



# Confirmit Horizons Reportal User Guide

This is document revision 1 of the Confirmit Horizons v24 Reportal User Guide published in August 2018. The information herein describes Confirmit Horizons Reportal and its features as of Build nr. 24.0.010. New features may be introduced into Confirmit Horizons Reportal after this date. Go to [www.confirmit.com](http://www.confirmit.com) or check "News" on the Customer Extranet for the latest updates.

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The companies, names and data used or described in the examples herein are fictitious.

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## What's New in this Issue?

**Note: Only the latest changes to this documentation are listed here. Changes made to earlier revisions are listed in the "Changes to the User Documentation" document which can be downloaded from the Confirmit Extranet at <https://extranet.confirmit.com>.**

The following changes have been made in revision 1 of the Confirmit Horizons 24 Reportal User Guide:

- No changes were made to the documentation. The version and revision numbers are updated to match the current build number.

**Note: The general layout and language in this document is continually being corrected, adjusted and improved to ensure the user has the best possible source of information. Only NEW information and details of functionality that has changed since the previous issue are listed here - minor corrections to the text and document layout are not listed.**

**Important**

We need your feedback so we can improve this document and provide you with the information you require. If you have any comments or constructive criticism concerning the content or layout of this documentation, please send an email to [documentation@confirmit.com](mailto:documentation@confirmit.com). Please include in your email the section number and/or heading text of the section to which your comment applies.

# 1. Introduction

**Note: Reportal is a Company Add-On. The add-on must be licensed by your company, and activated, for you to have access to the functionality.**

Confirmit Reportal™ is a platform for the creation and administration of online Report Portals. The Confirmit Reportal™ application revolutionizes the way insight is delivered to internal and external clients.

The powerful and flexible Reportal™ designer enables users to create online report portals using a state-of-the-art HTML WYSIWYG (What-You-See-Is-What-You-Get) editor. Designing becomes as easy as using any standard Windows application.

The Confirmit Reportal™ Designer:

- enables creation of highly aesthetic and professional online reports.
- provides a very strong and flexible chart and table designer.
- offers an easy-to-use, intuitive GUI (Graphical User Interface) with drop-down and right-click menus.

Through the Reportal™ interface, Reportal™ Viewers have real-time access to data sets defined by the Reportal™ designer. The designer can provide the viewers with drill-down functionality, either by including a number of filter options or by setting up a report hierarchy.

There are four user types/access levels in Confirmit Reportal:

- Reportal Designers with Confirmit access.
- Reportal Designers without Confirmit access.
- Reportal Analyst.
- Reportal Viewers.

**Important**

The browser manufacturers' interpretations of web standards may vary, and this can result in slight differences across the different browsers. Confirmit therefore recommends that users test their surveys, Panel Portal projects, and Reportal Viewer/Public Reports, on different browsers to ensure they look and function as expected/required on the different browsers.

## 1.1. System Requirements

**Note: Your browser must be set to allow cookies from the Confirmit site. If your browser does not accept cookies, you will not be able to log on (see Cookies in Confirmit on page 11 for more information).**

A description of the licensing options is given in the Access Control chapter (see Reportal Designer, Analyst and Viewer Access on page 635 for more information).

**Note: In the event you receive XML popup errors or other unusual behavior, check to see if you have any unnecessary browser extras and/or add-ons running. For example the Google toolbar "Please translate this page" option can cause an error message when you attempt to open the Report Properties page. If you experience such behavior, ensure these items are switched off whilst using Reportal.**

### 1.1.1. Reportal Designers

Confirmit Reportal prerequisites (Analyst mode)		
Element	Minimum	Recommended
Operating system	Windows Vista SP2	Windows 7 or Windows 8 Desktop.

	OS X	
Web browser	Internet Explorer 8, Firefox 10, Chrome 26	Internet Explorer 11, Firefox (latest), Chrome (latest).
Web browsing enhancement	Microsoft XML parser 3.0 SP3	Microsoft XML parser 6.0 ( <a href="http://support.confirmit.com/xml/">http://support.confirmit.com/xml/</a> )

Confirmit's Test Lab has performed testing on the English versions of the browsers.

### 1.1.2. Report Analysts

Confirmit Report prerequisites (Analyst mode)		
Element	Minimum	Recommended
Operating system	Windows Vista SP2.	Windows 7 or Windows 8 Desktop.
Web browser	Internet Explorer 8, Firefox 10, Chrome 26.	Internet Explorer 11, Firefox (latest), Chrome (latest).
Web browsing enhancement	Microsoft XML parser 3.0 SP3	Microsoft XML parser 6.0 ( <a href="http://support.confirmit.com/xml/">http://support.confirmit.com/xml/</a> )

Confirmit's Test Lab has performed testing on the English versions of the browsers.

### 1.1.3. Report Viewers

Confirmit Report prerequisites (Analyst mode)		
Element	Minimum	Recommended
Operating system	Any	Any
Web browser	Internet Explorer 8, Firefox 10, Safari 5.1, Chrome 26. Previous versions of Netscape, Internet Explorer, Firefox, Safari and Chrome will normally allow access to most functionality, but Confirmit will not be supporting viewer related issues with older browsers.	- Internet Explorer 11. - Firefox (latest) - Safari 5.1+ - Chrome (latest)

Confirmit's Test Lab has performed testing on the English versions of the browsers.

### 1.1.4. Animated Charts

To view animated Charts, Macromedia Flash player from Adobe (<http://www.adobe.com/go/getflashplayer>) is required both for Viewers and Designers.

### 1.1.5. Browser Security Settings

Confirmit Report prerequisites (Analyst mode)		
Element	Minimum	Recommended

Download Signed ActiveX controls	Enable/Prompt	Required to download and install Macromedia Flash Player ActiveX component. Animated charts will not work if this setting is disabled.
Run ActiveX controls and plugins	Enable	Animated charts in Confirmit Report rely on ActiveX controls that are installed with Internet Explorer.
Script ActiveX controls marked as safe for scripting	Enable	Animated charts in Confirmit Report rely on ActiveX controls that are installed with Internet Explorer.
Automatic prompting for file downloads	Enable	Only required if the Export Delivery Method is set to "Download" or "User Defined" rather than Email.

### 1.1.6. PowerPoint Add-in Requirements

Confirmit Report prerequisites (Analyst mode)		
Element	Minimum	Recommended
Operating system	Microsoft Windows Vista SP2	Windows 7 or Windows 8.
Microsoft Office Version	Microsoft Office 2007 Service Pack 2, Microsoft Office 2010. Microsoft Office 2013.	(as minimum)
Operating System Extras	Microsoft .NET Framework 4.5.	(as minimum)
Operating System Extras	Microsoft Visual Studio 2010 Tools for Office.	(as minimum)
Operating System Extras	Microsoft Windows Installer 3.1 <a href="http://www.microsoft.com/downloads/details.aspx?FamilyID=889482fc-5f56-4a38-b838-de776fd4138c&amp;DisplayLang=en">http://www.microsoft.com/downloads/details.aspx?FamilyID=889482fc-5f56-4a38-b838-de776fd4138c&amp;DisplayLang=en</a>	(as minimum)

**Note:** PowerPoint Add-in requirements (except OS and Microsoft Office version) will be installed automatically by the PowerPoint Add-in setup application if not already installed.

### 1.2. Language Settings in Internet Explorer

The language used for many of the menu and button texts in the reports is defined by the preference selected in the report viewer's Internet browser. For example, the text in the commands in the report's Admin menu is one of the items controlled by this setting. In addition, the decimal sign used in report tables etc. will be displayed as either comma or point depending on the standard used in the selected language.

To set the default language, proceed as follows (for Internet Explorer):

1. In your Internet browser, go to **Tools > Internet Options**.  
The Internet Options dialog opens.
2. Click on the **Language** button located towards the bottom of the General tab.  
The Language Preference pop-up opens as shown in the figure below. The language that is displayed first in the list is the default language in which the menus, buttons etc. will be displayed.
3. To change the default, select a language in the list and click the **Move Up** or **Move Down** buttons as appropriate to place the required language at the top of the list.
4. To add other languages to the list, click the **Add** button and select the required language(s).

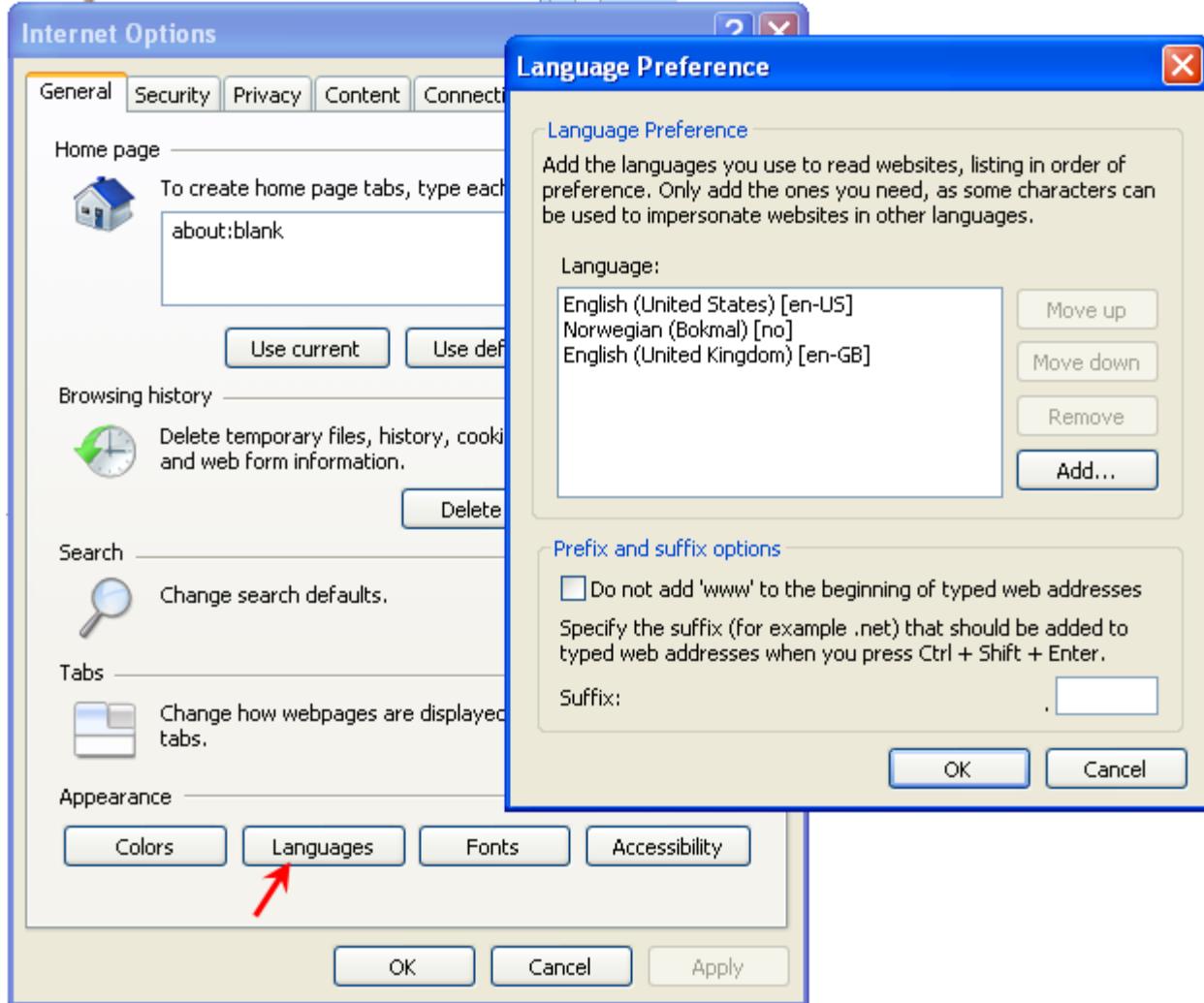


Figure 1 Setting Language preferences

### 1.3. About this Document

This document is available to Report Analysts and Designers both with and without Confrimt access. As some of the functionality described within this document is not accessible for Report Analysts and Designers without Confrimt access, some parts of the document will not be relevant for those users. The chapters that are not relevant for external Report Designer users are clearly marked at the beginning of the chapter.

## 2. Entering Confirmit Report

If using Confirmit's SaaS, Confirmit Report Designers and Report Viewers enter Report via the following URLs:

- On the USA site: <http://reportal.us.confirmit.com>
- On the UK site: <http://reportal.euro.confirmit.com>

If you are working from a different installation of Confirmit, the link will be different.

**SaaS only:**

You can log in to Report by clicking the appropriate link on the Confirmit home page,  
<http://www.confirmit.com/>.

### 2.1. Logging In to Report

When you enter the URL, the login page is displayed as below:

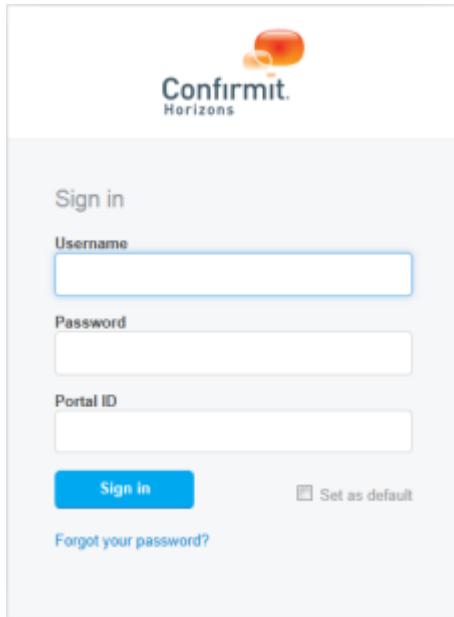


Figure 2 The Report Login page

**Note:** It is possible to define a style for the login screen for a company. If this is done, all panelists and end users for the company will then log in using the custom login page. The setup is performed by the System or Company Administrator. Refer to the Confirmit Administrator Guide for further details.

Type your user name and password into the appropriate fields.

Designers with Confirmit access can log in with their regular Confirmit user id and password (leave the Portal ID field empty). Designers without Confirmit access and Report Viewers must enter the Portal ID (End user list ID/Panel ID) in addition to their user id and password.

**Note:** Report Designers who have a Confirmit user license can also enter Report directly from Confirmit by going to the Home > Report menu command. Report then opens in a new browser window.

**Important**

If someone attempts to access the login page with an incorrect username and/or password, the number of attempts made is counted. When the counter reaches a preset limit, Reportal will lock for that user and a message will be displayed telling the user that they must contact their Reportal administrator to be given access. The user will not be able to log in again until the account is reopened. An email will also be sent to the user's registered email address informing them that they can use the Forgotten Password functionality to reopen their account.

This lockout and reopening functionality also applies for end-users and panelists.

On-Premise customers can themselves set the permitted number of attempts in the registry settings. The default number of attempts is 5.

**Note:** End-users and panelists can only be logged on to Reportal from one browser at a time. By default, Authoring and Reportal Users (the designers of the surveys and the reports) can be logged on to Reportal as many times as they wish (within the limitations of the user's license agreement). However the Confrimt system includes a setting that will also prevent duplicate log-ins by users.

The most recently accessed reports are displayed in the Welcome page.

The screenshot shows the Confrimt Reportal home page for a user named Adam Apple. The top navigation bar includes links for Home, New, Recent, Favorite List, Report List, Template List, Data Source List, Wizard List, Import, PowerPoint Templates, Deleted Reports, and User Settings. The Confrimt logo is in the top right corner. On the left, there is a sidebar with 'Create New' buttons for Report, Template, and Data Source, and a 'Go To' section with links for Report List, Favorite List, Template List, Data Source List, and Wizard List. Below the sidebar are 'Recent Reports', 'Favorite Reports', 'Recent Templates', and 'Recent Data Sources' sections, each listing items with their names, creation dates, and authors. At the bottom of the page is a copyright notice: '© 2013 Confrimt. All rights reserved.'

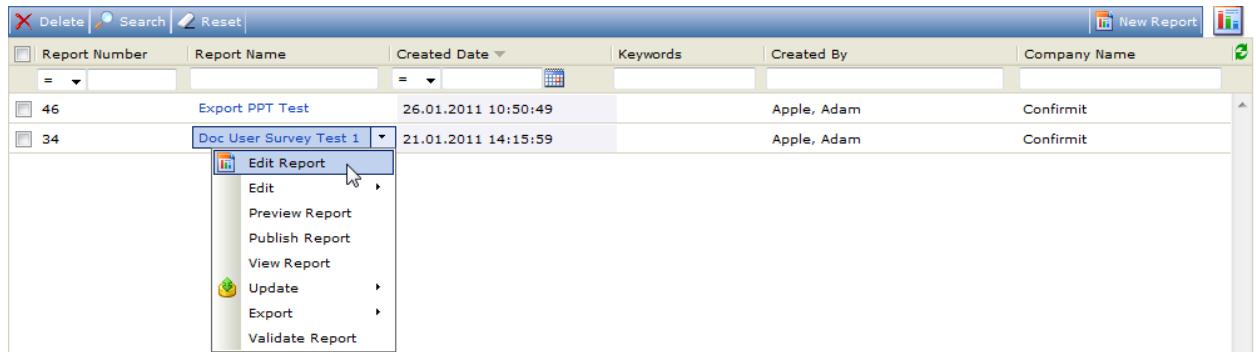
Section	Name	Date	Author
Recent Reports	3916 CarSurvey1	9/19/2013 9:43:17 AM	Bennett, Nigel
	1730 nb1	11/13/2012 1:58:36 PM	Bennett, Nigel
Recent Data Sources	3832 CarSurvey1	9/19/2013 9:42:55 AM	Bennett, Nigel
	1655 nb1	11/13/2012 1:58:34 PM	Bennett, Nigel

Figure 3 Example of a Reportal user's home page

Click on a report link to open the report in edit mode.

In the event the list is extensive and you know some of the details about the report you wish to work with, you can use the Quick Find fields to help you find the report. Type in the report number, the report name, or a keyword (see Searching in Lists on page 37 for more information) and click Go to search the list for the report(s) answering the criteria. Once you have found the report you can add it to your Favorites list so it is easier to find next time (see The Favorites List on page 18 for more information).

The opening page displayed depends on the type of access you have. Report Designers and Viewers without Confirmit access go directly to a report list where the reports available to them are displayed. In this list, to open a report for editing you must right-click on the report and select **Edit Report** from the drop-down menu. A Report Viewer can only view and export a report (see [The Exporting of Reports by Viewers on page 12](#) for more information).



*Figure 4 Report list for designers*

Confirmit users logging on to Reportal are brought to the Main Page. This page displays the **Home** menu, the Report List, Template List, Data Source List, and shortcuts to recently used items. In the Quick Access pane to the left, the links in the **Create New** section lead to the Report Wizard, Template Wizard, and Data Source Wizard. Under **Go To**, are short-cuts to the Report List, Template List, and Data Source List. Quick Find fields allow you to search for specific reports directly from the main Page. The same elements can be accessed from the **Home** menu across the top of the Main Page.

When you first open a report, the Report Editor page shows the Report Summary. This contains some general information about the report you have selected so you can ensure that this is the report you wish to work on. The summary page also contains a number of links that allow you quick access to some of the most-used functionality. Note that the Report Summary can be accessed at any time from the **Report > Report Summary** menu command.

A screenshot of the Report Editor interface. On the left is a 'Toolbox' panel divided into two sections: 'Layout and Styles' and 'Report'. 'Layout and Styles' contains categories for Report Master, Custom Texts, Page Masters, and Layout Masters. 'Report' contains categories for Copy of Project X, Hide Scripts, Parameter Scripting, TextBox Scripting, Table Scripting, and Chart Scripting. The main area displays 'Copy of Project X' details: Report ID (95207), Report Datasource Type (Surveys/Bit Stream), Datasource (Copy of Project X), Last update of bitstream files (01/08/2014 12:35:31), Last published (Never Published), Public (No), Status (Online), Number of Records (401), Number of Tables (11), Database (Production), and Keywords. At the bottom is a 'Quick links' section with links to View Report Properties, Publish Report, Assign End Users, and Start Report Page Wizard.

*Figure 5 Example of the Report Summary information presented when you first open a report*

**Note:** If you open a report for which the BitStream files have not yet been generated, then the files will be generated automatically and you will be presented with a message informing you of this. The message status will be updated when the files are available.

Click the white "collapse" button in the frame between the Quick Access pane and the main window to collapse the pane to give more space when editing reports, data sources, etc.

## 2.2. The Login Overlay

For security reasons, if Reportal is inactive for longer than a preset time (perhaps you have gone to a meeting and left Reportal running) then the application will lock and a login page is displayed in front of the Reportal window. You will then need to log in again to continue your Reportal session. Your username will be remembered; just type your password into the Password field to log on in the normal way.

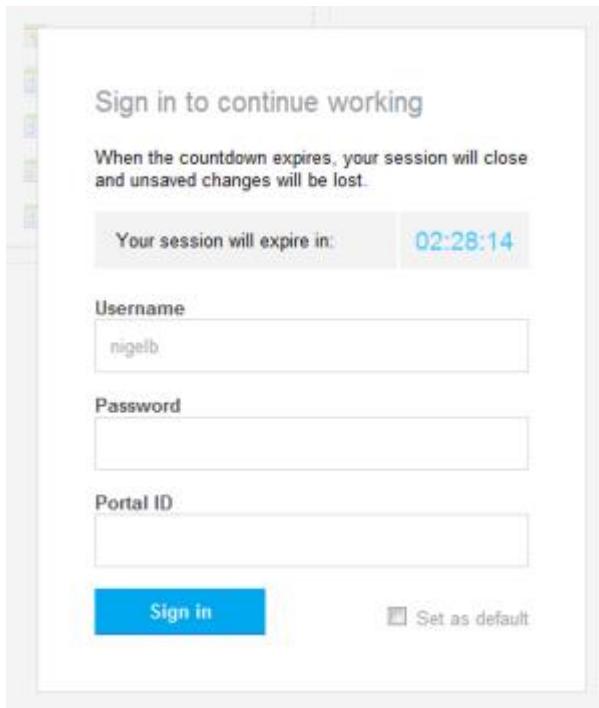


Figure 6 The login overlay that is displayed when a Reportal session has timed-out due to inactivity

If you have made some changes in your report and Reportal locks before you have the chance to save them, then all is not lost. When you log in again, Reportal will reopen at the page you were last in, allowing you to continue where you left off (and save your changes at your earliest opportunity!).

**Note:** When Reportal locks in this way, you have a preset time within which you can log in and Reportal will reopen where you left off. If you do not log in within this time, then Reportal will close completely and any unsaved changes will be lost.

## 2.3. Password Policy

As part of the continuous effort to ensure that Confirmit complies with the highest standards of security, the following password policy applies for end users (CAPI interviewers, report viewers, Analysts and Designers) and Authoring users (Express/Professional/Translator).

### General:

System messages are provided (with translations to the usual common languages) for these settings. The appropriate error messages will be displayed when users choose passwords that do not comply with the site settings.

The Authoring (Express and Professional), Reportal and Panel Portal modules all have 'Forgotten Password' functionality. In the event a user or end user forgets his/her password, clicking the Forgot Password button requests an email with a link that opens a page where they can reset the password. Note that the reset password link is time-limited and only valid for one hour. If the user does not reset their password within that time then they must re-click the button to be sent a new link (see Forgotten Password on page 11 for more information). You can also refer to the Confirmit Authoring User Guide for further details.

All passwords, including those of panelists in Professional, Standard and Basic Panels, are hashed, and are not transmitted in plain text. Consequently, passwords will not be available in plain text for any system users. Instead, users will be sent an activation link to open a page where they can choose their own password.

### **Panelists:**

The changes to the password policy for Panelists are optional, and users must actively enable the restrictions for the Panels. Users may also choose between enabling the site settings, or defining custom settings for a panel. Panelist passwords will be hashed, meaning that passwords will not be available in plain text. When panelists use the "Forgot password" feature, they will be sent an activation link which will open a page where they can reset their password.

### **SaaS users:**

The passwords for all areas of Confirmit must satisfy the same minimum requirements for complexity. Wherever passwords can be changed or set within the application, they will be validated against these rules before the change is accepted. The passwords will have to comply with these rules from the first time they are changed after the Confirmit 14 release.

- **Password history** - the new password must be different from the last 12 passwords.
- **Minimum age** - the user will have to wait 24 hours after changing the password before being allowed to change it again.
- **Maximum number of login attempts** - after 5 invalid login attempts the account will be locked. The user will not be allowed to login again until the account is reactivated by the system administrator.
- **Uppercase characters** - the password must contain at least 1 uppercase letter.
- **Non-alpha characters** - the password must contain at least 1 character that is not a letter (a..z, A..Z).
- **Password length** - the password must contain at least 8 characters.
- **Password expiry days** - the password will expire after 60 days. (This will not apply for login to the CAPI console.)

For Authoring users, it is possible to enforce even stricter requirements through certain company settings. Contact Confirmit support if you wish to implement a stricter policy.

### **On-Premise users:**

The following configurable settings will be enforced for all On-Premise users from the release of Confirmit 14. If the Company Administrator selects to use the settings, users will have to comply with these settings when changing their password:

- **Password history** - the new password must be different from the last X passwords.
- **Minimum age** - the user will have to wait X hours after changing the password before being allowed to change it again.
- **Maximum number of login attempts** - after X invalid login attempts the account will be locked. The user will not be allowed to login again until the account is reactivated by the system administrator.
- **Non-alpha-numeric characters** - a required minimum number of characters that are not numbers (0..9) or letters (a..z, A..Z).
- **Uppercase characters** - a required minimum number of uppercase letters.
- **Non-alpha characters** - a required minimum number of characters that are not letters (a..z, A..Z).
- **Password length** - a required minimum number of characters in the password.

- **Password expiry days** - the password will expire after a number of days. (This will not apply for login to the CAPI console.)
- **Password strength** - in addition to a combination of the above settings, a regular expression may be used to enforce an even stricter policy.

For Authoring users, it is possible to enforce even stricter requirements through certain company settings. The server documentation that will be provided with the release will contain more detail.

**Note:** It is possible to disable the Force Password Changes functionality for End user lists, such that the end users' passwords never expire. This is done in Confirmit Authoring - refer to the Authoring User Guide for further details.

## 2.4. 2-Step Verification

Confirmit supports 2-step verification (2-factor authentication). This can be enabled on a user-by-user basis. 2-factor authentication uses the Google Authenticator™ app, and users will need to download the app to their smartphone to use 2-factor verification with Confirmit. When enabled, users will be required to provide an additional authentication code obtained from the app to successfully log into the system. Users have the ability to set certain devices as "trusted devices" for a period of 30 days; trusted devices will not request the additional authentication code from that user when logging in within the trusted device period. Once that period expires the user will be required to re-enter the verification code. Refer to the Authoring User Guide for further details.

## 2.5. The Single Sign-on Functionality

**Note:** SSO is a company add-on and is subject to payment.

The Single Sign-on (SSO) functionality enables clients to use their own authentication infrastructure when logging on to the Authoring environment, Reportal (designers and report viewers) and limited surveys. If a respondent has already logged on to the system, they will be able to access the survey without the requirement for additional in-logging.

**Note:** If someone is using SSO to access Reportal, the end user list that is referenced for access MUST have been created by a Professional user who is a member of the same company.

For a client to be able to use SSO, the client must provide Confirmit with a 256-bit AES key for establishment of the trust, and this should be done over a secure file transfer channel. This key will be used when decrypting the tokens that are presented by the users during log-in. The SSO company add-on must also be enabled for the client.

### Authentication:

1. SSO authentication is performed by sending a clear-text company identifier ("co") and an encrypted token ("key") via HTTP(S) POST or GET to a Single Sign-on enabled log-in page in Confirmit.
  - The "co" parameter should contain the client company id.
  - The "key" query parameter should have a value equal to the base 64 encoding of the encrypted value of the string composed of semi-colon delimited key value pairs for id, timestamp, and in some cases destination URL:
    - id – Confirmit user id
    - ts - UTC timestamp of the form "2007-01-10 23:39:39"
    - url - Destination URL
- Sample decrypted "key" value: id=abc123;ts=2007-01-10 23:39:39
2. The value for the "key" parameter must be encrypted by the client using the same 256-bit AES key that was sent to Confirmit previously when enabling SSO. ECB blocking and PKCS5 padding must be utilized.

3. Confirmit will attempt to decrypt the "key" parameter using the key associated with the client identified by the "co" parameter. If this fails, the authentication request will be rejected. Otherwise authentication will be successful as long as the timestamp parameter is not older than a predefined (but configurable) number of seconds. This leeway is used to address lack of systematic clock synchronization across client and Confirmit systems. Every effort should be made to reference a common time source and narrow the timestamp timeout period. After a successful authentication, authorization is performed using the decrypted "id" value.

## 2.6. Forgotten Password

Your Confirmit password is what prevents unauthorized people from using your Confirmit account and interfering with your projects. You must therefore ensure your password is difficult to guess and is known only to you. This of course can create problems - if you should forget your password then you will not be able to use Confirmit. The Confirmit login page therefore includes the possibility for you to reset your password should you forget it. To do so:

1. Click the **Forgot your password?** link below the login page.

The dialog shown below opens.

Enter your User ID (and Portal ID if you have one) and press Send. An email will be sent to you containing instructions for resetting your password.

User  Portal ID  Send Cancel

Figure 7 The "Forgot your password?" dialog

2. Type your user name into the field and click **Send**.

A message is sent to Confirmit Support. They will send an email to the address registered to the username you have given, containing instructions for how you can reset your password.

**Note: The reset password link is time-limited and is only valid for one hour. If you do not reset your password within that time then the link will expire and you must repeat the procedure to be sent a new link.**

## 2.7. Cookies in Confirmit

A cookie is a small file downloaded on to a device (such as a PC or a mobile device) when the user accesses certain websites. Cookies are then sent back to the originating website on each subsequent visit. Cookies are used on the Confirmit Horizons SaaS environment to provide you with a better user experience. Confirmit Horizons does not collect or store personal data via cookies. Cookies (if any) used when you visit pages delivered by Confirmit Horizons have a low level of privacy intrusiveness.

The Confirmit Cookie Policy is provided in response to the requirements of the "Privacy and Electronic Communications (EC Directive) Regulations 2011", referred to herein as the "Regulations". For more information about the Regulations as implemented in the UK, visit <http://www.ico.gov.uk/>.

The Confirmit Cookie Policy document contains information about the cookies that may be used when you or your respondents access the Confirmit Software as a Service (SaaS) environment for the purpose of designing surveys or reports or responding to a survey or viewing a report.

The use of cookies and similar technologies has for some time been commonplace and cookies in particular are important in the provision of many online services. Using such technologies is not prohibited by the Regulations, but the Regulations requires that people are told about cookies and given the choice as to which of their online activities are monitored in this way.

You can, should you choose to do so, disable the cookies from your browser and delete all cookies currently stored on your computer. You can find out how to do this for your particular browser by clicking **Help** on your browser's menu. Note however that should you choose to disable cookies from your browser it may prevent you from taking full advantage of the SaaS service, and some functionality may fail to work.

For further details on the cookies that may be used by Confirmit Horizons, go to the Cookie Policy page on the Confirmit website at <http://www.confirmit.com/Home/cookie-policy.aspx>, or click the link on the Confirmit Horizons login page.

## 2.8. The Exporting of Reports by Viewers

**Note: The Report Export functionality is a Reportal add-on and is subject to payment.**

A viewer (that is, a person who has received a report from the report designer) can choose between exporting the entire report or the current page to MS Excel, MS PowerPoint or Adobe PDF. The exports use EMF (Enhanced Meta File) files for charts to improve the image quality. EMF files are vector-based and can therefore be enlarged without degradation of quality. Note that this is a different functionality from that used for the export of reports by the designer to the viewer (see Exports on page 594 for more information).

**Note: For viewer-exports to Excel and PowerPoint, single-page exports are only allowed for pages which contain one or more specific Reportal component (table, chart, gauge, verbatim, etc). In other words, if there is only text and/or an image on the page, the viewer cannot export it using single page export. This limitation does not apply for PDF exports.**

The report designer can specify how the report is to be exported: attached to an email (default), saved as a downloadable file, or the designer can allow the viewer to choose which option is to be used (see The Report Properties > Export Settings Tab on page 113 for more information). The layout of the Export Report dialog will depend on the export option selected by the designer.

The following constraints apply:

- Charts are delivered as images. This means that they cannot be edited.
- If a chart and its table are on the same page, they are placed on the same sheet in the Excel export.
- If there are several tables on one page, they will be delivered as separate sheets in the Excel export.
- The tables will inherit the table layout (fonts, colors, etc.) from Reportal, and percentages and numbers will be formatted as percentages and numbers.
- Charts that do not belong to a table on the page are placed on separate sheets.
- The Table of Contents sheet is included in the Excel export.
- Excel exports require that Reportal Viewers have Microsoft Office 2007 or newer installed.

**Important**

**Microsoft™ will not support Office 2003™ after 8th April 2014. As from Confirmit version 18 it will therefore no longer be possible to produce exports in Office 2003™ format. Go to Report Properties > Export Settings and ensure the export format is set to Office 2007™ or above.**

- Open text questions are not included in PPT exports.
- PDF exports include all content on the page (text and images), but not menus, navigators etc. You can also exclude some content from being part of the export through special HTML tags (see Excluding Content from PDF Exports on page 600 for more information).

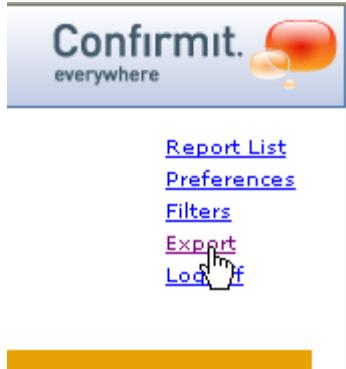


Figure 8 The Export link

Click the **Export** link to open a pop-up window:

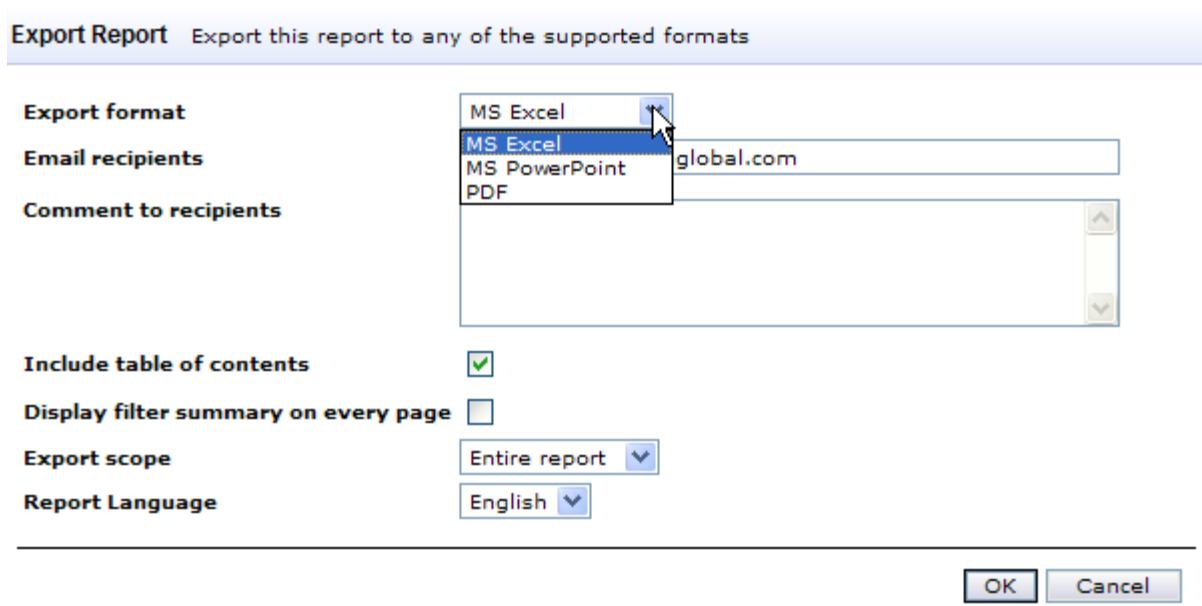


Figure 9 Choosing the export format

Here you choose the format and the scope of the export, whether the pages are to include a filter summary, and whether the table of contents is to be included in the MS Excel report. If you choose the PPT export, you can choose between Images (not editable) or OLE objects (editable) for the tables.

**Note:** The report designer can specify how the report is to be exported: via email or as a downloadable file - see above. In the event the designer has allowed you to choose the export method, a selection drop-down is added to the Export Report dialog.

When the Report Language is set to English and no specific culture is selected, the date format for the report will default to English US.

#### Important

If Download is chosen as the export method, then when you click OK to start the task, a message is displayed as shown below. Do not close this message window until the task is completed.

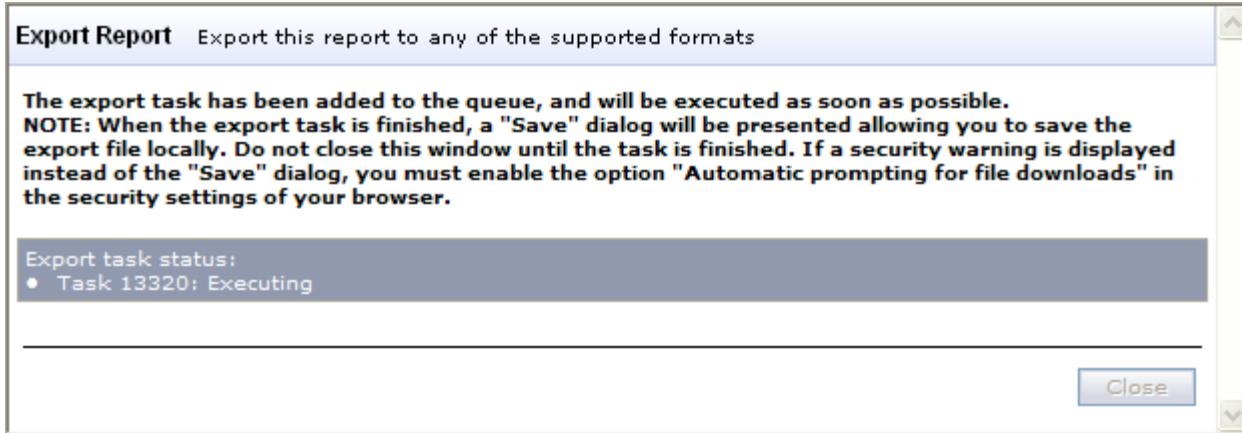


Figure 10 The message window displayed when Download is chosen as the export method

The **Close** button on the message window will not become active until the export task is completed. Once the task has been completed, the status dialog will turn green (with the status of "Complete") and you will be presented with a standard Download dialog box to save the file to your computer.

**Note:** In report properties, the designers will be able to select the PPT template that is to be used in PPT exports. PPT templates that are uploaded into Confirmit via Templates > PowerPoint, will be available in report properties.

For PDF exports, the user will be able to choose the page orientation (portrait or landscape) and paper size (A3, A4, A5, B4, B5, Legal, Letter or Tabloid).

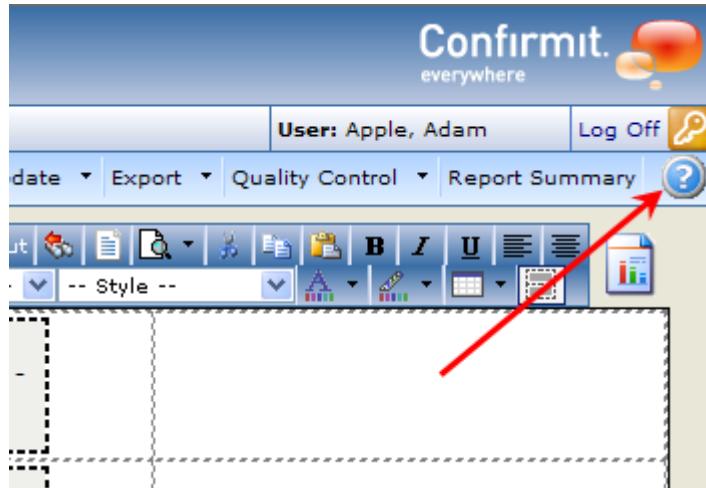
If one or more export packages are defined for the report (see Export Packages on page 601 for more information), the user will be able to choose between them when ordering exports.

If the viewer has not been granted any "Entire report" export units (see Access Control on page 635 for more information), then the viewer will be able to export only the current report page, as long as the page has been set to be Exportable.

The Reportal Designer can order exports and edit the reports to which he/she has been given access. There may be a combination of these – you may only have viewer rights on some reports while on others you may have full designer access.

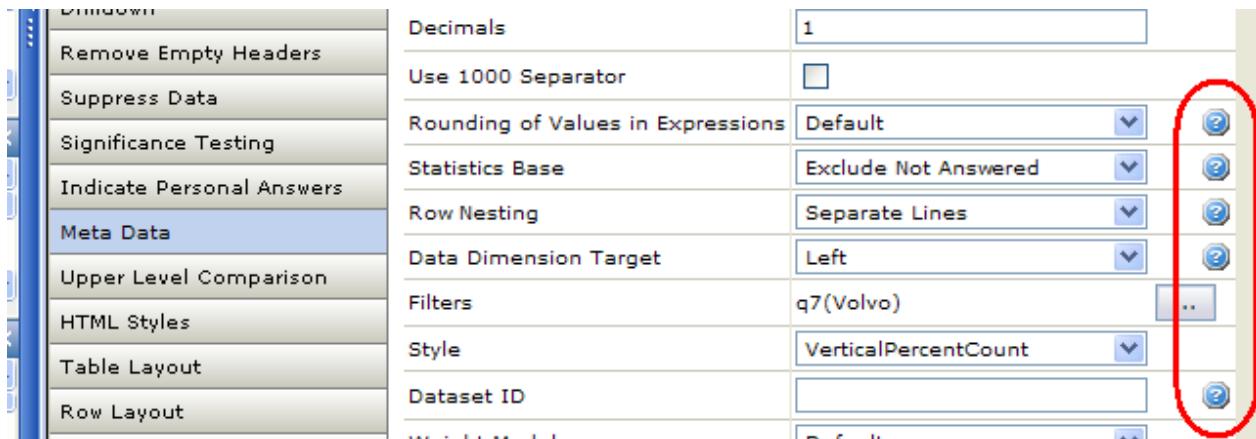
## 2.9. Getting Help

Reportal contains a built-in On-line User Assistance system to provide you with information should you require it. Click the ? button, located in the upper right corner of most of the windows, to open the assistance page for that window. Most of the pages within the On-line User Assistance system contain links to additional information and related topics – click the links to go to those pages. Use the **Back** and **Forward** buttons to navigate through previously opened pages.



**Figure 11 The User Assistance button**

Many of the properties in the various property sheets also have help texts associated with them. Click the ? button beside a property to view additional information about that particular property.



**Figure 12 Example of help text access buttons on a Properties sheet**

In addition, in Confirmit Authoring you can go to the **Home > Help > Confirmit Extranet** menu command, log on to the Confirmit Extranet using your username and password, and download current and past revisions of the Confirmit User Guides. These user guides are available as printable PDF files in A4 or Letter format, or as .CHM files for on-screen use.

## 3. Working in Confirmit Reportal

Most operations in Confirmit Reportal are performed by drag-and-drop, right clicking and selecting from the menu, or by accessing editors by double-clicking on an item. The following sections in this chapter describe the main components that are used throughout Confirmit Reportal.

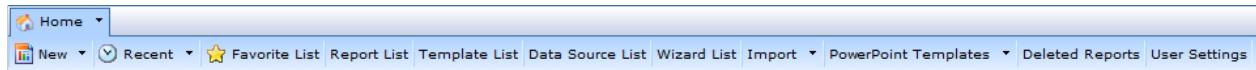
### 3.1. The Menu System

The main Reportal menu system is located across the top of the Reportal window, towards the left side. Here, when you initially log on to Reportal and before you have selected a report, only the **Home** menu is available (see **The Home Menu** on page 16 for more information). Once you have selected a report, the **Report** menu (see **The Report Menu** on page 24 for more information) and the **Permissions** menu (see **The Permissions Menu** on page 27 for more information) become available. Note that the **Home** menu commands apply to Reportal generally and all the reports to which you have access, while the **Report** and **Permissions** menu commands apply only to the selected report.

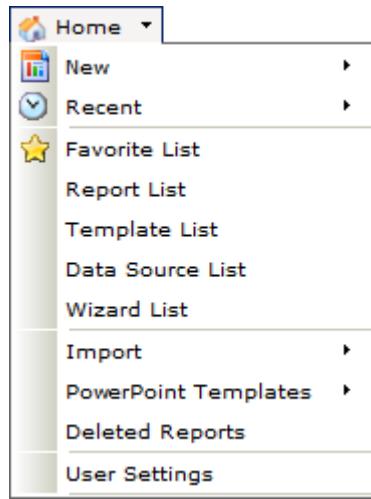
Once you have selected a report, several of the toolboxes that appear also have right-click menus. Through these menus you can access much of the functionality applicable to the toolboxes and their contents (see **The Toolbox Right-Click Menus** on page 33 for more information).

#### 3.1.1. The Home Menu

The Home menu is the only menu available to you when you initially log into Reportal. Once you have selected a report, the **Report** menu and the **Properties** menu become available. The commands in the **Home** menu apply to Reportal generally and all the reports to which you have access. The menu commands are presented in the sub-menu bar, and can also be accessed via the drop-down menu which is opened by clicking the down-arrow beside the **Home** main menu command.



*Figure 13 The Home menu commands*



*Figure 14 The Home drop-down menu*

Menu commands which have arrows beside them, for example the **New** menu, contain sub-menus. Click on the arrow to open the sub-menu. If you click the actual menu command, for example **New**, then the top command in the sub-menu will be activated, in this case **New Report**.

The commands under this menu are as follows:

- **New** - contains the menu command that enable you to create new reports, templates and data sources (see The New Menu on page 17 for more information).
- **Recent** - provides quick access to the reports, templates and data sources that you have recently been working with (see The Recent Menu on page 17 for more information).
- **Favorite List** - mark Reportal reports as "favorites" for fast access to commonly used reports (see The Favorites List on page 18 for more information).
- **Report List** - click to go to the Report List page.
- **Template List** - click to go to the Template List page, where all report templates to which you have access are listed.
- **Data Source List** - click to go to the Data Source List page, where all the data sources to which you have access are listed (see The Data Source List on page 649 for more information).
- **Wizard List** - click to open the list of report wizards (see The New Report Wizard on page 90 for more information).
- **Import** - contains the menu commands that enable you to import report and template definitions (see The Import Menu on page 18 for more information).
- **PowerPoint Templates** - contains the menu commands providing access to the PowerPoint functionality (see The PowerPoint Templates Menu on page 18 for more information).
- **Deleted Reports** - lists any reports that have been deleted (see Deleting and Undeleting Reports on page 39 for more information).
- **Activity Overview** - [need Company Administrator permission] provides the administrator with an overview of the various licenses available to the company, and activities concerning reports, log-on and permissions within the company (see The Activity Overview Page on page 19 for more information).
- **User Settings** - allows the Reportal user to change some of the Confirmit user settings (see The User Settings Page on page 22 for more information).

### 3.1.1.1. The New Menu

This menu, located under the Home menu, contains the commands allowing you to create new reports, templates and data sources.

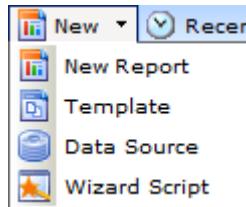


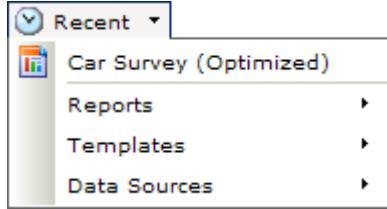
Figure 15 The New menu commands

The commands under this menu item are as follows:

- **New Report** - enables you to create a new Reportal report.
- **Template** - enables you to create a new report template.
- **Data Source** - enables you to create a new data source for your report(s).
- **Wizard Script** - enables you to create a new Wizard script (see The New Report Wizard on page 90 for more information).

### 3.1.1.2. The Recent Menu

The commands in this menu provide quick access to reports, templates and data sources that you have recently been working on.



**Figure 16** The Recent menu commands

Uppermost in the sub-menu is the latest report on which you have been working. The lower part of the sub-menu enables you to open lists of the recent reports, templates and data sources.

### 3.1.1.3. The Favorites List

You can mark commonly used Reportal reports as "favorites" to allow fast access. Once marked, the reports are listed in the Favorites page.

- To mark a report as "Favorite", in the Home page right-click on the desired report and select **Add to Favorites**.
- To remove a report from the Favorites list, go to the **Home > Favorite List** menu item, check the box beside the report number for the report and click **Remove from Favorites**.

### 3.1.1.4. The Import Menu

The Import menu contains the commands you will need when you wish to import a report or template definition.



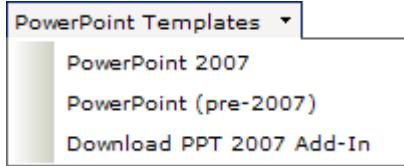
**Figure 17** The Import menu commands

The commands under this menu are as follows:

- **Report Definition** - this imports a report definition when the data source exists on the destination site. Click to commence the report definition import process (see How to Import a Report Definition on page 82 for more information).
- **Template Definition** - click to commence the template definition import process (see How to Import a Template Definition on page 733 for more information).
- **Remote Report Definition** - this imports a report definition when the data source does not exist on the destination site (it exists on a remote site). Click to commence the report definition import process (see Importing Remote Reports on page 84 for more information).

### 3.1.1.5. The PowerPoint Templates Menu

The PowerPoint Templates menu contains the commands you will need when you wish to work with PowerPoint templates or the PowerPoint Add-in.



**Figure 18** The PowerPoint Templates menu commands

The commands under this menu are as follows:

- **PowerPoint 2007** - opens a list of PowerPoint 2007 templates to which you have access (see How to Upload a PowerPoint Template on page 599 for more information).
- **PowerPoint (pre-2007)** - opens a list of pre-PowerPoint 2007 templates to which you have access.
- **Download PPT 2007 Add-In** - click to go to the Add-In download site (see How to Install the Reportal PowerPoint Add-in on page 605 for more information).

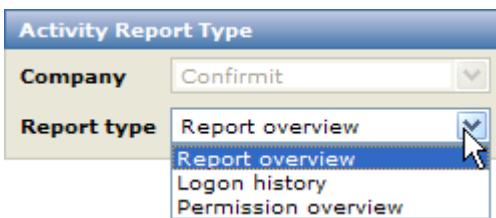
### 3.1.1.6. The Activity Overview Page

If you have the System\_Company\_Administrate permission or higher, then the Activity Overview menu will be available in your **Home** menu. Click on this menu item to open the Activity Overview page. This page provides you with an overview of the various licenses available to the company, and end-user and panelist permissions and activities to assigned reports within the company.

**Figure 19** The Activity Overview page

The Available Licenses row indicates how many licenses of the various types your company has purchased, and how many have not yet been allocated. For example, in the figure above, the company has purchased a total of 100 Viewer licenses and has 93 available, meaning that the company has used 7 of their licenses.

In the Activity Report Type box, click the down-arrow beside the Report Type field to open a list of the types available.



**Figure 20** The Activity Report Type drop-down list

- **Report overview** - shows a list of the reports owned by your company and the number of users who have been assigned them (see Report Overview on page 20 for more information).

- **Logon history** - shows a list of end users who have been assigned to reports owned by your company and information on when they have accessed Reportal (see Logon History on page 20 for more information).
- **Permission overview** - shows a list of the users assigned to reports in your company, and the permission types associated with those users (see Permission Overview on page 21 for more information).

When you select a report type, the fields available in the Filters box will change to suit your selection. Add search criteria to the various filter fields and select operators and/or dates as necessary, then click **Search** to display a list of the information answering to your search criteria.

Once you have a list of reports/users available, you can revoke user permissions for selected reports and users, and you can export the reports to Excel (see Exporting Activity Overview Files on page 22 for more information).

### 3.1.1.6.1. Report Overview

This page shows a list of the reports owned by your company and the number of users who have been assigned to them. Use the filter fields to narrow the list to find particular reports by name, number, date, user type etc. You can then export the reports to Excel (see Exporting Activity Overview Files on page 22 for more information).

You can sort the list by the column headers - click on a header to toggle the sort direction.

The screenshot shows the 'Report Overview' section of the Confirmit Horizons 24 Report User Guide. At the top, it displays available licences: View (93/100), Analyst (96/100), and Design (94/100). Below this are two main sections: 'Activity Report Type' and 'Filters'.

**Activity Report Type:** Contains dropdown menus for 'Company' (set to 'Confirmit') and 'Report type' (set to 'Report overview').

**Filters:** Contains several input fields and operators for filtering reports. The fields include 'Report Number', 'Report Name', 'Created By', 'Created Date', 'Assigned Viewers', 'Assigned Analysts', 'Assigned Designers', and an 'Offline reports only' checkbox. There are also 'Search' and 'Export' buttons.

**Results Grid:** A table listing 50 reports from a total of 257. The columns are: Report number, Report n..., Created date, Created by, Offline, View, Analyst, and Design. Each row has a checkbox in the first column. The grid includes navigation buttons for pages 1-6 and links for 'All' and 'Revoke permissions'.

	Report number	Report n...	Created date	Created by	Offline	View	Analyst	Design	Actions
<input type="checkbox"/>	82	Imp...	30/06/2010 17:49:53	Skau, Kristir	False	1	0	0	
<input type="checkbox"/>	30	Imp...	23/06/2010 08:44:45	Choumenko	False	1	0	0	
<input type="checkbox"/>	10	Car	21/06/2010 10:51:52	ProS, Marin	False	1	0	1	
<input type="checkbox"/>	19	2 sec...	22/06/2010 10:11:37	ProS, Marin	False	1	0	0	
<input type="checkbox"/>	247	endu...	28/07/2010 08:38:46	Strelkalovsk	False	1	1	1	
<input type="checkbox"/>	4	MB T...	18/06/2010 09:12:22	Bjerke, Mon	False	1	1	1	
<input type="checkbox"/>	21	V16 ...	22/06/2010 10:42:13	ProS, Paul	False	1	1	1	
0 of 50 selected.									[ 1 - 50 of 257 ]   ...

Figure 21 Example of a Report Overview result list

Check the appropriate boxes in the left column to select reports, then use the Revoke Permissions drop-down and button to revoke access permission for the selected user types.

### 3.1.1.6.2. Logon History

This page shows a list of the end users who have been assigned to reports owned by your company, and information on where they have accessed Reportal from. Use the filter fields to narrow the list to find particular users, dates etc. You can then export the reports to Excel (see Exporting Activity Overview Files on page 22 for more information).

You can sort the list by the column headers - click on a header to toggle the sort direction.

Available licences (remaining/total) : View (93/100) Analyst (96/100) Design (94/100)

Activity Report Type		Filters			
Company	Confirmit	User ID	=	Login Count	< 1
Report type	Logon history	User Name		Assigned Reports	>= 1
		Portal ID		Logins From	30/06/2010
				Logins To	30/07/2010
<input type="button" value="Search"/> <input type="button" value="Export"/>					

						All	Revoke permissions
<input type="checkbox"/>	UserId	Username	PortalId	Number of logons	Number of reports	Last logon	
<input type="checkbox"/>	18		145527	0	1		
<input type="checkbox"/>	19		145527	0	1		
<input type="checkbox"/>	3		7265	0	1		
<input type="checkbox"/>	1		p0039052	0	1		
<input type="checkbox"/>	2		p0039052	0	1		
<input type="checkbox"/>	1		p0178542	0	1		

0 of 6 selected. [ 1 - 6 of 6 ] ... 1 ...

**Figure 22 Example of the Logon History filters and result list**

Check the appropriate boxes in the left column to select users, then use the Revoke Permissions drop-down and button to revoke access permissions for the selected users.

Click on the Number of Reports link to go to the Permissions Overview Report for that specific user (see Permission Overview on page 21 for more information).

### 3.1.1.6.3. Permission Overview

This page shows a list of the users assigned to reports in your company, and the permission types associated with those users. The UserId and PortalId used to access the report for each user type are also displayed. Use the filter fields to narrow the list to find particular reports by name, number, date, user type etc. You can then export the reports to Excel (see Exporting Activity Overview Files on page 22 for more information).

You can sort the list by the column headers - click on a header to toggle the sort direction.

The screenshot shows a report interface with the following components:

- Available licences (remaining/total) :** View (93/100) Analyst (96/100) Design (94/100)
- Activity Report Type:** Company (Confrimt) and Report type (Permission overview).
- Filters:** User ID, Report Name, Portal ID, Permission Type (All), Report Number, Expiry Date.
- Buttons:** Search, Export.
- Result List:** A table with columns: UserId, PortalId, Number of logons, Number of reports, Last logon. The data is as follows:
 

UserId	PortalId	Number of logons	Number of reports	Last logon
18	145527	0	1	
19	145527	0	1	
3	7265	0	1	
1	p0039052	0	1	
2	p0039052	0	1	
1	p0178542	0	1	
- Bottom Status:** 0 of 6 selected, page navigation [ 1 - 6 of 6 ] ... 1.

Figure 23 Example of a Permission Overview result list

Check the appropriate boxes in the left column to select reports, then use the Revoke Permissions drop-down and button to revoke access permission for the selected reports for selected user types.

#### 3.1.1.6.4. Exporting Activity Overview Files

You can export the Activity Overview lists to Excel files. To do this:

1. Go to the **Home > Activity Overview** menu command.
2. Set the filter criteria to create the desired report.
3. Click **Export**.

The Activity Overview Export page opens, with the currently logged-on user's email address (your email address) in the field.

4. Edit the email address as required, then click **OK**.

The export task is commenced. On completion, an email is sent to the specified email address, with a zipped Excel file attached.

#### 3.1.1.7. The User Settings Page

Each Reportal user has a profile set up at login. The profile holds information about the user's name, email address, preferred language etc.

The user may change his/her user settings at any time. To do this:

1. Go to the **Home > User Settings** menu command, or click on the **User:** field in the upper-right corner of the Reportal window.

The User Settings overlay opens as shown in the figure below.

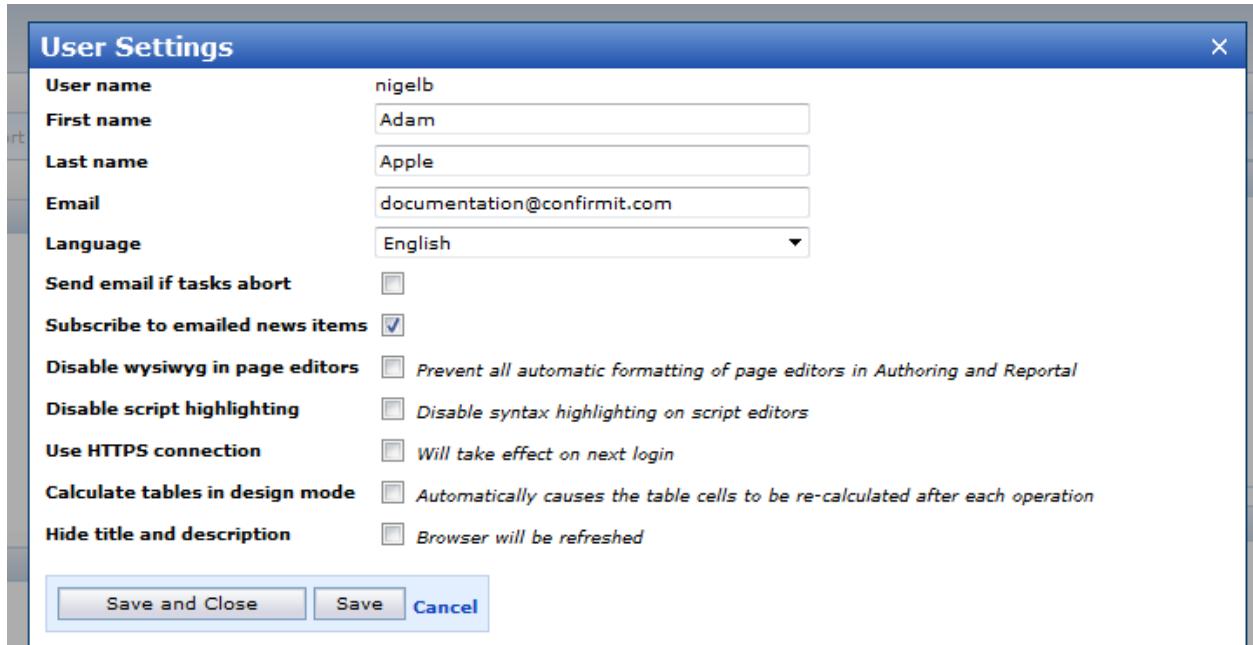


Figure 24 The User Settings page

The properties and fields are as follows:

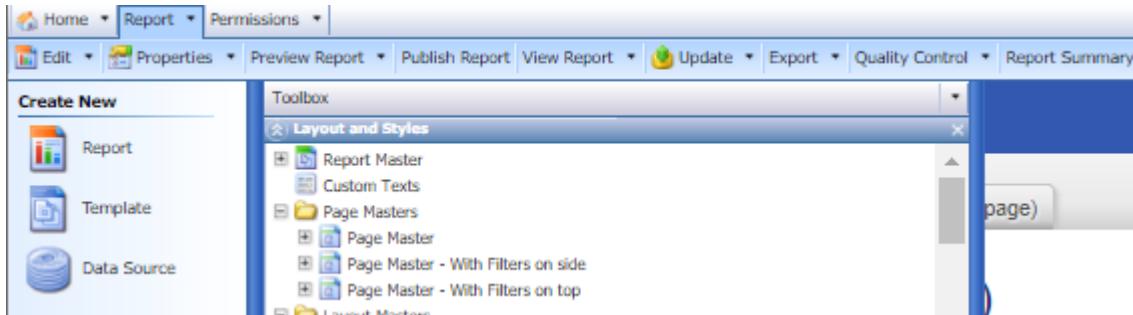
- **User name** – user login name. In combination with a password, this user name will log the user on to the Confirmit application.
- **First name /Last name** – the name of the user. Used mainly for interaction with other users.
- **Email** – the user's email address. This address is used by the Confirmit message system to send messages to the Confirmit users. This is also the default email address where requested report and export files are sent. This field can be left empty.
- **Language** – the user's preferred language. This is the language that will be used when previewing questions and reports. This is important to note when working with multilingual projects.
- **Send email if task aborts** – when a task is aborted (export, import, etc.), a notification will be sent to the user.
- **Subscribe to emailed new items** - when checked, the user will receive news items as emails.
- **Disable WYSIWYG in page editors** – when enabled, this setting will prevent all automatic formatting of page editors in Authoring and Reportal.
- **Disable script highlighting** - a syntax highlighter is enabled by default in all areas where scripts can be written. This means that while scripting you no longer need to remember the functions or look up which properties belong to which classes and which parameters the various methods accept - all these are available at the touch of a button. The highlighter automatically color-codes key words, and provides lists of selectable options under specific conditions while scripting. Check "Disable script highlighting" to disable the syntax highlighting functionality (see The Syntax Highlighter on page 569 for more information).
- **Use HTTPS connection** – users can themselves control whether Confirmit Authoring is to run on SSL (<https://>) or not. Choose this property, log off Confirmit and then log in again to effect the change.
- **Calculate tables in design mode** - check to force the cells in aggregate tables to be recalculated automatically after each editing operation. As each update may take some seconds, the user may wish to save time by updating tables manually once several changes have been made; in this case leave the box un-checked (default setting). In the Table Designer page a message will then be displayed to inform the user that he/she must click the **Refresh** button to update the tables manually after making changes.

- **Hide title and description** - check to hide the title and description bar. This bar is by default located above the Report window and holds the page title towards the left end and the Confirmit logo towards the right. Hiding this bar will provide more space for the active page.

### 3.1.2. The Report Menu

When designing a Reportal report, one of the main methods of control and input that you have is the **Report** menu. This is located in the menu bar, in the upper-left corner of the Reportal window, and gives access to many of the basic Reportal functions. The menu appears in the menu bar when a Reportal report is open.

Note that the settings and selections made in this menu apply only to the open report.

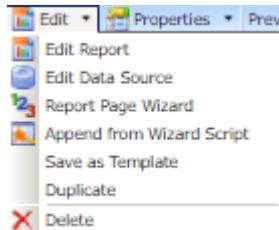


**Figure 25 The Report menu - location and items**

The menu items are as follows:

- **Edit** - the Edit menu contains the commands used while editing the report (see The Edit Menu on page 25 for more information).
- **Properties** - the Properties menu contains commands associated with the report properties (see The Properties Menu on page 25 for more information).
- **Preview Report** - click to preview the report as the user will see it. Preview does not require the report to be published.
- **Publish Report** - to make the report available for external access (so viewers can see it), you must publish the report (see How to Publish the Report on page 121 for more information).
- **View Report** - once the report has been published (see How to Publish the Report on page 121 for more information), select this menu command to open it for viewing. The report is displayed as the user will see it.
- **Update** - the Update menu contains the commands to update the BitStream files and the cache (see The Update Menu on page 26 for more information).
- **Export** - the Export menu contains commands allowing you to export the report to other formats (see The Export Menu on page 26 for more information).
- **Quality Control** - the Quality Control menu contains commands enabling you to check the report for scripting and other errors, and to view lists of any errors that may be found (see The Quality Control Menu on page 27 for more information).
- **Report Summary** - click to display the Report Summary. It contains some general information about the report you have selected so you can ensure that this is the report you wish to work on. The summary page also contains a number of links that allow you quick access to some of the most-used functionality.

### 3.1.2.1. The Edit Menu



**Figure 26** The Edit menu commands

The commands under this menu item are as follows:

- **Edit Report** - if you have selected another function from the Report menu and therefore have a different page open on your display, select this option to open the report for editing (see The Report Page Editor on page 96 for more information).
- **Edit Data Source** - opens the data source editing page (see The Data Source on page 649 for more information).
- **Report Page Wizard** - use the Report Page Wizard to assist you when creating the pages of your report (see How to Create a Report using the Report Page Wizard on page 75 for more information).
- **Append from Wizard Script** - click to append a wizard script to the report (see Using a Wizard Script in an Existing Report on page 93 for more information).
- **Save as Template** - if you have modified the “Layout and Styles” section and you want the modifications to be available as a new template, you can save the report definition as a Template (see Saving a Report as a Template on page 86 for more information).
- **Duplicate** - if you wish to create a report that is to be very similar to an existing report, instead of going through the entire report creation and construction process again you can make a duplicate copy of the existing report (see Duplicating a Report on page 40 for more information) then edit it.
- **Delete** - deletes the project. You will be asked to confirm the operation. Note also that you can delete objects from the report (see Deleting Objects From the Report Toolbox on page 42 for more information).

### 3.1.2.2. The Properties Menu



**Figure 27** The Properties menu commands

The commands under this menu item are as follows:

- **Report Properties** - opens the report's Properties page (see Report Properties on page 109 for more information).
- **Filter Summary** - provides an overview of which filters are used on which pages in the report (see Filter Summary on page 542 for more information).
- **Set Survey Layout** - when editing texts in a report, you can link the report to a Survey Layout in Confirmit Authoring and use the HTML styles from the survey layout (see How to Select a Survey Layout on page 70 for more information).

### 3.1.2.3. The Update Menu



Figure 28 The Update menu commands

The commands under this menu item are as follows:

- **Update BitStream Files** - runs the BitStream file updating task (see BitStream Files on page 132 for more information).
- **Clear Cache** - to improve the performance of the report for the viewers, the report pages are stored in the cache. When a cached report page is shown to a report viewer, the report engine will not query the database to build an updated table and chart, but use the results that are stored on the server. Consequently the report page will load much faster, giving your viewers a better user experience. If the report is updated and you wish to ensure the viewers see the latest information, you can clear the cache (see Report Properties on page 109 for more information).

### 3.1.2.4. The Export Menu

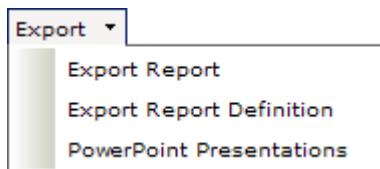


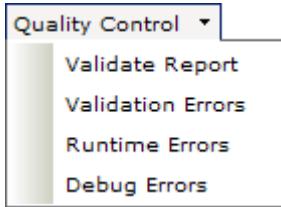
Figure 29 The Export menu commands

The commands under this menu item are as follows:

- **Export Report** - Reportal Designers can export Reportal reports to MS Excel, MS PowerPoint and Adobe PDF (see Exporting a Report on page 594 for more information).
- **Export Report Definition** - you can export and import Reportal report XML files so you can move report definitions between different Confirmit servers (see Exporting and Importing a Report Definition (XML) on page 81 for more information).
- **PowerPoint Presentations** - you can export PowerPoint presentations to other users or viewers (see The PowerPoint Add-in on page 604 for more information).

Note that you can export an individual table directly to Excel by clicking the **Send to Excel** button in the Table Designer page toolbar (see The Table Toolbar on page 158 for more information). This functionality then enables you to open the file in Excel, or save it.

### 3.1.2.5. The Quality Control Menu



**Figure 30** The Quality Control menu commands

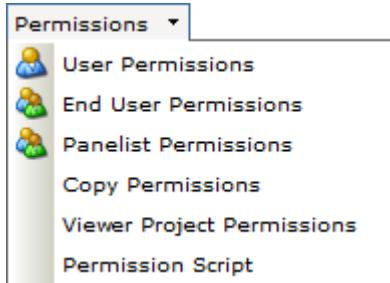
The commands under this menu item are as follows:

- **Validate Report** - a task is run that checks and compiles all scripting used in the report, and also validates other areas in the report. This basically does the same as publishing the report, without actually publishing it.
- **Validation Errors** - opens a page with three tabs, showing the tab listing all validation errors. These can be script compilation errors or other errors generated during publishing/validation of the report or when entering Preview.
- **Runtime Errors** - opens a page with three tabs, showing the tab listing errors generated when users are viewing a report. Within this page you can choose between errors from View and Preview.
- **Debug Errors** - opens a page with three tabs, showing the tab listing debug messages written from within report scripts.

**Note:** Users with the Admin or Pros permissions also have access to the Report History menu item. Refer to the Confirmit Administrator Guide for further details.

### 3.1.3. The Permissions Menu

This menu, located in the main menu bar, contains the commands allowing you to set the various user permissions for the report. Note that the settings and selections made in this menu apply only to the open report.



**Figure 31** The Permissions menu commands

The commands under this menu item are as follows:

- **User Permissions** - opens the User Permissions page, enabling you to set access permissions to the current report for users.
- **End User Permissions** - opens the End User Lists page, enabling you to select and set up end user lists for the current report .
- **Copy Permissions** - once you have set up an "approved" set of permissions for a report or panel, you can copy them directly from one report or panel to another .

- **Panelist Permissions** - opens the Panelist Permissions page, where you set up access permissions for your panelists.
- **Viewer Project Permissions** - here you can grant viewers read access to all your projects. If further permission control is required, this should be implemented in the report permission script.
- **Permission Script** - opens a scripting page in which you can implement permission controls etc. for the report.

## 3.2. Toolboxes

The toolboxes that are located down the left side of the Reportal main window are used in several of the Reportal editors. Through the toolboxes, you access the layouts and styles, the report itself, the data source for the questionnaire you are using, and any filters you may create. The toolboxes are as follows:

- **Layout and Styles** – the layouts and styles that define how the report will look (where on the pages the various elements are positioned, the colors used etc.)
- **Report** – contains the actual report and pages, along with any Parameters, Date Range Lists, Export Packages and Codelibrary Scripts (see Codelibrary Script on page 572 for more information) that may be created.
- **Analyst** - allows the user to create tables and inspect the data without having to first create pages etc. (see The Analyst Toolbox on page 384 for more information). Note that for Analysts, only the Analyst, Data Source and Filter toolboxes are accessible.
- **Data Source** – the questionnaire tree as copied from the Confirmit questionnaire. This is the source of the data that is used to create the report, and contains the questions, blocks, predefined lists, quotas, banners, recordings, categorizations, etc.

Note that the "complete" data source can be fairly complicated. Reportal therefore allows you to elect to display this in Simplified mode. This mode hides all survey logic but retains the questions, folders etc. allowing you to concentrate on the important parts of the data source. To activate the Simplified mode, right-click on the data source (the top item in the Data Source toolbox) and select **Simplified View**. When this view is selected, the text (simplified) is displayed in the Data Source toolbox header. To see the full Data Source, right-click on the data source and select **Simplified View** again to deselect.

- **Filters** – you can create filters to allow viewers to filter the results displayed in the report. Any filters you create will be stored here.
- **Visual Components** – the elements that you can use to build your report.

The toolboxes may be hidden or displayed, rearranged and resized as required. The Toolbox frame can be collapsed to give more space when editing report pages.

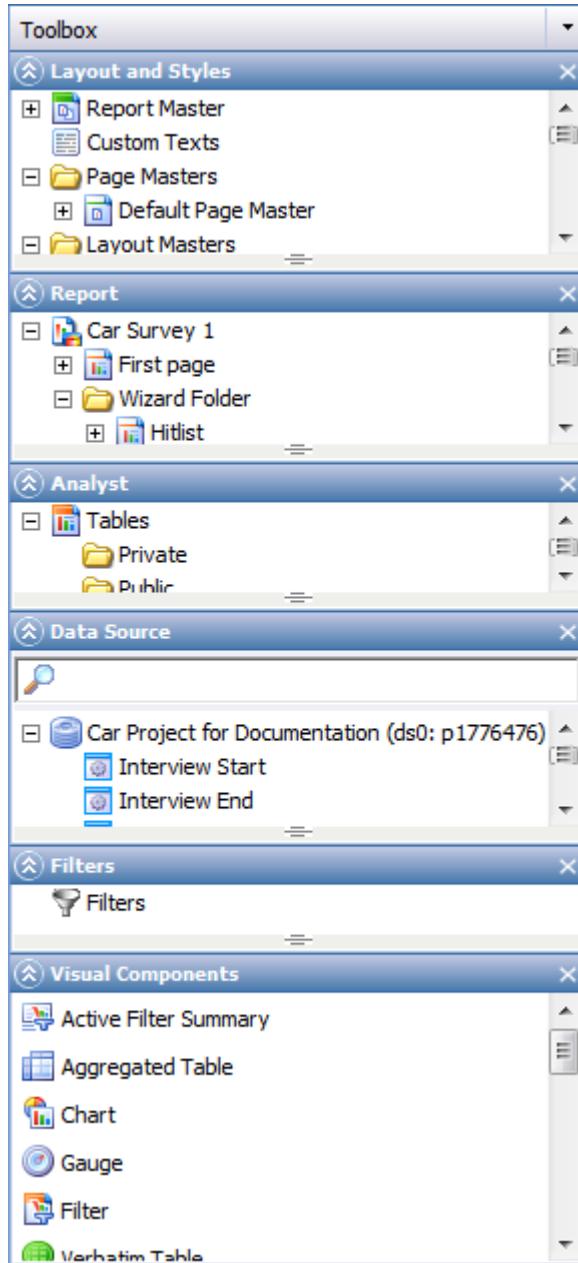


Figure 32 The toolboxes

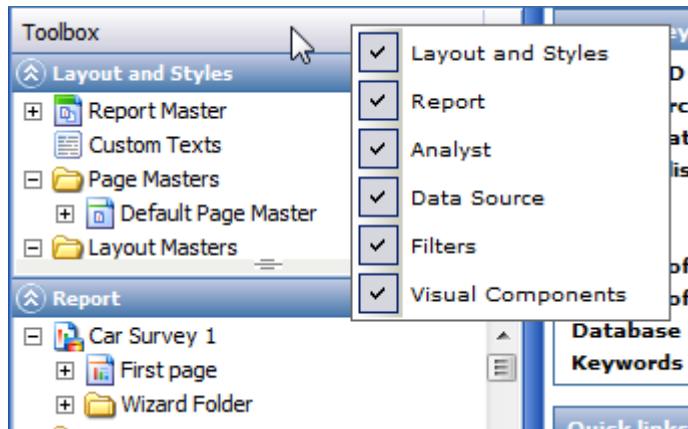
The toolboxes are described in greater detail in the sections as they are used.

### 3.2.1. How to Show and Hide Toolboxes

You may wish to hide toolboxes that you are not currently using to give more space for those toolboxes that you need to use, or you may wish to show toolboxes that you have previously hidden. Proceed as follows:

1. Right-click on the Toolbox header bar or click the down-arrow in the right end of the bar.

The Toolbox selection drop-down menu appears.



**Figure 33 Selecting which toolboxes are to be displayed**

Those toolboxes with their checkboxes checked and shaded are displayed in the Toolbox column.

2. Click on a toolbox name in the menu to toggle the toolbox on and off.
3. Click out of the menu to close it.

**Note:** You can also hide a toolbox by clicking the X button located towards the right end of its header, but you must use the right-click menu to show it again.

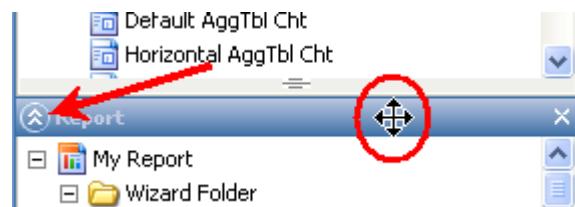
### 3.2.2. How to Collapse a Toolbox

If you do not wish to hide a toolbox but just require a bit more space for a short period, you can collapse it. The toolbox's header will then still be visible in the Toolbox column.

1. Place the mouse pointer into the header of the toolbox you wish to collapse, and click the left mouse button, or click on the double-chevron button at the left end of the header bar (below, arrowed).

The pointer may be displayed as a 4-headed arrow (as shown below, circled) or as a single arrow, depending on where in the header you place it.

The toolbox collapses and the “double-chevron” button changes to point downwards.



**Figure 34 Collapsing a toolbox**

2. To expand a collapsed toolbox, click again in the toolbox header.

### 3.2.3. How to Resize a Toolbox

You can resize the toolboxes both horizontally (as a group) and vertically (individually).

#### Horizontally:

1. Move the mouse pointer over the blue vertical frame on the right side of the toolbox column until the pointer changes to the double-headed arrow.

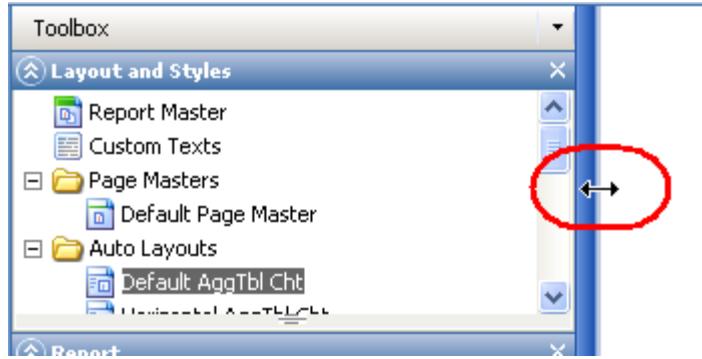


Figure 35 Resizing the toolboxes horizontally

2. Click and hold the left mouse button then drag the frame until the column is the desired width.
3. When the column is the desired width, release the mouse button.

#### Vertically:

1. Move the mouse pointer over the lower horizontal frame of the toolbox you wish to resize, until the pointer changes to the double-headed arrow.

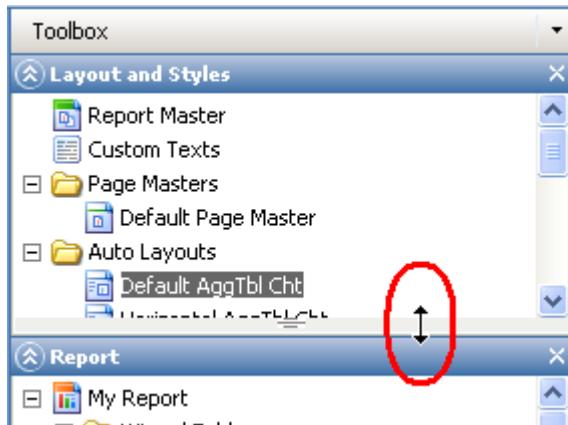


Figure 36 Resizing the Layout and Styles toolbox vertically

2. Click and hold the left mouse button then drag the frame until the toolbox is the desired height.
3. When the toolbox is the desired height, release the mouse button.

#### 3.2.4. How to Rearrange the Toolboxes

You can move toolboxes such that they are in a more logical order for the job you wish to perform. Proceed as follows:

1. Place the mouse pointer into the center of a toolbox header such that the pointer changes to the 4-headed arrow as shown below.

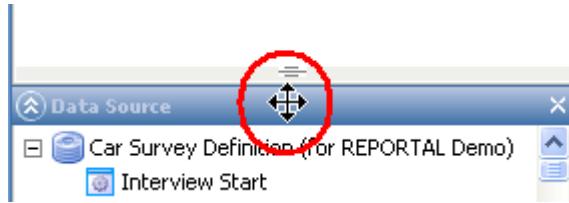


Figure 37 The four-headed arrow pointer

2. Click and hold the left mouse button, and drag the toolbox up or down to the desired location.

As you start to move the toolbox, a shaded rectangle will appear to indicate its current position, as shown below.

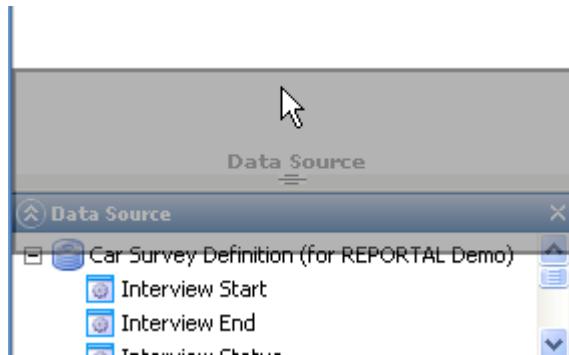
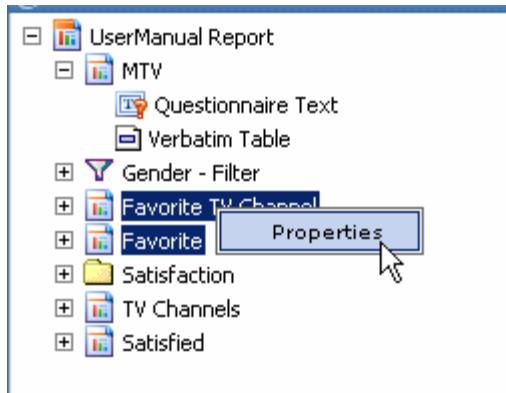


Figure 38 Dragging a toolbox

3. When the toolbox is in the required location, release the mouse button to drop the toolbox into position.

In addition:

- You can edit all the objects in the Layout and Styles, Report, Data Source, and Filters toolboxes. To open an object for editing, either double-click on the object or right-click and choose **Properties** or **Edit** from the menu as appropriate. You can also rename the items in the trees by right-clicking and selecting **Rename**, or by selecting the item and pressing **F2**.
- Some of the items found inside the various toolboxes are nested inside tree structures. Expand and collapse the trees by clicking on the + and – buttons beside the object icons.
- You can enter the Aggregated Table, Chart, Parameter and Hit List Edit modes directly from the Report Toolbox. Either double-click on the item or right-click on it and choose **Edit**.
- You can copy items here and paste them in another report page. You can also copy and paste while editing a report page.
- You can edit the properties of several report pages simultaneously by selecting several items, right-clicking and choosing **Properties**. Only fields that are not object-specific will be displayed.



**Figure 39 Selecting several elements in a toolbox**

- Several of the items inside the toolboxes can be dragged into the various designer pages in Reportal. This functionality is described elsewhere in this manual.

### 3.2.5. The Toolbox Right-Click Menus

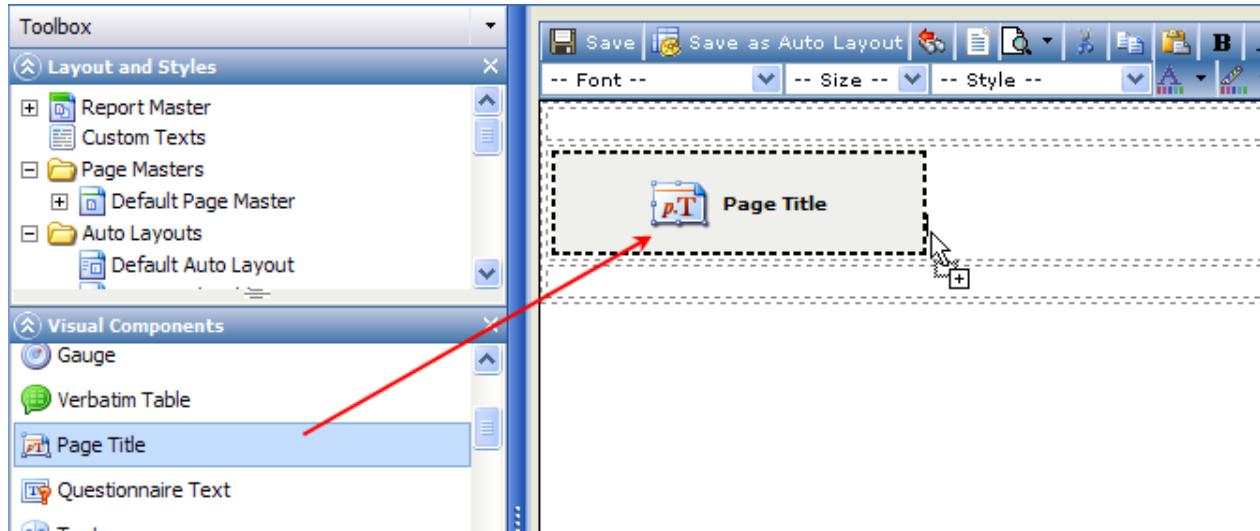
Many of the objects in the various toolboxes have right-click menus, through which you can access and control functionality applicable to those objects. The items and commands available in a particular menu will depend on the type of object to which the menu is attached. For example if you right-click on the report object in the Report toolbox, the resulting menu allows you to perform such operations as view or preview the report, insert pages, edit user permissions, view and edit the report properties etc. Right-clicking on the Date Range Lists object however displays just one command that allows you to add a new date range list.

The toolbox right-click menu commands are referred to in the procedures where they are used.

## 3.3. Drag-and-Drop Operations

In Confirmit Report, you can move most objects to different locations and copy elements from the toolboxes into the report by using the drag-and-drop method. Once the objects are in the desired locations, you can edit them by double-clicking on the object or right-clicking on it and choosing **Properties** or **Edit** from the menu.

When editing Report Masters, Page Masters, Layout Masters and Report Pages, you can drag the elements from the Visual Components toolbox, and drop them into the appropriate table cell in the Page editor.



**Figure 40 Dragging an element from the Visual Components toolbox**

An alternative method for inserting visual components is to right-click in the designer page and select the component under the **Insert Component** menu command.

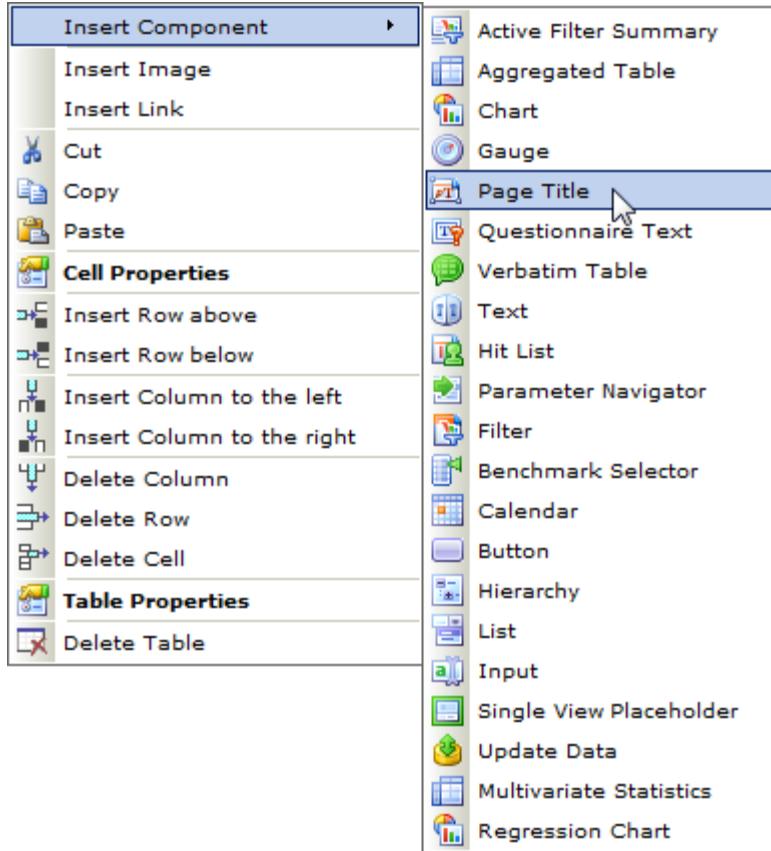


Figure 41 Inserting a component

**Note:** You may experience that long drop-down menus in Reportal are truncated. This is due to a setting in your Internet Explorer, and you will need to change the setting to display the full menus. In your IE, go to Tools > Options to open the Internet Options dialog, then go to the Security tab. Click Custom Level, then scroll approximately half way down the list to "Allow script-initiated windows without size or position constraints" and set this to Enable. Click OK, then restart Internet Explorer.

When creating or editing Report Page and Aggregated Table elements, you must provide the actual data to be presented. To do this, you drag items from the Data Source and drop them in specific destinations in the Page Editor to create links. In the picture below, a question from the Data Source is being dragged into the Questionnaire text element. In this case this will cause the question text from the Age question to be presented in the given location on the report page.

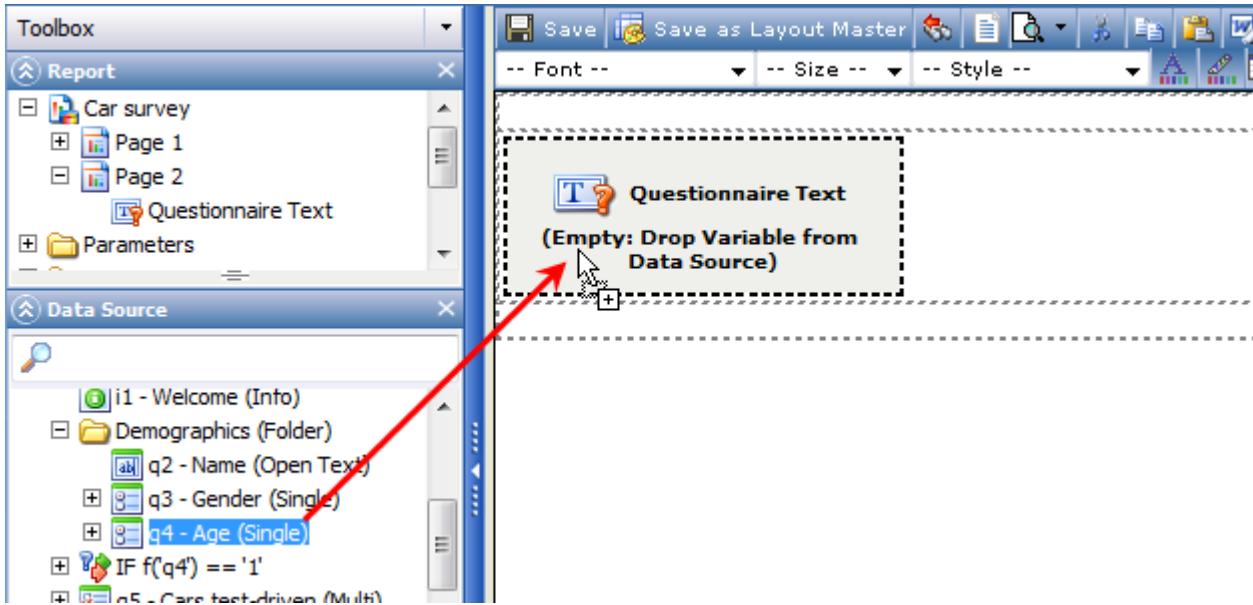


Figure 42 Dragging an element from the Data Source

In the figure below, a question from the Data Source is being dropped into the rows section of an aggregated table. In this case, the Age data will be displayed in the table rows.

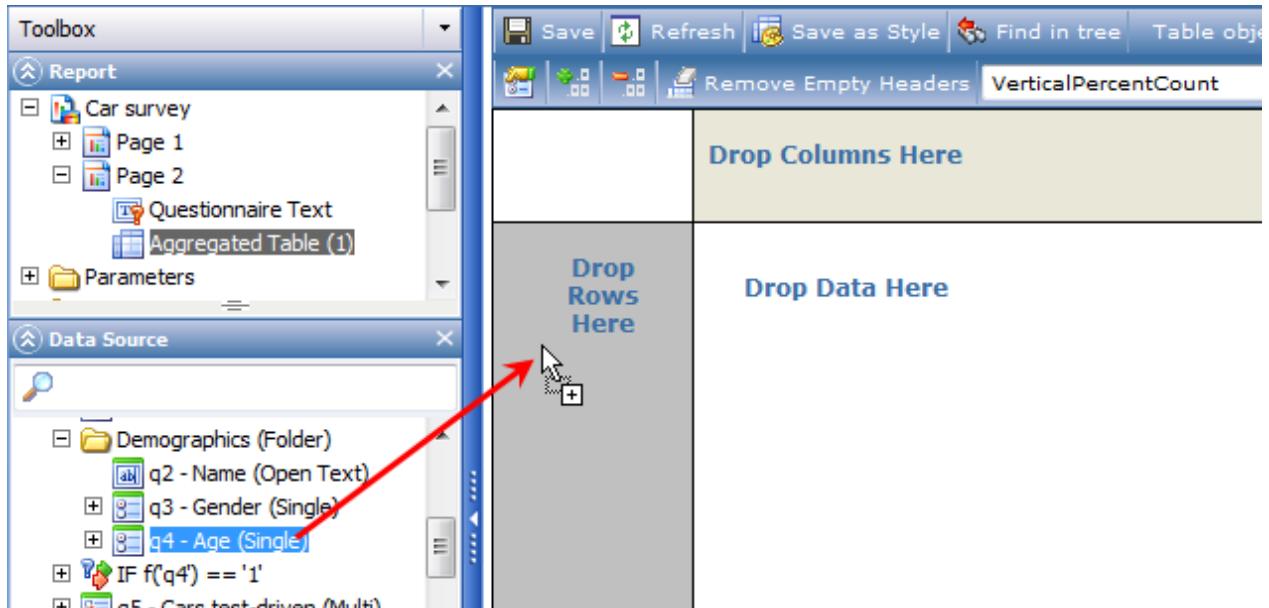


Figure 43 Dragging a question into an aggregated table

### 3.4. Property Sheets

Most objects in Report have a wide range of properties and settings that you can customize by using the property sheets. To open the property sheets, right-click on an object and choose **Properties**, or double-click on the object. The property sheet will always display the type and name/title of the active item. Below is an example of the properties available in the Chart Designer page. Note that the chart also has Advanced Properties, accessible by clicking the **Advanced Properties** button in the toolbar (see The Advanced Properties on page 364 for more information).

Whenever you change a property away from its default setting, the property will be given a yellow background so it is easily identifiable.

Detailed explanations of the Table and Chart properties are given in the Table Designer and Chart Designer chapters respectively.

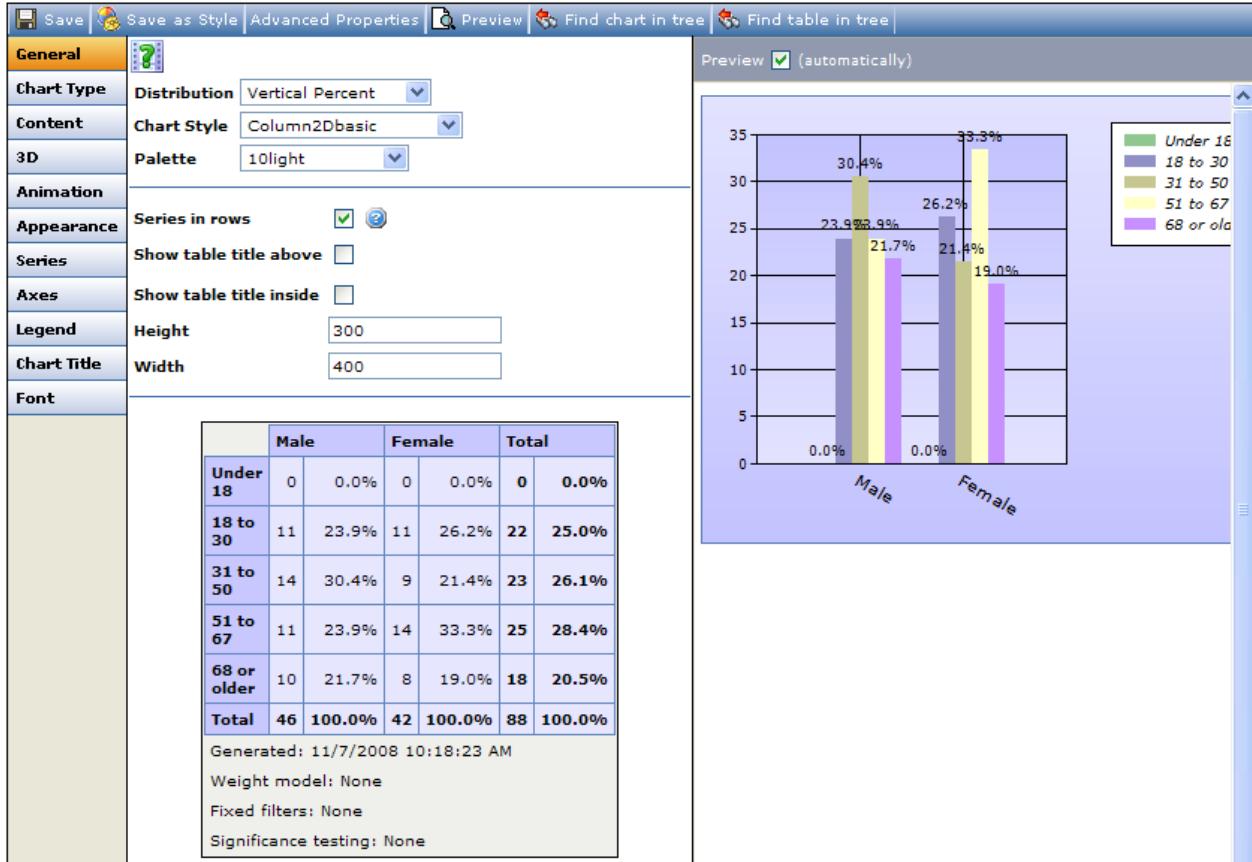
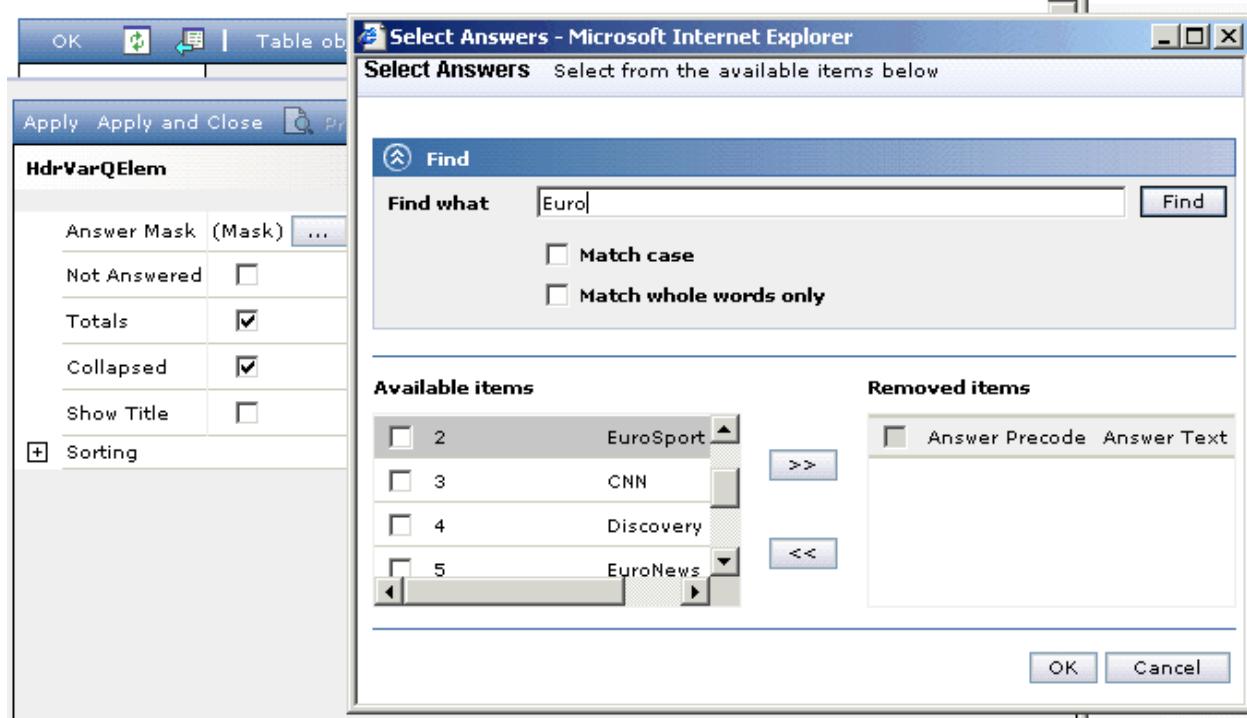


Figure 44 Chart properties

Some property sheets contain ellipses buttons. Click this type of button to open a pop-up window to display additional properties, for example masks or filters.



**Figure 45 Answer mask property window**

Similar pop-ups are available to help you accomplish many of the tasks in Reportal, such as picking dates and colors and adding an item to a collection.

### 3.5. Searching in Lists

Within Confirmit Reportal, where lists are displayed (for example of reports, templates, projects to use as data sources etc.) these lists may be extensive. Search functionality is therefore available in the list page. All of the search lists function in the same fashion and have similar search options.

The picture below shows an example of the layout of the search options for the Report List page. In this case the calendar has been opened.

Report Number	Report Name	Created Date	Keywords	Created By
32970	World Cup Demo Data	12/16/2014		
68897	Confirmit V17.5 Reportal Features	10/25/2014		
73958	Parameter folder	3/5/2014		
73945	3 blank pages	3/4/2014		
97959	Instant analytics report on survey [p1837398806]	7/25/2014		
73957	Parameter folder	3/5/2014		
95207	Copy of Project X	6/10/2014		
97991	Instant analytics report on survey [p802109640]	7/28/2014		
55959	Documentation Survey 2011	11/10/2011 11:57:19 AM		
86139	Project X	12/16/2013 10:21:21 AM		

**Figure 46 Example of the Report List search functionality**

In the Report List page you can search by Report Number, Report Name, by the date the report was created, by any keywords that have been added to the report, by the name of the person creating the report or the company. In addition, you can select to display only reports where the report name starts with a particular letter. When searching by Report Name, a wildcard is automatically added after the text you enter. Use \* as wildcard if you wish to search for reports with names ending with a particular string, for example “\*satisfaction survey”, which will give both “customer satisfaction survey” and “employee satisfaction survey”.

For Report Number and creation dates (“Created Date”), you can select the operators: Less than, less than or equal to, equal to, greater than, and greater than or equal to.

When searching for keywords, you can type in multiple keywords separated by a semi-colon, for example “keyword1;keyword2;...” etc. Keywords are set for a report in the Report Properties page General tab (see The Report Properties > General Tab on page 110 for more information).

Your search may produce several active links. Click on a report name to open the report ready for editing. Click on the drop-down button to the right of the report name to open the report menu (see The Report Menu on page 24 for more information). Note that this drop-down menu does not include the Properties command - you must first open the report before you can access its Properties page.

If your search returns more items than can fit on one page, use the Back and Next page arrows to switch between pages and browse through the list. The default number of items displayed is set to 100. You can change this setting to 50, 25, and 10. To sort the list by one of the columns, click on the column header. An arrow within the header indicates in which direction the list is sorted, ascending or descending.

In this list, you can select one or more items and delete them by clicking the **Delete** button at the top of the list (see Deleting and Undeleting Reports on page 39 for more information). To select all the items, click in the checkbox at the top of the list next to “Report number”.

## 3.6. Filtering The Report List

You can filter the Report List by report type by selecting the required report type from the **Show:** drop-down menu in the top right corner of the list. When the default **All Reports** value is selected, the Report List is not filtered, i.e. reports of all types are shown in the report list. The following report types are available:

- **Report** - Standard Report reports
- **Instant Analytics** - Instant Analytics reports (see Instant Analytics on page 390 for more information)

The picture below shows the filter menu in the Report List page.

Report Number	Report Name	Created Date	Key
97991	Instant analytics report on survey [p802109640]	7/28/2014 9:56:25 AM	
97959	Instant analytics report on survey [p1837398806]	7/25/2014 3:09:41 PM	Ilyichov, Alexander
95207	Copy of Project X	6/10/2014 4:16:45 PM	Ilyichov, Alexander
86139	Project X	12/16/2013 10:21:21 AM	Ali, Faraz
73958	Parameter folder	3/5/2013 8:19:14 AM	Ilyichov, Alexander
73957	Parameter folder	3/5/2013 8:14:32 AM	Ilyichov, Alexander
73945	3 blank pages	3/4/2013 9:09:03 PM	Ilyichov, Alexander
68897	Confirmit V17.5 Reportal Features	10/25/2012 10:45:34 AM	Watts, Paul
55959	Documentation Survey 2011	11/10/2011 11:57:19 AM	Apple, Adam
32970	World Cup Demo Data	12/16/2009 1:40:02 PM	Watts, Paul

Figure 47 The Report List filter menu

### 3.7. Deleting and Undeleting Reports

When you no longer require a report, you can delete it. To delete a report:

1. Go to the **Home > Report List** menu command.  
The Report List page opens, listing all the reports to which you have access.
2. In the list, find the report that you wish to delete, and click in the box at the left end of the report's row in the table to select it.
3. Click the **Delete** button above the list.

The screenshot shows the 'Report List' interface. On the left, there's a sidebar with 'Create New' buttons for Report, Template, and Data Source. The main area has a toolbar with 'Delete' and 'Search' buttons. A table lists reports with columns for Report Number, Report Name, Created Date, and Created By. The first report in the list, 'Copy of Import of Recoding Report' (ID 917), has its checkbox selected. The 'Delete' button is highlighted with a cursor. The top right corner shows the Confirmit logo and the user 'Adam Apple'.

Report Number	Report Name	Created Date	Created By
<input checked="" type="checkbox"/> 917	Copy of Import of Recoding Report	05/11/2009 10:23:10	Apple, Adam
<input type="checkbox"/> 916	Import of Recoding Report	05/11/2009 09:36:23	Apple, Adam
<input type="checkbox"/> 903	Car Survey (Optimized)	02/11/2009 12:59:01	Bennett, Nigel

Figure 48 Deleting a report from the Report List

4. Confirm the deletion.  
The selected report is deleted from the Report List.

**Note:** The report is flagged as deleted and is no longer visible in the Report List. However it is not irretrievably removed; within 30 days since the deletion date it can still be "undeleted" if you later find you need it. After 30 days, the report will be hard-deleted , and the user will then no longer be able to undelete it.

To undelete a report that has previously been deleted:

1. Go to the **Home > Deleted Reports** menu command.  
The Report List page opens, listing any reports that have been deleted.
2. In the list, find the report that you wish to undelete, and click in the box at the left end of the report's row in the table to select it.
3. In the toolbar above the Report List, click **Undelete**.

This screenshot shows the 'Report List' interface after a report has been deleted. The toolbar now includes an 'Undelete' button, which is highlighted with a cursor. The table lists reports, and the first report ('Copy of Import of Recoding Report') has its checkbox selected. The 'Undelete' button is highlighted.

Report Number	Report Name	Created Date	Created By
<input checked="" type="checkbox"/> 917	Copy of Import of Recoding Report	05/11/2009 10:23:10	Apple, Adam
<input type="checkbox"/> 507	Another test	31/07/2009 10:09:19	Bennett, Nigel

Figure 49 Undeleting a previously deleted report

The selected report is undeleted and returned to the Report List.

## 3.8. Duplicating a Report

If you wish to create a report that is to be very similar to an existing report, instead of going through the entire report creation and construction process again you can make a duplicate copy of the existing report. You can then make the appropriate changes to the copy to give you the second report.

To make a duplicate copy of the report:

1. Go to the **Report > Edit > Duplicate** menu command.

The Duplicate Data Source question box opens.

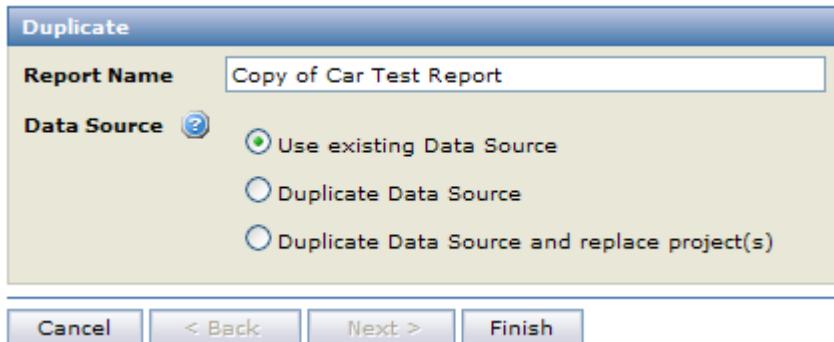


Figure 50 The Duplicate Data Source dialog

2. Edit the name of the new report as required.
3. Select if or how you wish to duplicate the data source. The options are:
  - o **Use the existing data source** for both the original and the new report. The duplicated report will share the same Data Source definition with the original report. Therefore if you later change the Data Source of either of the reports in any way, this will affect all other reports using this Data Source.
  - o **Duplicate the data source** such that the original and the new report have separate but identical data sources. If you later change the Data Source of one of the reports, this will not affect the other report.
  - o **Duplicate the data source and replace project** adds a step to the procedure, allowing you to change the project(s) referenced within the data source.
4. Click **Next** or **Finish** as appropriate.

If you selected Use Existing Data Source or Duplicate Data Source, the task runs.

If you selected Duplicate Data Source and Replace projects, the Project Mapping page opens. Here you can find and select the project(s) you wish to use. In the event the list is extensive you can use the search criteria fields across the top of the list to narrow the search. The search list functionality is explained in Search Lists. You can also sort the columns by clicking on the column headers.

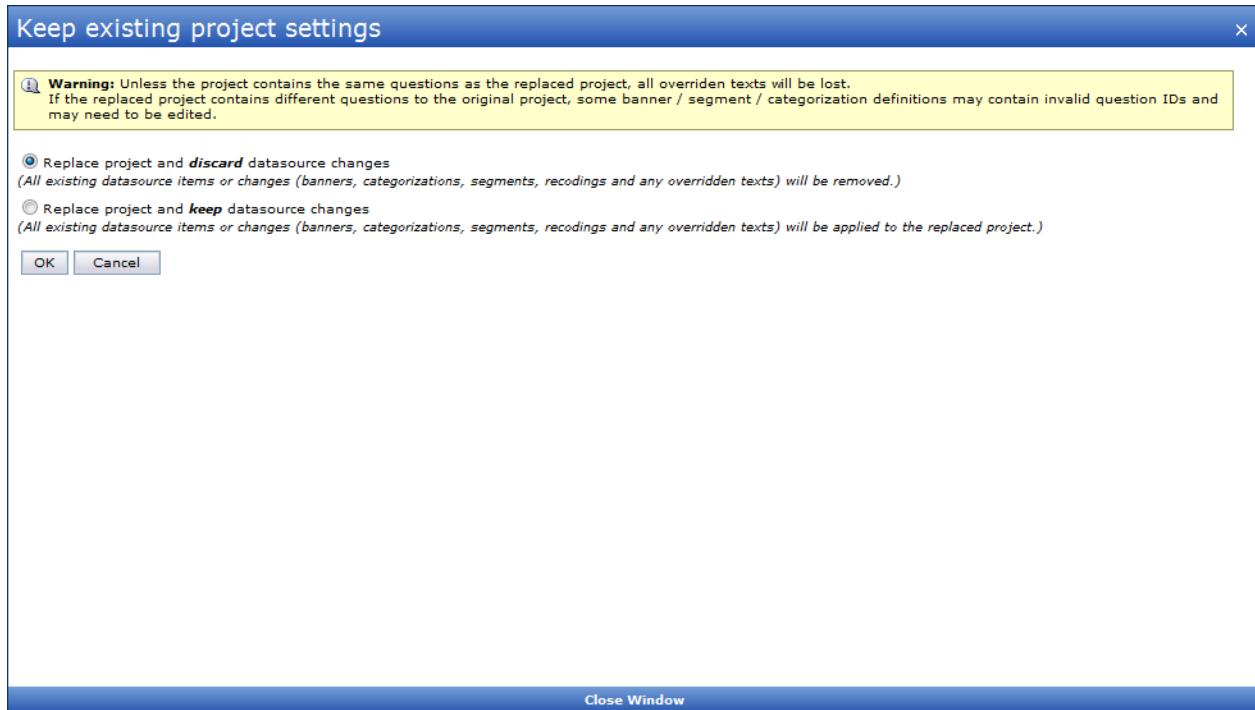
The screenshot shows a 'Project mapping' interface. On the left, there's a 'Project mapping' section with 'Old Project ID' (p2661497) and 'New Project ID' (p2661497) fields, and a 'X' button. To the right is a 'Search for projects' section with a search bar, a 'Reset' button, and a dropdown menu set to 'Projects only'. Below these are two tabs: 'Projects / Panels' (selected) and 'Projects only'. A table lists several projects with columns for ID, Created Date, Created By, and Keywords. The table includes rows for p5111409, p4850516, p4839864, p4675928, p4674541, and p26612294.

**Figure 51 Example of the project mapping page**

- To remove the original project, click the X button beside the New Project ID field. To add a new project, find it in the project list, select it and click the << button.

**Note:** If you choose to duplicate your Data Source, the duplicated report will have an entirely separate Data Source identical to that of the original report. If you later change the Data Source of one of these reports, this will not affect the other data source or report.  
**If you choose to not duplicate your Data Source, the duplicated report will share the Data Source with the original report. In this case if you later change the Data Source of either of the two reports, this will affect the other report.**

- If you choose to replace the project (by selecting different project and clicking <<), a selection dialog opens.



**Figure 52 The Keep existing project settings selection dialog**

Here you are presented with the option to keep or discard any changes made in the Data Source texts, banners, segments, recodings, and categorizations.

7. Make the required selection and click **OK**, or **Cancel**.
8. Click **Finish**.

A task is initiated. During the task processing, a copy of the data source used in the report will be added to the Data Source list.

9. When the task is completed, click **OK**.

The Report List opens, with the new report (the duplicate) at the top of the list. The new report will be named as specified in the Report Name field in the Duplicate question box.

**Note:** If a report contains uploaded PowerPoint 2007 presentations, these presentations will be duplicated if the report is duplicated. All references to Report objects (such as pages or tables) in each presentation will be updated to refer to the appropriate objects in the new report.

### 3.9. Deleting Objects From the Report Toolbox

To delete an object from the report, select it and press the <Del> key on your keyboard, or right-click on the object and select **Delete** from the drop-down menu. This will soft-delete (remove) the selected object from the report.

**Note:** Soft-deleted objects are included in report definition exports and imports.

Note however that after this initial deletion operation the object is not "irretrievably deleted"; it is flagged as having been deleted from the report, and is both hidden from view and logically removed from the report. If you later find that you need the object you can "Undelete" it, or if you wish to permanently remove it you can do so.

To undelete an object:

1. In the Report toolbox right-click the report folder and choose **Show deleted** from the menu.

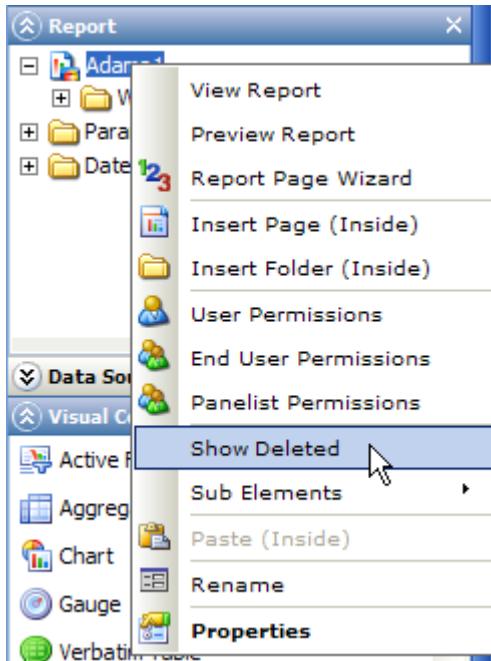


Figure 53 Selecting **Show Deleted** from the report's right-click menu

The toolbox is refreshed and any soft-deleted objects reappear grayed-out.

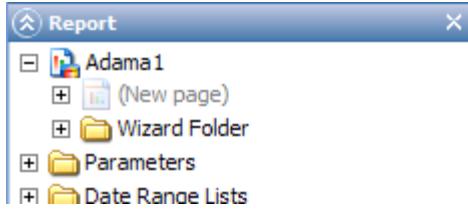


Figure 54 Deleted objects "shown"

2. Either right-click on the required soft-deleted item and choose **Undelete** from the menu, or access the **Properties** page for the deleted object you want to recover and uncheck the **Deleted** flag.

To permanently delete an object, delete it again from its "Show Deleted" state.

**Note:** If an object is already marked as deleted, and you delete it again from the Show Deleted state, it will be deleted permanently, and cannot then be recovered.

The following objects can be "soft-deleted" from the Report toolbox:

- Folders
- Pages
- Filter Pages

### 3.10. Filtering the Data Source Toolbox

You can filter the Data Source toolbox such that it only shows questions of a specified type. This functionality is intended to simplify the search for particular questions when you need to edit the data source of a large project.

1. In the Data Source toolbox, right-click on the root item (the top data source node) to open the drop-down menu.
2. Select **Data Source filter**, then click on the question type you wish to see.

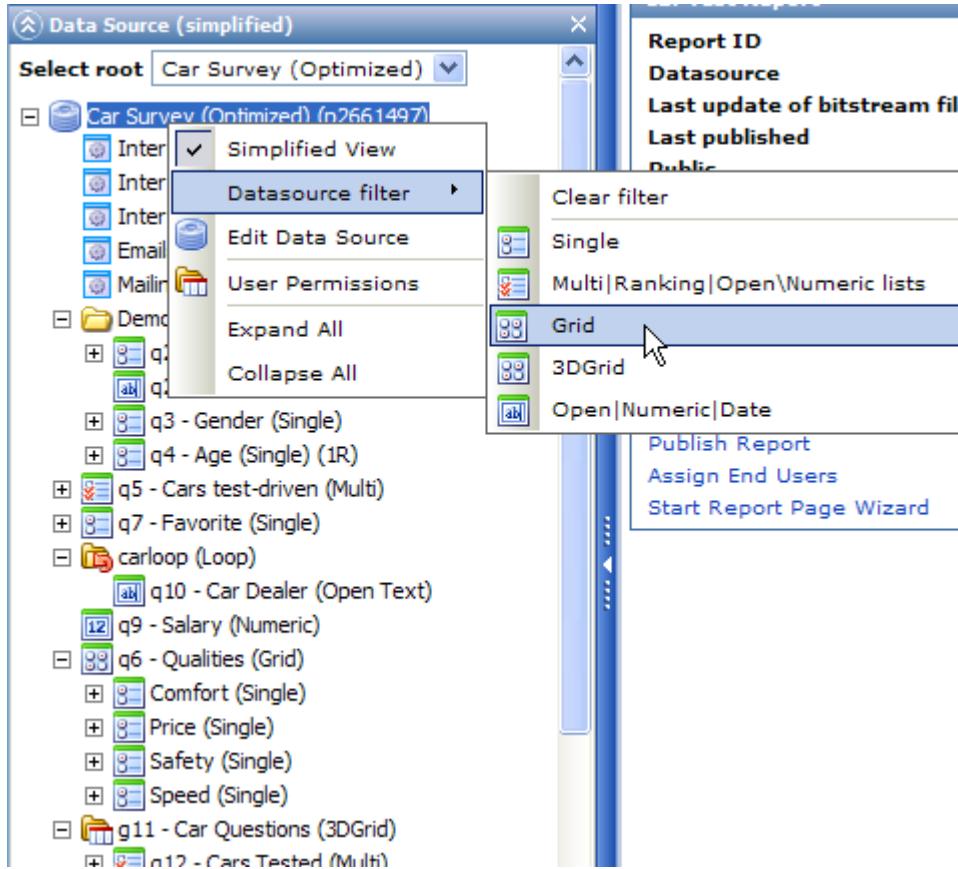


Figure 55 Using the Data Source Filter

The data source list will now be filtered to display only questions of the selected type - in this case Grid questions. The (filtered) item in the toolbox title area indicates a filter is applied.

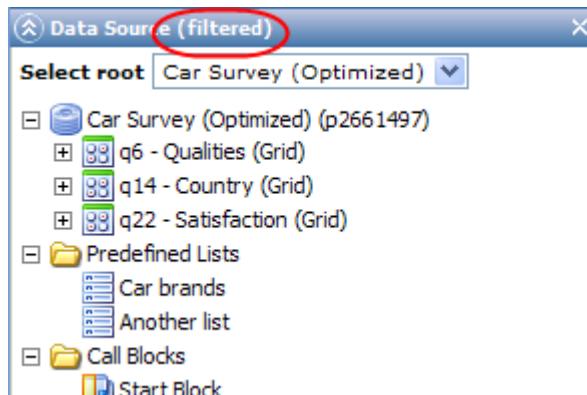


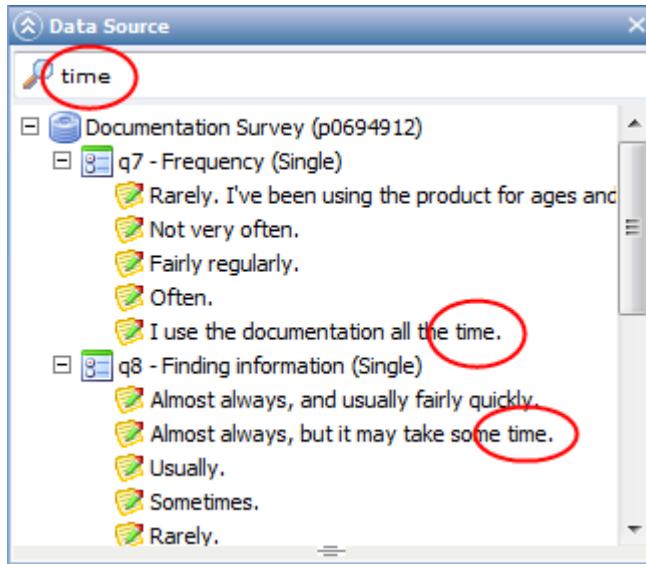
Figure 56 Example of a filtered data source

To remove the filter, go to the same menu again but select Clear filter.

## 3.11. Searching in the Data Source Toolbox

In the event your data source is large, you can conduct a search in the toolbox to find specific character strings (words, figures etc.). A substring search is performed, so it will match any survey node containing the search text. You do not have to press enter after entering the search text; it will automatically commence the search once you stop typing in the search field.

To run a search, type the text string you are looking for into the search field at the top of the Data Source toolbox. A short time after you stop typing, the search will run and any nodes in the data source that do not contain the search string will be removed, leaving only those nodes which contain the string. In the example below, once the search is run only the two nodes containing the word "time" will remain in the list.



**Figure 57 Example of a data source search**

Every node in the data source survey will be searched, with the following limitations:

- 3D-grid answers will not be searched.
- If a multi-project data source is used, the search will only be performed on the currently selected datasource.
- The search is performed on the questionnaire tree only (that is, banners, categorizations, etc. are not returned in the search).
- Conditional nodes will not be found, however a condition's children will be searched. So for example if you search for "if then", the conditional nodes in the source will not be returned.
- If the search matches a folder name, it will not look further down into that folder. So if by coincidence you are looking for a question that lies inside a folder which has the same name, you will only find the folder; you will have to expand the folder "manually" and look for your question.

## 3.12. Editing Groups of Sub-Elements

The right-click menus for the Report node, folders and pages includes the **Sub-Elements** command. This command allows you to edit the settings for groups of elements simultaneously.

Any changes you make will be applied to all instances of the elements that are contained within the selected object. For example, if you right-click on the Report node and select **Sub Elements > Tables**, any changes you make to the properties will be applied to all the tables in the report. If you right-click on a page and select **Sub Elements > Tables**, any changes you make to the properties will be applied only to the tables on that page.

**Note: Changes performed via these menu commands will clear any style changes previously made to the specified elements.**

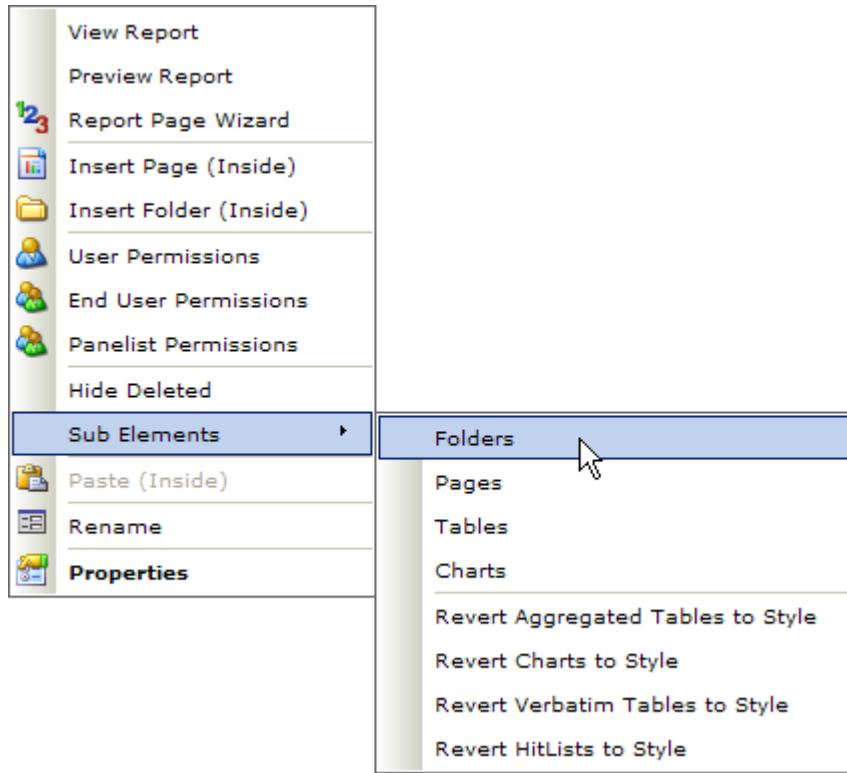


Figure 58 The Sub Elements menu

- The **Folders**, **Pages**, **Tables** and **Charts** commands open the Properties pages for those items.
- **Revert Aggregate Tables to Style** - opens a window in which you can select a table style. Click **Save and Close** to apply the selected style to all instances of aggregate tables in the specified object.
- **Revert Charts to Style** - opens a window in which you can select a chart style. Click **Save and Close** to apply the selected style to all instances of charts in the specified object.
- **Revert Verbatim Tables to Style** - opens a window in which you can select a verbatim table style. Click **Save and Close** to apply the selected style to all instances of verbatim tables in the specified object.
- **Revert Hit Lists to Style** - opens a window in which you can select a hit list style. Click **Save and Close** to apply the selected style to all instances of hit lists in the specified object.

## 4. Getting Started: Creating a Report Using Report Wizard

Confirmit Report enables you to tailor your reports to achieve any look-and-feel. The reports however do not have to be customized. This chapter demonstrates how you can build a standard report using predefined settings, styles, layouts and templates already stored in Confirmit Report.

The figure below shows an example of a standard predefined Report Page.

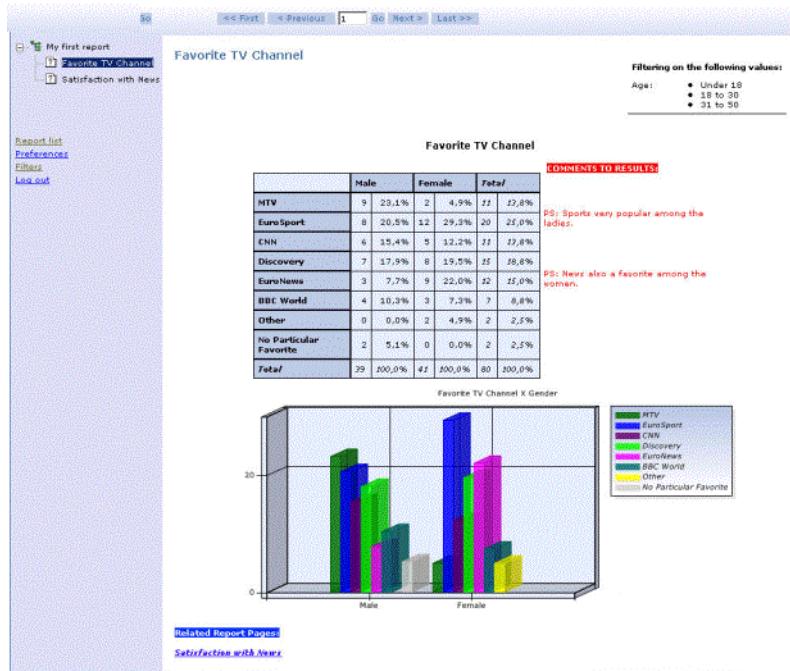
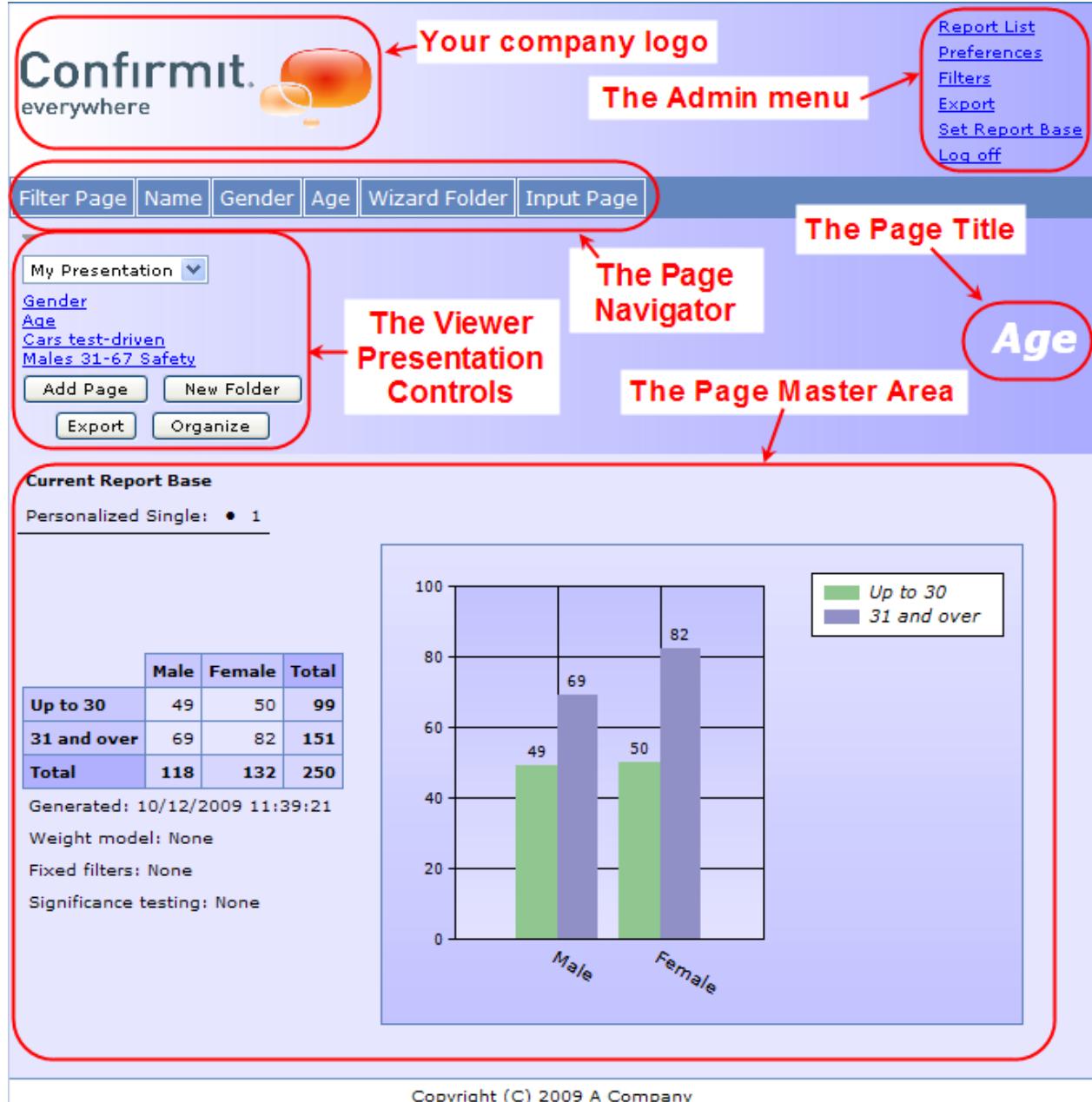


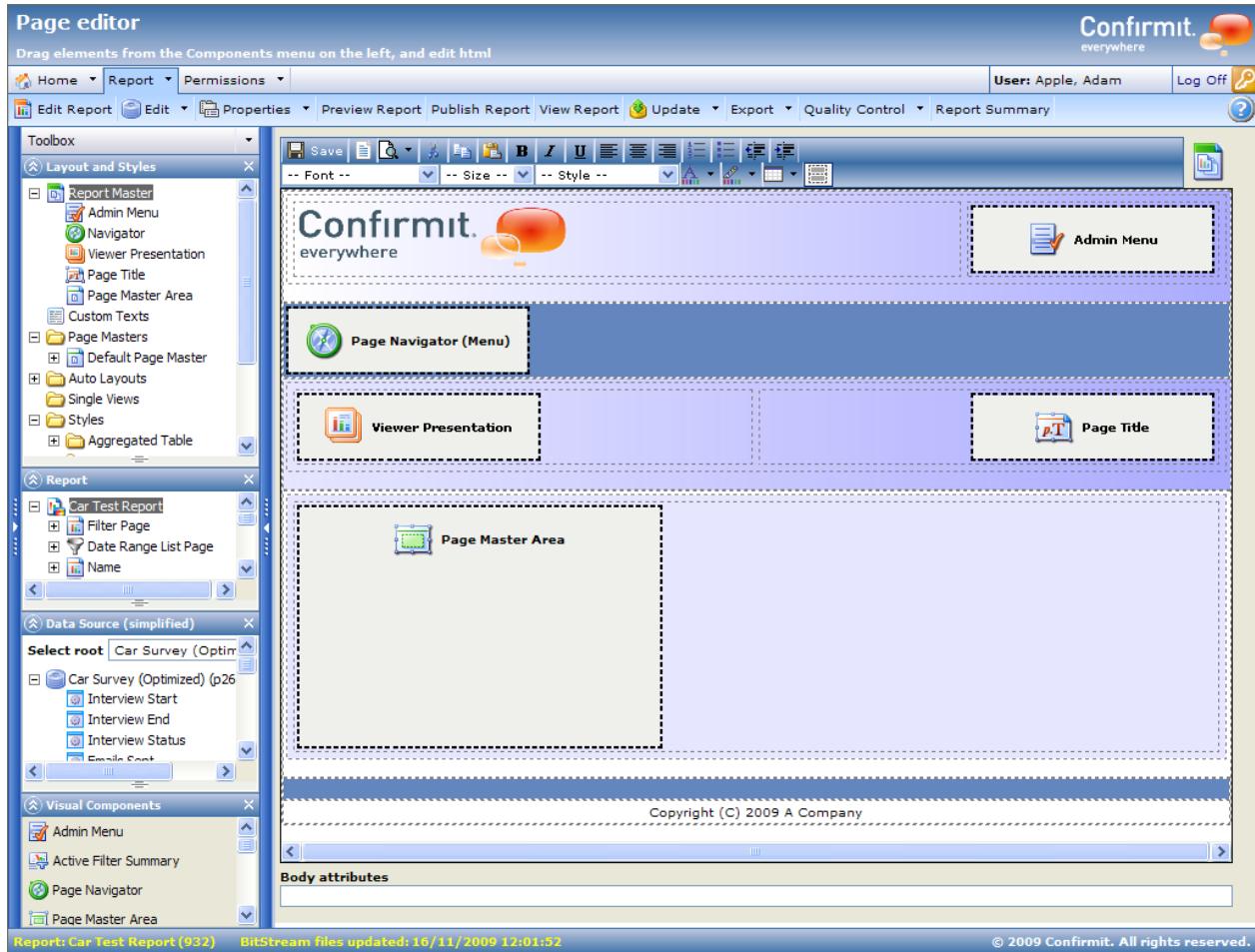
Figure 59 Standard Report Page

The various elements on the page are as follows:



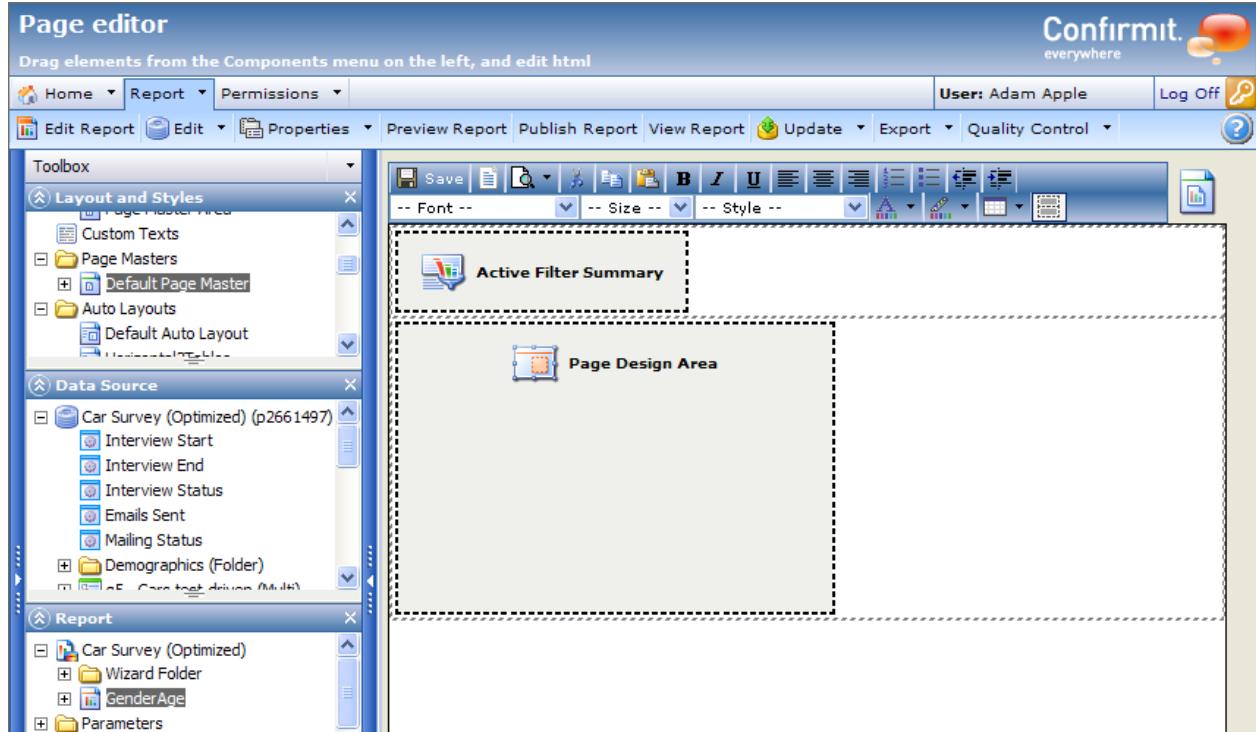
**Figure 60 Standard Report Page with identifiers**

The page as shown in the figure above is based on the Report Master shown below.



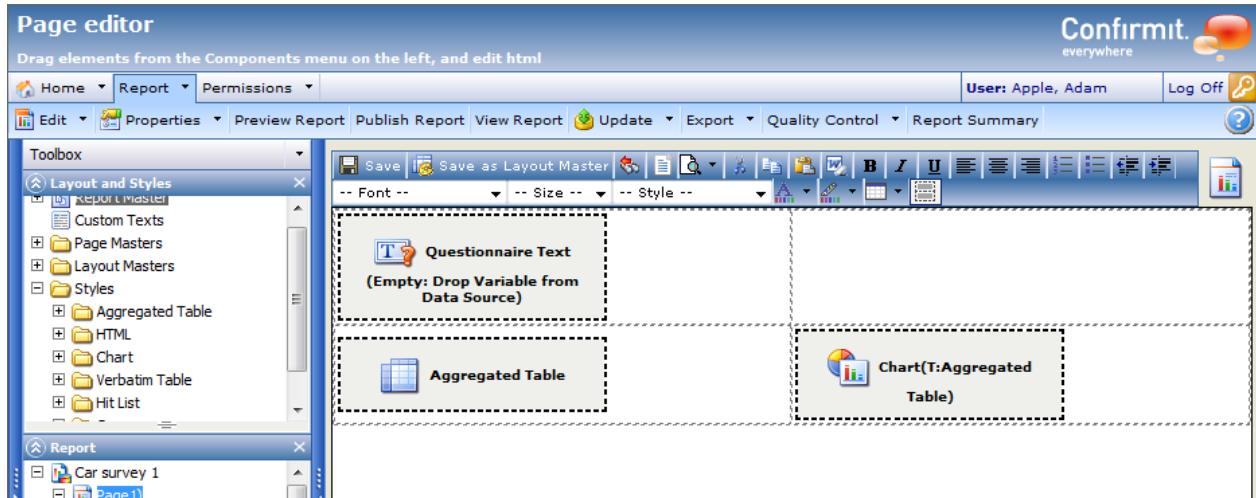
**Figure 61 Example of a Report Master**

The figure below shows the “Page Master Area,” which is a part of the Report Master. To open the Page Master page editor, double-click on the appropriate item under the Page Masters folder in the Layout and Styles toolbox.



**Figure 62** The Page Master area of the report page

The figure below shows an example of the “Page Design Area,” which is a part of the Page Master.



**Figure 63** Example of the Page Design area for a report page

## 4.1. How to Create a Standard Report

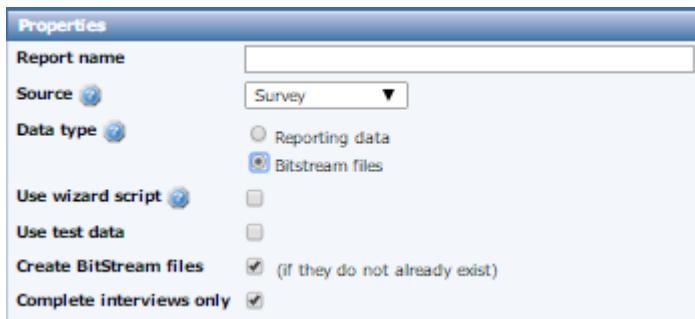
The following pages describe how to produce a standard published report using Report's default settings. For specific details on how to customize and alter reports and report pages, refer to the Report Page Editor, Text Elements, Table Designer, Chart Designer and Templates chapters.

**Note:** When creating a report based on a professional panel, the panel must have one or more BitStream variants (see The Report Properties > General Tab on page 110 for more information).

**Note:** The report used in the following example is based on a fictitious survey that intends to discover respondents' car preferences.

1. On the Reportal main page, click the **Create New > Report** button.

The first step of the Report Wizard opens.



*Figure 64 Specify the report name and source*

2. On this page, type the report name into the Name field and select the source for the data to be used in the report.

**Note:** The Report name can be a maximum of 64 characters long.

You can select one of your Confirmit projects or a data source (a collection of one or more projects), an existing hub or a panel or you can select to use external data. Uploading external data allows you to take data from a different system and use that data in your report.

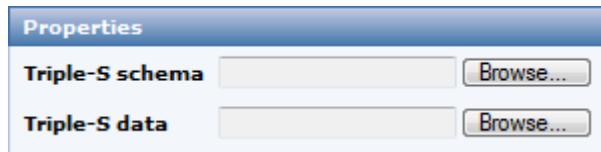
3. Select the data type. This option is available when a survey or a panel have been selected as a source in Step 2. There are the following data types:
  - **Reporting Data** - is a new data type, which uses the same high-performance, scalable technology used in SmartHub and will automatically provide near real-time data updates without needing to create recurring tasks (see Using Reporting Data in Reportal on page 140 for more information). It is used by default for new Reports.
  - **Bitstream Files** - is a legacy data type (see BitStream Files on page 132 for more information)
4. You can create your new report based on a scripted wizard (see The New Report Wizard on page 90 for more information). Check the **Use wizard script** box to include another step in this procedure, in which you can select the wizard to be used. This option is only available when the Bitstream Files data type has been selected.

**Note:** When using a Reportal wizard script, Data Sources and external data are not supported in the report creation process. You may only select a Confirmit Project.

5. If you want to base your report on test data or use test data to check your report, check the **Use test data** box. Note that if you are to upload external data then the remaining options are not available. Otherwise -
  6. If the BitStream files do not yet exist or are out of date, leave the **Create BitStream Files** box checked. This option is only available when the Bitstream Files data type has been selected.
  7. If you wish to specify that only completed interviews are used in the report, leave this box checked. This option is only available when the Bitstream Files data type has been selected.
8. Click **Next**.

Step 2 of the wizard opens.

If you have selected to upload external data, then an upload properties box opens.



**Figure 65 The Upload External Data Properties box**

In this case, browse to the files you wish to upload, then click **Next**.

If you have selected a project or a data source, then a list of those available to you opens. Here you can if necessary search for the project or data source(s) you wish to use for this report. Data sources can be Confrimt projects and/or Confrimt panels (see The Data Source on page 649 for more information).

ID	Name	Created Date	Created By	Keywords
p1072152	New open survey	11.08.2011	Apple, Adam	
p1054242	Age survey	10.08.2011	Apple, Adam	
p0841854	Car Survey (Optimized)	22.07.2011	Apple, Adam	
p0813119	Test Copy of Documentation User Survey	22.07.2011	Apple, Adam	
p0840311	Satisfaction Project	22.07.2011	Apple, Adam	
p0806530	Database Designer Test	21.07.2011	Apple, Adam	
<b>p0570973</b>	<b>Documentation User Survey</b>	27.06.2011	Apple, Adam	
p0048368	Holmenkollstafetten 2011	31.05.2011	Apple, Adam	

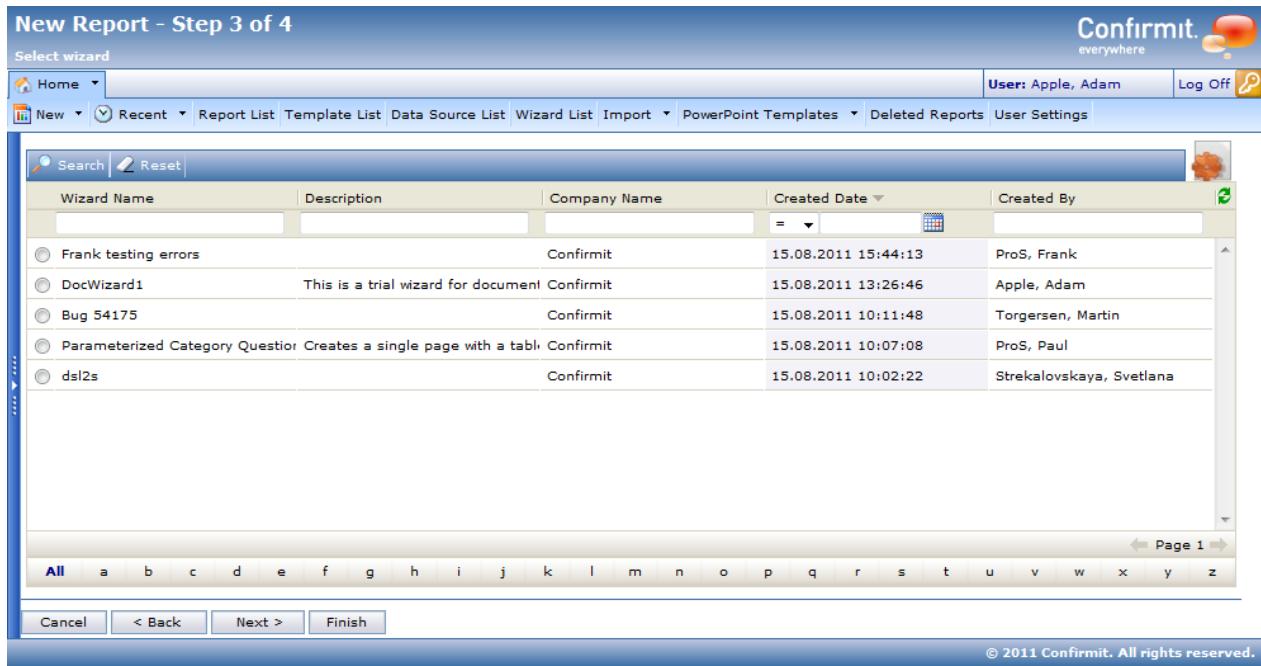
**Figure 66 Finding and selecting the project to use as the data source**

- Using the search functionality as necessary, locate the Confrimt project/panel you wish to use as the data source.

Use the Projects / Panels drop-down to search for particular types of projects and/or panels.

- Select the project you wish to use by clicking the button to the left of the project ID, then click **Next**.

If you have checked the **Use Wizard Script** box, the Select Wizard page now opens, otherwise you go directly to the Select Templates page.



**Figure 67 The Select Wizard page**

11. Using the search functionality as necessary, find and select the wizard you wish to use.
12. Click **Next**.

The last page of the wizard opens. Here you can search for and select a Template for your report. A template is the collection of styles that give the report its look and feel. Reportal offers a few suggestions but you can also create your own if desired.

**Note:** Every time you make a change to a page master, a table or chart layout etc. the template will change. If you wish to create several reports that look the same; i.e. use the same template, the easiest method is to create the first report and set it up as you wish, then duplicate that report (see Duplicating a Report on page 40 for more information) and change the data source (see How to Replace a Data Source on page 654 for more information).

Template Number	Template Name	Created Date	Created By
7135	Import of Default template	23.01.2014 14:14:06	Profs. Marina
6428	Import of Public C553 - Default Blue	24.05.2013 16:01:55	Profs. Ingvar
5026	Import of Import of Default template	25.04.2013 11:46:18	Profs. Viktoriya
4818	Public Template Jan 2013	03.01.2013 17:26:52	Profs. Paul
3732	Import of Default template	08.11.2012 13:25:43	Strelakovskaya, Svetlana
3686	Public C553 - Default Blue	11.10.2012 11:16:32	Profs. Elmer
1291	Import of Import of Public Light Grey Template	26.07.2012 11:23:24	Liposky, Anita
1203	Import of RT008 v1.2	06.07.2012 11:30:18	Profs. Paul
1126	Import of Import of Import of Default template # 2a	18.06.2012 10:01:31	Simeunovic, Daniel
1	Default template	02.05.2012 16:28:27	administrator

Figure 68 Selecting and previewing the template

Click the **Preview** button at the right end of the template row to preview the template in a new window before applying it.

- Once you have selected a Template, click **Finish** to complete the procedure and open the report Page Editor.

**Note:** You can continue to build the report with the Report Page Wizard. If you wish to use this facility then check the Continue... box before you click Finish.

## 4.2. How to Create Pages in the Report

**Note:** The report used in the following example is based on a fictitious survey.

The Report Page Editor is where you design the layout and the contents of your reports (see The Report Page Editor on page 96 for more information)

Your new report (named Car Test Report in the example below) is now displayed in the Report toolbox. If you did not check the **Continue with Report Page Wizard** box then the report will be empty and you must add pages.

- In the Report toolbox, right-click on the report name to open the menu and choose **Insert Page (Inside)**.

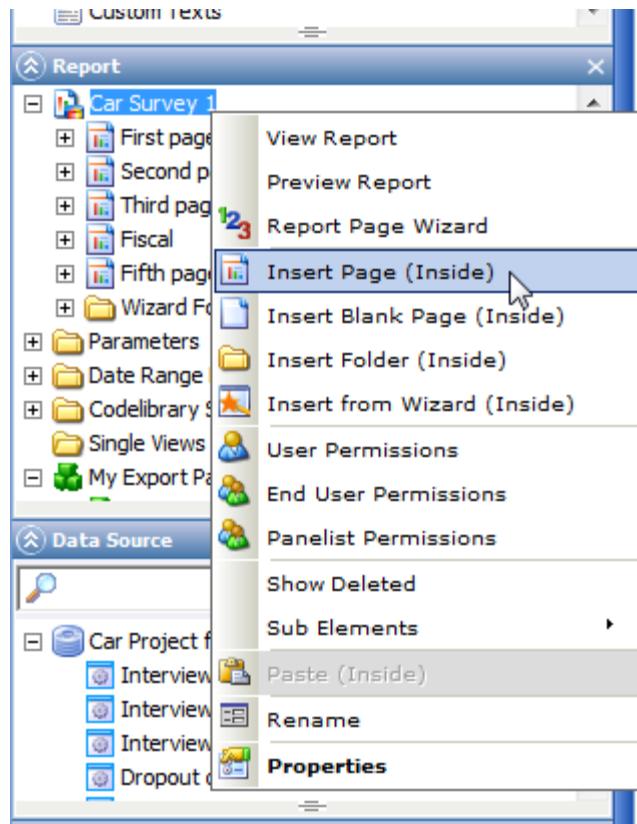


Figure 69 Inserting a page

The Create A New Page selection page opens.

**Choose page type**

**Standard pagelayouts**

**Blank Page**

**From Layout Master**

**Question and response analytics**

**Net Promoter Score**   
Net Promoter Score:  
Creates a page displaying the Net Promoter Score (NPS)\* and category breakdown (Detractors, Passives, Promoters) optionally trended by a selected time period.

**Verbatim Comments**

**Questions Page**

**Response Rates**

**Key driver analysis**

**Impact Table**

**Quadrant Table**

**Quadrant Chart**

**Figure 70 Selecting the new page page**

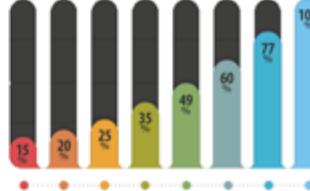
2. Click on a page type to select that type.

Hover the mouse cursor over a page type to see a description of that type of page (see The Page Types on page 57 for more information).

On clicking on a page type, the registration page for that type opens. Note that the registration page will be different for each page type; the options and properties available depending on the requirements for that page type.

**New Report Page**

Creates a page based on one of the available layout masters from the report template, which may contain one or several report component placeholders.



**Page name**

**Page Masters**

**Layout Masters**

**Cancel** **Create Page**

- Type a name for the new page into the Page Name field, select the Page Master, Layout Master and other styles you wish to use, then click **Create Page**.

Note that the fields and options available on the registration page will depend on the type of page selected in (2) above.

**Note:** The page name can be a maximum of 100 characters long.

The new page is created and appears in the report tree in the Report toolbox. You can now set the properties for the page and edit it as required.

#### 4.2.1. The Page Types

When you create a new page in a report, the Choose Page Type page opens. This presents a number of page layout templates that have a selection of often-needed visual components already in place. The options are:

- Blank Page** - this is merely a blank page, allowing you to start from scratch and add whatever components you need.
- From Layout Master** - this creates a page based on one of the available layout masters from the report template. The resulting page may contain any of a number of report component placeholders.
- Net Promoter Score™** - this creates a page displaying the Net Promoter Score™ (NPS™)<sup>1</sup> and category breakdown (Detractors, Passives, Promoters) optionally trended by a selected time period (see The NPS™ Page Type on page 58 for more information).
- Verbatim Comments** - this creates a page with a verbatim table to show comments from one or more open text questions. To display several questions, these must either exist in a parameter or a new parameter can be created through this wizard (see The Verbatim Page Type on page 59 for more information).

<sup>1</sup>NPS and NET PROMOTER are registered trademarks of Satmetrix Systems, Inc., F. Reicheld, and Bain & Company.

- **Questions Page** - this creates a page displaying the frequency counts and percentages of selected single categorical questions, with an optional bar chart. To display several questions, these must either exist in a parameter or a new parameter can be created through this wizard (see The Questions Page Type on page 59 for more information).
- **Response Rates** - this creates a page displaying a breakdown of the number of completed versus incomplete interviews by status over a specified time period. For surveys using email invitations, the table can also contain additional details for the number of emails sent and the delivery status in addition to the completion rate. There is an additional option to include a dropout analysis table that indicates where respondents are exiting the survey before reaching completion (see The Response Rates Page Type on page 60 for more information).
- **Impact Table** - performs a previously defined or new regression analysis, and produces an ordered table showing the impact that each category can contribute towards improving the dependent variable (for example Overall Satisfaction) alongside the estimated improvements resulting in a configurable percentage increase in the category score (see The Impact Table Page Type on page 60 for more information).
- **Quadrant Table** - performs a previously defined or new regression analysis, and classifies each statement as an opportunity (positive impact on the dependent variable, for example Overall Satisfaction) or threat (negative impact on the dependent variable). These statements are then placed into a quadrant table representing the greatest areas of threats and opportunities by category (see The Quadrant Table Page Type on page 61 for more information).
- **Quadrant Chart** - performs a previously defined or new regression analysis, and plots each category on a chart representing its importance (size of Beta-coefficient) against the improvement potential (difference from a maximum satisfaction rating) (see The Quadrant Chart Page Type on page 62 for more information).

Click on a page type to open the form for that page, then select the appropriate options and properties. On completion click **Create Page**.

#### 4.2.1.1. The NPS™ Page Type

Selecting this page type creates a page displaying the Net Promoter Score™ (NPS™)<sup>2</sup> and category breakdown (Detractors, Passives, Promoters) optionally trended by a selected time period.

**Note: NPS™ is based on a direct question: "How likely are you to recommend our company/product/service to your friends and colleagues?" The scoring for the answer to this question is based on a scale of 0 to 10.**

1. Type in a logical name for the page.
2. Select a text style.  
The styles listed in the drop-down are those available in the **Styles > HTML Styles** folder in the Layout and Styles toolbox.
3. Drag a question from the Data Source and drop it into the Question field.  
This will be the question that forms the basis for the NPS™. The supported question types are Single with numeric codes/scale and Grid elements with numeric scale.
4. Select the table style to be used.  
The styles listed in the drop-down are those available in the **Styles > Aggregated Table** folder in the Layout and Styles toolbox.
5. Select the presentation to be used. The options are:
  - o **Metric** - the NPS™ figure is displayed as a single number in a large tile
  - o **Gauge** - displays the metric on a radial gauge, with the NPS™ value indicated both by the needle position and displayed as a number on the gauge.
6. Select the trend to be used.  
Here you can select a rolling time period, or no limits.

<sup>2</sup>NPS and NET PROMOTER are registered trademarks of Satmetrix Systems, Inc., F. Reicheld, and Bain & Company.

9. Click **Create Page**, or **Cancel** to close the setup page without creating.

#### **4.2.1.2. The Verbatim Page Type**

Selecting this page type creates a page with a verbatim table to show comments from one or more open text questions. To display several questions, these must either exist in a parameter, or a new parameter can be created through this wizard.

1. Type in a logical name for the page.
2. Select the table style to be used.

The styles listed in the drop-down are those available in the **Styles > Verbatim Table** folder in the Layout and Styles toolbox.

3. Select whether you wish to use a question or existing parameter, or whether you wish to create a new parameter.

If you select **Use question...**, the **Variable** field appears. This field must contain an open text question, or an existing parameter based on open text questions. A verbatim table in the created page will display the contents of the chosen question. Drag a question from the Data Source and drop it into the **Variable** field.

If you select **Create and use...**, the **Parameter Name** and **Questions** fields appear.

- o Type in a name for your new parameter.
- o The **Question** field must contain one or more open text questions to be included in a new parameter. A verbatim table in the created page will then display the contents of the parameter selection.

4. Click **Create Page**, or **Cancel** to close the setup page without creating.

#### **4.2.1.3. The Questions Page Type**

Selecting this page type creates a page displaying the frequency counts and percentages of selected single categorical questions, with an optional bar chart. To display several questions, these must either exist in a parameter, or a new parameter can be created through this wizard.

1. Type in a logical name for the page.
2. Select the table style to be used.

The styles listed in the drop-down are those available in the **Styles > Aggregated Table** folder in the Layout and Styles toolbox.

3. Select whether you wish to display bars in the table.

This specifies if the frequency for each answer code is to be displayed as bars in an additional column in the frequency table.

4. Select whether you wish to use a question or existing parameter, or whether you wish to create and use a new parameter.

If you select **Use question...**, the **Variable** field appears. This field must contain a single type question, or an existing parameter based on single type questions. An aggregated table in the created page will display the frequency of the answers of the chosen question. Drag a question from the Data Source and drop it into the **Variable** field.

If you select **Create and use...**, the **Parameter Name** and **Questions** fields appear.

- o Type in a name for your new parameter.
- o The **Question** field must contain one or more single type questions to be included in the new parameter. An aggregated table in the created page will display the frequency of the question selected for the parameter.

4. Click **Create Page**, or **Cancel** to close the setup page without creating.

#### 4.2.1.4. The Response Rates Page Type

Selecting this page type creates a page containing a breakdown of the number of completed Vs. incomplete interviews by status over a specified time period. For surveys using email invitations, the table can also contain additional details for the number of emails sent and the delivery status in addition to the completion rate. There is an additional option to include a dropout analysis table indicating where respondents are exiting the survey before reaching completion.

1. Type in a logical name for the page.
2. Select the table style to be used.

The styles listed in the drop-down are those available in the **Styles > Aggregated Table** folder in the Layout and Styles toolbox.

3. Select whether you wish to break by the interview start date.

This setting specifies if the survey response data should be crossed against the interview start date, and what time frame is to be displayed in the results. Here you can select a rolling time period, or no limits.

4. Select the layout master to be used.

The styles listed in the drop-down are those available in the **Layout Masters** folder in the Layout and Styles toolbox.

5. Select whether you wish to include emailing status.

This setting specifies if the emailing status for the respondents should be displayed. This setting should only be used if the survey is not an open survey.

6. Select whether you wish to include dropout analysis

This setting specifies if an analysis of dropout question is shown in the page. The analysis will be displayed in a separate aggregated table.

7. Click **Create Page**, or **Cancel** to close the setup page without creating.

#### 4.2.1.5. The Impact Table Page Type

Selecting this page type creates a page that performs a previously defined or new regression analysis and produces an ordered table showing the impact that each category can contribute towards improving the dependent variable (e.g. overall satisfaction) alongside the estimated improvements resulting in a configurable percentage increase in the category score.

**Note:** To be able to calculate and display improvement indexes, the regression must be based on variables with a lower and an upper limit.

1. Type in a logical name for the page in the **Page name** field.
2. Select the table style to be used in the **Aggregated table styles** field.

The styles listed in the drop-down are those available in the **Styles > Aggregated Table** folder in the Layout and Styles toolbox.

3. In case any linear regression has already been created in the **Advanced Analytics > Linear Regression** folder in the Analyst toolbox, the Regression radio-button is displayed, with two options available:

- **Use existing** - enables selecting either any of the existing linear regressions or selecting **New page wizard regression** which creates a new linear regression automatically by a page wizard script. The new linear regression is then displayed in the **Advanced Analytics > Linear Regression** folder in the Analyst toolbox. Selecting **Use existing** also enables:

- o **Run Number** - the drop-down list enables selecting the Run Number (see Linear Regression Example on page 393 for more information). In case the selected linear regression has only one run available, **One Run available** is displayed instead.

When **Use existing** is selected, proceed to step 10.

- **Create new** - creates a new linear regression. When this option is selected, proceed to step 4.

4. Select the dependent variable in the **Dependent variable** field.

This field will contain the variable to be analyzed by linear regression analysis. The variable will as a result of the analysis be expressed as a linear function of the independent variables. The field can contain only one variable, and the variable must be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop a question from the Data Source toolbox to populate the field.

5. Select the independent variables in the **Independent variables** field.

This field will contain the variables that will be used to explain the dependent variable, as a linear function. The field can contain one or more variables, and the variables must all be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop one or more questions from the Data Source toolbox to populate the field.

6. Select a filter if required in the **Filter** field.

This field may contain a filter to restrict the underlying dataset the linear regression analysis is performed on. The field can contain only filters of type Filter Expression. Drag and drop a filter expression to populate the field. The filter expression can be reviewed or edited by clicking the "..." button.

**Note:** Linear Regression does not support parameters, so any parameters used in the filter expression will be ignored and should instead be written as explicit expressions.

7. Define **Minimum number of Cases** - this specifies a minimum number of cases (data rows) required to run the multivariate calculation. The default value is 0, imposing no lower limit. If the number of available cases in the calculation is less than the specified limit, an error message will be displayed.
8. Define **Case selection** - this specifies how to handle calculations if the number of available cases (data rows) exceeds the system limit for maximum number of cases allowed in multivariate calculations. The limit is 10.000 data rows.
  - **Default** - the last 10.000 of the available data rows will be used. This corresponds to the latest collected data.
  - **Random** - a random subset containing 10.000 of the available data rows will be used.
  - **First** - the first 10.000 of the available data rows will be used. This corresponds to the earliest collected data.
9. Define **Data selection** - this specifies which data values to use for categorical variables in the multivariate calculation.
  - **Codes** - the variables' answer codes will be used. This requires the codes to be numerical.
  - **Scores** - the variables' answer scores will be used. This requires the answer scores to be specified. Any answers with missing scores will be omitted by listwise deletion in the calculation.
10. Define **Increase** - the value in this field is used to calculate the potential impact on the dependent variable, if an independent variable is increased by the specified percentage.
11. Define **Confidence Limit** - if enabled, the value in this field is used to perform a confidence test of the linear regression result. If the regression result has a confidence level less than the specified limit, a warning message will be displayed in the page.
12. Click **Create Page**, or **Cancel** to close the setup page without creating.

#### 4.2.1.6. The Quadrant Table Page Type

Selecting this page type creates a page that performs a previously defined or new regression analysis and classifies each statement as an opportunity (positive impact of the dependent variable, for example overall satisfaction) or threat (negative impact on the dependent variable). These statements are then placed into a quadrant table representing the greatest areas of threats and opportunities by category.

1. Type in a logical name for the page.
2. Select the table style to be used.

The styles listed in the drop-down are those available in the **Styles > Aggregated Table** folder in the Layout and Styles toolbox.

3. Select the dependent variable.

This field will contain the variable to be analyzed by linear regression analysis. The variable will as a result of the analysis be expressed as a linear function of the independent variables. The field can contain only one variable, and the variable must be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop a question from the Data Source toolbox to populate the field.

4. Select the independent variables.

This field will contain the variables that will be used to explain the dependent variable, as a linear function. The field can contain one or more variables, and the variables must all be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop one or more questions from the Data Source toolbox to populate the field.

5. Select a filter if required.

This field may contain a filter to restrict the underlying dataset the linear regression analysis is performed on. The field can contain only filters of type Filter Expression. Drag and drop a filter expression to populate the field. The filter expression can be reviewed or edited by clicking the "..." button.

**Note:** Linear Regression does not support parameters, so any parameters used in the filter expression will be ignored and should instead be written as explicit expressions.

- **Minimum number of Cases** - specifies a minimum number of cases (data rows) required to run the multivariate calculation. The default value is 0, imposing no lower limit. If the number of available cases in the calculation is less than the specified limit, an error message will be displayed.
  - **Case selection** - specifies how calculations are to be handled if the number of available cases (data rows) exceeds the system limit for maximum number of cases allowed in multivariate calculations. The limit is 10.000 data rows.
    - **Default** - the last 10.000 of the available data rows will be used. This corresponds to the latest collected data.
    - **Random** - a random subset containing 10.000 of the available data rows will be used.
    - **First** - the first 10.000 of the available data rows will be used. This corresponds to the earliest collected data.
  - **Data selection** - this specifies which data values to use for categorical variables in the multivariate calculation.
    - **Codes** - the variables' answer codes will be used. This requires the codes to be numerical.
    - **Scores** - the variables' answer scores will be used. This requires the answer scores to be specified. Any answers with missing scores will be omitted by listwise deletion in the calculation.
  - **Confidence Limit** - if enabled, the value in this field is used to perform a confidence test of the linear regression result. If the regression result has a confidence level less than the specified limit, a warning message will be displayed in the page.
6. Click **Create Page**, or **Cancel** to close the setup page without creating.

#### 4.2.1.7. The Quadrant Chart Page Type

Selecting this page type creates a page that performs a previously defined or new regression analysis and plots each category on a chart representing its importance (size of Beta-coefficient) against the improvement potential (difference from a maximum satisfaction rating).

**Note:** The regression must be based on variables with a lower and an upper limit. Any variable without such limits will not be displayed in the chart.

1. Type in a logical name for the page.
2. Select the chart style to be used.

The styles listed in the drop-down are those available in the **Styles > Chart** folder in the Layout and Styles toolbox.

3. Select the dependent variable.

This field will contain the variable to be analyzed by linear regression analysis. The variable will as a result of the analysis be expressed as a linear function of the independent variables. The field can contain only one variable, and the variable must be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop a question from the Data Source toolbox to populate the field.

4. Select the independent variables.

This field will contain the variables that will be used to explain the dependent variable, as a linear function. The field can contain one or more variables, and the variables must all be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop one or more questions from the Data Source toolbox to populate the field.

5. Select a filter if required.

This field may contain a filter to restrict the underlying dataset the linear regression analysis is performed on. The field can contain only filters of type Filter Expression. Drag and drop a filter expression to populate the field. The filter expression can be reviewed or edited by clicking the "..." button.

**Note: Linear Regression does not support parameters, so any parameters used in the filter expression will be ignored and should instead be written as explicit expressions.**

- **Minimum number of Cases** - This field can be used to specify a minimum number of cases (data rows) required to run the multivariate calculation. The default value is 0, imposing no lower limit. If the number of available cases in the calculation is less than the specified limit, an error message will be displayed.
- **Case selection** - This setting specifies how to handle calculations if the number of available cases (data rows) exceeds the system limit for maximum number of cases allowed in multivariate calculations. The limit is 10.000 data rows.
  - **Default** - the last 10.000 of the available data rows will be used. This corresponds to the latest collected data.
  - **Random** - a random subset containing 10.000 of the available data rows will be used.
  - **First** - the first 10.000 of the available data rows will be used. This corresponds to the earliest collected data.
- **Increase** - the value in this field is used to calculate the potential impact on the dependent variable, if an independent variable is increased by the specified percentage.
- **Data selection** - this specifies which data values to use for categorical variables in the multivariate calculation.
  - **Codes** - the variables' answer codes will be used. This requires the codes to be numerical.
  - **Scores** - the variables' answer scores will be used. This requires the answer scores to be specified. Any answers with missing scores will be omitted by listwise deletion in the calculation.
- **Confidence Limit** - if enabled, the value in this field is used to perform a confidence test of the linear regression result. If the regression result has a confidence level less than the specified limit, a warning message will be displayed in the page.

6. Click **Create Page**, or **Cancel** to close the setup page without creating.

### 4.3. How to Rename a Report Page

You may find that you need to rename a report page. To do this:

1. In the Report toolbox, right-click on the page name and choose **Rename** from the menu.  
The page name field goes into the Edit mode.
2. Change the page name as required, then click out of the name field to save the change.

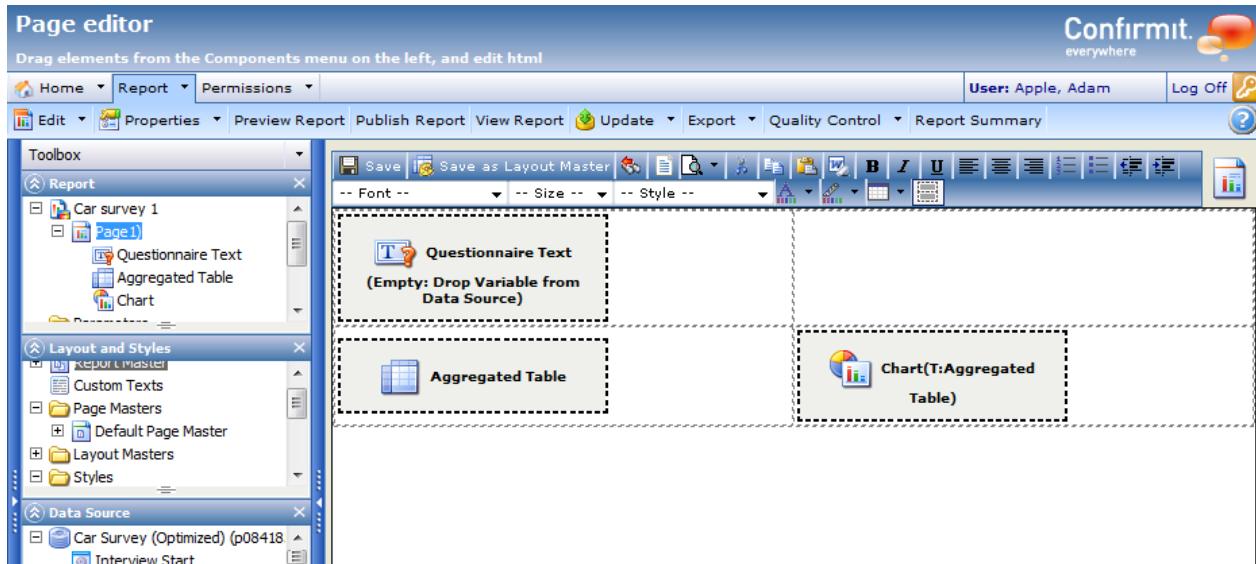
## 4.4. How to Edit the Contents of a Report Page

You edit the report pages using the Page Editor. There are two methods of opening the page editor for a report page. In the Report toolbox:

- Right-click on the name of the page you wish to edit and choose **Edit**, or
- Double-click on the page name.

The methods have the same result - the Page Editor opens in the area to the right of the toolbox (see The Report Page Editor on page 96 for more information).

The current page content will depend on the Layout Master you selected when defining the page, and any editing that has already been performed, in step 2 of the procedure in How to Create Pages in the Report. For further details on how to customize these, see Chapters 8 The Table Designer and 9 The Chart Designer.



**Figure 71 Working in WYSIWYG**

In the example, as the page is based on a Layout Master, the required elements are already positioned on the page. We therefore only need to specify which questions we want each component to be based on. If you wish to add additional elements to the page, either drag them from the Visual Components toolbox and drop them onto the page (see Drag-and-Drop Operations on page 33 for more information), or right-click on the page and select **Insert Component**.

When a new component is added to a page (regular page, page master, report master etc.), then a new name will be assigned to the component in the Report toolbox using the following pattern: <component name> (N), for example Table (1). The component will be given the next available number, so if there are tables named Table (1) and Table (2) on a page then the next table will be named Table (3). Any "holes" in the numbering will be filled, so if there are tables named Table (1), Table (3) and Table (4) on a saved page then the next table will be named Table (2). This applies for all components.

**Note: Once you have set up a page as required, you can save it as a Layout Master for future use (see Saving a Page as a Layout Master on page 73 for more information).**

In the following sections we will run a cross-tab of q7 (Favorite) with q3 (Gender). A table, a chart and a header will be required for this page.

#### 4.4.1. Editing the Questionnaire Text Element

The header on a report page will normally display text to give the report viewer an indication of what the page contains. A simple method of achieving this will often be to include the question text from the survey page from which the data to be presented on the report page is taken. In this case we will use the text from the **Favorite** question.

1. If necessary, right-click on the page name in the Report toolbox and choose **Edit**, or double click on the page name, to open the Page Editor.
2. Drag the appropriate question (in this case **q7**) from the Data Source toolbox on the left, and drop it on the **Questionnaire Text** element.

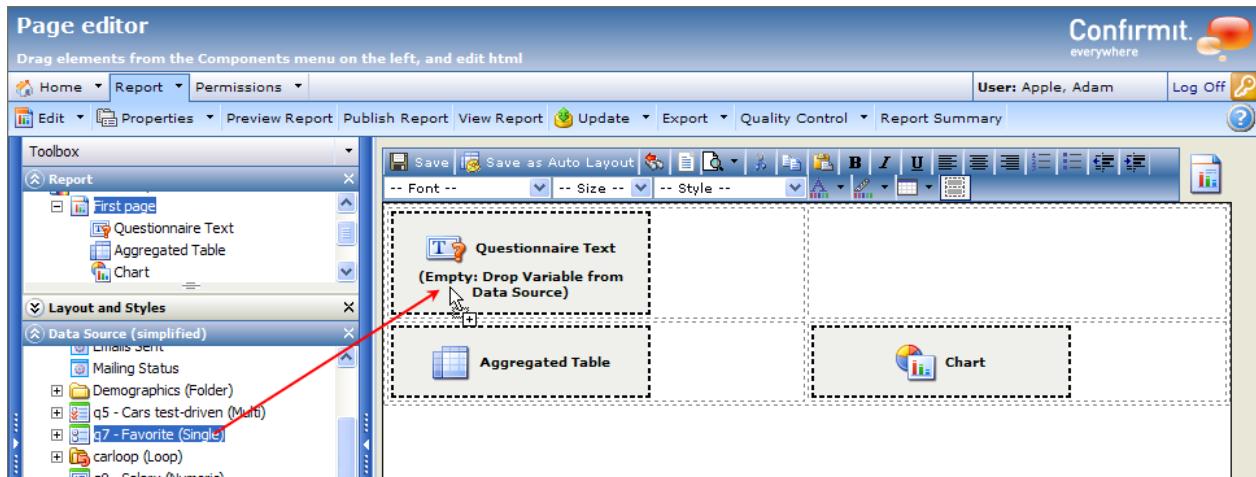


Figure 72 Dragging a question element into the Questionnaire Text component

**Note:** You can drag an Info node from the Data Source into a Questionnaire Text element to display the full text from that node in the report page.

2. Right-click on the **Questionnaire Text** element and choose **Properties**.

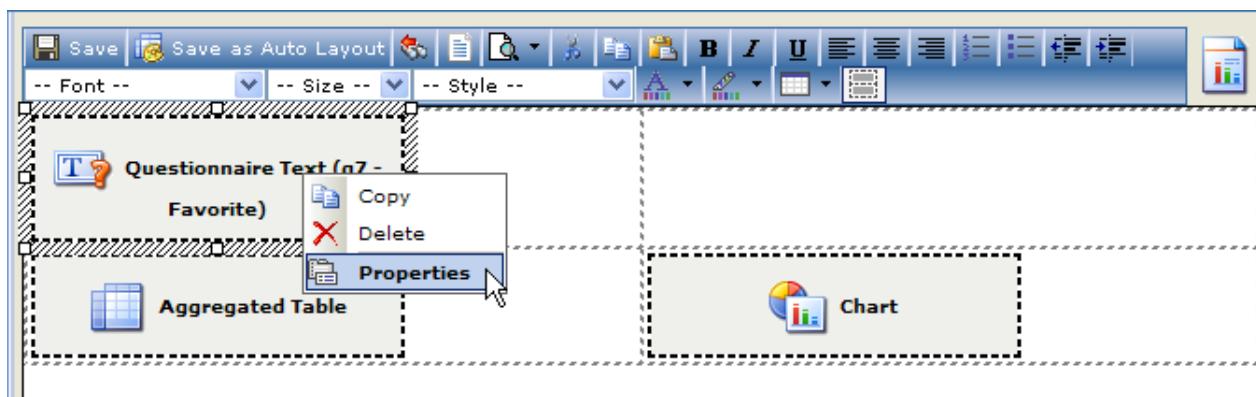
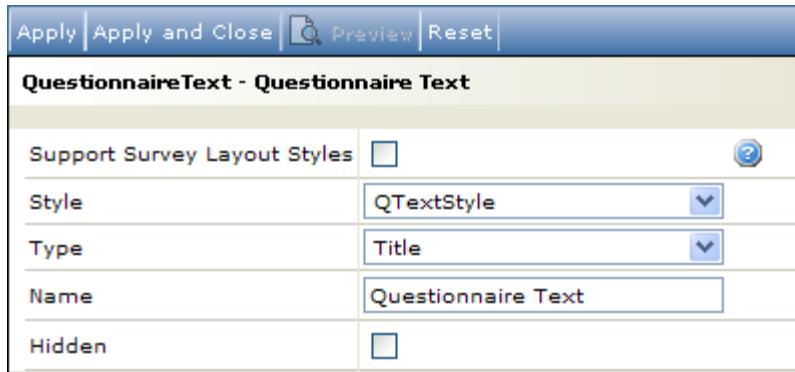


Figure 73 Opening the Questionnaire Text element's Properties page

A property box appears enabling you to select the “look and feel” of this element.



**Figure 74 Question text properties**

3. Select the **Style** and **Type** of text as required, then click **Apply**.

**Note:** You can also link a Reportal report to a Survey Layout in Confirmit Authoring, and use the HTML styles from the Survey Layout (see How to Select a Survey Layout on page 70 for more information).

Remember to save your work frequently. A yellow border will blink around the **Save** button when Reportal detects unsaved changes.

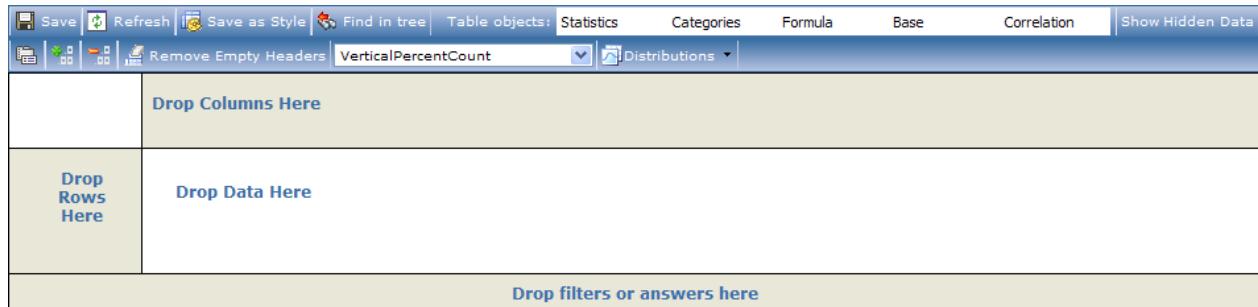
#### 4.4.2. Editing the Aggregated Table Element

We will now edit the contents of the aggregated table.

1. Right-click the Aggregated Table element and choose **Design**, or right-click the aggregated table element in the Report toolbox and then choose **Edit** (or double-click the element in the toolbox).

**Note:** If you right-click the element and choose Design, the Save button (see the figure below) will be replaced by an OK button. In this case, when you have made some changes to the table you must first click the OK button to return to the Page Editor, then click the Save button on the Page Editor to save the changes.

The Table Designer page opens. Here you design the table by dragging the required data elements from the Data Source toolbox and dropping them into the table cells, then setting properties.



**Figure 75 The aggregated table designer**

2. Drag the relevant question (in this case **q7 Favorite**) from the Data Source area on the left, and drop it into the **Drop Rows Here** cell in the designer.
3. Similarly, drag and drop the other question (here, the **q3 Gender** question) into the "Drop Columns Here" cell.
4. Click on the **Refresh** button to see a preview of your table. (see The Table Designer on page 143 for more information)

The figure below shows a preview of the table.

q3 - Gender							
q7 - Favorite		Male		Female		Total	
	Ford	3	7.0%	4	10.3%	7	8.5%
	Chrysler	2	4.7%	4	10.3%	6	7.3%
	Volvo	2	4.7%	4	10.3%	6	7.3%
	BMW	7	16.3%	2	5.1%	9	11.0%
	Honda	6	14.0%	8	20.5%	14	17.1%
	Toyota	6	14.0%	4	10.3%	10	12.2%
	^f('q5_98_other')^	5	11.6%	1	2.6%	6	7.3%
	I have no favorite.	12	27.9%	12	30.8%	24	29.3%
	Total	43	100.0%	39	100.0%	82	100.0%

Generated: 15/02/2010 09:18:44  
Weight model: None  
Fixed filters: [Drop filters or answers here](#)  
Significance testing: None

[Drop filters or answers here](#)

*Figure 76 Preview of the table*

- Click **Save** in the top left corner of the page to save your work (or **OK** then **Save**).

Click on a data cell in the table to open a Cell Information window (see The Cell Information Window on page 192 for more information).

#### 4.4.3. Editing the Chart Element

We will now look at the Chart element.

- In the Report toolbox, double-click on the **Chart** element (or right-click and choose **Edit**).

The Chart Designer page opens. (see The Chart Designer on page 258 for more information) First, we need to specify which aggregated table we want to base the chart on.

**Note:** If when the Page is created the designer chooses a Layout Master that includes both a Table and a Chart element, then the Table and the Chart will be connected automatically. However if the Page is created without both elements then there will be no such connection and you will then have to make that connection "manually" as described below. For example, if you first create a page, then add a table, and then add a chart, there will be no connection between the two elements.

**Note also that if you are using a Layout Master that contains two tables and a chart, the chart will be connected to the first table. And if you are using a Layout Master that has more than one chart, only the first chart will be automatically connected to a table.**

To specify which table we want to base the chart on:

- Drag the aggregated table node from the Reports toolbox, and drop it into the Drop Table Here area (see figure below).

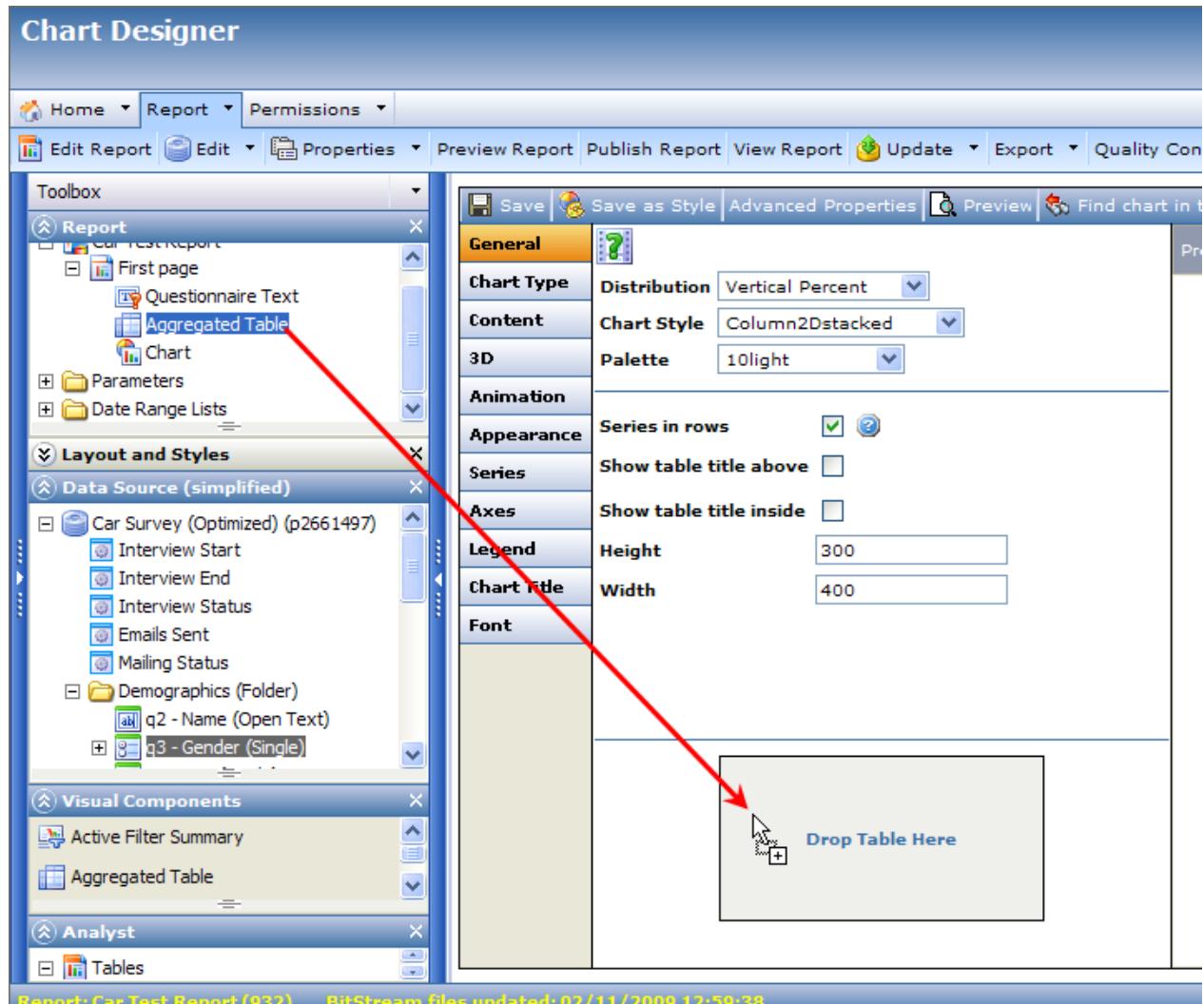
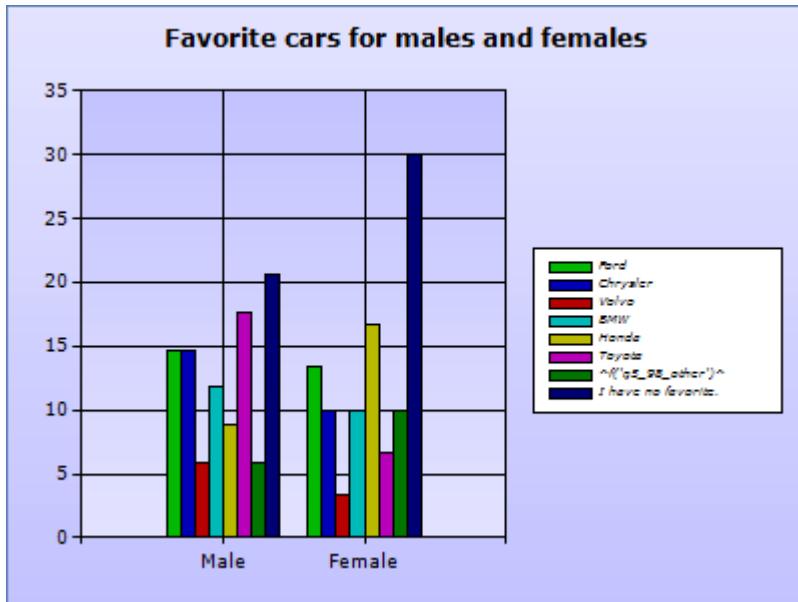


Figure 77 Dropping a table element into the chart

The chart as currently defined appears in the preview area to the right of the Chart Designer.

**Figure 78 Chart preview**

You may well need to edit the properties of this chart to present the information to best effect. Use the properties in the various tabs down the left side of the Chart Designer window. See the figure below for an example.

**Figure 79 Example of how property settings can be used to change the chart look**

Note that a chart can be based on any table, on any page in the report. Once a chart is linked to a table, the relevant table will be identified in the Chart element in the Page Editor by the text (T:<table name>).

Remember to save your changes.

#### 4.4.4. The Text Style Drop-down List

You can use styles to control the layout of the text elements in Reportal. These styles are set up in the Layout and Styles toolbox (see Toolboxes on page 28 for more information) then linked to the text elements that are to use them. In this way, if you wish to change the look of a text element type (for example you wish to increase the font size of the text), you only have to make the change in the one place and all the text elements in the report that use that style will automatically be updated.

When you first create a Reportal report you are asked to specify a template to be used, and this template will contain a number of "default" styles that will always be available to the report. You and/or your company can create new styles as required (see Styles on page 706 for more information), and you can also link the report to a Survey Layout in Confirmit Authoring and use the HTML styles from the survey layout (see How to Select a Survey Layout on page 70 for more information).

**Note:** If you apply a style to a text element, then the text element will always adopt the properties defined by the style. If you select a Survey Layout, apply a style from the Survey Layout to a text element, then later select a different Survey Layout, if the new Survey Layout includes a style of the same name as that in the original layout, then the text element will be updated to conform with the properties of the new style. If the new layout does not include a style of the same name, then the text element will revert to the default settings.

#### 4.4.5. How to Select a Survey Layout

When editing texts in a report, you can link the report to a Survey Layout in Confirmit Authoring and use the HTML styles from the survey layout. To do this:

1. When in a report, go to the **Report > Properties > Set Survey Layout** menu command.

The Set Survey Layout dialog opens.

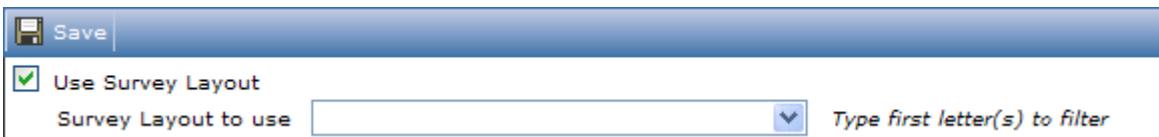


Figure 80 The Set Survey Layout dialog

2. Click in the **Use Survey Layout** box to select it.

The Survey Layout to use field becomes active.

3. Click the down-arrow beside the Survey Layout to use field to open a list of the Survey Layouts to which you have access, and select the layout you wish to use.

This list will include all the standard public layouts and any that your company has created and made available to you.

4. Save the changes.

**Note:** If you select a Survey Layout, apply a style from the Survey Layout to a text element, then later select a different Survey Layout, if the new Survey Layout includes a style of the same name as that in the original layout, then the text element will be updated to conform with the properties of the new style. If the new layout does not include a style of the same name, then the text element will revert to its default settings.

#### 4.4.6. Inserting Your Company Logo into the Report

You can add your company logo or other images to your reports in Confirmit. If you wish to have the logo appear on every page of a report then you are advised to place the logo into the Report Master (see The Report Master on page 687 for more information). There are two methods of adding a logo:

- You can drag a logo from another web page.
- You can add a URL to the report that points to an archived image file.

The method you use will depend on where you are taking the logo from and how "secure" you want the image to be. The simplest method is to drag the logo from another web page, for example your company's web site, but this may not be too secure - see the note below. A more secure method, the method described here, assumes the image file is stored in the File Library (refer to the Confirmit Authoring User Guide for further details).

**Note:** Be aware that the logo and/or other multimedia files are not stored in the report. The logo/file is a link that points to the original file in the archive or website where you found it. So if the original file is changed or removed from that archive/website, then this will also affect your report. Therefore, ensure that any files (such as the company logo) that you wish to use in a report will be available throughout the life of the report.

To add a logo or other image to the report, proceed as follows:

1. Open the **Layout and Styles** toolbox, and double-click on **Report Master**.

The Report Master page editor opens. The Report Master is the template for all the pages in this report, so any changes you make here will be reflected throughout the report.

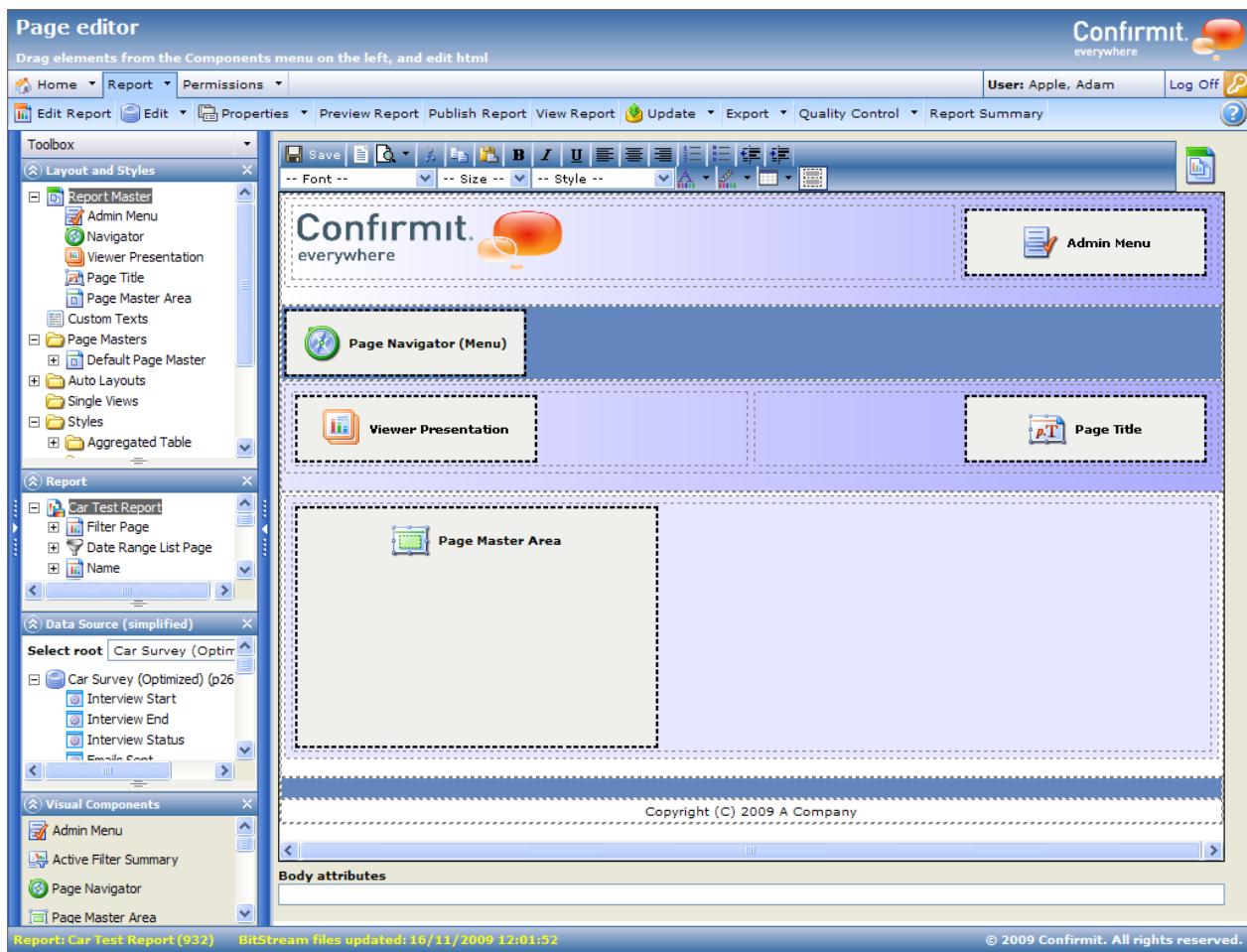
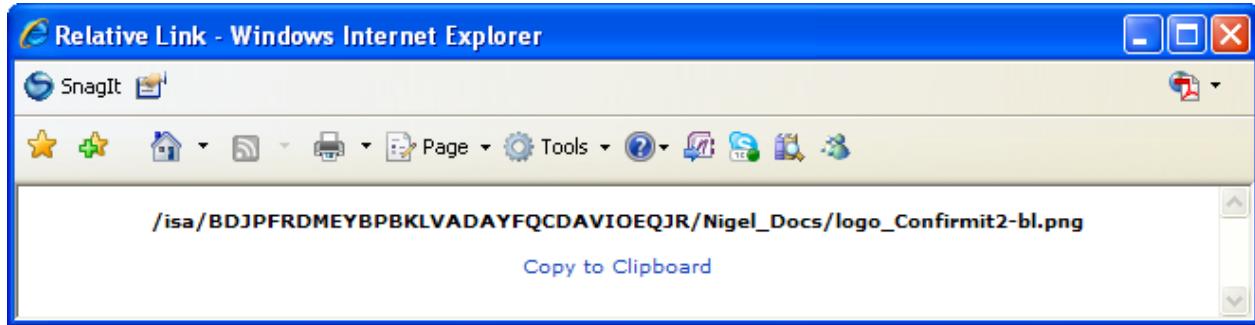


Figure 81 The Report Master page editor

We will now add a logo to the area in the upper-right corner of the page. Note that you can add the logo to any part of the page.

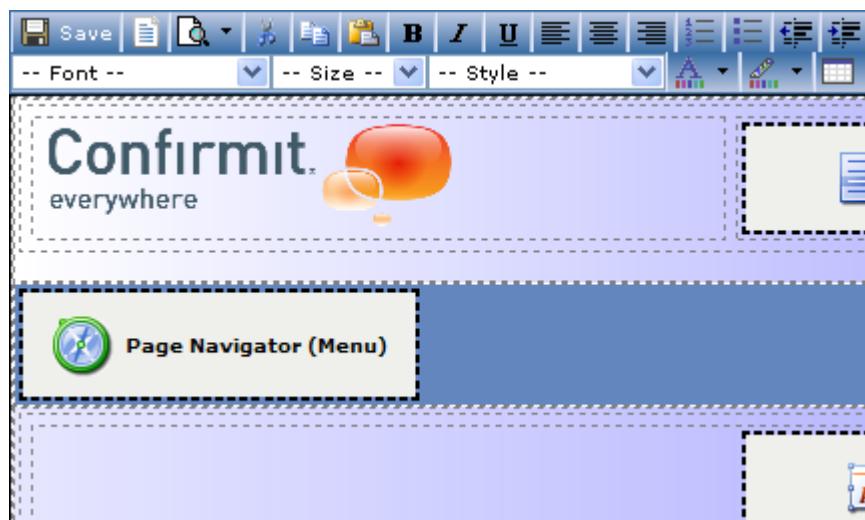
2. In a separate window, open Confirmit Authoring, go to the **Confirmit Authoring > File Library**, and open the folder in which the image file is stored.
3. Click the **View** link for the image file you wish to use.

The Relative Link window opens, containing the link to the image file.



**Figure 82 Example of the Relative Link window for an image file archived in the Authoring File Library**

4. Click **Copy to Clipboard** to copy the link URL to your PC's clipboard.
5. Return to the Reportal browser and, with the cursor in the desired location, right-click and choose **Paste**.  
The logo is pasted into the Report Master.
6. To adjust the size of the logo, click on it to activate the handles, then drag the handles as appropriate.



**Figure 83 The new logo in place**

7. Click **Save** to save the changes.
8. Go to the **Report > Preview Report** menu command to see how the report will look with the new logo.

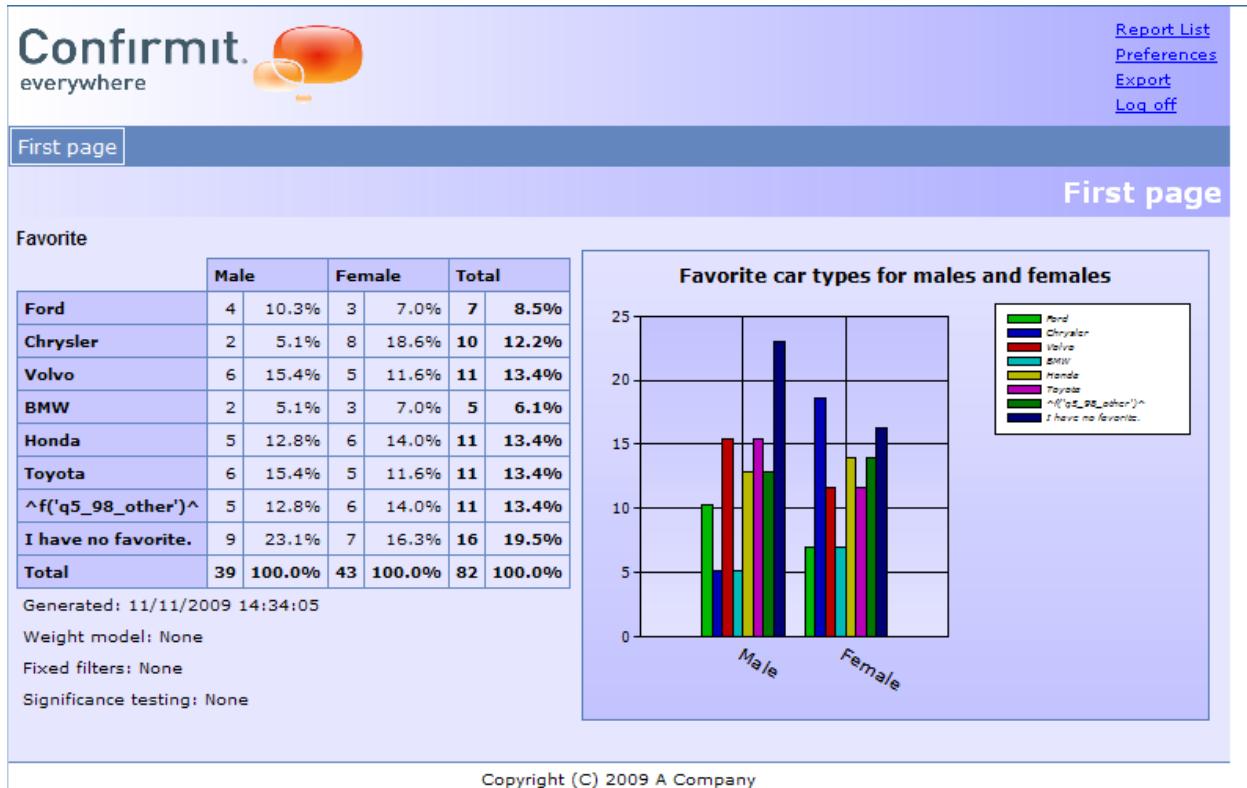


Figure 84 Preview of the report with the new logo

For more details about using and storing multimedia safely, refer to the File Library chapter in the Authoring User Guide.

#### 4.4.7. Saving a Page as a Layout Master

If you wish you can save a page as a Layout Master. To do this:

- When the page is laid out as required, click the **Save as Layout Master** button in the page toolbar.

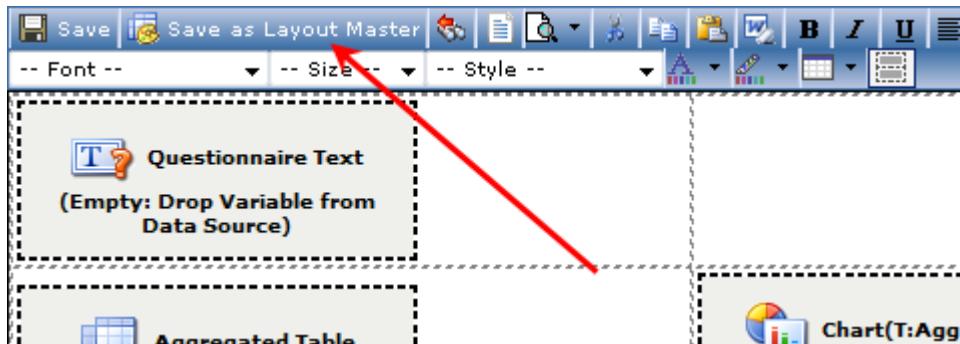
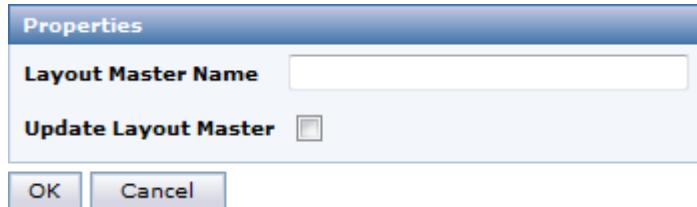


Figure 85 The Save as Layout Master button

The Properties dialog opens.



**Figure 86** The Save as Layout Master Properties dialog

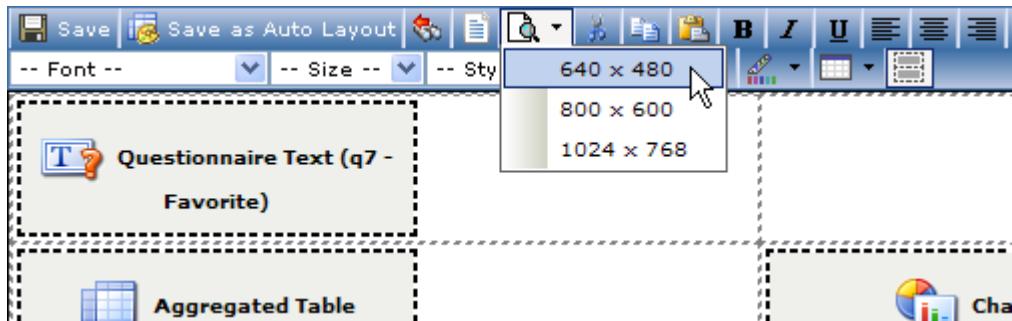
2. Type a name for the layout master into the Name field.
3. If you wish to update an existing layout master, check the Update Layout Master box.
4. Click **OK**.

The new layout master is added to the list in the Layouts and Styles toolbox, and when you create a new page this layout master will be selectable. Note that the new layout master will only be available to the report in which it was created.

## 4.5. Previewing Your Report Page

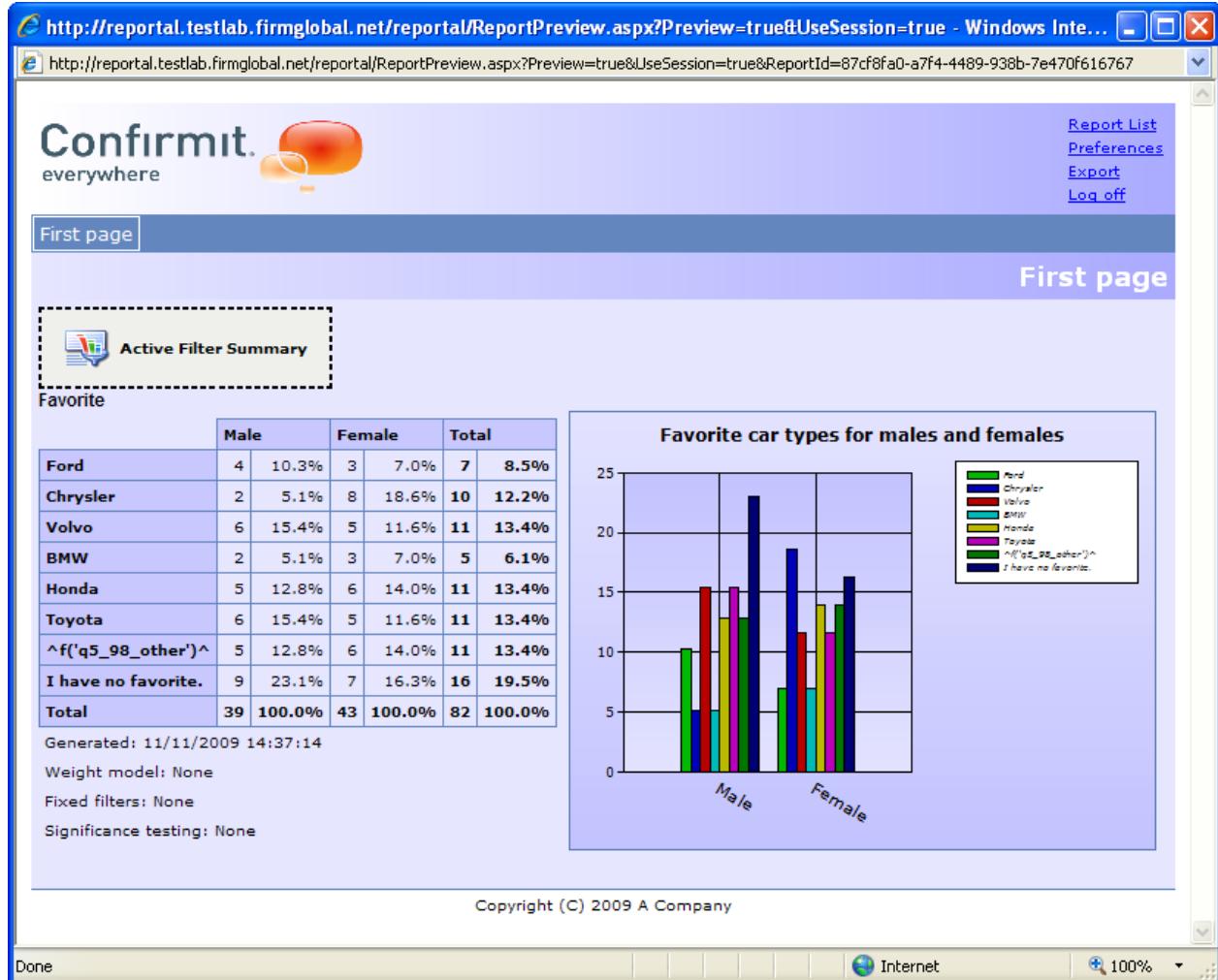
When a report page is finished (and maybe also while you are building it) you will probably wish to preview the page to see what it looks like and see what effect your changes are having on the layout. There are several options available:

- You can preview the entire report, opening at the first page. To do this, in the Report toolbox, right-click on the report item and select **Preview Report**. If the report has multiple pages you can then move through the pages by clicking on the page buttons in the report's menu.
  - You can preview the report, opening at a specific page (perhaps the page you have just been working on). To do this, in the Report toolbox, right-click on the report page and select **Preview Page**. Again, if the report has multiple pages you can move through them by clicking on the page buttons in the report's menu.
  - When the appropriate page is open in the Page Editor, click the **Preview** button in the Editor toolbar. This procedure is described below.
1. In the Report toolbox, double-click on the page name to open the Page Editor.
  2. Click the **Preview** button in the toolbar and choose the desired resolution (640 x 480 is usually fine).



**Figure 87** Selecting the preview resolution

The figure below shows an example of how the preview window could look for the table and chart of the First page of your report.

**Figure 88 Report Preview**

Compare this report page to the one at the beginning of this chapter. Some of the elements have changed places and some were not used in the example here. But, the method used to build the pages is the same. You can edit the look and feel of the pages to fit your specific needs.

At this point you could add additional report pages to this report. And remember that there is an almost endless list of enhancements we could make to the report.

## 4.6. How to Create a Report using the Report Page Wizard

In Step 3 of the Report Wizard (where you select the Template to be used for the report), you can choose whether you wish to continue designing the report page by page, or whether you wish to use the **Report Page Wizard** (see the figure below).

You can run this facility at any time during the report creation and editing process by going to the **Report > Edit > Report Page Wizard** menu command.

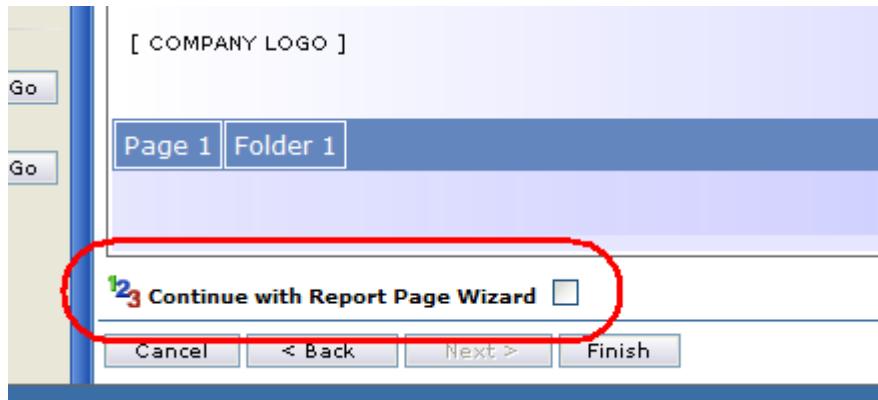


Figure 89 Choosing Continue with Report Page Wizard

The four-step Report Page Wizard allows you to create, quickly and easily, a number of standard report pages based on the selections you make in the wizard.

1. In the Report Wizard check the **Continue with Report Page Wizard** box and click **Finish**, or if you wish to add further pages to an existing report using the Page Wizard, go to the **Report > Edit > Report Page Wizard** menu command.

The Report Page Wizard opens at Step 1.

2. Choose the layout for the report pages from a number of predefined styles and layouts:
  - o Page masters
  - o Layout masters
  - o Aggregated table styles
  - o Chart styles
  - o Chart palettes
  - o Question text type

**Note:** If you choose a Layout Master that includes both a Table and a Chart element, then the Table and the Chart will be connected automatically. However if the Page is created without both elements then there will be no such connection and you will then have to make that connection "manually".

**Note also that if you use a Layout Master that contains more than one table and a chart, the chart will be connected to the first table. And if the Layout Master has more than one chart, only the first chart will be automatically connected to a table.**

As you select a layout or style, the preview of the resulting page is updated.

**Page Masters:** Default Page Master

**Auto Layouts:** Default Auto Layout

**Aggregated table styles:** VerticalPercent

**Chart styles:** Column2Dbasic

**Chart palettes:** Standard

**Questionnaire text type:** Title

**Preview Report:**

**Report List** [Preferences](#) [Export](#) [Log off](#)

First page

Page Title

Active Filter Summary

Questionnaire Text

	X	Y	Z
A	85	3	127
B	97	144	165
C	170	40	68
D	168	149	159
Total	118	115	62

Copyright (C) 2009 A Company

**Cancel** **< Back** **Next >** **Finish**

Figure 90 Example of the Report Page Wizard - Step 1

- When you have selected the desired layout and styles, click **Next** to proceed to step 2 in the Wizard.

In Step 2 you choose the questions that will be used in the table rows of the aggregated tables. A separate page will be created for each question you choose in this step.

The screenshot shows the 'Questions' tree on the left and a preview table on the right. The 'Questions' tree includes items like Interview Start, Interview End, Interview Status, Demographics, and various IF conditions and grids. The preview table shows four rows labeled A, B, C, D, followed by a 'Total' row, with columns X, Y, and Z.

	X	Y	Z
A	198	9	30
B	167	130	32
C	118	103	164
D	78	150	2
Total	119	11	4

Figure 91 Example of the Report Page Wizard - Step 2

The **Interview Start** and **Interview End** items are the time/date information of when the respondents started and ended the survey. If you select these items, a pop-up window appears (see the figure below). In this window you can define the time increments (the granularity), and the start and end dates of the period for which the data is to be displayed. (see Rolling Time Series on page 217 for more information)

The screenshot shows the 'Questions' tree with 'Interview Start' selected (indicated by a red circle and arrow). A 'Timeseries -- Webpage Dialog' window is open, titled 'Timeseries Define the timeseries of the selected date node'. It contains fields for 'Break by' (set to 'Year'), 'Start date' (set to '01/11/2009'), and 'End date' (set to '30/11/2009').

Figure 92 Interview Start and End

When you select the Interview Status item, a pop-up window with all Confrimt Interview statuses is displayed.

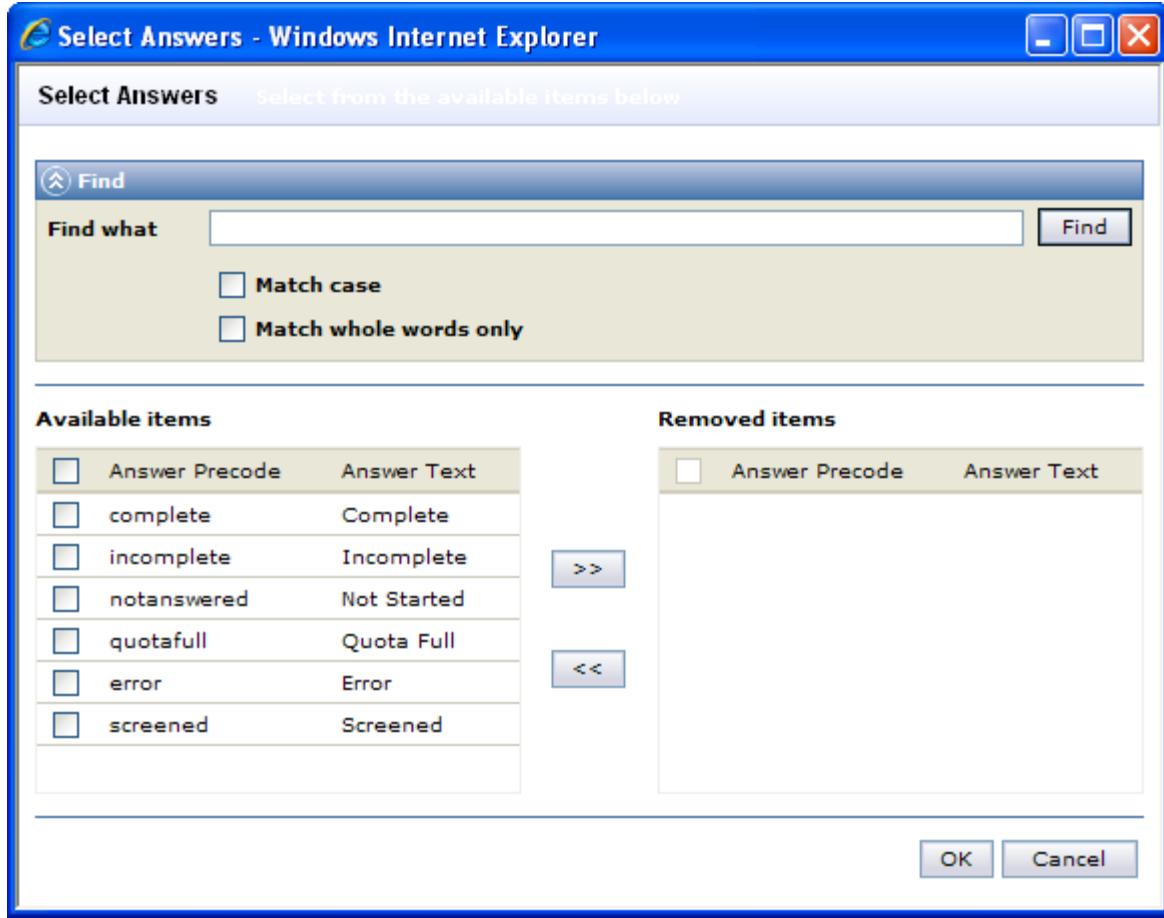


Figure 93 Interview Status

The statuses that you do not want to display can be removed from the Available items field. Click **OK** on completion.

4. Click **Next** to proceed to the next step in the Wizard.

In Step 3 of the wizard, you must choose the questions that will be used in the table columns of the aggregated tables. All questions selected in the previous step will be crossed with the question(s) you select here. Banners (cross-breaks) will be available in this step. For more information about Banners, see Chapters 8 The Table Designer and 20 Data Source.

The screenshot shows the Report Page Wizard - Step 3 interface. At the top, there are buttons for 'Select all', 'Unselect all', 'Expand all', and 'Collapse all'. Below this is a tree view of 'Questions' under 'Car Survey (Optimized)'. The visible nodes include 'Interview Start', 'Interview End', 'Interview Status', a folder 'Demographics' containing 'q3 - Gender (Single)' and 'q4 - Age (Single)', a conditional node 'IF f('q4') == '1'', another conditional node 'IF !f('q5').inc('99') THEN q7 - Favorite (Single)', a folder 'carloop' containing 'IF (f('q4') == '3' || f('q4') == '4') && ! f('q5')...', a folder 'g11 - Car Questions' containing 'q12 - Cars Tested (Multi)', and a folder 'g11 - Car Questions' containing 'q12 - Cars Tested (Multi)'. To the right of the tree view is a preview table with columns X, Y, and Z. The table data is as follows:

	X	Y	Z
A	198	9	30
B	167	130	32
C	118	103	164
D	78	150	2
Total	119	11	4

Figure 94 Report Page Wizard - Step 3

- Select the questions you wish to use as the table columns, then click **Next** to proceed.

Step 4 of the Wizard opens. Here you can choose the questions you want to use as dynamic filters that are available for Viewers (see Filter Page for Viewers on page 555 for more information).

The screenshot shows the Report Page Wizard - Step 4 of 4 interface. At the top, it says 'Specify questions to add to the filter page of the report'. Below this is a toolbar with 'Home', 'Report', 'Permissions', 'Edit Report', 'Edit', 'Properties', 'Preview Report', 'Publish Report', 'View Report', 'Update', 'Export', 'Quality Control', and 'Report Summary'. On the right, there is a user info bar for 'User: Apple, Adam' and 'Log Off'. At the bottom, there are buttons for 'Select all', 'Unselect all', 'Expand all', and 'Collapse all'. The tree view of 'Questions' is identical to Figure 94. To the right of the tree view is a preview table with columns X, Y, and Z, showing the same data as Figure 94.

Figure 95 Example of the Report Page Wizard - Step 4

**Note: Only Single and Grid questions will be available in this step. Interview Start, Interview End, and Interview Status can also be used as dynamic filters.**

- Click **Finish** to generate the report.

A folder called **Wizard Folder** is created that contains all the new report pages. Open the folder to see the report pages.

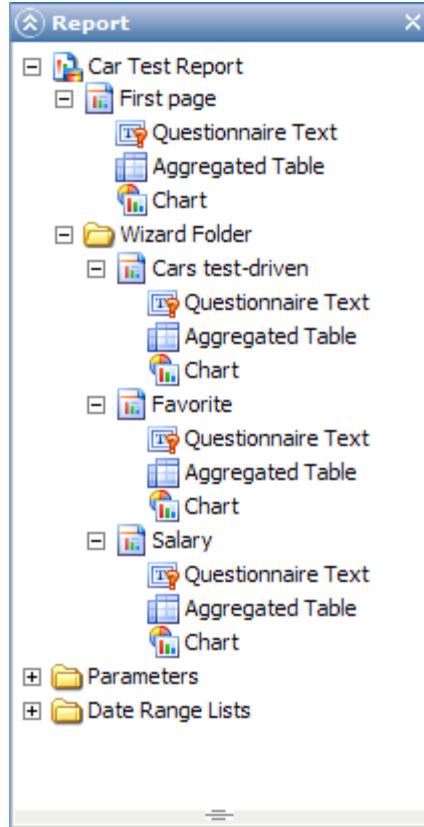


Figure 96 Example of the resulting Wizard folder

## 4.7. Exporting and Importing a Report Definition (XML)

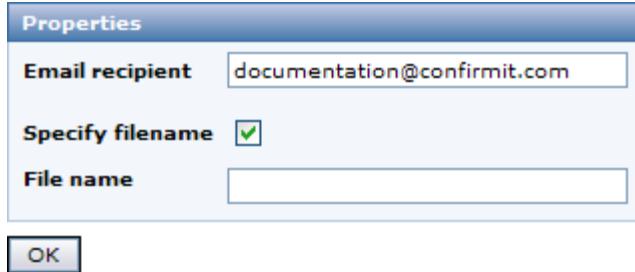
You can export and import Reportal report XML files, thereby enabling you to move report definitions between different Confirmit servers. Note that when exporting and importing report definitions, soft-deleted pages and their contents (see Deleting Objects From the Report Toolbox on page 42 for more information), and Export Packages (see Export Packages on page 601 for more information) are included in the export/import.

### 4.7.1. How to Export a Report Definition

To export a report definition:

1. Open the report for which you wish to export the definition.
2. Go to the **Report > Export > Export Report Definition** menu command.

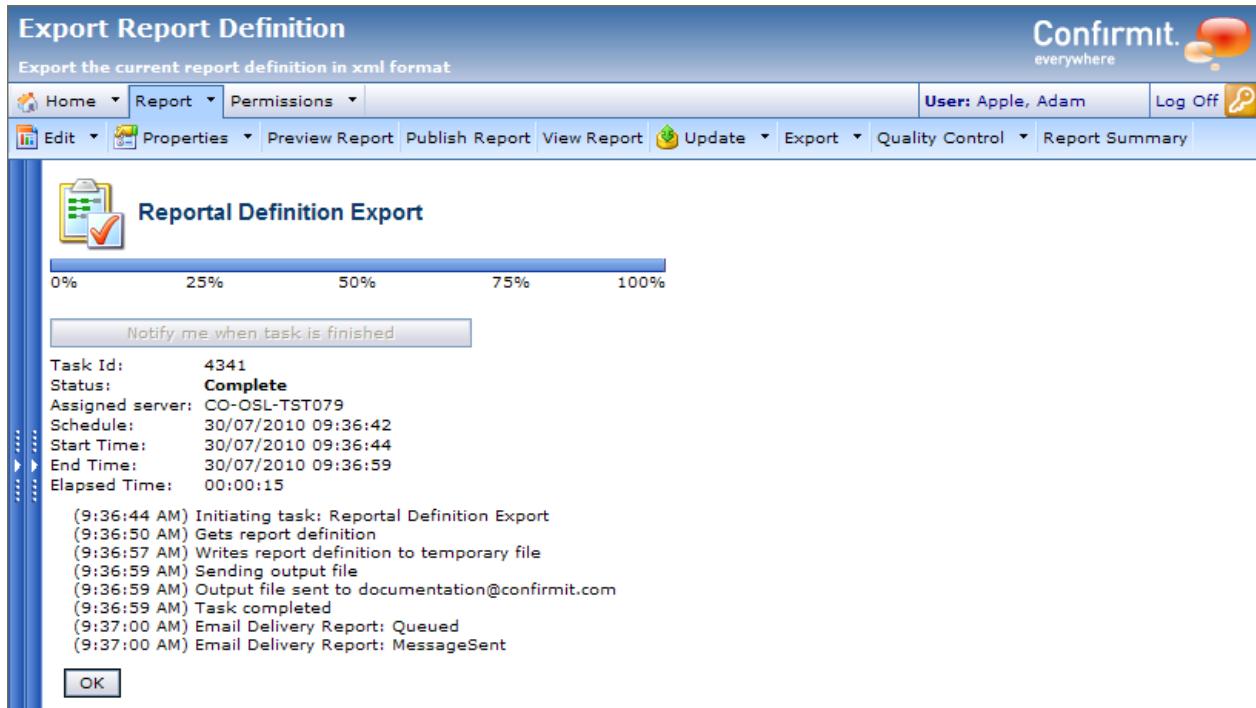
The Export Definition Properties box opens.



**Figure 97 Specifying the email address and file name**

2. Specify the email address to which you want the XML file to be sent.
3. If you wish to specify the name of the export file, check the Specify Filename box and type the desired name into the field that appears.
4. On completion, click **OK**.

The task is added to the Confirmit batch tasks, and you can follow its progress on your display. When the task is completed, an email will be sent to the email address specified above, with the report definition file attached.



**Figure 98 Task ID specification**

If the file does not arrive at the specified email address, you can go to **Confirmit > Tasks** and search for the batch job using the specified Task ID to see the status of the job.

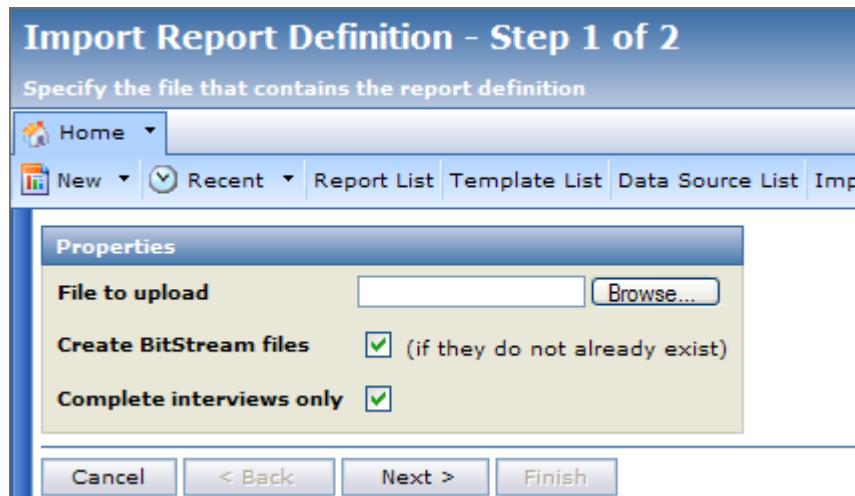
**Note:** If a report includes Linear Regression charts, these charts will be included in the export file if the report definition is exported (see [Linear Regression](#) on page 391 for more information).

#### 4.7.2. How to Import a Report Definition

To import an XML report file into Reportal:

1. Go to the **Home > Import > Report Definition** menu command.

The Import Report – Step 1 dialog opens.



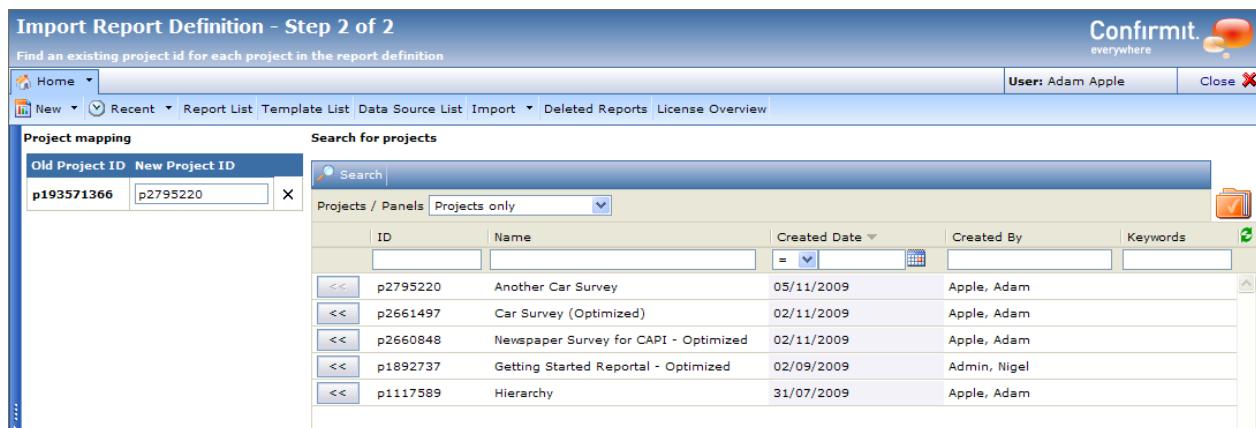
**Figure 99 Browse for file**

2. Click the **Browse** button to open a file browser, then find and select the XML file that is to be uploaded.
3. If BitStream files do not already exist for the project, leave the box checked to create them during import.
4. If you wish to include interviews that are incomplete for any reason, uncheck the box.
5. Click **Next** to continue.

The Step 2 dialog opens.

A report is based on one or more projects in the data source. When you import a report, you must specify which project(s) the report must use in the data source. You must also specify which project IDs these projects will have on the server you are importing the report to. The project IDs the projects had on the server the report was created on will be provided to assist you in selecting the correct projects.

4. Select the required projects and click **Finish** to complete the procedure.



**Figure 100 Project Mapping**

The task is added to Confirmit batch tasks, and will be processed in its turn. You can go to Confirmit Tasks and search for the batch job by the specified Task ID to see the status of the job.

Once the report has been imported, it will appear in the Report List. The title will be "Import of..." and the original title of the report.

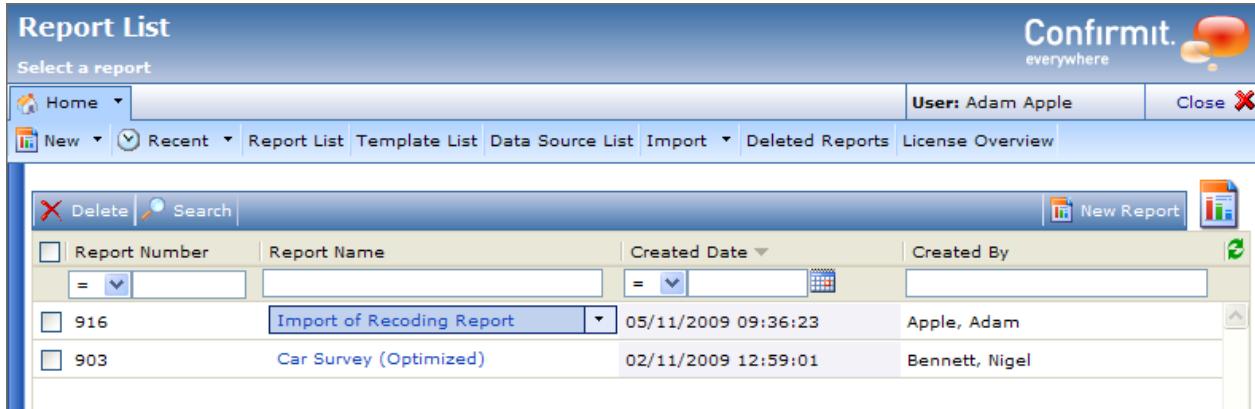


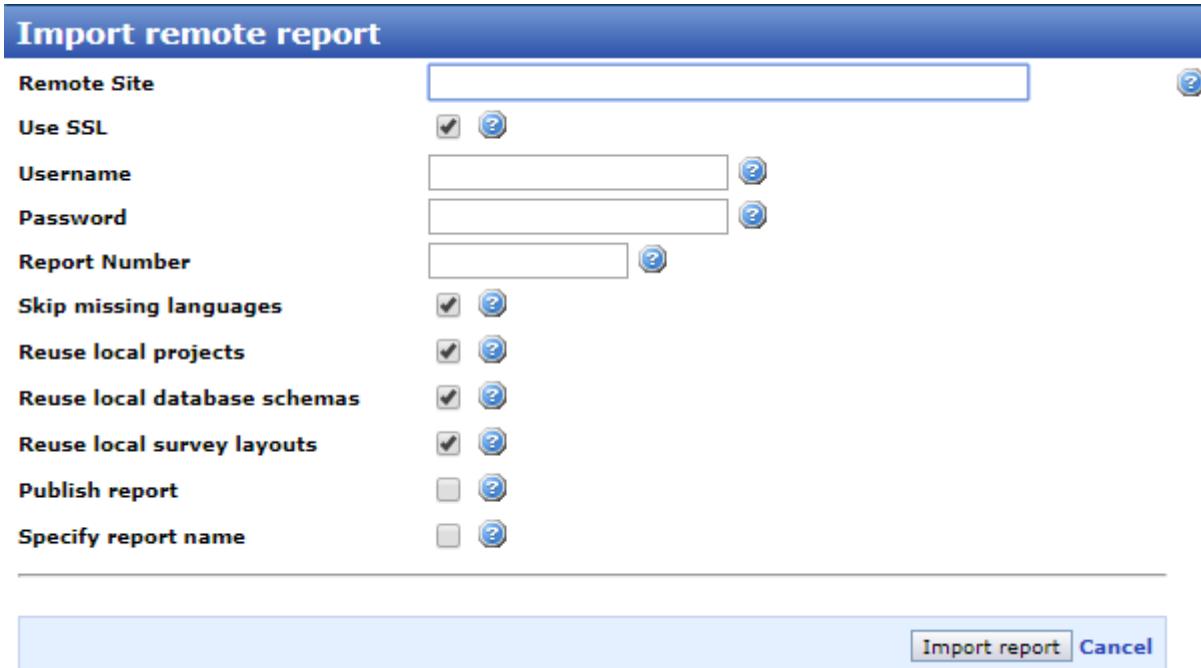
Figure 101 Example of an imported report in the report list

#### 4.7.3. Importing Remote Reports

A Remote Report is one where the data source survey is not already located on the site to which the report definition is being imported to. In this case, the survey will also be imported to the destination site along with the report definition, unless the Reuse Local Projects option is selected - see below.

To import a remote report:

1. Go to the **Home > Import > Remote Report Definition** menu item.
2. The Import Remote Report overlay opens.



**Figure 102** The Import Remote Report overlay

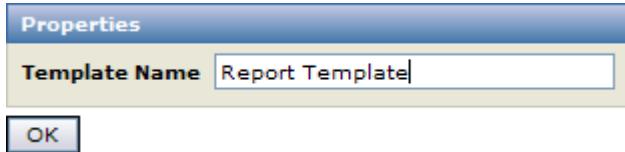
3. Add the details and select the properties as appropriate.
  - **Remote Site** - the domain name of the remote Confirmit site you want to import from (for example author.euro.confirmit.com).
  - **Use SSL** - if the transfer should be performed using an encrypted channel, leave this checked. Note that for this to work, the remote host you are connecting to must have set up SSL for HTTP connections.
  - **Username** - the username you wish to use at the remote Confirmit site. Note that this user must have the SYSTEM\_API\_ACCESS permission at the remote site, and read-access to the schema you wish to retrieve.
  - **Password** - the corresponding password for your user at the remote Confirmit site.
  - **Report Number** - the number of the report on the remote site.
  - **Skip missing languages** - when this option is enabled, any language that is present in the remote report but missing from the local system will be removed from the report and import will continue. If the option is unchecked then any missing languages will cause import to fail.
  - **Reuse local projects** - if enabled, this will attempt to find local projects with the same name as the project(s) associated with the remote report. If such a project is found, the local project(s) will be used rather than importing the remote project(s).
  - **Reuse local database schemas** - if enabled, this will attempt to find a local database schema with the same name as the schema associated with the remote survey. If such a schema is found, the local schema will be used rather than importing the remote schema. When this checkbox is disabled, a schema in a remote survey will always be imported, irrespective of the number of times you import the survey.
  - **Reuse local survey layouts** - if enabled, this will attempt to find a local survey layout with the same name as the survey layout with the remote survey(s). If such a survey layout is found, the local survey layout will be used rather than importing the remote survey layout.
  - **Publish Report** - when this option is enabled, the report is published once the import is completed.
  - **Specify report name** - if you want to import the report using a different name than it has on the remote Confirmit site, check this box and input your own name. If not, leave this unchecked.
4. Click **Import Report**.

## 4.8. Saving a Report as a Template

If you want the modifications you have done in the “Layout and Styles” section to be available as a new template, You can save the report definition as a Template.

1. Go to the **Report > Edit > Save as Template** menu command.

The Properties dialog opens.



*Figure 103 Naming the new template*

2. Give the new template a name and click **OK**.

The new template will now be displayed in the Template list (go to the **General > Template List** menu command) as shown in the picture below, and can be used when you generate new reports (see Templates on page 684 for more information).

 A screenshot of the 'Template List' application window. The title bar says 'Template List'. The main area is a grid table with the following data:
 

Template Number	Template Name	Created Date	Created By	Action
951	Report Template	12/11/2009 13:11:51	Apple, Adam	Preview
838	Import of Default template	19/10/2009 11:26:34	Hammarström, Robert	Preview
435	Default template	28/07/2009 11:36:20	System, Admin	Preview
6	Import of Reportal Training - Example Template	22/04/2009 11:20:47	Strelakovskaya, Svetlana	Preview
5	Import of Default template # 2a	22/04/2009 11:19:50	Strelakovskaya, Svetlana	Preview
4	Import of Default template # 2b	22/04/2009 11:16:23	Strelakovskaya, Svetlana	Preview
1	Default template	30/03/2009 14:17:25	administrator	Preview

*Figure 104 The new template in the Template list*

## 4.9. Multilingual Reports

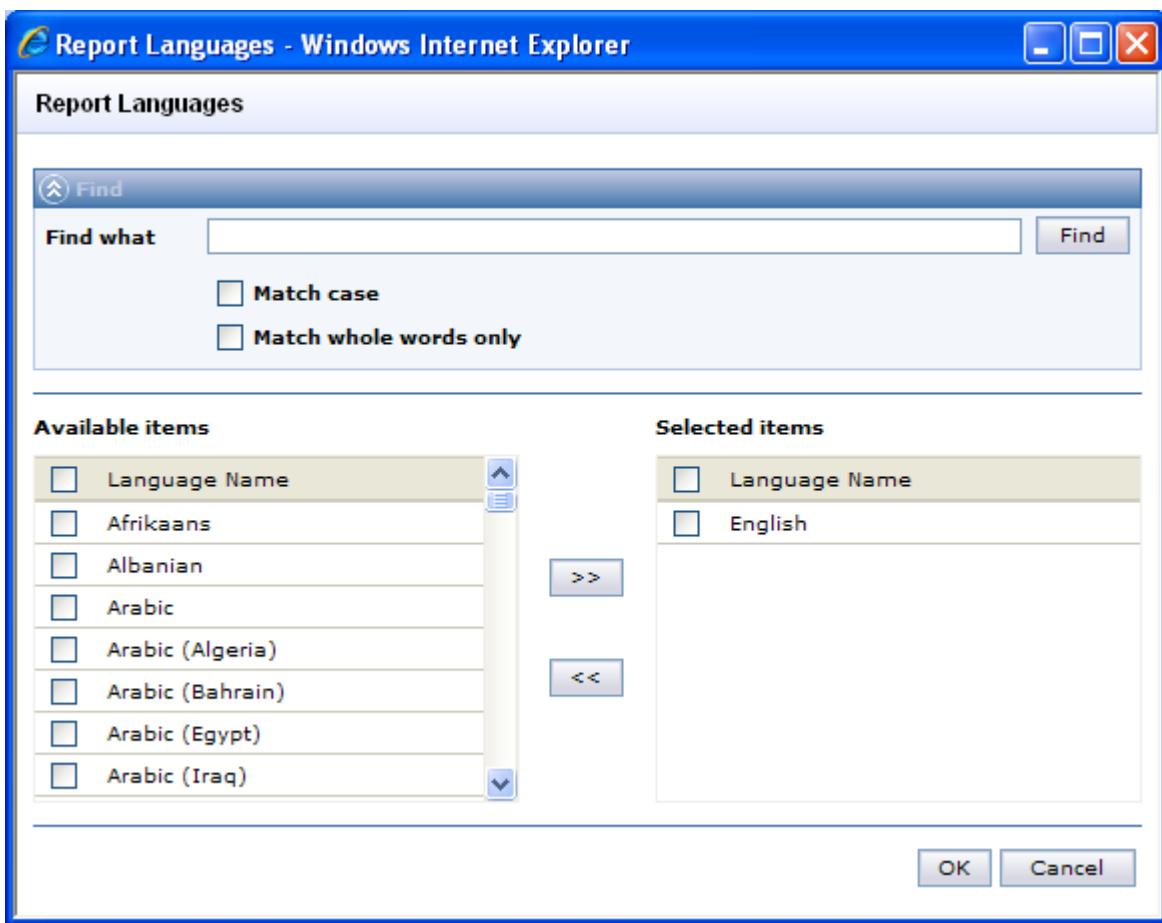
A report will always have a default language, but the Reportal user creating the report can also include any number of additional languages. For multilingual reports, a report viewer can select the language in which he/she wishes to view the report from a drop-down list in an overlay that opens from a link in the report's **Admin** menu.

The default language for a report will be specified automatically when the report is created, and will be the default language defined for the survey on which the report is based (and this will by default be the language selected in that PC's User Settings). If necessary you can change the default language for the report in the report's Properties sheet (go to the **Report > Properties > Report Properties** menu command).

The report will always be displayed in the default language unless additional languages are made available by the report creator and one of these languages is specifically selected by the viewer. If a viewer selects another language, while texts are available in that language then they will be displayed. However if a text field in the report does not have text in the selected language, then the default language will be used for that text field.

To select languages for a report:

1. Open the report.
  2. Go to the **Report > Properties > Report Properties** menu command.
  3. Towards the bottom of the properties page, click the  button beside the Report Languages property.
- The Report Languages selection window opens.



*Figure 105 The Report Languages window*

4. In the Available Items column, click in the checkboxes for those languages you wish to use in your report and click the **>>** button, or double-click on the languages, to select them and move them to the Selected Items column. In the figure below, English, French and Norwegian have been selected .

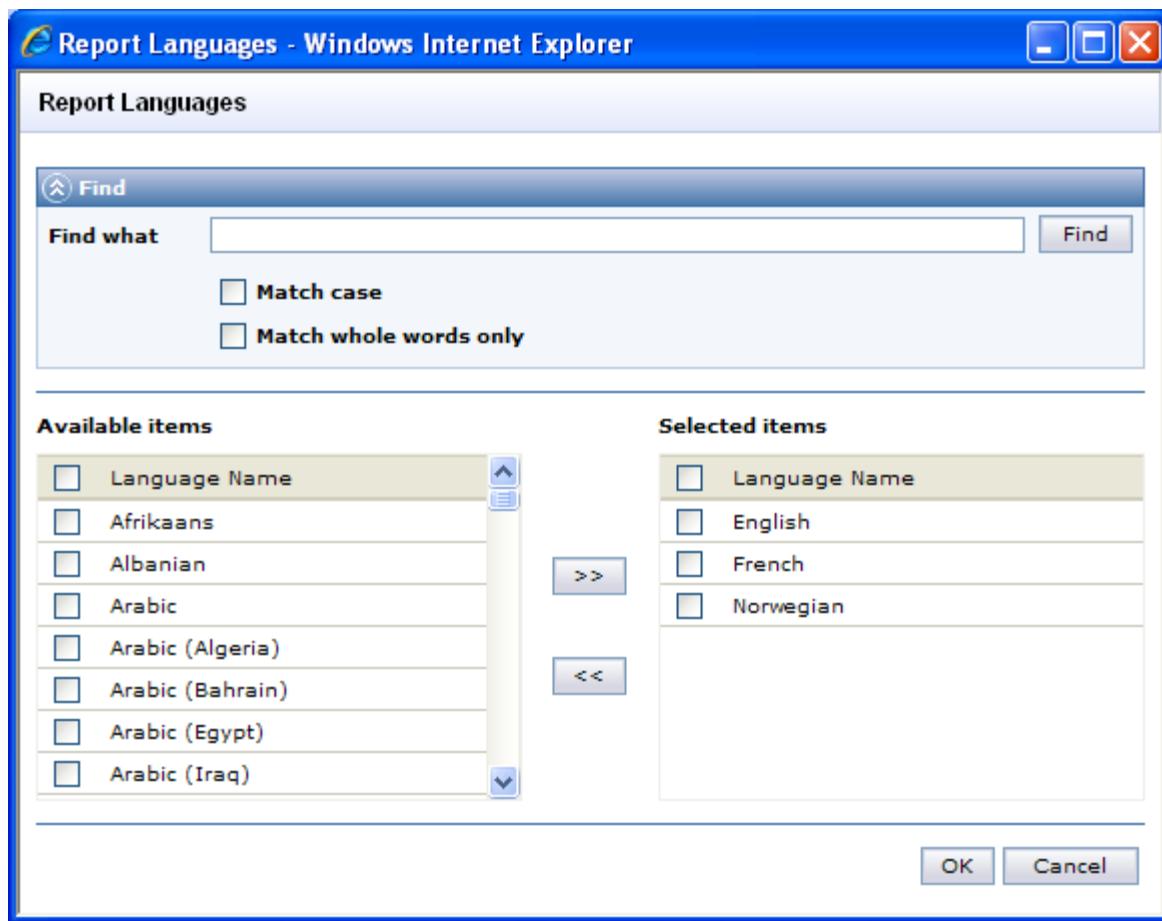


Figure 106 Languages selected for the report

5. Click **OK** to select the languages and close the window.

Now, in all cases where text fields are displayed in the report, for example a Text component, a text field will be available for each language specified for the report. The figure below shows the text fields (English, French and Norwegian) in the Properties page of a Text component

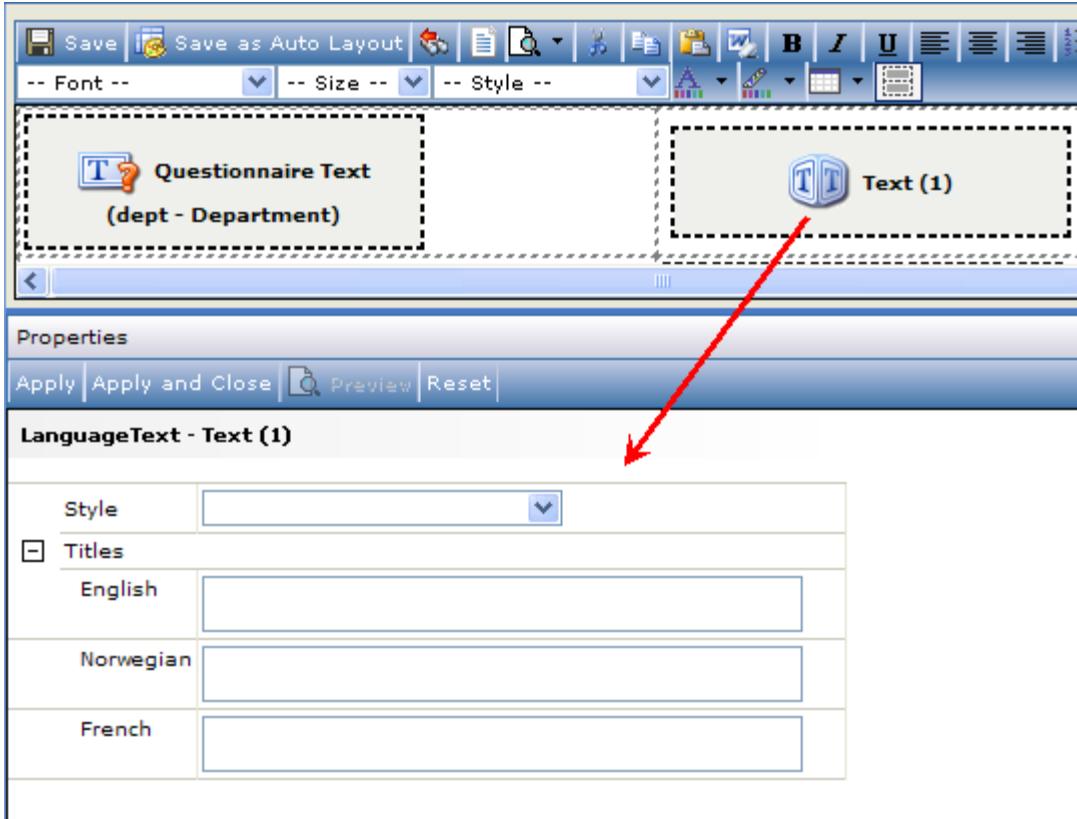


Figure 107 The text fields for the languages specified for the report

You can now add the desired text to these fields in the appropriate languages. The report viewer will then be able to go to the Preferences item in the report's Admin menu and select the language he/she wishes to view the report in.

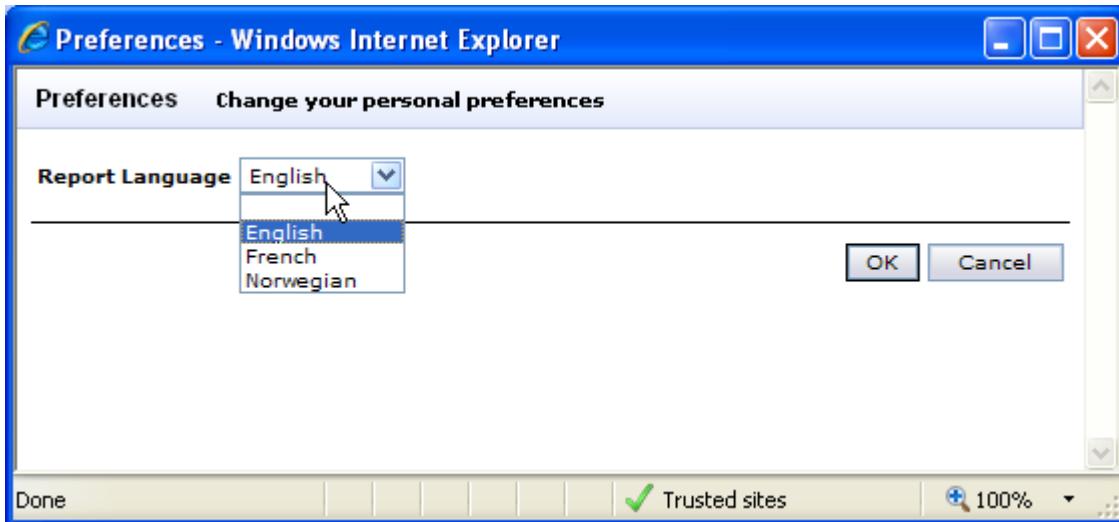


Figure 108 The report viewer's language selector

## 4.10. The New Report Wizard

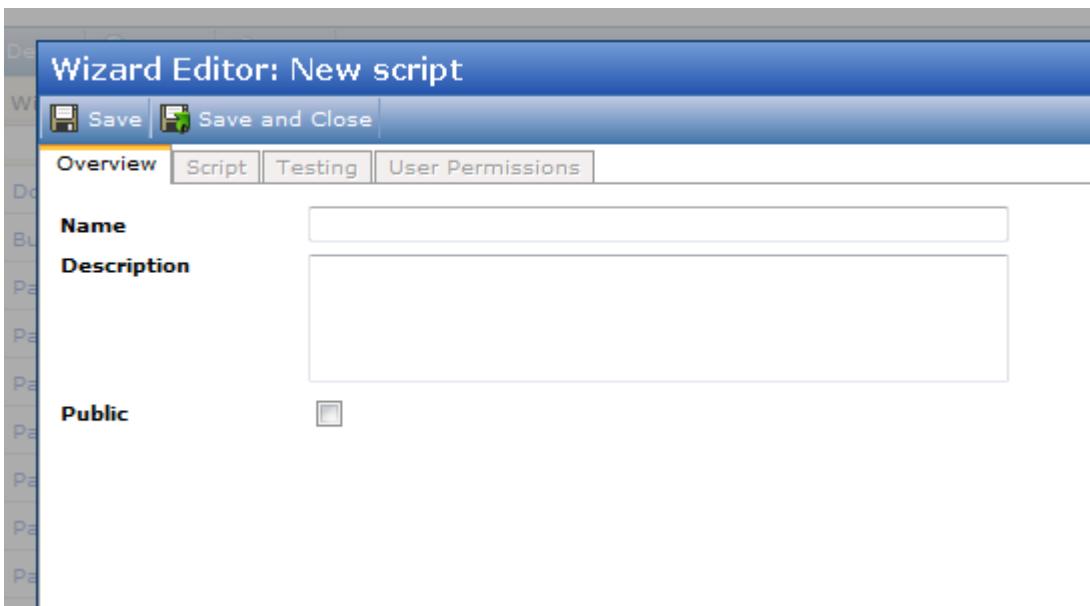
This functionality enables you to create scriptable report wizards that are adapted to different scenarios and domains. The wizards enable Authoring users to create full reports with a single mouse click, directly from Confirmit Authoring, or to add elements to existing reports. See also the Authoring User Guide for further information.

The resulting reports are editable. So once a report has been created by a wizard, you can go into the report and change it, adapt it and set it up exactly as you require. The wizard adds no additional or special code to the report.

The wizards themselves are created in Reportal. The script required for the wizard can be typed 'manually' into the scripting field, or a pre-written script can be copied in from for example Notepad. Using script you can set a number of the report properties.

#### **4.10.1. How to Define a Report Wizard Script**

1. Go to the **Home > Wizard List** menu command.  
The Wizard List page opens.
  2. Click the **New Wizard** button located in the upper-right corner of the page.  
The Wizard Editor overlay opens.



*Figure 109 The Wizard Editor overlay*

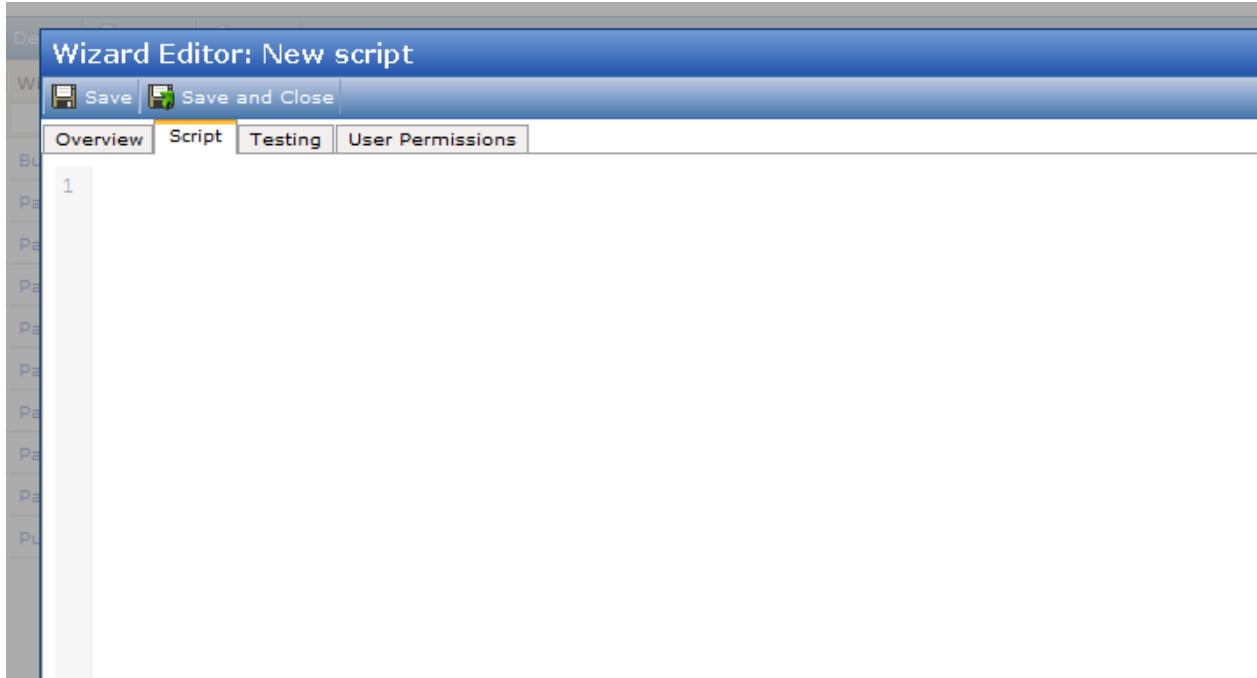
- Type a name for the new wizard into the Name field.
  - Type in a description if required.

The wizard can be made available to any user (Public), or it can only be available to you and other users to whom you have given access permission.

5. Check the Public box if you wish the wizard to be available to any user.
  6. Save the changes.

The wizard is created and saved in the Wizard list, and the Script, Testing and User Permissions tabs become available.

- #### 7. Go to the Script tab.



Here you can type or copy in the script required for the wizard.

A screenshot of the 'Wizard Editor: Doc Wizard' window. The title bar shows 'Wizard Editor: Doc Wizard'. Below it is a toolbar with 'Save' and 'Save and Close' buttons. A navigation bar at the top includes tabs for 'Overview', 'Script' (which is selected), 'Testing', and 'User Permissions'. The main area is a code editor with a vertical line number column on the left. Lines 1 through 20 contain the following Python-like script:

```
1 styles:
2   Template='Webinar Light Grey Template'
3   PageMaster='Default Page Master'
4   LayoutMaster='Table+Chart+P'
5
6 Report.Name = 'Doc report wizard 1'
7
8 create folder, 'Questions':
9
10    for_every_question:
11      where = (single or multi)
12      create page:
13        LayoutMaster='Title+Table+Chart'
14        name = q.Name
15        question_text.style_name = 'PageTitleStyle'
16        question_text.question = q.Name
17        table.Name = q.Name
18        table.RowHeaders = q.Name
19
20
```

Figure 110 Example of scripting for a wizard

The script in the above example is written in "functional blocks".

- The first block defines the template and any styles that are to be used. This is optional, and if no template or styles are defined then any default styles from the template you select will be used. These can then be changed at the page or object level as necessary.
- The report name is also not necessary - there is a field in the report wizard in which you can enter a report name.
- The remainder of the script in the example above creates the report, in this case a folder called "Questions", containing a page for each single or multi question in the project.

Using the script you can create parameter folders in the Report wizard, and a parameter folder can have folders and questions. You can name a parameter folder, and there may be any level of nested folders. Inside a parameter and a parameter folder, the folders will be listed first followed by the questions. Inside "create parameter", use indented "create parameter\_folder" to create folder. You can also set a number of the report properties, create Analyst folders and tables, and quotas. Refer to the Report Wizard Scripting documentation for further details.

**Note:** Names for folders, pages, tables, parameters etc. used in wizard scripts must follow the same rules for lengths and characters as when created/renamed in the Report toolbox.

#### 4.10.2. How to Test a Report Wizard

Once you have created the required script, you can compile it and test it to ensure it functions as required. To do this:

1. Go to the Testing tab.

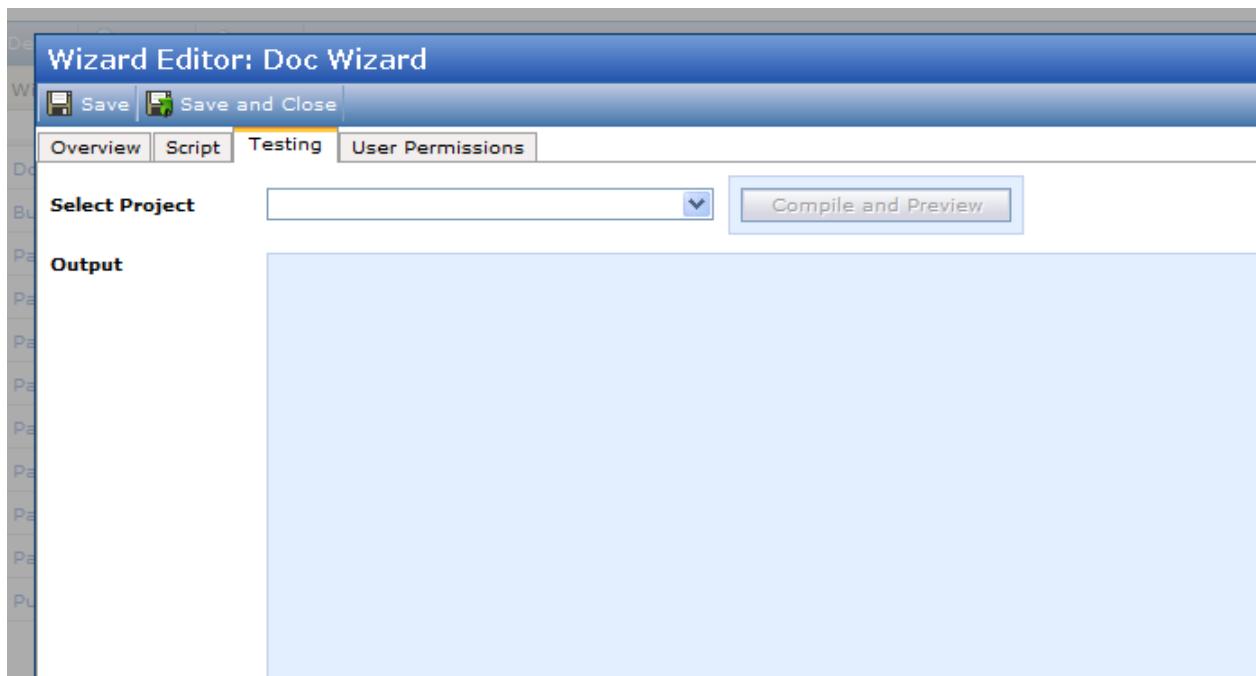


Figure 111 The Wizard Editor Testing tab

2. Select the project you wish to test the script on.
3. Click the **Compile and Preview** button.

Note that the button is inactive until a project has been selected.

The script is run, and the result is displayed in the tab.

The screenshot shows the 'Wizard Editor: Doc Wizard' window. The 'Testing' tab is active. On the left, there's a vertical toolbar with icons for Save, Save and Close, Overview, Script, Testing, and User Permissions. Below the toolbar, 'Select Project' is set to 'Car Project for Documentation - (p29413)'. To the right of the project selection is a 'Compile and Preview' button. The main area is titled 'Output' and contains the following report script:

```

Report:
  TemplateName = 'Webinar Light Grey Template'
  Default TableStyle = 'Will use default style from template'
  Name = 'Doc report wizard 1'
  Folders:
    Folder 'Questions' :
      Page 'gender' :
        LayoutMaster = 'Title+Table+Chart'
        PageMaster = 'Default Page Master'
        Table 'gender' :
          StyleName = 'Will use default style'
          ColumnHeaders = ""
          RowHeaders = 'gender'
          DefinitionExpression = ""
          StyleName = 'Will use default style'
        QuestionText 'QuestionText1' :
          Question = 'gender'
          StyleName = 'PageTitleStyle'
      Page 'age' :
        LayoutMaster = 'Title+Table+Chart'
        PageMaster = 'Default Page Master'
        Table 'age' :
          StyleName = 'Will use default style'
          ColumnHeaders = ""
          RowHeaders = 'age'
          DefinitionExpression = ""
          StyleName = 'Will use default style'
        QuestionText 'QuestionText1' :
          Question = 'age'
          StyleName = 'PageTitleStyle'

```

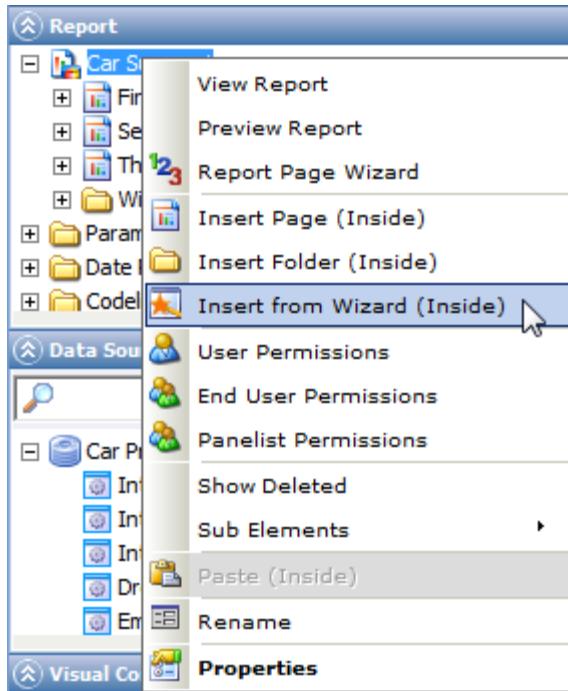
*Figure 112 The result of the compilation*

This result shows the template and styles to be used, the report name, the folder, and the questions that will be included from the selected survey. Any syntax errors that are found will be listed, along with the error's location line and column.

#### 4.10.3. Using a Wizard Script in an Existing Report

Wizard Scripts can be used from both Authoring and Reportal to add elements to an existing report. To use a wizard script within an existing report, proceed as follows:

1. In Reportal, open the report you wish to work with.
2. Either go to the **Report > Edit > Append from Wizard Script** menu command or right-click on the report icon in the Report toolbox, and select **Insert from Wizard (Inside)**, or right-click on a page in the report and select **Insert from Wizard (After)**.



**Figure 113 Inserting an object into an existing report using a Wizard Script**

The Update Report with Wizard Script page opens, with a list of all the wizard scripts that are available to you.

3. Find and select the wizard script you wish to use, then click **Finish**.

A task runs, and the appropriate objects are added to the report.

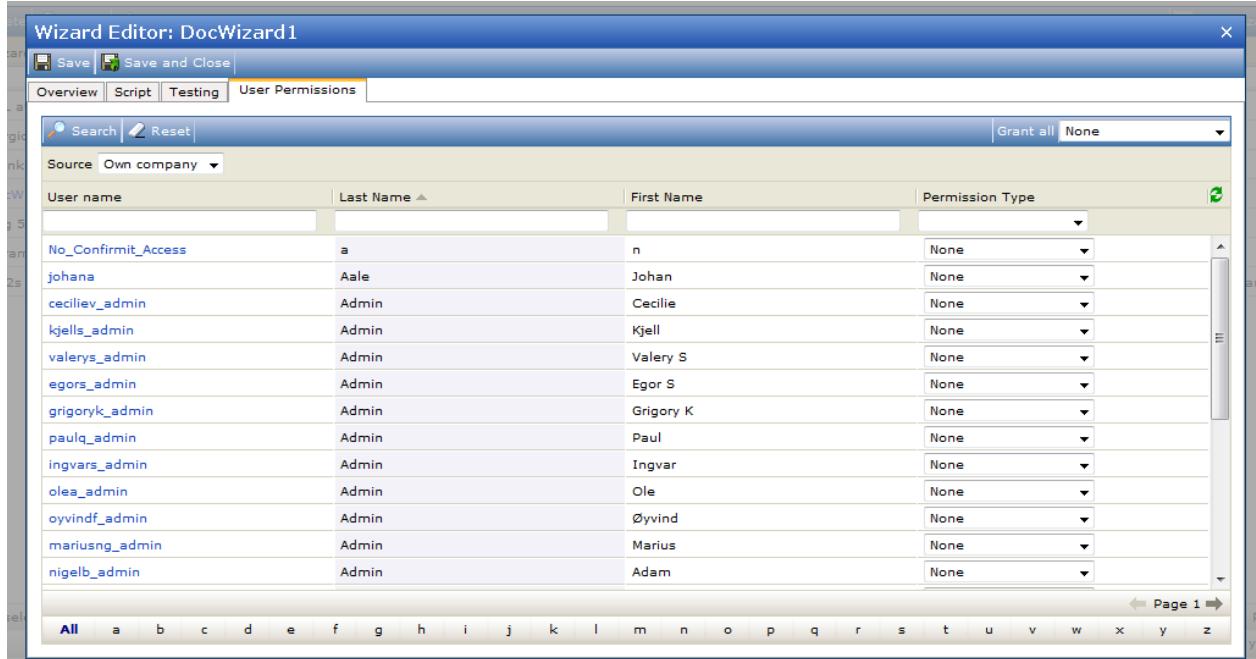
**Note:** The Preview button towards the right end of each row in the list opens an overlay showing the script contained in the wizard.

**Note:** Wizard scripts can be used to add new pages to existing reports, and can add any objects required on those new pages. However scripts cannot add objects to existing pages.

#### 4.10.4. User Permissions for the Report Wizard

A report wizard can be created such that it is Public (any user with access to the server can make use of the wizard), or private (initially only the user who has created the wizard has access to it). Once a user has created a private wizard, he/she can then go to the Permissions tab and allocate access permissions to that wizard to the various users registered in their company.

1. When in the Wizard Editor page for the wizard you wish to work with, go to the User Permissions tab.



**Figure 114 Example of the User Permissions tab**

Here you can search for users in your Own company or in the Other users list (the users you have added to the permissions list by inserting their user key in the Add users box in Confirmit Authoring). In the event the list is extensive, you can add search criteria to the search fields above the columns, and you can sort the columns by clicking on the column headers. Click **Reset** to remove all search criteria and re-display the full list.

2. To apply a permission for an individual user, go to the Permission Type field for that user and select the required Permission Type from the drop-down list.

The options are:

- o **None** - The user cannot use or see the wizard in his/her Create Report Using Wizard overlay list (see the Confirmit Authoring User Guide for further details).
- o **Execute** - the user can see the wizard in his/her Create Report Using Wizard overlay list, and use the wizard to create a report.
- o **Design: Write** - the user can edit the wizard but not delete it.
- o **Design: Delete** - the user can edit or delete the wizard.
- o **Design: Administrate** - the user has administrative permission for the wizard (he/she can allocate permissions).

You can either give access to each user individually, or use the Grant All option for a group of users if they are to be granted the same level of permission. To give the same permission to all users currently displayed in the list, in the Grant All field select the desired permission and click the **Grant All** button. The list is re-displayed with the appropriate permission applied.

Note that the selected permission will be granted to all the users who are currently listed on the page. If you wish to grant a particular permission to a sub-set of users, conduct a search such that only those users are listed before you apply the Grant all permission.

## 5. The Report Page Editor

**Note:** Confirmit Reportal is not installed on your computer locally like an application such as MS PowerPoint normally is. In addition, no plug-ins or ActiveX components must be downloaded for you to gain full functionality. Working in Reportal means working 100% in a browser window. All formatting is performed using HTML and style sheets. You use table or style properties to position elements on the page, instead of moving them to a precise point as for example in PowerPoint.

The Report Page Editor is the screen you use when designing and creating the pages of your report.

### 5.1. HTML Tables

The normal method of setting up a report page is to create an HTML table on the page then place the various report elements such as text (see Text on page 103 for more information) and images (see Images on page 106 for more information) into the cells of the table.

#### 5.1.1. How to Insert an HTML Table

To place an HTML table onto a page:

1. In the Report toolbox, double-click on the page in which you wish to create the table.  
The Page Editor opens.

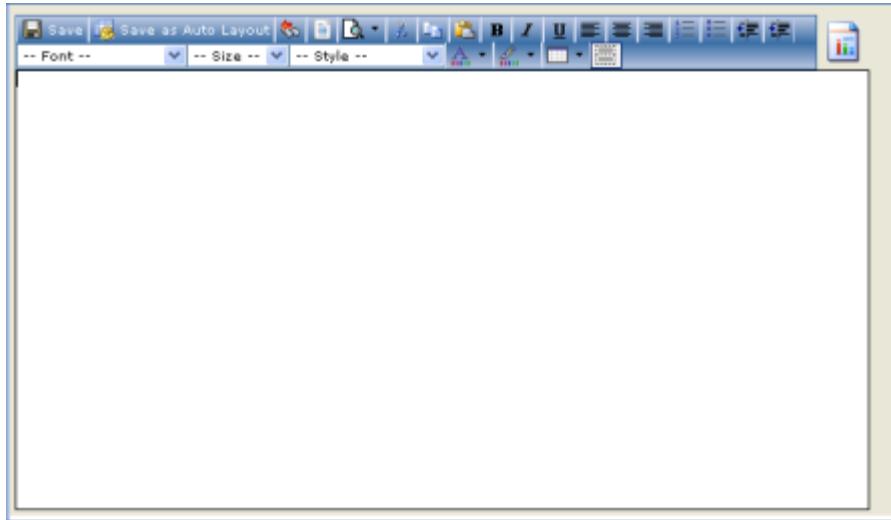


Figure 115 The blank page editor

2. Click the **Table** button towards the right end of the page editor toolbar to open the table selector, move the pointer to the right and down until the required number of rows and columns are selected, then click in the square (see the figure below).

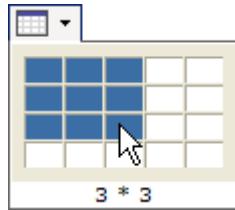


Figure 116 Creating a table - in this case 3 x 3

The table is created. Use this table to specify the positions of the components on the page.

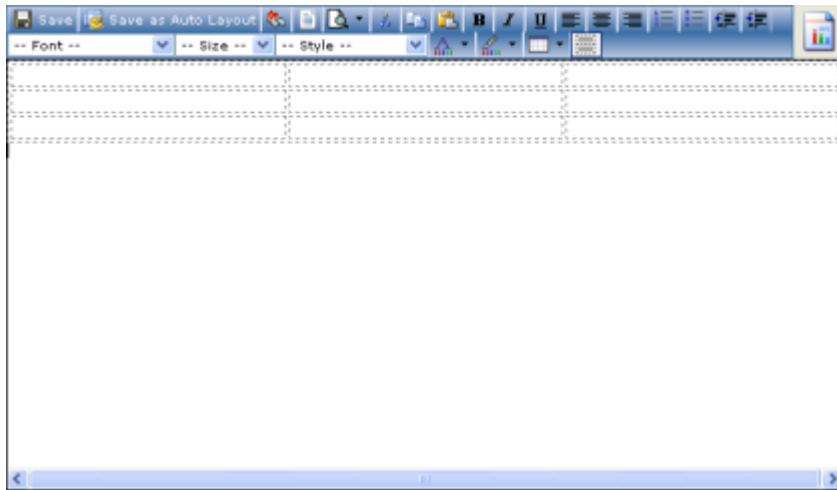


Figure 117 The resulting 3 x 3 table

You can add rows and columns to a table at any time (see How to Add Rows and Columns to an HTML Table on page 97 for more information).

The figure above shows a table with three rows and three columns. The dotted grid is a visual reference to enable you to see the table while editing. It will not be visible in the final report. If you prefer to see the page without this grid, either select preview, or click the **Hide grid** button towards the right end of the toolbar.

### 5.1.2. How to Add Rows and Columns to an HTML Table

You can add as many rows and columns as required to any HTML table.

1. Right-click in the cell next to which you wish to add a row or column.
2. Choose the required action from the drop-down menu.
3. Save the changes.

### 5.1.3. How to Delete Cells, Rows and Columns

Delete unwanted cells, rows and columns as follows:

1. Right-click in a cell in the row or column you wish to delete.
2. Select the appropriate command from the drop-down menu.

In the figure below, the third row is being deleted.

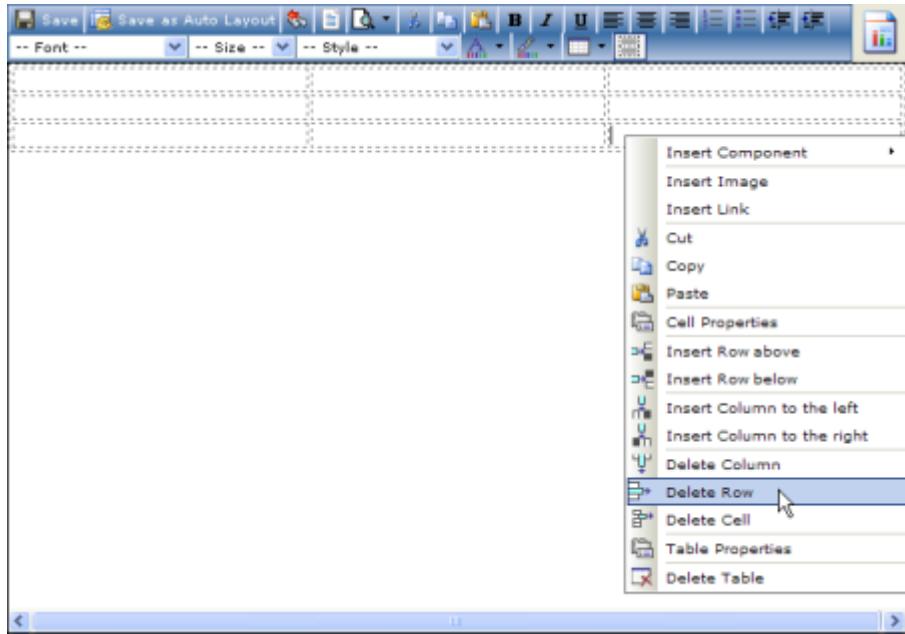


Figure 118 Deleting cells, rows and/or columns

3. Save the changes.

#### 5.1.4. Editing HTML Table Properties

The HTML table has a number of properties that you can set as required. To open the Properties page for the table, right-click anywhere in the table and select **Table Properties** from the drop-down menu.

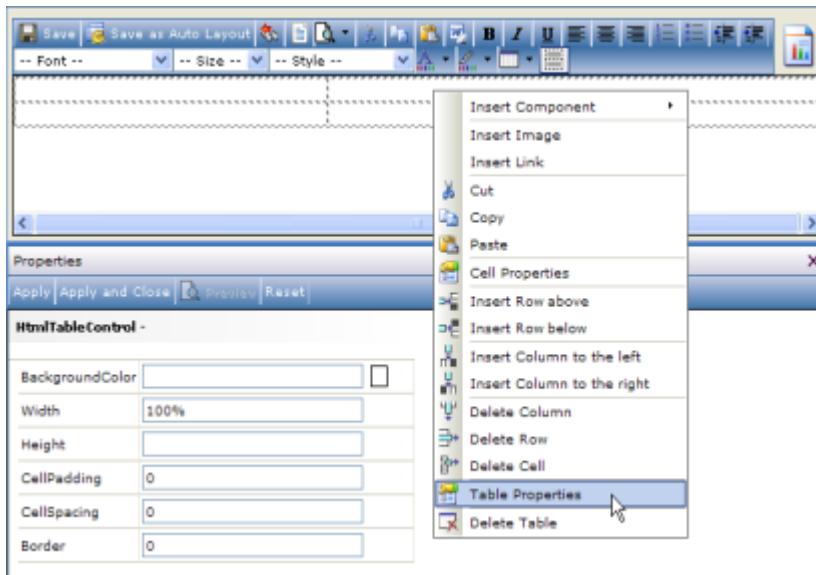


Figure 119 Accessing the table properties

The HTML Table Properties page appears. Here you can change the properties of the table.

- To set the **background color** of your table, type in the color code in the **BackgroundColor** text field, or double-click in the square to the right of “**BackgroundColor**” and choose a color from the color picker.
- You can specify **Width** and **Height** of your table. Note that if you specify width and height with the % character, then the system will maintain the table as the specified percentage of the available window space. If you specify a value without the % symbol, the system will interpret this to be width and height in pixels.
- **Cell Padding** – is the space between the edge of the cell and any object that might be in the cell, for example text. The padding value is applied above, below and to both sides of the cell contents. Set in pixels.
- **Cell Spacing** – is the space between the cells – the width of the “frame”. Set in pixels.
- **Border** – is the width of the table border that gives the table the 3-dimensional effect. Set in pixels.

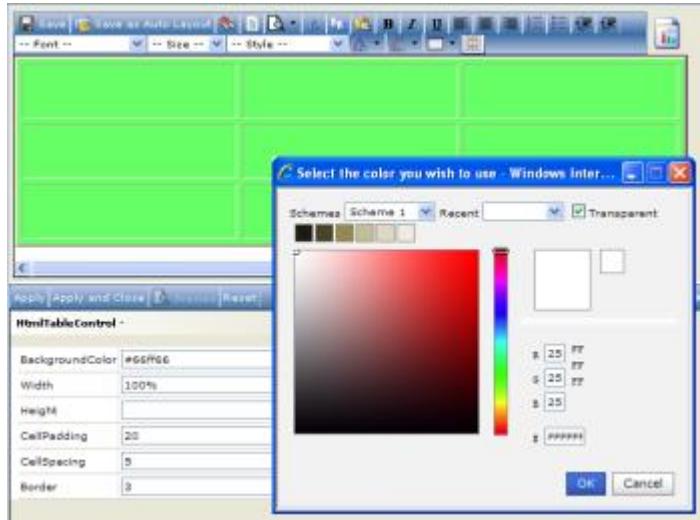


Figure 120 Specifying table properties

On completion, click **Apply** or **Apply and Close** to apply the changes to the table. Once you are satisfied with the result, click **Save**.

### 5.1.5. Cell Properties

Each cell in the HTML table has its own properties that can be set independently of the remainder of the table.

**Note:** The cell properties described here are not related in any way to the cell properties of the aggregated tables.

To open the cell properties window, right-click in the cell you want to edit and choose **Cell Properties** from the drop-down menu. The property box shown below appears.

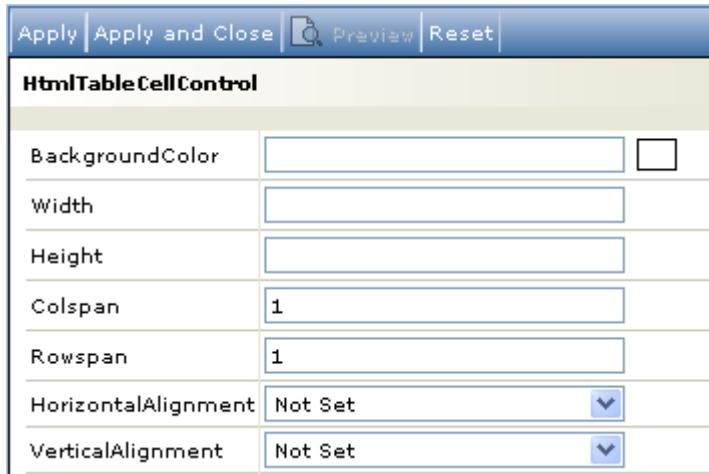


Figure 121 The cell property box

You change the **Background Color**, **Width** and **Height** as described in (see Editing HTML Table Properties on page 98 for more information). Be aware that changing these for one cell might influence the formatting or appearance of the other cells in the same row or column.

If you want to stretch a cell across more than one row or column, use **Colspan** and **Rowspan** to specify how many rows/columns you want the cell to span.

For example, assume we need to merge the two cells in the bottom row of the table. To do this, go to the Cell Properties page for the lower-left cell and set **Colspan** to **2**. Note that the selected cell becomes as wide as two columns; it is not merged with the other cell in the row. The other cell in the row is therefore pushed out to the side as shown below. If this additional cell is not required, delete it to maintain the balance of the table.

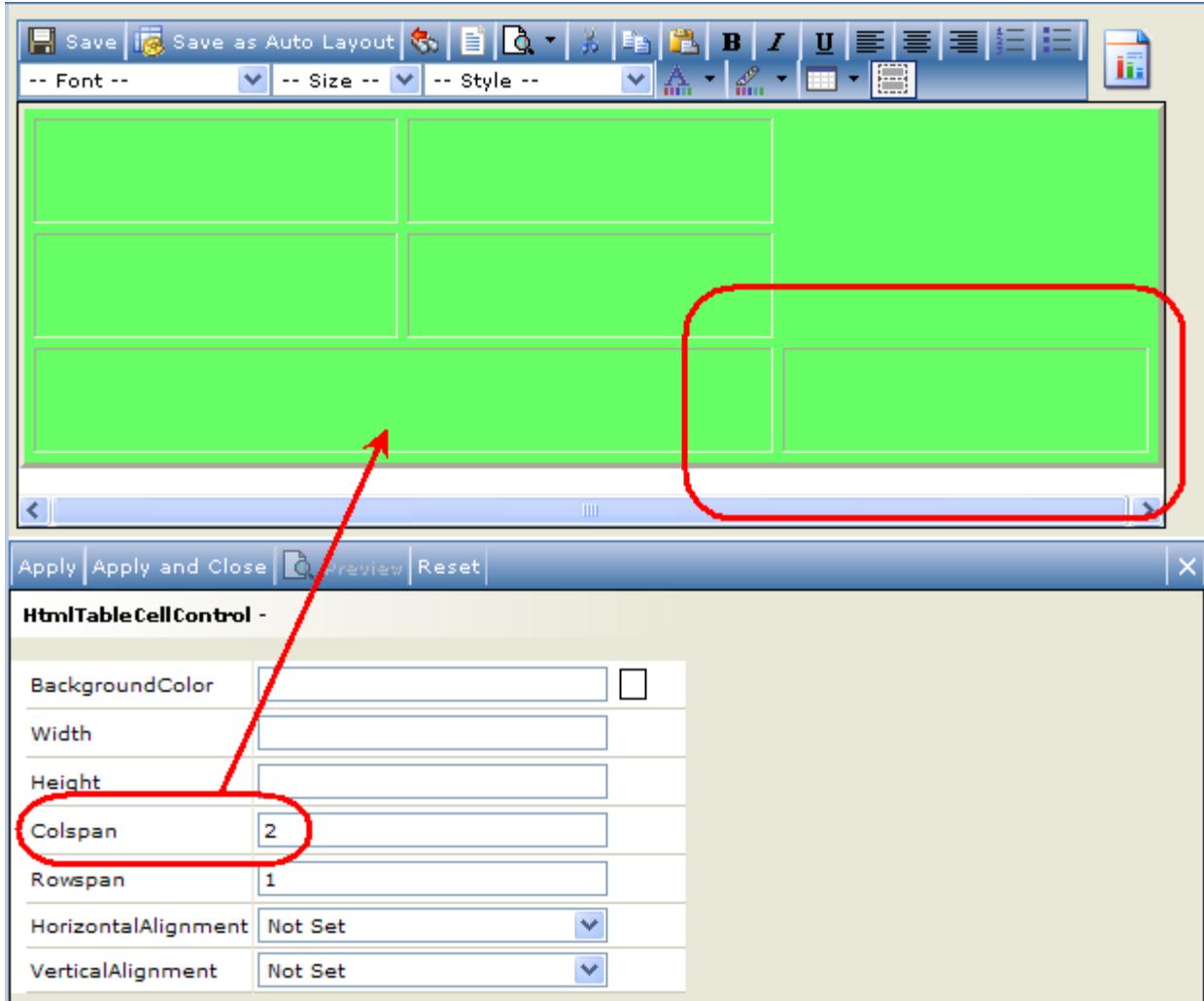


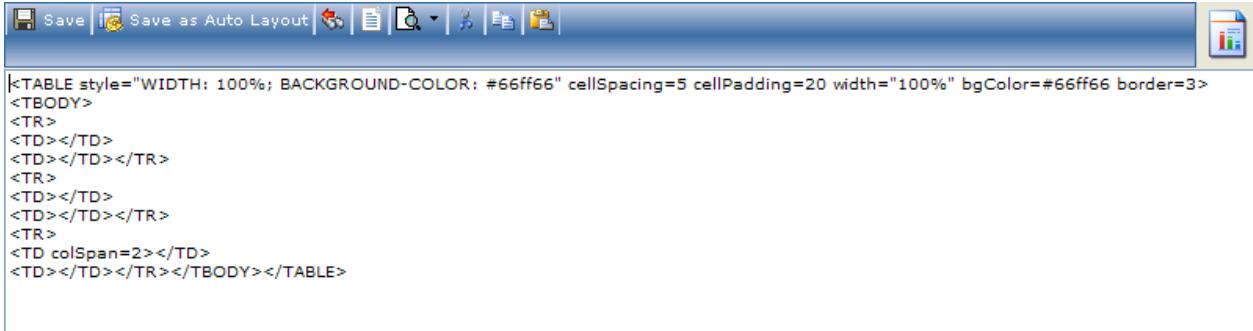
Figure 122 Merging cells

## 5.2. HTML Mode

When building your reports, you will normally work in WYSIWYG mode (what-you-see-is-what-you-get). Users who are familiar with HTML coding can switch to HTML mode at any time. To change modes, click the **Toggle Mode**

button  on the Page Editor toolbar.

The figure below shows the HTML code for a page with a table. Toggle back to WYSIWYG mode by clicking the same button.



*Figure 123 Example of the HTML mode*

For security reasons, to prevent XSS (cross site scripting), the following HTML tags will be removed automatically if added to a report:

```
<applet></applet>
<body></body>
<embed></embed>
<frame></frame>
<script></script>
<frameset></frameset>
<html></html>
<iframe></iframe>
<layer></layer>
<ilayer></ilayer>
<object></object>
<title></title>
<meta></meta>
<head></head>
<form></form>
<input></input>
```

**Note:** When working in HTML mode, ensure you do not remove or modify any code that refers to Report objects such as aggregated tables, charts, report titles etc. This code is identified with the tag WysiwygComponent. Below is an example from a page containing code for an aggregated table:

```
<TR>
<TD><WysiwygComponent type="AggregatedTable" id="27fefb65-cd9e-4ed5-b0ae-b406ba896260"/></TD>
<TD></TD>
```

*Figure 124 Example of HTML code for an aggregated table in a page*

## 5.3. Text

To add text to the report, type or copy/paste directly into any table cell. To edit your text further, use the tools in the Page Editor toolbar, as shown in the figure below. You can also use standard keyboard shortcuts, for example **CTRL-B** for bold, **CTRL-U** for underline, **CTRL-I** for italic etc. **Enter** inserts a paragraph break (`<p></p>`) and **Shift-Enter** inserts a line break (`<br>`). If you paste in preformatted text from, for example MS Word or other web pages, the text will keep its original formatting.

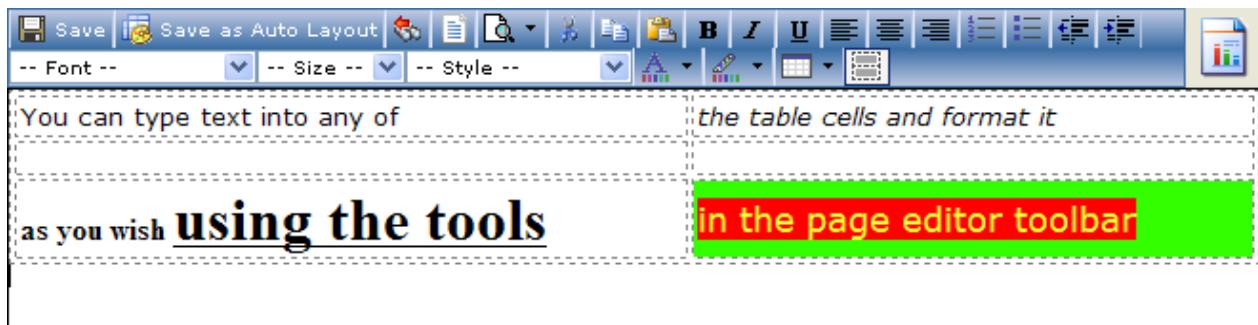


Figure 125 The text editing toolbar

## 5.4. The Filter Component

The Filter component in the Visual Components toolbox allows you to place a filter directly onto a report page. You then drag a single or multi question onto the Filter component to create an "on-page" filter. The filter component has a number of properties that allow you to regulate how it is to be displayed. This procedure is much simpler than before.

1. Open the Page Editor for the page on which you wish to create a filter.
2. Drag a Filter component from the Visual Components toolbox and drop it into the appropriate area on the page.

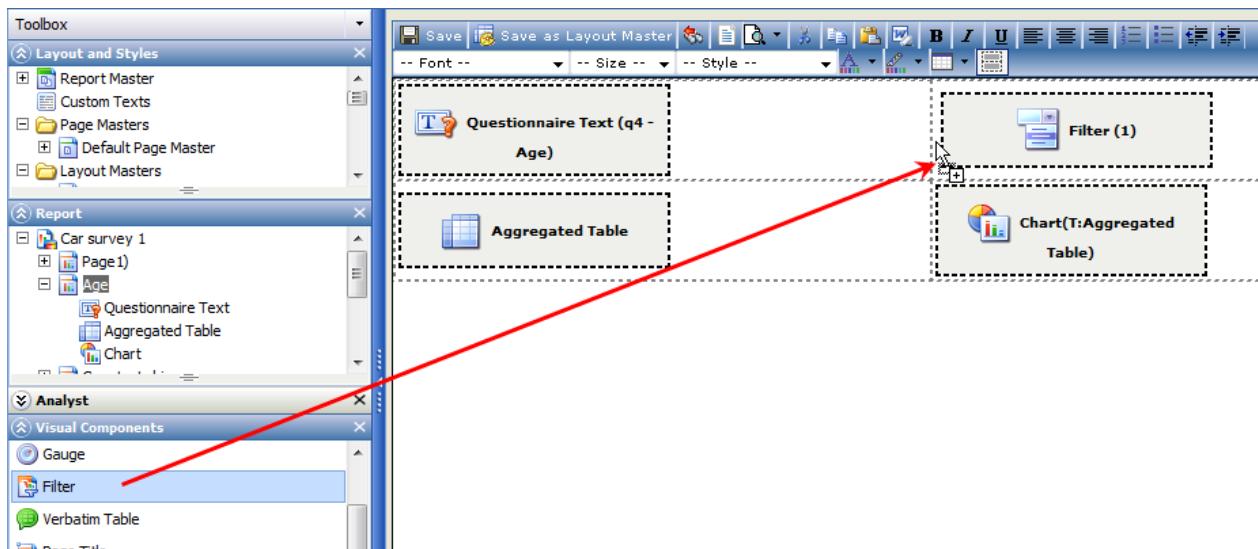


Figure 126 Creating a page filter

3. From the Data Source toolbox, drag the single or multi question on which you want the filter to be based, and drop it onto the filter component.

4. Save the changes.
5. Preview the page to see and test your new filter.

Note that to view the filter in action you must check the Auto Submit box in the filter Properties page (see below). Then, when you select an option from the filter, the page will be updated automatically.

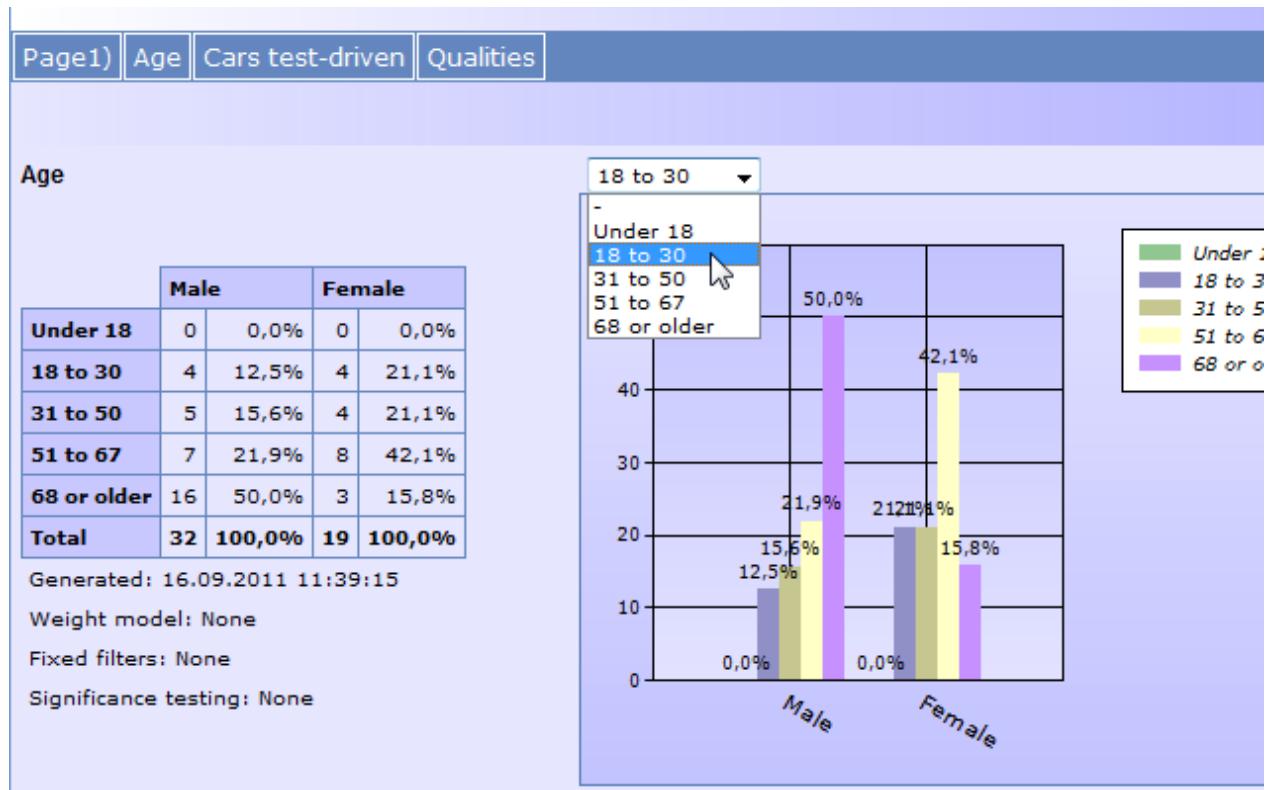


Figure 127 Example of a page filter

In the Report toolbox, double-click on the filter component or right-click on it and select **Properties**, to open its Properties page.

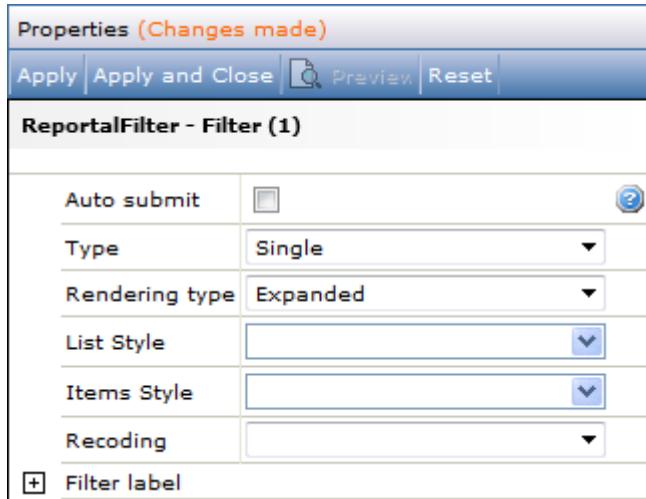


Figure 128 The page filter's Properties page

The properties are as follows:

- **Auto submit** - if this property is selected, the report page will reload automatically when the user changes the filter value.
- **Type** - select the type of filter you wish to use. The options are:
  - **Single** - the user can only select one item from the filter at a time.
  - **Multiple** - using standard Windows selection techniques, the user can select more than one item from the list in the filter.
- **Rendering type** - enables you to specify how you wish the filter to be presented. The options are:
  - **Limited** - presents the options in a drop-down list.
  - **Expanded** - displays the options in a column. See also Horizontal Columns below.
  - **Autocomplete** - provides a filtering possibility for filters with long answer lists. When this option is selected, the user is presented with a scrollable answer list with a text field located above the list. The user can then type the first few characters of the required category into the text field, and the answer list is reduced to just those categories that include the typed text. The filter will find all examples of the specified criteria; for example if the category options comprise a long list of names including "David Carlson" and "Carl Davidson", and the user types "DAV" into the field, both names would be found
- **Horizontal columns** - when Rendering Type is set to Expanded, this property becomes available. Select this to present the options horizontally rather than in a vertical column..
- **List Style** - select the html style you wish to be used to display the frame of the list of options.
- **Items Style** - select the html style you wish to be used to display the elements within the list.
- **Recoding** - in the event recordings have been performed in the question that the filter is based on, then those recordings will be listed in the drop-down. You can then select a recording from the list to base the filter on the recording rather than the original question.
- **Filter label** - this functionality is only available in the ReportFilter component that you can add into a normal Report Page. If this property is enabled, then you can select the Style, the Position (left, top), the Text source (text from Question Title, from Question Text or Custom Text) to place a label on the filter.

Properties changed away from the default values will have yellow backgrounds.

6. On completion, click **Apply** or **Apply and Close** to save the changes.

**Note:** When you have made and saved changes to the filter's properties, right-click on the page in the Report toolbox and re-select Preview Page to view those changes in the preview.

## 5.5. The User Component

The User component is a stand-alone component which can be placed on a report page and which allows the user to change a number of personal settings depending on the type of user who is logged on.

- Professional Users can change the report language.
- End users can change the report language, the user language and the password.
- Panelists can change the report language, the user language and the password.

The component can be placed on a specific report page, or it can be placed in the Report Master so that it appears on every page in the report. Drag and drop the component from the Visual Components toolbox, or right-click in the page and select **Insert Component > User**.

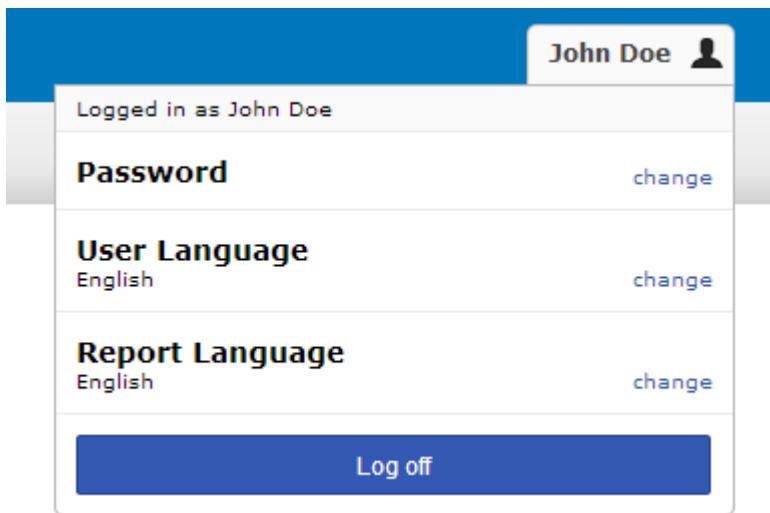


Figure 129 Example of the User component on a report page

To change a setting, click the appropriate **change** link to open the relevant drop-down.

## 5.6. Images

You can insert images/pictures into your report.

- If you are in HTML mode (see HTML Mode on page 101 for more information) enter the HTML code (img tag) at the location where you want to insert the image.
- If you are in WYSIWYG mode you can copy-and-paste an image, or drag-and-drop an image from a website or browser, into the report.

**Note:** If the image you want to use is a hyperlink then you must copy and paste it into the report. You cannot drag-and-drop an image link as this will result in the browser trying to open the page the link points to instead of pasting in the picture. The images will not be moved to the Confirmit Reportal site, there will just be an image tag referring to the original location of the image.

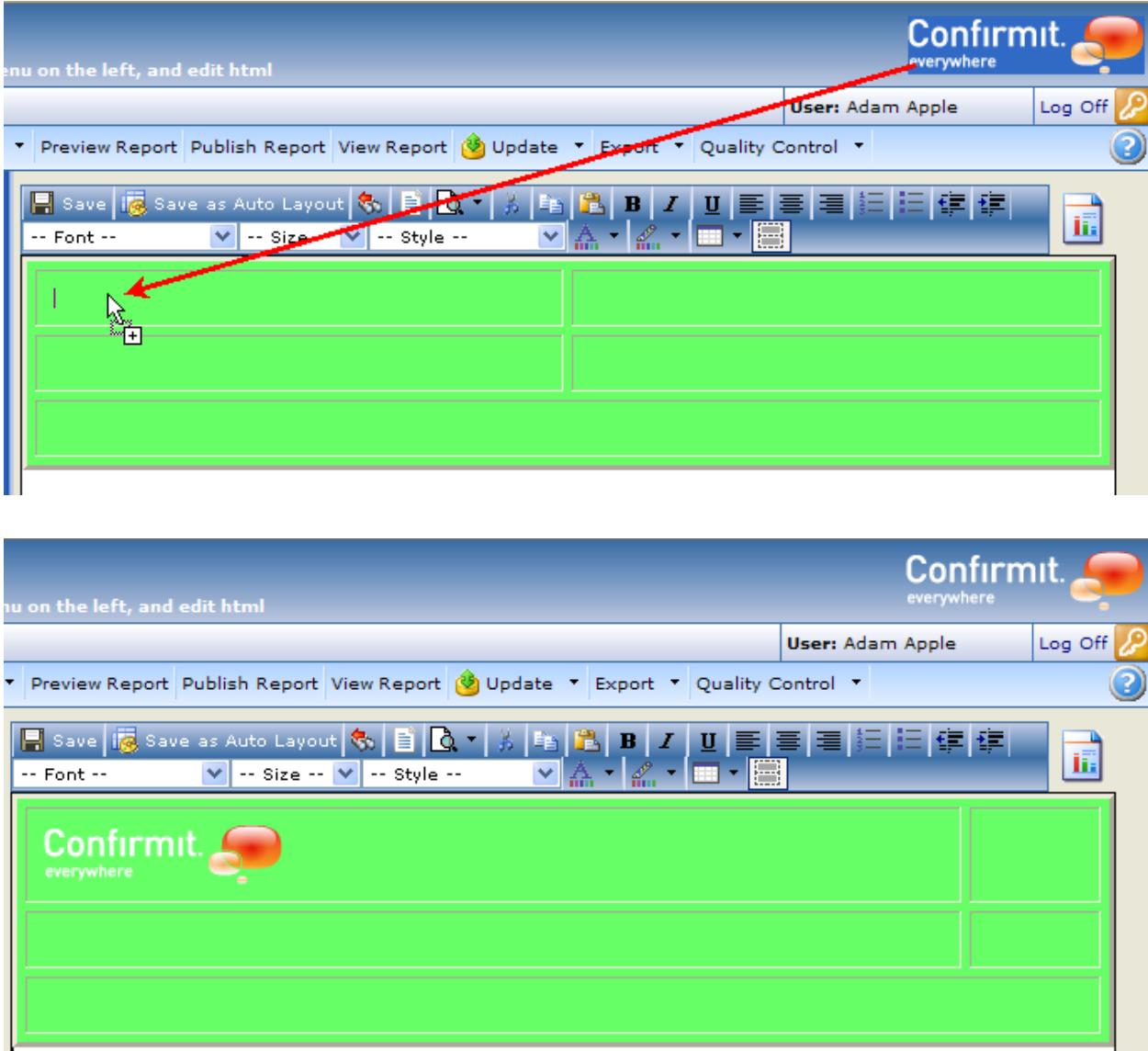


Figure 130 Inserting an image with drag-drop (can also be done from other browser windows)

You can also right-click in the report page where you want to insert the image, and select **Insert Image** from the menu.

This opens a property sheet where you specify the source (the URL to the image), width, height, border, alternative text (to be used when image is not displayed), image alignment, and horizontal and vertical spacing.

**Note:** Images using standard links will not be displayed when they are exported to PDF; in this case a small red X will be displayed in their place. You must use the full URL to an image if it is to be displayed correctly after being exported to PDF. This is due to a limitation in PDF, not Confirmit.

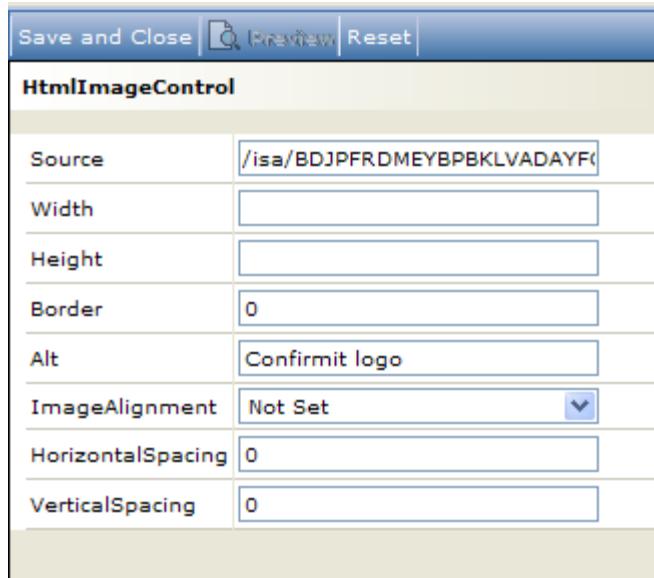


Figure 131 Image properties

## 5.7. Report Page Properties

To edit the properties of a report page, right-click on the page name in the Report toolbox and select **Properties** from the drop-down menu. Note that you can select several pages using standard Windows techniques and edit the object properties simultaneously. Page-specific properties will not be displayed in this case.

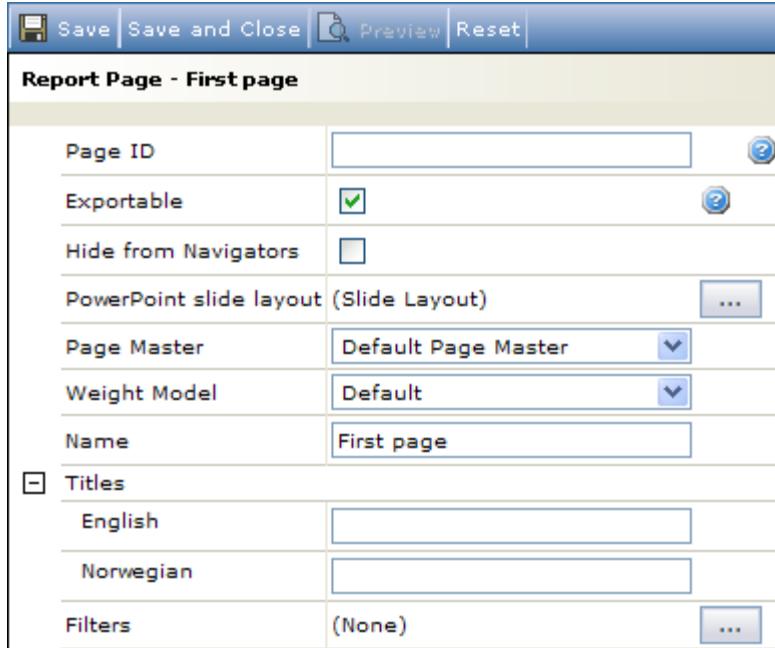


Figure 132 Example of a report page's properties pane

- **Page id** – is a unique page identifier used in drill-down reporting (see Drill-down on page 435 for more information). This field is optional: If the page is not used in drill-down reporting, you do not need to provide a page id.

- **Exportable** – if checked, the report viewers/end users will be able to export the current report page.
- **Hide from Navigators** – if checked, the page will not be shown in the menus, trees or drop-downs that can be included on the report page to enable viewers to navigate between pages. This is typically used when you want viewers to move to the page through drilling down in a table/chart on another page rather than moving directly to it through a navigator. Note that you can add to another page a link that will take the viewer to the "hidden" page, but pages that are hidden by scripts will not be displayed.
- **PowerPoint slide layout** – choose the layout for the PPT exports (see MS PowerPoint Slide Layout Settings on page 596 for more information).
- **Page Master** – select the layout master for the page from the Styles and Layouts.
- **Personalized filter status** – will be visible only for reports where hierarchical questions or single questions with Indexed property are used. Turn on or off the personalized filter.
- **Weight Model** – weight models must be defined in Confirmit Authoring before they can be applied to elements in the report. The drop-down in this property contains a list of the weight models defined for the survey on which this report is based. Select the required weight model from the list and save the change to apply the model to the report page. Refer to the Weighting section in the Confirmit Authoring User Guide for further information on creating weight models.
- **Name** – define the report page name that is to be displayed in the tree.
- **Titles** – if you have a multilingual project, set the report page titles for each language in the Titles field.
- **Filters** – add filters to each page by clicking the  button. A new window will open with all available filters (see Filter Designer on page 513 for more information). Any filters added to the page will be listed in the Filters row (in the case above, no filters are added so None is displayed).

## 5.8. Report Properties

To edit the properties of the entire report, go to the **Report > Properties > Report Properties** menu command, or in the Report toolbox, either right-click on the report and select **Properties** or double-click on the report. The report property sheet is displayed. This property sheet has five tabs - click the links below for further details see the following sections for details.

When you have made changes to the report's properties and not yet saved those changes, this is indicated in the properties page header.



*Figure 133 The "Changes made" indicator*

When you have saved the changes, the message changes to:



*Figure 134 Your changes have been saved*

**Note:** For SaaS users, a maximum of 200 tables can be included in the pages of the report. There is no limit for the number of tables that can be stored in the Analyst toolbox. If a report requires more than 200 tables, contact Confirmit's Professional Services team because this will necessitate a change to the server setup for that report. This change must be applied specifically for each report.

Note that exports from Report (including "Export all tables" from Analyst, "Report Export", "Export Packages", and "Export Viewer Presentation") incur an additional charge, incremental in steps of 100 pages (1-100 pages = 1 export charge, 101 - 200 pages = 2 export charges etc.). The export of the current page/table does not incur any charge.

For clients operating Confirmit on their own servers, the maximum number of tables in a report is defined by the server administrator and this level will be the default value for all reports.

### 5.8.1. The Report Properties > General Tab

The General tab is as shown below .

General	Export settings	Cache settings	Drilldown	Menu	Layout	Titles
Name	Test Personalized filter					
Data Source	Test Personalized filter (5601)					
Last published	02.03.2016 18:39:41					
Public	<input type="checkbox"/>					
Offline	<input type="checkbox"/>					
Use Test Data	<input type="checkbox"/>					
Enable dynamic page update	<input checked="" type="checkbox"/>					
Exportable	<input checked="" type="checkbox"/>					
Company	Confirmit					
Default Language	English					
Week 1	First day					
First Day of Week	Sunday					
Default Calendar	Standard					
Weight Model	Default					
Max Aggregated Tables	100					
Personalized filter status	Default					
Personalized filter question						
Personalized filter base	Include children					
Allow multiple selection	<input type="checkbox"/>					
Table Barchart Renderer	Table-based (legacy)					
Report Languages	(Languages)					
Filters	(None)					
Keywords						
Max answers in "open as single"	0					
Hub query strategy	Automatic					
Chart Version	Highcharts 4.0.4					

Figure 135 The Report Properties > General tab

The properties on this tab are as follows:

- **Name** - the current name of the report. You can edit the name here if required.

**Note:** The Report name can be a maximum of 64 characters long.

- **Data Source** – the name and ID of the data source that the report uses.
- **Last published** – the last time when the report was published.
- **Public** – if checked, the report will be an open, public report, accessible via an open link without login. The link will be displayed when the property is selected and the report has been published (see How to Publish the Report on page 121 for more information).

**Note that not all Report features are available to public reports. Features that are not available include the "Admin Menu" (Filter page, language settings, export options), the "Update data", the "Drilldown", the "Hit list" and the "Quota" components. Parameters can however be used.**

**Note:** If the Update Data component is included on a page in the report (see Updating the Data on the Report Page on page 138 for more information), then the report cannot be published as a Public report.

- **Offline** – if checked, the report will not be accessible online. Use this if for example you do not want viewers to be able to access the report while a new version is being prepared.
- **Use Test Data** – if checked, test data will be used in the report instead of data from the production database.
- **Enable dynamic page update** - when selected, pages will support partial update. Then if the report viewer changes filter values, only the part of the page affected by these filters will be updated. Note that if this property is set on the Report level, it will apply to all pages in the report and cannot be turned off on the individual page level. This setting is by default on for new reports and off for existing reports.
- **Exportable** – if checked, the report viewers/end users will be able to export the report. The report administrator can define how many exports each end user can order (see Access Control on page 635 for more information).

**Note:** The Report Export (Exportable) and report access via Public link are Report add-ons and are subject to payment.

- **Company** – your company's name.
- **Use BitStream Files** – (only for Legacy database) if checked, the report will use BitStream files in the tables. Response data can be converted to the data format as a recurring task which incrementally adds new and modified survey data to the BitStream files (see BitStream Files on page 132 for more information). When this box is checked, the **Week 1** property is introduced – see lower in this list.

**Note:** If the Optimized database is used (see the Confirmit Authoring User Guide for more information) then BitStream Files are obligatory so the Use BitStream Files option is not available.

- **BitStream Variant** - (only for Optimized database). Two different BitStream file sets can be generated; one for the Reportal report and one for Rapid Results reporting. Under most circumstances you should keep the two types separate, but if for some reason you need to use the same type for both applications then you should select to use the Rapid Results file set. Rapid Results reporting and the Reportal report will then always display the same data.
  - **Reportal BitStream Files** - (default value) creates the variant required for Reportal reports.
  - **Rapid Results Data** - this variant is only relevant for Panels, where you can create several different BitStream sets using different cuts of the data.

**Note:** For Confirmit projects (both Optimized and Legacy) you can create only two different BitStream file sets: The Rapid Results file set (which is used in Rapid Results in Express and Professional and the Results tab/Topline report in Professional Desginer) and the Reportal file set. However using Panel Management rules in Panels, you can create several file sets taking different cuts of the data. Then for Panel projects in Reportal, the drop-down list will include the BitStream file sets you have created in panel rules (with the names you have assigned to them there).

**Important**

You must ensure that the Rapid Results BitStream Files are updated for the report in Authoring before you attempt to use the Rapid Results Data option here. In the event the Rapid Results BitStream Files are not updated in Authoring and Rapid Results Data is selected, an error message will be displayed.

- **Tabulation Engine** - two choices of tabulation engine are available. The difference between the engines affects only reports using weighted data, with tables using Std. Deviation, Error and Variance Calculations (see APPENDIX C: The Tabulation Engine Versions on page 749 for more information).
- **Default Language** – choose the default language of the report, i.e. the language the report will be displayed in if the user has not selected a specific language.
- **Time Zone Offset** – the server time of the Confirmit server will be used in the date calculations. For Confirmit SaaS users, this will be Dallas (Texas, USA) time (CST, i.e., GMT-6) for clients on the USA server, and London time (GMT) for clients on the UK server. If you wish the time-stamps to be adjusted to a different time zone, set the time zone offset in the report properties.
- **Week 1** – when reporting on weeks, specify here which rule is to be used to decide the first week of a year. Note that this property is only available for BitStream reports – see higher in this list. The options are:
  - **First Day** – indicates that the first week of the year starts on the first day of the year and ends before the following designated first day of the week, irrespective of how many days the first "week" may contain. For example, if First Day of Week is specified as Sunday, and 1<sup>st</sup> January falls on a Friday, the first week of the year will only have two days – Friday and Saturday.
  - **First 4-day Week** – indicates that the first week of the year is the first week with four or more days before the designated first day of the week. Week 1 can therefore start for example on 3<sup>rd</sup> January.
  - **First full Week** – indicates that the first week of the year begins on the first occurrence of the designated first day of the week on or after the first day of the year. Week 1 can then start for example on 6<sup>th</sup> January.

The first week based on the "First day" value can have one to seven days. The first week based on the "First full week" value always has seven days. The first week based on the "First 4 day week" value can have four to seven days.

- **FirstDayOfWeek** – when reporting on weekdays, the first weekday in the list will depend on the setting in "FirstDayofWeek" in report properties.
- **Default calendar** - select a default fiscal calendar for the report (see Use Fiscal Calendar on page 216 for more information)
- **Weight Model** – weight models can be applied to the report as a whole, or to any elements in the report (folders, pages, tables). The weight models must be defined in Confirmit Authoring before they can be applied to the elements in the report. The drop-down in this property contains a list of the weight models defined for the survey on which this report is based. Select the required weight model from the list and save the change to apply the model to the report. Refer to the Weighting section in the Confirmit Authoring User Guide for further information on creating weight models.

Selecting '**Default**' will cause an element to inherit the weight model set at a higher level (a table inherits the weight model set for Page, a page inherits the weight model set for Folder, a folder inherits the weight model set for Report). Selecting '**(None)**' applies no weight model on the element. Selecting '**Default**' at the Report level equals selecting '**(None)**'.

- **Personalized Filter Status** - select whether a personalized filter question is to be used for the report. The options are:
  - **Default** - Personalized filters are not used in this report.
  - **On** - Personalized filters can be used in this report.
  - **Off** - Personalized filters are not used in this report.
- **Personalized Filter Question** - if any questions can be used as personalized filters, they will be listed here. Select one from the list. Note that a question must be of type SINGLE, and it must either be a regular single question, or a single question mapped to a self-referencing hierarchy, for it to be listed. In addition, it must also be indexed (the property "Indexed" must be selected for this question in Authoring (**Designer > Question Details > Properties**) - refer to the Confirmit Authoring User Guide for further information).

- **Personalized filter base** - select the personalized filter base for the report (see Personalized Filter Base on page 494 for more information).
- **Allow multiple selection** - (only for hierarchical reports) controls whether end users who are assigned multiple report bases can view and compare results from more than one of these bases within the same personalized results. Note that selecting this will remove the need for the previous "Re-enter Report" functionality for end users who have multiple bases assigned, should they wish to change to one of the assigned bases. By default, results for all assigned bases will be shown for the user.
- **Report languages** – if you want to make the report available in several languages, click  to open a new window where you can select the languages.
- **Filters** – click the  button to open a new window with all available filters (see Filter Designer on page 513 for more information).
- **Keywords** - keywords may be used to categorize specific types of Reportal reports (for example "Demos", "E-SAT"), etc and can then be used when searching the report list to filter and identify such reports.
- **Table Bchart Renderer** - select the BarChart rendering type:
  - **Table-based** - generates BarCharts as HTML tables. Horizontal bars are represented by TDs nested into one TR. Width of each bar is specified in % via attribute on TD. The height of the TABLE is set to Thickness, the overall width of the TABLE is set to Size. Vertical bars are represented by TDs inside a separate TD for each one. Height of each bar is specified in % via attribute on TD. The width of TABLE is set to Thickness, the overall height is set to Size.
  - **Div-based** - new recommended layout. BarCharts are generated as HTML DIVs: main DIV and a number of nested floating DIVs. Width and height is set via inline CSS style attributes. Size and Thickness properties of the BarChart are used respecively as for the tables.
- **Max answers in "open as single"** - specify the limit number of answers in dynamic answer lists created for open text questions marked as "single in reporting" in Authoring. Answer list for such a question will contain most frequent answers from actual response data. If zero value is specified, then 200 will be used by default.
- **Hub query strategy** - specify a way how SQL queries should be generated in the Reportal reports based either on Reporting data or a SmartHub. This option affects performance of the aggregated tables processing:
  - Automatic - Reportal will select the query strategy automatically taking into account the structure of the aggregated table.
  - Strategy #1 - To be described.
  - Strategy #2 - To be described.
- **Chart Version** - select the version of the Highcharts engine used to build Charts.

## 5.8.2. The Report Properties > Export Settings Tab

On this tab you can specify which export options are to be available for a report. You can also specify the default export format and scope.

**Note:** Exports from Reportal (including "Export all tables" from Analyst, "Report Export", "Export Packages", and "Export Viewer Presentation") incur an additional charge, incremental in steps of 100 pages (1-100 pages = 1 export charge, 101 - 200 pages = 2 export charges etc.). The export of the current page/table does not incur any charge.

General	Export settings	Cache settings	Drilldown	Menu Layout	Titles
Excel enabled	<input checked="" type="checkbox"/>				<a href="#">?</a>
Excel export logo					<a href="#">?</a>
Insert logo in cell	A2				<a href="#">?</a>
Hide Report Base in Excel exports	<input type="checkbox"/>				<a href="#">?</a>
Hide gridlines	<input type="checkbox"/>				<a href="#">?</a>
Table title line break	<input type="checkbox"/>				<a href="#">?</a>
Merge Table Titles\Language Text Cells	<input type="checkbox"/>				<a href="#">?</a>
Include folder structure in Table of Contents	<input type="checkbox"/>				<a href="#">?</a>
PowerPoint enabled	<input checked="" type="checkbox"/>				<a href="#">?</a>
PDF enabled	<input checked="" type="checkbox"/>				<a href="#">?</a>
Current page export enabled	<input checked="" type="checkbox"/>				<a href="#">?</a>
Allow disabled formats in current page exports	<input checked="" type="checkbox"/>				<a href="#">?</a>
Compress export files	<input checked="" type="checkbox"/>				<a href="#">?</a>
Execute page script	<input type="checkbox"/>				
Export delivery method	Email				<a href="#">?</a>
Fixed FTP path	<input type="checkbox"/>				<a href="#">?</a>
Default export scope	Entire Report				<a href="#">?</a>
Default export format	Excel				<a href="#">?</a>
Allow to override email subject	<input type="checkbox"/>				<a href="#">?</a>
Default email subject					<a href="#">?</a>
Allow to override file name	<input type="checkbox"/>				<a href="#">?</a>
Default file name					<a href="#">?</a>
Default PDF orientation	Portrait				<a href="#">?</a>
Default PDF paper size	None				<a href="#">?</a>
PDF scaling	ShrinkWideDocument				<a href="#">?</a>
PDF engine	EssentialObjects v2				<a href="#">?</a>
PDF header					<a href="#">?</a>
PDF footer					<a href="#">?</a>
PowerPoint template	(None)				<a href="#">?</a>
Analyst slide layout	(Slide Layout)			<a href="#">...</a>	
PowerPoint template frontpages	0				<a href="#">?</a>

Figure 136 The Report Properties &gt; Export Settings tab

The properties on this tab are as follows:

- **Excel enabled** - select to allow viewers to be able to export reports to Excel. Note that even if Excel exports are disabled here, single-page Excel exports can still be available if the Current Page Export setting below is enabled.
- **Excel export logo** - specify the File Library link to the logo file used in the Excel export.
- **Insert logo in cell** - specify a cell where the logo should be inserted to in the Excel export.

- **Hide Report Base in Excel exports** - when the option is set, the Report Base information will be hidden in Excel exports. The Report Base details will be removed from the following locations:
  - the Excel export file content;
  - the accompanying email body text;
  - the Excel export file name.In addition, the option will reject Excel exports for repeated personalized nodes. This will prevent the situation where a recipient receives several reports that are identical apart from the report numbers.
- **Hide gridlines** - hide gridlines in the Excel export by checking the box.
- **Table title line break** - enabling this option inserts an empty row in the Excel export worksheet between the table title and the table content.
- **Merge Table Titles\Language Text cells** - when this option is enabled, then all cells in the row that contains either a table title or a language text are merged into one. This can be used for managing long titles and language texts. Optionally, you can limit the length of the title\text span to a number of cells by checking the Number of Cells option and specifying an integer number in the input field. 15 is a sensible recommended maximum. E.g. when the number is set to 3 and the table title\language text starts at column B, then the table title\language text row cells in columns B, C and D will be merged into one.
- **Include folder structure in Table of Contents** - when this option is enabled, then the Table of Content in the Excel export reflects the report structure displaying both pages and folders. Indentation is used to indicate nested elements.
- **Number of cells** - this option is only available when the Merge Table Titles\Language Text cells option has been enabled. You can limit the length of the title span to a number of cells by specifying an integer number in the input field.
- **Default font family for Excel exports** - specifies the font type that is to be used in the Excel export. This property is overridden by the font family property of a component.
- **PowerPoint enabled** - select to allow viewers to be able to export reports to PowerPoint. Note that even if PowerPoint exports are disabled here, single-page exports can still be available if the Current Page Export setting below is enabled.
- **PDF enabled** - select to allow viewers to be able to export reports to PDF. Note that even if PDF exports are disabled here, single-page exports can still be available if the Current Page Export setting below is enabled.
- **Current page export enabled** - check to allow viewers to export the current page to Excel. Note that if this setting is disabled and the Excel, PowerPoint, and PDF settings are also disabled, viewers will not be able to export information from the report.
- **Allow disabled format in current page exports** - active if "Current page export enabled" is checked. This option allows any export formats to be selected for the current page export regardless of the general export format settings.
- **Compress export files** - check to specify that exports made from this report are to be compressed as zip files before being sent to recipients.
- **Execute page script** - check to enable execution of any page-level scripts when generating PowerPoint or Excel exports. Page scripts are executed for PDF exports by default.
- **Export delivery method** - exports ordered by report viewers can be delivered as e-mail to a specified address, they can be saved as downloadable files to specified PCs/folders, or the viewers themselves may select in the Export window which method they wish to use (see The Exporting of Reports by Viewers on page 12 for more information). You as the report designer must select the option you wish to provide the viewers of your report (default is email). Note that to enable the download of exports directly, viewers must have the option "Automatic prompting for file downloads" enabled in their browser.
  - **Email** - report exports are sent by email when the export task is complete.
  - **Download** - a "Save" dialog is presented on completion of the export task, allowing the user to save the export file directly.
  - **FTP** - report exports are sent to an FTP-server when the export task is complete.

- o **User defined** - the user can then choose in the export window whether to download or have the export file emailed.
- **Fixed FTP Path** - this option is available only when FTP is selected as the export delivery method. When this option is selected, the exported file is saved in a dedicated FTP folder "\Download\ReportExport\ReportN", where N is the report number.
- **Enforce FTP for end users and panelists** - this option is available only when FTP is selected as the export delivery method. Checking this option will enforce FTP export for end users and panelists. By default, FTP export is not available for end users and panelists.
- **Default export scope** - allows you to specify which export scope is to be selected by default when a report viewer opens the Export Report dialogue.
- **Default export format** - allows you to specify which export format is to be selected by default when a report viewer opens the Export Report dialogue.
- **Allow to override email subject** - check to allow the subject of an export email to be changed. If change is allowed, the input field below becomes available and you can then modify the email subject from any export user interface. You can use templates to customize the email subject.
- **Default email subject** - active if "Allow to override..." is checked. This field allows you to define your own export email subject rather than using the system default. Leave the field blank to allow the user to type in a suitable subject, or add parameters taken from the report. The "personal" email subject can be a mix of system defined parameters and user text (see Default File Name and Email Subject Parameters on page 117 for more information).
- **Allow to override file name** - check to allow the file name of an export email to be changed. If change is allowed, the input field below becomes available and you can change the email file name from any export user interface. You can use templates to customize the file name. If the export creates several files, they will not be renamed.
- **Default file name** - active if "Allow to override..." is checked. This field allows you to define your own export file name rather than using the system default. Leave the field blank to allow the user to type in a suitable subject, or add parameters taken from the report. The "personal" file name can be a mix of system defined parameters and user text (see Default File Name and Email Subject Parameters on page 117 for more information).
- **Default PDF Orientation** - allows you to specify which presentation format is to be selected by default when a report viewer opens the Export Report dialogue; Portrait or Landscape.
- **PDF scaling** - allows you to specify whether the online report content is re-sized or not when generating a PDF report:
  - o **No scaling** - content of an online report is not resized to fit a PDF page. This may result in content areas being cut-off from the PDF output.
  - o **Fit to page** - content of an online report is resized to fit a PDF page. The same scaling factor which is based on the widest or longest report page is applied to all pages. This may result in decrease of the font size etc.
  - o **Shrink wide pages** - content of an online report is resized to fit the width of the PDF page. Each report page is scaled by its own factor.
  - o **Shrink wide documents** - content of an online report is resized to fit the width of the PDF page. The same scaling factor which is based on the widest report page is applied to all pages.
- **PDF Engine** - this property allows you to select the engine used to generate PDF exports. Output will vary based on the engine selection and the styling used within the report, so it is advised to test the export prior to delivery to end users.
  - o **ActivePDF** - this is the legacy engine.

**Note:** Charts and hitlists using the “version 2” render mode may not fully render in the output.

- o **EssentialObjects v1 (limited CSS)** - this is the latest supported PDF engine. Differs from the **EssentialObjects** as this does not include all report CSS and ignores all instances of "@media print".

**Note: Reports created prior to the introduction of the EssentialObjects with full CSS option that used the EssentialObjects engine may already have additional styling to compensate for this, so changes may be needed to switch to the full CSS version and retain the desired formatting.**

- o **EssentialObjects v1** - Includes all CSS defined within the report, including "@media print" except when it has been defined in an externally loaded CSS document.
- o **EssentialObjects v2** - this is the preferred option. This version significantly outperforms the old one.
- **PDF Header** - this option is only available when EssentialObjects v2 is selected as a PDF engine. Provide a link to an html file uploaded to FileLibrary that will be used as a PDF header. The EssentialObjects engine supports variables. For instance, {page\_number} variable could be used inside html.
- **PDF Footer** - this option is only available when EssentialObjects v2 is selected as a PDF engine. Provide a link to an html file uploaded to FileLibrary that will be used as a PDF footer. The EssentialObjects engine supports variables. For instance, {page\_number} variable could be used inside html.
- **Excel 2007 Format** - - exports with this option checked will generate exported Excel files in .XLSX format, which may be opened in Excel versions 2007 and 2010. Advantages include: Reportal charts are exported as native Excel charts so they are fully interactive objects, hit lists, regression charts and multivariate statistics are supported, the user can choose between two layout options:
  - o Components on the same page in Reportal will be placed on the same sheet in Excel.
  - o Each table component will be placed on a separate Excel sheet along with its dependant components (e.g. aggregated tables will be on the same page as its charts and gauges).
- **PowerPoint Template** - choose the PPT template to be applied to MS PowerPoint exports. The templates available are located in **Confirmit Templates > PowerPoint**. If no template is selected, the default Confirmit template will be used.
- **Analyst Slide Layout** - - select the default slide layout to be used by analysts.
- **PowerPoint Template Frontpages** - a PowerPoint template can have any number of front pages. This property specifies how many of the pages in the template (if any) are to appear as front pages in PowerPoint exports of this report. For example, if the number of front pages is set to 1, when a PowerPoint export is done from this report, the first page in the template will appear as the front page, followed by the exported data. If the template contains more than 1 page, the remaining pages will appear in the end of the PowerPoint presentation.

**Note: Do not allow the number specified in this property to exceed the number of pages in the PowerPoint template as this will cause your PowerPoint exports to fail.**

### 5.8.2.1. Default File Name and Email Subject Parameters

If on the Export Settings tab you have checked the "Allow to override email subject" or "Allow to override file name" boxes, then you can define your own email subjects and file names rather than using the system defaults. The "personal" file name and/or subject can be a mix of system defined parameters and user text. The parameters that are available are:

- ^REPORTNUM^ - Report number.
- ^REPORTNAME^ - Report name.
- ^REPORTTITLE^ - Localized report title.
- ^USERID^ - ID of user performing the export.
- ^USERNAME^ - Name of user performing the export.
- ^TASKID^ - ID of the export task.
- ^DATE^ - Current date in format YYYYMMDD
- ^TIME^ - Current time in format HHMM
- ^REPORTBASE^ - Report base if available. If export result contain several report bases then localized multi-base.

- ^SUBJECT^ - Localized default email subject. E.g. "Export of".
- ^COMPONENTNAME^ - name of exported component. (If the component is page - page name, report or package – report title, verbatim or hit list – component name, presentation – name of presentation, analyst table – table name).

Note that all parameter texts are case sensitive.

Toggle the **Click to...** button beside the Email Subject or File Name fields such that the editing mode is active (the field is white), then type the appropriate parameters and text into the field (as the Email Subject field in the figure below). Toggle the button to the viewing mode (the field is gray) to view the result (as the File Name field)



Figure 137 Example of Overridden email subject and file name

The File Name field shows the result of using the parameters currently typed into the Email Subject field.

### 5.8.3. The Report Properties > Cache Settings Tab

The cache is a "temporary storage place" on the Confirmit servers. When report pages are generated, the pages are stored in the cache so that new visitors can view the cached pages without them having to be regenerated. Using this method, the servers do not have to re-calculate the numbers in the SQL database, thus saving waiting time for report pages to load - hence also for our servers.

To improve the performance of the report for the viewers, you can specify for how long the report pages are to be stored in the cache. When a cached report page is opened for a report viewer, the report engine will not query the database to build an updated table and chart, but use the results that are stored on the server. Consequently the report page will load much faster, giving your viewers a better user experience.

The tab is as shown below.

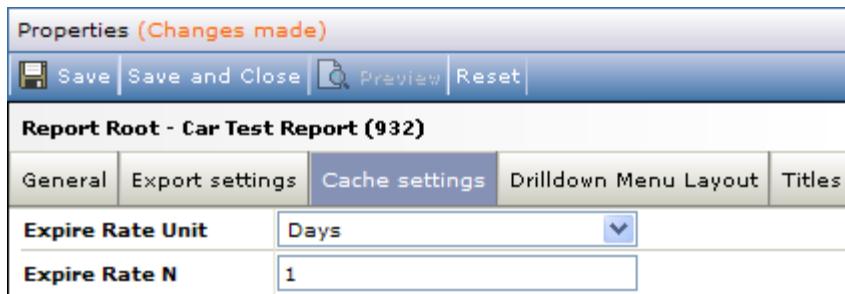


Figure 138 The Report Properties > Cache Settings tab

The properties on this tab are as follows:

- **Expire Rate Unit** – specify for how long the report pages should be stored in the cache before being updated.
  - o **Never** - the cache will never expire.

- o **Weeks** - the cache will expire X weeks after it was last rebuilt.
- o **Days** - the cache will expire X days after it was last rebuilt.
- o **Hours** - the cache will expire X hours after it was last rebuilt.
- **Expire Rate N** - specify the number of units (integer) selected in the previous property, that are to be used.

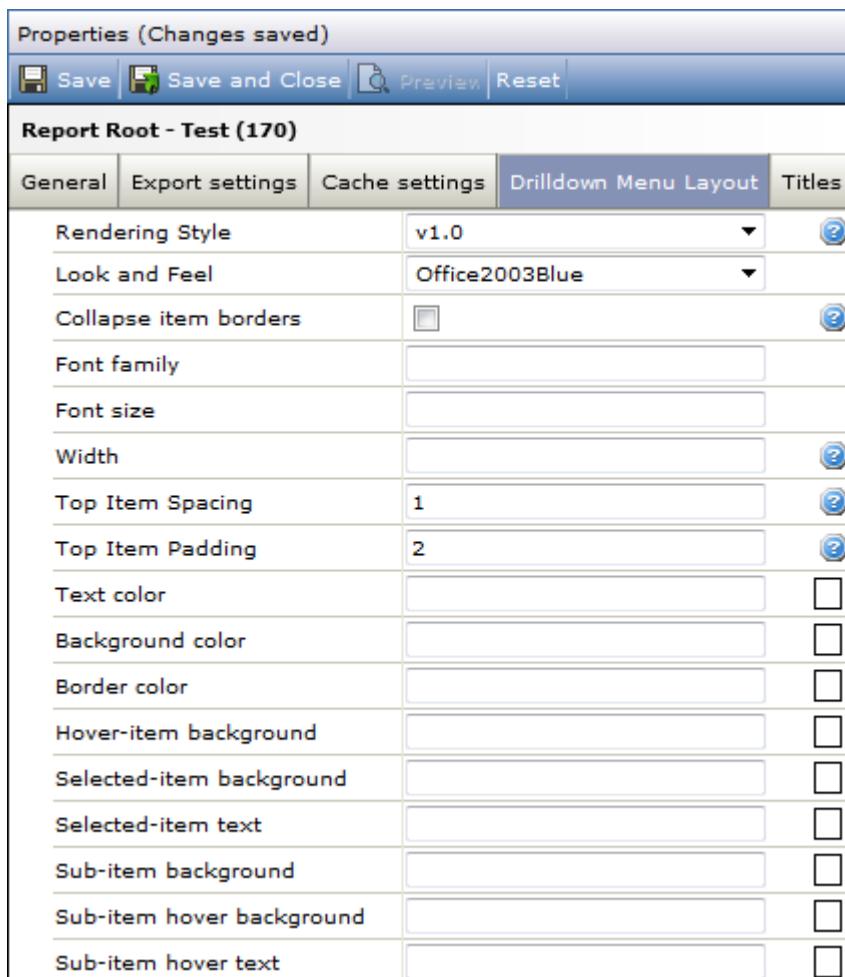
When a viewer accesses a page, Reportal will check if the expiry time has passed, and if it has it will rebuild the report page. If not, the page will be retrieved from the cache. In Reportal the charts and tables are updated when a viewer or designer accesses the report. If nobody accesses the report for 24 hours then it will not be updated, even though the cache settings specify 1 hour. If the project is closed and interviewing is finished, there should be no reason for selecting anything but "Never Expire", as this will give your Report Viewers the best user experience. The other options can be chosen when the survey is live to give your viewers updated results.

The update will be done regardless of whether any changes have been made in the database; the only thing it checks for is the cache expiry date/time. If your report is based on BitStream files, the cache will automatically be cleared if the BitStream file set is updated.

To force Reportal to clear the cache on a report, go to the **Report > Update > Clear Cache** menu command.

#### 5.8.4. The Report Properties > Drilldown Menu Layout Tab

The settings on this tab control the look and feel of the menu that pops up when you click in charts or tables where drill-down functionality (see Drill-down on page 435 for more information) is applied.



The properties on this tab are as follows:

- **Rendering Style** - sets the appearance and customization possible for the visual component. In Version 17.5, several components have received additional capabilities to the out-of-the-box appearances and the ability to style elements using custom CSS styles. The version number reflects the following:
  - **Version 1** - the component rendering style prior to Version 17.5. A number of properties are available so you can set up the layout of the drill-down menu.
  - **Version 2** - the component rendering style after Version 17.5. Version 2 has no user-adjustable properties for setting up the drill-down menu. Version 2 is the default for all new reports.
- **Look and Feel** - choose among predefined styles of drill-down menus.
- **Collapse item borders** - an HTML style that collapses the borders between the report menu items. It is recommended to select this option if Border Color has been specified, in order to avoid double borders.
- **Font family** - specifies the font type that is to be used to display the menu items.
- **Font size** - defines the size of the characters in the menu items.
- **Width** - specifies the width of the container where the top elements are stored. The width can be specified in both pixels and percent. When you want to use percent, add the % symbol after the number. The top level menu items will be placed next to each other (depending on specifications in Top Item Spacing) when no width is specified.
- **Top item spacing** - specifies the spacing between the top-level menu items, in pixels.
- **Top item padding** - specifies the padding around the top-menu items, that is, the space between the menu item text and the border. Specified in pixels.
- **Text color** - specifies the color of the text to be used in the menu items.
- **Background color** - defines the background color for the menu items.
- **Hover-item background** - defines the background color of the top-level menu items when the user holds the mouse pointer over the item.
- **Selected-item background** - defines the background color of the top-level menu items when the sub-items are displayed, that is, when the top-level item is selected.
- **Selected-item text** - defines the color of the top-level menu item text when the sub-items are displayed.
- **Sub-item background** - defines the background color of the sub-items.
- **Sub-item hover background** - defines the background color of the sub-items when the user holds the mouse pointer over the item.
- **Sub-item hover text** - defines the text color of the sub-items when the user holds the mouse pointer over the item.

### 5.8.5. The Report Properties > Titles Tab

If you have a multilingual project, on this tab you can specify the report title for each language. A field is presented for each language selected for the report.

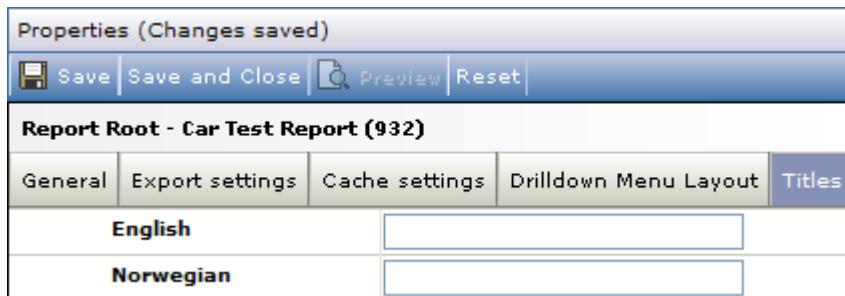


Figure 139 The Report Properties > Titles tab

## 5.9. How to Publish the Report

To make the report available for external access (so viewers can see it), you must publish the report. Note that if you make changes to a report after it is published, the changes will not be available to viewers until you republish the report. Before publishing you can preview the report by selecting **Preview Report** from the **Report** menu. **Report > View Report** shows the last published version of the report. If the report has not yet been published, then a message will be displayed informing you of this.

1. Go to the **Report > Publish Report** menu command or click **Publish Report** in the Report menu bar.

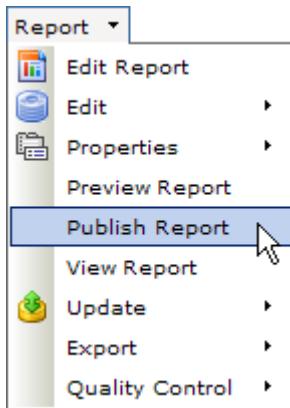


Figure 140 The Report > Publish Report menu command

The confirmation dialog opens.

2. Click **OK** to confirm that the report is to be published.



Figure 141 Publishing a report

The publishing task is added to Confirmit batch tasks, and the task is run as appropriate. A progress bar is displayed along with the Task ID, and as the task progresses the various steps are listed as they are completed .

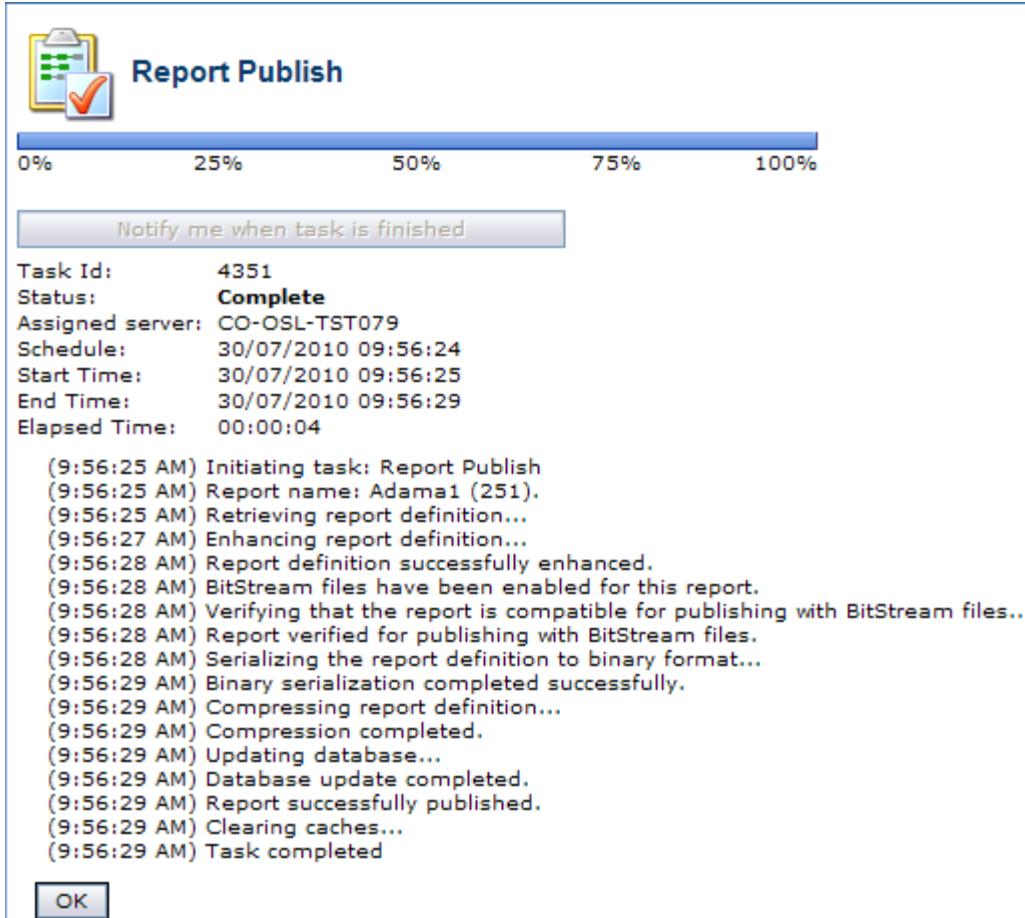


Figure 142 Publish report task list

In the event a problem is discovered with the report, the task will abort and any errors will be listed. You must then correct the errors and re-publish. In Confirmit Authoring you can go to the **Tasks** menu command and search for the batch job by the specified Task ID to see the status of the job.

## 6. Text Elements

There are four elements in Confirmit Report where text will be displayed dynamically in the report. These are Page title, Question text, Links and Text Objects for multi-lingual texts on report pages. In addition, you can enter static text, such as comments, in any table cell on a report page.

The layout, font, colors, etc., of the text elements are set in the properties style. Choose from the default styles available in the template you are using, or define your own style and add it to the style list (see Styles on page 706 for more information).

### 6.1. The Page Title Element

If you include the Page Title element in a table cell, the name of the report page will be displayed there. For example, the Page Title element placed in the Report Master in the first figure below (arrowed) gives the title ringed in report preview shown underneath.

In this case, as the Page Title element is placed in the Report Master, the appropriate page titles will appear in the same place on every page of the report. Note that if you do not place the Page Title element in the Report Master, you can place it separately on each page of the report and locate it where you wish for each page (you can of course do both, but it is probably not necessary to have the title twice on a page).

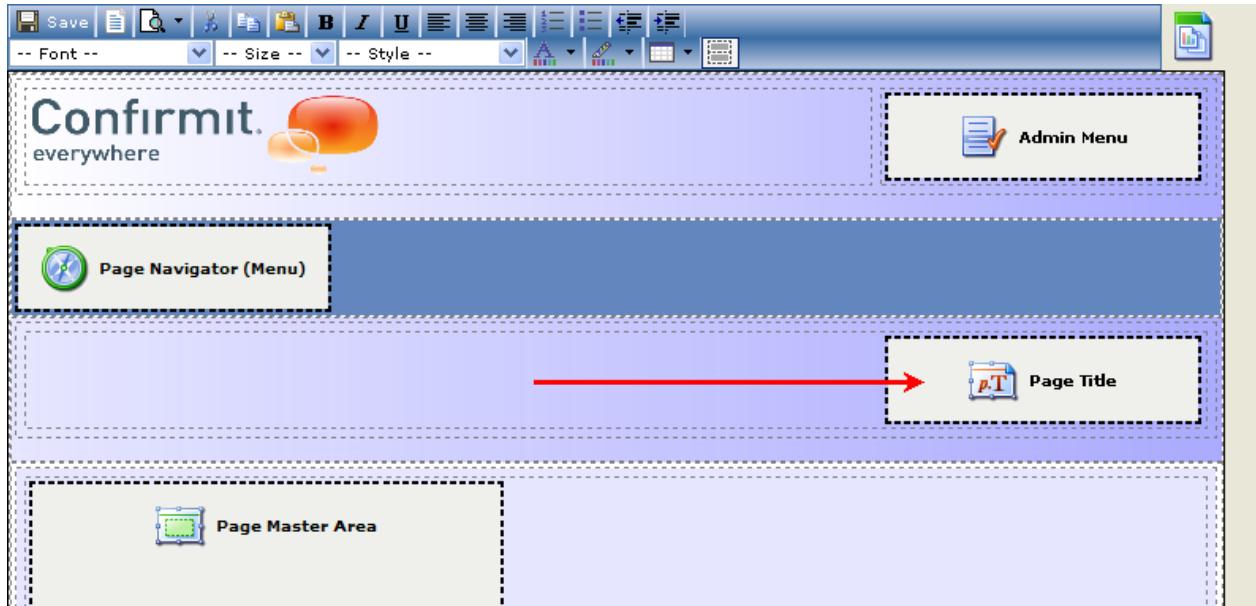


Figure 143 The Page Title component

The screenshot shows a report page from the Confirmit Horizons 24 Report User Guide. At the top right, there are links for 'Report List', 'Preferences', 'Export', and 'Log off'. Below that is a navigation bar with 'First page', 'Page Two', and 'Wizard Folder'. The main content area has a title 'Favorite' and a table showing favorite car types by gender. A bar chart titled 'Favorite car types for males and females' is also present. The title 'First page' is circled in red.

	Male	Female	Total			
Ford	4	10.3%	3	7.0%	7	8.5%
Chrysler	2	5.1%	8	18.6%	10	12.2%
Volvo	6	15.4%	5	11.6%	11	13.4%
BMW	2	5.1%	3	7.0%	5	6.1%
Honda	5	12.8%	6	14.0%	11	13.4%
Toyota	6	15.4%	5	11.6%	11	13.4%
<code>^f('q5_98_other')^</code>	5	12.8%	6	14.0%	11	13.4%
I have no favorite.	9	23.1%	7	16.3%	16	19.5%
Total	39	100.0%	43	100.0%	82	100.0%

Generated: 16/11/2009 10:46:23  
 Weight model: None  
 Fixed filters: None  
 Significance testing: None

**Favorite car types for males and females**

Category	Ford	Chrysler	Volvo	BMW	Honda	Toyota	I have no favorite
Male	10	5	15	5	13	15	23
Female	7	7	11	7	14	12	16

**Figure 144** The resulting title

To define the style of the page title, depending on where the Page Title element is located:

1. In the Report toolbox double-click on the page name to open the Page Editor for the report page, or in the Layouts and Styles toolbox double-click on the Report Master.
2. Right-click on the **Page Title** element and choose **Properties**.
3. Choose the style you want to apply from the Style drop-down (see below).

**Note:** The Style drop-down will list all the HTML styles that are included in the Layout and Styles toolbox > Styles > HTML folder. You can add and delete styles, and set them up as required (see The HTML Styles on page 708 for more information).

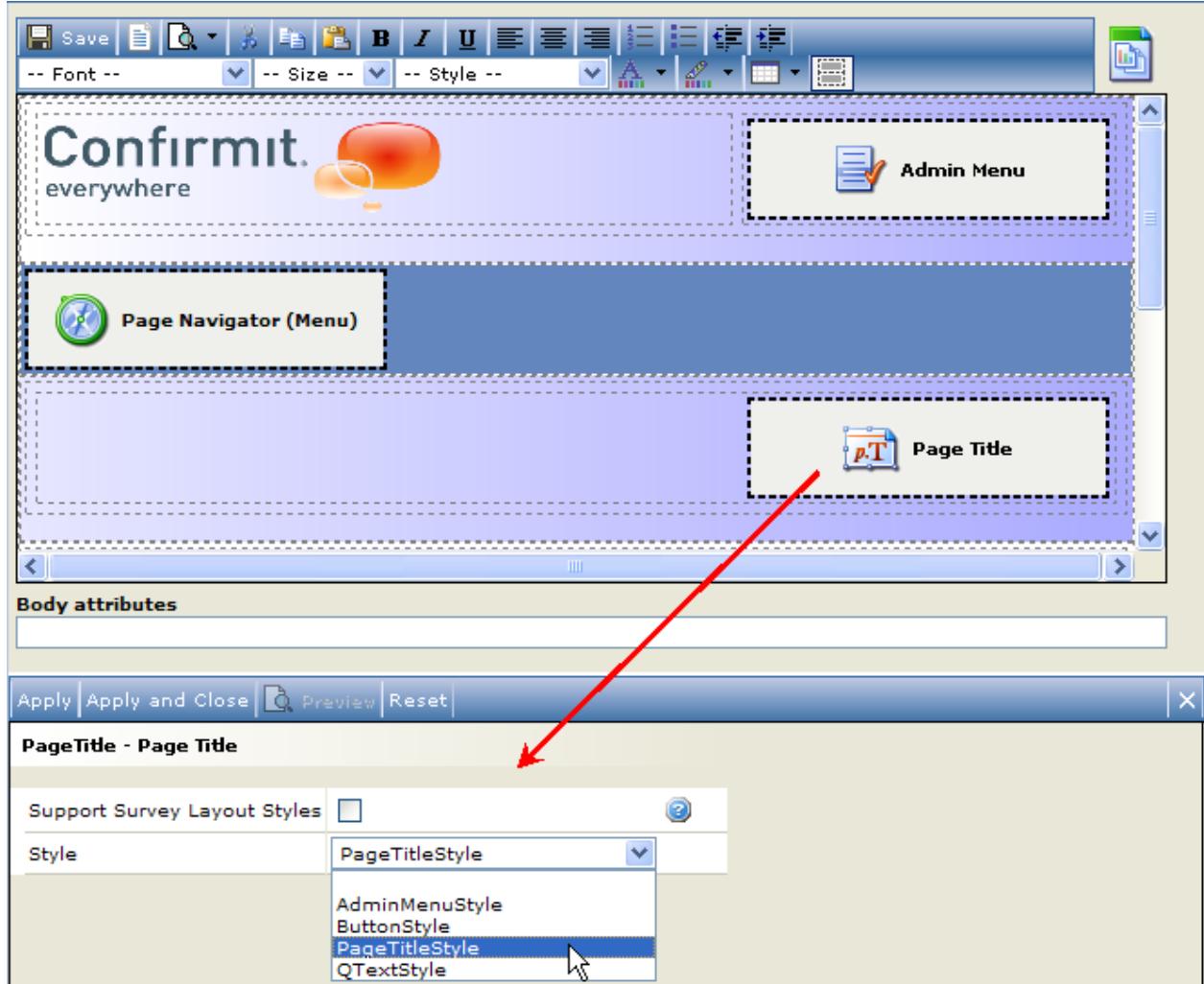


Figure 145 Setting the page title properties

4. On completion, click **Apply** and then **Save** to save the changes.

## 6.2. Questionnaire Text

If you add a Questionnaire Text element into a table cell, you can display on that page in the report the Title, Text or Answer Text used in a questionnaire page, or you can drag an Info node onto the element to display the full Info text. Note that a Questionnaire Text element must have a data source so Confrimt knows which text is to be displayed.

To set the style of the text:

1. Right-click the element and choose **Properties**.

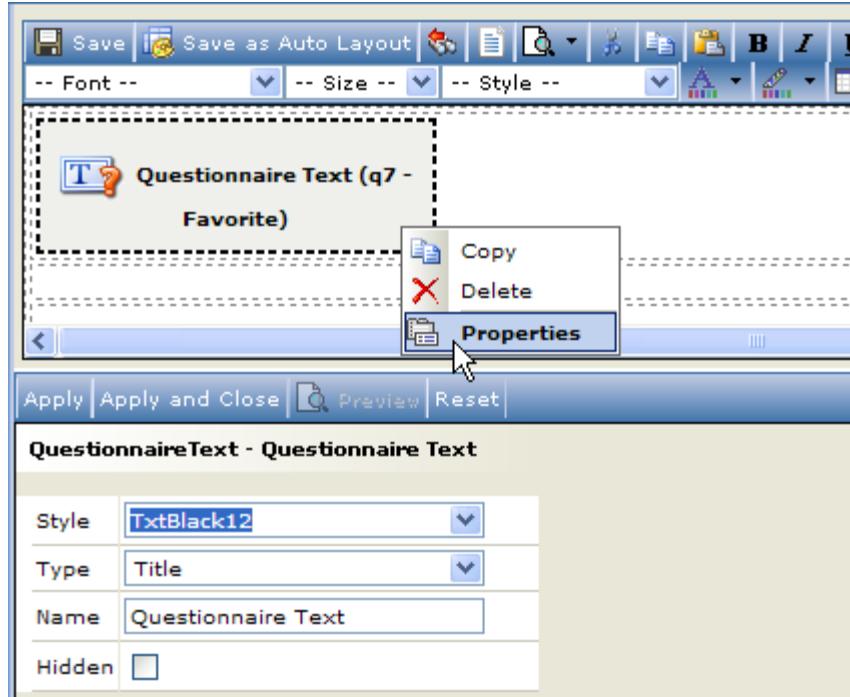


Figure 146 Questionnaire text properties

The element's properties page opens.

2. In the **Type** drop-down menu, choose the type of question text element you want to include in the report page. If you select Answer Text, you will also be able to select which answer you want to be displayed.
3. Select the desired style for the text from the **Style** drop-down. The styles available here are set up in the Layout and Styles toolbox.
4. On completion, click **Apply** and then **Save** to save the changes.

## 6.3. Links

You can create links between pages in a report, and from the report to external pages.

### 6.3.1. Links Within a Report

You can add a link from one page in a report to another page in the same report. To do this:

1. Open the Report Page editor for the page on which you want the link to appear, then drag the page you want to link to, from the Report toolbox, and drop it into the open page.

In the example, a link to the **Age** page is being added to the **First Report Page**.

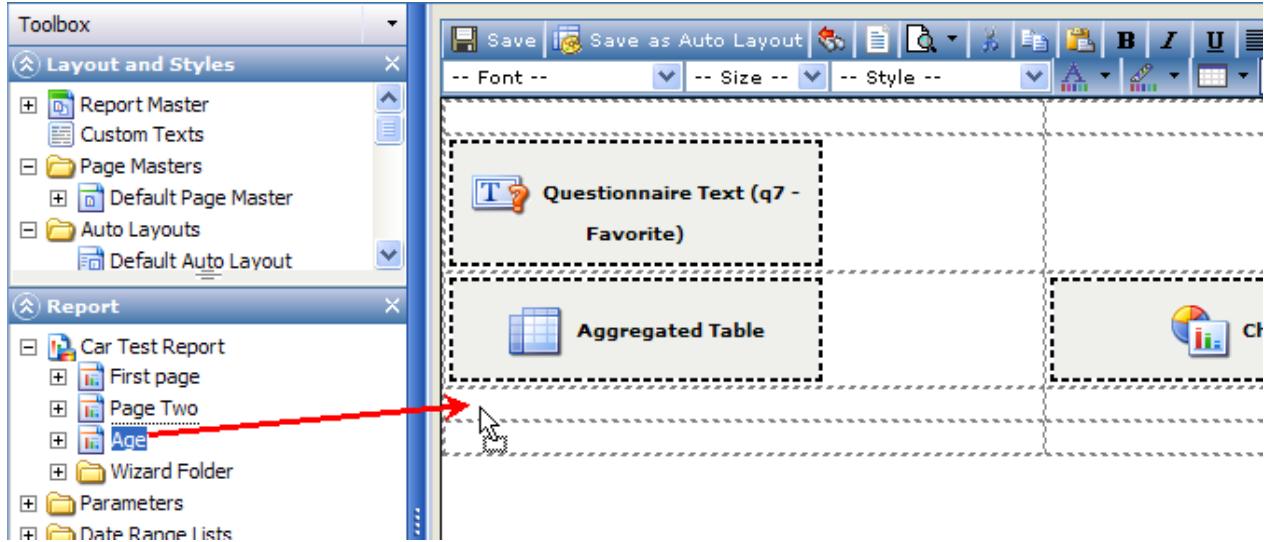


Figure 147 Adding a link to a page

A **Link to:** element is added to the page, see the figure below.

2. Right-click on that element and choose **Properties**.

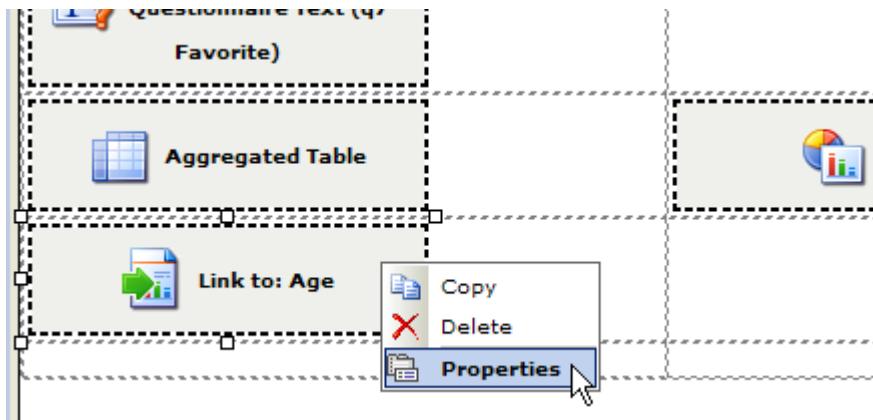


Figure 148 Report page link properties

3. In the Properties page, select the Style you wish to use for the link.  
The layout, font, colors, etc. of the link are set by the Style you choose.

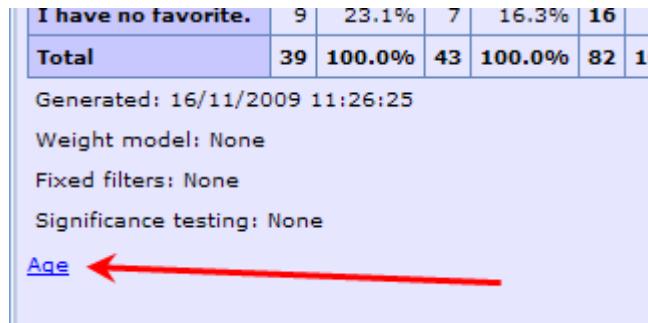


Figure 149 The resulting link

### 6.3.2. External Links

You can also add links to external pages. You can create these links either directly in HTML mode (see HTML Mode on page 101 for more information), or via a menu command in WYSIWYG mode. To insert a link in WYSIWYG mode:

1. Open the Page Editor for the page on which you wish to create the link.
2. Right-click in the table cell where you wish to create the link, and select **Insert Link** from the menu.
- The HTML Link Control page opens.
3. Type into the **Href** field the URL to the web page you wish the link to open.
4. In the **Target** field, type the target for the link (where the page should open - \_blank for a new browser window).
5. In the **Text** field type the text you wish to appear as the link in your report. For example:

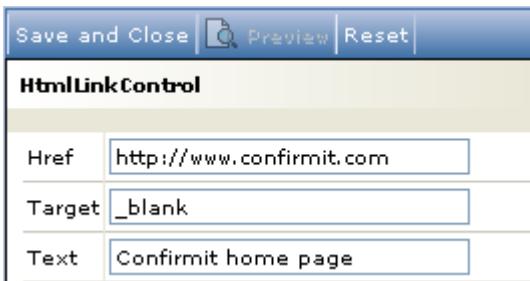


Figure 150 Example of the Link Properties dialog

```
<TABLE style="WIDTH: 100%" cellSpacing=0 cellPadding=0 width="100%" border=0>
<TBODY>
<TR>
<TD></TD>
<TD></TD></TR>
<TR>
<TD><confirmit:wysiwygcomponent type="QuestionnaireText" id="77d509c71061170af15bc75c4ea55be" /></TD>
<TD>&nbsp;<A href="/www.confirmit.com" target=_blank>Confirmit home page</A></TD></TR>
<TR>
<TD><confirmit:wysiwygcomponent type="AggregatedTable" id="01422e4b-9f44-45ee-9017-6ed9c766c5f6" /></TD>
<TD><confirmit:wysiwygcomponent type="ChartDataDef" id="e9e54362-6e99-451e-8d51-119060e45bdb" /></TD></TR>
<TR>
<TD><confirmit:wysiwygcomponent type="ReportPageLink" id="cd9e19c1-024c-4ef2-9236-7605c4d34487" /></TD>
<TD></TD></TR>
<TR>
<TD></TD></TR></TBODY></TABLE>
```

Figure 151 The HTML code for the same link

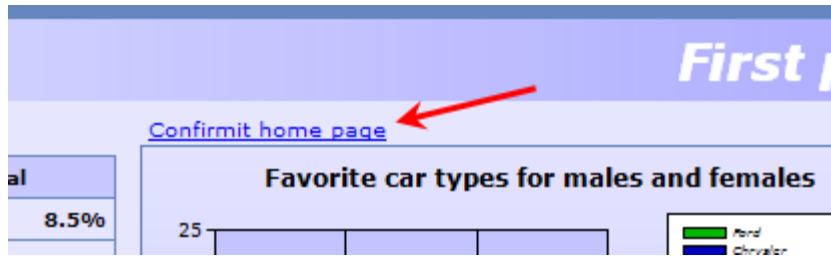


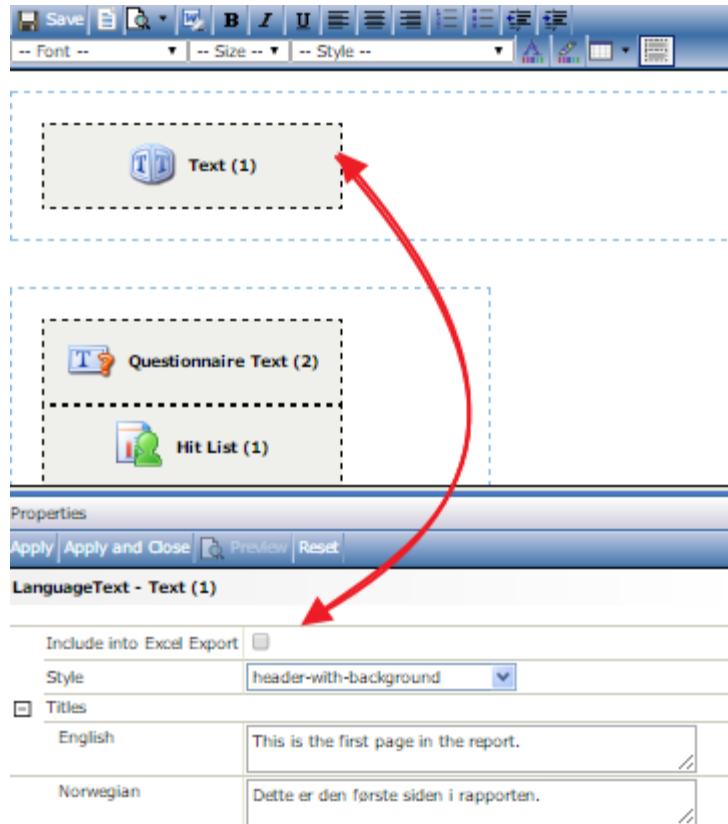
Figure 152 The page with the link included

6. Save the changes.

## 6.4. Text Object for Multi-lingual Texts on Report Pages

In some cases, you may wish to provide additional information for the report viewers. If your report has just one language, you can enter the text directly onto the page by going to the Page Editor for the appropriate page and typing it into an empty table cell. However if the report is available in more than one language, you will probably want the text to be available in all the languages. In this case, you can use a Text Element. Here you can add texts in each of the languages specified for the report, and the viewer will see only the text in the language defined for his/her report.

1. In the Page Editor, insert a Text element into the appropriate table cell (see the figure below).
2. Right-click on the Text element and select **Properties** to open the Properties page for the element .  
In this example the report languages are English and Norwegian, so there are two language fields under Titles in the Properties page.
3. Type into the fields the text you wish to display for the various languages.
4. Select the style required for the text.
5. If you want this text to be included in the Excel Export, check the **Include into Excel Export** option.
6. Click **Apply** and **Save**.



**Figure 153 Using a Text element**

Now when you preview the page, you will see the text depending on which language is set for the report.

**Note:** If you leave a language field for a text object empty, then the report in that language will show the text from that text object in the default language for the report. The default language for a report is set in the Report properties.

## 6.5. Scripting in Text Elements

You can add scripting to text elements in Reportal (see Scripting in Reportal on page 564 for more information). If you add scripting to a text element in the Report Master or a Page Master, then that scripting will be run on all the pages, in the same place on the page every time. This will avoid you having to repeat scripts on each page. To add script to a text element in the Report Master:

1. In the Layout and Styles toolbox, double-click on the ReportMaster to open the Page Editor.
2. Add a Text component to the appropriate place on the page, and save the changes.
3. Right click on the Text element in the Report Master in the toolbox, and chose **Script**. A Component Script page opens.
4. Enter the desired script and click **Save** to save the changes.

For example, if you add the following script:

```
var output : String = "Scripting in the Report Master";
text.Output.Append(output);
```

then when you preview the report you will see the text "Scripting in the Report Master" on every page of the report in the location defined by the text element in the Report master.

Note that any scripting added to a Text element will over-write and replace all texts provided by the Titles fields in that text element. I.e. the scripting will take precedence.

## 7. BitStream Files

BitStream Files are a way of storing survey data in compact files. These files are optimized for fast access, to allow aggregated tables to be generated as quickly as possible for your Reportal report.

### Important

The use of BitStream files is default for all new projects in Confirmit Horizons. However if you create a new project using the Legacy database format, BitStream files can be deselected if required. Confirmit strongly recommends you use BitStream Files on all projects.

If the data source project used the Optimized database format, then BitStream files must be used. Go to the Confirmit Authoring User Guide for further information on the Optimized database format.

It is not possible to create a report based on a Professional Panel that has no associated BitStream variants.

If a user creates a report in Confirmit 15 Legacy format, the default option will be to use BitStream files. However if this has been deselected and you open a report for which the BitStream files have not yet been generated, then the files will be generated automatically and you will be presented with a message informing you of this. The message status will be updated when the files are available.

For Legacy projects and reports, before the BitStream Files are created for a database, when Reportal wishes to generate an aggregated table it must interrogate the SQL database directly. This can be a slow process, and it will become even slower as the database size increases. The BitStream Files are created by initiating a task in Confirmit that runs through the survey database and saves the survey data to files. Once the files have been created, you can go to the Properties page General tab for the report and specify the type of BitStream Files that are to be used for the current report (check the box - see the figure below).

**Note:** For Confirmit projects (both Optimized and Legacy) you can create only two different BitStream file sets: The Rapid Results file set (which is used in Rapid Results in Express and Professional, and the Results tab/Topline report in Professional Designer), and the Reportal file set. However using Panel Management rules in Professional Panels, you can create several file sets taking different cuts of the data. Then for Panel projects in Reportal, the drop-down list will include the BitStream file sets you have created in panel rules (with the names you have assigned to them there).

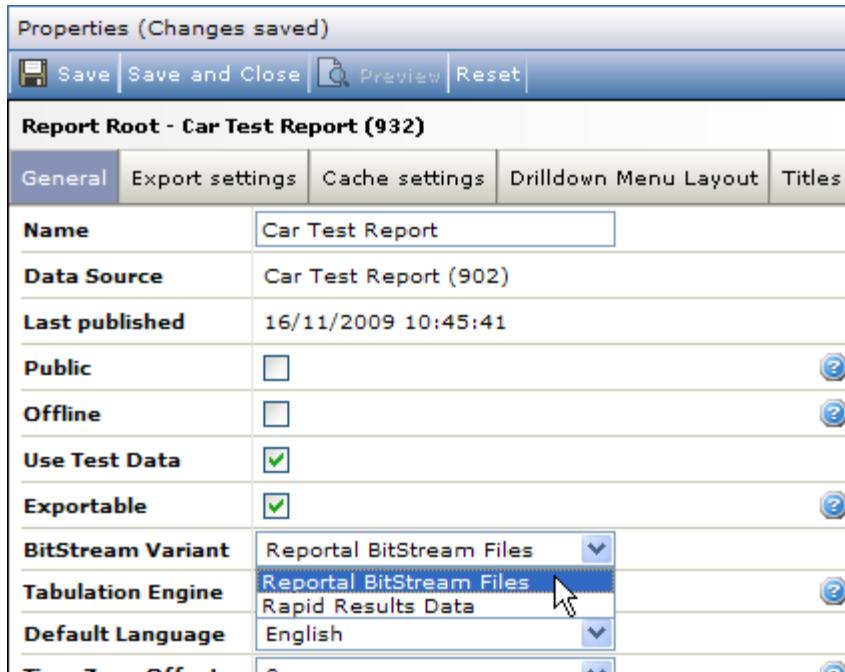


Figure 154 Selecting the BitStream variant to be used for the report

Note that for RVAs/RDAs and Confirmit users (not Public reports), you can add a "BitStream Updater" component to the report pages to allow the viewer to update the data displayed (see Updating the Data on the Report Page on page 138 for more information).

## 7.1. Benefits

Interrogating the data set to create aggregated tables will be considerably faster when working with BitStream files than when the default method of querying the SQL database is used. The performance improvement will be greater the larger the dataset is, but it is recommended to use BitStream files with all surveys for the following reasons:

- It will reduce strain on the SQL server because reporting will then use a different calculation engine and different files. This means that reporting will not impact on the collection of data or other processes in the survey database.
- The tables and charts cannot be generated at exactly the same time (down to milliseconds) irrespective of which report engine you are using. If the survey is live and reporting is conducted directly towards the SQL database, new respondents may be entering and completing the survey while the report is being generated. This will make the totals for different tables and charts inconsistent because they will be generated from a changing data set. When using BitStream files, you are generating reports based on a fixed data set, making all tables and charts consistent. When the BitStream files are updated, the Reportal cache is automatically cleared to ensure that all results displayed in charts and tables are generated from an identical dataset.
- For RVAs/RDAs and Confirmit users (not public reports) you can include an "Update Data" button on the report page. This will allow the report viewer to update the data displayed by the report.
- With BitStream files you can cross a question by itself (i.e. have the same question included in both rows and columns of a table). This is not possible when querying the SQL database.

## 7.2. BitStream Limitations

BitStream files cannot be used:

- If you use **Join** in the report's data source.

- If you have several projects in the report's data source, and one of the projects does not have BitStream files generated.
- If the report uses a fixed filter which is based on an open text-field.

Verbatim tables in the report will interrogate the SQL database even if the report is set up to use BitStream files.

**Note:** If you are to work on an existing report, you are advised to make a copy of the report before enabling BitStream files. This will allow you to back-track in the event you run into problems with one of the above limitations.

When you attempt to publish the report, Reportal will check that your report complies with these limitations.

## 7.3. Differences between SQL and BitStream Results

The SQL and BitStream reporting engines produce identical results with one important exception: Handling of NULL values (missing responses) when using the NOT operator.

- In SQL, if you filter with NOT(rating="1"), the results will include all responses other than "1" (all other codes, for example codes "2", "3", "4", "5" and "DK" for don't know) but **not** missing responses (NULL) (where the question has not been answered at all, due to for example masking or skipping).
- When reporting based on BitStream files, the missing responses (NULL) **will** be included when you filter with the NOT operator.

## 7.4. How to Generate BitStream Files

**Note:** This procedure can be performed in both Confirmit Authoring and Reportal.

### In Reportal:

1. Go to the **Report > Update** menu and select **Update BitStream Files**.
2. Choose whether you wish to generate BitStream files only on complete responses (default), or on all responses.

**Note:** You will only be able to change this setting for projects where BitStream files have not yet been generated. If you wish to change this setting for projects where an existing BitStream generation task exists, then this must be applied to the project in Authoring (under Reporting > Create Reportal BitStream files).

3. Click **OK**.

A gray message field is displayed indicating the state and progress of the task. When the task is completed, the field turns green.

### In Authoring:

1. Go to the **Reporting > Create Reportal BitStream Files** menu command.
2. Choose whether you wish to generate BitStream files only on complete responses (default), or on all responses.

**Note:** Only select all responses (uncheck the box - see below) if you want to include the results from respondents with other statuses (incomplete, screened etc.) in your reports.

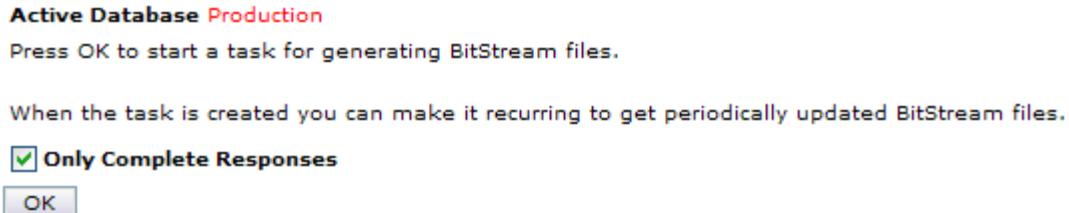


Figure 155 BitStream File generation settings

3. Click **OK**.

The files are generated as a task in Confirmit.

Once the BitStream files have been generated for a project, the task exists. If you later go to the **Create Report BitStream Files** menu command, the settings page will have changed to that shown below.

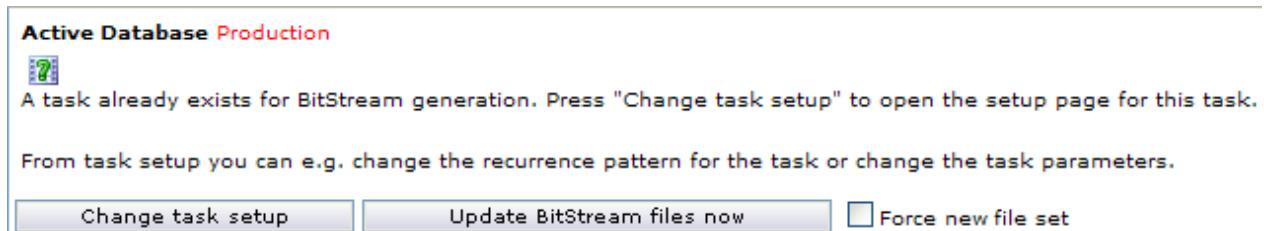


Figure 156 The BitStream Files generation settings page once the task exists

This page allows you to change the task, for example to make it a recurring task, and to run the task immediately. The buttons are as follows:

- o **Change task setup** - click to open the Task Setup page (see below).
- o **Update BitStream files now** - click to start the BitStream File update task immediately (the task will be placed in the queue and will be run when its turn comes).
- o **Force new file set** - normally when the BitStream file task runs, the existing files will be updated. Check this box to delete the existing files completely and replace them with new files. Note that this only affects the data that is included in the report, not the report itself, so no other actions are necessary.

4. Click **Change task setup** to open the Task Setup page for the task.

Task Type: BitStream Generator  
ID: 772927  
Owner: nigelb  
Company: Confirmit  
Project Id: p27083529  
Comment:  
Command Line: Firmglobal.Confirmit.Tasks.Reporting

Save    Run task

**Figure 157 BitStream Generator task parameters**

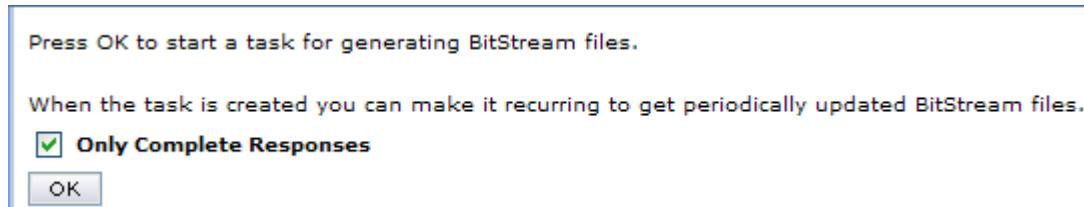
Go to the Recurrence tab and click **Change** to access the recurrence properties (see How to Update the BitStream Files on page 136 for more information).

## 7.5. How to Update the BitStream Files

To update BitStream files:

1. Go to the **Report > Update BitStream Files** menu command.

The update dialog opens.

**Figure 158 Updating the BitStream files**

2. Select whether or not you wish to include incomplete responses, then click **OK**.

A task is sent to the task queue, and the task is run as appropriate.

If you are running a live survey and wish to have the BitStream files updated at regular intervals to add new responses, you can set up a recurrence pattern on the BitStream generation task. You can for example have the files updated twice a week on Mondays and Thursdays at 2 o'clock in the morning.

As the BitStream file creation process will interrogate the SQL database to retrieve the data on the survey, you are recommended to set the task to run during periods when low activity in the survey can be expected, for example late at night.

1. To set the task to repeat at regular intervals, go to the Recurrence tab and click **Change**.

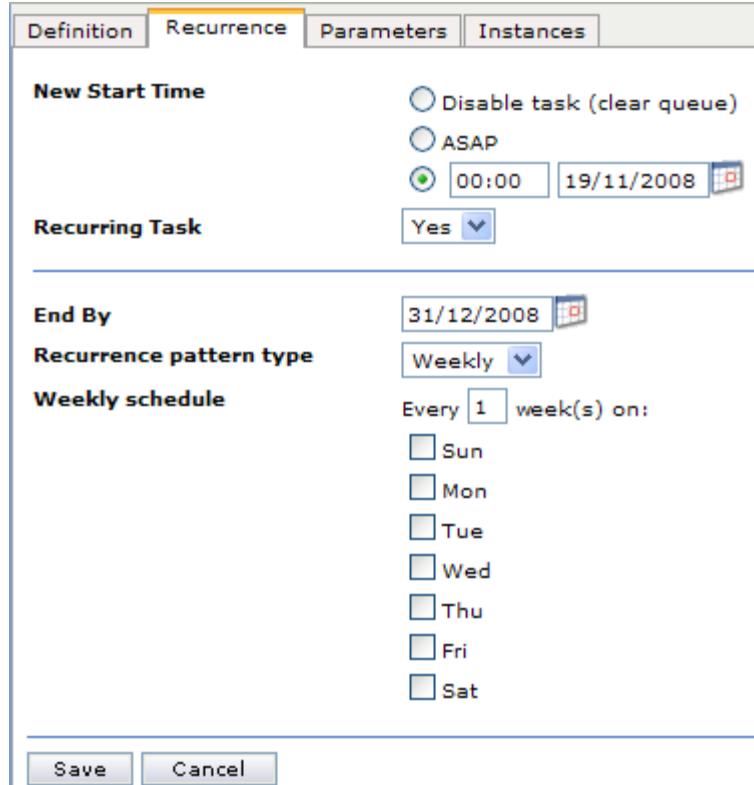


Figure 159 The Recurrence Pattern dialog

2. Make the settings as required then click **Save**.

**Note:** The times the task is set to run will be "server" time - the time at the server on which your project is running. If you are sitting in a different time zone from the server, you must bear this in mind when deciding when you wish the task to run.

The tab changes to the layout shown in the example below. The next few scheduled occurrences are listed.

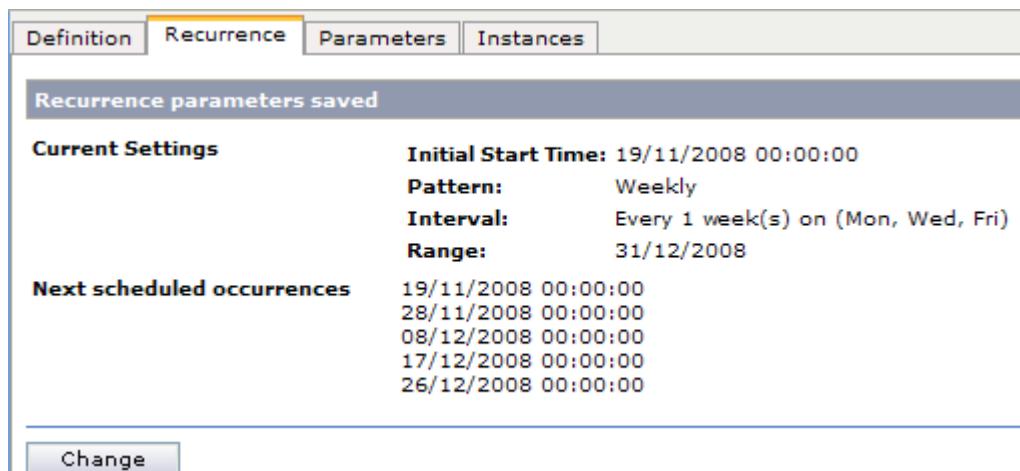


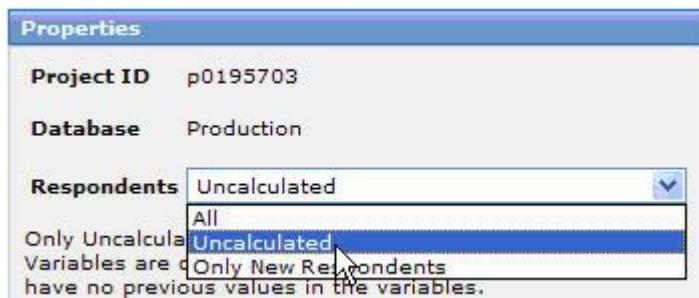
Figure 160 Example of the Recurrence tab with scheduled occurrences

When running a BitStream file generation on a project where BitStream files have already been created, the existing BitStream files will be updated if:

- Responses are added, changed or deleted.
- Questions are added or removed from the survey.
- The type of a question is changed (for example multi -> single).
- Questions or loops are moved into another loop or out of a loop.
- Codes are changed or items are added to or removed from the answer lists of grids, multis and loops.

This ensures that the calculations performed on the BitStream files will be correct with respect to the content of the entire survey database at the time of the last execution of the BitStream generation task.

If you use recoded variables in your survey (see the Confirmit Authoring Manual) ensure that the recoded variables are calculated for new responses before the BitStream generation is run. However, you should choose carefully which respondents the variables are to be calculated for. Note that choosing **All** will mean that recoding will touch all responses in the survey database, and when all responses are updated, the BitStream files must be updated for all respondents as well. You are therefore recommended to use **Uncalculated** or **Only New Respondents** if you can. (Read more in the Confirmit Authoring Manual).



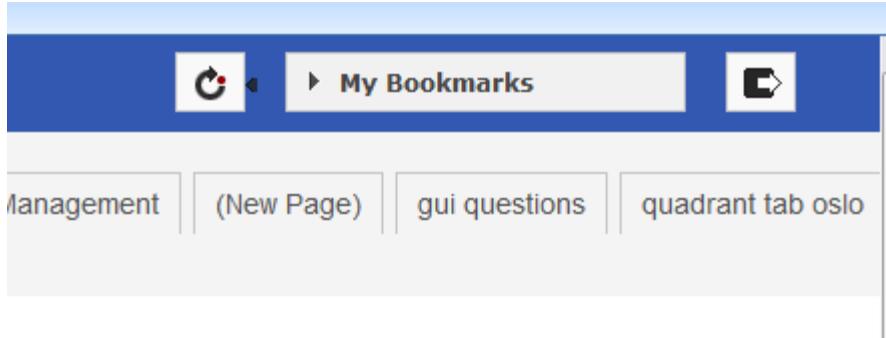
*Figure 161 The Calculate Variables options*

## 7.6. Updating the Data on the Report Page

**Note:** If the Update Data component is included on a page in the report, then the report cannot be published as a Public report (see Report Properties on page 109 for more information).

**Note:** The Update Data component is only available for reports using the Report BitStream Files variant (see The Report Properties > General Tab on page 110 for more information).

For RVAs/RDAs and Confirmit users (not Public reports), you can include an "Update Data" component on the report pages. This component is added in the same way as any other, from the Visual Components toolbox, and allows the viewer to update the BitStream files and thereby the data displayed on the report page. The component can be added to a page, Page Master and Report Master. Only one instance of the component can be added to a page.



*Figure 162 Example of the data update icon on a report page*

If the respondent data has changed since the BitStream file was last updated then the icon arrow will be dark, and when the viewer hovers over the mouse pointer over the icon a message will be displayed to inform them of this.



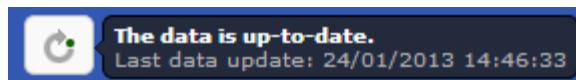
*Figure 163 Example of the BitStream File Update link*

The viewer can then click the icon to update the BitStream file and the data presented in the report. The arrow spins to indicate the update task is in progress. When the task is completed and the data is up-to-date, the icon changes to gray.



*Figure 164 The "data up-to-date" icon*

If the viewer hovers the mouse pointer over the icon, a date/time stamp for the latest update is displayed.



*Figure 165 Example of the hover-text*

If the data source includes more than one project (and therefore more than one BitStream file set), then the most recent time-stamp is displayed.

If the Update Data task is already queued or running when the viewer clicks the icon, then a new task will not be scheduled. The time stamp and link are not displayed in report exports (Excel, PowerPoint, PDF etc.).

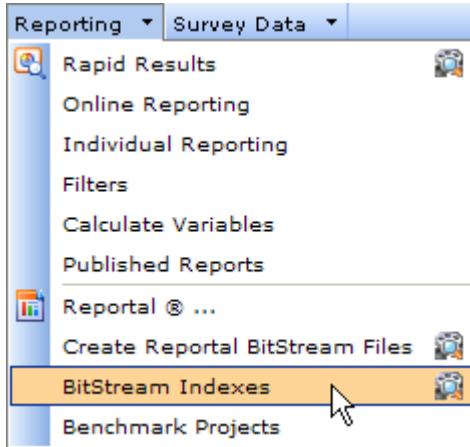
## 7.7. BitStream Indexes

If a large number of reports are to be created, the database is large, and/or you often need to filter for a particular question, then you can index the BitStream files. This will flag specified rows in the database, thereby reducing search times and improving performance.

You can index the BitStream file for Interview\_start, Interview\_end, status, single and multi questions.

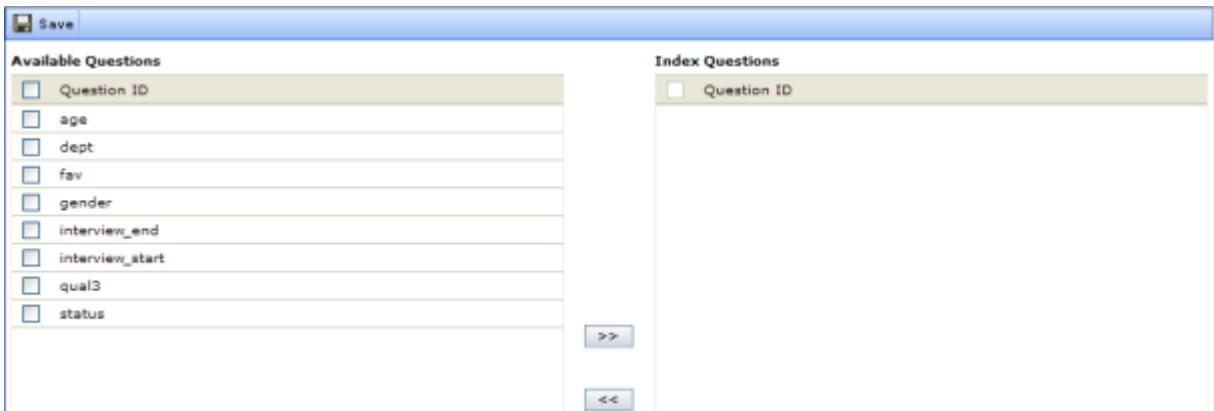
To create a BitStream Index:

1. In Confirmit Authoring, go to the **Reporting > BitStream Indexes** menu command.



*Figure 166 Starting BitStream Indexing*

The BitStream Indexes page opens as shown in the example below.



*Figure 167 The BitStream Indexes page*

2. In the Available Questions column, select the questions you wish to create the index for, and click the **>>** button to move them to the Index Questions column.
3. Save the changes.
4. Create the BitStream files (go to the **Reportal > Create Reportal BitStream Files** menu command).

A task pane opens, indicating the status of the task. Here you can set the task to re-occur if you wish to update the file at regular intervals. On completion, the file will be indexed as specified.

## 7.8. Using Reporting Data in Reportal

In Reportal, if you have a report that has only one data source and was using BitStream files, you can change this to use Reporting Data instead. To do this, in Reportal, go to the Data Source toolbox, right-click on the root folder and select **Switch Data Source to Hub**. Note that this is a one-way operation - once you have changed the data source to use the hub it cannot be changed back to use BitStream files. Also note that this will apply to all reports using the same data source. If you want to switch a live report to "Reporting Data", it is recommended to duplicate the report first, and switch the duplicate to "Reporting Data" and verify that the report works as it should, before switching the original.

### 7.8.1. Benefits of using SmartHub/Reporting Data and Differences Compared to BitStream files

If selecting to run Reportal reports on “Reporting Data” or a hub set up in SmartHub, the following benefits can be achieved:

- Nearly real-time data updates through continuous synchronization of data from survey databases etc. that is triggered every 5 minutes if there are changes in the datasets.
- Improved performance and scalability, especially on large datasets.
- Consistency between data displayed in hitlists and aggregated tables. When using BitStream files, hitlists will get data directly from the survey database, which may not have been written to the BitStream files (yet). With SmartHub/Reporting Data, hitlists and aggregated tables both are querying the same back-end, so there is consistency in results reported.
- New analytics functionality, like ability to set aggregation levels on loop data/one-to-many relations (“hierarchical data”).
- With reports based on a hub configured in SmartHub: greatly enhanced capabilities for combining and mapping different data sources.

There are some key differences between reporting on SmartHub/Reporting Data and BitStream files to be aware of:

- SmartHub/“Reporting” Data only support the “extended” table engine. If you have an existing report on table engine “version 1”, you need to switch it to the extended table engine first, and then switch to Reporting Data. It is recommended to make a duplicate of the report, and switch that to the extended engine and verify first, before switching a live report to the extended engine.
- Reports with multiple projects in the source are not supported on “Reporting Data”. Base the report on a hub configured in SmartHub instead.
- It is not supported to set up Joins and Unions in the data source inside Reportal for reports on “Reporting Data”/SmartHub. Instead you can set up a hub in SmartHub with a “Combined data source” (union) or linking surveys to a Contact database (join).
- Timezone Offset is not supported on SmartHub/“Reporting Data”.
- Note that BitStream and “Reporting Data”/SmartHub will do data synchronization at different points of time. BitStream files are generated through scheduled data updates, whereas SmartHub by default will synchronize data continuously when there is changes/new data in the survey db. So for a live survey, data may differ because the synchronization has been run at different points of time for BitStream and “Reporting Data”/SmartHub. So to compare similar datasets, you can for example apply a global filter on the report that uses “Reporting Data”/“SmartHub” as a date filter based on time less than the time of the last BitStream synchronization.
- “Reporting Data” and SmartHub will bring in all records from the survey database. BitStream files may be filtered on status, and do not include “screened” responses. So to achieve the same filtering, you will have to set a status filter (for example status = “complete”) on the report level in Reportal after switching to use “Reporting Data” or a hub.
- Deleted categories: If you have data stored in the survey database for categories (answers) that have later been deleted/removed from the questionnaire, BitStream will be including those deleted values when counting total number of records. When reporting on SmartHub/“Reporting Data”, the deleted values will be treated as no response, and not be included in the total.
- Filters will not affect the level of aggregation used in a table when report is based on “Reporting Data”/SmartHub. The default rule used for aggregation level is that the default aggregation level will be the lowest level, so if a variable inside a loop is added, the aggregation level will automatically be set to the loop level. For a report using BitStream this also happens when applying a filter that references a loop variable. For reports based on SmartHub/Reporting Data, the filter will not affect aggregation level.

If there are inconsistencies between values in the survey database for background variables in respondent data and response data, for example due to survey scripts, API updates, updates in data editors or Data Processing/data imports on one table, but not the other, there will be differences in results produced by BitStream and SmartHub/"Reporting Data" if you set a table to "Use Respondent Data". This is because SmartHub/"Reporting Data" will be fetching values from respondent data for background variables when you set "Use Respondent Data", whereas BitStream is only fetching values from respondent data for "Not answered" respondents, that don't have any response data, and will combine that with response data for respondents that have answered the survey (partially or complete).

## 8. The Table Designer

The charts in your reports are based on the data provided by aggregated tables. Use the Table Designer facility to create and edit the aggregated tables.

**Note:** For SaaS users, a maximum of 200 tables can be included in the pages of the report. There is no limit for the number of tables that can be stored in the Analyst toolbox. If a report requires more than 200 tables, contact Confirmit's Professional Services team because this will necessitate a change to the server setup for that report. This change must be applied specifically for each report.

**Note** that exports from Reportal (including "Export all tables" from Analyst, "Report Export", "Export Packages", and "Export Viewer Presentation") incur an additional charge incremental in steps of 100 pages (1-100 pages = 1 export charge, 101 - 200 pages = 2 export charge etc.). The export of the current page/table does not incur any charge.

**For clients operating Confirmit on their own servers, the maximum number of tables in a report is defined by the server administrator and this level will be the default value for all reports.**

To open the Table Designer:

1. Create or open a report.
2. Create or open a page in the report.
3. If required, create an aggregate table on the page and save it.
4. Double-click on the Aggregated Table element in the Report toolbox, or right-click on it and select **Edit**, or right-click on the Aggregated Table element in the page and select **Design**.

The Table Designer opens as shown below.

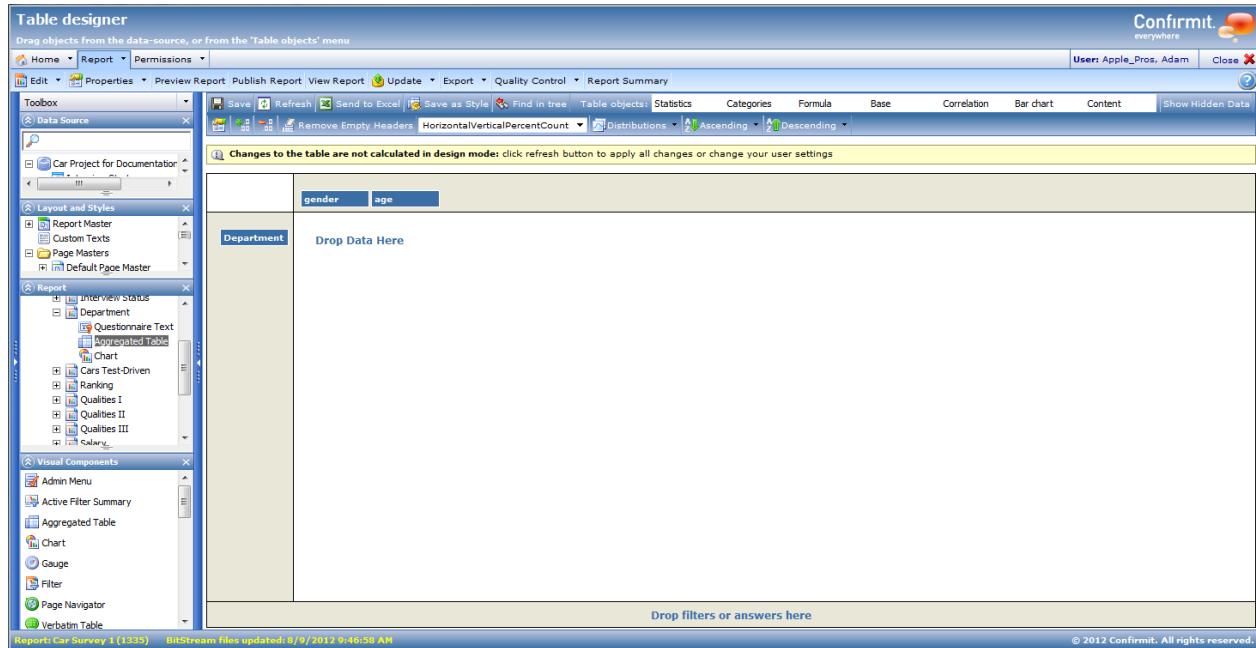


Figure 168 Example of the Table Designer page

Use the Data Source toolbox to access the questions you want to report on when working in the Table Designer. The Table Designer supports all question types except Open Text List questions. It also supports loops, questions inside 3D-grids and the system variables: interview start, interview end (time stamps), interview status and Extended Status (CATI only) (note that certain properties must be applied for Open Text questions (see Using Open Text Questions in Aggregated Tables on page 251 for more information)). The Data Source has the same structure as the questionnaire in Confirmit, and you can expand items such as folders, conditions, 3D-grids and loops by clicking the expand button (+) next to the icons. Singles, Grids and multi questions, which are multi-variable question types, can also be expanded to display all of the items in their answer lists. Each of these items can then be used individually in the Table Designer.

**Note:** By default, to avoid possible delays, tables will not be updated every time a change is made. You must then click the Refresh button to update the tables manually after making changes. If you wish the tables to be updated automatically, go to the User Settings page and check the "Calculate tables in design mode" box (see The User Settings Page on page 22 for more information). While the box is un-checked, a message is displayed in the Table Designer page to inform the user that he/she must update the tables manually after making changes.

## 8.1. Drag-and-Drop Table Design

Use the Table Designer by dragging objects from the Data Source toolbox into the "Rows," "Columns" and/or "Data" dimension. The rows and columns define the vertical and horizontal headers of the table. If no variables are inserted in the Data Dimension, the contents of the rows and columns will be used to determine the basis of the table. So, for the most common types of tables, there is no need to include anything in the Data Dimension (see The Data Dimension on page 156 for more information).

1. Drag in a simple single question, for example q3 (Gender), and drop it in the Drop Rows Here area as shown below.

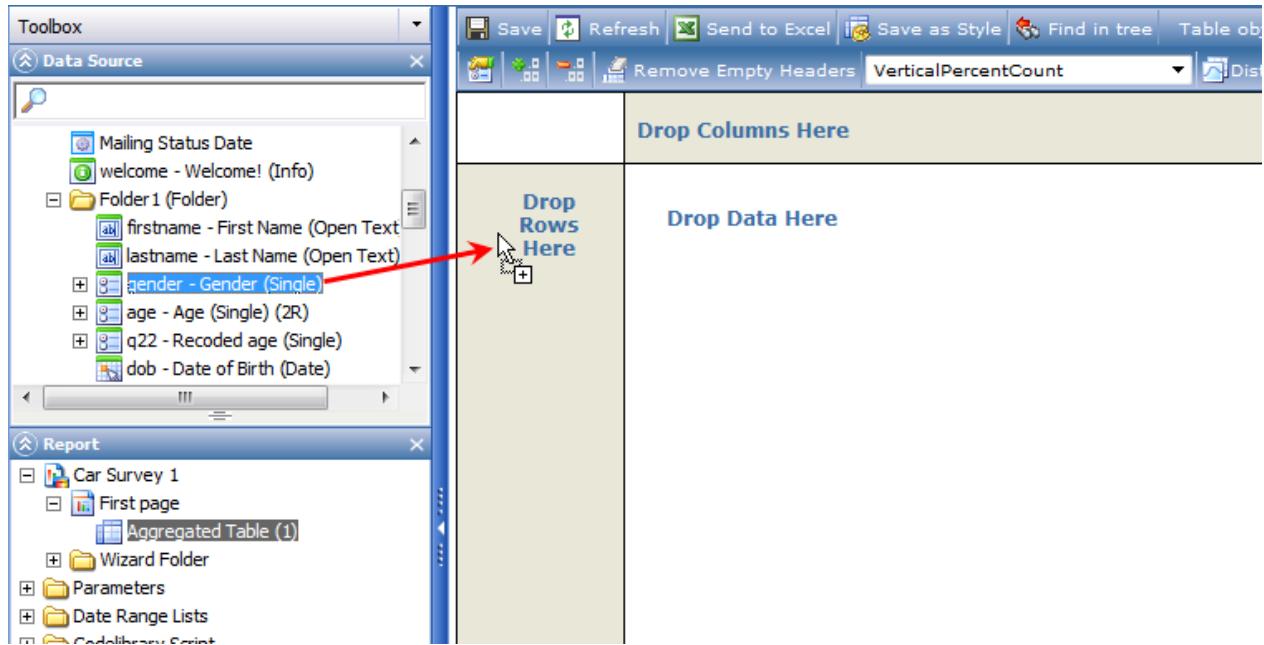
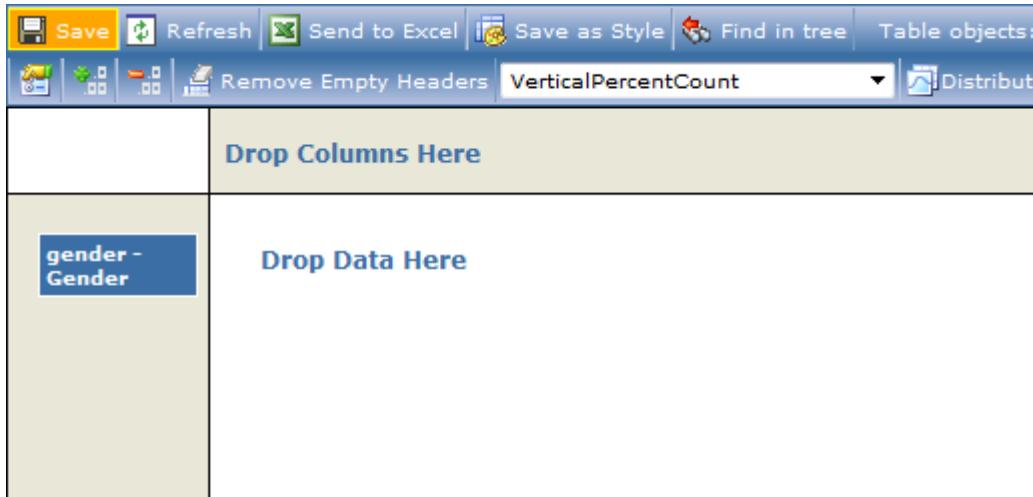


Figure 169 Dragging a question into rows



**Figure 170 The Gender question in Rows**

2. Click the Refresh button in the toolbar to see a preview of the table with real-time results.

Drop Columns Here						
gender - Gender	Male	41	50.0%			
	Female	41	50.0%			
	Total	82	100.0%			
	Generated: 8/15/2012 11:04:58 AM					
Weight model: None						
Fixed filters: <a href="#">Drop filters or answers here</a>						
Significance testing: None						

**Figure 171 Previewing the table**

The formatting and settings of the table will depend on the default table style of the template you are using in your report. In this example, the counts (the number of male and female respondents) and the percentages (of males and females, total 100%), are displayed. The various properties you can apply to the table are described in The Table Property Sheet. The Fixed Filters field, into which you can drag questions to be used as filters, is described in Adding a Filter to the Table.

**Note: You can expand categorical questions (Single, Multi and Grid questions) and drag individual categories (the answer options) or groups of categories (select using CTRL key) into the table.**

There are also several properties available for the header variable, for example, including an average on a question with a scale weighted from 1 to 4, as shown below. The header variable properties are described in The Header Variable Property Sheet.

<b>Very Good</b>	274	24.7%
<b>Good</b>	281	25.3%
<b>Poor</b>	264	23.8%
<b>Very Poor</b>	290	26.1%
<b>Total</b>	<b>1109</b>	<b>100.0%</b>
<b>Avg</b>		2.5

Figure 172 Table with average

The default settings for the report present all the results **without any filtering**, so respondents with all statuses (complete and incomplete interviews, and respondents who have been screened out with a quota full or by a screener question) are included. If you want to report on a particular status, for example only using responses that are completed, you must apply a filter on your report, report page or table (see Filter Designer on page 513 for more information).

- To create a cross-tab, drag-and-drop a question, for example q4 (Age), into the Drop Columns Here area.

The screenshot shows the Confrimt Horizons 24 Report Designer interface. On the left, the 'Toolbox' and 'Data Source' panes are visible. The 'Data Source' pane lists various data items: 'Mailing Status Date', 'welcome - Welcome! (Info)', 'Folder1 (Folder)' containing 'firstname - First Name (Open Text)', 'lastname - Last Name (Open Text)', 'gender - Gender (Single)', 'age - Age (Single) (2R)', 'q22 - Recoded age (Single)', and 'dob - Date of Birth (Date)'. The 'Report' pane shows a report structure with 'Car Survey 1', 'First page', and an 'Aggregated Table (1)'. The main workspace displays a table titled 'VerticalPercentCount' with the following data:

	<b>Drop Columns Here</b>			
<b>gender</b>	<b>gender</b>	Male	41	50.0%
		Female	41	50.0%
		<b>Total</b>	<b>82</b>	<b>100.0%</b>

Below the table, the following metadata is displayed:

- Generated: 8/15/2012 11:04:58 AM
- Weight model: None
- Fixed filters: **Drop filters or answers here**
- Significance testing: None

Figure 173 Creating a cross-tab

- Then click the **Refresh** button to see the result .

age - Age													
gender - Gender		Under 18	18 - 30		31 - 40		41 - 50		51- 60		Over 60		Total
	Male	0	10	66.7%	10	50.0%	9	45.0%	7	46.7%	5	41.7%	41 50.0%
	Female	0	5	33.3%	10	50.0%	11	55.0%	8	53.3%	7	58.3%	41 50.0%
	Total	0	15	100.0%	20	100.0%	20	100.0%	15	100.0%	12	100.0%	82 100.0%

Generated: 8/15/2012 11:10:26 AM  
Weight model: None  
Fixed filters: Drop filters or answers here  
Significance testing: None

Figure 174 The resulting table

- When you have finished working on your table, save the changes.

The save procedure will depend on how you opened the Table Designer. Either first click **OK** which will bring you back to the Report Page Editor, then click **Save** in the Report Page Editor, or just click **Save**.

## 8.2. Nesting and Stacking Questions in Columns and Rows

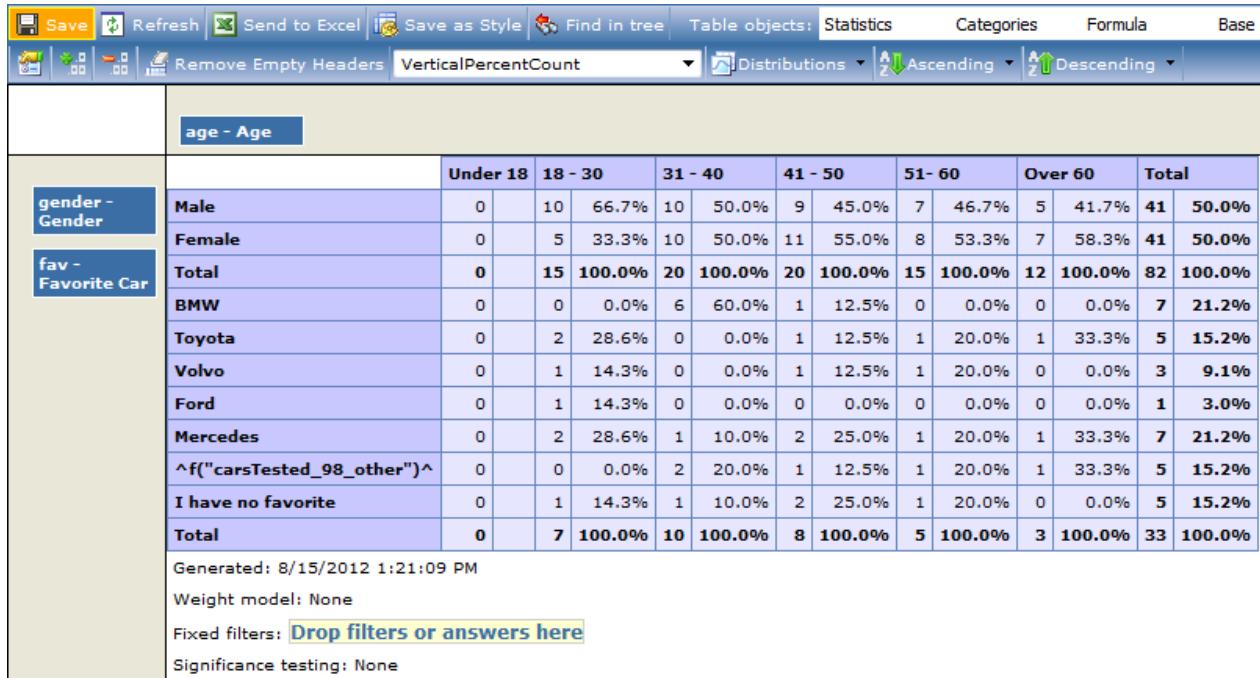
You can have more than one item in both the rows and the columns of a table. You can for example add another single question, in this case q7 (Favorite), to the Rows dimension.

**Note:** You can also include items from more than one data source (project) in the table (see Override Other Projects on page 212 for more information).

If you place the second question below the first, the items will be **stacked**. The first part of the table will then show the results for the **Gender** question, and below that, the results for the **Favorite** question. Both of the sets of results will be crossed with the content of the Columns dimension, in this case the **Age** question.

Figure 175 Dragging the Favorite question into rows

Click **Refresh** to update the table and see the result:



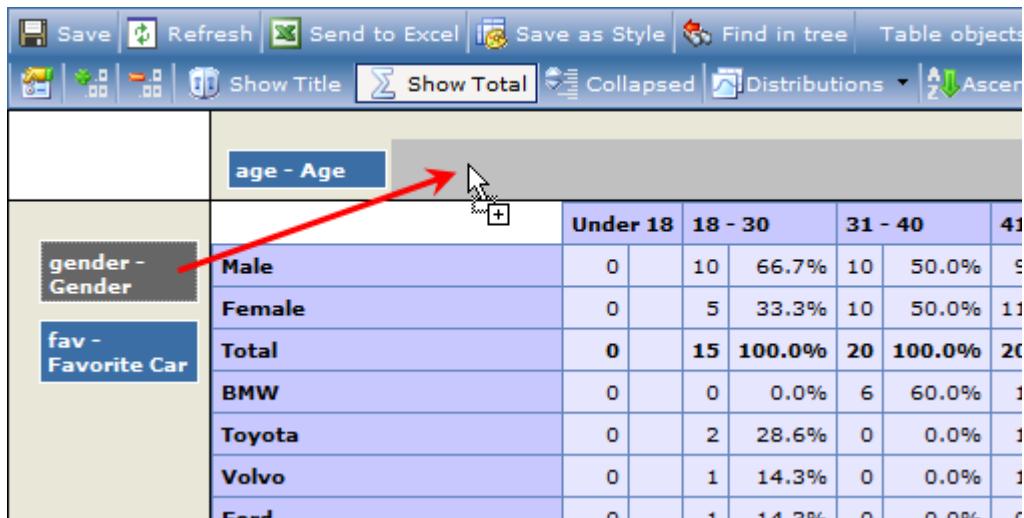
The screenshot shows a report interface with a toolbar at the top containing Save, Refresh, Send to Excel, Save as Style, Find in tree, Table objects, Statistics, Categories, Formula, and Base buttons. Below the toolbar, there are filters for Remove Empty Headers, VerticalPercentCount, Distributions, and sorting options (Ascending, Descending). The main area displays a table titled 'age - Age'. The table has columns for 'Under 18', '18 - 30', '31 - 40', '41 - 50', '51- 60', 'Over 60', and 'Total'. Rows include gender ('Male', 'Female', 'Total') and favorite cars ('BMW', 'Toyota', 'Volvo', 'Ford', 'Mercedes', '^f("carsTested\_98\_other")^', 'I have no favorite', 'Total'). The data is presented as counts and percentages. At the bottom of the table, there are generated time, weight model, fixed filters, and significance testing information.

	age - Age									
		Under 18	18 - 30	31 - 40	41 - 50	51- 60	Over 60	Total		
gender - Gender	Male	0	10	66.7%	10	50.0%	9	45.0%	7	46.7%
	Female	0	5	33.3%	10	50.0%	11	55.0%	8	53.3%
	Total	0	15	100.0%	20	100.0%	20	100.0%	15	100.0%
fav - Favorite Car	BMW	0	0	0.0%	6	60.0%	1	12.5%	0	0.0%
	Toyota	0	2	28.6%	0	0.0%	1	12.5%	1	20.0%
	Volvo	0	1	14.3%	0	0.0%	1	12.5%	1	20.0%
	Ford	0	1	14.3%	0	0.0%	0	0.0%	0	0.0%
	Mercedes	0	2	28.6%	1	10.0%	2	25.0%	1	20.0%
	^f("carsTested_98_other")^	0	0	0.0%	2	20.0%	1	12.5%	1	20.0%
	I have no favorite	0	1	14.3%	1	10.0%	2	25.0%	1	20.0%
	Total	0	7	100.0%	10	100.0%	8	100.0%	5	100.0%
									33	100.0%

Generated: 8/15/2012 1:21:09 PM  
Weight model: None  
Fixed filters: Drop filters or answers here  
Significance testing: None

Figure 176 Stacking elements in rows

Similarly, you can stack elements in columns by placing them next to each other. For example, move the Gender question from rows onto columns next to the Age question:



The screenshot shows the same report interface as Figure 176, but with a different layout. The 'age - Age' question is now in the first column of the table. The 'gender - Gender' question is now in the second column. The rest of the table structure and data remain the same. A red arrow points to the 'age - Age' question in the row header.

	age - Age	Under 18	18 - 30	31 - 40	41
gender - Gender	Male	0	10	66.7%	10
	Female	0	5	33.3%	10
	Total	0	15	100.0%	20
fav - Favorite Car	BMW	0	0	0.0%	6
	Toyota	0	2	28.6%	0
	Volvo	0	1	14.3%	0
	Ford	0	1	14.3%	0

Figure 177 Dragging Gender into columns

Then click Refresh to see the result.

	age - Age	gender - Gender										
fav - Favorite Car		Under 18	18 - 30	31 - 40	41 - 50	51 - 60	Over 60	Total	Male	Female	Total	
	BMW	0	0	0.0%	6	60.0%	1	12.5%	0	0.0%	7	21.2%
	Toyota	0	2	28.6%	0	0.0%	1	20.0%	1	33.3%	5	15.2%
	Volvo	0	1	14.3%	0	0.0%	1	20.0%	0	0.0%	3	9.1%
	Ford	0	1	14.3%	0	0.0%	0	0.0%	0	0.0%	1	3.0%
	Mercedes	0	2	28.6%	1	10.0%	2	25.0%	1	20.0%	1	6.7%
	^f("carsTested_98_other")^	0	0	0.0%	2	20.0%	1	12.5%	1	20.0%	1	6.7%
	I have no favorite	0	1	14.3%	1	10.0%	2	25.0%	1	20.0%	0	0.0%
	Total	0	7	100.0%	10	100.0%	8	100.0%	5	100.0%	3	100.0%

Generated: 8/15/2012 1:24:50 PM  
Weight model: None  
Fixed filters: [Drop filters or answers here](#)  
Significance testing: None

Figure 178 Stacking elements in columns

Items can also be **nested** both in columns and rows. You can, for example, move the Age question above Gender. Again, there is a gray-shaded area that will help you determine where the item will be inserted.

	age - Age	gender - Gender				
fav - Favorite Car			Under 18	18 - 30	31 - 40	
	BMW		0	0	0.0%	6
	Toyota		0	2	28.6%	0
	Volvo		0	1	14.3%	0
	Ford		0	1	14.3%	0

Figure 179 Dragging Age on top of Gender

Click **Refresh** to update the table. Note that each Age column is now divided into the genders, and each has its own “Totals” column with an additional “Totals” column for the entire table on the right. Note that for this table the Vertical Percents distribution has been deselected to reduce the size of the table (see The Distributions Tab on page 171 for more information).

The screenshot shows a report interface with a toolbar at the top containing Save, Refresh, Send to Excel, Save as Style, Find in tree, Table objects, Statistics, Categories, Formula, Base, and Correlation buttons. Below the toolbar, there are filters for Remove Empty Headers, VerticalPercentCount, Distributions, and sorting options (Ascending, Descending). The main content area displays a table with nested elements. The first column contains the filter 'fav - Favorite Car'. The second column contains 'age - Age' and 'gender - Gender' stacked vertically. The table has four main sections: Under 18, 18 - 30, 31 - 40, and 41 - 50. Each section is further divided into Male, Female, and Total columns. The data rows include BMW, Toyota, Volvo, Ford, Mercedes, and a category for other cars. A summary row 'Total' is shown at the bottom. The table includes generated and weight model information, and fixed filters.

	age - Age gender - Gender													
fav - Favorite Car		Under 18			18 - 30			31 - 40			41 - 50			
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female		
BMW		0	0	0	0	0.0%	0	0.0%	0	0.0%	5	71.4%	1	33.3%
Toyota		0	0	0	2	66.7%	0	0.0%	2	28.6%	0	0.0%	0	0.0%
Volvo		0	0	0	0	0.0%	1	25.0%	1	14.3%	0	0.0%	0	0.0%
Ford		0	0	0	1	33.3%	0	0.0%	1	14.3%	0	0.0%	0	0.0%
Mercedes		0	0	0	0	0.0%	2	50.0%	2	28.6%	1	14.3%	0	0.0%
^f("carsTested_98_other")		0	0	0	0	0.0%	0	0.0%	0	0.0%	1	14.3%	1	33.3%
I have no favorite		0	0	0	0	0.0%	1	25.0%	1	14.3%	0	0.0%	1	33.3%
Total		0	0	0	3	100.0%	4	100.0%	7	100.0%	7	100.0%	3	100.0%
Generated: 8/15/2012 1:28:32 PM														
Weight model: None														
Fixed filters: <a href="#">Drop filters or answers here</a>														
Significance testing: None														

Figure 180 Nesting elements in columns – Age on top

If you place Gender on top of Age, the table layout changes again. This time the Gender columns are divided into the various ages.

The screenshot shows a report interface with a toolbar at the top containing Save, Refresh, Send to Excel, Save as Style, Find in tree, Table objects, Statistics, Categories, Formula, Base, and Correlation buttons. Below the toolbar, there are filters for Remove Empty Headers, VerticalPercentCount, Distributions, and sorting options (Ascending, Descending). The main content area displays a table with nested elements. The first column contains the filter 'fav - Favorite Car'. The second column contains 'gender - Gender' and 'age - Age' stacked vertically. The table has two main sections: Male and Female. Each section is further divided into Under 18, 18 - 30, 31 - 40, 41 - 50, 51 - 60, Over 60, and Total columns. The data rows include BMW, Toyota, Volvo, Ford, Mercedes, and a category for other cars. A summary row 'Total' is shown at the bottom. The table includes generated and weight model information, and fixed filters.

	gender - Gender age - Age														
fav - Favorite Car		Male							Female						
		Under 18	18 - 30	31 - 40	41 - 50	51- 60	Over 60	Total	Under 18	18 - 30	31 - 40	41 - 50	51- 60		
BMW		0	0	0.0%	5	71.4%	0	0.0%	0	0.0%	5	33.3%	0	0.0%	
Toyota		0	2	66.7%	0	0.0%	1	33.3%	0	0.0%	0	20.0%	0	0.0%	
Volvo		0	0	0.0%	0	0.0%	1	33.3%	0	0.0%	0	25.0%	0	0.0%	
Ford		0	1	33.3%	0	0.0%	0	0.0%	0	0.0%	1	6.7%	0	0.0%	
Mercedes		0	0	0.0%	1	14.3%	0	0.0%	0	0.0%	1	6.7%	0	0.0%	
^f("carsTested_98_other")		0	0	0.0%	1	14.3%	0	0.0%	1	100.0%	1	20.0%	0	0.0%	
I have no favorite		0	0	0.0%	0	0.0%	1	33.3%	0	0.0%	0	25.0%	1	33.3%	
Total		0	3	100.0%	7	100.0%	3	100.0%	1	100.0%	15	100.0%	0	4	
Generated: 8/15/2012 1:31:53 PM															
Weight model: None															
Fixed filters: <a href="#">Drop filters or answers here</a>															
Significance testing: None															

Figure 181 Nesting elements in columns – Gender on top

A similar nesting with Gender and Favorite in columns will give the following result:

		age - Age									
gender - Gender	fav - Favorite Car		Under 18	18 - 30	31 - 40	41 - 50	51 - 60	Over 60	Male	Female	Total
		BMW	0	0	0.0%	5	50.0%	0	0.0%	0	0.0%
		Toyota	0	2	28.6%	0	0.0%	1	12.5%	0	0.0%
		Volvo	0	0	0.0%	0	0.0%	1	12.5%	0	0.0%
		Ford	0	1	14.3%	0	0.0%	0	0.0%	0	0.0%
		Mercedes	0	0	0.0%	1	10.0%	0	0.0%	0	0.0%
		^f("carsTested_98_other")^	0	0	0.0%	1	10.0%	0	0.0%	1	20.0%
		I have no favorite	0	0	0.0%	0	0.0%	1	12.5%	0	0.0%
		Total	0	3	42.9%	7	70.0%	3	37.5%	1	20.0%
		Male									
		BMW	0	0	0.0%	1	10.0%	1	12.5%	0	0.0%
		Toyota	0	0	0.0%	0	0.0%	0	0.0%	1	20.0%
		Volvo	0	1	14.3%	0	0.0%	0	0.0%	1	20.0%
		Ford	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%
		Mercedes	0	2	28.6%	0	0.0%	2	25.0%	1	20.0%
		^f("carsTested_98_other")^	0	0	0.0%	1	10.0%	1	12.5%	0	0.0%
		I have no favorite	0	1	14.3%	1	10.0%	1	12.5%	1	20.0%
		Total	0	4	57.1%	3	30.0%	5	62.5%	4	80.0%
		Total									
		BMW	0	0	0.0%	6	60.0%	1	12.5%	0	0.0%
		Toyota	0	2	28.6%	0	0.0%	1	12.5%	1	20.0%
		Volvo	0	1	14.3%	0	0.0%	1	12.5%	1	20.0%
		Ford	0	1	14.3%	0	0.0%	0	0.0%	0	0.0%
		Mercedes	0	2	28.6%	1	10.0%	2	25.0%	1	20.0%
		^f("carsTested_98_other")^	0	0	0.0%	2	20.0%	1	12.5%	1	20.0%
		I have no favorite	0	1	14.3%	1	10.0%	2	25.0%	1	20.0%
		Total	0	7	100.0%	10	100.0%	8	100.0%	5	100.0%

Figure 182 Nesting elements in rows

Nesting and stacking in Reportal is very flexible, and you can stack and nest variables in several levels. For example, with Age and Gender stacked in columns, you could nest a third question on top of either of them or on top of both. As you move the object above the other items in columns, different areas will be shaded to show where it will be inserted.

Dropping the Favorite question above Age and Gender while the entire width of the area is shaded, as shown in the figure below-left, will give Favorite nested above both Age and Gender as shown in the figure below-right.

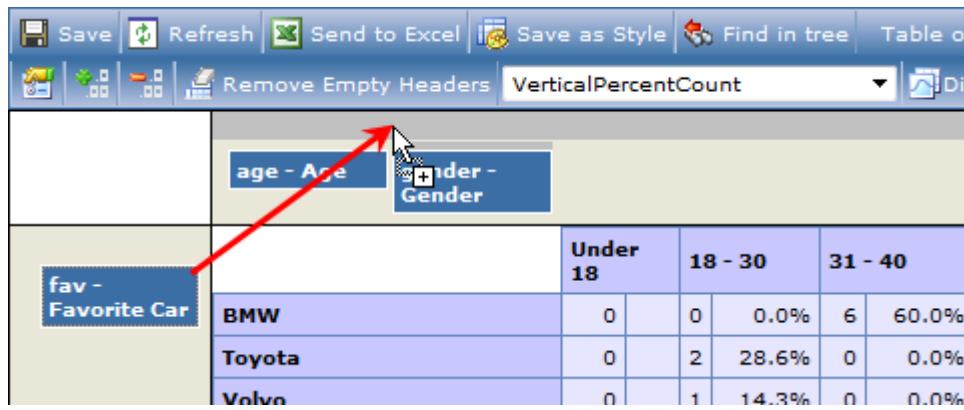


Figure 183 Dragging Favorite above Age and Gender



Figure 184 Favorite nested above Age and Gender

Dropping Favorite above Age while only the smaller area is shaded, as shown in the figure below-left, will nest Favorite above Age, and leave both stacked beside Gender as shown in the figure below-right.

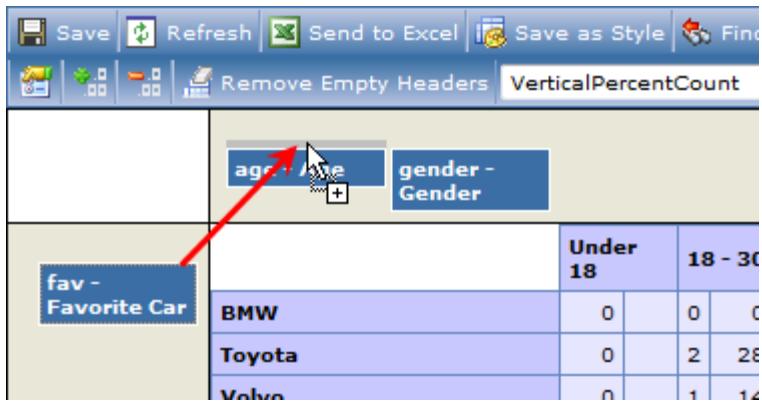


Figure 185 Dragging favorite on top of age



Figure 186 Favorite nested above Age

It is however, not recommended to nest and stack too many variables in too many levels, at least not if they have long answer lists, as the size of the tables produced will quickly become very large. If the report is run directly against the survey database instead of using BitStream files (see BitStream Files on page 132 for more information), the database queries needed to compute the content of the table may then timeout (see Query Timeout on page 256 for more information). It is also difficult to read tables that contain too many variables.

**Note:** If your report is based on BitStream files, you can include the same question in both the rows and columns of the table. If your report does not use BitStream files, this will give an error message.

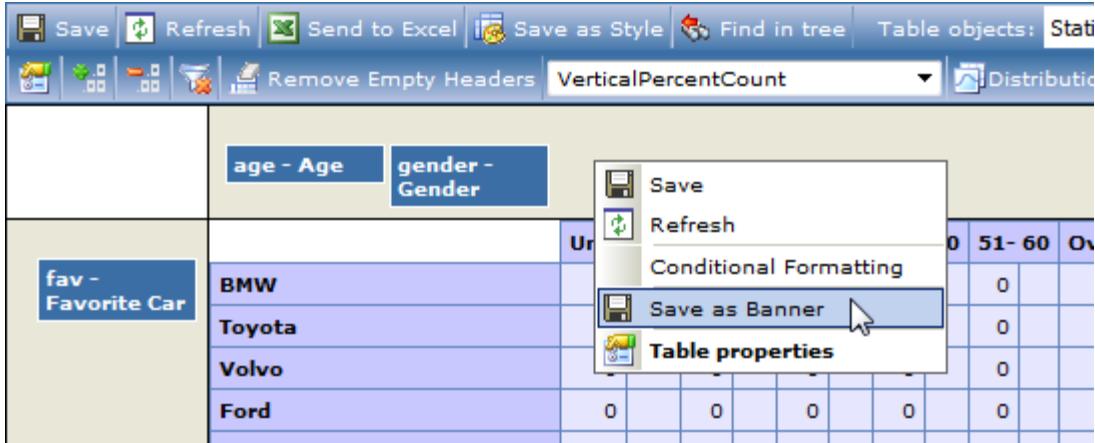
**Note:** You can cross a Formula object with a Statistics object, but you cannot cross Statistics with Statistics; if you attempt to do this an error message will be displayed.

You may have noticed in the examples in this chapter that there are no answers for the "Under 18" group in the favorite question (0 counts). This is due to screening: At the beginning of the survey respondents under 18 were prevented from going further, and consequently were not asked the favorite question. In most circumstances, as this column provides no useful information, you would probably wish to remove that column from the table. Do this using masking (see Answer and Scale Masks on page 198 for more information) or by removing columns with zero responses (see The Remove Empty Headers Tab on page 176 for more information)

### 8.3. How to Save a Column Definition as a Banner

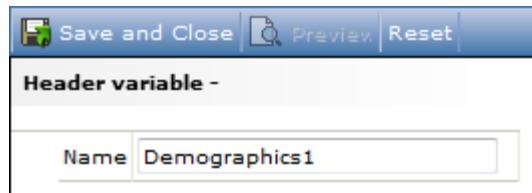
A Banner is a pre-defined table column header. When you have created a useful column definition for an aggregated table, you can save this column definition as a banner so you can use it later in other tables in the report.

1. Right-click in the column field and select **Save as Banner** from the menu.



*Figure 187 Saving a column definition as a banner*

A property sheet opens below the table.

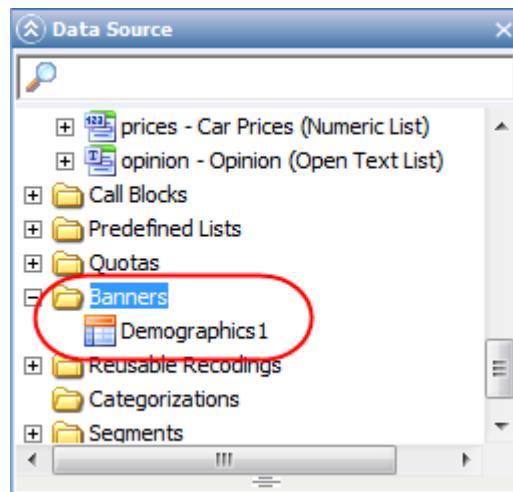


*Figure 188 Giving the banner a name*

2. Type a name for the banner into the **Name** field, then click **Save and Close**.

**Note:** In the event the table contains questions from more than one data source, a selection box is displayed below the Name field to allow you to select in which data source the banner is to be saved.

The new banner is added to the **Banners** folder in the Data Source toolbox.



*Figure 189 The new banner in the Data Source toolbox*

To use the banner in an aggregated table, drag and drop it as you would any other element from the Data Source toolbox.

## 8.4. Adding a Filter to the Table

The Fixed Filters field allows you to drag questions or question categories (the answer options to questions) from the Data Source into the table to use as filters. In the example below, three answer options from the **q7 - Favorites** question have been dragged into the filters field. The resulting table will then display the Gender data crossed with Age, for those respondents who selected either Ford, Volvo or BMW as their favorite vehicle.

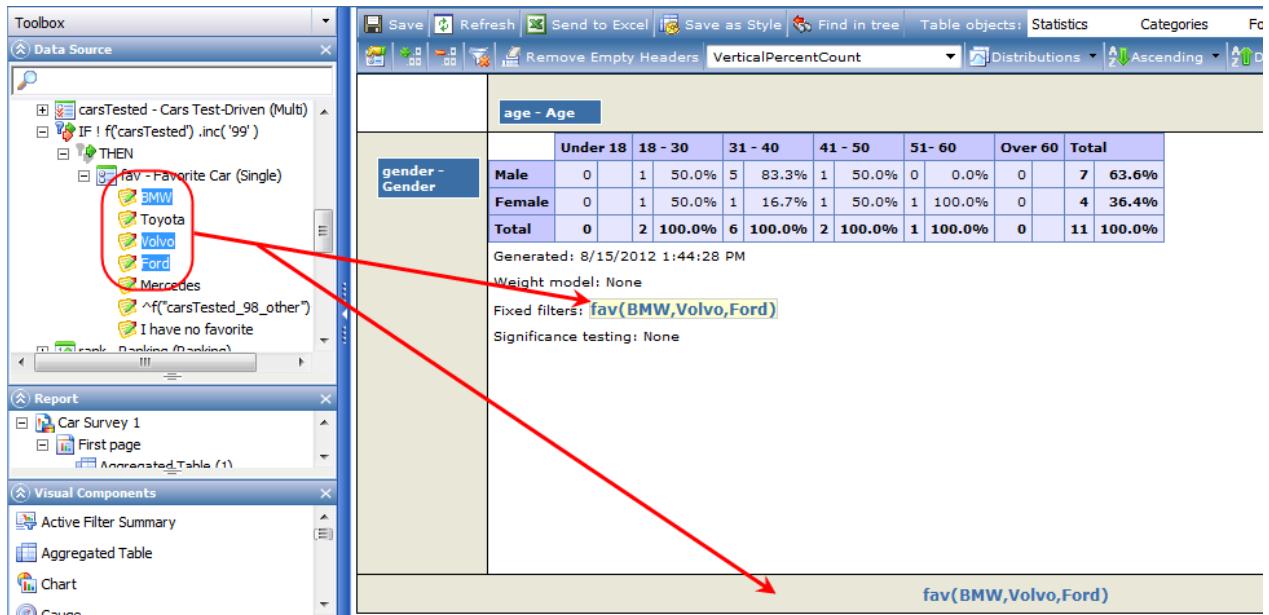


Figure 190 Dragging questions from the data source for use as a filter

**Note:** You can drag the questions into either the "Fixed Filters" field in the information area directly below the data table, or into the "Drop filters or answers here" area in the lower frame of the table.

**Note:** If you attempt to drag another question into the filter when it already contains a question, the second question will replace the first. If you wish to use more than one question in the filter, use standard Windows selection techniques (Shift / Control) to select the questions.

When you drag questions into the Filters field, this will also automatically create a filter item in the Filters toolbox.

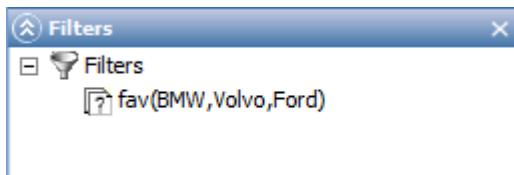


Figure 191 The Filters toolbox with the new filter

**Note:** You can also add filters to the table by going to the **Filters** property on the General tab in the table's property sheet (see **Filters** on page 166 for more information).

To remove an unwanted filter, click the **Remove Filters** button in the table toolbar (see The Table Toolbar on page 158 for more information), or go to the table Properties sheet and remove the filter via the Report Filters dialog (see Filters on page 166 for more information).

A table will also be affected by any filters added to the report, the page the table is on etc., so these filters will also be listed in the Fixed Filters field and in the filter bar at the bottom of the table. In the filter bar, filters inherited from higher up in the report are denoted "INHERITED:..." as shown below.

Total	0	0	0	0	0	0	0	0
Generated: 8/15/2012 1:51:47 PM								
Weight model: None								
Fixed filters: <a href="#">fav(BMW,Volvo,Ford)</a> , <a href="#">fav(Toyota)</a>								
Significance testing: None								
<a href="#">fav(Toyota)</a> <b>INHERITED: fav(BMW,Volvo,Ford)</b>								

Figure 192 Example of a table with inherited filters

## 8.5. The Data Dimension

You may want the content of the cells to be statistics calculated on a variable (or variables). For example, you may wish to use Age in rows, Gender in columns, but you want the content of the cells to be an average of a third question (for example, "Safety," which has a scale from 1 to 5. To do this, the Safety question must be inserted in the Data Dimension.

If the table is not yet displayed (as a result of clicking the **Refresh** button), you can drop the Safety component directly in the "Drop Data Here" field as shown below.

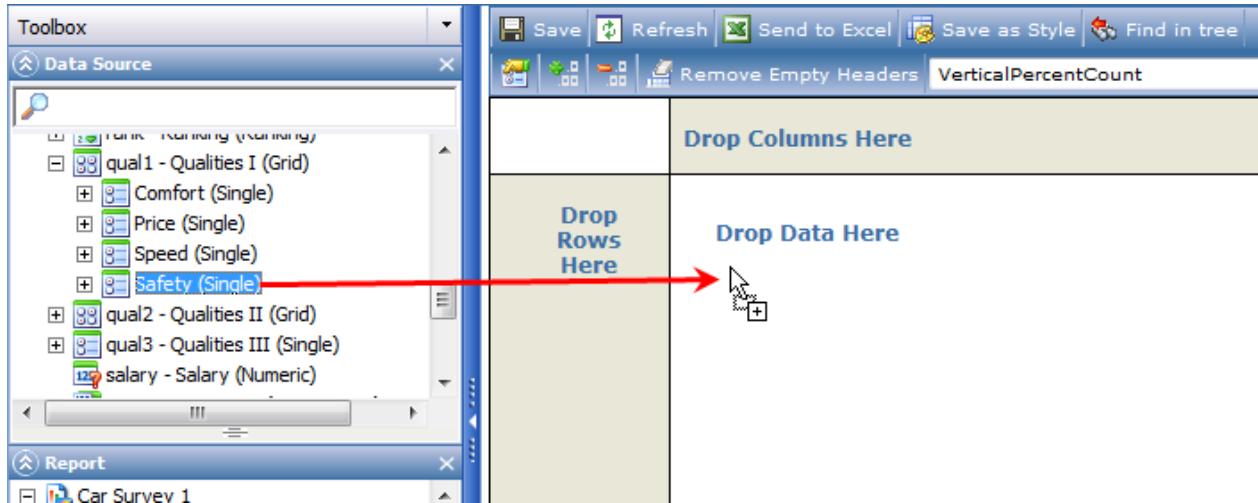


Figure 193 Dragging "Safety" into the Drop Data Here field

If the inner part of the table is already filled with a preview of a table, you can drop it into the upper left corner:

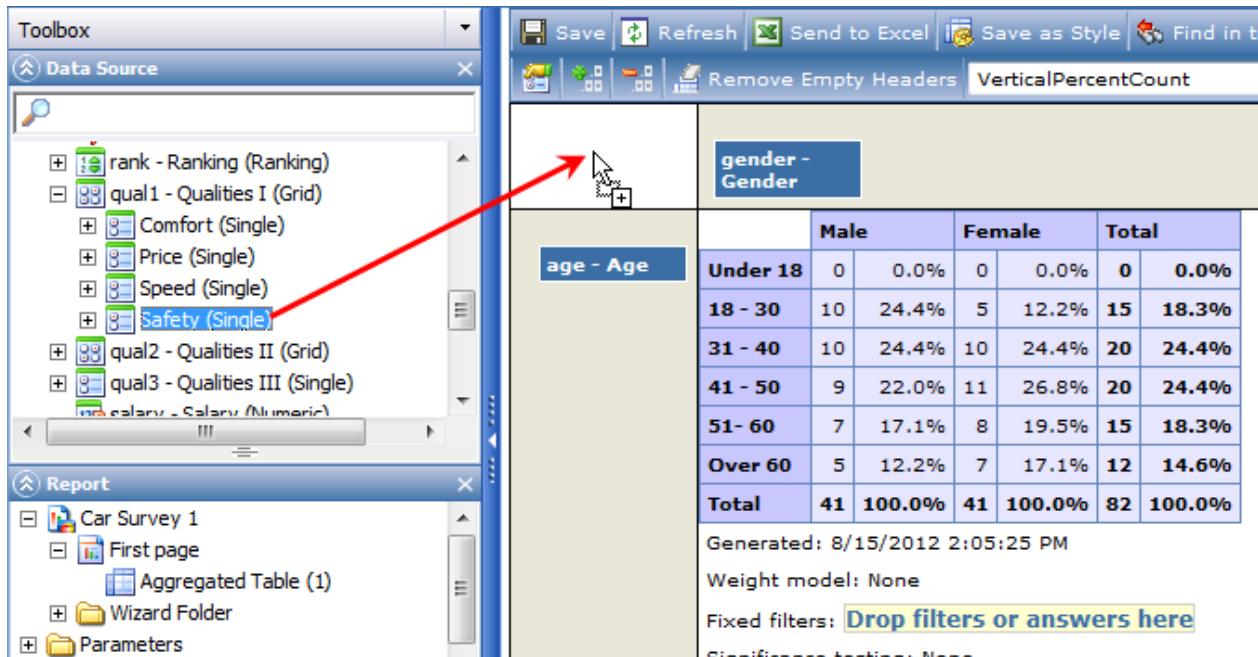
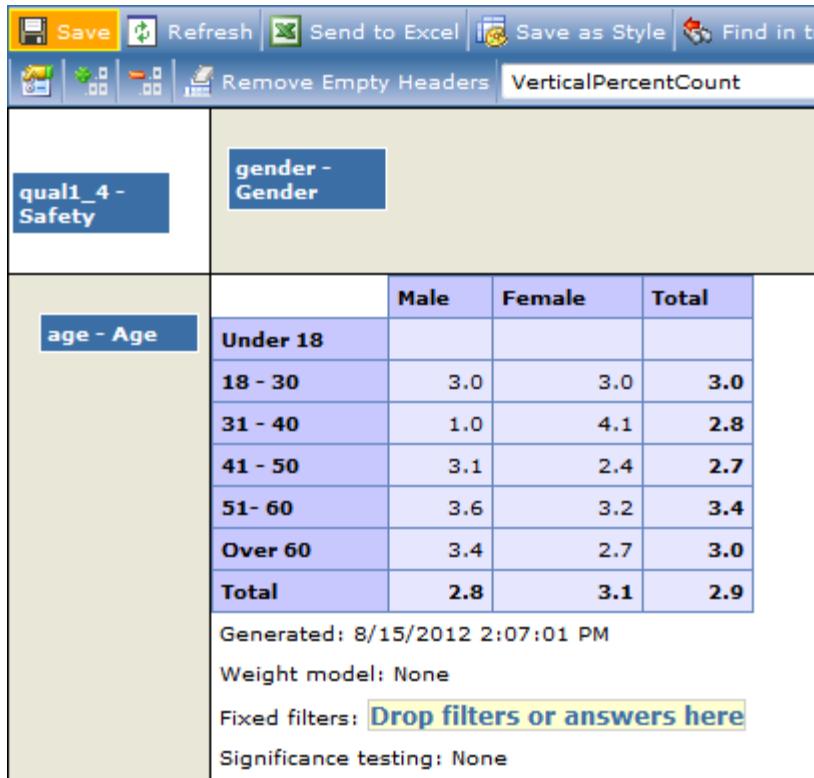


Figure 194 Dragging "Safety" into the Data Dimension

Note: Only numeric questions or those that have scores defined when set up in Confirmit (in the answer list) can be used in the Data Dimension.

You select the type of statistics that are to be displayed for the question in the Data Dimension, in the header variable properties for that question (see The Header Variable Property Sheet on page 197 for more information). In this case, Average is selected. The resulting table is displayed below:

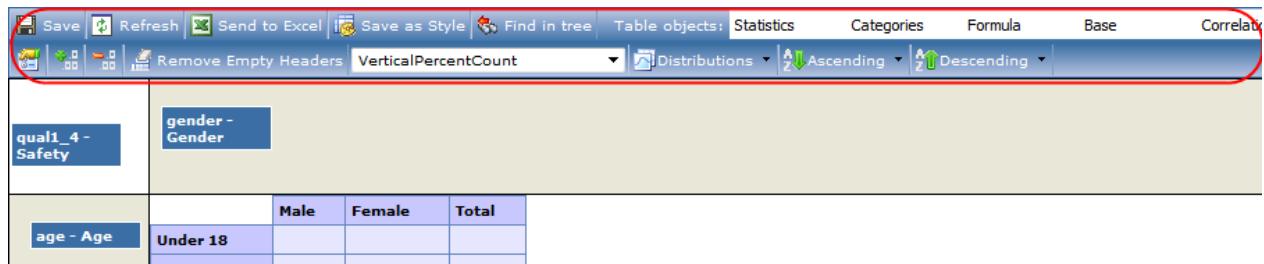


*Figure 195 Using the Data Dimension*

You can add more than one variable to the Data Dimension. In this case, the table will be extended with text to explain which of the questions in the Data Dimension the value refers to, and the values will be nested under the variable(s) either in rows or in columns (see Data Dimension Target on page 165 for more information).

## 8.6. The Table Toolbar

When a table is opened in the Table Designer, it has its own toolbar below the Table Designer page toolbar.



*Figure 196 The table toolbar*

The tools available in this toolbar depend on the part of the table that is currently in focus, so will change as you click into different items and areas of the table. The tools all have tool-tips, and are as follows:

- **Save** - saves any changes that you have made to the table.
- **Refresh** - re-displays the table taking into account any changes you may have made to the table rows and columns, filters etc.

- **Send to Excel** - enables you to export the table directly to Excel, and thereafter open the Excel file or save it (see Send To Excel on page 160 for more information).
- **Save as Style** - click to save the current table layout as a style (see Save as Style on page 168 for more information).
- **Find in Tree** - click to highlight the current table in the Report toolbox.
- **Table Objects** - a number of different object types that can be dragged into Rows or Columns to provide additional possibilities in the table. The various objects and their uses are described in detail elsewhere in the manual.
- **Properties** - click to open the table Properties page. This appears towards the bottom of the window, below the table. You can also open the Properties page by double-clicking in the table, or by right-clicking on the table and selecting **Table Properties** from the drop-down menu.
- **Increase decimals** - click to increase the number of decimal places displayed for the data . If you have clicked into the main data area then this button will adjust the settings for the entire table. If you have clicked into a specific variable then changes will apply only to the selected variable. Note that once a specific variable has been changed, then you cannot later adjust it by changing the setting for the table's data area.
- **Decrease decimals** - click to reduce the number of decimal places displayed for the data . If you have clicked into the main data area then this button will adjust the settings for the entire table. If you have clicked into a specific variable then changes will apply only to the selected variable. Note that once a specific variable has been changed, then you cannot later adjust it by changing the setting for the table's data area.
- **Remove Filters** - deletes filters that you have dragged into the Fixed Filters field (see Adding a Filter to the Table on page 155 for more information).
- **Remove Empty Headers** - [entire table] enables you to automatically hide (mask) all rows and/or columns that contain no data. As soon as data is received for the row or column, it will be displayed. This property can also be set via the table properties sheet Remove Empty Headers tab (see The Remove Empty Headers Tab on page 176 for more information).
- **Style** - [entire table] this is a drop-down list of the various data that can be presented in the table cells (see The Aggregated Table Styles on page 706 for more information). Select the data you wish to present. This property can also be set via the table properties sheet Distributions tab (see The Distributions Tab on page 171 for more information).
- **Show Title** - [a specific variable in a row or column] when a variable is selected, this button appears. Click to display or hide the title above/beside the row or column for the selected variable.
- **Show Total** - [a specific variable in a row or column] click to display or hide the Total row or column for the selected variable (see Include Totals on page 206 for more information).
- **Collapsed** - [a specific variable in a row or column] click to collapse or expand the data row or column for the selected variable (see Collapsed on page 208 for more information).
- **Distributions** - enables you to define the type of numerical presentation used in the table. You can select any combination of counts (the actual number of responses), horizontal and/or vertical percentages, and one additional selectable value (see The Distributions Tab on page 171 for more information).
- **Statistics** - [a Statistics variable] drag the Statistics object into your table, and then in the table either double-click on the object or right-click on it and select Properties to open the property sheet where you can choose the type of statistics you want to use (see Statistics on page 213 for more information).
- **Ascending / Descending** - to sort the data: Click the appropriate button, select **Rows** or **Columns** depending on which direction you wish to sort on, then select which of the available rows/columns you wish to sort on. Click **Save** to save the settings and sort the table.

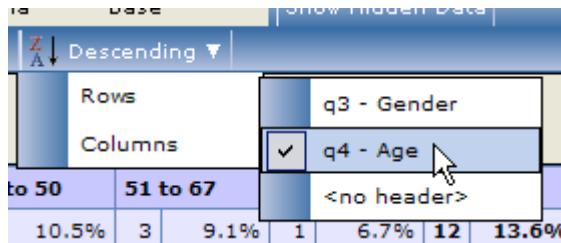


Figure 197 Sorting a table on "Descending > Rows > Age"

### 8.6.1. Send To Excel

You can export aggregated tables to Excel directly from the table designer without triggering a task to perform the export.

1. Go to the Table Designer page for the table you wish to export.
2. In the table toolbar, click Send to Excel.

Drop Columns Here		
<b>q1 - Hierarchy</b>	<b>Africa</b>	0.0%
	<b>Antarctica</b>	10.0%
	<b>Asia</b>	0.0%
	<b>Australia</b>	40.0%
	<b>Europe</b>	0.0%
	<b>North America</b>	0.0%
	<b>South America</b>	50.0%
	<b>Total</b>	<b>100.0%</b>

Generated: 8/29/2012 2:09:01 PM  
 Weight model: None  
 Fixed filters: Drop filters or answers here  
 Significance testing: None

Figure 198 Clicking the Send to Excel button in the table toolbar

If the table contains unsaved changes, you'll be notified that table will be saved before export - confirm or cancel.

3. A message appears asking you whether you wish to open the file or save it - click as appropriate.

If you click **Open**, Excel opens with the table.

	A	B	C	D
1	Africa	0,0%		
2	Antarctica	10,0%		
3	Asia	0,0%		
4	Australia	40,0%		
5	Europe	0,0%		
6	North America	0,0%		
7	South America	50,0%		
8	Total	100,0%		
9	Generated: 8/29/2012 2:23:19 PM			
10	Weight model: None			
11	Fixed filters: None			
12	Significance testing: None			
13				

Figure 199 The resulting Excel file

Click the down-arrow beside the **Save** button to open a list of save options.

## 8.7. The Table Property Sheet

Open the property sheet for a table using one of the following methods:

- Double-click in the table (not on a variable or in the data area).
- Click the **Properties** button in the table toolbar.
- Right-click anywhere in the table and select **Table Properties**.
- Expand a report page in the Report toolbox, right-click the Aggregated Table element and select **Properties**.

**Note:** You cannot open the table property sheet from the report tree if the page the table is inside is currently being edited (is the active page).

The table property sheet General tab is shown in the figure below.

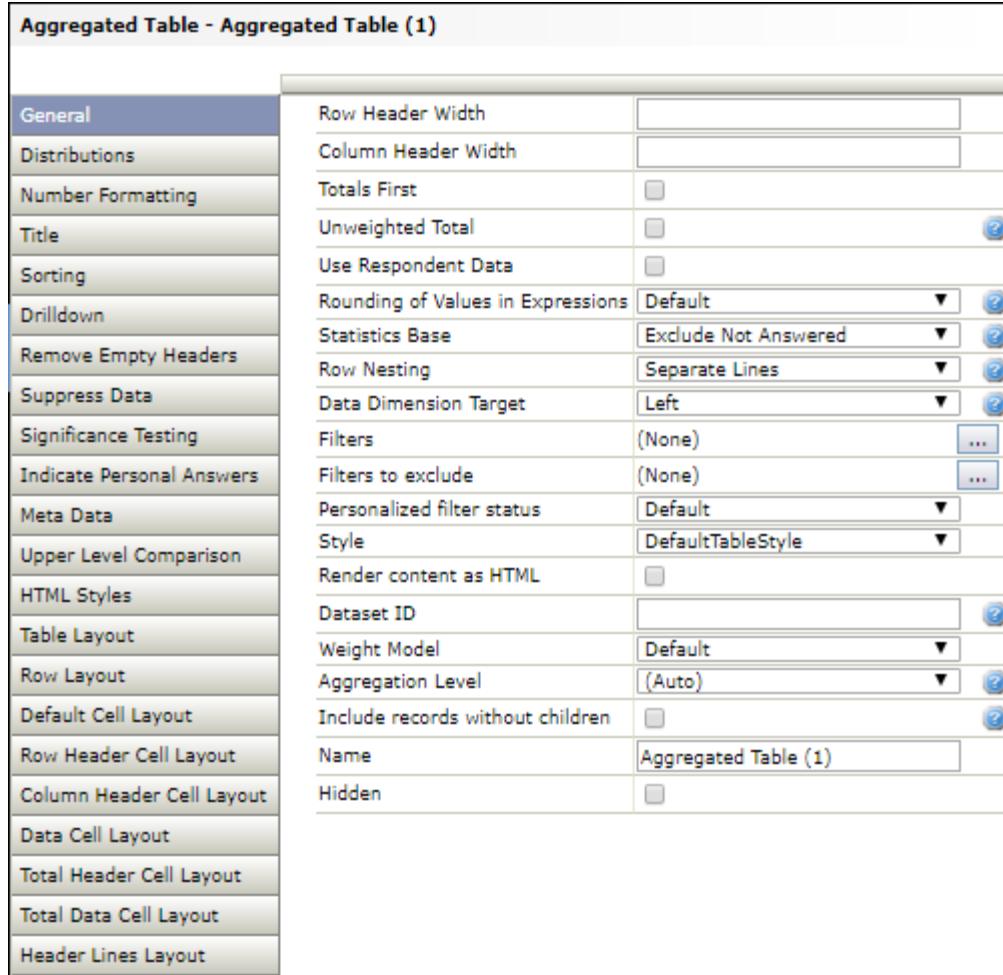


Figure 200 The table property sheet General tab

## 8.7.1. The General Tab Properties

### 8.7.1.1. Row and Column Header Width

You can set the width in pixels on the row and column headers, to control the width of the columns in the aggregated table. **Row Header Width** is the width of the first column(s) with the row header texts. **Column Header Width** is the width of the column(s) under the column headers, that is, the columns in which the results are displayed. Row Header Width and Column Header Width are supported during export in PowerPoint 2007.

### 8.7.1.2. Totals First

Check this box to display the Totals at the top of the table.

### 8.7.1.3. Unweighted Total

Check this box in combination with a Weight Model (in Report properties or in Page properties) to include the unweighted totals in the table.

**Note:** Weighting is only applied to complete records.

**Important:** In the event a weighting model is based on a survey question that for some data records is not answered (has the value NULL), then the results published in a report will differ depending on whether the BitStream query engine or the SmartHub query engine is used. If weights are missing, the BitStream engine defaults to 1 while the SmartHub engine defaults to 0 and therefore excludes these records from aggregated tables.

#### 8.7.1.4. Use Respondent Data

You can cross response rates on a survey by background variables. This functionality can be used for example for reporting on employee surveys where you would like to look at response rates for different departments.

**Note:** To use this functionality, the questions you wish to cross the response rate by must be defined as background variables.

**Note:** When reporting on respondent-level data, the table headers cannot contain variables that only exist on response level, there can be no filters affecting the table, and the table must not have a personalized filter applied. If the report is personalized, personalization must be turned off for the table to allow reporting on the respondent-level data.

1. Create an aggregated table.
2. Open the Properties page for the aggregated table and select **Use Respondent Data**.

Reporting for this table will now be based on the contents of the respondent table and the system variables in response\_control. The following system variables can now be used in the table:

- o **Created Date** - the dates and times when the respondents were "created" in the survey's respondent list.
- o **Interview Start** - the date and time the respondent first accessed the interview.
- o **Interview End** - the date and time the interview was completed.
- o **Interview Status** - this includes "not answered" in addition to the other statuses.
- o **Extended Status** - CATI only, can be used in hit lists and tables as other variables.
- o **Last Touched** - the dates and times when the respondents last accessed the survey.
- o **Dropout question** - if applicable, this registers the question at which the respondent exited the survey (see The Dropout Question Variable on page 683 for more information).
- o **Emails Sent** - noOfEmailsSent - the number of emails that have been sent.
- o **Mailing Status** - from the email delivery report.
- o **Mailing Status Date** - a date/time stamp for the last SmtpStatus value. This allows you to link the last mailing status value with the date/time it was returned. This variable can be used as a filter.

In addition, you can drag into the table coded questions from the questionnaire that are defined as background variables.

#### 8.7.1.5. Rounding of Values in Expressions

This setting controls whether or not the data cell values used in calculations in expressions for conditional formatting and formulas are rounded. The options in the drop-down list are:

- **Default** - for conditional formatting, rounded data cell values will be used in calculations. For formulas, exact data cell values will be used in calculations.
- **Rounded** - rounded data cell values will be used in calculations, both for conditional formatting and formulas.
- **Exact** - exact data cell values will be used in calculations, both for conditional formatting and formulas.

### 8.7.1.6. Statistics Base

Some questions in the survey may not be answered by some respondents. This may be because the question has been set up as “not required” and the respondent has moved to the next page without having provided an answer, perhaps the respondent did not answer the entire questionnaire (incomplete or screened), or the questionnaire could have been set up with skip patterns so that certain respondents did not see all the questions. By default the percentages are calculated using the **Exclude not answered** setting, thereby basing the results only on those respondents who have answered the question. However, if you wish to include in the base the respondents who have not answered the question, set this to **Include not answered**.

This setting is usually used in combination with including “Not answered” on the header variable(s) (see [Include Not Answered](#) on page 205 for more information).

### 8.7.1.7. Row Nesting

When you have several elements in the Rows dimension of a table (either because you stack or nest several variables in rows or because you have a multi-level variable such as a grid question in Rows), you can choose how you want the titles and subtitles to appear.

- The titles and subtitles can be displayed as separate lines, as shown in the table below. For this layout, set Row Nesting to **Separate Lines**.

	q3 - Gender		
q21_3 - Ford			
q21_7 - VW			
	Male	Female	Total
<b>18 to 30</b>			
Ford	4.8	4.7	4.7
VW	3.9	3.7	3.8
<b>31 to 50</b>			
Ford	4.1	4.1	4.1
VW	4.8	3.9	4.5
<b>51 to 67</b>			
Ford	4.0	4.6	4.3
VW	5.2	4.2	4.8
<b>68 or older</b>			
Ford	3.9	4.8	4.4
VW	4.5	3.5	3.9
<b>Total</b>			
Ford	4.2	4.6	4.4
VW	4.6	3.8	4.2

Figure 201 Row nesting: "Separate lines"

- The titles and subtitles can be displayed beside each other, as shown in the table below. For this layout, set Row Nesting to **Beside each other**. Note that the two tables use the same row, column and data dimension variables.

	q3 - Gender				
q21_3 - Ford					
q21_7 - VW					
q4 - Age			Male	Female	Total
18 to 30	Ford	4.8	4.7	4.7	
	VW	3.9	3.7	3.8	
31 to 50	Ford	4.1	4.1	4.1	
	VW	4.8	3.9	4.5	
51 to 67	Ford	4.0	4.6	4.3	
	VW	5.2	4.2	4.8	
68 or older	Ford	3.9	4.8	4.4	
	VW	4.5	3.5	3.9	
Total	Ford	4.2	4.6	4.4	
	VW	4.6	3.8	4.2	

Figure 202 Row nesting: "Beside each other"

#### 8.7.1.8. Data Dimension Target

This property setting applies only when you have more than one item in the "Data" dimension of the table (i.e. more than one element dragged into the cell in the upper-left corner of the table designer). When you have more than one item in the Data dimension (see The Data Dimension on page 156 for more information), the values for those variables will be nested with their accompanying titles. The **Data Dimension Target** property specifies whether those values are to be nested under the columns or the rows.

When you set **Data Dimension Target** to **Left**, the values will be nested under the variables in rows.

	<b>q3 - Gender</b>				
<b>q21_3 - Ford</b>					
<b>q21_7 - VW</b>					
			<b>Male</b>	<b>Female</b>	<b>Total</b>
<b>q4 - Age</b>	<b>18 to 30</b>	<b>Ford</b>	4.8	4.7	4.7
		<b>VW</b>	3.9	3.7	3.8
	<b>31 to 50</b>	<b>Ford</b>	4.1	4.1	4.1
		<b>VW</b>	4.8	3.9	4.5
	<b>51 to 67</b>	<b>Ford</b>	4.0	4.6	4.3
		<b>VW</b>	5.2	4.2	4.8
	<b>68 or older</b>	<b>Ford</b>	3.9	4.8	4.4
		<b>VW</b>	4.5	3.5	3.9
	<b>Total</b>	<b>Ford</b>	4.2	4.6	4.4
		<b>VW</b>	4.6	3.8	4.2

*Figure 203 Data Dimension Target set to Left*

When you set Data Dimension Target to Top, the values will be nested under the variables in columns.

	<b>q3 - Gender</b>						
<b>q21_3 - Ford</b>							
<b>q21_7 - VW</b>							
		<b>Male</b>	<b>Female</b>	<b>Total</b>			
<b>q4 - Age</b>	<b>18 to 30</b>	<b>Ford</b>	<b>VW</b>	<b>Ford</b>	<b>VW</b>	<b>Ford</b>	
		4.8	3.9	4.7	3.7	4.7	3.8
	<b>31 to 50</b>	4.1	4.8	4.1	3.9	4.1	4.5
		4.0	5.2	4.6	4.2	4.3	4.8
	<b>51 to 67</b>	3.9	4.5	4.8	3.5	4.4	3.9
		4.2	4.6	4.6	3.8	4.4	4.2
	<b>68 or older</b>	4.2	4.6	4.6	3.8	4.4	3.9
		4.6	4.6	4.6	3.8	4.4	4.2
	<b>Total</b>	4.2	4.6	4.6	3.8	4.4	4.2

*Figure 204 Data Dimension Target set to Top*

### 8.7.1.9. Filters

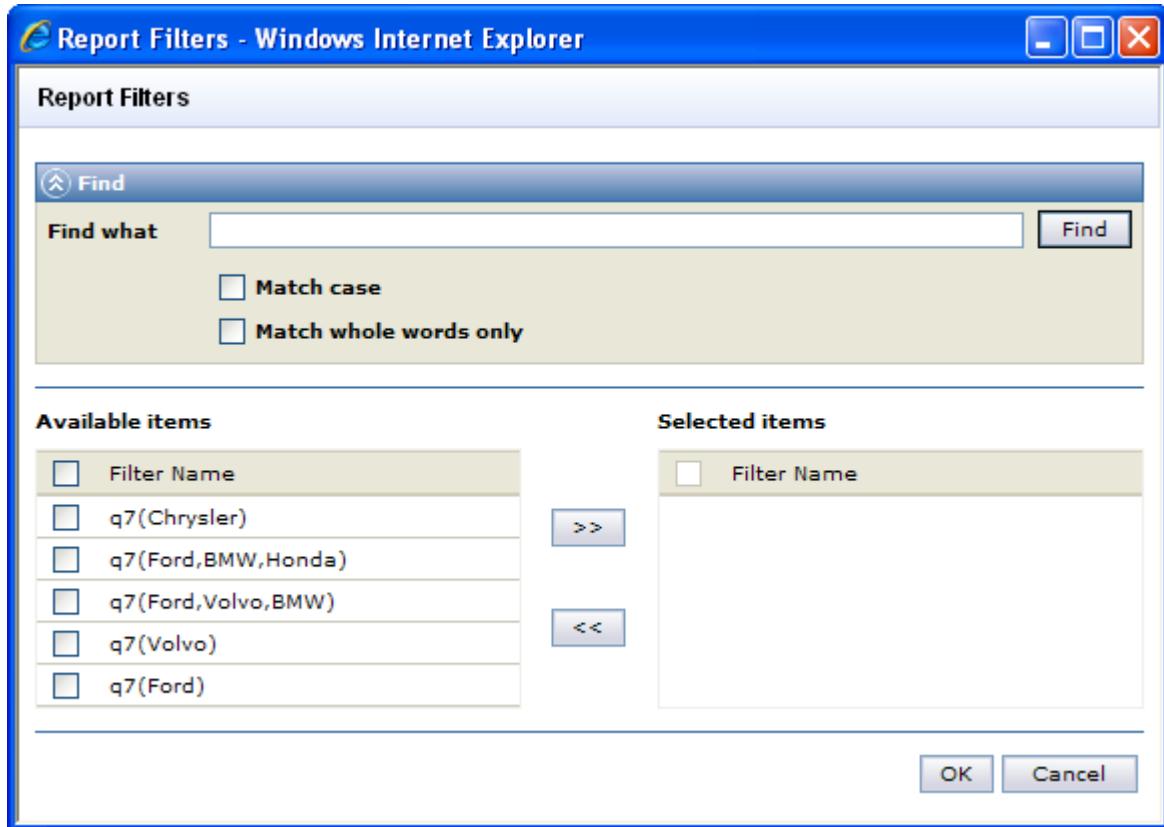
You can select a filter to apply for the entire aggregated table. Available filters are those listed in the filter toolbox (see Filter Designer on page 513 for more information).

Any filters applied to a table will be listed in the Filters row at the bottom of the table and in the Fixed Filters row in the table information area below the table. Filters that are inherited by the table from higher up in the report, for example from the page or from the report itself, will be specified as such in the Filters row. In the event the list of filters is too long to be displayed in its entirety, place the mouse pointer over the list to display it in full.

To add a filter to the table using the table properties sheet:

1. Double-click on the table to open the table Properties sheet.
2. On the General tab, click the **ellipses** button (...) beside the Filters property.

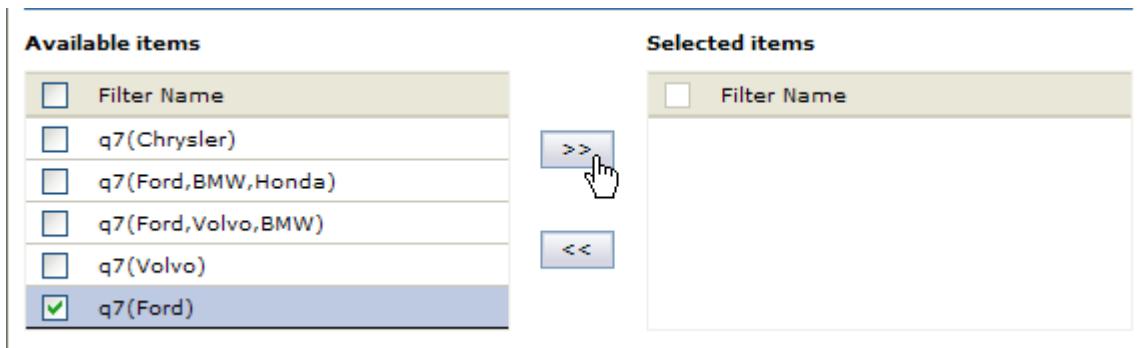
The Report Filters window opens. All the filters that are available to the report are listed in the Available Items column. Any filters that are already applied to the table are listed in the Selected items column.



*Figure 205 The Report Filters dialog*

3. Select a filter in the Available Items column and click the >> button to move it to the Selected Items column.

In the event you have a large number of filters available, you can search for the required filter using the functionality in the Find area.



*Figure 206 Selecting a filter*

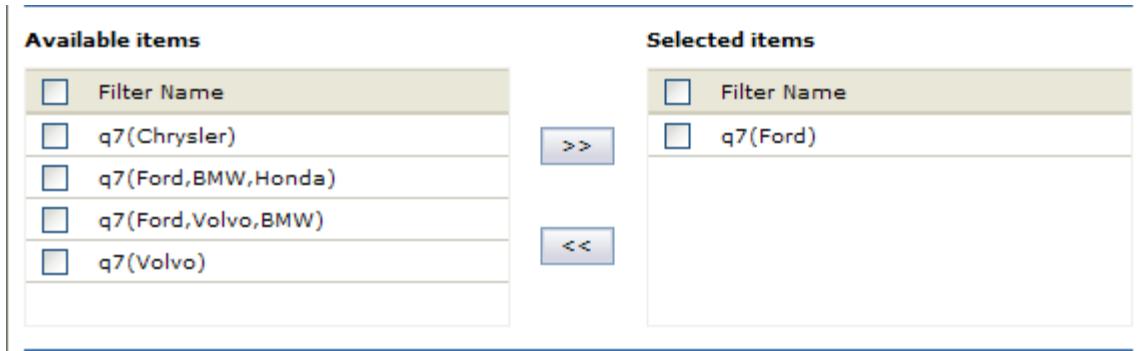


Figure 207 The selected filter

4. Click **OK** to close the window, then click **Apply** or **Apply and Close** in the properties page to apply the filter to the table.

The selected filter(s) are listed in the **Fixed Filters** field and the **Drop filters or answers here** row below the table .

	<b>68 or older</b>	1	2	3
	<b>Total</b>	7	6	13
Generated: 27/11/2009 10:51:52				
Weight model: None				
Fixed filters: <b>q7(Ford)</b>				
Significance testing: None				
<b>q7(Ford)</b>				

Figure 208 The filter listed in the Fixed Filters field

Note: You can also drag filters and questions directly from the Filters toolbox and drop them into the Fixed Filters field or the Drop filters... row (see Adding a Filter to the Table on page 155 for more information).

#### 8.7.1.10. Filters to Exclude

You can disable inherited filters. Click the ... button to open the Report Filters page, which lists all inherited filters, and select the inherited filters you want to exclude. On completion, save the changes.

#### 8.7.1.11. Personalized Filter Status

This option defines whether and how the Personalized filter affects the table. You can switch the personalized filter on and off. If you select "Default" on Report Page or Report Folder level, it will inherit the setting from the level above (a component belongs to a page, a page belongs to a folder, which may belong to a report, or may be nested inside one or more folders which themselves belong to a report).

#### 8.7.1.12. Save as Style

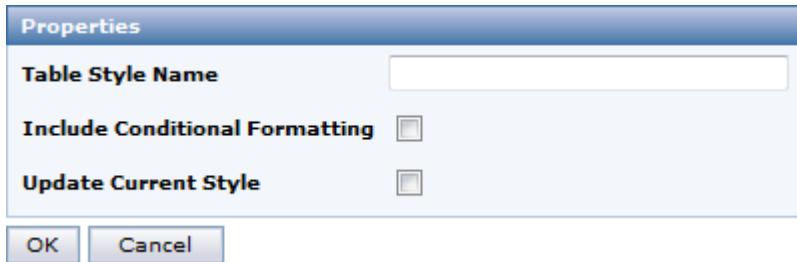
The properties available in the Table Property Sheet are the same as those in the "Aggregated Table Style", which is accessed through the Layout and Styles toolbox.

You can apply local modifications to the current style. Any changes you make to the property sheet of one table will apply only to that table, whereas any changes you make to the style will affect all tables using that style.

You may have several aggregated table styles to choose from, depending on the template your report is based on. You can also create your own styles. To save a table as a style:

1. Click **Save as Style** in the Table Designer toolbar.

The Table Style Properties dialog opens.



*Figure 209 The Table Style Properties dialog*

2. To save the style as a new style, type a name for the style into the field.
3. If you have applied conditional formatting to the table and you wish to include that formatting in the new style, check the **Include Conditional Formatting** box.

**Note:** This box only appears if conditional formatting has been applied to the table.

4. To update the current style, check the **Update Current Style** box.
5. Click **OK** to complete the procedure or **Cancel** to close the dialog and return to the Table Designer page.

**Note:** You must be in the Table Designer for the Save as Style button to be available.

You can override local property changes set on the table by reverting the table to the style settings. To do this:

- Right-click on the table in the Report toolbox and select **Revert Aggregated Table to Style**.

**Note:** The Style drop-down list in the General Tab allows selecting an available table style and applying it on the Table.

#### **8.7.1.13. Render Content as HTML**

When this option is checked, then the special characters (for example, currency signs or copyright symbol) in the table content will be rendered as HTML (for example, '&euro' will be rendered as '€'). This affects only view and preview; it does not affect exports.

#### **8.7.1.14. Dataset ID**

You may wish to display several versions of the same table on a page, using different rows or columns for each table. You can use this layout for example to show the top 10 answers in one table and the bottom 10 in another. To improve performance on the page, you can assign the same Dataset ID to both these tables. This will avoid Reportal having to calculate the results more than once, thus making the page load faster. This feature should be used with caution however, as it will give errors if the tables are not identical except for the content filtering. If you leave the Dataset ID empty (default), the table calculations will be performed as normal.

#### **8.7.1.15. Weight Model**

Weight models must be defined in Confirmit Authoring before they can be applied to elements in the report. The drop-down in this property contains a list of the weight models defined for the survey on which this report is based. Select the required weight model from the list and save the change to apply the model to the table.

Refer to the Weighting section in the Confirmit Authoring User Guide for further information on creating weight models.

Note that questions that reside within loops cannot be used in weight models.

**Note:** Only Single variables with Normal answer lists can be used for the Sampling and Cell Matching weight models. If the user changes the type of a variable or answer list that has been used in one of these weight models to one that is not supported, then this variable will be removed from the weight model when the weight model task is run.

Weight models can be used in multi-project data sources.

#### 8.7.1.16. Aggregation Level

Specify an explicit hierarchy level for table calculation.

#### 8.7.1.17. Include Records without Children

When reporting on one-to-many relations (e.g. survey loops, or a Confirmit Hub containing a contact database with multiple survey records per contact), there may arise instances where some records at the parent level have no associated child data (e.g. no loop records, or a record in the contact database with no associated surveys). As an example, calculations of the average of count (number of loop records) will then differ depending on whether or not such records are included. By default, records without associated data on the lower level will not be included in the calculations. The inclusion of such records will lead to reduced performance and is therefore not recommended if the total number of records is high.

#### 8.7.1.18. Object URL

This property only appears for an object in a report page that is specified as being a Public report (see Report Properties on page 109 for more information).

The Object URL property allows specified objects (tables, charts and gauges) to be viewed individually via a direct URL, without having to open the report. This allows the possibility to embed a table, chart or gauge in other web pages, for example web portals or intranets.

Once a report has been published as Public, then this property becomes visible in the property sheets of the table, chart and gauge objects in that report. Go to the property sheet of a particular object and select the Object URL property to display a further field containing a URL to the object.

Copy the URL displayed in the field, and paste it into the desired web page. The object will then be visible in that web page.

#### 8.7.1.19. Name

You can set up several aggregated tables in a report page. If you have more than one table on a report page, you may wish to assign names to the different tables in the Report toolbox to simplify identification for when you wish to perform a process such as building a chart based on one of the tables. The name you assign in the **Name** field will be used in the tree in the Report toolbox.

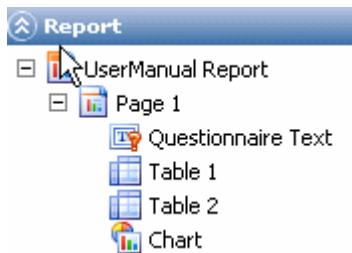


Figure 210 Aggregated tables with names "Table 1" and "Table 2"

#### 8.7.1.20. Hidden

A chart is always based on an Aggregated Table. However in some cases you may not want to show the table itself in the report. Check the **Hidden** box to hide the Aggregated Table in the report page.

## 8.7.2. The Distributions Tab

The Distributions tab contains a number of properties that enable you to define the type of numerical presentation used in the table. You can select any combination of counts (the actual number of responses), horizontal and/or vertical percentages, and an additional selectable value. Percentage values can be presented with or without the % character. Each table cell is divided into one, two or four fields depending on the number of data items selected, with one field allocated to each item.

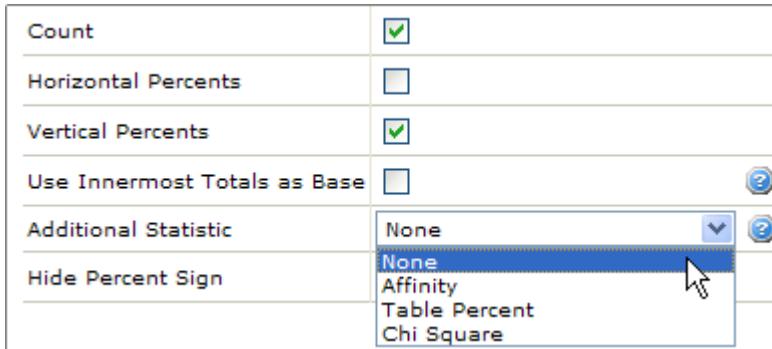


Figure 211 The Distributions tab properties

- **Use Innermost Totals as Base** - the default behavior for calculating percentages is based on the overall total for the table. Check this option to obtain percentages calculated for the sub-totals of the nested questions in the specific columns or rows.
- **Additional Statistic** - select from the drop-down list an additional statistic to be displayed in the lower-right field of each row/column cell - field D in the illustration below. The data selected for display in this cell can be used in a chart as the Distribution (see Distribution on page 274 for more information). Note that the position of the field in the cell will depend on which other data items are selected. The options are:
  - **None** - the field is empty.
  - **Affinity** - affinity index statistic is displayed.
  - **Table Percent** - the field displays the percentage value of the count in each cell against the total count for the entire table.
  - **Chi Square** - shows the Chi Square cell value for a table cell (see The Chi-Square Significance Statistic on page 740 for more information).

**Note:** To assist the viewer, the distribution statistics displayed in the table can be listed in the meta data below the table. The text lists the data displayed in the grid cells in "top-left > top-right > bottom-left > bottom-right" order. To display this text, go to the Meta Data tab and select Distribution (see The Meta Data Tab on page 182 for more information).

The figure below shows an example of a table where counts (A), horizontal percents (B) and vertical percents (C) are selected. "None" is selected for the Additional Statistic cell D. The vertical percents are set up so that they will be easy to compare by browsing vertically through the table and the horizontal percents so that they will be easy to compare by browsing horizontally through the table. The count is placed in the upper left corner of each data point.

	gender - Gender	Male	24.4%	Female	
age - Age	18 - 30	10	24.4%	5	12.2
	31 - 40	10	24.4%	10	24.4
	41 - 50	9	22.0%	11	26.8

Figure 212 Example of a table showing counts, horizontal and vertical percents

- If you wish to display the percentage values without the percent character (%), check the **Hide Percent Sign** box.

### 8.7.3. The Number Formatting Tab

Here you can specify how the numbers in the table are to be displayed. You can increase the number of decimal places displayed to reduce the effects of rounding and thereby increase the accuracy of the displayed data. The tab contains two pages:

#### General page:

- Format** - specifies the format for the numbers displayed in the table.
  - Default** - the numbers are displayed without any formatting.
  - Currency** - if you wish to display the numbers as a currency, select this option then specify the desired currency symbol.
  - Time Span** - the numbers in the table will represent units of time. You can then also specify what the unit is to be and how the numbers are to be interpreted; Days, hours, minutes, seconds or milliseconds. The numbers will always be displayed in the format HH:MM:SS,M.
- Use 1000 separator** - check to show the designated 1000 separator when appropriate in the table. The separator used will be that defined by your computer's national settings. Default is Unchecked (do not use separator).

#### Decimals page:

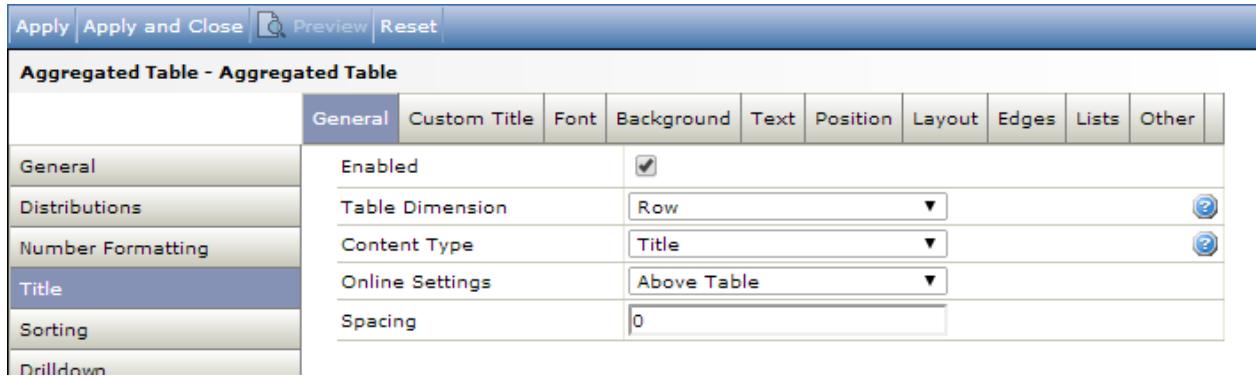
These fields allow you to define different decimal place values for distributions (e.g. count and percent), the Totals rows and columns, and numeric statistics (e.g. average). For each cell type, specify the number of decimal places you want to display after the point. Enter a whole, positive numeric value (integers greater than or equal to 0) in the fields. Note that you can also adjust the number of decimal places presented by clicking the Increase and Decrease Decimals buttons in the table toolbar (see The Table Toolbar on page 158 for more information).

For the Decimals settings, the following rules apply:

- The "statistics" setting has a higher priority than "totals".
- If either of the "totals" or "statistics" settings are not set, then the "distributions" setting will be used by default.
- Any local "decimal" setting in a table header overrides the table settings.

### 8.7.4. The Title Tab

The Title tab contains the properties relating to the table title - check the Enabled box to show the properties. These properties allow your report to have titles in different languages assigned to the aggregated tables. These titles can be fetched automatically from the text or title of the first question on the row, column or data dimension of the aggregated table.



**Figure 213 The Title tab properties**

The figure below shows an example where the question text of the Favorite question is included as the title of the table. To achieve this, check the Enabled box to open the remaining properties, then set Table Dimension to Row and Content Type to Text.

Other alternatives for the Table Dimension are "Column" or "Data". In the example, Column will give the Gender question text.

	q3 - Gender   q4 - Age							
q7 - Favorite	Of the cars you have test-driven, which car did you like the most?							
	Gender			Age				
	Male	Female	Total	18 to 30	31 to 50	51 to 67	68 or older	
	6	4	10	5	2	3	0	
Ford		60%	40%	100%	50%	20%	30%	0%
Chrysler		6	3	9	1	2	3	3
67%		33%	100%	11%	22%	33%	33%	

**Figure 214 Table with Title**

The title may be used both in the online and in the PowerPoint versions of the report, but you can also hide it from either of these versions. If you decide to include a title in the online version of the report, it will be displayed in a cell just above the table. In PowerPoint, you can choose between using the table name as the title of the slide, or have it displayed just above the table.

You can also include the table title on the chart. To do this:

1. Open the Chart Designer for the chart.
2. Open the Properties page.
3. On the **General** tab, check the **Show table title** box.

### 8.7.5. The Sorting Tab

The properties on the Sorting tab enable you to sort the information in the table by both the rows and columns, and you can choose to sort either by a header variable on the opposite dimension, or by a particular column/row, identified by code or by the row/column's position in the table counting from the start or the end. The figure below shows the **Rows** properties on the **Sorting** tab. The **Columns** properties are identical.

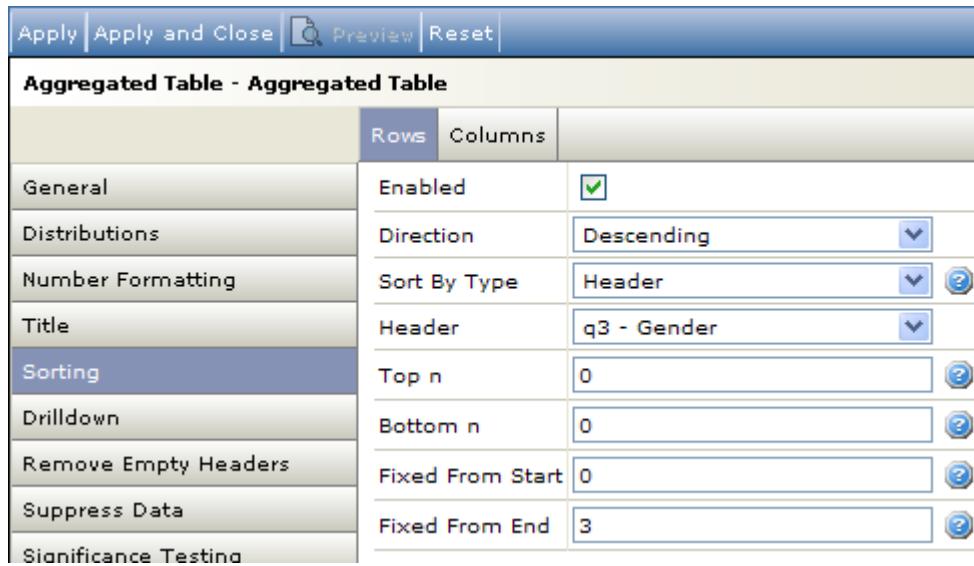


Figure 215 The Sorting tab – Rows properties

In the example below, the rows are sorted in ascending order, based on the total score. The last three elements ("Other", "No Particular Favorite" and Total) are not included in the sorting.

		q3 - Gender					
q7 - Favorite		Male		Female		Total	
	<b>BMW</b>	4	5.5%	6	8.2%	<b>10</b>	<b>6.8%</b>
	<b>Ford</b>	7	9.6%	6	8.2%	<b>13</b>	<b>8.9%</b>
	<b>Chrysler</b>	5	6.8%	9	12.3%	<b>14</b>	<b>9.6%</b>
	<b>Honda</b>	9	12.3%	6	8.2%	<b>15</b>	<b>10.3%</b>
	<b>Volvo</b>	8	11.0%	8	11.0%	<b>16</b>	<b>11.0%</b>
	<b>Toyota</b>	15	20.5%	7	9.6%	<b>22</b>	<b>15.1%</b>
	<b>^f('q5_98_other')^</b>	9	12.3%	9	12.3%	<b>18</b>	<b>12.3%</b>
	<b>I have no favorite.</b>	16	21.9%	22	30.1%	<b>38</b>	<b>26.00%</b>
<b>Total</b>		<b>73</b>	<b>100.0%</b>	<b>73</b>	<b>100.0%</b>	<b>146</b>	<b>100.0%</b>

Generated: 30/11/2009 11:07:46  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

Figure 216 Sorting Example

In the Sorting tab, the properties are as follows:

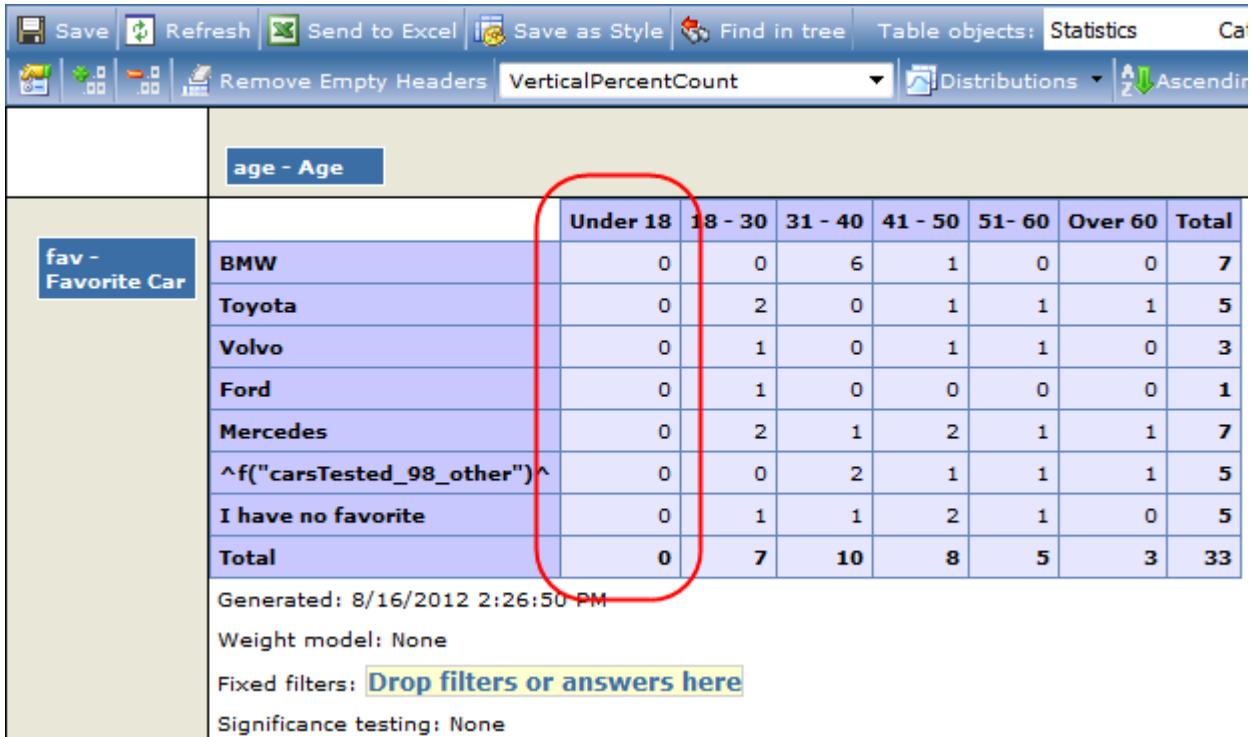
- Check the **Enabled** box for the Rows and/or Columns pages as required to enable the sorting functionality.
- **Direction** – the direction of the sorting. Descending puts the largest value at the top of the list, Ascending puts the lowest value at the top of the list.
- **Sort By Type** – specify the content you wish to sort by. The options are;
  - **Header** allows you to specify a "Header" variable from the headers on the other table dimension. Select the variable in the "Header" drop down, and then the sorting will be done based on the results on the cross with that header variable.
  - You can also sort by a specific **Code** in the answer list of the item(s) on the other table dimension. The codes are shown in tool tips as you move the mouse pointer over the headers in the table preview.
  - **Position** allows you to define which column or row the table is to be sorted by, counting "From Start" or "From End" of the table.
- **Top / Bottom n** – type in a number to display only the specified number of items with the highest or lowest scores. If both of these are set to 0, all items will be displayed.
- **Fixed from start / end** – defines a number of elements, from the start or the end, that are not to be included in the sorting, but remain in their positions at the start/end of the row/column. In the example in the "Sorting tab - Rows properties" figure above, the Fixed From End property was set to 3 for Rows to fix the "Other", "I have no favorite" and "Total" rows at the bottom of the list.

### 8.7.6. The Drilldown Tab

These settings allow the viewers to dynamically drill down on elements in rows and/or columns of a table, or in the chart based on the table (see Drill-down on page 435 for more information).

## 8.7.7. The Remove Empty Headers Tab

The Remove Empty Headers functionality enables you to automatically hide (mask) all rows and/or columns that contain no data. As soon as data is received for the row or column, it will be displayed. In the example in the figure below, "Favorite" is crossed with "Age", and screening leaves the "Under 18" column with no responses.



		age - Age						
fav - Favorite Car		Under 18	18 - 30	31 - 40	41 - 50	51 - 60	Over 60	Total
	BMW	0	0	6	1	0	0	7
	Toyota	0	2	0	1	1	1	5
	Volvo	0	1	0	1	1	0	3
	Ford	0	1	0	0	0	0	1
	Mercedes	0	2	1	2	1	1	7
	^f("carsTested_98_other")^	0	0	2	1	1	1	5
	I have no favorite	0	1	1	2	1	0	5
	Total	0	7	10	8	5	3	33

Generated: 8/16/2012 2:26:50 PM  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

Figure 217 The Under 18 column has no data

Go to the Remove Empty Headers tab and check the appropriate box(es) to apply the functionality. In this case, check the **Remove empty headers** box for Columns to mask the Under 18 column. This results in the table shown in the figure below.

**Note:** You can also click in the table's data area and click the Remove Empty Headers button in the table toolbar to hide or show empty rows or columns (see The Table Toolbar on page 158 for more information).

The screenshot shows a report interface with a toolbar at the top containing Save, Refresh, Send to Excel, Save as Style, Find in tree, Table objects, Statistics, Remove Empty Headers, VerticalPercentCount, Distributions, and a dropdown menu.

The main area displays a table titled "age - Age". The columns are labeled "18 - 30", "31 - 40", "41 - 50", "51- 60", "Over 60", and "Total". The rows represent different car brands and a category for those who have no favorite car. The data is as follows:

	18 - 30	31 - 40	41 - 50	51- 60	Over 60	Total
<b>BMW</b>	0	6	1	0	0	<b>7</b>
<b>Toyota</b>	2	0	1	1	1	<b>5</b>
<b>Volvo</b>	1	0	1	1	0	<b>3</b>
<b>Ford</b>	1	0	0	0	0	<b>1</b>
<b>Mercedes</b>	2	1	2	1	1	<b>7</b>
<b>^f("carsTested_98_other")^</b>	0	2	1	1	1	<b>5</b>
<b>I have no favorite</b>	1	1	2	1	0	<b>5</b>
<b>Total</b>	<b>7</b>	<b>10</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>33</b>

Below the table, there are several status messages: Generated: 8/16/2012 2:25:45 PM, Weight model: None, Fixed filters: Drop filters or answers here, and Significance testing: None.

Figure 218 The empty column is removed

### 8.7.8. The Suppress Data Tab

The Suppress Data tab enables you to hide results when those results are based on a very low number of responses. This could be because the questions may be of a sensitive nature and it would be too easy to identify the respondents, or because the low number of responses would give unreliable results.

The dialog box contains the following properties:

- Base Less Than: Set to 5.
- Small base values (Extended engine): Hide.
- Statistic (Extended engine): Percentage.
- Always Suppress: Checked.
- Distribution Measure: Innermost Row.
- Individual cells (Extended engine): Show as is.

Figure 219 The properties in the Suppress Data tab

The properties are as follows:

- **Base Less Than** - set a minimum value for the number of responses here. If the value is not met then the remaining properties are activated. A value of 0 deactivates the functionality.

Note that the Base Less Than value is compared to the total number of responses regardless of their scores and not to the Count statistics that takes scores associated with responses into account.

- **Small base values** - select how cells containing base values less than the minimum are displayed. The options are:
  - o **Show as is** - if the minimum limit is not met, the value is displayed anyway.
  - o **Hide** - if the minimum limit is not met, the value is hidden.

- o **Show "< limit" marker** - if the minimum limit is not met, "< limit" is displayed to indicate as such.
  - **Statistic** - choose which values are to be compared with base to suppress values.
  - o **Count** - suppression is based on a direct comparison between the input value and the number of respondents. Note that for single questions and grids this will be the number of responses for which a score is defined in the answer list /scale. Therefore, if there is for example a "Don't know" item in the answer list, which will not normally be assigned in the scale, the count will not include these responses.
  - o **Percentage** - column percentage is used if Measure is on columns, row percentage if Measure is on rows.
  - **Always Suppress** - check the box to activate the suppression functionality. Distribution Measure is then displayed.
  - **Distribution Measure** - is the question you are reporting on for which you want to hide the results if the base is too low. Select whether this is placed in the columns (default) or rows. If elements are nested, it will be the innermost question that is the measure.
  - **Individual cells** - allows individual table cells to be suppressed regardless of base.
  - o **Show as is** - if the minimum limit is not met, the value is displayed anyway.
  - o **Hide** - if the minimum limit is not met, the value is hidden.
  - o **Show "< limit" marker** - if the minimum limit is not met, "< limit" is displayed to indicate as such.
- If option other than "Show as is" is selected, then two additional options become available:
- o **If value of** - defines statistic to be used.
  - o **Less than** - defines the limit (individual cell limit is independent from base limit).

**Note: Suppression can also be used with segments and other single-cell headers.**

### 8.7.8.1. Suppressing Data

For many companies it is important to be able to hide results when those results are based on a very low number of responses. This could be because the questions may be of a sensitive nature and it would be too easy to identify the respondents, or because the low number of responses would give unreliable results.

Report can automatically hide results when those results are based on less than a preset number of respondents. Proceed as follows:

1. Go to the Suppress Data tab.
2. Type the required limit into the **Base Less Than** field.
3. Check the **Always Suppress** box and specify the **Distribution Measure**, or you can activate the suppression through the base object (see Base on page 228 for more information).

The "Distribution Measure" is the question you are reporting on, for which you wish to hide the results if the base is too low. Select whether this is placed in the columns (default) or rows. If elements are nested, only the innermost question will be measured.

The table below displays the results of Favorite Car crossed with Age, using counts. Here a minimum limit of 35 respondents per age group is specified, so the column with only 34 results has been suppressed. The "measure" (the question being reported on here) is the Favorite question, which has been set up in rows. Therefore the "Distribution Measure" is set up as "Innermost Row."

		q4 - Age				
q7 - Favorite		18 to 30	31 to 50	51 to 67	68 or older	Total
	Ford	3	5		3	13
	Chrysler	4	5		1	14
	Volvo	0	8		5	16
	BMW	2	3		3	10
	Honda	4	3		2	15
	Toyota	6	6		8	22
	^f('q5_98_other')^	9	1		2	18
	I have no favorite.	11	6		12	38
Total		39	37	34	36	146

Generated: 30/11/2009 11:32:59  
Weight model: None

*Figure 220 Suppress content, distribution measure "innermost row"*

The table below shows the same table where a minimum limit of 15 respondents testing a car is specified. Distribution Measure is therefore the Innermost Column and the limit is set to 15.

		q4 - Age				
q7 - Favorite		18 to 30	31 to 50	51 to 67	68 or older	Total
	Ford					13
	Chrysler					14
	Volvo	0	8	3	5	16
	BMW					10
	Honda	4	3	6	2	15
	Toyota	6	6	2	8	22
	^f('q5_98_other')^	9	1	6	2	18
	I have no favorite.	11	6	9	12	38
Total		39	37	34	36	146

Generated: 30/11/2009 11:35:44  
Weight model: None

*Figure 221 Suppress content, distribution measure "innermost column"*

Innermost is chosen because there may be a nesting outside the measure variable. For example if Gender is nested above the Age question in the previous example, the result would be as shown in the figure below.

	Male					Female					Total				
	18 to 30	31 to 50	51 to 67	68 or older	Total	18 to 30	31 to 50	51 to 67	68 or older	Total	18 to 30	31 to 50	51 to 67	68 or older	Total
Ford															13
Chrysler															14
Volvo															16
BMW															10
Honda															15
Toyota															22
<code>^f('q5_98_other')</code>															18
I have no favorite.	5	3	4	4	16	6	3	5	8	22	11	6	9	12	38
Total	19	22	17	15	73	20	15	17	21	73	39	37	34	36	146

Figure 222 Suppress content, distribution measure “innermost column” with nesting

## 8.7.9. The Significance Testing Tab

Significance Testing checks the statistical significance between the results in the columns in the aggregated table when they have independent samples (for example if crossing with single questions in the column dimension). Significance Testing will be conducted on both proportion and means, and can also be applied to weighted tables.

Statistical Significance means that the differences found in the sample(s) may be assumed to exist in the population(s) from which the probability samples are drawn. Statistical significance has nothing to do with “importance”, as the term “significance” is used in normal language. The statistically significant differences are not more important than other differences. The larger the statistical significance, the greater is the probability that these differences are representative of the total population.

Reportal provides the following methods of significance testing:

- T-Test \ T-test (unweighted base)
- Chi Square
- Z-Test \ Z-test (unweighted base)

In the Significance Testing tab, click the down-arrow to open the list of test methods available and select the method to be used.

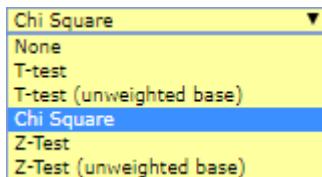


Figure 223 Selecting the type of significance testing to be used

The formulae used for significance testing are described in Appendix A: Significance Testing.

### 8.7.9.1. T-Test and Z-Test Significance Testing

Confirmit supports T-Test and Z-Test significance testing both with weighted and unweighted base.

When conducting Significance Testing, you can define up to two confidence levels. The higher the confidence levels, the more certain you can be that there really is a difference in the two groups being tested. For example, 90% confidence means that there is a 10% chance that a difference in scores could have been found purely through the effects of sampling.

Note that the second confidence level should be set lower than the first if the second level is to be identifiable in the table.

Type	T-test
Confidence Level	95%
Second Confidence Level	None
Apply Choi-Stablein test	<input type="checkbox"/>
Significant Cell Color	<input type="color"/>
Symbol placement	Before cell content

**Figure 224 Settings for Significance Testing**

Reportal represents statistical significance by indicating the columns in which the corresponding cells are located, on the same row, where the difference is statistically significant. The columns are represented with letters that are included in the column headers. Significant cells will be displayed with upper case letters if the base is greater than or equal to 30. For base numbers less than 30, lowercase letters will be displayed. You can also specify a background color that will be used on these cells and choose whether the letters are placed before or after the cell value.

In case the two groups being tested have overlapping samples, you can select to apply Choi-Stablein test for the Proportional T-test calculation. Note that when this option is checked, overlapping samples will be excluded from the Mean T-test calculation (see The T-Test Significance Statistic on page 735 for more information).

Significant cells for the second confidence level will be marked in parentheses if the cell is not already significant for the first level.

If you select "Significance test columns" in "Meta data" (this setting is default), text is included below the table explaining which columns have been tested and the confidence levels.

		q3 - Gender   q4 - Age								
q7 - Favorite		Male	Female	Total	18 to 30	31 to 50	51 to 67	68 or older	Total	
		A	B	C	D	E	F			
	Ford	7	6	13	3	5	2	3	13	
	Chrysler	5	9	14	4	F5	4	1	14	
	Volvo	8	8	16	0	C8	C3	C5	16	
	BMW	4	6	10	2	3	2	3	10	
	Honda	9	6	15	4	3	6	2	15	
	Toyota	B15	7	22	6	6	2	E8	22	
	^f('q5_98_other')^	9	9	18	DF9	1	D6	2	18	
	I have no favorite.	16	22	38	11	6	9	D12	38	
	Total	73	73	146	39	37	34	36	146	

Generated: 30/11/2009 11:59:45  
Weight model: None  
Fixed filters: [Drop filters or answers here](#)  
Significance testing: Columns tested (90% confidence level) - A/B - C/D/E/F. Significance on cells with base under 30 shown with lowercase.

**Figure 225 Table with significance testing**

The formulae used are described in Appendix A: Significance Testing.

### 8.7.9.2. Chi Square Significance Testing

With the Chi Square significance test, users can set a color for positive and negative probabilities, position of the letters (before or after the cell value) and set probability intervals for indicating up to five different levels of significance (represented by + or - in the table cells depending on a positive or negative probability).

Type	Chi Square	
Positive Color	#E68383	
Negative Color	#2C3FA1	
Probability Level1 (*)	0.9	
Probability Level2 (**)	0.95	
Probability Level3 (****)	0.99	
Probability Level4 (*****)	0.995	
Probability Level5 (******)	0.999	
Symbol placement	Before cell content	

**Figure 226 The properties when Chi Square significance testing is selected**

Probability Level1 (\*) - Probability Level5 (\*\*\*\*\*\*) are thresholds for displaying '-' and '+' in the table. You do not need to provide values for all the levels, but if you provide any levels the values must be in ascending order and in consecutive levels from level 1.

The formulae used are described in Appendix A: Significance Testing.

**Note:** If you select the Significance Test Columns option in the Meta Data tab (see The Meta Data Tab on page 182 for more information), text is included below the table explaining which columns have been tested and the confidence level.

### 8.7.10. The Indicate Personal Answers Tab

If the report viewers (those who are assigned rights to see the report) are also respondents to the survey, and each viewer is uniquely identified by the value stored on a single question in the survey, you can use the "Indicate Personal Answers" functionality to highlight each viewer's responses in the aggregated tables to that viewer. This allows a viewer to compare for example their answer for a question against the average answer in the company (see Indicating Personal Answers on page 510 for more information).

### 8.7.11. The Meta Data Tab

This tab enables you to select the various items of information you may wish to include below the table in the report pages. Check the boxes for those items you wish to include, then **Apply** and **Save**.

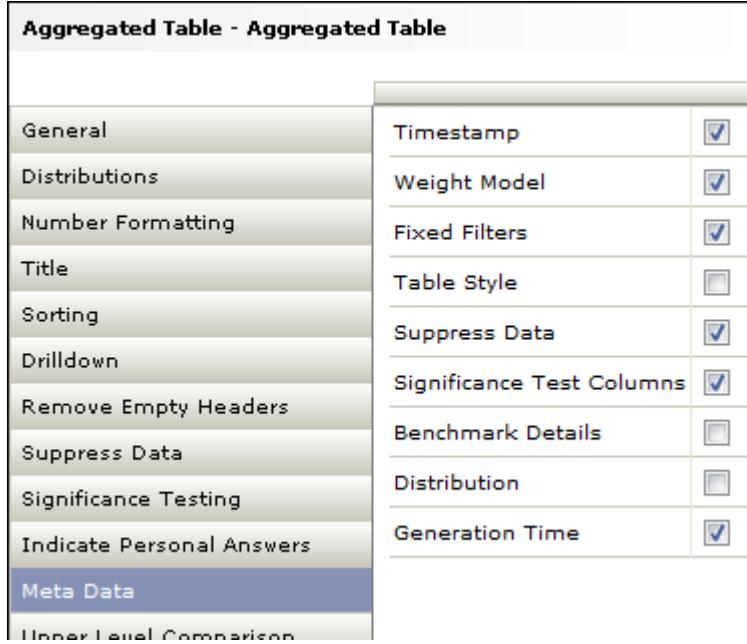


Figure 227 The Meta Data tab

- **Generation Time** - adds a row to the table metadata detailing how long the system took to generate the table the last time it was generated.
- **Distribution** - displays a text below the table grid, describing which distributions are displayed in the table cells (see The Distributions Tab on page 171 for more information). Similarly, if you select the Significance Test Columns option, text is included below the table explaining which columns have been tested and the confidence level (see Chi Square Significance Testing on page 181 for more information).

	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #d9e1f2;">Toyota</td><td style="background-color: #d9e1f2;">(+15)</td><td style="background-color: #ffcc99;">(-)7</td><td style="background-color: #d9e1f2;">22</td><td style="background-color: #d9e1f2;">6</td><td style="background-color: #d9e1f2;">6</td><td style="background-color: #ffcc99;">(-)2</td><td style="background-color: #ffcc99;"></td></tr> <tr> <td style="background-color: #d9e1f2;">^f('q5_98_other')^</td><td style="background-color: #d9e1f2;">9</td><td style="background-color: #d9e1f2;">9</td><td style="background-color: #d9e1f2;">18</td><td style="background-color: #d9e1f2;">(++)9</td><td style="background-color: #ffcc99;">(--1)</td><td style="background-color: #d9e1f2;">6</td><td style="background-color: #ffcc99;"></td></tr> <tr> <td style="background-color: #d9e1f2;">I have no favorite.</td><td style="background-color: #d9e1f2;">16</td><td style="background-color: #d9e1f2;">22</td><td style="background-color: #d9e1f2;">38</td><td style="background-color: #d9e1f2;">11</td><td style="background-color: #d9e1f2;">6</td><td style="background-color: #d9e1f2;">9</td><td style="background-color: #ffcc99;"></td></tr> <tr> <td style="background-color: #d9e1f2;">Total</td><td style="background-color: #d9e1f2;">73</td><td style="background-color: #d9e1f2;">73</td><td style="background-color: #d9e1f2;">(+++++)146</td><td style="background-color: #d9e1f2;">39</td><td style="background-color: #d9e1f2;">37</td><td style="background-color: #d9e1f2;">34</td><td style="background-color: #ffcc99;"></td></tr> </table> <p>Generated: 30/11/2009 12:42:47  Weight model: None  Fixed filters: <a href="#">Drop filters or answers here</a>  Significance testing: Chi Square, confidence levels: 0.9/0.95/0.99/0.995/0.999  Distribution: Count</p>	Toyota	(+15)	(-)7	22	6	6	(-)2		^f('q5_98_other')^	9	9	18	(++)9	(--1)	6		I have no favorite.	16	22	38	11	6	9		Total	73	73	(+++++)146	39	37	34	
Toyota	(+15)	(-)7	22	6	6	(-)2																											
^f('q5_98_other')^	9	9	18	(++)9	(--1)	6																											
I have no favorite.	16	22	38	11	6	9																											
Total	73	73	(+++++)146	39	37	34																											

Figure 228 Example of the meta data texts, including Significance testing and Distribution, below the table grid

### 8.7.12. The Upper Level Comparison Tab

The Upper Level Comparison tab (see Upper Level Comparison on page 503 for more information) contains settings to define what unit's results should appear when the "Upper level comparison" setting is applied to the categories or statistics object inside the table. This can be used when a hierarchy question is selected as "Personalized filter question" on the table.

**Note:** When the base question is used in the table, the base filter is not applied but figures in each cell are taken from the corresponding "upper" category.

### 8.7.13. The HTML Styles Tab

This tab allows you to specify HTML styles separately for each part of the table.

Table Title	<input type="button" value="▼"/>
Table	<input type="button" value="▼"/>
Row	<input type="button" value="▼"/>
Default Cell	<input type="button" value="▼"/>
Row Headers	<input type="button" value="▼"/>
Column Headers	<input type="button" value="▼"/>
Data Cell	<input type="button" value="▼"/>
Total Header Cell	<input type="button" value="▼"/>
Total Data Cell	<input type="button" value="▼"/>
Header Lines	<input type="button" value="▼"/>
Nets Headers Cell	<input type="button" value="▼"/>
Nets Data Cell	<input type="button" value="▼"/>

*Figure 229 The various table properties that can be allocated HTML styles in the HTML Styles tab*

Each item in the tab can be allocated a particular pre-defined HTML style. All the HTML styles available in the **Styles > HTML** toolbox are listed in the drop-downs beside the data fields - click the down-arrow beside the appropriate field and select the desired HTML style from the list. New HTML styles can be created as required (see The HTML Styles on page 708 for more information).

The Nets Headers Cell and Nets Data Cell items relate to the Display Original Categories header variable property (see Display Original Categories on page 204 for more information).

### 8.7.14. Layout Settings

The table is divided into sections, and the table designer gives you full control of the layout of the different sections. The properties for each section are accessed via separate tabs in the left column of the table property sheet, named as appropriate. The property page accessed from each section tab holds a row of tabs which group the properties for that section logically. The properties in the group tabs for each section are identical.

- **Table Layout** has the settings that will be applied to the entire table, unless other settings are made for specific areas using the other tabs below this one.
- **Row Layout** has settings that apply to all the rows in the table, unless other settings are made for specific cells using the tabs below this one.
- **Default Cell Layout** has the settings that will be applied as default to all the cells in the table, unless other settings are made for header, data and total cells.
- **Header Cell Layout** has the settings that will be applied to all header cells except the total cell. Settings made here will override any applied by the Row Layout and Default Cell Layout properties.
- **Data Cell Layout** has the settings that will be applied to all data cells except the total data cells. Settings made here will override any applied by the Row Layout and Default Cell Layout properties.
- **Total Header Cell Layout** has settings for the Total column and row headers. Settings made here will override any applied by the Row Layout and Default Cell Layout properties.
- **Total Data Cell Layout** has settings for the data cells in the total row and column. Settings made here will override any applied by the Row Layout and Default Cell Layout properties.

- **Header Lines Layout** has settings for the lines in the headers of the row elements when “Row nesting” is set to “Separate Lines” (see Row Nesting on page 164 for more information).

The formatting for all of these is achieved by setting HTML style properties (CSS).

**Note:** A property that is set in a ...Cell Layout tab overrides the same property that is set in the Row Layout tab, and a property that is set in the Row Layout tab overrides the same property that is set in the Table Layout tab.

#### 8.7.14.1. Properties in the Font Tab

These properties specify the font used in the table, row or cell. Note that additional properties are available in the Text tab.

Font	Background	Text	Position	Layout	Edges	Lists	Other	
Color								
Family								
Italic	Not Set							
Small caps	Not Set							
Bold	Not Set							
Size								
No decoration								
Underline								
Strikethrough								
Overline								

Figure 230 The properties available on the Font tab

- **Color** - sets the color of the text used in the table/row/cell.
- **Family** - specifies the font family to be used for the text in the table/row/cell.
- **Italic** - specifies whether italic text is to be used table/row/cell. The options are:
  - **Not Set** - makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Normal** - prevents the table/row/cell from using italic text.
  - **Italic** - restricts the table/row/cell to using italic text only.
- **Small caps** - specifies whether small capital text is to be used table/row/cell. The options are:
  - **Not Set** - makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Normal** - prevents the table/row/cell from using small capital text.
  - **Italic** - restricts the table/row/cell to using small capital text only.
- **Bold** - specifies whether bold text is to be used table/row/cell. The options are:
  - **Not Set** - makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Normal** - prevents the table/row/cell from using bold text.
  - **Italic** - restricts the table/row/cell to using bold text only.

- **Size** - sets the font size to be used. Specify the unit to be used, for example "em" or "%". Note that for accessible surveys, the font size will scale best if specified in 'em' or '%'. Avoid using 'px' or 'pt' as those values will not scale properly.
- **No decoration** - check the box to prevent the use of all forms of "text decoration" in the table/row/cell, for example underline or strikethrough.
- **Underline** - check to use underlined text in the table/row/cell.
- **Strikethrough** - check to use ~~strikethrough~~ text in the table/row/cell.
- **Overline** - check to use overlined text in the table/row/cell.

#### **8.7.14.2. Properties in the Background Tab**

The properties on this tab set the background area details for the selected object.

Font	Background	Text	Position	Layout	Edges	Lists	Other
	Color						
	Image URL						
	Background position						
	Background repeat	Not Set					
	Background attachment	Not Set					

**Figure 231 The properties available on the Background tab**

- **Color** - specifies the color of the background.
- **Image URL** - if a background image is to be used, type the URL to the image here.
- **Background position** - specifies the "start" position of the background image.
- **Background repeat** - specifies if and how the background image is to be repeated if the image is smaller than the area it is applied to. The options are:
  - **Not set** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **NoRepeat** - the image is only shown once in the object.
  - **Repeat** - the image repeats in both directions.
  - **RepeatX** - the image only repeats in the X (vertical) direction.
  - **RepeatY** - the image only repeats in the Y (horizontal) direction.
  - **Inherit** - the image inherits the Repeat property from the stylesheet.
- **Background attachment** - specifies how the background image is to be attached to the area. The options are:
  - **Not set** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Fixed** - the image is fixed within the viewing area.
  - **Scroll** - the image moves with the object as the respondent scrolls the questionnaire page.
  - **Inherit** - the image inherits the Attachment property from the stylesheet.

**Note:** When using background images, be very careful that colors or details in the image do not make the data difficult to read.

### 8.7.14.3. Properties in the Text Tab

The properties on this tab set the details for text in the selected object. Note that these properties are in addition to the Font properties.

Font	Background	Text	Position	Layout	Edges	Lists	Other	
Letter spacing								
Text indent								
Word spacing								
Line height								
Text transform	Not Set							
White space	Not Set							
Vertical alignment	Not Set							
Horizontal alignment	Not Set							

Figure 232 The properties available on the Text tab

- **Letter spacing** - specify the spacing between the letters, in pixels, for the object.
- **Text indent** - specify, in pixels, the indent to be used for the first line of text in the object.
- **Word spacing** - specify the spacing between the words, in pixels, for the object.
- **Line Height** - specify the spacing between the text baselines. The line height is calculated by multiplying the element's font size by the given value. Percentage values are relative to the element's font size. Negative values are not permitted.
- **Text transform** - specify how the text in the object is to be rendered. The options are:
  - **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **None** - the text is not transformed.
  - **Capitalize** - makes the first letter of every word upper-case.
  - **Lowercase** - makes all the letters lower case.
  - **Uppercase** - makes all the letters upper case.
- **White space** - defines how lines of text are to be wrapped within the object. The options are:
  - **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Normal** - white space is ignored by the browser.
  - **NoWrap** - line breaks are suppressed. The content does not wrap to the next line.
  - **Pre** - white space is preserved by the browser.
- **Vertical alignment** - specifies how the text is to be positioned vertically within the object. The options are:
  - **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Auto** - aligns the contents of an object according to the value of the -ms-layout-flow attribute (an Internet Explorer property).
  - **Baseline** - aligns the baseline of the element with the baseline of the parent element.
  - **Bottom** - the bottom of the element is aligned with the lowest element on the line.
  - **Middle** - the element is placed in the middle of the parent element.

- **Subscript** - aligns the element as if it was subscript.
- **Superscript** - aligns the element as it was superscript.
- **Text Bottom** - the bottom of the element is aligned with the bottom of the parent element's font.
- **Text Top** - the top of the element is aligned with the top of the parent element's font.
- **Top** - the top of the element is aligned with the top of the tallest element on the line.
- **Inherit** - specifies that the value of the vertical-align property is to be inherited from the parent element.
- **Horizontal alignment** - specify how the text is to be positioned, horizontally, within the object. The options are:
  - **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Left** - places the text at the left end of the line (see the note below).
  - **Centered** - places the text at the center of the line.
  - **Right** - places the text at the right end of the line (see the note below).
  - **Justified** - within reason, this setting spreads the text across the width of the line. If the text requires considerably less space than is available, left alignment will be used by default.

**Note:** The Horizontal Alignment property contains two options that are dependant on the type of language in use. Left (right in RTL) and Right (left in RTL) will automatically place the text at the opposite end of the line in the event a right-to-left language is in use.

#### 8.7.14.4. Properties in the Position Tab

The properties on this tab set the position details for the text in the selected object.

Font	Background	Text	Position	Layout	Edges	Lists	Other											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Width</td> <td style="width: 85%;"><input type="text"/></td> </tr> <tr> <td>Height</td> <td><input type="text"/></td> </tr> <tr> <td>Min Width</td> <td><input type="text"/></td> </tr> <tr> <td>Min Height</td> <td><input type="text"/></td> </tr> <tr> <td>Type</td> <td style="background-color: #668dca; color: white; padding: 2px;">Not Set</td> </tr> </table>									Width	<input type="text"/>	Height	<input type="text"/>	Min Width	<input type="text"/>	Min Height	<input type="text"/>	Type	Not Set
Width	<input type="text"/>																	
Height	<input type="text"/>																	
Min Width	<input type="text"/>																	
Min Height	<input type="text"/>																	
Type	Not Set																	

Figure 233 The properties available on the Position tab

- **Width** - sets the width of an element.
- **Height** - sets the height of an element.
- **Min Width** - ensures a consistent width setting in different browsers and versions of browsers for surveys, portals and reports that have width settings specified in their styles.
- **Min Height** - ensures a consistent height setting in different browsers and versions of browsers for surveys, portals and reports that have height settings specified in their styles.
- **Type** - places an element in a Static, Relative or Absolute position. When Relative or Absolute is selected, five additional properties become available.
  - **Not Set** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - **Static** - an element with this position type always has the position defined by the normal flow of the page. A Static element ignores any top, bottom, left or right declarations.

- o **Relative** - this position type moves an element relative to its normal position. Additional properties that then become available are: Top, Left, Bottom, Right and z-Index. For example, "Left:20" adds 20 pixels to the element's "Left" position. The z-Index property specifies the stack order of the element; an element with greater stack order is always in front of an element with a lower stack order.
- o **Absolute** - the element is positioned at the specified coordinates relative to its containing block. The element's position is then specified with the Top, Left, Bottom, Right and z-Index properties. The z-Index property specifies the stack order of the element; an element with greater stack order is always in front of an element with a lower stack order.

#### **8.7.14.5. Properties in the Layout Tab**

The properties on this tab set the layout for the selected object.

Font	Background	Text	Position	Layout	Edges	Lists	Other
		Visibility	Not Set	<input checked="" type="checkbox"/>			
		Display	Not Set	<input checked="" type="checkbox"/>			
		Float	Not Set	<input checked="" type="checkbox"/>			
		Clear	Not Set	<input checked="" type="checkbox"/>			
		Overflow	Not Set	<input checked="" type="checkbox"/>			
		Page break before	Not Set	<input checked="" type="checkbox"/>			
		Page break after	Not Set	<input checked="" type="checkbox"/>			

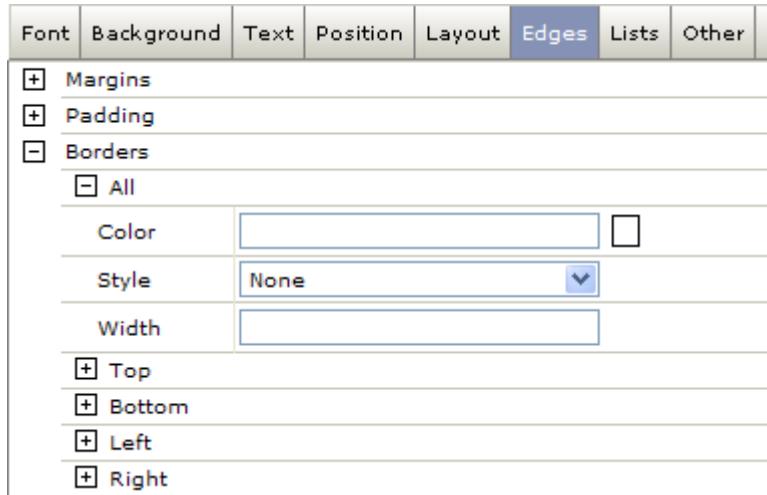
*Figure 234 The properties available on the Layout tab*

- **Visibility** - this property specifies whether or not the content of the object is to be displayed. The options are:
  - o **NotSet**- (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **Visible** - the object content is visible.
  - o **Hidden** - the object content is hidden.
- **Display** - specifies how the object is displayed. The options are:
  - o **NotSet**- (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **Inline** - the object is rendered as an inline element.
  - o **Block** - the object is rendered as a block element.
  - o **None** - the object is not rendered.
- **Float** - sets where an image or text is to appear within another element.
  - o **NotSet**- (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **None** - (Default) the image or text will be displayed where it occurs in the HTML code.
  - o **Left** - the image or text moves to the left in the parent element.
  - o **Right** - the image or text moves to the right in the parent element.
- **Clear** - image and text elements that appear within another element are called floating elements. The Clear property sets the sides of an element where other floating elements are not allowed.
  - o **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **Both** - no floating elements are allowed on either the left or right sides.
  - o **Left** - no floating elements are allowed on the left side.

- o **Right** - no floating elements are allowed on the right side.
- o **None** - allows floating elements on both sides.
- **Overflow** - specifies how the content of the object is to be managed when the content exceeds the height or width of the object. The options are:
  - o **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **Auto** - the content is clipped and scroll bars added only when necessary.
  - o **Scroll** - the content is clipped and scroll bars are added even if the content does not exceed the dimensions of the object.
  - o **Visible** - the content is not clipped and scrollbars are not added.
  - o **Hidden** - content that exceeds the dimensions of the object is not shown.
- **Page break before** - if you wish to specify whether or not the object to which this style is applied is to have a page-break before, select the appropriate item from the drop-down list. The options are:
  - o **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **Always** - always inserts a page break before the object.
  - o **Auto** - neither forces nor forbids a page break before the object.
  - o **Avoid** - does not allow a page break before the object.
  - o **Left** - always inserts a page break before the object if the object will otherwise be on a "left" page. I.e. this forces the object to be on a "right" page.
  - o **Right** - always inserts a page break before the object if the object will otherwise be on a "right" page. I.e. this forces the object to be on a "left" page.
- **Page break after** - if you wish to specify whether or not the object to which this style is applied is to have a page-break after, select the appropriate item from the drop-down list.
  - o **NotSet** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.
  - o **Always** - always inserts a page break after the object.
  - o **Auto** - neither forces nor forbids a page after before the object.
  - o **Avoid** - does not allow a page break after the object.
  - o **Left** - always inserts a page break after the object if the object is on a "left" page.
  - o **Right** - always inserts a page break after the object if the object is on a "right" page.

#### **8.7.14.6. Properties in the Edges Tab**

The properties on this tab set the details for the table, row or cell edges.



**Figure 235** The properties available on the Edges tab

- **Margins** - an object can have margins around it (outside the object) to provide space between adjacent objects. Click the + icon to open the property so you can access the margin setting fields, then type values, in pixels, into the appropriate fields.
- **Padding** - an object can have padding around its edges (inside the object) to provide space between the object's borders and its contents. Click the + icon to open the property so you can access the padding setting fields, then type values, in pixels, into the appropriate fields.
- **Borders** - you can set borders on an object. For each border (top, bottom, left and right) you can set the color, style and width of the line to be used. Note that you can set each individually, or if all are to be identical you can set all simultaneously.
  - **Color** - if the Border Width property is set to a value greater than 0, then the resulting border line will have the color specified here.
  - **Style** - use the Line Style property to specify the type of line you wish to use for the border; solid, dotted etc.
  - **Width** - The Border Width property sets the thickness of the border line, in pixels. If you do not want the border line to be displayed, set the width to 0 or leave it blank.

#### 8.7.14.7. Properties in the Lists Tab

The properties on this tab set the details for how list item markers are to be displayed in the selected object.



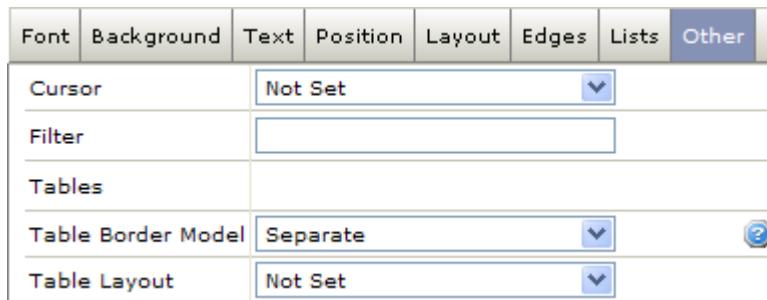
**Figure 236** The properties available on the Lists tab

- **Image URL** - if a list-item marker is to be used for the object, type the URL to the image that is to be used as the marker.
- **Position** - specifies how the list-item marker image is to be positioned relative to the object's content. The options are:
  - **Not Set** - (default) makes no specific setting at this level. This allows the next level up to specify the setting.

- **Inside** - the list-item marker image is positioned inside the object and any wrapping text is aligned under the marker.
- **Outside** - (Default) the list-item marker image is placed outside the text, and any wrapping text is not aligned under the marker.
- **Type** - specifies the type of the line-item marker to be used for the object. Various types are available. Default is Not Set, meaning that no specific setting is made at this level. This allows the next level up to specify the setting.

#### **8.7.14.8. Properties in the Other Tab**

The properties on this tab allow you to set additional details for the object for which the style is used.



*Figure 237 The properties available on the Other tab*

- **Cursor** - specifies the form of cursor that is to be displayed as the mouse pointer moves over the object.
- **Filter** - used to create a gradient color "shading" on the background where the html style is used. Type the following code into this field:

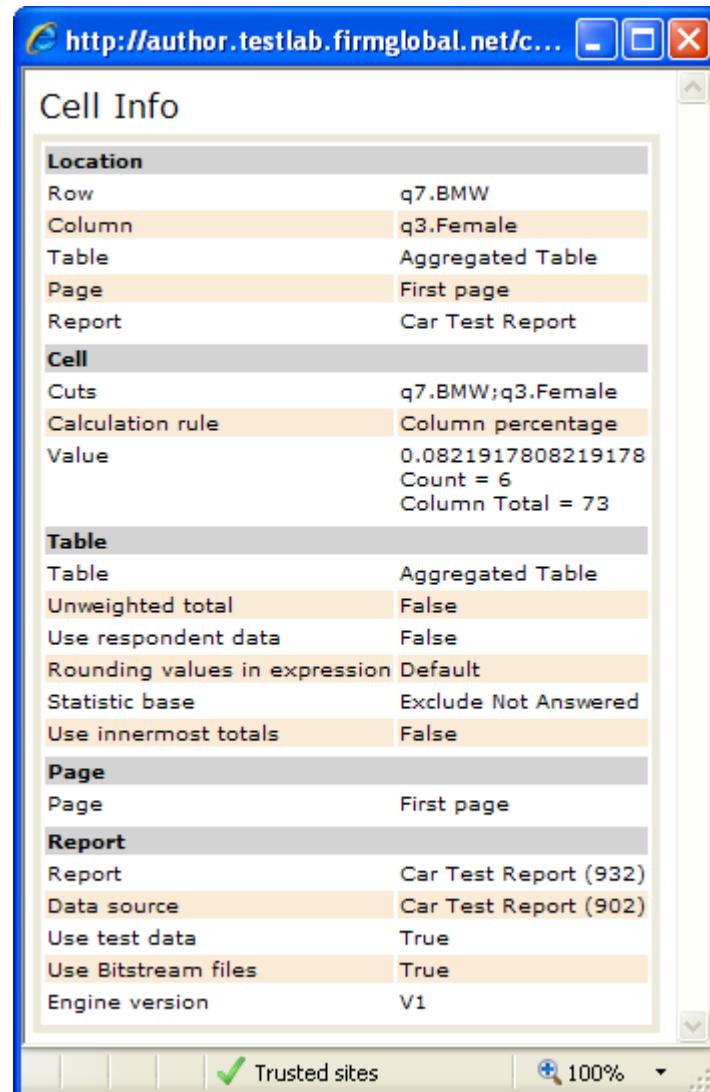
```
filter:Progid:DXImageTransform.Microsoft.Gradient(endColorstr='#BDBABD',
startColorstr='#9C969C', gradientType='0'
```

and change the color codes to those you wish to use.

- **Tables Border Model** - controls the space between adjacent cell borders, so the table borders can be collapsed into a single border or detached as in standard HTML.
  - **Not Set**- no specification is made.
  - **Collapse** - borders are collapsed into a single border when possible.
  - **Separate** - (default) some space is added between adjacent cell borders.
- **Table Layout** - specifies whether the table layout is fixed or automatic. The options are:
  - **NotSet**- (default) no specification is made.
  - **Auto** - the column width is set by the widest unbreakable content in the column cells.
  - **Fixed** - table and column widths are set either by the sum of the widths on the column objects, or if these are not specified, by the width of the first row of cells. If no width is specified for the table, it renders by default with width = 100%.

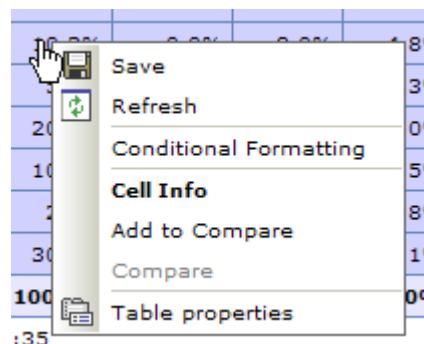
#### **8.7.15. The Cell Information Window**

Click on a data cell in the aggregated table to open a Cell Information window. This window displays information related to cell location, calculation rule, values used during the evaluation (in some cases) and report/page/table options that affect the final value displayed .



**Figure 238 Example of the Cell Information window for cell "BMW-Female" in the table above**

Right-click on a data cell in the aggregated table to open a context menu. This menu allows quick access to some of the most commonly used functionality for the data cells.



**Figure 239 The context menu for a cell in an aggregated table**

The menu commands are:

- **Save** - saves any changes to the table.
- **Refresh** - updates the table to include any changes but does not save those changes.
- **Conditional Formatting** - opens the conditional formatting functionality.
- **Cell Info** - opens the Cell Information window - see above.
- **Add to Compare** - holds the current cell information ready to compare it with another cell's information (see How to Compare Two Cells on page 194 for more information).
- **Compare** - [only available if another cell has previously been "Added" - see above] compares the current cell information with the cell information previously added. Common properties are displayed, with any differences highlighted in red (see How to Compare Two Cells on page 194 for more information).
- **Table properties** - opens the table's Properties page (see The Table Property Sheet on page 161 for more information).

**Note: Only two cells can be compared against each other at one time. Comparisons are only possible between tables within the same report - you cannot compare tables in two different reports.**

### 8.7.15.1. How to Compare Two Cells

Assume you have two tables which look identical but show slightly different results as shown below.

	BMW			Toyota			Volvo			Ford			Mercedes		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Non Technical Categories	3.3	3.0	3.2	2.8	3.0	2.9	2.7	3.1	3.0	2.6	3.1	2.8	2.8	2.8	2.8

	BMW			Toyota			Volvo			Ford			Mercedes		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Non Technical Categories	3.3	2.9	3.2	2.9	3.0	2.9	2.7	3.1	3.0	2.7	3.1	2.8	2.7	2.7	2.7

Figure 240 Two tables which look identical but show slightly different results

To discover what the differences between the two tables are by checking the cell and table properties could be quite time consuming.

The screenshot shows the 'Cell Info' dialog box open in a web browser window. The dialog box contains various settings for a specific cell, such as Location (Row: Non Technical Categories, Column: fav.Ford;gender.Female), Cell (Cuts: fav.Ford;gender.Female, Calculation rule: Categorization total (Avg. of Aggregates)), and Report (Report: Car 2009). A red arrow points from the 'Column' entry in the dialog to the 'Female' column in a table view on the right. The table view shows data for 'Ford' across categories Female, Total, Male, Female, and Total, with values 3.1, 3.0, 2.6, 3.1, and 2.8 respectively. The cell for 'Female' in the 'Ford' row is circled in red.

	Female	Total	Male	Female	Total
Ford	3.1	3.0	2.6	3.1	2.8

**Figure 241** Checking the cell properties for one of the cells in the table

You can however compare cells in the two tables, and the differences will be highlighted. To do this:

1. Go to the aggregated table that includes one of the cells that you wish to compare.
2. Right-click on the data cell to open the context menu and select **Add to Compare**.

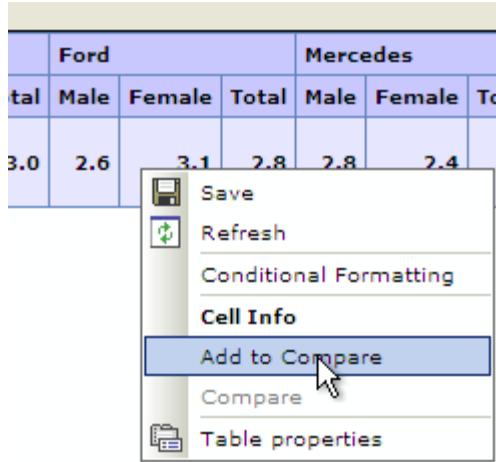


Figure 242 Selecting Add to Compare

The cell information is held in memory.

3. Go to the table containing the other cell that you wish to compare with the first.
4. Right-click on the data cell to open the context menu
5. Click **Compare**.

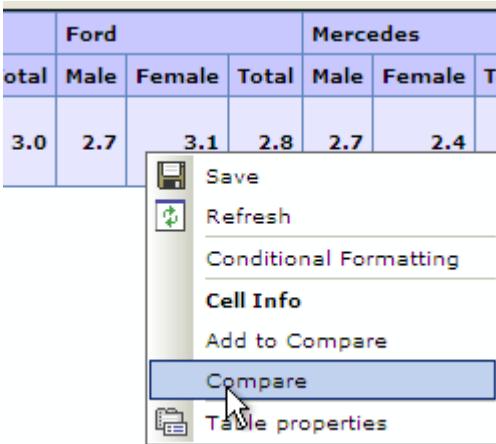


Figure 243 In the second table, selecting Compare

The Cell Information window opens with two columns of information.

Compare Cell Info		
<b>Location</b>		
Row	Non Technical Categories	Non Technical Categories
Column	fav.Ford;gender.Female	fav.Ford;gender.Female
Table	Aggregated Table	Aggregated Table
Page	Set by Age	Set by Age 2
Folders	Compare	Compare
Report	Car 2009	Car 2009
<b>Cell</b>		
Cuts	fav.Ford;gender.Female	fav.Ford;gender.Female
Calculation rule	Categorization total (Avg. of Aggregates)	avg
Value	3.12946428571429	3.09259259259259
<b>Table</b>		
Table	Aggregated Table	Aggregated Table
Unweighted total	False	False
Use respondent data	False	False
Rounding values in expression	Default	Default
Statistic base	Exclude Not Answered	Include Not Answered
Use innermost totals	False	False
<b>Page</b>		
Page	Set by Age	Set by Age 2
<b>Folders</b>		
Path	Compare	Compare
<b>Report</b>		
Report	Car 2009 (556)	Car 2009 (556)
Data source	Car 2009 (514)	Car 2009 (514)
Use test data	True	True
Use Bitstream files	True	True
Done		
<input checked="" type="checkbox"/> Trusted sites		
<span>100%</span>		

**Figure 244** The cell properties compared

Only properties that are common for both cells are displayed, with any differences highlighted in red for the second cell selected.

**Note:** Only two cells can be compared against each other at one time. Comparisons are only possible between tables within the same report - you cannot compare tables in two different reports.

## 8.8. The Header Variable Property Sheet

In addition to all of the properties you can apply to the table itself, there are also properties that you can apply to the header variables. The properties available for the variables will depend on the type of the variable.

To open the property sheet for a header variable, double-click on the header variable or right-click on it and select **Properties**.

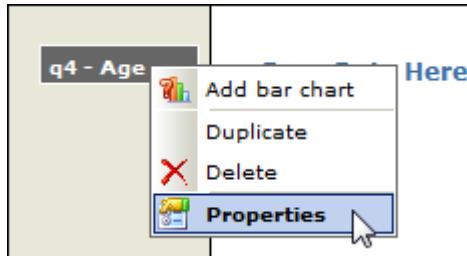


Figure 245 Opening header variable properties

You can select multiple header variables to edit their properties simultaneously. To do this, press and hold the **Ctrl** key on your keyboard while you select the required headers, then click the **Properties** button in the toolbar, or while continuing to hold the **Ctrl** key, right-click on the headers and select **Properties**. Note that only "common" properties that apply to all the selected headers will be available in the resulting properties sheet.

You can duplicate a header variable. To do this, right-click on the variable and select **Duplicate**. Note that if header variables are nested, you can duplicate the lowest variable (right-click on the appropriate lowest level item) or the entire nested set (right-click on the top item).

### 8.8.1. Use Default Settings

As part of the aggregated table style (see The Aggregated Table Styles on page 706 for more information), you can specify default header variable settings for all the different types of questions and variables that you can use in the aggregated tables. This means that you can save time when defining your tables, because the settings you normally apply have already been specified globally. You can override the settings locally for a particular variable by unchecking "Use Default Settings".



Figure 246 Use default settings

### 8.8.2. Filters

The Filters property in the Header Variables property sheet allows you to apply filters only to intersections containing this header variable. This can remove the need to create and nest a segment containing the filter condition.

### 8.8.3. Answer and Scale Masks

If you want to remove certain columns or rows from a table, you can apply an answer or scale mask. Scale masks are only available for grids.

To specify an answer mask, click the ... button beside the "Answer Mask" property in the property sheet for the variable you want to mask.

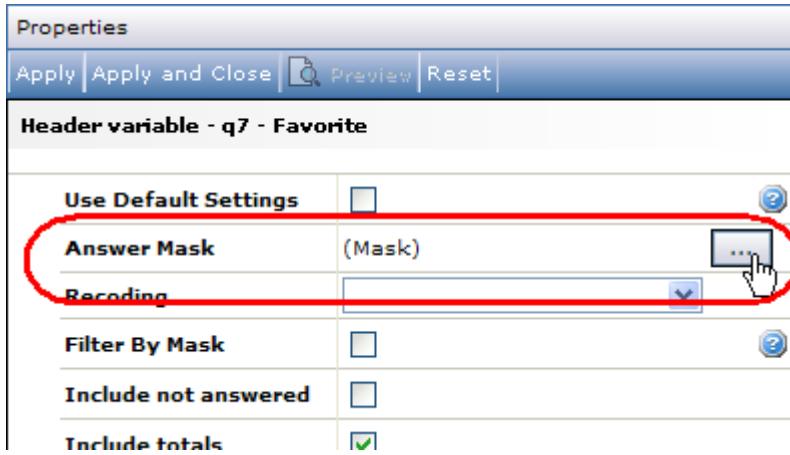


Figure 247 Setting the Answer Mask

A Select Answers window opens. Here you must find and select the answers you wish to mask. Above the "Selected items" list is a drop-down in which you specify whether the elements you select are to be **excluded** from the table or **included**. If you select "**Exclude in Table**", the elements you select will **not** be included in the table. The other elements in "Available items" will be included in the table.

If you wish to exclude a small proportion of the available elements, it would be quicker to select the elements that are to be excluded. However, if you wish to include only a small proportion of the elements, it would be quicker to select "**Include in Table**". The elements selected will then be displayed in the table, and all the other elements in "Available items" will **not** be displayed in the table.

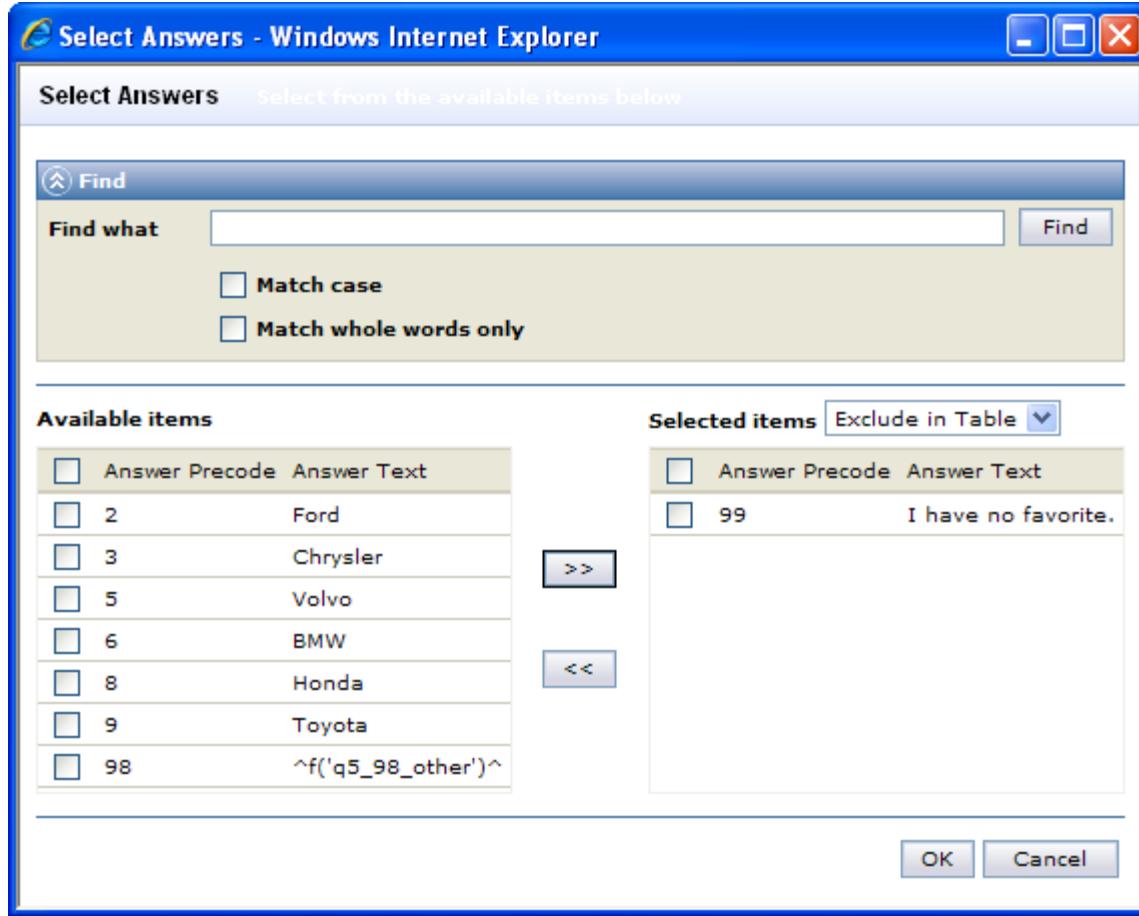


Figure 248 Selecting items to be masked

#### 8.8.4. Hierarchy Layout

The hierarchy layout property controls the layout of the hierarchy levels when added to a table, when the same variable is used as a personalized filter question. Note that this property is only available when these criteria are fulfilled. There are two options:

- **Flat** - first all items in the top level of the hierarchy are displayed, then all siblings of the next level of the hierarchy, repeated for each level.

	<b>Overall_sat</b> - What was your o...
<b>q1 - Hotel Location</b>	<b>What was y...</b>
<b>Overall Hotel Group</b>	
<b>London Region</b>	
<b>Northern Region</b>	
<b>Midlands Region</b>	
<b>Southern Region</b>	
<b>Scotland Region</b>	
<b>London</b>	
<b>Manchester</b>	
<b>Liverpool</b>	
<b>Newcastle</b>	
<b>Leeds</b>	
<b>Sheffield</b>	
<b>Birmingham</b>	
<b>Bristol</b>	
<b>Portsmouth</b>	
<b>Plymouth</b>	
<b>Edinburgh</b>	
<b>Glasgow</b>	

Figure 249 Example of a flat hierarchy layout

- **Nested** - The first item from the top level of the hierarchy is displayed, followed by all that item's children (with any sub-levels following the appropriate child), then the next item from the top level followed by its children with appropriate sub-levels, then the next item from the top level etc.

	<b>Overall_sat</b> - What was your o...
<b>q1 - Hotel Location</b>	<b>What was your overall satisfaction with the hotel?</b>
	<b>Overall Hotel Group</b>
	<b>Total</b>
	<b>London Region</b>
	<b>Total</b>
	<b>London</b>
	<b>Total</b>
	<b>Northern Region</b>
	<b>Total</b>
	<b>Manchester</b>
	<b>Liverpool</b>
	<b>Newcastle</b>
	<b>Leeds</b>
	<b>Sheffield</b>
	<b>Midlands Region</b>
	<b>Total</b>
	<b>Birmingham</b>
	<b>Total</b>
	<b>Southern Region</b>
	<b>Total</b>
	<b>Bristol</b>
	<b>Portsmouth</b>
	<b>Total</b>
	<b>Plymouth</b>
	<b>Scotland Region</b>
	<b>Total</b>
	<b>Edinburgh</b>
	<b>Glasgow</b>

*Figure 250 Example of a nested hierarchy layout*

You can set the default value for the hierarchy layout (nested or flat) in the default header settings for the table style (see Default Header Settings on page 707 for more information). Note that for new reports where the hierarchy header is also the assigned personalized question, the Hierarchy layout will be set to "Nested" as default.

### 8.8.5. Numeric Mask

This property provides a simple way of excluding from calculations values from numeric variables. Click the + icon beside the property to open the options fields.



Figure 251 The Numeric Mask property

The options are:

- **Show all** - default, no selections made.
- **Show specified range** - upper and lower limit check boxes become available, and if selected associated fields appear into which you type the required limiting values.
- **Show Specified Values** - a field appears into which you type the values that you want to show. Type multiple values separated by a comma.
- **Hide specified range** - upper and lower limit check boxes become available, and if selected associated fields appear into which you type the required limiting values.
- **Hide Specified Values** - a field appears into which you type the values that you want to hide. Type multiple values separated by a comma.

### 8.8.6. Recoding

If one or more recodings are set up in Reportal (see Recoding Variables on page 662 for more information) for a header variable, a drop-down will be available in its property sheet allowing you to select the desired recoding. If a recoding is saved as a reusable recoding (meaning it can be used across several questions), it can be applied to the categories object (see Categories and Statistics Objects on page 222 for more information).



Figure 252 Selecting recoding

The figure below shows an example where recodings are applied to a 5 point scale (1-3 unfavorable, 4-5 favorable):

Categories					
		Percent unfavorable	Percent favorable	Don't know	Total
q12 - Your position - Perform...	I enjoy my job	46.4%	39.4%	14.2%	100.0%
	I am always motivated	49.2%	31.0%	19.8%	100.0%
	I enjoy my working environment	49.0%	33.8%	17.2%	100.0%
	I am able to develop my personal skills	47.8%	35.0%	17.2%	100.0%
	I am able to influence my career path	50.2%	28.6%	21.2%	100.0%
	I am constantly challenged	52.0%	34.4%	13.6%	100.0%

Figure 253 Recoding applied to a table

When a recoding is selected, the Display Original Categories option becomes available - see the next topic.

### 8.8.7. Display Original Categories

When a recoding is selected for the header variable, the Display Original Categories option becomes available. Select this option to display the original data categories in addition to the recoded data, in both the table and associated chart. This functionality is known as Nets.

When the Display Original Categories option is selected, a further option becomes available - Recoded Category Position. This allows you to specify where the recoded category is to be located relative to the original "un-recoded" categories. The options are:

- After original group - the recoded data category is presented immediately after its set of "un-recoded" data categories.
- Before original group - the recoded data category is presented immediately before its set of "un-recoded" data categories.
- Together at end - the recoded data categories are presented together, after all the "un-recoded" data items.
- Together on start - the recoded data categories are presented together, before all the "un-recoded" data items.
- Top and bottom of categories - the recoded data categories are presented before and after all the "un-recoded" data items.

The HTML styles to be used for the Nets header and data cells can be specified (see The HTML Styles Tab on page 184 for more information).

### 8.8.8. Filter by Mask

When you apply a mask to a question, for example to exclude the "I have no favorite" row, you may also want to exclude these responses from the base calculations so that the percentages of the remaining items add up to 100%. Check the **Filter by mask** box to exclude the masked responses when calculating percentages . This functionality is particularly useful when you have several questions stacked in the same table.

	<b>18 to 30</b>		<b>31 to 50</b>		<b>51 to 67</b>		<b>68 or older</b>		<b>Total</b>	
<b>Ford</b>	3	7.7%	5	13.5%	2	5.9%	3	8.3%	<b>13</b>	<b>8.9%</b>
<b>Chrysler</b>	4	10.3%	5	13.5%	4	11.8%	1	2.8%	<b>14</b>	<b>9.6%</b>
<b>Volvo</b>	0	0.0%	8	21.6%	3	8.8%	5	13.9%	<b>16</b>	<b>11.0%</b>
<b>BMW</b>	2	5.1%	3	8.1%	2	5.9%	3	8.3%	<b>10</b>	<b>6.8%</b>
<b>Honda</b>	4	10.3%	3	8.1%	6	17.6%	2	5.6%	<b>15</b>	<b>10.3%</b>
<b>Toyota</b>	6	15.4%	6	16.2%	2	5.9%	8	22.2%	<b>22</b>	<b>15.1%</b>
<b>^f('q5_98_other')^</b>	9	23.1%	1	2.7%	6	17.6%	2	5.6%	<b>18</b>	<b>12.3%</b>
<b>I have no favorite.</b>	11	28.2%	6	16.2%	9	26.5%	12	33.3%	<b>38</b>	<b>26.0%</b>
<b>Total</b>	<b>39</b>	<b>100.0%</b>	<b>37</b>	<b>100.0%</b>	<b>34</b>	<b>100.0%</b>	<b>36</b>	<b>100.0%</b>	<b>146</b>	<b>100.0%</b>

Figure 254 The "complete" table

	18 to 30		31 to 50		51 to 67		68 or older		Total	
<b>Ford</b>	3	7.7%	5	13.5%	2	5.9%	3	8.3%	<b>13</b>	<b>8.9%</b>
<b>Chrysler</b>	4	10.3%	5	13.5%	4	11.8%	1	2.8%	<b>14</b>	<b>9.6%</b>
<b>Volvo</b>	0	0.0%	8	21.6%	3	8.8%	5	13.9%	<b>16</b>	<b>11.0%</b>
<b>BMW</b>	2	5.1%	3	8.1%	2	5.9%	3	8.3%	<b>10</b>	<b>6.8%</b>
<b>Honda</b>	4	10.3%	3	8.1%	6	17.6%	2	5.6%	<b>15</b>	<b>10.3%</b>
<b>Toyota</b>	6	15.4%	6	16.2%	2	5.9%	8	22.2%	<b>22</b>	<b>15.1%</b>
<b>^f('q5_98_other')^</b>	9	23.1%	1	2.7%	6	17.6%	2	5.6%	<b>18</b>	<b>12.3%</b>
<b>Total</b>	<b>39</b>	<b>100.0%</b>	<b>37</b>	<b>100.0%</b>	<b>34</b>	<b>100.0%</b>	<b>36</b>	<b>100.0%</b>	<b>146</b>	<b>100.0%</b>

Figure 255 The same table with "I have no favorite" masked but without "Filter by Mask" - the percentages don't add up

	18 to 30		31 to 50		51 to 67		68 or older		Total	
<b>Ford</b>	3	10.7%	5	16.1%	2	8.0%	3	12.5%	<b>13</b>	<b>12.0%</b>
<b>Chrysler</b>	4	14.3%	5	16.1%	4	16.0%	1	4.2%	<b>14</b>	<b>13.0%</b>
<b>Volvo</b>	0	0.0%	8	25.8%	3	12.0%	5	20.8%	<b>16</b>	<b>14.8%</b>
<b>BMW</b>	2	7.1%	3	9.7%	2	8.0%	3	12.5%	<b>10</b>	<b>9.3%</b>
<b>Honda</b>	4	14.3%	3	9.7%	6	24.0%	2	8.3%	<b>15</b>	<b>13.9%</b>
<b>Toyota</b>	6	21.4%	6	19.4%	2	8.0%	8	33.3%	<b>22</b>	<b>20.4%</b>
<b>^f('q5_98_other')^</b>	9	32.1%	1	3.2%	6	24.0%	2	8.3%	<b>18</b>	<b>16.7%</b>
<b>Total</b>	<b>28</b>	<b>100.0%</b>	<b>31</b>	<b>100.0%</b>	<b>25</b>	<b>100.0%</b>	<b>24</b>	<b>100.0%</b>	<b>108</b>	<b>100.0%</b>

Figure 256 The same table with "I have no favorite" masked and with "Filter by Mask" set

The illustrations show the same table with the results of a "what is your favorite" question against the respondent's age. The top table shows the "complete" table, including the "I have no favorite" results, where the total base is 146 and the percentages in the columns add up to 100%. The second table has the "I have no favorite" results masked so the row is removed from view. However as the table is not filtered by the mask the results are still included in the calculations, so the total base is still 146 and the percentages in the columns no longer add up to 100%. The final table also has the Filter by Mask property set. Here the "I have no favorite" results are removed from the calculations, reducing the total base to 108 and changing the remaining percentage values accordingly so that the columns now total 100%.

You can use the Filter by Mask property to exclude certain categories, numeric codes or ranges from statistical computations. The Filter by mask option and the appropriate mask settings (answer mask/scale mask/numeric mask depending on the variable type) is available both in collapsed and uncollapsed state. If filtering by mask is turned on then the appropriate filter will be applied regardless of the collapsed state of the question. This can be used to include/exclude certain codes or ranges (i.e. 99) when computing averages or other statistics.

Numeric mask settings include the "exclude range" and "exclude codes" options so that both inclusive and exclusive filtering can be specified (see Numeric Mask on page 202 for more information).

### 8.8.9. Include Not Answered

Use this in combination with the "Include not answered" setting for "Statistics base" in table properties (see Statistics Base on page 164 for more information) to show the respondents who did not answer the question.



		q3 - Gender					
q7 - Favorite		Male		Female		Total	
	Ford	7	8.1%	6	7.8%	13	8.0%
	Chrysler	5	5.8%	9	11.7%	14	8.6%
	Volvo	8	9.3%	8	10.4%	16	9.8%
	BMW	4	4.7%	6	7.8%	10	6.1%
	Honda	9	10.5%	6	7.8%	15	9.2%
	Toyota	15	17.4%	7	9.1%	22	13.5%
	^f('q5_98_other')^	9	10.5%	9	11.7%	18	11.0%
	I have no favorite.	16	18.6%	22	28.6%	38	23.3%
Not Answered		13	15.1%	4	5.2%	17	10.4%
Total		86	100.0%	77	100.0%	163	100.0%

Figure 257 Including "Not answered" on Favorite and Gender

If "Include not answered" is not selected in the table properties, the Not Answered fields will show zeros.

### 8.8.10. Include Totals

If you want to include the totals for the variable in the table, check the **Include Totals** box in the variable's property sheet. In the example, Include Totals is selected in the properties of Favorite but not in the properties of Gender.

		Male		Female	
Ford		7	8.1%	6	7.8%
Chrysler		5	5.8%	9	11.7%
Volvo		8	9.3%	8	10.4%
BMW		4	4.7%	6	7.8%
Honda		9	10.5%	6	7.8%
Toyota		15	17.4%	7	9.1%
^f('q5_98_other')^		9	10.5%	9	11.7%
I have no favorite.		16	18.6%	22	28.6%
Not Answered		13	15.1%	4	5.2%
Total		86	100.0%	77	100.0%

Figure 258 Including the Total row

Note: You can also click in the variable to select it, then click the Show Total button in the table toolbar to hide or show the Total row or column for that variable (see The Table Toolbar on page 158 for more information).

In some situations, totals will not be displayed when a value such as an average or a collapsed multi is nested within other questions. Subtotals are available for hierarchical structures such as hierarchical questions and time series (the Interview Start and Interview End time stamps).

For example, when reporting using Interview Start with grouping by year and then by month, you can select subtotals to get totals for each year as well as the overall total (see Timeseries Settings on page 214 for more information).

	Interview start												
Favorite	2002				2003					Total			
	dec		Total		jan		feb		Total				
MTV	2	10,0%	2	10,0%	10	14,5%	4	8,5%	14	12,1%	16	11,8%	
	12,5%		12,5%		62,5%		25,0%		87,5%		100,0%		
Euro Sport	7	35,0%	7	35,0%	20	29,0%	4	8,5%	24	20,7%	31	22,8%	
	22,6%		22,6%		64,5%		12,9%		77,4%		100,0%		
CNN	3	15,0%	3	15,0%	12	17,4%	11	23,4%	23	19,8%	26	19,1%	
	11,5%		11,5%		46,2%		42,3%		88,5%		100,0%		
Discovery	3	15,0%	3	15,0%	6	8,7%	15	31,9%	21	18,1%	24	17,6%	
	12,5%		12,5%		25,0%		62,5%		87,5%		100,0%		
Euro News	2	10,0%	2	10,0%	7	10,1%	13	27,7%	20	17,2%	22	16,2%	
	9,1%		9,1%		31,8%		59,1%		90,9%		100,0%		
BBC World	0	0,0%	0	0,0%	8	11,6%	0	0,0%	8	6,9%	8	5,9%	
	0,0%		0,0%		100,0%		0,0%		100,0%		100,0%		
Other	1	5,0%	1	5,0%	2	2,9%	0	0,0%	2	1,7%	3	2,2%	
	33,3%		33,3%		66,7%		0,0%		66,7%		100,0%		
No Particular Favorite	2	10,0%	2	10,0%	4	5,8%	0	0,0%	4	3,4%	6	4,4%	
	33,3%		33,3%		66,7%		0,0%		66,7%		100,0%		
Total	20	100,0%	20	100,0%	69	100,0%	47	100,0%	116	100,0%	136	100,0%	
	14,7%		14,7%		50,7%		34,6%		85,3%		100,0%		

Figure 259 Subtotals when reporting on interview start

### 8.8.11. Include Total Mentions

When a respondent answers a Multi question, he/she can choose several answers from the list of options. In the table, the Total row shows the number of respondents who have answered the Multi question. By checking the Include Total Mentions box, you can also include a row in the table that shows the total number of options that have been selected by all the respondents.

For example, in the table below, 49 male respondents have answered the Multi question. Of these, 22 selected Ford, 19 selected Chrysler etc., and together they have made a total of 122 selections from the answer list (22+19+16+19+24+22).

	Gender			
	Male		Female	
<b>Ford</b>	22	44.9%	23	50.0%
<b>Chrysler</b>	19	38.8%	21	45.7%
<b>Volvo</b>	16	32.7%	16	34.8%
<b>BMW</b>	19	38.8%	16	34.8%
<b>Honda</b>	24	49.0%	22	47.8%
<b>Toyota</b>	22	44.9%	20	43.5%
<b>Total</b>	<b>49</b>	<b>100.0%</b>	<b>46</b>	<b>100.0%</b>
<b>Total Mentions</b>	122	249.0%	118	256.5%

*Figure 260 Example of a table including the Total Mentions row*

The values can also be displayed as % relative to the Total value.

### 8.8.12. Collapsed

If you select **Collapsed**, the variable is treated as one field instead of it being broken down to its individual categories. This setting will differ based on what type of question the variable is.

When you enable Collapsed for numeric questions, ordered multi questions, single questions with scores defined in the answer list and grid questions with scores defined in the scale, the “default stats” drop-down opens. The statistics you can choose between are the same as those listed in the Statistics section. Instead of showing the distribution based on the answer list, the table shows an average value.

Items that represent only one variable will then just give one item in the answer list, whereas items that represent several variables, that is grids and multis, will give one item for each answer in the answer list.

For example, when you report on a grid question that has a 5-point scale, un-collapsed can give a table such as that shown in the figure below.

	Male		Female	
<b>Comfort</b>				
<b>1</b>	11	12.8%	14	18.2%
<b>2</b>	12	14.0%	11	14.3%
<b>3</b>	15	17.4%	18	23.4%
<b>4</b>	17	19.8%	16	20.8%
<b>5</b>	15	17.4%	9	11.7%
<b>Don't know</b>	16	18.6%	9	11.7%
<b>AVG</b>		3.2		2.9
<b>Price</b>				
<b>1</b>	22	25.6%	10	13.0%
<b>2</b>	11	12.8%	14	18.2%
<b>3</b>	9	10.5%	12	15.6%
<b>4</b>	19	22.1%	14	18.2%
<b>5</b>	17	19.8%	13	16.9%
<b>Don't know</b>	8	9.3%	14	18.2%
<b>AVG</b>		3.0		3.1
<b>Safety</b>				
<b>1</b>	19	22.1%	8	10.4%
<b>2</b>	14	16.3%	18	23.4%
<b>3</b>	9	10.5%	8	10.4%
<b>4</b>	13	15.1%	10	13.0%
<b>5</b>	19	22.1%	19	24.7%
<b>Don't know</b>	12	14.0%	14	18.2%
<b>AVG</b>		3.0		3.2
<b>Speed</b>				
<b>1</b>	20	23.3%	9	11.7%
<b>2</b>	12	14.0%	13	16.9%
<b>3</b>	11	12.8%	7	9.1%
<b>4</b>	16	18.6%	16	20.8%
<b>5</b>	9	10.5%	12	15.6%
<b>Don't know</b>	18	20.9%	20	26.0%
<b>AVG</b>		2.7		3.2

Figure 261 Example of an un-collapsed grid

Reporting on the same grid but selecting **Collapsed** and **Average** as default statistics, will give a table such as:

	Male	Female
Comfort	3.2	2.9
Price	3.0	3.1
Safety	3.0	3.2
Speed	2.7	3.2

*Figure 262 Example of a collapsed grid*

Multi questions are by default reported collapsed. All other types are reported un-collapsed.

	Male	Female	
		Count	Percentage
Ford	44	51.2%	31
Chrysler	31	36.0%	30
Volvo	43	50.0%	33
BMW	38	44.2%	37
Honda	33	38.4%	35
Toyota	38	44.2%	41
Other, please specify:	23	26.7%	35
Did not test any cars.	13	15.1%	4
Total	86	100.0%	77
			100.0%

*Figure 263 Example of a collapsed multi*

**Note:** As the respondents may select more than one item in the multi questions, the sum of the percentages will be more than 100%. However, the total number of respondents in each group, (for example 86 males), is 100% of the base in that group.

If you deselect **Collapsed** on the multi question, the table will show "Yes" for selected and "No" for not selected for each of the items in the multi question:

	Male		Female	
<b>Ford</b>				
<b>Yes</b>	44	51.2%	31	40.3%
<b>No</b>	42	48.8%	46	59.7%
<b>Total</b>	86	100.0%	77	100.0%
<b>Chrysler</b>				
<b>Yes</b>	31	36.0%	30	39.0%
<b>No</b>	55	64.0%	47	61.0%
<b>Total</b>	86	100.0%	77	100.0%
<b>Volvo</b>				
<b>Yes</b>	43	50.0%	33	42.9%
<b>No</b>	43	50.0%	44	57.1%
<b>Total</b>	86	100.0%	77	100.0%
<b>BMW</b>				
<b>Yes</b>	38	44.2%	37	48.1%

Figure 264 Extract from the same multi table, "un-collapsed"

There are three types of questions that display a similar behavior:

- A **Ranking** question will, by default, be displayed collapsed, showing the average for each of the items. If you deselect the **Collapsed** property, a table similar to that shown above will be produced, showing the distribution for the various categories. That is, for each item, the number of respondents who ranked it as number 1, the number who ranked it as number 2 etc. will be listed.
- A **Numeric List** question will by default be collapsed, showing an average for each item. If minimum and maximum values are defined in the question's properties, and the number of items between the minimum and maximum does not exceed 101, you can display the distribution for each number by deselecting **Collapsed**.
- The same also applies to a **Numeric** question with the maximum and minimum limits set.

The **Collapsed** property is also used with the statistics and categories objects.

### 8.8.13. Show Title

Check the **Show Title** box if you want the titles to be included in the table.

	q3 - Gender						
q7 - Favorite not in ( 99 )	Favorite	Gender					
		Male		Female		Total	
		Ford	7	10.9%	6	9.4%	13 10.2%
		Chrysler	5	7.8%	9	14.1%	14 10.9%
		Volvo	8	12.5%	8	12.5%	16 12.5%
		BMW	4	6.3%	6	9.4%	10 7.8%
		Honda	9	14.1%	6	9.4%	15 11.7%
		Toyota	15	23.4%	7	10.9%	22 17.2%
		I have no favorite.	16	25.0%	22	34.4%	38 29.7%
		Total	64	100.0%	64	100.0%	128 100.0%

Figure 265 "Show title" selected for Favorite and Gender

The titles of variables in rows can either be displayed beside the answer list, as in this example, or as separate rows above the answer list, depending on the "row nesting" table property setting (see Row Nesting on page 164 for more information). When several variables are nested, titles will only be shown on the outer level.

Titles have an upper limit of 30 characters. If a title contains more than 30 characters, it will be truncated and ended with an ellipsis (...), but the full text will be available as a tool tip.

### 8.8.14. Override Other Projects

You can use variables from more than one data source in a table. A typical example would be when you wish to present the data from similar questions taken from different projects, against the same demographic variables.

When presenting the data in the table, the row variables are crossed with the column variables, and while the two sets of variables are from the same data source then there is no problem. However if for example one row variable is taken from a different data source than the remaining row and column variables, then a discrepancy will occur. To avoid this, check the Override Other Projects box for all of the row or column variables that are taken from different data sources. Each row variable will then be crossed with the column variable from its own data source.

**Note: The data sources must include the same variable(s) against which the rows/columns are crossed.**

For example, the figure shows a table where two Gender row variables are taken from two different data sources and crossed with the Age variable. The Age variable is taken originally from one data source, however both sources must have the Age variable. The Gender variables must have the Override Other Projects boxes checked so each refers to its own data source. Note that in this case the Age variable has also had one of its answers masked.

The screenshot shows a report interface with a toolbar at the top containing Save, Refresh, Send to Excel, Save as Style, Find in tree, Table objects, Statistics, and other icons. The main area displays a table titled "q4 - Age not in (1)". The table has a row for "q3 - Gender" and a row for "q4 - Age not in (1)". The columns represent age groups: 18 to 30, 31 to 50, 51 to 67, 68 or older, and Total. Data is provided for Male, Female, and Total categories across these age groups. The table is generated on 8/16/2012 at 2:26:50 PM, using a weight model of None, and includes fixed filters and significance testing options.

	q4 - Age not in (1)									
q3 - Gender		18 to 30		31 to 50		51 to 67		68 or older		Total
	Male	24	51.1%	36	64.3%	30	58.8%	28	49.1%	118 55.9%
	Female	23	48.9%	20	35.7%	21	41.2%	29	50.9%	93 44.1%
	Total	47	100.0%	56	100.0%	51	100.0%	57	100.0%	211 100.0%
	Male	11	52.4%	6	33.3%	11	50.0%	6	42.9%	34 45.3%
	Female	10	47.6%	12	66.7%	11	50.0%	8	57.1%	41 54.7%
	Total	21	100.0%	18	100.0%	22	100.0%	14	100.0%	75 100.0%

Generated: 8/16/2012 2:26:50 PM  
Weight model: None  
Fixed filters: [Drop filters or answers here](#)  
Significance testing: None

[Drop filters or answers here](#)

Figure 266 Example of a multi-source table

Typical uses for this functionality could be:

- When you wish to have questions from more than one project as row headers in a table. In this case, check the Override other projects box for all these questions.
- When you wish to use a set of common demographic questions as column headers in the table. These questions could be picked from any of the projects involved. For example, you may wish to compare data from two different projects. In this case you could create a table using the Favorite question from the two projects, crossed against Age and Gender.
- When you wish to filter the table by one or more common demographic questions.

### 8.8.15. Decimals

You can override the table decimal setting by specifying the number of decimals to use in the results for a specific header variable. Type a positive integer into the field.

**Note:** You can increase the number of decimal places displayed to reduce the effects of rounding and thereby increase the accuracy of the displayed data.

### 8.8.16. Statistics

Statistics are available for numeric questions (open text or multi questions with the ordered property), ordered multi questions, single questions with scores defined in the answer list and grid questions with scores defined in the scale.

The following statistics are available:

- **Count** – the *total number* of responses. Note that for single questions and grids this will be the number of responses for which a score is defined in the answer list /scale. Therefore, if there is for example a “Don’t know” item in the answer list, which will not normally be assigned in the scale, the count will not include these responses.
- **Avg** – the *average* of the responses.

- **Stdev** – the statistical *standard deviation* for the responses, treating them as members of a population.
- **Stdevp** – the statistical *standard deviation* for the responses, treating them as members of a complete population.
- **Var** – the statistical *variance* for the responses, treating them as members of a population.
- **Varp** – the statistical *variance* for the responses, treating them as members of a complete population.
- **Max** – the *maximum* of the responses.
- **Min** – the *minimum* of the responses.
- **Sum** – the *sum* of the responses.
- **Mode** - the most frequently occurring number amongst the responses.
- **Median** - the number separating the higher half of a sample, a population, or a probability distribution, from the lower half.
- **Standard Error** - evaluation of standard error statistic. Both weighted and un-weighted values are supported.  
Note: the results will be different when using table engine 1 and 2 due to the different standard deviation formulas used.

**Note:** The average will be selected by default when you drag in single or grid questions with scores defined in the answer list/scale, as they then will be interpreted as measures. This means that if these questions are crossed with other questions that are also used as measures, you may receive error messages such as "Statistics are defined by intersecting headers". This is because you are trying to cross an average with an average. To avoid this problem, deselect "Average" on the question in the header variable properties.

**Note:** If you have dragged a Statistics object into the table, then in the table either double-click on the object or right-click on it and select Properties to open the property sheet and select the statistics to be used (see The Table Toolbar on page 158 for more information).

**Note:** Base (N) and Statistics (Count) may well return different results, and this difference will be the number of Don't Know (DK) answers. You can make N and Count the same by setting a score for the DK answers. If the two values are the same (a score has been set), then you can use either value in a report. If however the values are different, then you must ensure you always use only Count (to include the DK data) or only N (to omit the DK data).

### 8.8.17. Sorting and Top/Bottom N

You may sort the values in your tables based on the responses. Sorting must be based on the values from the intersection with one of the other variables in the table. This other variable either must have only one item, or a total that the sorting can be based on.

You can sort in **ascending** (1,2,3...) or **descending** (10,9,8,7...) order by selecting "Direction."

You may also define Top and Bottom N. This will show only the specified number of elements in the table. For example, if you type 5 in Top N, only the top 5 elements will be displayed. The other elements will be removed from the table.

### 8.8.18. Timeseries Settings

When working with the Interview Start and Interview End time stamps, you will have access to time series settings. Use these settings to define how responses are to be grouped, based on when the respondents started or completed the interview.

**Header variable - interview\_start - Interview start**

Use Default Settings	<input type="checkbox"/>	
Flat layout	<input type="checkbox"/>	
Apply Timeseries From Filters	<input type="checkbox"/>	
Use Fiscal Calendar (Extended engine)	<input type="checkbox"/>	
Break by	Year	
Then by		
Start Date	<input type="text"/>	
End Date	<input type="text"/>	

**Figure 267 Timeseries properties**

Note that additional fields become available in the list as selections are made.

Use caution when setting up the Break By options and Start / End dates. If only "break by day of month" is specified, then each category will correspond to a particular day regardless of the month, year etc. So for example category "1" will include the first day of all months and all years within the Start and End dates. Using the "short date" format is then not appropriate for selected categories as all the parts of the date except 'day' are meaningless. The recommended formatting in most cases is "Default", which does not show any irrelevant information. Alternatively, custom formatting may be used to achieve maximum flexibility.

### 8.8.18.1. Flat Layout

Check the Flat Layout box to combine nested dates into one row. The flat format is more suitable to be used as Header variable properties labels in charts.

January, 2000	February, 2000	March, 2000	April, 2000	2000
Jan	Feb	Mar	Apr	

**Figure 268 Example of the date layout with and without Flat Layout checked**

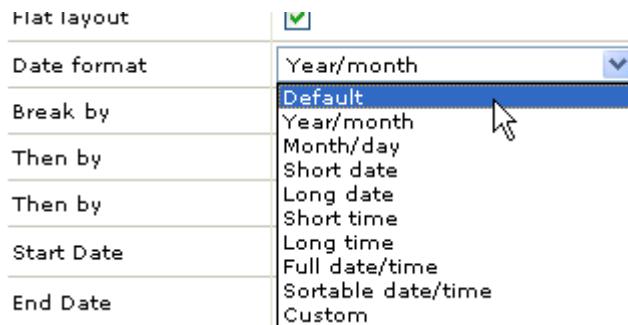
When Flat Layout is checked, the Date Format property is introduced. This allows you to select the format to be used.

**Note:** The dates will be presented in the format defined by the language selected by the report.

**Note:** When exporting, if the Report Language is set to English (see The Exporting of Reports by Viewers on page 12 for more information) and no specific culture is selected, the date format for the report will default to English US.

### 8.8.18.2. Date Format

Click the down-arrow to open a drop-down list of the date format options.



**Figure 269 The Date Format options**

- Click the **Help** button beside the field to view additional information on this field.
- Select **Default** to present the dates using the “parts” of the date that would have been used if Flat Layout had not been selected.
- Select **Custom** to define your own date format. The Custom Format String property is introduced. Click the **Help** button beside the field to open a message window. The link in this message takes you to the Microsoft MSDN information site that describes the valid date and time formats. You are recommended to check the information on this site before attempting to create a custom date format.

### 8.8.18.3. Apply Timeseries From Filters

Timeseries settings on a table header of type Date (for example interview\_start) can be controlled by a filter (either an on-page filter or a filter page filter). When this option is enabled, filters containing a date range list selector will affect the timeseries/rolling information on tables. Use this option to achieve dynamic timeseries settings controlled by filter selections.

How to use the feature:

1. In the header variable property sheet, check the Apply Timeseries From Filters box.
2. Create a date range list with the ranges you want to navigate on (see How to Create a Date Range List on page 559 for more information).
3. Add a filter to the page (or the filter page) and assign a date variable.
4. Choose Daterange as the date selection method.

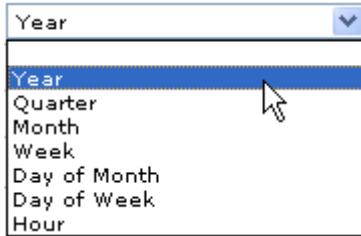
When this option is selected, the Break by, Start Date, End Date and Rolling Timeseries options are deactivated and hidden. Note that this feature can also be used when creating reports from DSL Wizards.

### 8.8.18.4. Use Fiscal Calendar

If the report uses the Extended Tabulation Engine (see APPENDIX C: The Tabulation Engine Versions on page 749 for more information), then the header property sheet for any date questions will include the Use Fiscal Calendar property. Check this box to apply the fiscal calendar set up for the company to the table. Setting up the fiscal calendar is performed in Confirmit Authoring; refer to the Authoring User Guide for details.

### 8.8.18.5. Break By

Select the first unit by which you wish to break up the time period selected in the Start and End Date properties. The options are as shown in the figure below.



**Figure 270 The Break By options**

When you select an option here, the Then By field is introduced.

#### **8.8.18.6. Then By**

If required, select the second unit by which you wish to break up the time period selected in the Start and End Date properties. The options available here are the same as those in the Break By property. A second Then By property is available if required.

**Note:** Be aware that the tables can become very large when you nest on several levels.

#### **8.8.18.7. Show Dates in Reverse Order**

Check the box to sequence the dates in reverse order in the table.

#### **8.8.18.8. Start / End Date**

You can set the headers to display only results between specific dates by selecting start and end date. You can either enter the date in the format DD.MM.YYYY or you can click the calendar icon to open the date picker and browse to the required date. The endpoints will be included when you define the start and end dates. Note that this is not a filter. The "Totals" for the question will include results for dates outside of the start date and end date. Start and end dates are just used to mask the categories that will be displayed in the table (see Filter Designer on page 513 for more information).

The time setting in the Confirmit server is used in the date calculations. For Confirmit SaaS users, this will be either Dallas (Texas, USA) time (CST, = GMT-6), or GMT. If you wish the time-stamps to be adjusted to a different time zone, set time zone offset in the report properties.

When reporting on weekdays, use the "FirstDayofWeek" in report properties to set the first weekday.

### **8.8.19. Rolling Time Series**

The Interview Start and Interview End variables allow the use of a "rolling" time series. The rolling time series are relative settings, where instead of inputting specific dates, you can specify a time period relative to the current date. This allows you to create reports based on results that are maintained automatically to the selected time-period, for example the month previous to the current date. Note that you can specify a period in the future.

The relative date ranges can be set on data header variables in the aggregated tables and in fixed filters.

To access the rolling time series functionality, double-click on the Interview Start / End component in the aggregated table to open the component's Properties page, then click on the + icon beside the Rolling Timeseries property to expand it.

Show dates in reverse order	<input type="checkbox"/>
<b>Rolling Timeseries</b>	
Enabled	<input checked="" type="checkbox"/>
Unit	Year
Use from-limit	<input checked="" type="checkbox"/>
From	0
Use to-limit	<input checked="" type="checkbox"/>
To	0
Decoding	

Figure 271 The Rolling Time Series properties

- **Enabled** – check this box to enable the functionality.
- **Unit** – the time unit to be used for the series. The options are Day, Week, Month, Quarter and Year.
- **Use from-limit** – check this box if you wish to specify a start-point for the period. For example, “from 6 months before the current date”. If you do not check this box, then Reportal will use all available data up to the specified Use to-limit.
- **From** – if you check the Use from-limit box, this field appears. Input the number of “units ago” you wish to start the period. For example **-10** means “start the series 10 weeks before the current date”. Note that a positive number indicates a point in the future.
- **Use to-limit** – check this box if you wish to specify an end-point for the period. For example, “to 1 month before the current date”. If you do not check this box, then Reportal will use all available data after the specified Use from-limit.
- **To** – if you check the Use to-limit box, this field appears. Input the number of “units” before or after the current, that you wish to end the period. For example if the Unit is set to Weeks, **-2** means “end the series 2 weeks before the current date”. Note that a positive number indicates a point in the future.

Examples:

- For a time series for the last 4 months including the current month, use the settings: Unit=Month, From=-3 and To=0.
- For a time series for the 4 months before the current month, use the settings: Unit=Month, From=-4 and To=-1.
- For a time series for the current month and the next two months, use the settings: Unit=Month, From=0 and To=2.

### 8.8.20. Hide Data

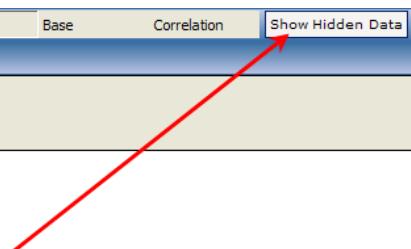
There may come a time when you wish to use a formula to calculate for example the difference between two elements, but you do not want the final table to show the elements the difference is calculated from. To hide such columns or rows, open the Header's Properties page and check the **Hide data** checkbox. If you have nested headers in the table, use the property on the lowest level.

The example table below shows the difference in the numbers of two groups (Males and Females) who have tested different makes of cars.

	q3 - Gender	Formula		
q7 - Favorite not in ( 98 )	Favorite	Ford	1	
Chrysler		-4		
Volvo		0		
BMW		-2		
Honda		3		
Toyota		8		
I have no favorite.		-6		
Total		0		
Generated: 01/12/2009 11:22:10				
Weight model: None				
Fixed filters: <a href="#">Drop filters or answers here</a>				
Significance testing: None				
Distribution: Count, Vertical Percent				
<a href="#">Drop filters or answers here</a>				

Figure 272 Hiding data

The table actually contains two more columns, which are used as input to the formula (first column – second column), but the data columns are hidden. Consequently they will not be included in charts based on this table, displayed to viewers or included in exports. However, to assist when designing the table, you can view these hidden results. Click the **Show Hidden Data** button followed by **Refresh**.



	q3 - Gender	Formula		
q7 - Favorite not in ( 98 )	Favorite	Male	Female	
Ford		7		
Chrysler		5		
Volvo		8		
BMW		4		
Honda		9		
Toyota		15		
I have no favorite.		16		
Generated: 01/12/2009 11:25:31		Total	64	
Weight model: None		Male	64	
		Female	64	
		Gap	0	

Figure 273 The Show Hidden Data button

### 8.8.21. Hide Header

When nesting elements in tables, cases may arise that result in redundant headers, for example a header above a header above a single element, as in the example. This shows percent favorable (4 or 5 selected on a 5 point scale) on two industries.

		industry - Industry			
q6 - Satisfaction with variou...	Categories			Consulting	Financial
		Product/service quality		Favorable	69.49% 75.76%
		Value for the price		Favorable	72.82% 70.67%
		Purchase experience		Favorable	71.96% 75.86%
		Installation or first use experience		Favorable	73.47% 71.56%
		Usage experience		Favorable	71.38% 71.25%
		After purchase service		Favorable	75.59% 73.70%
		Repeat purchase experience		Favorable	74.83% 71.99%

*Figure 274 Redundant headers in a table*

To remove the redundant header, go to the header's Properties page and check the **Hide Header** checkbox, then **Apply**. In the example above, you could set **Hide Header** on the Categories object to remove the Favorable text - as below .

		industry - Industry			
q6 - Satisfaction with variou...	Categories			Consulting	Financial
		Product/service quality		69.49%	75.76%
		Value for the price		72.82%	70.67%
		Purchase experience		71.96%	75.86%
		Installation or first use experience		73.47%	71.56%
		Usage experience		71.38%	71.25%
		After purchase service		75.59%	73.70%
		Repeat purchase experience		74.83%	71.99%

*Figure 275 Hide Header applied on categories*

## 8.8.22. Categorizations

Categorizations are variables that are composed of several questions that have the same scale. The categorization can present the results from these questions together with an average calculated from the questions it contains (see How to Set up Categorizations on page 661 for more information).

Working with the categorization object is very similar to working with a grid question in the Table Designer, but the categorization has one special property: the "Calculation Rule". The calculation rule property defines how the average of the elements is to be calculated.

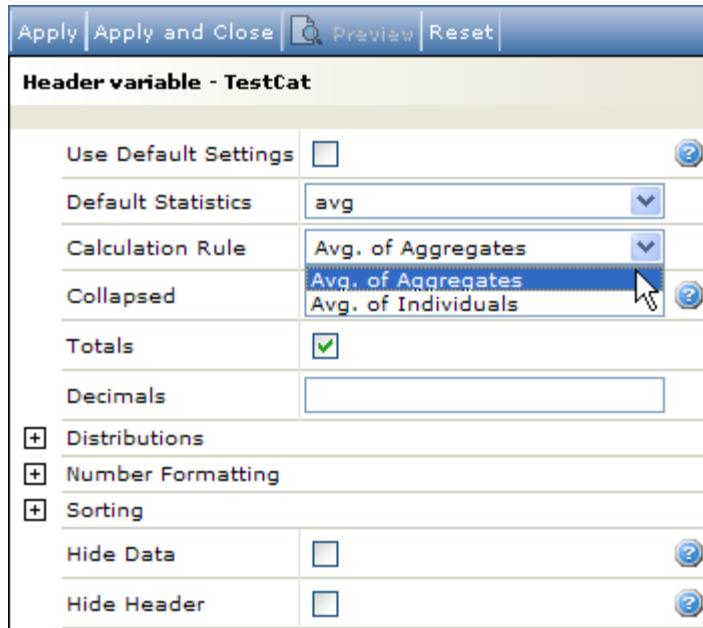


Figure 276 The Properties sheet for a Categorization

When a categorization is added to a table, two methods of calculating the average are available:

- **Avg. of Aggregates** (the average of the aggregated averages) - first the averages of all the individual elements are calculated, then a simple average of these results is calculated by adding all the element's averages together and dividing by the number of elements.
- **Avg. of Individuals** (the average of individuals) - the averages are first calculated for each respondent, then an overall average is calculated by calculating an aggregated average of the averages for all respondents.

These two methods will return equal results if **all** respondents have answered **all** questions. However if not all of the questions are required, or elements in the answer list have not been assigned weights (for example "Don't know"), then there may be differences between the results for the two methods of calculating the total average. In the example below, the average is calculated on three questions, q1, q2 and q3, using the two different methods. The results differ because some respondents have not provided answers for all the questions.

	A	B	C	D	E
					Average per respondent
1		q1	q2	q3	
2		1	3		2
3		1	2	4	2,3333333333
4		2	3	2	2,3333333333
5		1	3		2
6		1		2	1,5
7		4	2	3	3
8	Average per question	1,666667	2,6	2,75	
9					
10	Average of aggregates (B8:D8)	2,338889			
11	Individual Category Score (E2:E7)	2,194444			

Figure 277 Example of different average calculations for categorizations

Below is an example of a categorization set up based on a grid question. The “Satisfaction categorization” row shows the computed total average:

<b>News</b>	2,67
<b>Sports</b>	2,63
<b>Entertainment</b>	2,55
<b>Documentary</b>	2,65
<b>Movies</b>	2,61
<b>Satisfaction categorization</b>	2,61

*Figure 278 Categorization table*

In the event a categorization is added to a parameter, then an additional Calculation Rule option becomes available:

- **Avg. of Answers** (the average of the answers) - this is derived from the sum of all the individual answers divided by the number of individual answers.

**Note:** All of the Calculation Rule options will give the same result if all respondents have answered all the questions. However the results will differ if there are null values (some respondents have not answered all the questions) or elements in the answer list have not been assigned weights. So which option you use will depend on whether:

- You want all respondents to have equal "score" regardless of how many questions they have answered.
- You want all questions/statements to have equal score regardless of how many respondents have answered them.
- You want all responses to have equal "score".

**Important:** In the event a weighting model is based on a survey question that for some data records is not answered (has the value NULL), then the results published in a report will differ depending on whether the BitStream query engine or the SmartHub query engine is used. If weights are missing, the BitStream engine defaults to 1 while the SmartHub engine defaults to 0 and therefore excludes these records from aggregated tables.

## 8.9. Categories and Statistics Objects

You may wish to create certain table layouts that are not possible through the use of variables in columns and rows alone. For example, you may want to have the distributions on your grid questions displayed horizontally, but the items vertically.

To create tables such as this there are two “helper” objects, **Categories** and **Statistics**, available .

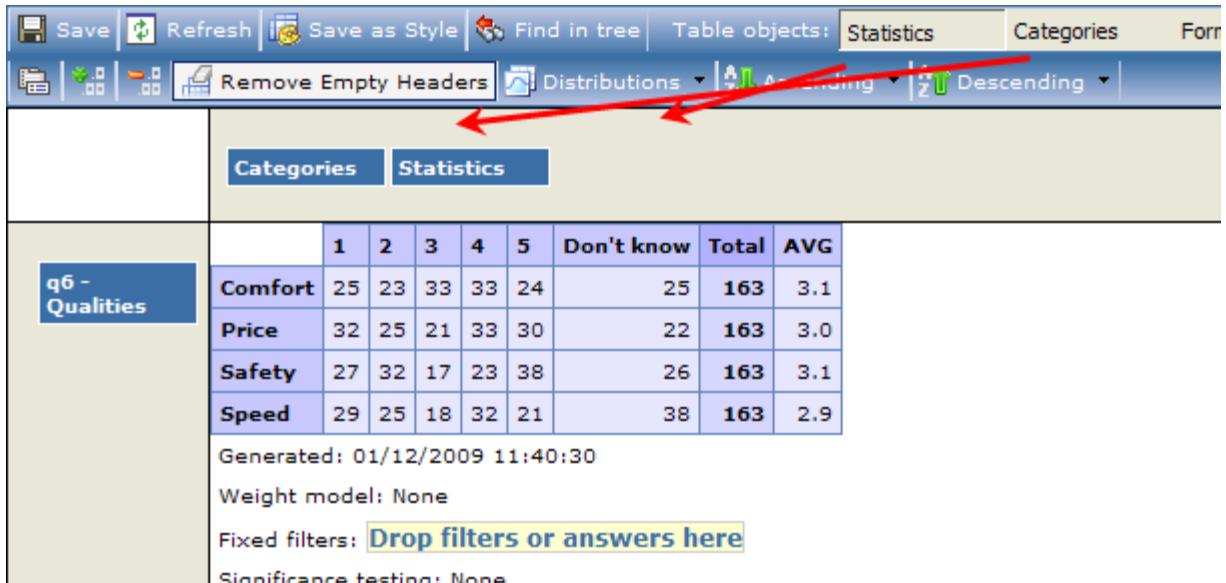


Figure 279 Setting up the table using Categories and Statistics objects

Categories provide the questions' answer list. In Statistics, you can apply one or more of the statistics described in the section Statistics if the question(s) are numeric, ordered or have scores defined.

To be able to cross a variable with the Categories and Statistics objects, you must set the **Collapsed** property on the variable (see Collapsed on page 208 for more information). Both the Statistics and the Categories objects can be nested with other header variables.

You can also use Categories and Statistics to create a condensed table with several questions that have the same answer list. You could, for example, drag in several other questions into the table above, as long as all the questions use the same point scale.

**Note:** You can cross a Formula object with a Statistics object, but you cannot cross Statistics with Statistics; if you attempt to do this an error message will be displayed.

### 8.9.1. How to Use the Categories Element

In addition to the various columns of statistical data, you can extend your table to include category information, in this case the 5-point scale of the grid.

1. Drag the **Categories** element from the button bar and drop it into the Drop Columns Here cell beside the Statistics element.

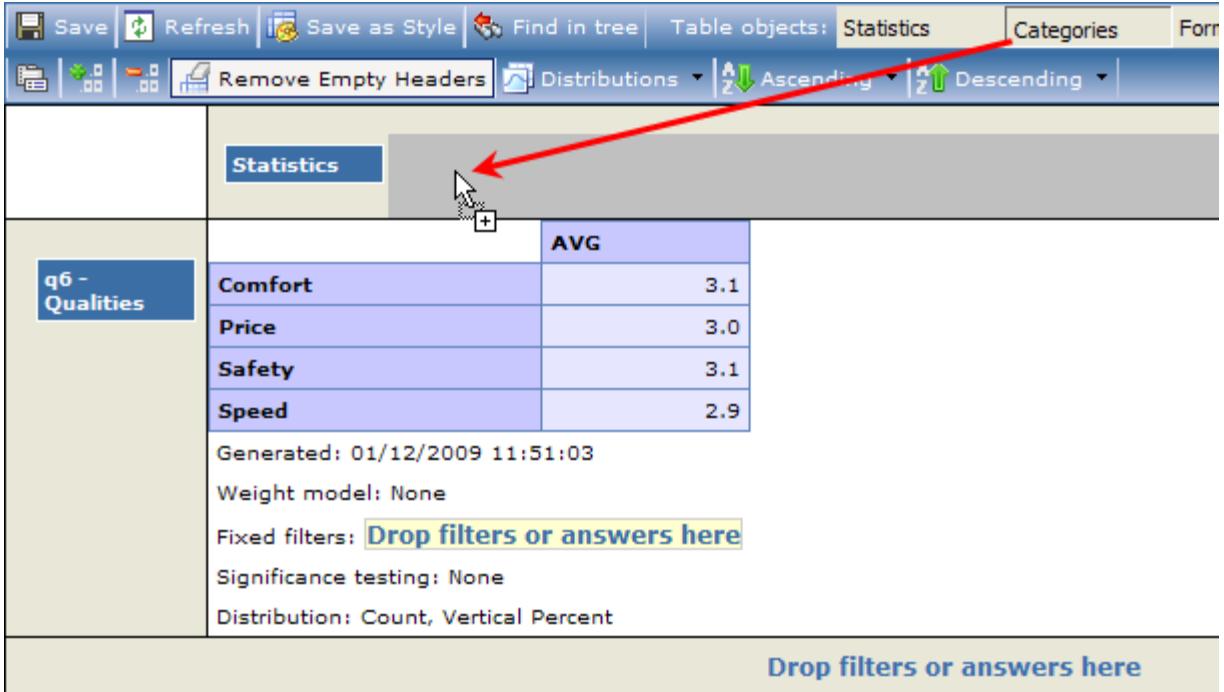


Figure 280 Dragging the Categories element into the table

- Click Refresh to view the results.

The table now looks as shown in the figure below.

		Statistics		Categories																
q6 - Qualities			AVG		1		2		3		4		5		Don't know		Total			
	Comfort	3.1	25	100.0%	23	100.0%	33	100.0%	33	100.0%	24	100.0%	25	100.0%	163	100.0%				
	Price	3.0	32	100.0%	25	100.0%	21	100.0%	33	100.0%	30	100.0%	22	100.0%	163	100.0%				
	Safety	3.1	27	100.0%	32	100.0%	17	100.0%	23	100.0%	38	100.0%	26	100.0%	163	100.0%				
	Speed	2.9	29	100.0%	25	100.0%	18	100.0%	32	100.0%	21	100.0%	38	100.0%	163	100.0%				
	Generated: 01/12/2009 11:53:11																			
Weight model: None																				
Fixed filters: <a href="#">Drop filters or answers here</a>																				
Significance testing: None																				
Distribution: Count, Vertical Percent																				
<a href="#">Drop filters or answers here</a>																				

Figure 281 The table with the Categories element

Note: In the table in the figure above, the rows are actually separate questions (in this case the rows in a grid). Therefore, when the results are calculated, the vertical percentages are calculated from the individual values as, for example in the first column of the Comfort row, 25 of 25. They are all therefore 100%.

3. Open the Category's Properties page and expand the **Distributions** property.
4. Keep the **Count** box checked, check the **Horizontal Percents** box, and uncheck the **Vertical Percents** box.

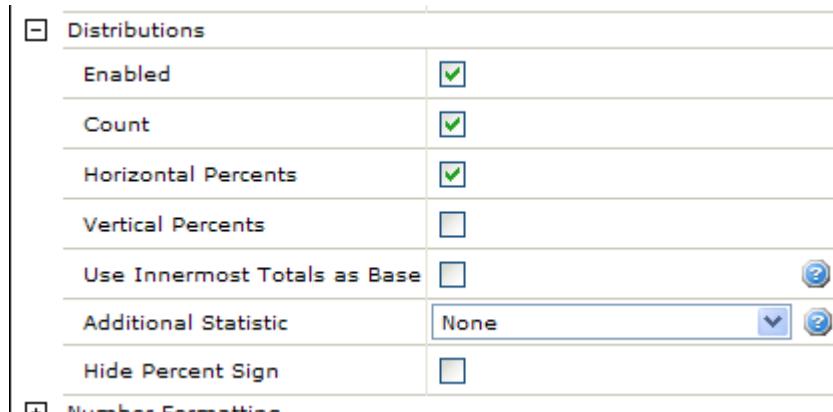


Figure 282 The Category Properties Distributions options

5. Click **Apply** and note how the table layout has changed.

	Statistics		Categories								
		Avg	1	2	3	4	5	Don't know	Total		
q6 - Qualities	Comfort	3.1	25	23	33	33	24	25	163		
			15.3%	14.1%	20.2%	20.2%	14.7%	15.3%	100.0%		
	Price	3.0	32	25	21	33	30	22	163		
			19.6%	15.3%	12.9%	20.2%	18.4%	13.5%	100.0%		
	Safety	3.1	27	32	17	23	38	26	163		
			16.6%	19.6%	10.4%	14.1%	23.3%	16.0%	100.0%		
	Speed	2.9	29	25	18	32	21	38	163		
			17.8%	15.3%	11.0%	19.6%	12.9%	23.3%	100.0%		

Figure 283 The same table using the Horizontal Percents property

6. Click **Save** to save the changes.

### 8.9.2. Masking

To exclude some of the responses from being displayed in Categories, you can apply a mask on the Categories object. Choose between **Show all** (no masking - default), **Hide all**, **Show specified codes** or **Hide specified codes**. If using show/hide specified codes, enter the codes of the categories you want to show or hide.

If you have applied a recoding on the categories object, use the code of the category in the recoding. To help you find the correct codes, tool tips are available on the headers in the table preview. These tool tips display the items' codes.

When specifying the codes to be shown or hidden, list them separated by commas. For numeric codes, you can also use - to indicate a range. For example, 1,3-5 will give the codes 1, 3, 4 and 5.



Figure 284 Categories Masking

### 8.9.3. Formulas First

Check the **Formulas first** box if the content of one of the masked columns/rows is to be used in a calculation before the mask is applied. This allows you to base a formula on elements under the categories object that are not displayed in the table.

### 8.9.4. Override Field Names

You may wish to include questions in your survey where you are assessing two different aspects of the same list of statements. For example, you may wish to evaluate satisfaction and importance. To show the results from these two different questions adjacent to each other inside the same table, use the **Override field names** functionality for the Categories and Statistics elements.

For example, if you have a 3D grid in your questionnaire that asks about both satisfaction and importance on a set of statements, you may want to report these results next to each other in an aggregated table, as in the illustration below:

	Satisfaction						Importance					
	1 Disagree	2	3	4	5 Agree	Don't know	1 Disagree	2	3	4	5 Agree	Don't know
I enjoy my job	15.6%	16.4%	14.4%	20.0%	19.4%	14.2%	16.2%	17.2%	19.4%	14.8%	16.0%	16.4%
I am always motivated	17.0%	15.0%	17.2%	15.0%	16.0%	19.8%	15.4%	13.8%	18.6%	17.6%	17.8%	16.8%
I enjoy my working environment	16.8%	14.8%	17.4%	17.0%	16.8%	17.2%	18.8%	17.0%	16.6%	16.0%	15.2%	16.4%
I am able to develop my personal skills	15.6%	16.6%	15.6%	17.8%	17.2%	17.2%	18.0%	16.8%	16.4%	16.0%	17.2%	15.6%
I am able to influence my career path	17.4%	14.8%	18.0%	13.2%	15.4%	21.2%	17.8%	13.4%	20.2%	16.6%	15.0%	17.0%
I am constantly challenged	18.4%	18.2%	15.4%	16.8%	17.6%	13.6%	16.0%	15.8%	17.0%	17.2%	16.2%	17.8%

Figure 285 Reporting results on two different questions adjacent to each other

If you had dragged the Satisfaction and Importance questions next to each other into the rows, the items would be nested. Here, we do not want to nest the two questions, but merely show the results adjacent to each other.

Drag the **Satisfaction** question into rows. Set the **Collapsed** property on this object to get one row for each statement in the grid. To get the scale in the columns, drag in the Categories object.

Now, to include the **Importance** grid, we drag another Categories object into columns. On this Categories object, set the **Override field names** settings to calculate scores on a different question than that in columns.

**Override field names** allows you to specify a part of the question id that is to be replaced. In this example the grids are q12 (satisfaction) and q13 (importance).

**Override Field Names**

Enabled	<input checked="" type="checkbox"/>
From	q12
To	q13
Not Answered	<input type="checkbox"/>

**Figure 286 Override field names**

The grids must have the same answer list. You can also use this set-up for the Statistics object.

To separate the results in the two categories objects, use the title property to give them different headers (see Show Title on page 227 for more information).

### 8.9.5. Ignore

To exclude "Not applicable", "Don't know" or similar responses from the bases when using categories, in the categories answer list select the codes of those items that you wish to ignore. If you have applied a recoding on the categories object, use the code of the category in the recoding. This will filter the results, removing the codes you specify from the base. To help you find the correct codes, tool tips are included on the headers in the table preview, displaying the codes for the various items. Use commas to separate the codes in the list. For numeric codes, you can also use - to indicate a range. For example, 1,3-5 will give the codes 1, 3, 4 and 5.

The figure below shows an example in which the code 6 for Don't know is ignored. You would normally also mask the content you wish to ignore (see Masking on page 225 for more information) to remove the entire column from the table.

Categories		1 Disagree	2	3	4	5 Agree	Don't know	Total
q12 - Your position - Perform...	I enjoy my job	18.2%	19.1%	16.8%	23.3%	22.6%	0.0%	100.0%
	I am always motivated	21.2%	18.7%	21.4%	18.7%	20.0%	0.0%	100.0%
	I enjoy my working environment	20.3%	17.9%	21.0%	20.5%	20.3%	0.0%	100.0%
	I am able to develop my personal skills	18.8%	20.0%	18.8%	21.5%	20.8%	0.0%	100.0%
	I am able to influence my career path	22.1%	18.8%	22.8%	16.8%	19.5%	0.0%	100.0%
	I am constantly challenged	21.3%	21.1%	17.8%	19.4%	20.4%	0.0%	100.0%

**Figure 287 Ignoring "Don't know"**

### 8.9.6. Show Title

To apply a header to your categories, select the **Show Title** checkbox to activate the functionality and define titles for each of the report's languages.

**Show Title**

**Title**

English	Satisfaction
English (United States)	Satisfaction
Norwegian	Tilfredshet

**Figure 288 Defining titles for the various languages in Show Title**

## 8.9.7. Upper Level Comparison

In personalized reporting based on a hierarchy question, you can use "upper level comparison" to show the results of a reference unit instead of the current report base (see [Upper Level Comparison on page 503](#) for more information).

## 8.9.8. Texts

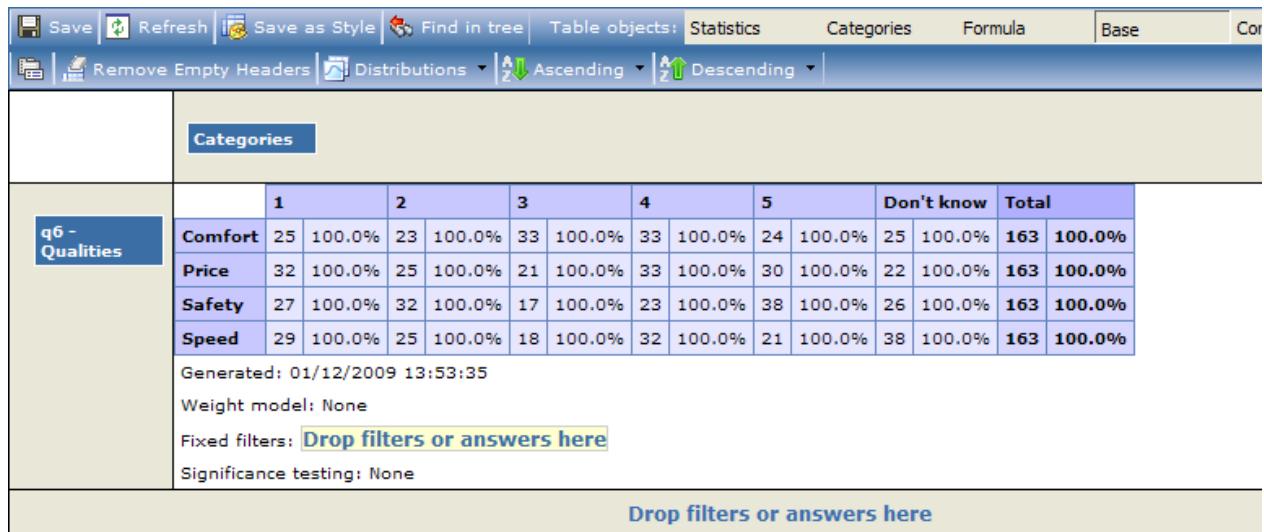
On the statistics object, you can override the system default texts for the various statistical elements and define your own texts. You can also do this for the entire report in **Report Properties > Layout and Styles tab >Custom Texts**.

<input type="checkbox"/> Texts	
<input type="checkbox"/> Average	
English	Mean
English (United States)	Mean
Norwegian	Snitt
<input checked="" type="checkbox"/> Deviation	
<input checked="" type="checkbox"/> Variance	
<input checked="" type="checkbox"/> Sum	
<input checked="" type="checkbox"/> Count	
<input checked="" type="checkbox"/> Min	
<input checked="" type="checkbox"/> Max	

Figure 289 Texts on the Statistics object

## 8.10. Base

Use the Base header variable when you wish to include a base or total column that displays counts only (no percentages) in the table, without being nested under any of the header variables. Note the difference between the tables shown below.



The screenshot shows a software interface for report generation. At the top, there's a toolbar with various icons for Save, Refresh, Save as Style, Find in tree, and Table objects. Below the toolbar, there are dropdown menus for Statistics, Categories, Formula, and Base. The main area contains a table titled 'Categories'. The table has a header row with columns for '1', '2', '3', '4', '5', 'Don't know', and 'Total'. The data rows are labeled 'Comfort', 'Price', 'Safety', and 'Speed', each showing counts and percentages. A summary row at the bottom of the table shows totals for all categories. Below the table, there are several status messages: 'Generated: 01/12/2009 13:53:35', 'Weight model: None', 'Fixed filters: Drop filters or answers here', and 'Significance testing: None'. At the very bottom, there's a large button labeled 'Drop filters or answers here'.

Figure 290 Using "include totals" on the header variable

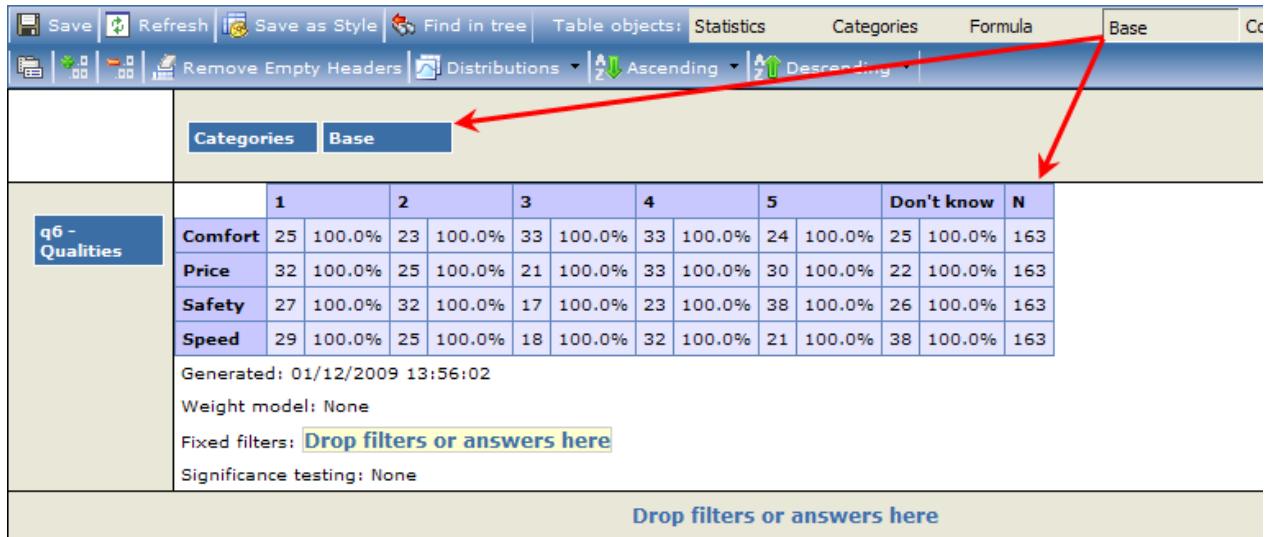


Figure 291 Using the Base object

The text **N** is used by default, but you can change this (see Custom Texts on page 703 for more information).

**Note: Base (N) and Statistics (Count)** (see Statistics on page 213 for more information) may well return different results, and this difference will be the number of Don't Know (DK) answers. You can make N and Count the same by setting a weight for the DK answers. If the two values are the same (a weight has been set), then you can use either value in a report. If however the values are different, then you must ensure you always use only Count (to include the DK data) or only N (to omit the DK data).

This header variable has three properties that are not explained elsewhere:

### 8.10.1. Suppress

You can control suppression on rows or columns by applying the **Suppress** setting on the base header variable. The limit used will be that specified in table properties (see The Suppress Data Tab on page 177 for more information). If the base is in columns, any rows with fewer responses than the specified limit will be empty, and if base is in rows, any columns with fewer responses than the limit will be empty.

### 8.10.2. Hide Suppressed Base

When you suppress data with a base less than a specified number (for example 5), you can also suppress the display of the base for those rows or columns that are below the limit. Instead the row will display < (less than) and the limit, for example < 5 as in the example below.

	N	Unfavorable	Neither/nor	Favorable
1 - 100	< 5			
101 - 500	5	40 %	40 %	20 %
501 - 1000	< 5			
1001 - 5000	6	50 %	33 %	17 %
5001 - 10000	7	29 %	29 %	43 %
10001 or more	< 5			
Total	26	38 %	27 %	35 %

Figure 292 Hiding the base quantity for suppressed data

### 8.10.3. Weighted Tables

The "Weighted Tables" setting is relevant when a weight model is applied to the report, folder or page. Use it to specify whether the base displayed should be an un-weighted base (weights not applied to the totals), or a weighted base (weights applied to the totals).

## 8.11. Formula

Formula are used to perform calculations between two sets of results in the aggregated table; in rows and/or columns. The Formula object is located in the toolbar next to the Statistics and Categories objects.

The mathematical expression used by the Formula can be simple, just a straight addition or subtraction, or it can be relatively complicated and include a number of functions and operators in sequence (see Expressions on page 235 for more information).

To use a Formula object, drag it from the toolbar and drop it into the required place in the table. Double-click on the object in the table to open its properties page so you can set it up as required.

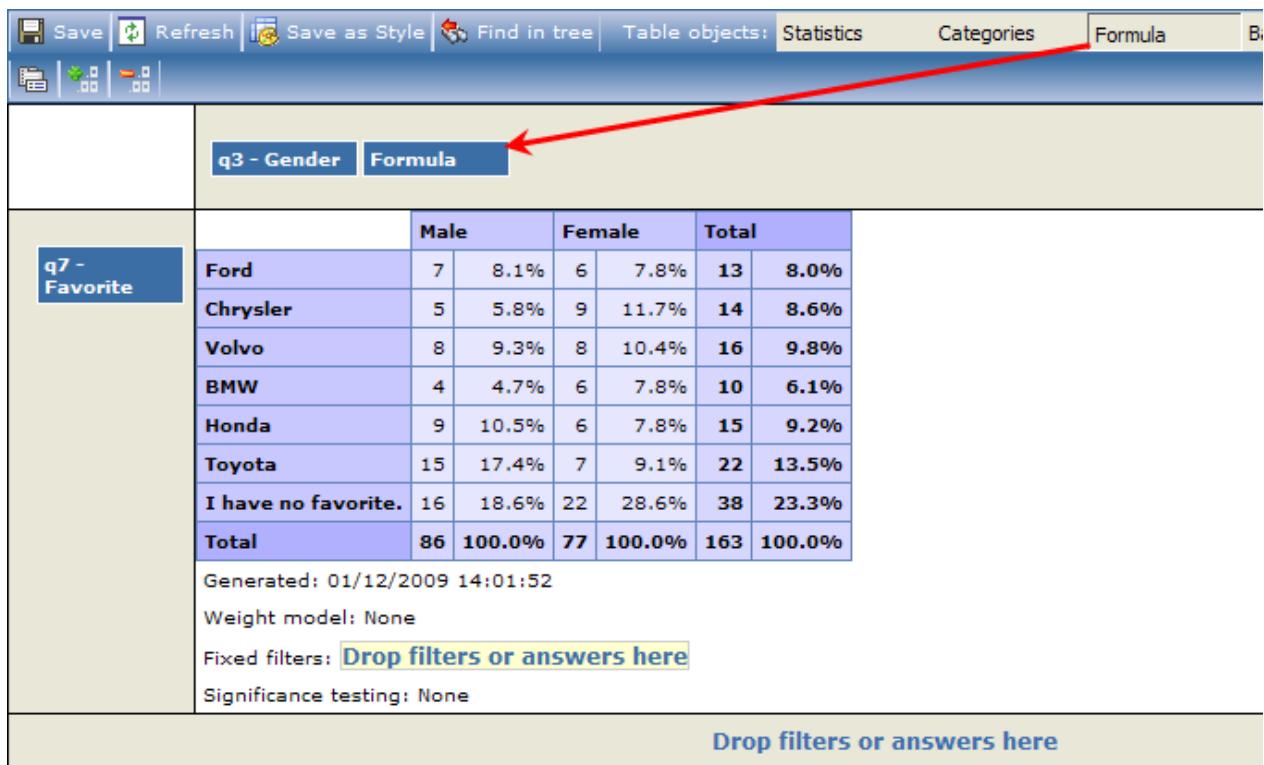


Figure 293 A Formula object being added to a table

When formula objects are used in both the rows and columns of a table, then the calculation order for intersecting cells can be prioritized (see Priority on page 233 for more information).

**Note:** Place the mouse pointer over the formula object in the table to see a text box containing information on the type used, arguments etc. without having to open its Properties sheet.

**Note:** You can cross a Formula object with a Statistics object, but you cannot cross Statistics with Statistics; if you attempt to do this an error message will be displayed.

### 8.11.1. The Formula Properties

Double-click on the Formula object to open its properties page.

Properties

Apply | Apply and Close | Preview | Reset

**HdrVarFormula - Formula**

Type	Operators
Operator	-
Reference Type	Relative
Left Argument	-2
Right Argument	-1
Percent	<input type="checkbox"/>
Priority (Extended engine)	0
[+] Filter	
[+] Label	
English	<input type="text"/>
Norwegian	<input type="text"/>
Decimals	<input type="text"/>
[+] Distributions	
[+] Number Formatting	
Hide Data	<input type="checkbox"/> ?
Hide Header	<input type="checkbox"/> ?

Figure 294 Example of a Formula Properties sheet with Type set to Operator

By default, the Formula object Type is set to Operators. Note that if you change the Type to Expression, some of the properties available in the sheet will change, as shown below.

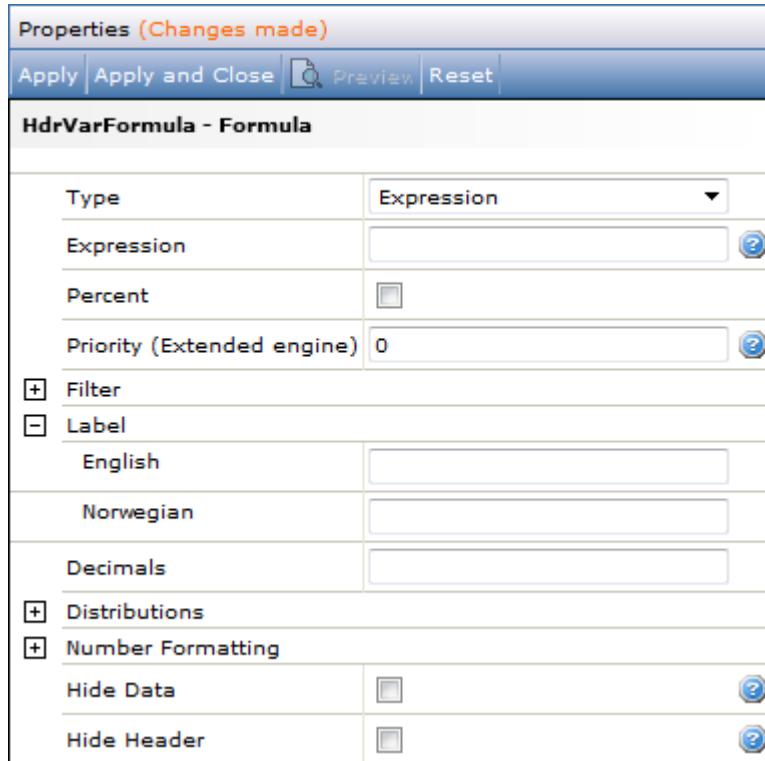


Figure 295 Example of a Formula Properties sheet with Type set to Expression

### 8.11.1.1. Type

Select the type of filter you wish to use. Note that the properties available on the sheet will differ depending on the selection you make here. The options are:

- **Operators** – the formula uses the operator selected.
  - **Operator** - select one of the mathematical operators listed in the drop-down.
  - **Reference Type** - when you specify the arguments of the formula, you can either define the left and right arguments by columns/rows *relative* to the formula column/row specified (negative numbers mean before, positive after), or by counting from the *start* or *end* row in the table.
  - **Left/Right Argument** - define the left and right Arguments, based on the Reference Type selected. Negative numbers indicate a number of columns or rows in front of the formula; positive numbers indicate a number of columns or rows after the formula
- **Expression** – the formula uses the expression you type into the Expression field that is introduced when this option is selected. Here you must use the same expression language as for Conditional Formatting (see Expressions on page 235 for more information). The Expression field has an associated **Help** button - click this for further information.

**Note:** Formula expressions always use the non-rounded values of a cell.

### 8.11.1.2. Percent

Check the Percent box if you wish the values calculated by the formula you are designing to be presented as percentage values rather than plain numerical values.

#### Important

The Percent format multiplies the value in the cell by 100 and displays the result with the % symbol. The result will not necessarily be an accurate calculation of, for example, the actual percentage difference of the two Argument columns.

### 8.11.1.3. Priority

If formula headers are present in both the rows and columns of the table, then the priority field is used to control the calculation order of these formulae in intersecting cells. When there are intersecting cells, then the formula with the highest priority value (i.e. the largest number) will be used as the calculation for the intersection. In the case where the priority fields are equal in formula headers when intersecting cells occur, an error will be generated. Where there no intersecting cells for formula headers, then the priority can remain unchanged from the default value of zero.

### 8.11.1.4. Filter

You can hide rows based on the result of the calculation in a formula. For example, in a table where a gap is calculated, you might want to show just the items where there is a negative gap. To do this, use the **Filter** settings on the formula object.

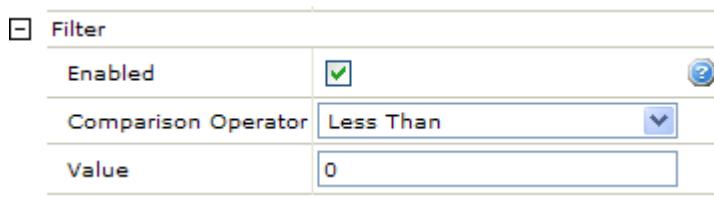


Figure 296 The Filter settings on the Formula object

The Comparison Operator options are: less than, less than or equal to, greater than and greater than or equal to. Enter any numerical value in the Value field. Using the settings in the figure above, the result will be a table displaying only negative gaps - the filter will remove all items with a positive gap. A typical scenario here could be that you wish to display the elements with a negative gap in one table and those with a positive gap in another.

**Note:** You can use the same functions and keywords in filters as those defined for expressions in formulae (see Expressions on page 235 for more information).

### 8.11.1.5. Label

By default, the formula column/row header will be given the name of the selected operator, or will be left blank if Expression is selected. Type text into the Label property to give the header a name other than the operator/blank. A text field will be displayed for each language selected for the report. This label can also be set globally for the report in Custom Texts (see Custom Texts on page 703 for more information).

### 8.11.1.6. Formula Decimals

Use this field to specify the number of decimal places displayed. Enter a whole, positive numeric value (integers greater than or equal to 0) in this field. This functionality is the same as that in the general Table Properties .

### 8.11.1.7. Distributions

The Distributions define the type of numerical presentation used in the Formula column. Check the Distributions Enabled box to open the Distributions properties list.

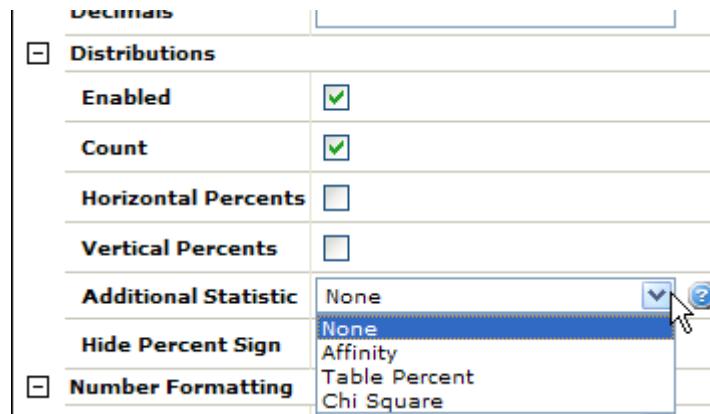


Figure 297 The Distributions properties

Check the desired property boxes to select the distributions you wish the table to use. The distributions are as follows:

- **Count** - displays the numerical value in the cell.
- **Horizontal Percents** - displays the percent values in a row so that they will be easy to compare by browsing horizontally through the table.
- **Vertical Percents** - displays the percent values in a vertical column so that they will be easy to compare by browsing vertically through the table.
- **Use Innermost Totals as Base** - [available when Horizontal and/or Vertical Percents are selected] The default behavior for calculating percentages is based on the overall total for the table. Check this option to obtain percentages calculated for the sub-totals of the nested questions in the specific columns or rows.
- **Additional Statistic** - select from the drop-down list as required, an additional statistic to be displayed. The options are:
  - **None** - the field is empty.
  - **Affinity** - affinity index statistic is displayed.
  - **Table Percent** - the field displays the percentage value of the count in each cell against the total count for the entire table.
  - **Chi Square** - the field displays the Chi Square statistic in the cell (see The Chi-Square Significance Statistic on page 740 for more information).
- **Hide Percent Sign** - removes the % sign from the fields.

#### 8.11.1.8. Number Formatting

This property controls how the numbers in the table are to be displayed. Expand the Number Formatting property, then select the desired format. The options are:

- **Default** - the numbers are displayed without any formatting.
- **Currency** - if you wish to display the numbers as a currency, select this option then specify the desired currency symbol. The numbers will then be displayed as monetary units, with the symbol in front.
- **Time Span** - select this option to specify that the numbers represent units of time. You can then also specify what the unit is to be and how the numbers are to be interpreted; Days, hours, minutes, seconds or milliseconds. The numbers will always be displayed in the format HH:MM:SS,M.

#### 8.11.1.9. Hide Data

If you check this box, this formula column is hidden from the table after the formula is calculated. This setting is useful if you would like to use some values from a formula calculation, but not include the actual values in the table.

In the table designer, you can choose see the hidden data by selecting **Show Hidden Data**.

### 8.11.1.10. Hide Header

Check this box to cause the formula header cell to be collapsed in the table if possible. This setting is useful if you add a header only to filter a column.

## 8.11.2. Expressions

A rich expression language is available for formulas and conditional formatting (see Conditional Formatting on page 252 for more information). This language offers flexibility ranging from simple expressions involving the current cell to complex calculations on the results of a range of cells in the table.

The selected formatting is applied to the cell when the expression evaluates to TRUE.

When several expressions are applied, the expressions are evaluated in the order they appear in the list. If the first expression in the list evaluates to FALSE, the next expression will be evaluated. As soon as an expression evaluating to TRUE is reached, that expression's formatting is applied to the cell and any following expressions will not be evaluated.

The following functions are supported:

Function	Description
ABS(val)	Returns the absolute value of val.
AVERAGE(val1, val2, ...)	Returns the average (arithmetic mean) of the arguments.  Example: AVERAGE(COLVALUES()) will return the average of the values in all the cells of the current column.
CEIL(val)	The smallest integer greater than or equal to the specified number.
CELLVALUE() CELLV()	Returns the value of the current cell. If the cell contains several values (count, horizontal and/or vertical percent) it returns the first value of the current cell.
CELLVALUE(column, row, [C   HP   VP]) CELLV (column, row, [C   HP   VP])	Returns the count/horizontal-/vertical percent value of the specified cell.  C = Count HP = Horizontal Percents VP = Vertical Percents  Examples: CELLVALUE(1,3) will return the value in the cell in the first column and third row of the table (or the first value if the cell contains several values (count, horizontal and/or vertical percent)) CELLVALUE(1,3,HP) will return the horizontal percentage in the cell in the first column and third row of the table, provided that that cell contains a horizontal percent. If it does not contain a horizontal percent, you will get an error message.
COLVALUES() COLV()	Returns the values in all the cells of the current column. If these cells contain several values (count, horizontal and/or vertical percent), the first value in each cell will be returned.  Example: AVERAGE(COLVALUES(1,ROWS-1)) will return the average of the values in all the cells of the current column. If these cells contain several values (count, horizontal

	and/or vertical percent), the average of the first values in the cells will be returned.
COLVALUES( <i>start, end, [C   HP   VP, column]</i> )  COLV ( <i>start, end, [C   HP   VP, column]</i> )	Returns the count/horizontal-/vertical percent values of the specified cells/column. This gives the ability to indicate a subset of values in a specific column.  C = Count HP = Horizontal Percents VP = Vertical Percents  Examples:  MAX(COLVALUES(2,4)) will return the maximum of the values in the rows 2 to 4 in the current column. If these cells contain several values (count, horizontal and/or vertical percent), the maximum of the first values in the cells will be returned.  AVERAGE(COLVALUES(1,5,VP)) will return the average of the vertical percents in rows 1 to 5 in the current column. If these cells do not contain vertical percents, you will get an error message.  MIN(COLVALUES(1,5,VP,3)) will return the minimum of the vertical percents in rows 1 to 5 in column 3 in the table. If these cells do not contain vertical percents, you will get an error message.
COUNT(val1, val2, ...)	Returns the number of arguments.  Example:  COUNT(COLVALUES()) will return the number of rows in the column.
EMPTYVALUE() EMPTYV()	Returns the empty value.  Examples:  IF (CELLV(1,1)=EMPTYV(), 0,CELLV(1,1)) tests for an empty value.  IF(CELLV(>10, CELLV(), EMPTYV()) sets an empty value.  EMPTYV(), apply and close. Use Remove Empty Headers to hide the formula's empty cells.
EXP(power)	Returns E (the base of natural logarithms) raised to the specified power.
FLOOR(val)	The greatest integer less than or equal to the specified number.
IF( <i>condition, expression1, expression2</i> )	If <i>condition</i> evaluates to TRUE, <i>expression1</i> is returned. If <i>condition</i> evaluates to FALSE, <i>expression2</i> is returned.  Example:  IF(CELLVALUE(>=75, CELLVALUE(1,1), CELLVALUE(1,2)) will return the (first) value in the first row and column of the table if the (first) value in the current cell is greater than or equal to 75, otherwise it will return the (first) value in the first column and second row of the table.
LN(val)	Returns the natural logarithm of val.
LOG(val, base)	Returns the logarithm of val to the specified base.
LOG10(val)	Returns the logarithm of val to base 10.
MAX(val1, val2, ...)	Returns the maximum from a set of values.  Example: MAX(COLVALUES()) will return the maximum of the values in the current

	column.
MIN(val1, val2, ...)	Returns the minimum from a set of values.  Example: MIN(COLVALUES()) will return the minimum of the values in the current column.
NEG(val)	Returns the negation of val.
POWER(val, power)	Returns the number val to the specified power.
ROUND(val, [decimals])	Returns the number with the specified number of decimals nearest the specified value. If number of decimals is not specified, it will return the nearest integer.
ROWVALUES() ROWV ()	Returns the values in all the cells of the current row. If these cells contain several values (count, horizontal and/or vertical percent), the first value in each cell will be returned.  Example:  AVERAGE(ROWVALUES()) will return the average of the values in all the cells of the current row. If these cells contain several values (count, horizontal and/or vertical percent), the average of the first values in the cells will be returned.
ROWVALUES(start, end, [C   HP   VP, row])  ROWV (start, end, [C   HP   VP, row])	Returns the count/horizontal-/vertical percent values of the specified cells/row. This gives the ability to indicate a subset of values in a specific row.  C = Count HP = Horizontal Percents VP = Vertical Percents  Examples:  MAX(ROWVALUES(2,4)) will return the maximum of the values in the columns 2 to 4 in the current row. If these cells contain several values (count, horizontal and/or vertical percent), the maximum of the first values in the cells will be returned.  AVERAGE(ROWVALUES(1,5,VP) will return the average of the vertical percents in columns 1 to 5 in the current. If these cells do not contain vertical percents, you will get an error message.  MIN(ROWVALUES(1,5,VP,3) will return the minimum of the vertical percents in columns 1 to 5 in row 3 in the table. If these cells do not contain vertical percents, you will get an error message.
SQRT(val)	Returns the square root of val.
SUM(val1, val2, ...)	Sum of the specified numbers.  Example:  SUM(ROWVALUES()) will return the sum of the values in the current row.

**Note:** Conditional formatting uses rounded values, so CELLVALUE(>0.5 will be true if Number of decimals is set to 1 and the value is 0,4999, because 0.5 will be displayed to the report viewer. This applies for all values returned from CELLVALUE, ROWVALUES and COLVALUES.

The following operators are supported:

Operator	Description
+	Addition
-	Subtraction
/	Division
<	Less than
%	Remainder (modulus) obtained by dividing one numeric expression into another
^	Power
>	Greater than
<=	Less than or equal
>=	Greater than or equal
=	Equality
==	
<> !=	Inequality
AND &&	Logical AND
OR 	Logical OR
NOT !	Logical NOT

The following constants are supported:

Constant	Description
COL	Current column number.
ROW	Current row number.
COLS	Total number of columns.
ROWS	Total number of rows.

TCOL	Total column for a horizontal distribution. -1 if no such column can be found.
TROW	Total row for a vertical distribution. -1 if no such row can be found.

### 8.11.3. Using a Formula - Example

To use a Formula object, drag it from the toolbar and drop it into the required place in the table, then double-click on the object to open its properties page.

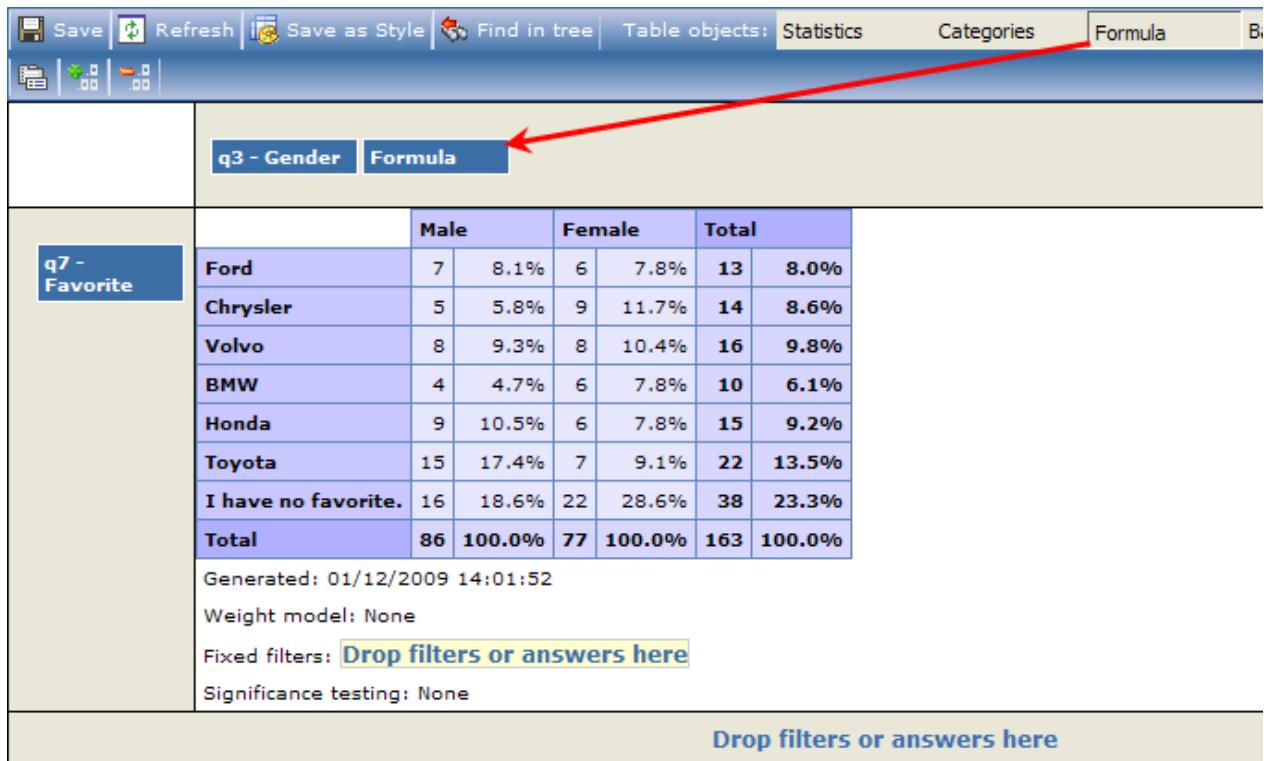


Figure 298 A Formula object added to a table

In the example, assume we want the table to calculate the difference between the Male and Female results. The settings on the Formula object define the arithmetic operator and the arguments of the arithmetic operation.

1. Select the Type of formula you wish to use (see Type on page 232 for more information). In this case, as the calculation is simple, we will use **Operators**.
2. Select the required operator, in this case "subtraction".

The four standard arithmetic operators are available: Subtraction (-), addition (+), division (/) and multiplication (\*).

3. Select a reference type. We will use **Relative**.
  - o **Relative** means that the arguments will be found by counting columns or rows from the Formula's position in the table.
  - o **From start** means that you specify the arguments by counting columns or rows from the beginning of the table.
  - o **From end** means that you specify the arguments by counting columns or rows from the end of the table, moving towards the beginning of the table.

4. Define the left and right Arguments, based on the Reference Type selected. For this example, the Arguments are -2 and -1 respectively.

Negative numbers indicate a number of columns or rows before the one containing the formula; positive numbers indicate a number of columns or rows after the formula.

5. Type a header text for the column into the Label fields, for each language; in this case, Gap is used.

If a percentage value is required, select the Percent checkbox.

**Note:** Depending on the type of calculation performed, the "percentage" value may not be logical/useful. For example, if the result of a subtraction operation is 15 and you check the Percentage box, then the value presented will be 1500%. However if the result from a division calculation is 0.17 and you want the result as a percentage, check the Percent box to present the result as 17%.

The properties should look as below:

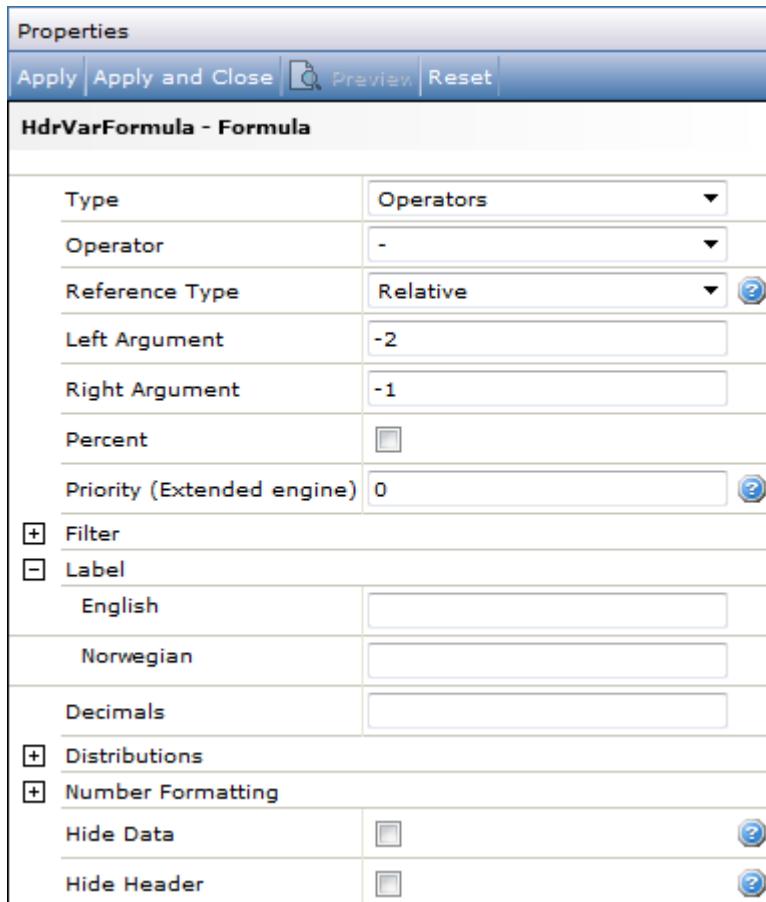


Figure 299 Formula properties

6. Click **Apply**.

The table should look as below.

	q3 - Gender   Formula				
q7 - Favorite not in ( 98 )		Male	Female	Gap	
	Ford	7	8.1%	6	7.8%
	Chrysler	5	5.8%	9	11.7%
	Volvo	8	9.3%	8	10.4%
	BMW	4	4.7%	6	7.8%
	Honda	9	10.5%	6	7.8%
	Toyota	15	17.4%	7	9.1%
	I have no favorite.	16	18.6%	22	28.6%

Figure 300 Example of the formula element in use

#### 8.11.4. Further Example

A case may arise where you need to set all the values in a column in an aggregated table. For example, you may need to create a column to hold a weighting value specific for each row. This can be achieved using a formula. The example below shows a table where the third column has been preset with the values 5.6, 3.4, 45 and 456.

	q3 - Gender   Formula			
q6_4 - Speed		Male	Female	
	1	20	9	5.6
	2	12	13	3.4
	3	11	7	45.0
	4	16	16	456.0
	5	9	12	456.0
	Don't know	18	20	456.0
	AVG	2.7	3.2	456.0

Generated: 02/12/2009 09:08:56  
 Weight model: None  
 Fixed filters: Drop filters or answers here  
 Significance testing: None

Drop filters or ans

Figure 301 Setting the values in a column

To do this:

1. Create a Formula object in the table (see Formula on page 230 for more information).
2. Double-click on the Formula object to open its Properties page.
3. Set Type to Expression, then type the following expression into the Expression field:

**IF(row=1, 5.6, IF(row=2, 3.4, IF(row=3, 45, IF(row=4, 456, CELLVALUE(col,4)))))**

There must be one IF condition for each data row in the table that is to have a specified value. Any rows not specifically stated in the condition will be given the value specified by the ELSE part of the condition CELLVALUE(col,4). In this example, unspecified rows will be given the value specified for row 4 of the same column. You could for example state that unspecified rows be given the value specified for row 5 of the previous column. In this case the ELSE part of the condition would read CELLVALUE(col-1,5), and the value given to all unspecified cells would then be 12.

The data rows in the table are numbered consecutively, starting from 1 for the uppermost data row. (Note that this table has 1, 2, 3 etc. in the first column - this is coincidental.) When the IF condition is run, the system will read through the condition to check whether a value is specified for the first row in the table. If so, then that value will be added to the cell; if not, then the value specified by the ELSE part will be added. The system will then look for a value for the second row in the table, and so on.

**Note:** This solution will not work if you use Hide Empty Headers or Masking in the table.

## 8.12. The Correlation Table Object

Correlation is a statistical technique that can show whether and how strongly pairs of variables are related. For example, height and weight are related; taller people tend to be heavier than shorter people. The relationship isn't perfect. People of the same height vary in weight, and you can easily think of two people you know where the shorter one is heavier than the taller one. Nonetheless, the average weight of people 5'5" is less than the average weight of people 5'6", and their average weight is less than that of people 5'7", etc. Correlation can tell you just how much of the variation in peoples' weights is related to their heights.

Although this correlation is fairly obvious, your data may contain unsuspected correlations. You may also suspect there are correlations, but don't know which are the strongest. An intelligent correlation analysis can lead to a greater understanding of your data (see Considerations when using Correlations on page 242 for more information).

There are several different correlation techniques. Reportal uses the most common type, called the **Pearson** or **product-moment** correlation. The full formula is included in Appendix A ([go to Correlation Coefficient Formulae for more information](#)).

### 8.12.1. Correlation Coefficient

The result of a correlation calculation is called the **correlation coefficient**. It ranges from +1, indicating a perfect positive linear relationship, to -1, indicating a perfectly negative linear relationship.

The closer this value is to +1 or -1, the more closely the two variables are related.

If the value is close to 0, it means there is no relationship between the variables.

If the correlation coefficient is positive, it means that as one variable gets larger, the other also gets larger. If the value is negative, this means that as one variable gets larger, the other gets smaller (often called an "inverse" correlation).

### 8.12.2. Considerations when using Correlations

Like all statistical techniques, correlation is only appropriate for certain kinds of data. **Correlation works for quantifiable data** in which numbers are meaningful, usually quantities of some sort. It cannot be used for purely categorical data, such as gender, brands purchased, or favorite color. The question must therefore be a Numeric, or a Single with a score.

Another key thing to remember when working with correlations is that **correlation does not show causation**; never assume a correlation means that a change in one variable causes a change in another. Sales of computers and athletic shoes have both risen strongly in the last several years and there is a high correlation between them, but you cannot assume that buying computers causes people to buy athletic shoes (or vice versa).

The second caveat is that the Pearson correlation technique works best with linear relationships: as one variable gets larger, the other gets larger (or smaller) in direct proportion. It does not work well with curvilinear relationships (in which the relationship does not follow a straight line). An example of a **curvilinear relationship** is age and health care. They are related, but the relationship does not follow a straight line. Young children and older people both tend to use much more health care than teenagers or young adults.

### 8.12.3. How to Create a Correlation

In the following example, we are going to correlate a set of statements regarding different aspects of quality with a total quality score, to see which areas have the most impact on total satisfaction. In the example, the statements have been collected in a grid.

1. Add the Grid to a new aggregated table in rows, as shown below.

Note that the header has the “collapsed” property set.

Total Satisfaction Overall	
Content	0.19
Usability	0.26
Knowledge	0.48
Ownership	0.94
Professionalism	0.70
Understanding of Problem	0.75
Time to Resolution	0.64
Clarity of solution	0.65

Figure 302 Example of a statement grid added to a table

2. Add the correlation object to the column area by selecting it from the table objects area of the table toolbar and dragging it onto the column area.

The correlation header will indicate that no variable has yet been assigned to this header.



Figure 303 The empty correlation header

3. To assign the variable that contains the question that you wish to correlate your individual categories to (in this case, a variable that contains a total quality score), drag the variable from the data source directly onto the correlation header item (the blue box).

When the variable is dragged correctly onto the correlation header item, it will turn green to indicate that you may now drop the variable to assign it to the correlation header.



Figure 304 The correlation header item ready for the variable

4. Refresh the table to return the correlation value of overall satisfaction for each of the statements in the rows.

In this example, the statement concerning Ownership (with a correlation value of 0.94) is most likely to impact overall satisfaction, whilst Content (with a correlation value of 0.19) is least likely to impact total satisfaction.

Total Satisfaction Overall	Correlation Value
Content	0.19
Usability	0.26
Knowledge	0.48
Ownership	0.94
Professionalism	0.70
Understanding of Problem	0.75
Time to Resolution	0.64
Clarity of solution	0.65

Figure 305 The resulting correlation table

### 8.12.4. Correlation Header Properties

To access the correlation header properties, double-click the header object or right-click on it and select **Edit**. The properties page opens.



*Figure 306 The Correlation header properties*

The properties are as follows:

- **Decimals** - sets the number of decimals that the correlation calculation is to display.
- **Hide Data** - if selected, all data below this header is hidden from the table. The data is removed from the table after formulas are calculated. This setting only applies to leaf headers, that is headers without other headers nested inside. This setting is useful if you wish to use some data in a formula calculation but do not want to include the data in the table. In the designer, you can choose see the hidden data by selecting "Show Hidden Data".
- **Hide Header** - if selected, the header cells are collapsed in the table if possible. This setting is useful if for example the header is only to be used to filter a column.
- **Label** - allows a label to be set for the correlation column to display on the table.

### 8.12.5. Using Correlation in Charts

Tables containing correlation may also be used in charts. In the following example, we will create an XY plot of the average category score to its correlation value (impact towards total satisfaction).

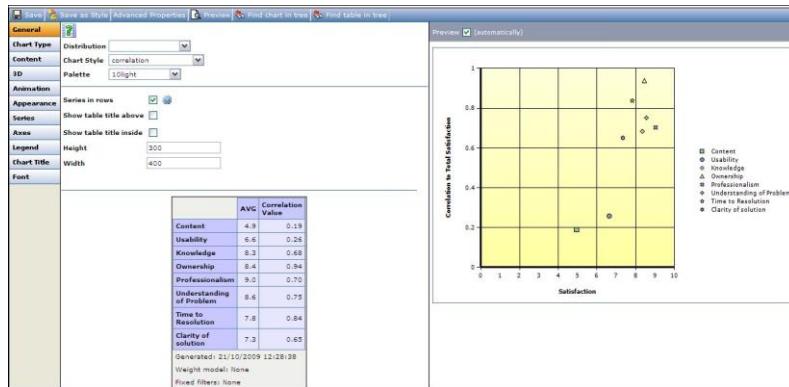
1. First, a statistics table object must be added to the rows to display the average category scores.

Avg Satisfaction Drivers	Statistics	Correlation overall_val	Correlation Val
	Avg	Correlation Value	Correlation Val
Content	4.9	0.2	0.2
Usability	6.6	0.3	0.3
Knowledge	6.3	0.7	0.7
Character	6.4	0.9	0.9
Professionalism	9.0	0.7	0.7
Understanding of Problem	6.6	0.8	0.8
Time to Resolution	7.8	0.8	0.8
Client Satisfaction	7.9	0.7	0.7

Generated: 10/10/2009 14:11:15  
 Insight model: none  
 Filter (None - Drag filters or answers here)  
 Significance testing: None

*Figure 307 A Statistics table object added to the table*

2. This table can now be applied to a chart.



**Figure 308 The table applied to a chart**

On the Content tab, Correlation will need to be selected to assign the correlation values on the chart.



**Figure 309 The Content tab**

## 8.13. The Bar Chart Object

You can add a bar chart to an aggregated table to provide for example visual feedback to the viewer or to display the answers to another question for comparison.

There are three methods of adding a bar chart to a table:

1. The **Free Form** method - add the bar chart object to a table in the same way as any other object; by dragging it from the table designer toolbar and dropping it into the table Rows, Columns and/or Data dimension as appropriate.

This method will add a "blank" bar chart to the table, and you must then go into the bar chart's Properties sheet to specify the series to be displayed.

2. The **Quick Start** method - right-click on a question in the table Rows, Columns and/or Data dimension, and select **Add bar chart**.

This method will automatically attach the bar chart to the question selected, so the bar chart will be displayed immediately with data. You will then only need to open the bar chart Properties sheet if you wish to change the settings.

3. **Reportal Scripting** - scripting of the properties is supported by syntax highlighting.

The first two methods are described in this documentation.

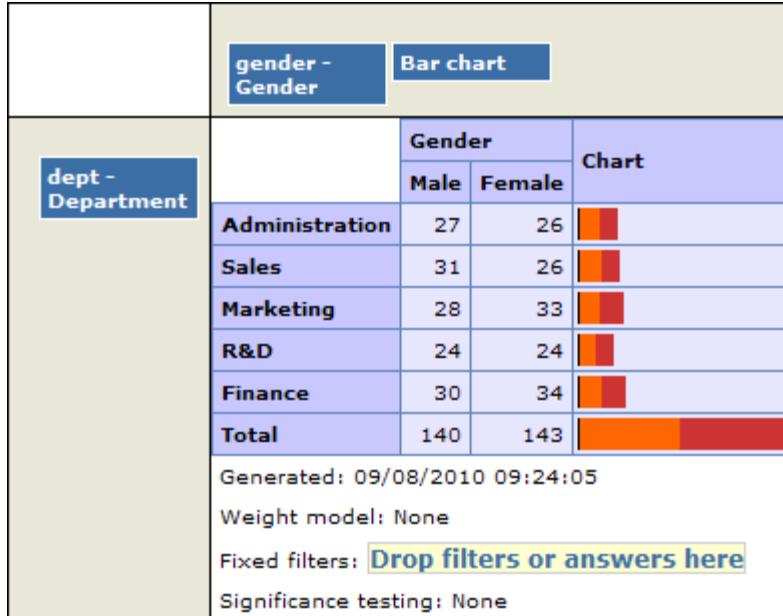


Figure 310 A table with a bar chart object in the columns area

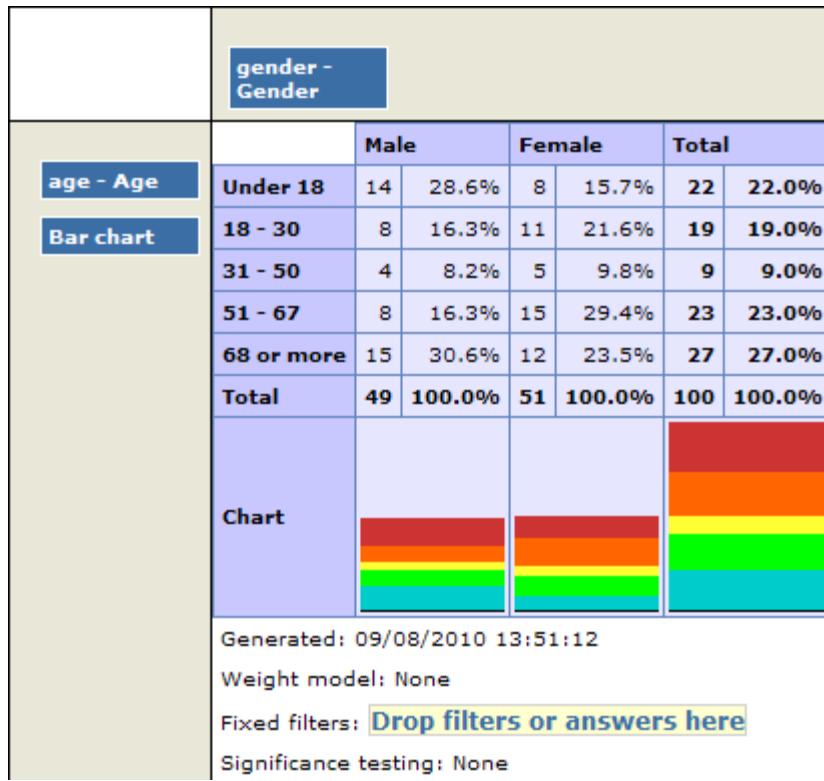


Figure 311 A table with a bar chart object in the rows area

To open the bar chart properties sheet, right-click on the bar chart object and select **Properties** from the drop-down menu (see The Bar Chart Properties Sheet on page 247 for more information).

Hover your mouse pointer over a section of a bar chart to display the title of that section.

### 8.13.1. The Bar Chart Properties Sheet

To open the bar chart properties sheet, right-click on the bar chart object and select **Properties** from the drop-down menu.



*Figure 312 The bar chart properties sheet*

The properties are as follows:

- **Chart Type** - Select the type of chart to be used. The options are:
  - **Bar** - the bars are displayed with widths proportional to the data values relative to the other bars in the chart.  
In the figure below the Total row, being the largest with its values of 140 and 143, provides the basis of the width ratios for the remainder of the column. The widths of the bars displayed in the other rows are then based proportionally on the width of the Total row.

	Gender		Chart
	Male	Female	
<b>Administration</b>	27	26	
<b>Sales</b>	31	26	
<b>Marketing</b>	28	33	
<b>R&amp;D</b>	24	24	
<b>Finance</b>	30	34	
<b>Total</b>	140	143	

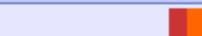
*Figure 313 Chart Type set to Bars*

- **100% Bar** - each bar in each table row is displayed to the full width of the Chart column, with the bar sections being proportional to the data values in the individual row.

	Gender		Chart
	Male	Female	
<b>Administration</b>	27	26	
<b>Sales</b>	31	26	
<b>Marketing</b>	28	33	
<b>R&amp;D</b>	24	24	
<b>Finance</b>	30	34	
<b>Total</b>	140	143	

*Figure 314 Chart Type set to 100% Bar*

- **Label** - the text to be displayed at the top of the bar chart column. A text field is available for each language selected for the report.
- **Size** - the width in pixels of the Chart column. Default is 100. Note that the chart bars themselves can be set separately.
- **Thickness** - the width, in pixels or percent of the chart row height, of the chart bars. Default is 100%.
- **Reverse** - by default the bar chart is built from left-to-right. Check this box to build it from right-to-left.

	Gender		Chart
	Male	Female	
<b>Administration</b>	27	26	
<b>Sales</b>	31	26	
<b>Marketing</b>	28	33	
<b>R&amp;D</b>	24	24	
<b>Finance</b>	30	34	
<b>Total</b>	140	143	

*Figure 315 A bar chart with Reverse selected*

- **Bars** - opens a settings window, enabling you to set threshold values, colors, expressions etc.

### 8.13.2. The Bar Chart Collection Editor Window

In the bar chart Properties sheet, click the  button beside the Bars property to open the Collection Editor overlay.

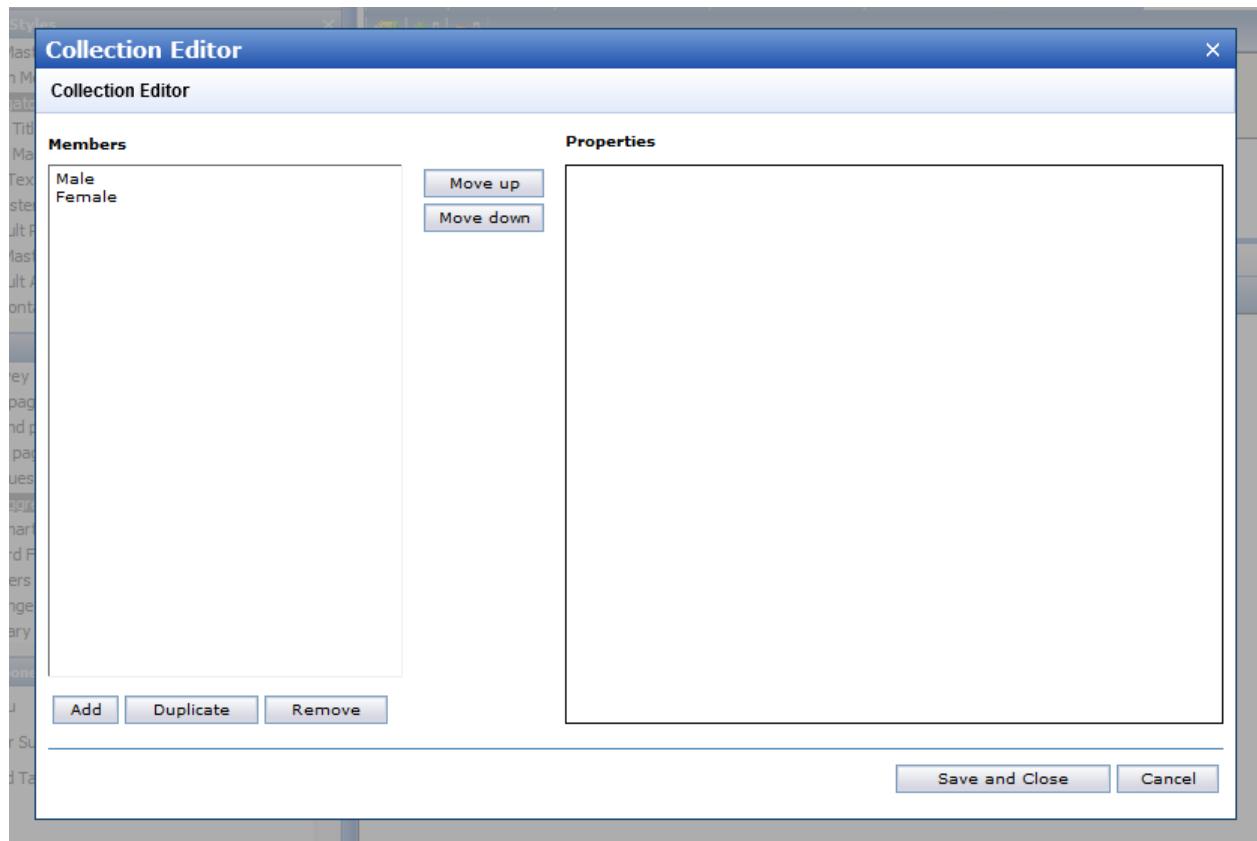
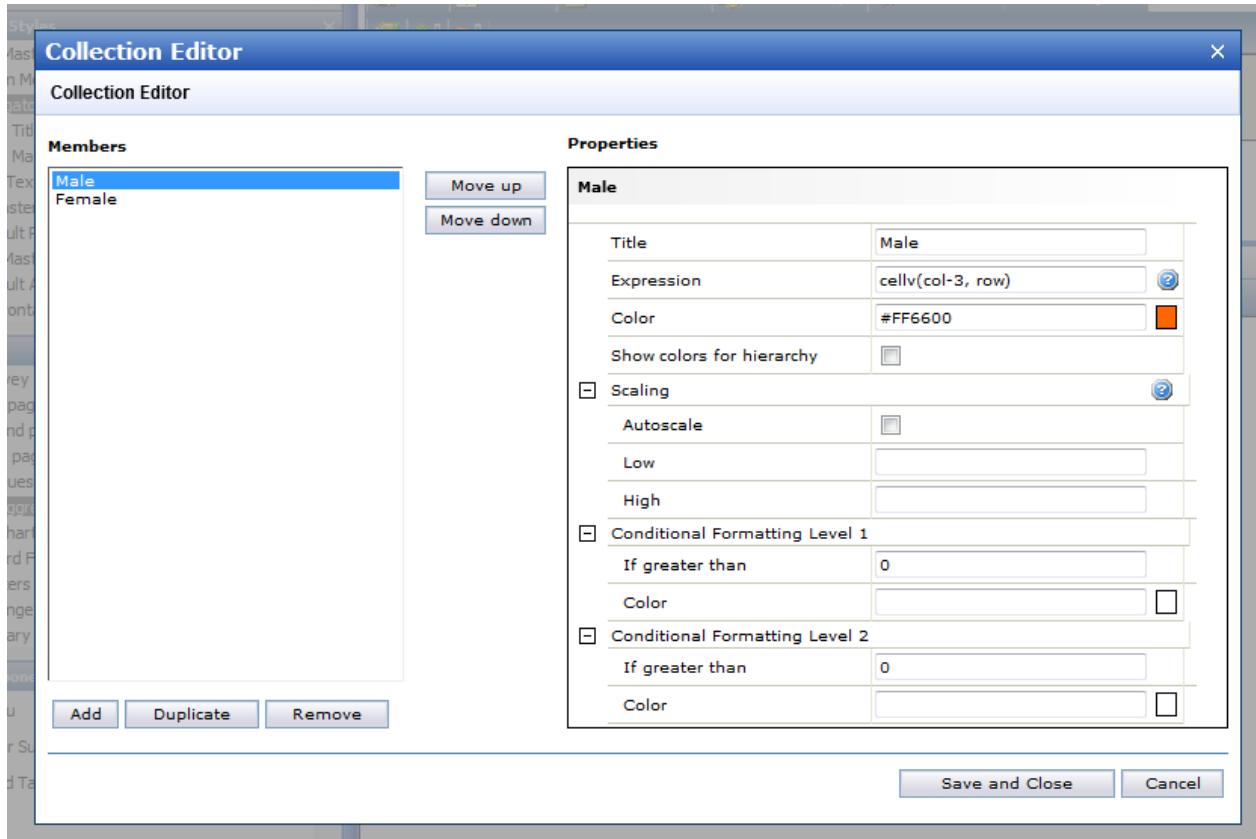


Figure 316 The bar chart Collection Editor overlay

Click on an item in the Members column to open the properties for that item.



**Figure 317 The Male item is selected**

The buttons and properties are as follows:

- **Move up / Move down** -the data elements will be displayed in the chart, from left-to-right (right-to-left if Reverse is checked) in the order in which they are listed in the members column. Select a member and click these buttons as appropriate to change the order in which the data elements are displayed..
- **Add** - adds a new "undefined" member to the list. You must then open the new member's Properties page and add the appropriate expression.
- **Duplicate** - if you wish to add another member that is a close copy of an existing member, select the member and click this button to create a duplicate copy. You can then open the copy's Properties page and edit it as required.
- **Title** - the title of the selected item, as it will be displayed when the mouse pointer is hovered over the chart.
- **Expression** - the expression that specifies which data is to be presented in the bar. The same expression language is used here as in other areas of Reportal.
- **Color** - defines the color to be used in the bar to present the data specified in Expression. Type a color name or code into the field, or double-click on the color sample square to open the color picker.
- **Show colors for hierarchy** - check to access further color properties allowing you to set different colors for different levels in for hierarchical reports.
- **Scaling** - if no limits are set, then the bar chart will be scaled from zero to the maximum value. Add values to the Low and High fields as appropriate to scale to the set values, or select Autoscale to scale from minimum to maximum values in the table.
- **Conditional Formatting Level 1/2** - you can add two levels of conditional formatting to the bar chart such that any results greater than certain values will be displayed in a different color.

## 8.14. The Content Object

The Content header variable is an empty "placeholder" to which you can add cell values using scripting, thus allowing you to create tables with custom cell values. The header variable is used to create empty rows and columns, and you can then use the header properties to specify row/column labels and formatting. Note that cell values can only be defined using script; it is not possible to specify values via the table designer. Refer to the Confirmit Scripting manual and the Reportal Scripting documentation for further information.

## 8.15. Using Open Text Questions in Aggregated Tables

You can also add open text questions to aggregated tables. When an open text question is used, a category list is created dynamically from the actual data; each unique answer becomes a category.

**Note:** The open text question must have a value set for its Field Width property and must be marked as an BitStream Variable in its question properties sheet in the Authoring questionnaire designer. Refer to the Authoring User Guide for further details.

To use an open text question in an aggregate table:

1. Create an aggregated table and drag the open text question to the rows or columns as required.
2. Add another question to the other axis of the table as necessary.
3. Open the header variable for the open text question (see The Header Variable Property Sheet on page 197 for more information), and uncheck "Collapsed".
4. Under Sorting:
  - o Check "Enabled" and specify the header by which the list is to be sorted.
  - o Set a value for "Top N" and optionally "Bottom N". At least one of these values must be non-zero. For the reports based on a Hub the sum of both must not exceed 200 since the table in hub-based reports can only show a maximum of 200 answers.
5. Save the changes and refresh the table.

The table will now show the various answers to the open text question as categories. The specified number of "Top N" and "Bottom N" categories are shown, and the Categories are sorted by the count values in the specified header in the other axis of the table.

The example below shows an aggregate table using the Name open text question in Rows and a Gender single question in Columns. "Top N" is specified as 10, so 10 names are currently listed (test data is used here, so the names are sequences of randomly generated letters). The number of Males and Females and totals using each name is given in the appropriate columns. In this case, the full data set comprises 40 males and 31 females.

		q3 - Gender		
q2 - Name		Male	Female	Total
	aflj	1	0	1
	ahj	0	1	1
	arhl	1	0	1
	avfgame	1	0	1
	baue	1	0	1
	blqyn	0	1	1
	bnqmyc	0	1	1
	bt	1	0	1
	btlausptit	1	0	1
	buysyue	1	0	1
<b>Total</b>		<b>40</b>	<b>31</b>	<b>71</b>

Generated: 03.02.2011 09:54:30  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

Figure 318 Example of an open text question being used in an aggregated table

## 8.16. Conditional Formatting

Use Conditional Formatting in aggregated tables to highlight cells in a table based on results. This highlighting is dynamic and is controlled by the results displayed in the table, so as respondents reply to the survey and the report is updated, different cells may be highlighted.

In the example below, conditional formatting is applied to column 2 ("Percent favorable") and column 5 (average). In column 2, scores below 50% are highlighted with a red background color, and scores greater than or equal to 55% are highlighted in green. In the last column, averages greater than or equal to 3.5 are highlighted in green.

	Percent unfavorable	Percent favorable	Don't know	Total	AVG
Product/service quality	41.2%	53.7%	5.2%	100.0%	3.44
Value for the price	41.5%	51.8%	6.7%	100.0%	3.44
Purchase experience	40.7%	51.3%	8.0%	100.0%	3.39
Installation or first use experience	43.3%	49.0%	7.7%	100.0%	3.34
Usage experience	40.0%	52.2%	7.8%	100.0%	3.42
After purchase service	39.3%	55.7%	5.0%	100.0%	3.50
Repeat purchase experience	44.0%	50.2%	5.8%	100.0%	3.39

Figure 319 Conditional Formatting applied to a table

**Note: Conditional Formatting uses the rounded values of a cell.**

Once you have set up a conditional formatting area, you can duplicate it to save time when creating more areas.

### 8.16.1. How to Apply Conditional Formatting to an Aggregated Table

1. In the Report toolbox, go to the table to which you wish to apply the conditional formatting.
2. Right-click on the table in the toolbox and select **Conditional Formatting**, or right-click on the table in the table designer page and again select **Conditional Formatting**.  
The upper frame in Conditional Formatting is a list of areas (columns or rows) in the table where conditional formatting is to be applied. Initially this list will be empty.
3. To add a new area, click **New Area** in the upper right corner of the list.

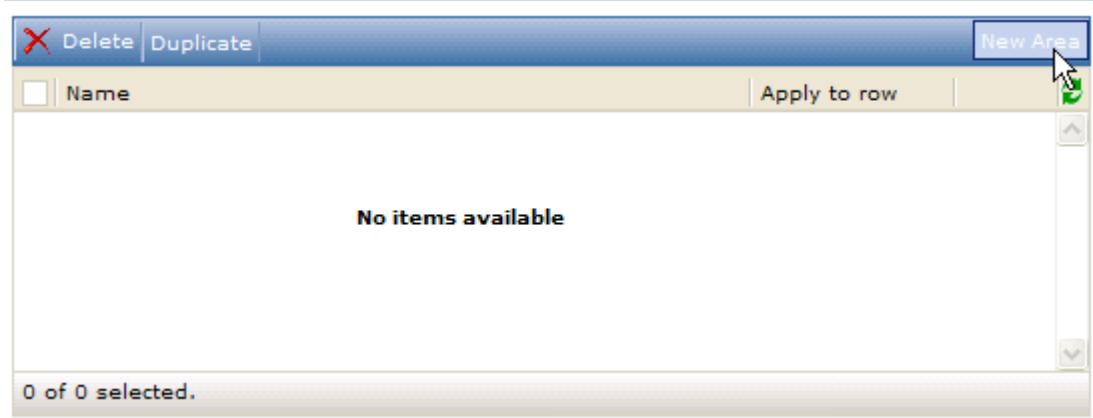


Figure 320 Adding a new Conditional Formatting Area

The input page opens at the **Area** tab.

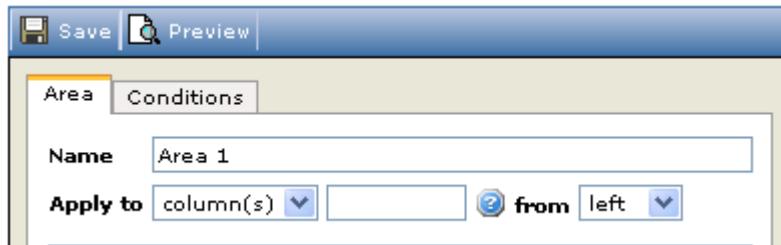
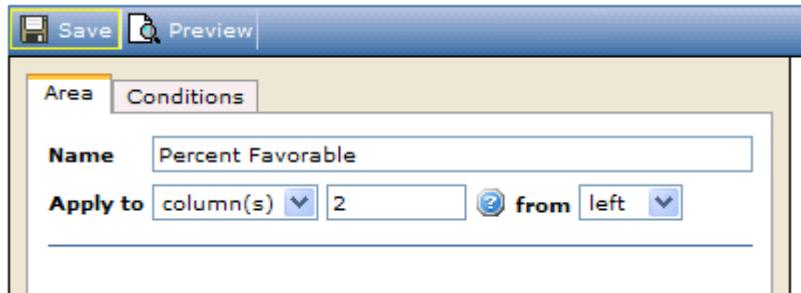


Figure 321 The Conditional Formatting Area tab

4. In the Area tab, specify whether the conditional formatting is to be applied to the columns or rows in the table.
5. Specify which columns/rows it is to be applied to, and where the system is to count from to find those columns/rows. For example, select **Rows, Top**, and type in **3**, to apply the formatting to the third row down from the top.  
To apply the same conditional formatting to more than one column or row, use comma (,) and/or dash (-) separators. For example, select **Columns, 1,2,6-8** and **Left** to apply the same conditional formatting to data columns 1, 2, 6, 7 and 8 counting from the left side of the table.
6. To simplify future reference, give the area a name.

By default new areas are named "Area 1", "Area 2" and so on.

**Figure 322 Area Definition**

In the example below, two areas for conditional formatting are defined: Column 2 from left, and column 1 from right (the last column).

Name	Apply to row
Percent Favorable	False
Average	False

**Figure 323 Conditional Formatting Applied to Two Areas**

7. Go to the **Conditions** tab.

For each area, define one or more Conditions for the conditional formatting. Each Condition must include an Expression (see Expressions on page 235 for more information) and a Style (see HTML Styles on page 255 for more information). If the Expression equates to TRUE, then the selected Style is applied to the cells specified in the Area tab. Note that you may need to create the styles before you can use them.

8. On completion, click **Save**.

9. Click **Preview** to see the condition applied to the table.

Below is an example of the definition for conditional formatting on the "Percent favorable" column in the example above.

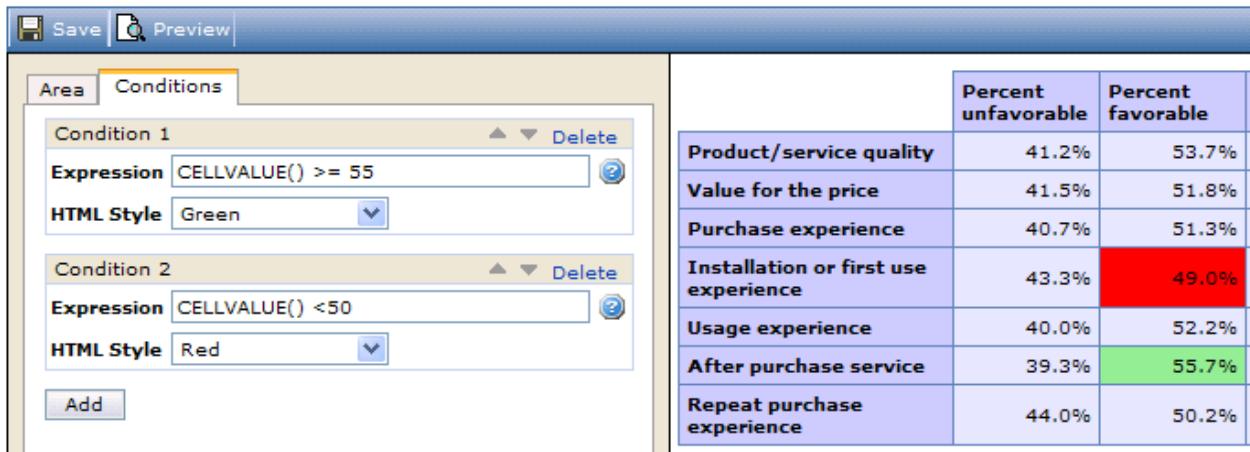


Figure 324 The Conditions tab

Once you have set up a conditional formatting area, you can duplicate it to save time when creating more areas. To do this, in the upper frame check the box beside the area you wish to duplicate and click Duplicate. A copy of the area is places in the list; select it and edit as necessary.

### 8.16.2. HTML Styles

In the **Conditions** tab, click the down-arrow beside the HTML Style field to open a list of the styles available, and select the desired style from the list. These styles are located in the **Styles > HTML** folder in the Layout and Styles toolbox. In the example, two simple styles called **Green** and **Red** are defined which allocate an appropriate background color to any cells that meet the specified criteria.

To edit a style, right-click on it and select **Properties** or double-click on it, to open the style's Properties page.

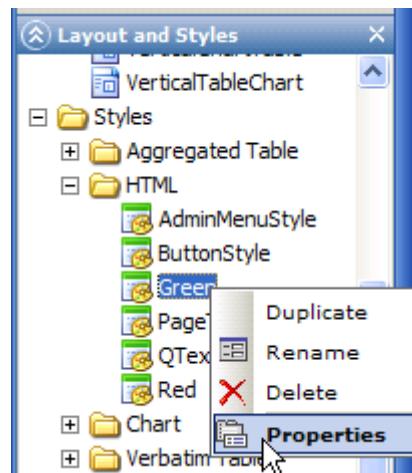


Figure 325 HTML Styles

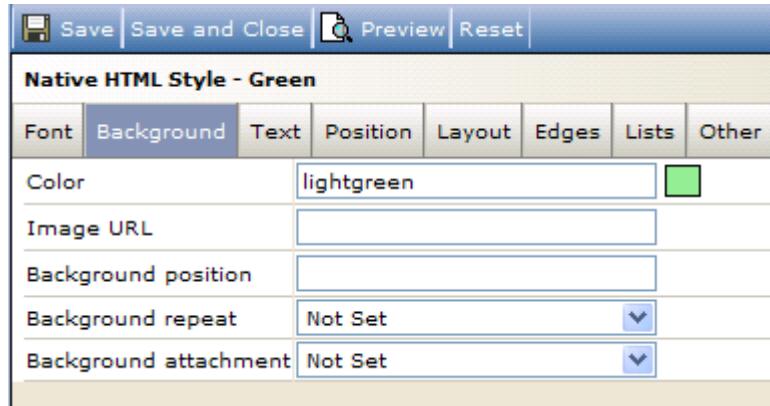


Figure 326 The properties page for the "Green" HTML Style

HTML style properties that are not set will be inherited from the table. In the example, borders and fonts are inherited from the style settings on the table (see The HTML Styles on page 708 for more information).

### 8.16.3. Conditional Formatting Settings on Aggregated Table Style

If you wish to reuse the same Conditional Formatting Settings across a table set, you may apply the setting to an Aggregated Table Style instead of setting it individually on each individual table.

To modify the Conditional Formatting Settings on an Aggregated Table style, right-click the style in the Layout and Styles toolbox and selecting **Conditional Formatting**.

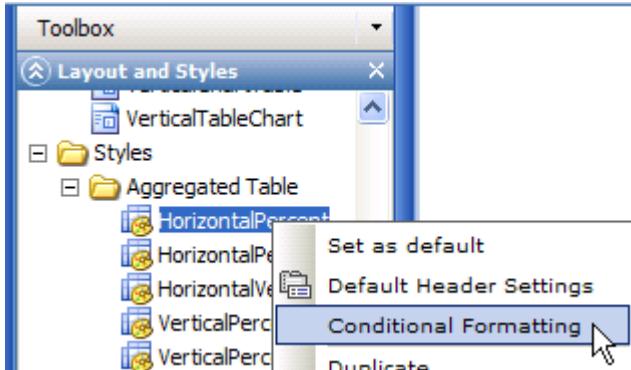


Figure 327 Setting Conditional Formatting for an aggregated table style

## 8.17. Query Timeout

It is easy to set up complex table designs that can produce extremely large tables. As Reportal is a shared environment and the tables generate real-time results by running queries directly against the database, some safeguards have been included in the system. These will prevent users from inadvertently causing excessive strain on the server, thereby affecting all other users.

Two types of timeouts are built into the system: one occurs if a single query takes too long, the other occurs if all the queries needed to compute the entire table would take too long. When working on single questions, you are usually able to compute all the answers in one query. When working on grid and multi questions however, several queries are needed to compute the results of the table.

**Note:** These timeouts only apply for queries performed directly on the survey database. If you use BitStream files instead, no timeout restrictions will apply.

If you receive a timeout message, try to reduce the number of queries and their complexity by:

- Reducing the number of variables in the table.
- Reducing the answer lists by using masking.
- Trying to avoid nesting several items on top of each other.

If you receive a timeout message on a report page, and the report page has several tables, you could also try to remove one or more of the tables from that page and set it up on a separate page.

## 9. The Chart Designer

Confirmit Report uses the Highcharts component by default, and the Dundas chart component can be selected if desired. All chart generation and image production is performed on the server, so you do not need to install any components or plug-ins to use the Chart Designer.

**Warning:** Confirmit recommends using HighCharts (v2) rather than Dundas (v1) chart component. Confirmit cannot provide support for Dundas chart component as it is no longer supported by the Dundas vendor. Confirmit recommends migrating existing reports from Dundas to HighCharts at the earliest opportunity.

The Chart Designer window is where you create and edit a chart. Each chart has its own window.

**Note:** If when the Page is created the designer chooses a Layout Master that includes both a Table and a Chart element, then the Table and the Chart will be connected automatically. However if the Page is created without both elements then there will be no such connection and you will then have to make that connection "manually". For example, if you first create a page, then add a table, and then add a chart, there will be no connection between the two elements.

**Note also that if you are using a Layout Master that contains more than one table and a chart, the chart will be connected to the first table. And if you are using a Layout Master that has more than one chart, only the first chart will be automatically connected to a table.**

Once you have placed a chart onto a page (see How to Create a Chart on page 258 for more information), you then need to set it up to present the required data. How you go about setting up the chart will depend on which chart design functionality you use: Highcharts (see Setting Up the Chart Using Highcharts on page 263 for more information) or Dundas (see Setting Up the Chart Using Dundas on page 269 for more information).

### 9.1. How to Create a Chart

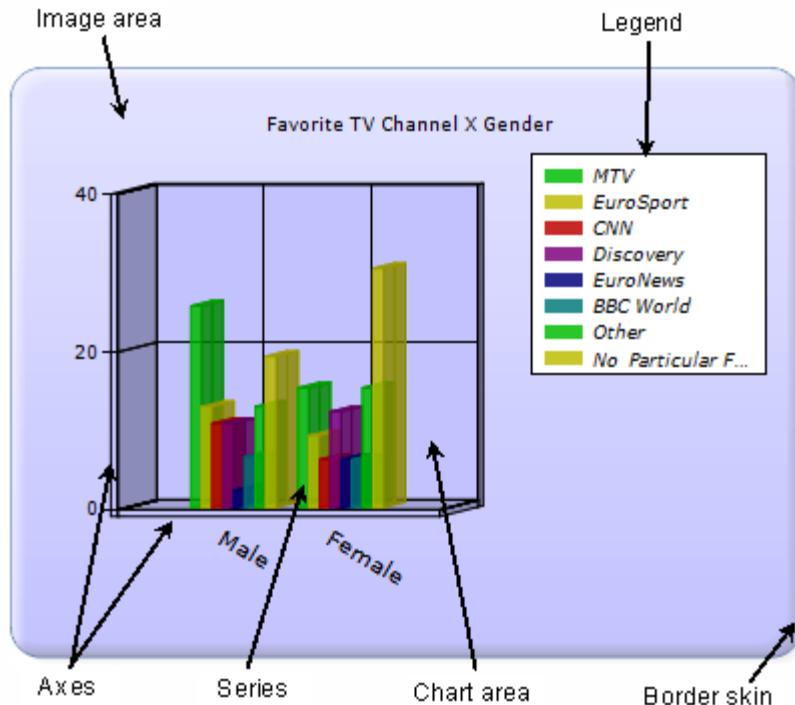
1. In the Report toolbox, double-click on the report page in which you wish to create the chart, to open the Page Editor for that page.
2. Either go to the Visual Components toolbox, drag a **Chart** element up to the Page Editor, and drop the element into the desired position in the page.  
Or, right-click in the appropriate cell in the page's table, and select **Insert Component > Chart** from the menu.
3. Click **Save** to save the changes.  
Note that the page will normally have an HTML table on it. If you drop the Chart element into a cell in the table then you will have considerable control over where on the report page the chart is positioned.
4. To open the Chart Designer for the chart, either double-click on it, right-click on it and select **Design**, double-click on the **Chart** element in the Report toolbox, or right-click on it and select **Edit**.

**Note:** If you open the Chart Designer via the Report toolbox, the Designer's toolbar will include a **Save** button so you can save your work directly. If you open the Designer via the Chart element in the Page Designer, then the toolbar will include an **OK** button instead. Click **OK** to apply any changes you have made to the chart and return to the Page Designer. You must then click the **Save** button in the Page Designer to save the changes.

How you set up the chart and the properties and settings that will be available to you will depend on which chart-design functionality you use; Dundas (see Setting Up the Chart Using Dundas on page 269 for more information) or Highcharts (see Setting Up the Chart Using Highcharts on page 263 for more information). After the release of Confirmit version 18 previously existing charts, which have been created using the Dundas functionality, continue to use Dundas. New charts use the Highcharts functionality by default. You can change from one system to the other in the chart's properties page (see How to Select Dundas or Highcharts on page 260 for more information).

### 9.2. The Parts of the Chart

A chart comprises six main parts:



**Figure 328 The various parts of a chart**

- **Image area** – the entire area covered by the diagram, including the chart, the legend, the title and any labels.
- **Legend** – describes the result series. In the chart shown in the figure above, the chart area is not large enough to include a label for each series. The series are therefore displayed in different colors, and the legend is included to inform the viewer which color represents which set of results.
- **Axes** – the horizontal and vertical edges of the chart area (normally the lower and left edges), against which the labels can be positioned. The X axis is normally the horizontal axis; the Y axis is normally the vertical axis.
- **Series** – the sets of results in the chart. For example, in the chart shown above, the bright red series represents the results for CNN.
- **Chart area** – the area within the image area that is covered by the actual chart.
- **Border skin** – the border of the image area.

The various parts of the chart are set up using the properties available in the Chart Setting tabs (see The Chart Setting Tabs on page 273 for more information).

To explain the Chart Designer we will use a real chart as an example. The Example Chart shown in the figure lower on the page is based on the following Aggregated Table:

The screenshot shows a software interface with a toolbar at the top containing 'Save', 'Refresh', 'Save as Style', 'Find in tree', 'Table objects', and 'Statistics'. Below the toolbar is a table titled 'q6 - Gender'. The table has a header row with columns 'Male', 'Female', and 'Total'. The data rows are grouped under a column labeled 'q7 - Favorite'. The data is as follows:

		Male	Female	Total	
q7 - Favorite	MTV	12	15.2%	17	21.3%
	Euro Sport	6	12.8%	9	11.3%
	CNN	5	10.6%	7	8.8%
	Discovery	5	10.6%	9	11.3%
	EuroNews	1	2.1%	3	3.8%
	BBC World	3	6.4%	5	6.3%
	Other	6	12.8%	11	13.8%
	No Particular Favorite	9	19.1%	19	23.8%
	Total	47	100.0%	80	100.0%

Figure 329 The Aggregated Table used to create the chart in the example

This table is a cross-tabulation using the multi question “Which is your favorite TV channel?” in the rows and the single question “What is your gender?” in the columns. In this case 47 males and 33 females have completed the survey, giving a total of 80 respondents completed. For these results, the Chart Designer gives the following chart suggestion:

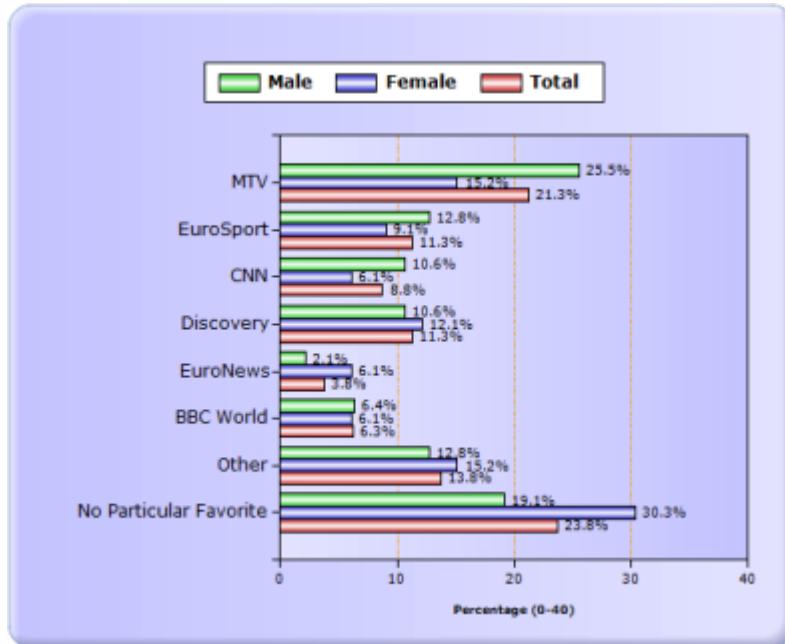


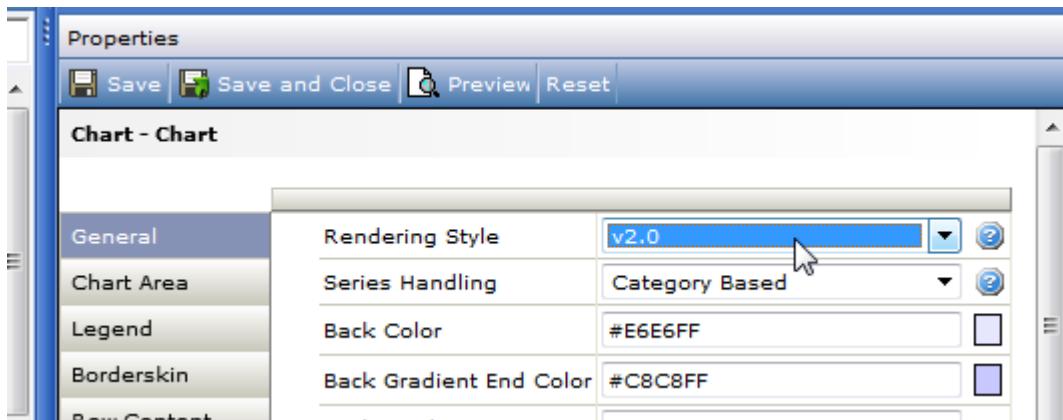
Figure 330 Example Chart

In this chart example a slightly changed version of chart style **Crosstab\_Bar2DLightBlue0-100** from the **Default template # 2b** template is used. When creating charts, if you are satisfied with the suggestion provided by the system, save it and move on to the next one. However, if you want to alter the look-and-feel of the chart, the Chart Designer offers a vast selection of variations.

### 9.3. How to Select Dundas or Highcharts

To select Dundas or Highcharts:

- When the chart is not selected in the report (is not displayed in the chart editor page), right click on the chart component in the report and select **Properties**.
- In the General tab, set Rendering Style to **v1.0** to use Dundas or **v2.0** to use Highcharts.



*Figure 331 Selecting use of Highcharts*

- Click **Save** or **Save and Close**.

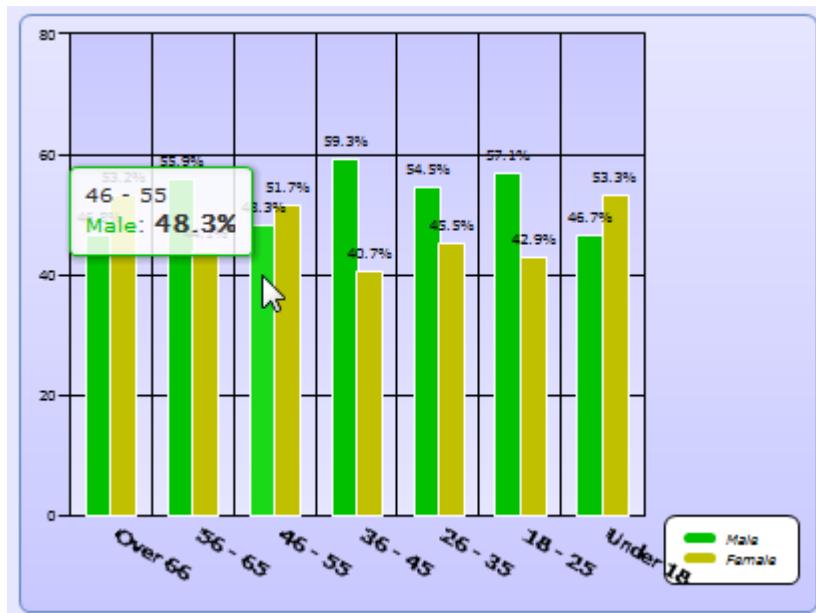
**Note:** Version 2 (Highcharts) is the default for all new reports.

## 9.4. Highcharts

Highcharts is used in new charts by default.

Highcharts gives possibilities for improved chart appearance, additional interactive capabilities and simplified data selection.

- Hover the mouse pointer over points in the chart to display the values.



*Figure 332 Hovering over a series to display the values*

- Click on the chart legend to hide and show the displayed series.

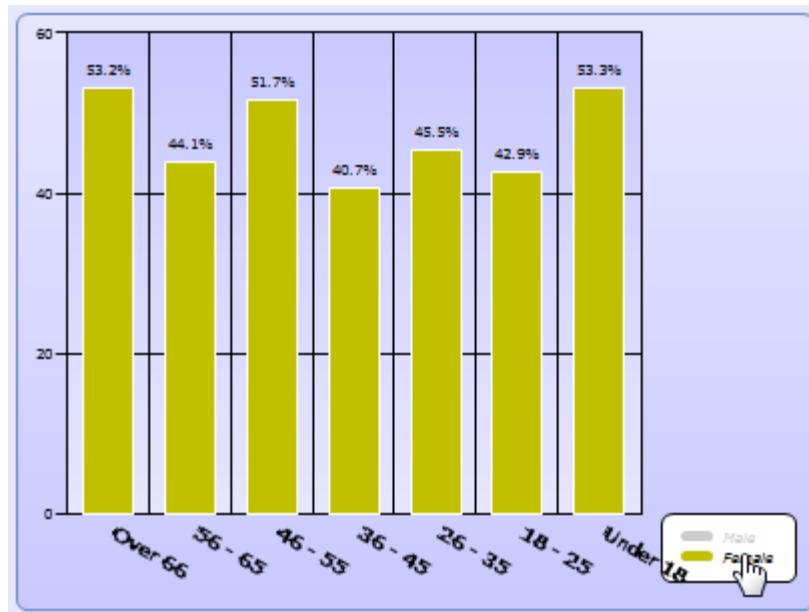


Figure 333 The Male series has been toggled off

- Drag on the chart to zoom in on an area, then click **Reset zoom** to return to the full view.

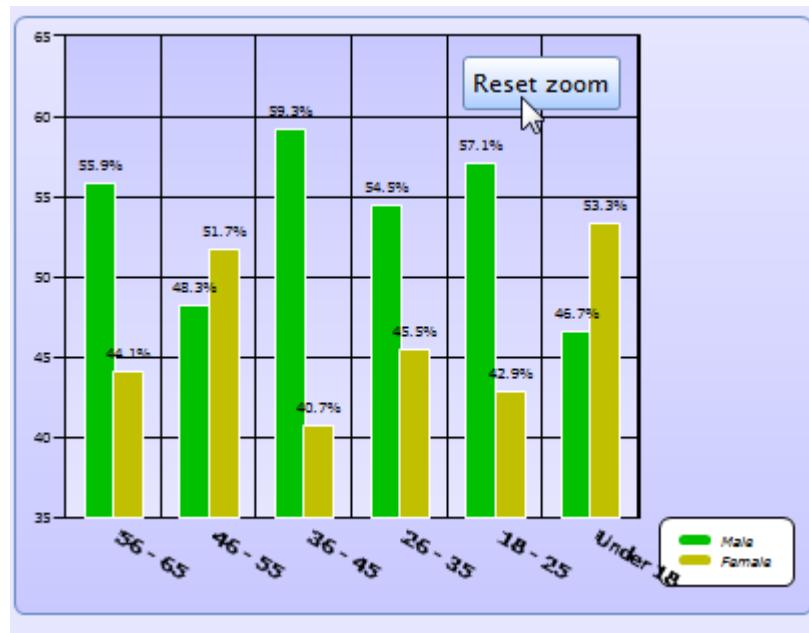


Figure 334 Zooming in on a part of the chart

- If you have more than one distribution available in the table, for example count and vertical percent, you can click in a cell to select that distribution to be presented in the table. Note that this only affects the presentation in the chart; no changes are actually made to the table or the data contained in the table.

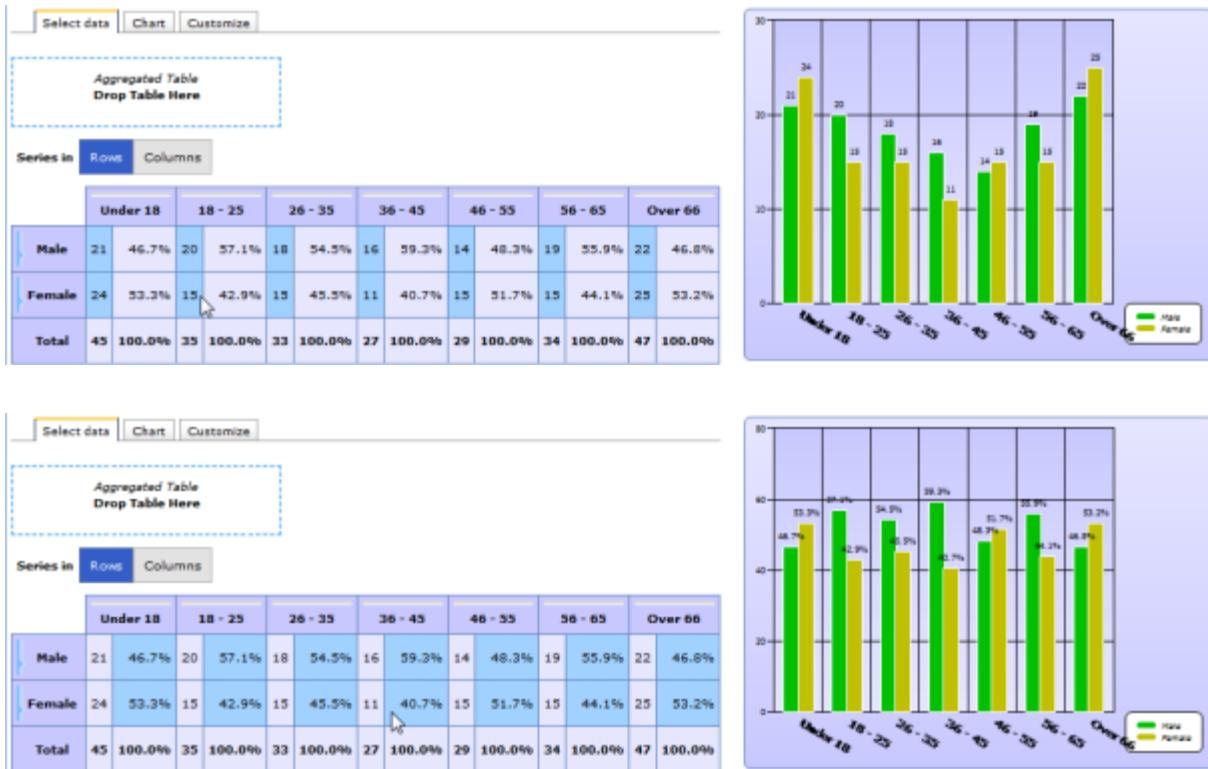


Figure 335 Click in the table to select which distribution is to be presented in the chart

#### 9.4.1. Setting Up the Chart Using Highcharts

The Highcharts Designer page for a new chart element appears as shown in the figure below.

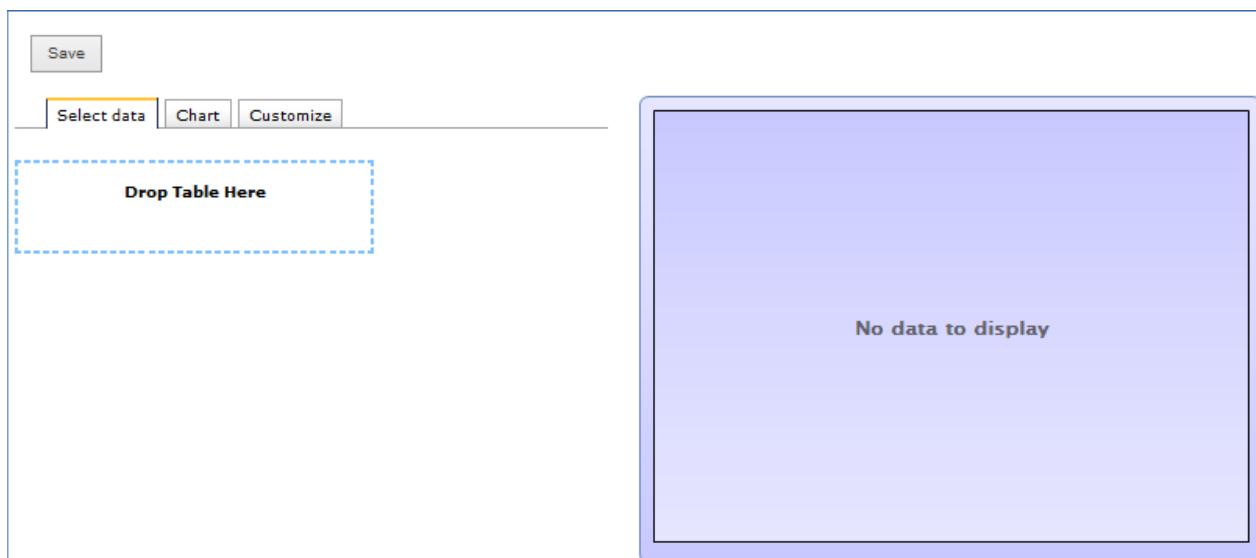


Figure 336 The Highcharts designer page for a new chart

A chart must have a source from which it receives the data it is to display. A chart is therefore always based on an Aggregated Table (see The Table Designer on page 143 for more information).

To indicate to the system which table you wish to use as the source for your chart, drag the appropriate Aggregated Table element from the Report toolbox (note that you may have to expand the report page by clicking the + symbol in front of the report page name), and drop the table into the **Drop Table Here** area as shown in the figure below.

**Note:** The aggregate table element used to provide the data for a chart does not have to be on the same page as the Chart. Any aggregated table in the Report toolbox can be used.

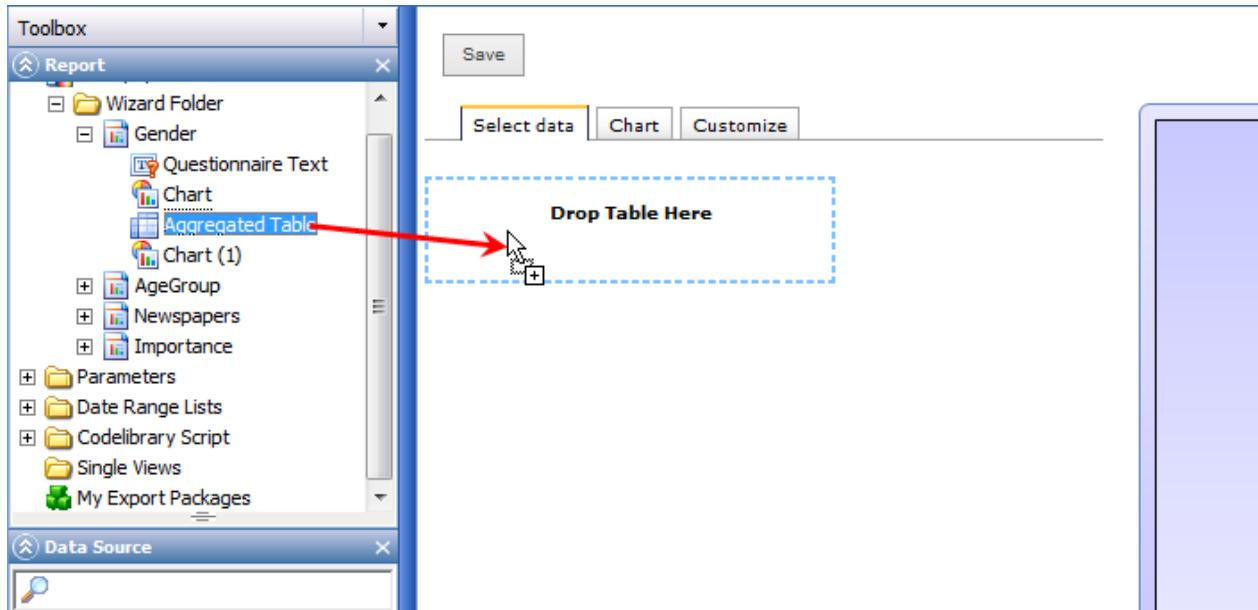


Figure 337 Dragging a source table into the chart

When you drop a table into the designated area, the Chart Designer page refreshes and suggests a chart layout based on the default chart style specified in the Report Template (see Templates on page 684 for more information). An example of the Chart Designer page is shown in the figure below.

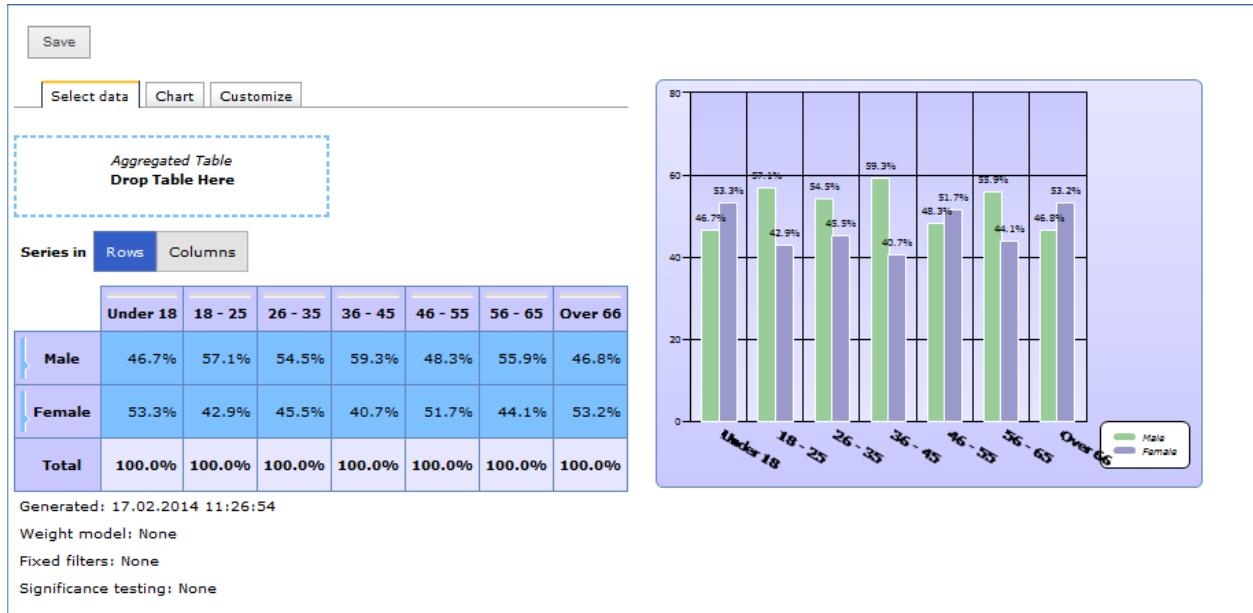


Figure 338 The Chart Designer page with a source table

On completion click **Save**.

You can now go to the other tabs in the Chart Designer and set up the chart as required.

#### 9.4.2. The Select Data Tab

When using Highcharts, the Chart Designer page opens at the Select Data tab as shown below.

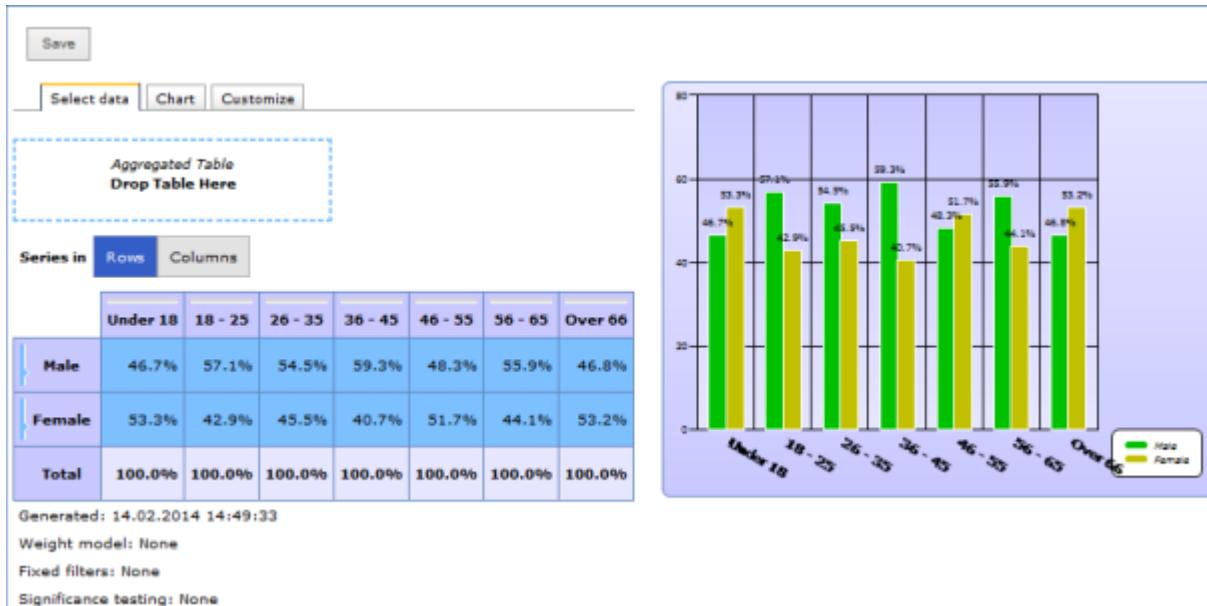
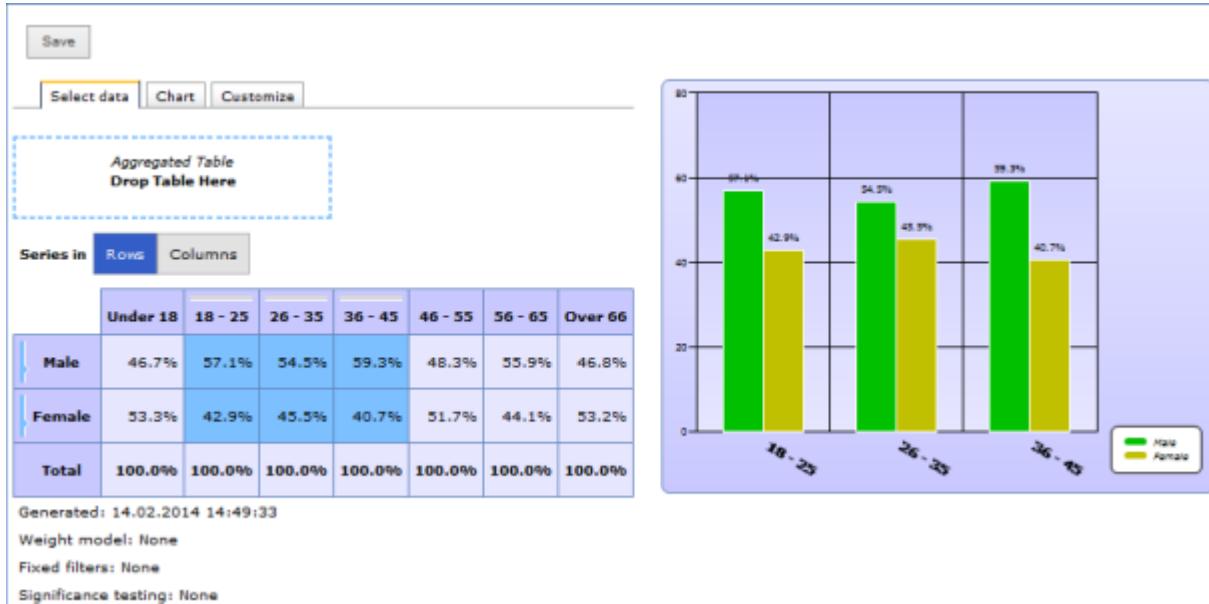


Figure 339 Example of the Highcharts Designer page

In the Select data tab:

- Click on a row or column in the table to select / deselect that data. The shaded cells indicate which rows and columns are currently selected.

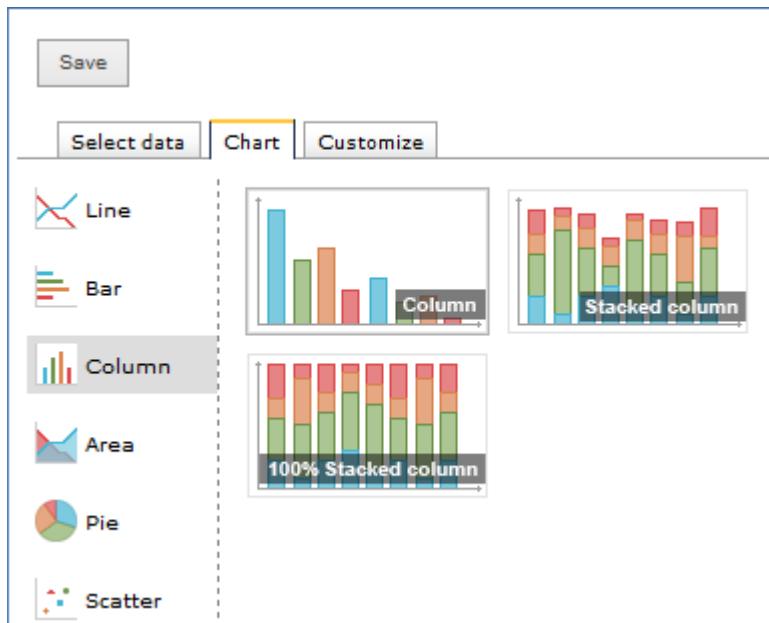


**Figure 340 Selecting the rows and columns of data to be displayed in the chart**

- Click on a distribution to set count, percent etc.

#### 9.4.3. The Chart Tab

In the Chart tab you select the type of chart to be used.



**Figure 341 Selecting the chart type in the Chart tab**

Select the general chart type in the column on the left, then select from the available options.

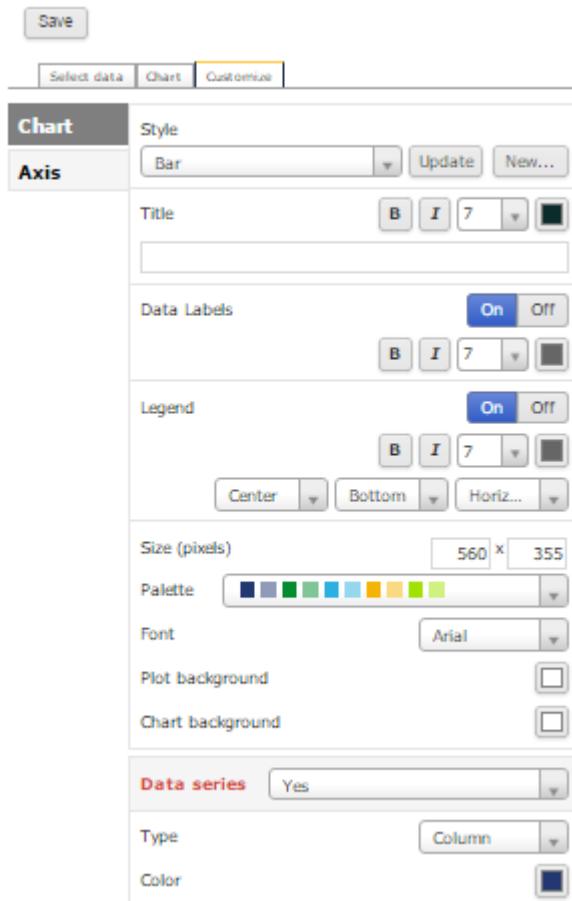
#### 9.4.4. The Customize Tab

This tab holds a list of properties and settings that allow you to customize the layout and coloring for the chart. The tab holds two tabs:

- **Chart** - contains properties for setting the colors used for the series and the background, the labels, legend etc.
- **Axis** - contains the properties for setting up the chart axes, axes labels, gridlines etc.

##### 9.4.4.1. The Customize > Chart Tab

This tab contains the properties and settings controlling the fonts and colors used for the chart area.



**Figure 342 The Chart tab**

The properties and settings are as follows:

- **Style** - the style on which the chart's settings are based by default. This style is located in the Layout and Styles toolbox, under **Styles > Chart**. Once you have selected a particular style, you can then change the settings in this tab as required for this chart. If you then click **Update**, you can update the selected style such that it now uses your new settings as default. Or you can click **New** and save the current settings as a new style in the Layout and Styles toolbox. This style will then be available for use in other charts.
- **Title** - give the chart a title and set the font size, type and color of the text.

- **Data labels** - shows or hides the data labels. If the data labels are to be displayed, set the font size and color to be used.
- **Legend** - select whether the legend to be displayed, where in the chart area you want it to be located, and set the font size, type and color of the text as well as the layout of the legend. Select horizontal or vertical.
- **Size** - the dimensions of the chart in pixels .
- **Palette** - the color palette to be used for presenting the data in the chart.
- **Font** - the font family to be used for the texts in the chart.
- **Plot background** - the color to be used for the chart plot area.
- **Chart background** -the color to be used for the background area.
- **Data series** - you can set the chart type, color and other properties separately for each series. Select the series from the dropdown and adjust the type and properties as required.

#### 9.4.4.2. The Customize > Axis Tab

This tab contains the properties and settings controlling the fonts and colors used for the chart axes.



Figure 343 The Axis tab

The properties and settings are as follows:

- **Axis** - select which axis you wish to edit. Available values are: **X Axis**, **Y Axis**, **Secondary Y Axis**.
- **Title** - if you wish to show a title for the axis, type it into the field and make the location, size and color settings as required.
- **Min\Max** set the minimal and maximal values for the axis.

- **Axis labels** - switch the axis labels on or off, set the font weight and style, size and color for the labels for the selected axis.
- **Gridlines** - set the type of line, its thickness and color for the major and minor gridlines.
- **Enabled** - switch the secondary Y axis on or off.
- **Series for secondary Y axis** - assign series to the secondary Y axis.

## 9.5. Setting Up the Chart Using Dundas

The Dundas Chart Designer page for a new chart element is as shown in the figure below.

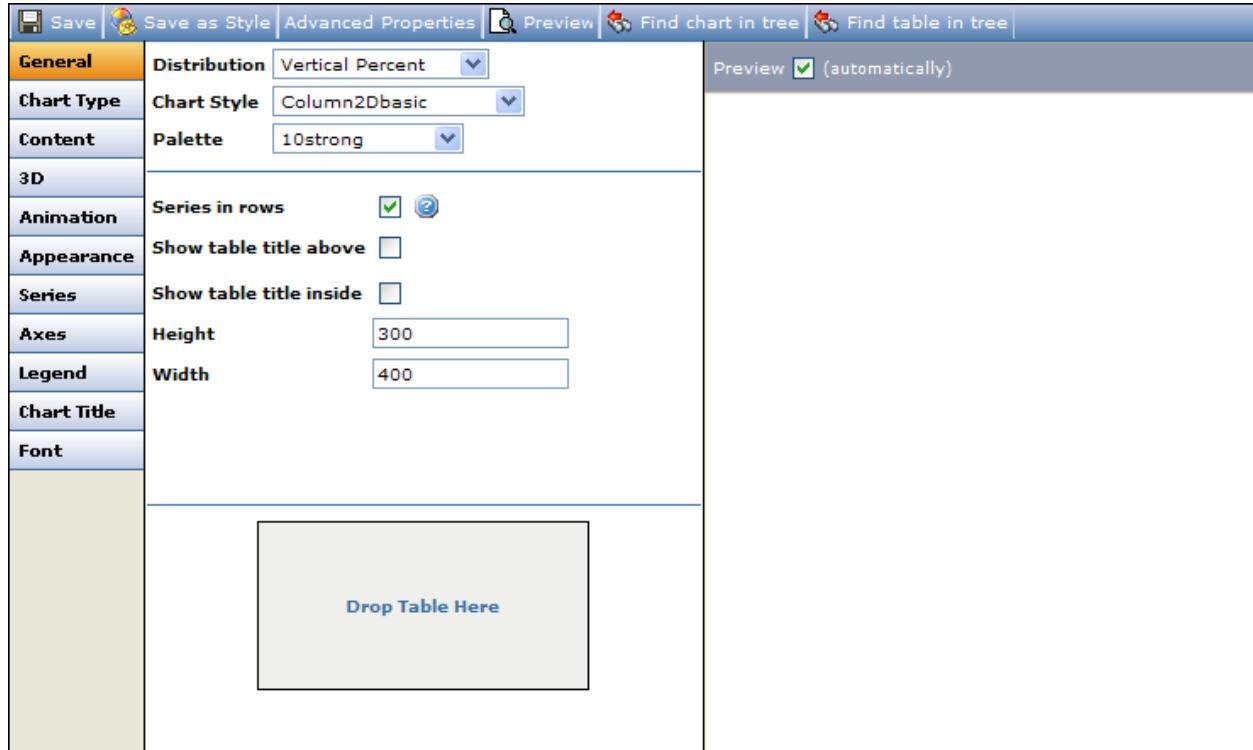


Figure 344 The Chart Designer page for a new chart element

A chart must have a source from which it receives the data it is to display. A chart is therefore always based on an Aggregated Table (see The Table Designer on page 143 for more information).

To indicate to the system which table you wish to use as the source for your chart, drag the appropriate Aggregated Table element from the Report toolbox (note that you may have to expand the report page by clicking the + symbol in front of the report page name), and drop the table into the **Drop Table Here** area as shown in the figure below.

**Note:** The aggregate table element used to provide the data for a chart does not necessarily have to be on the same page as the Chart. Any aggregated table in the Report toolbox can be used.

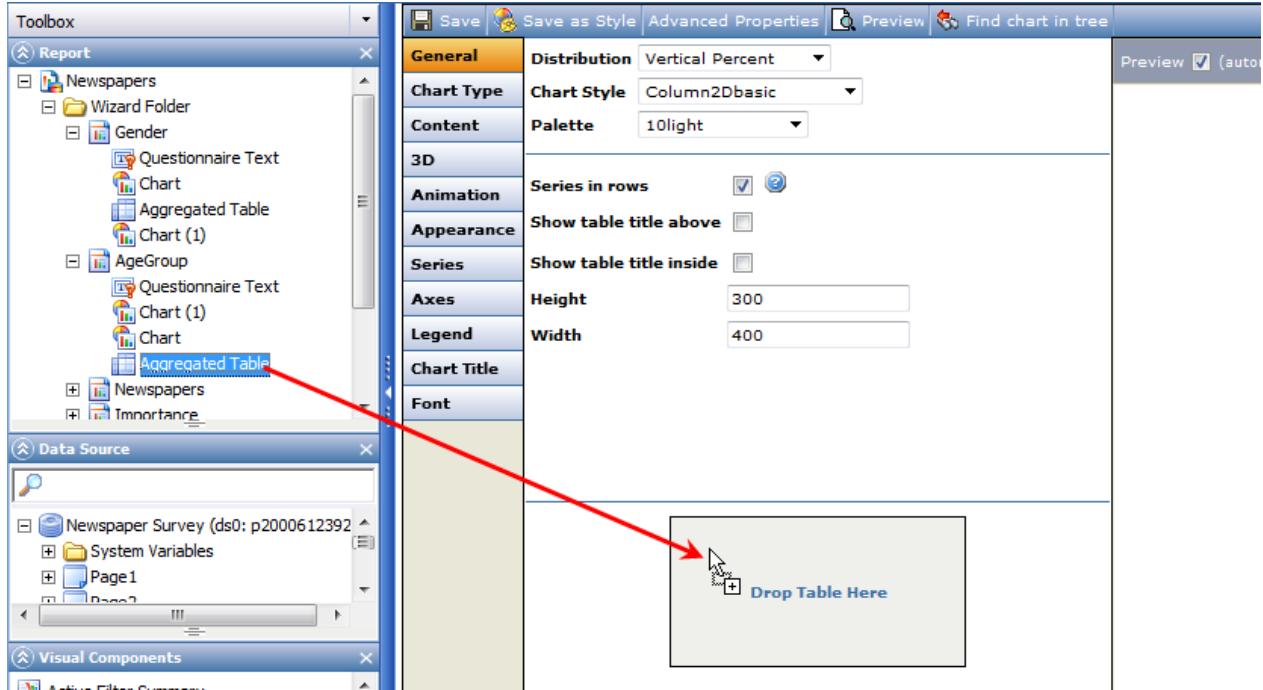


Figure 345 Selecting a source table for a Chart

When you drop a table into the designated area, the Chart Designer page refreshes and suggests a chart layout based on the default chart style specified in the Report Template (see Templates on page 684 for more information). An example of the Chart Designer page is shown in the figure below.

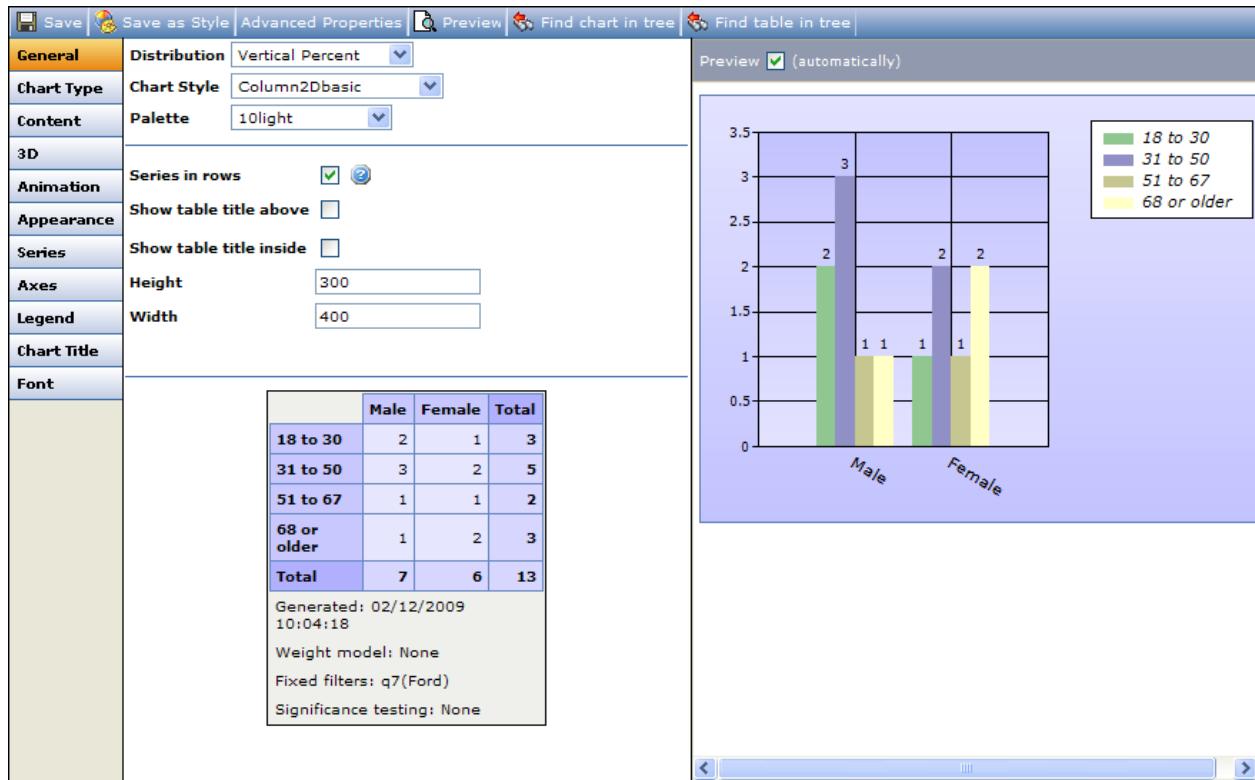


Figure 346 The Chart Designer page with a source table

You can now go to the other tabs in the Chart Designer and set up the chart as required.

## 9.5.1. Working With the Chart Designer

### 9.5.1.1. Automatic Preview

The **Preview** checkbox is located above the chart in the chart designer page. If **Preview** is selected, Reportal will automatically update the preview of the chart every time you change a setting. If you deselect this option, you must manually click the chart's **Preview** button (in the toolbar above the properties area) to refresh with the latest settings. The default setting is Selected.

### 9.5.1.2. Designing your Chart

The various tabs in the column on the left of the chart designer page contain the properties available to you when you are designing the chart. The properties are grouped logically in the tabs. To design your chart, move between the tabs and choose the settings required until the chart looks as desired. When you are satisfied with the result, click **Save** (in the toolbar at the top of the page) to save the settings (see The Chart Setting Tabs on page 273 for more information).

The properties in these tabs, and a number of additional properties, are also available through the Advanced Properties functionality (see The Advanced Properties on page 364 for more information).

### 9.5.1.3. The Chart Designer's Toolbar

The Chart Designer page's toolbar is located across the top of the page and contains the tools shown in the figure below.



Figure 347 Chart Designer's Toolbar

**Note:** In the figure above, the Chart Designer has been entered directly from the Report toolbox, either by double-clicking on the Chart element or by right-clicking the chart element and choosing Edit. The toolbar therefore includes the Save button. If you enter the Chart Designer via the element on the report Page Editor, then the Save button will be replaced by an OK button and a Cancel button will appear in addition. In this case, to save your work, click OK to return to the Page Editor then click Save.

### 9.5.1.3.1. Saving

When you want to save the current settings/look, click **Save**, or if you have entered the Chart Designer via the report Page Editor, click **OK** to return to the Page Editor then click **Save**.

### 9.5.1.3.2. The Save as Style Button

If you have created a chart look you want to re-use for other charts, save the current chart settings as a style. You can then apply the style to other charts. To save the chart as a style:

1. **Save** the current settings.
2. Click **Save as Style**.

The Save as Style Properties dialog opens.



Figure 348 The Save as Style properties dialog

3. To update the style currently used for the tables, check the **Update Current Style** checkbox.

To create a new style, leave the box unchecked and type in a logical name for the style.

4. Click **OK**.

#### To apply the style to another chart:

1. Open the Chart Designer for the chart in question.
2. On the **General** tab, click the down-arrow beside the **Chart Style** property to open a drop-down list of the available styles.
3. Select the required style from the list.  
The chart is updated with the new style.
4. Click **Save**.

#### To edit the style:

1. Open the **Layouts and Styles** toolbox, then go to the **Styles > Chart** folder and double-click on **SingleMulti...** as this is the style we updated.  
The Chart Style Properties page for the style opens.

**Note:** Every chart layout is defined by a style. To check which style is used for a chart, open the chart properties page, go to the General tab and check the Chart Style property.

2. Make the required changes.
3. Click **Save**.

### 9.5.1.3.3. The Advanced Properties Button

The Chart Designer contains only the most commonly used chart properties. A large variety of additional properties and settings are available via the **Advanced Properties** button.

To access the Advanced Properties, click the **Advanced Properties** button in the Chart Designer toolbar. The window changes to show the chart with the table below. Right-click in the chart and select **Chart Properties** from the menu (see The Advanced Properties on page 364 for more information).

### 9.5.1.3.4. The Preview Button

Click the **Preview** button at any time to refresh the chart preview (the right frame of the window). If automatic preview is enabled, this button can be ignored.

### 9.5.1.3.5. The Find Chart in Tree Button

Click to locate the current chart in the Report toolbox. When you click the button, the chart element is high-lighted in the report tree.

### 9.5.1.3.6. The Find Table in Tree Button

Click to locate the table used by the current chart in the Report toolbox. When you click the button, the Aggregated Table element used by the chart is high-lighted in the report tree.

## 9.5.2. The Chart Setting Tabs

The Chart Designer page holds a column of tabs down the left side. These tabs contain the commonly used properties that will be needed when setting up the chart. The various tabs and the properties they contain are described in the following sections.



Figure 349 The Chart Designer page's tab column

### 9.5.2.1. The General Tab

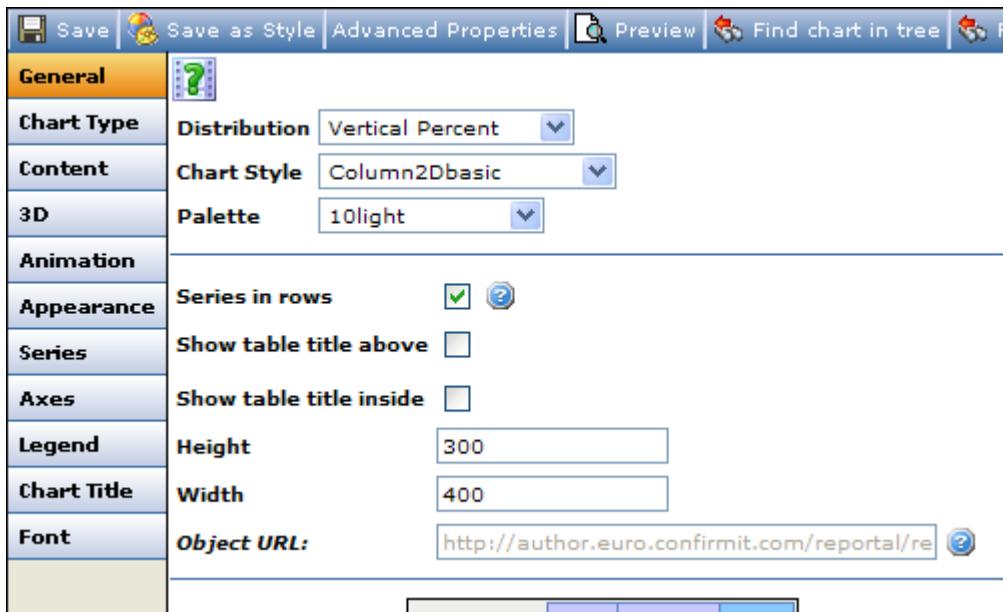


Figure 350 The properties on the General tab

#### 9.5.2.1.1. Distribution

Select the data on which the chart is to be based. Note that the selected option must be available in the table for it to be presented in the chart (see The Distributions Tab on page 171 for more information).

- **Count** – shows the actual number of responses per series.
- **Horizontal Percent** – the results calculated as a percentage, where the columns add up to 100% “horizontally” in the table.
- **Vertical Percent** – the results calculated as a percentage, where the columns add up to 100% “vertically” in the table.
- **Affinity** - affinity index statistic.
- **Table Percent** - the results based on the total value of the count in each cell against the total count for the entire table.
- **Chi Square** - the results based on the Chi Square statistic.

#### 9.5.2.1.2. Chart Style

The layout or style and the palette of the chart are based on the chart style chosen for this chart. The default chart style is used for all new charts, but you can change this as required. Be aware that any changes you make in the chart style will affect all charts using that style. Layout and Styles are part of the template (see Templates on page 684 for more information).

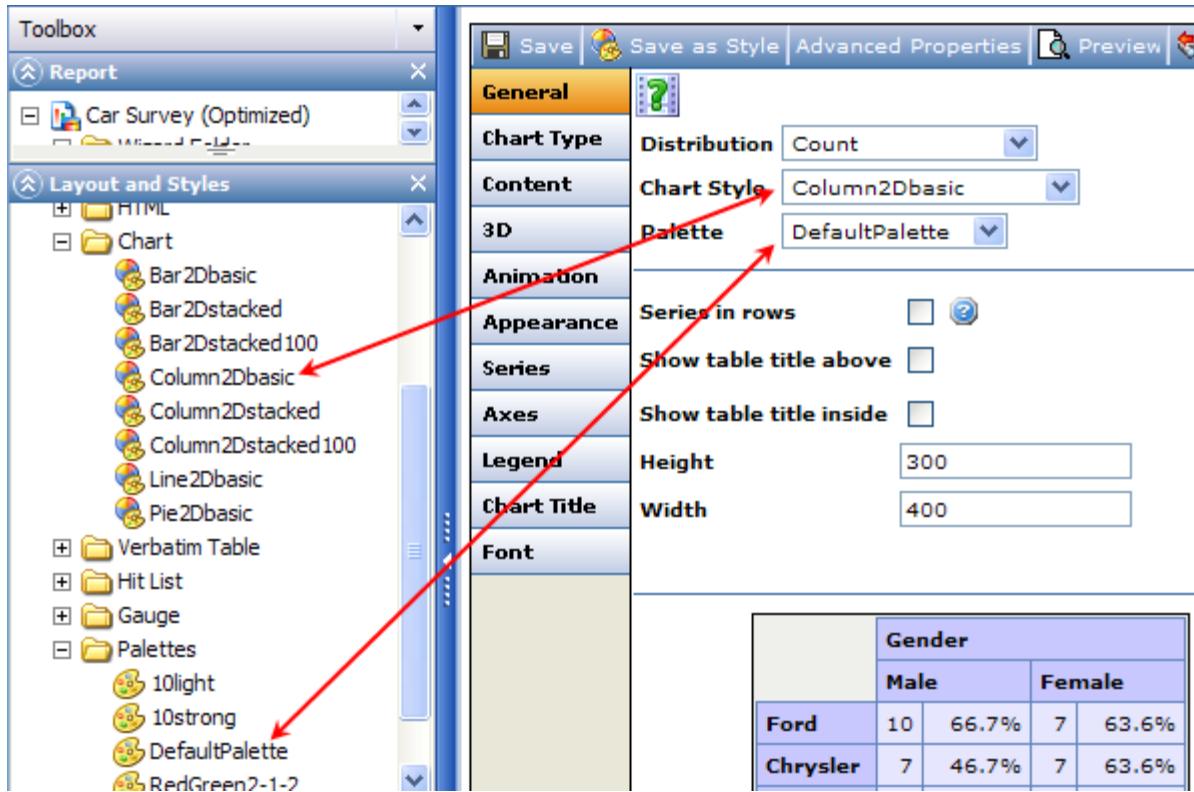


Figure 351 The Chart Style and Palette

### 9.5.2.1.3. Palette

The colors used for the series in the chart are based on the palette style chosen for this chart.

A palette is used to assign colors automatically to data elements if the data points themselves do not have colors assigned to them, and the data series that the data points belong to also do not have an assigned color.

You can assign colors to data points and series in the Data Source Editor (see The Data Source on page 649 for more information). Layout and Styles are part of the template (see Templates on page 684 for more information).

### 9.5.2.1.4. Series in Rows

A chart always displays the series in rows or in columns. The Series are the data points (plot points) of the aggregated table. In the table below, the car makes comprise the rows while male and female (the gender question) are the columns.

**Rows**

**q5 - Cars test-driven**

**Columns**

**q3 - Gender**

	Male	Female	Total
Ford	44	31	<b>75</b>
Chrysler	31	30	<b>61</b>
Volvo	43	33	<b>76</b>
BMW	38	37	<b>75</b>
Honda	33	35	<b>68</b>
Toyota	38	41	<b>79</b>
Other	23	35	<b>58</b>
<b>Did not test any cars.</b>	13	4	<b>17</b>
<b>Total</b>	<b>86</b>	<b>77</b>	<b>163</b>

Generated: 03/12/2009 08:36:44  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

Dro

**Figure 352 Rows and Columns in an aggregated table**

The figure below shows the chart based on the table with **Series in rows** deselected (so the chart is presented as Series in Columns). For each “group” (car make) the chart displays the series (data points) of the three columns; Male, Female, and Total.

The Legend always contains the rows in a “Series in rows” chart, and the columns in a “Series in columns” chart.

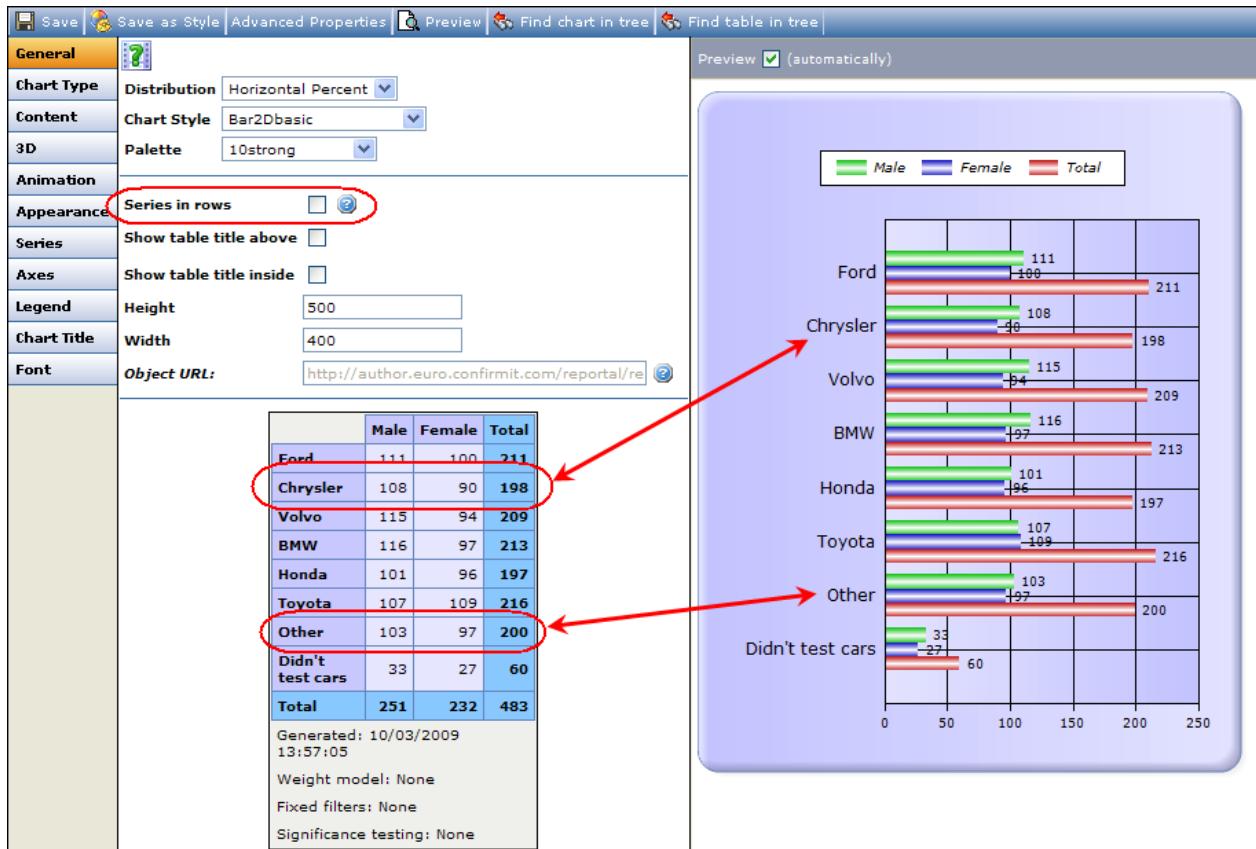


Figure 353 Series in Columns

The figure below shows the chart based on the same table, but now with **Series in rows** selected. Here each group (this time the Male, Female and Total columns) now displays the series for the eight rows.

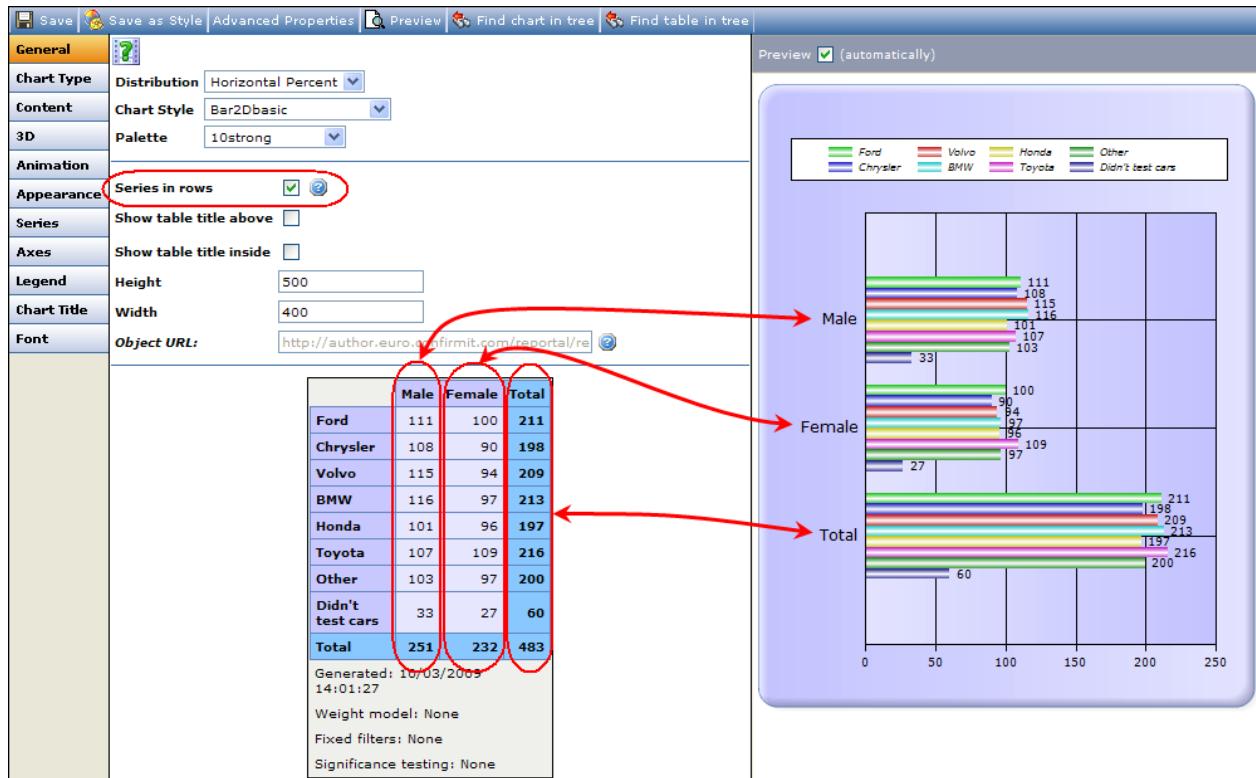
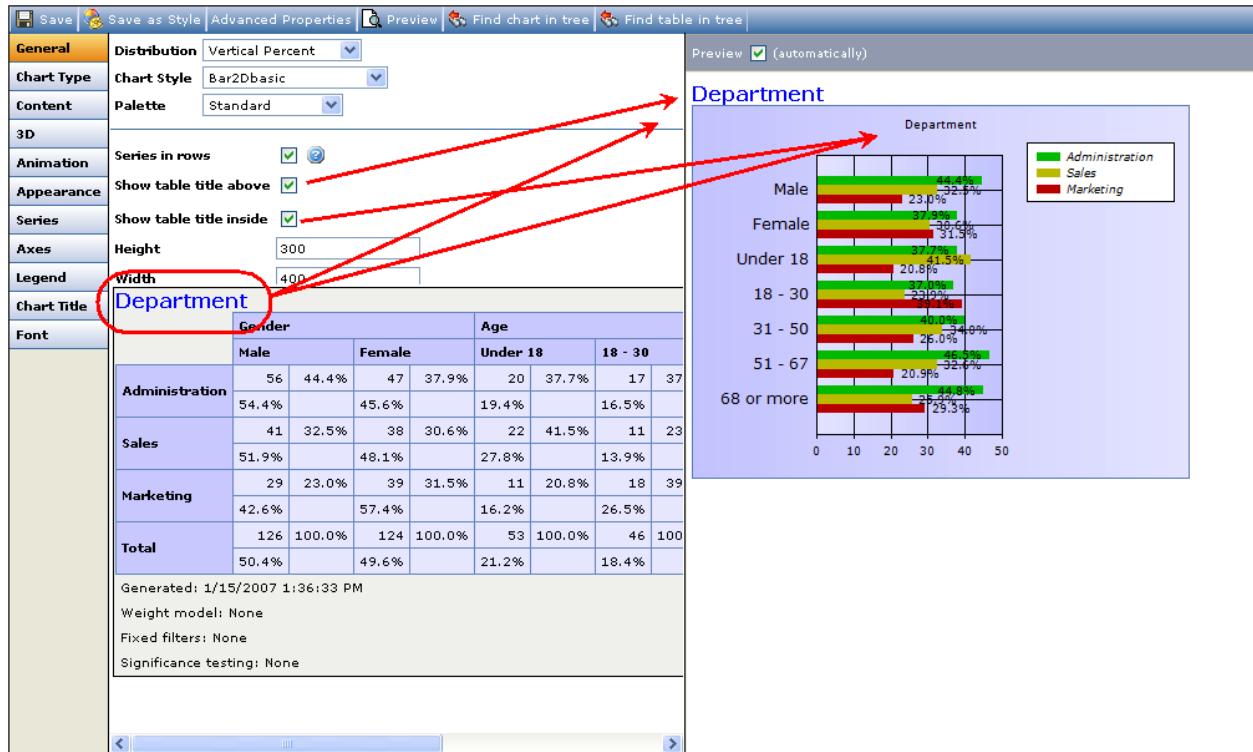


Figure 354 Series in Rows

#### 9.5.2.1.5. Show Table Title Above/Inside

If a title is specified for the aggregated table (source table) (see The Title Tab on page 173 for more information), then that title can also be displayed with the chart; above it, inside it, or in both locations. Check the appropriate box(es).



**Figure 355 Showing the table title in and/or above the chart**

#### 9.5.2.1.6. Height

This property specifies the height of the chart on the report page. Specify the chart height in pixels.

#### 9.5.2.1.7. Width

This property specifies the width of the chart on the report page. Specify the chart width in pixels.

#### 9.5.2.1.8. Object URL

This property only appears for an object in a report page that is specified as being a Public report (see Report Properties on page 109 for more information).

The Object URL property allows specified objects (tables, charts and gauges) to be viewed individually via a direct URL, without having to open the report. This allows the possibility to embed a table, chart or gauge in other web pages, for example web portals or intranets.

Once a report has been published as Public, then this property becomes visible in the property sheets of the table, chart and gauge objects in that report. Go to the property sheet of a particular object and select the Object URL property to display a further field containing a URL to the object.

Copy the URL displayed in the field, and paste it into the desired web page. The object will then be visible in that web page.

### 9.5.2.2. The Chart Type Tab

Confirmit Reportal supports 25 different chart types, the majority available as either 2-dimensional or 3-dimensional. Select a chart group from the drop-down, then select a specific chart type. The example shows the different column chart options. As you change the selection, the chart preview in the area to the right of the window is updated to reflect the change.

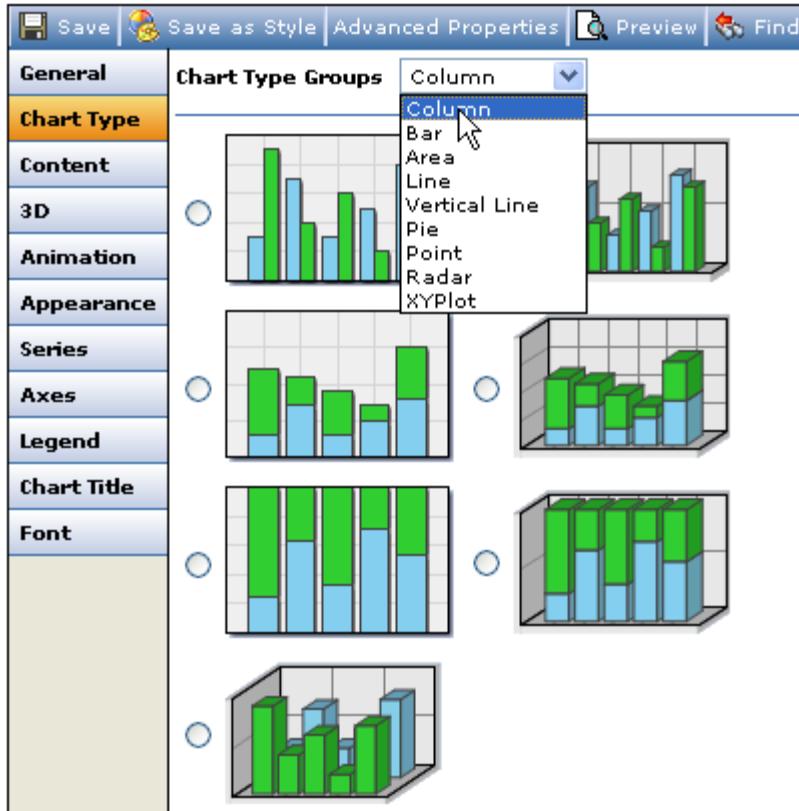
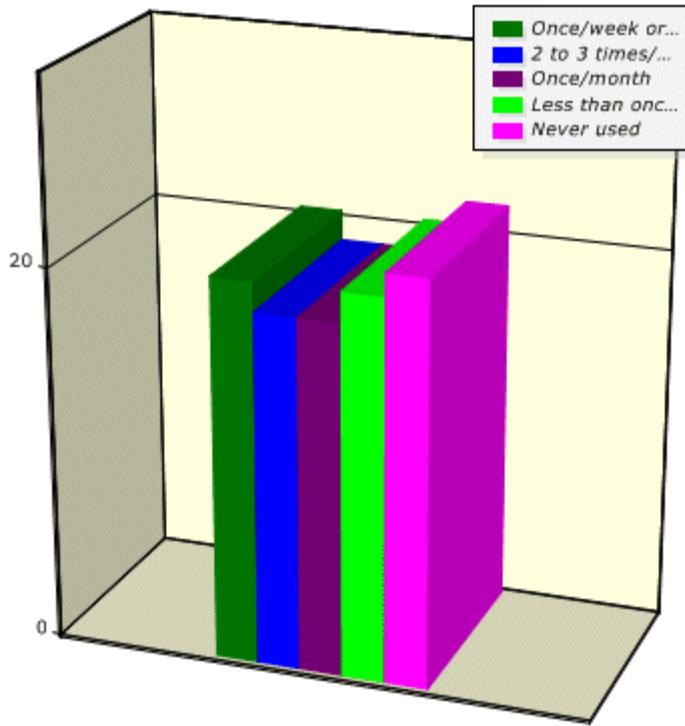


Figure 356 The Chart Type menu

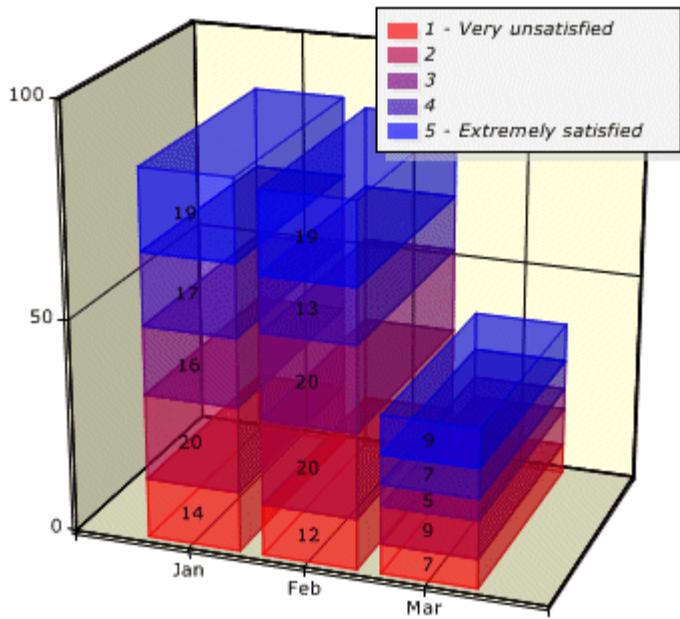
#### 9.5.2.2.1. Column, Stacked Column and 100% Stacked Column Charts

A column chart uses a sequence of columns to compare values across categories.



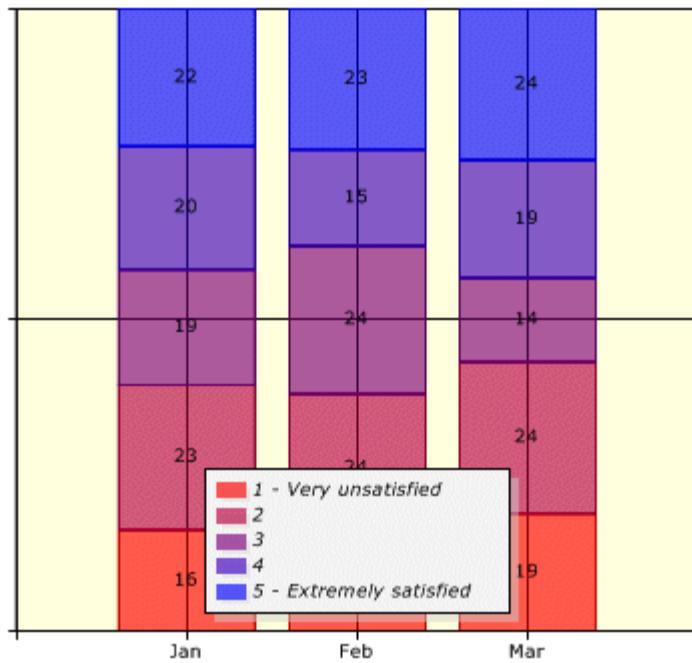
*Figure 357 Example of a Column chart*

A stacked column chart is used to compare the contribution of each value to a total across categories.



**Figure 358 Example of a Stacked Column chart**

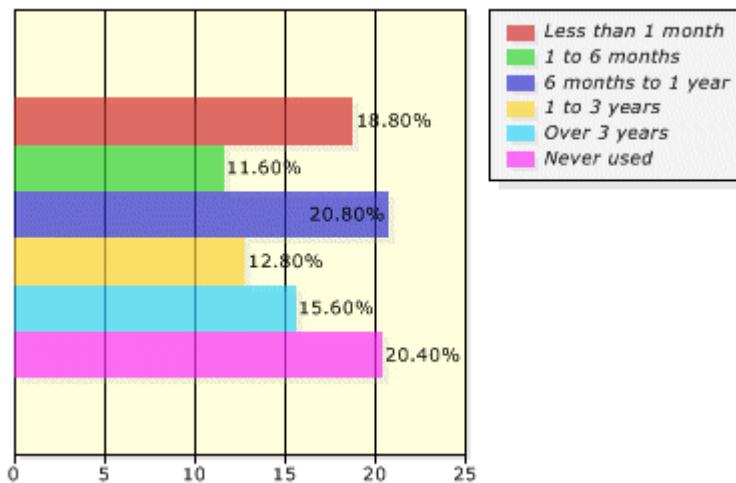
The 100% stacked column chart displays multiple sets (series) of data as stacked columns, and the cumulative proportion of each stacked element always totals 100%. The 100% stacked column chart is useful for measuring multiple series as a proportion versus time. For example, this type of presentation could be used to display the proportion of a monthly mortgage payment that is applied to the interest and the principal over time. The mortgage payment amount would represent 100%, while the interest and the principal values would be the two stacked elements that make up one column.



*Figure 359 Example of a 100% Stacked Column chart*

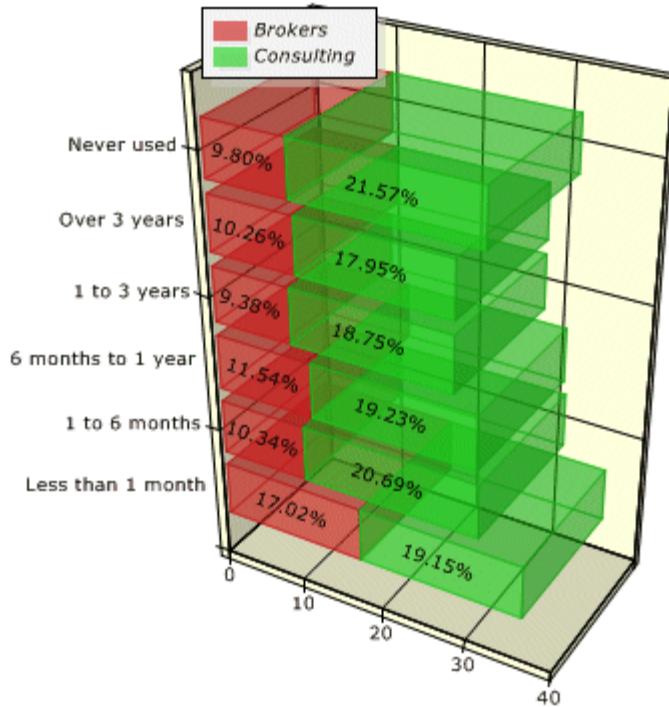
#### 9.5.2.2.2. Bar, Stacked Bar and 100% Stacked Bar

A bar chart illustrates comparisons among individual items. Categories are organized horizontally while values are displayed vertically in order to place more emphasis on comparing values and less emphasis on time.



*Figure 360 Example of a Bar chart*

In a stacked bar chart, several sets of data can be represented by one bar or stack. For each row, individual data elements and the sum of all the data elements are displayed.



**Figure 361 Example of a Stacked Bar chart**

The 100% stacked bar chart displays multiple sets (series) of data as stacked bars, and the cumulative proportion of each stacked element always totals 100%.

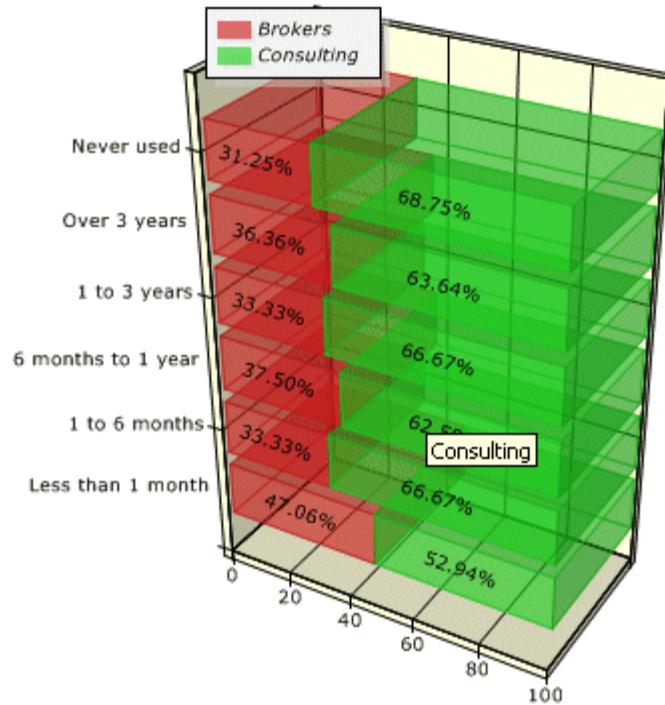
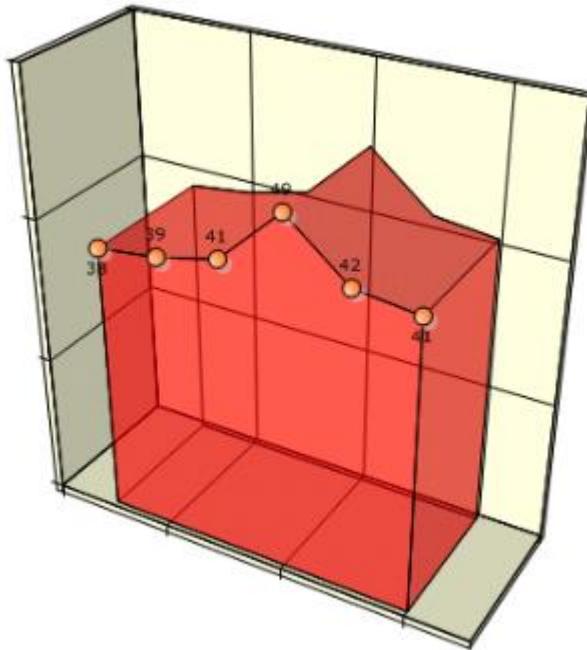


Figure 362 Example of a 100% Stacked Bar chart

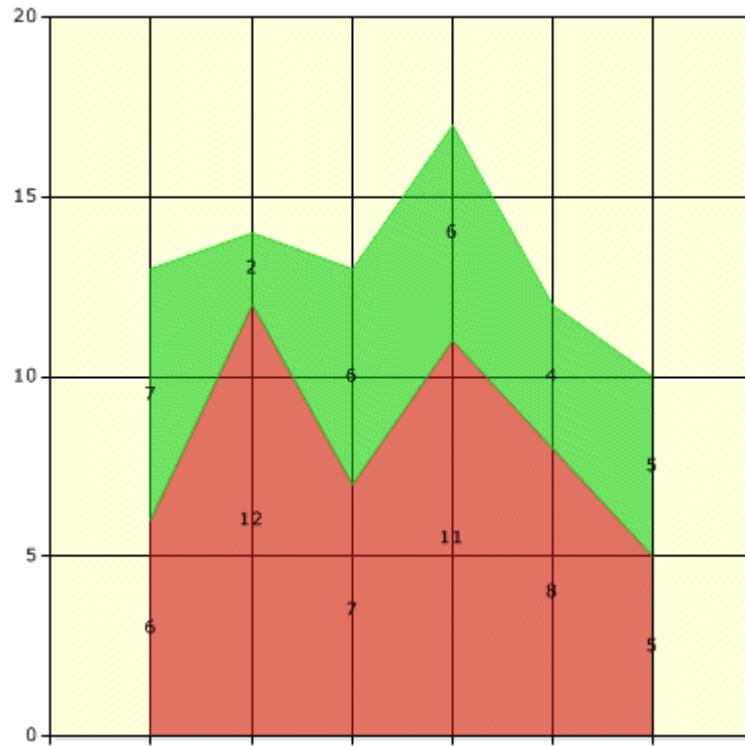
#### 9.5.2.2.3. Area, Stacked Area and 100% Stacked Area

An area chart emphasizes the degree of change over time, and also shows the relationship of the parts to the whole.



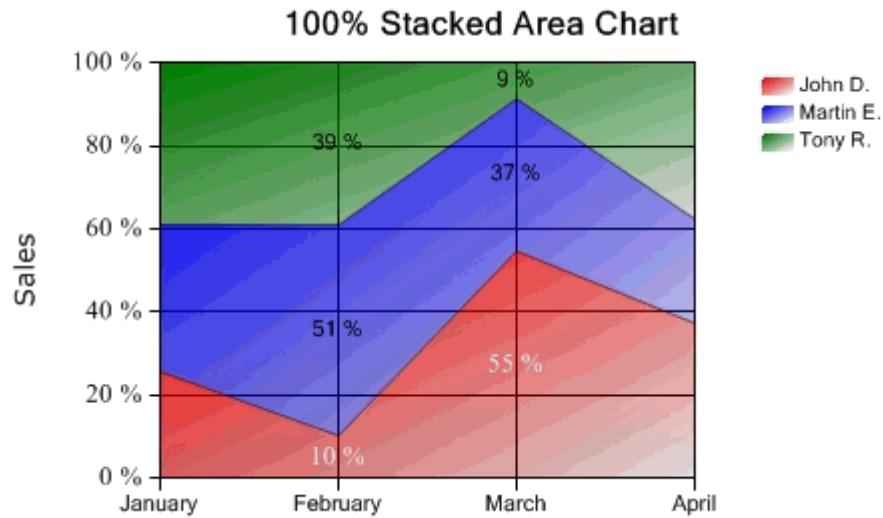
**Figure 363 Example of an Area chart**

A stacked area chart is an area chart that uses two or more data series.



**Figure 364 Example of a Stacked Area chart**

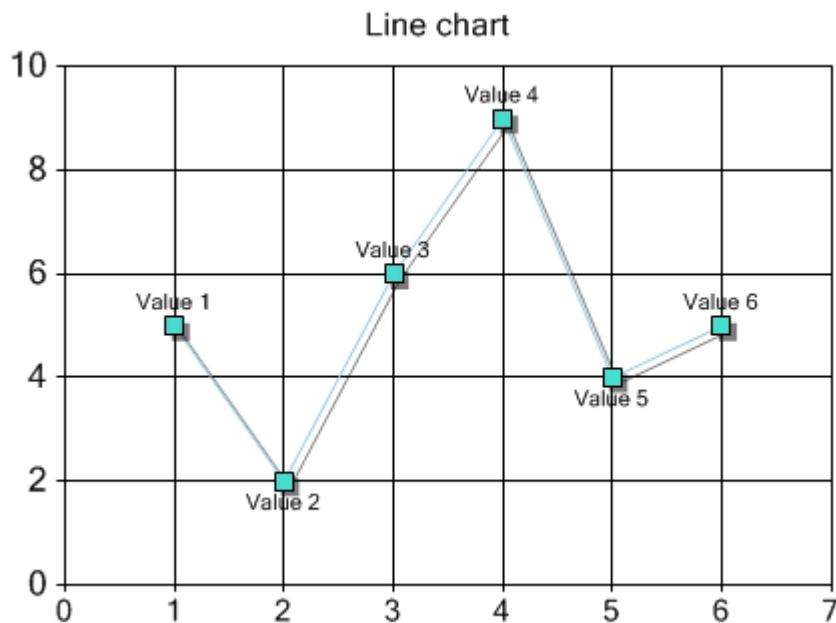
The 100% stacked area chart displays multiple sets (series) of data as stacked areas, and the cumulative proportion of each stacked element always totals 100%. The entire chart will always be filled, since the value being measured must be 100% (a combination of several sets of data).



*Figure 365 Example of a 100% Stacked Area chart*

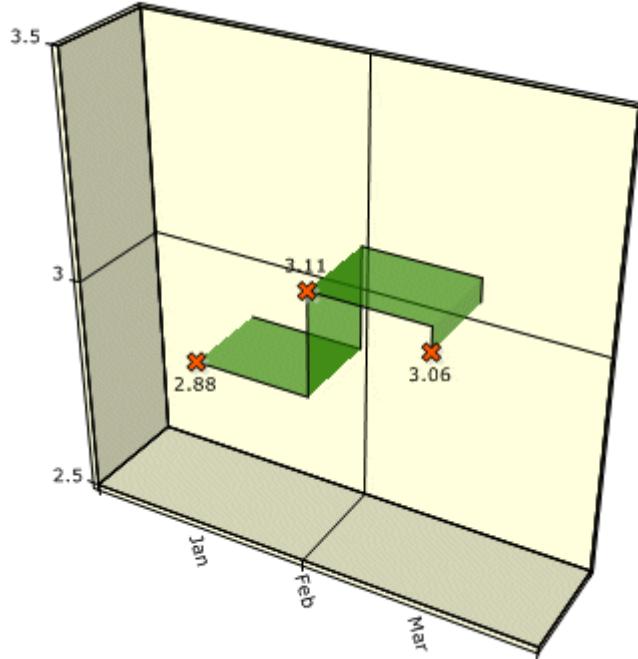
#### 9.5.2.2.4. Line, Step Line, Spline and Spline Area

A line chart illustrates trends in data with the passing of time.



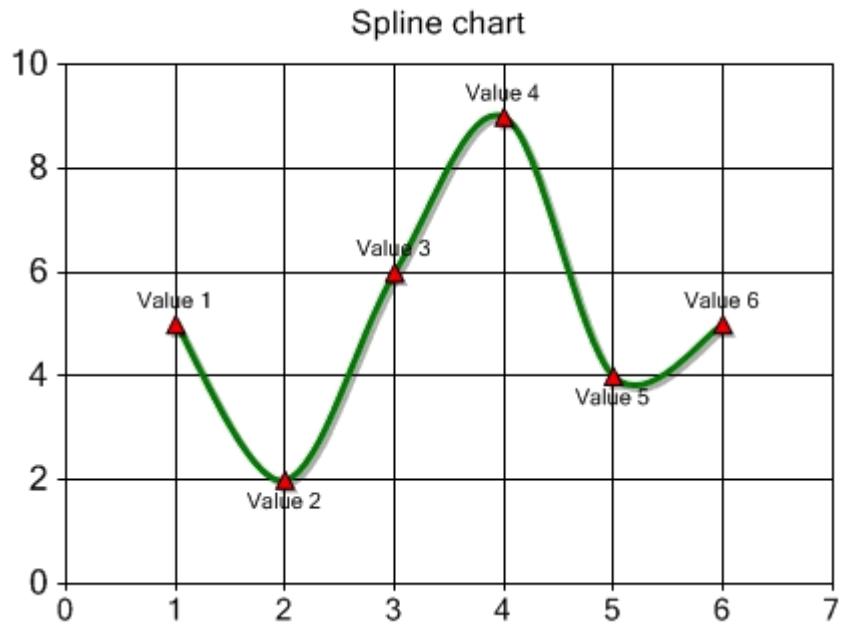
*Figure 366 Example of a Line chart*

A step line chart is similar to a line chart but does not use the shortest distance to connect two data points. Instead, the step line chart uses vertical and horizontal lines to connect the data points in a series forming a step-like progression.



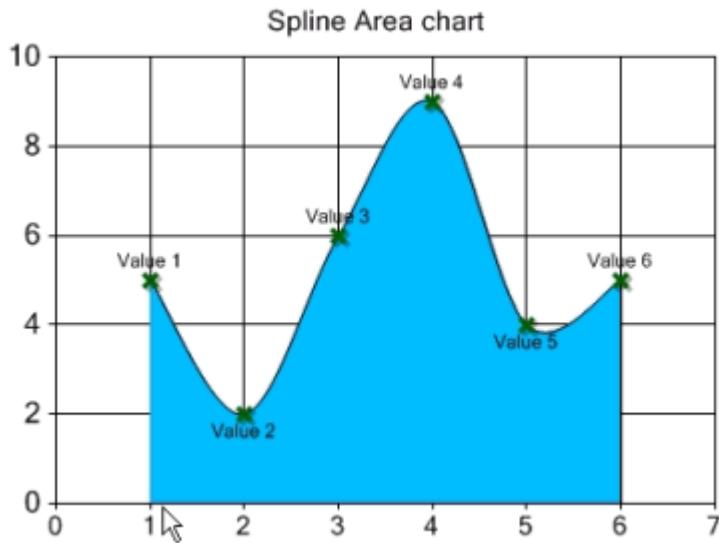
*Figure 367 Example of a Stepped Line chart*

A spline chart is a line chart that plots a fitted curve through each data point in a series.



*Figure 368 Example of a Spline chart*

A spline area chart is an area chart that plots a fitted curve through each data point in a series.



*Figure 369 Example of a Spline Area chart*

#### 9.5.2.2.5. Vertical Line

A Vertical Line chart is a "rotated" line chart, where the lines are drawn vertically (top-bottom) instead of horizontally (left-right) (in the same way as a bar chart is a "rotated" version of a column chart).



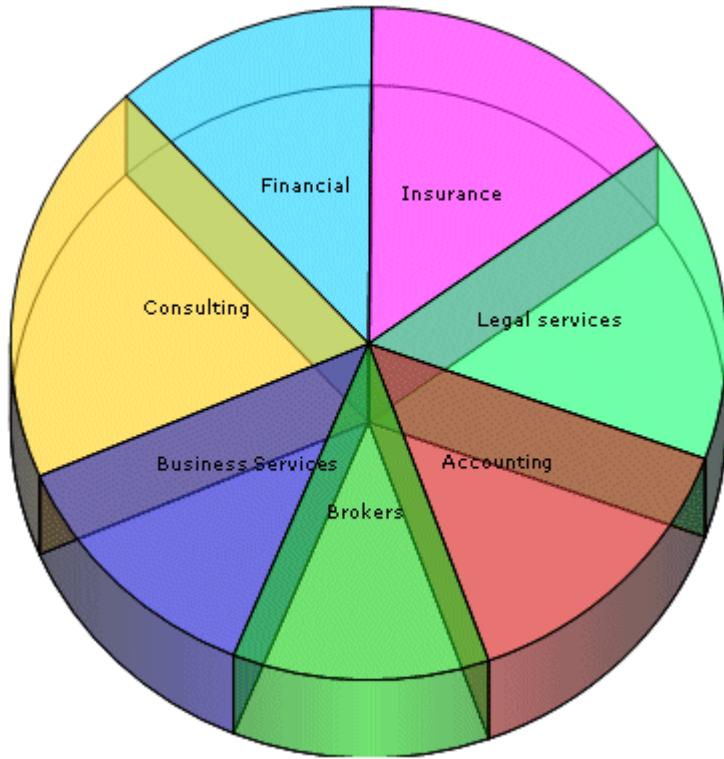
**Figure 370 Example of a Vertical Line chart**

As with bar charts, the X and Y axes are switched when you select a vertical line chart. So the X axis is the axis with the labels ("Product/service quality", "Value for the price" etc.) and the Y axis is the axis with the values.

Option settings for the markers (the points on the line) and the line itself are under "Series" (see The Series Tab on page 328 for more information).

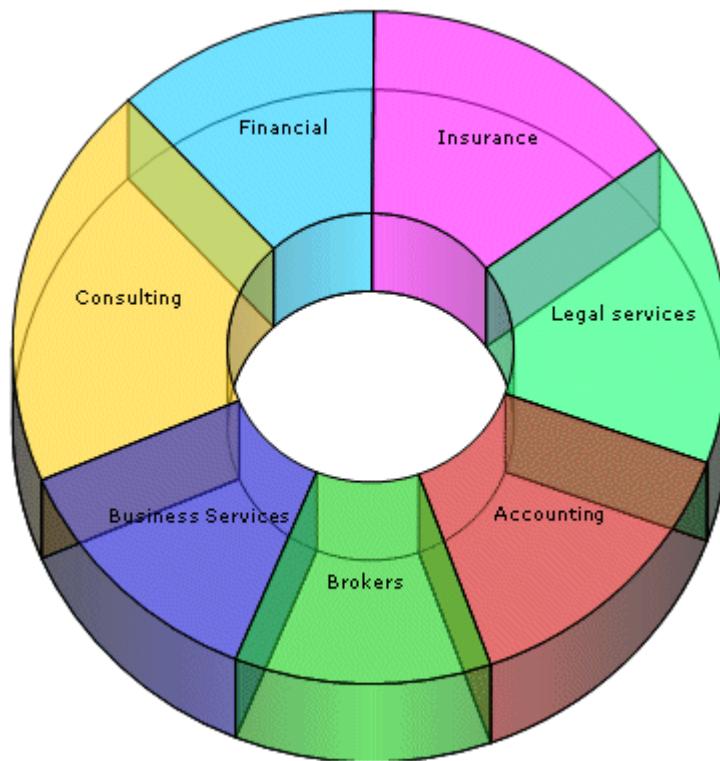
#### 9.5.2.2.6. Pie and Doughnut Charts

A pie chart shows how proportions of data contribute to a whole.



*Figure 371 Example of a Pie chart*

A doughnut chart is similar to a pie chart, but is in the form of a ring rather than a circle.



*Figure 372 Example of a Doughnut chart*

#### **9.5.2.2.7. Point**

A point chart uses value points to present the data.

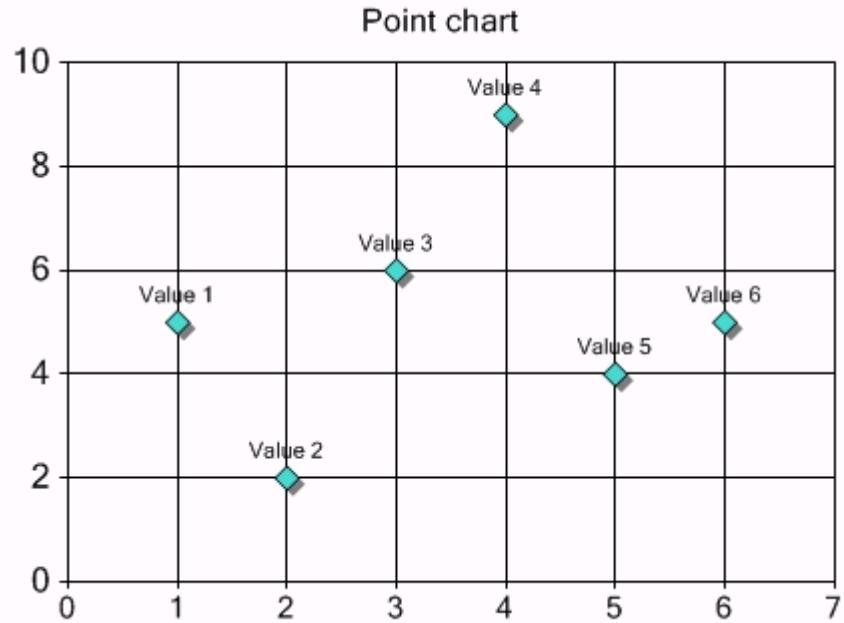


Figure 373 Example of a Point chart

#### 9.5.2.2.8. Radar Chart

A Radar Chart, sometimes referred to as a Spider Chart or a Star Chart, is a circular graph used primarily as a data comparison tool. The chart will normally be circular, but can be displayed as a polygon.

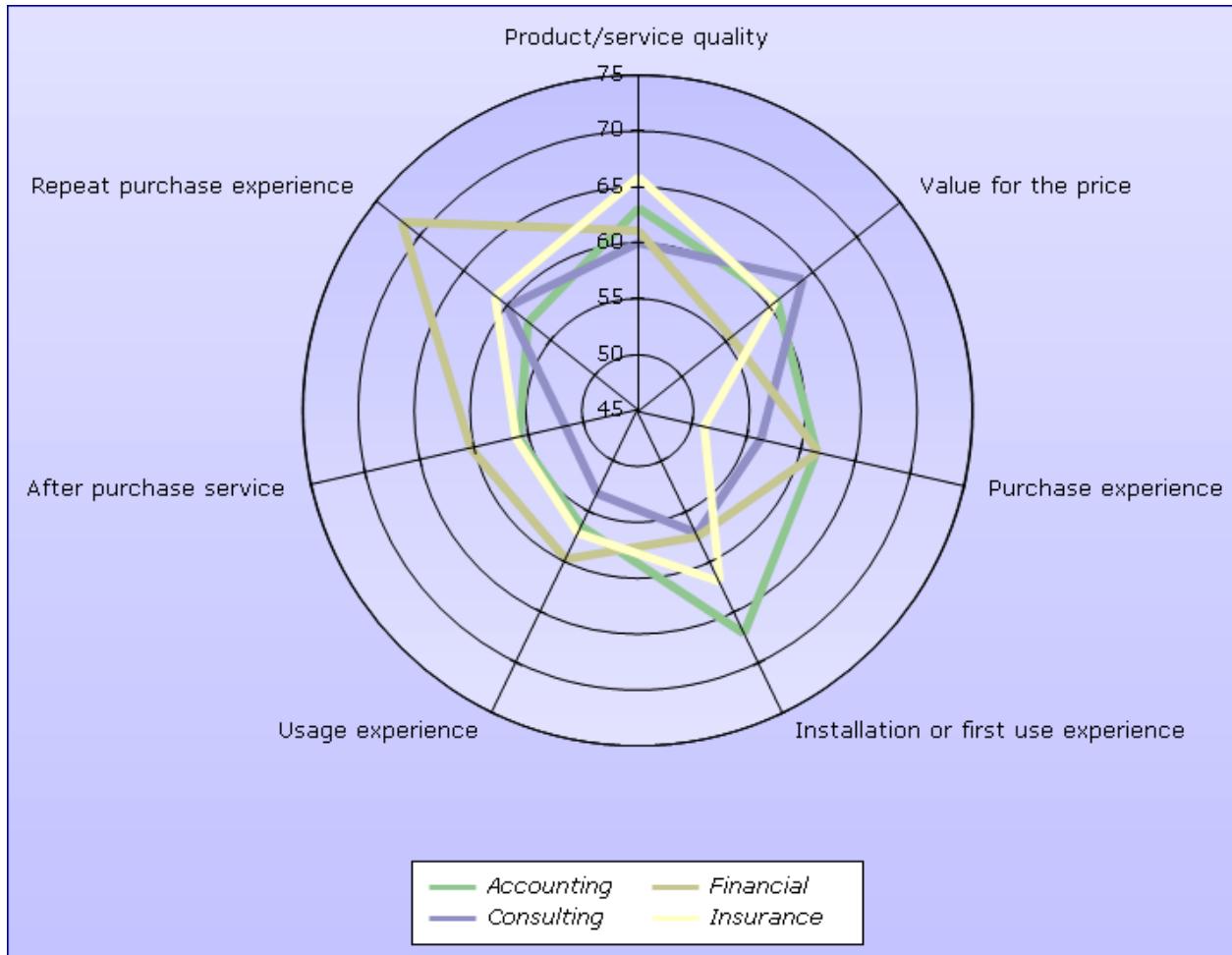


Figure 374 Example of a Radar Chart

When a radar chart is selected, additional settings become available on the series; both in chart designer and under advanced properties.

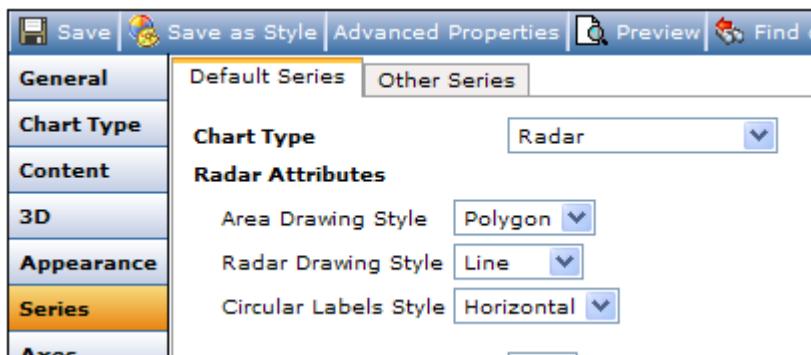


Figure 375 Radar Attributes (in Chart Designer)

Chart Type	Radar	<input type="button" value="▼"/>
Area Drawing Style	Polygon	<input type="button" value="▼"/> <input type="button" value="?"/>
Radar Drawing Style	Line	<input type="button" value="▼"/> <input type="button" value="?"/>
Circular Labels Style	Horizontal	<input type="button" value="▼"/> <input type="button" value="?"/>

Figure 376 Radar Attributes (in Series properties in Advanced properties mode)

### Area Drawing Style

Select the shape of the Radar Chart Area in the Area Drawing Style field. This attribute has two options: Circle (the default), or Polygon. See the figure in Radar Chart for an example of the Circle layout.

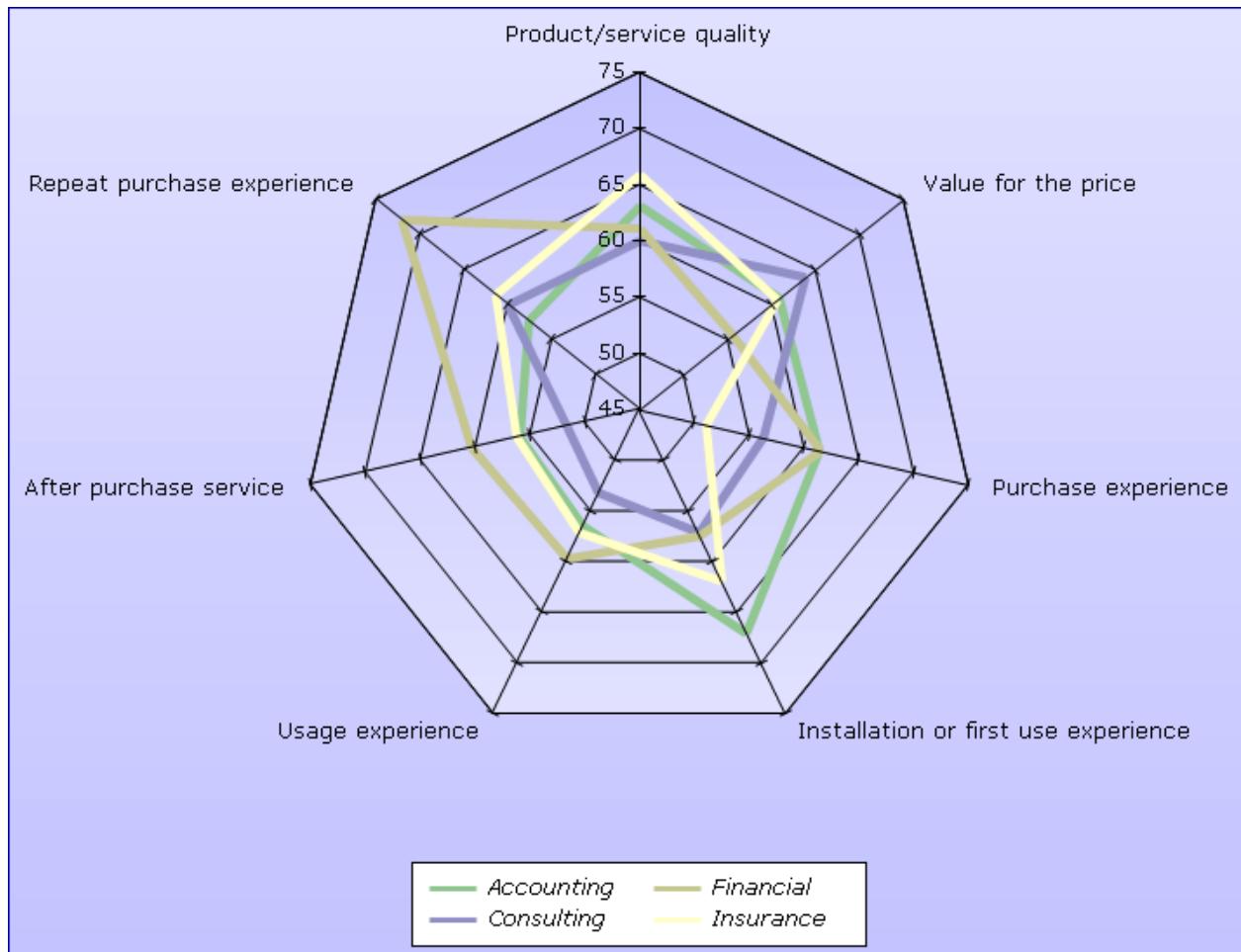


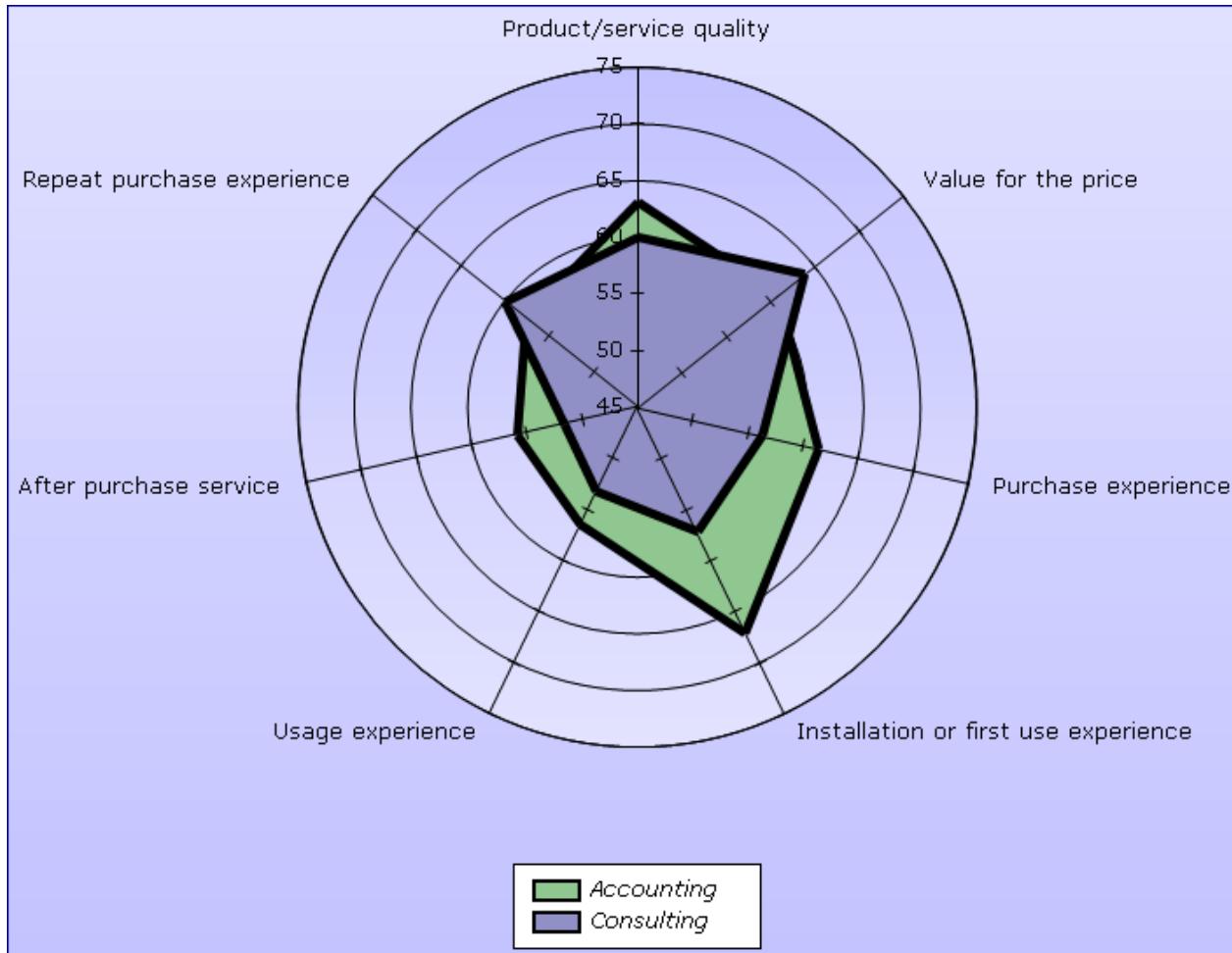
Figure 377 Example of a Polygon Radar Chart

### Radar Drawing Style

Three main styles are available for drawing the Radar chart series: Area, Line and Marker. In addition to selecting the drawing style, you control the appearance using the ordinary properties of the Series window. This means that you may also use the Series drawing styles such as Borders and Markers through the standard Series properties (Marker Style, Marker Color, Border Color, etc.). If you want the colors of the lines and markers to follow the chosen palette for your chart, leave the Color fields for these parameters empty.

## Area

A radar chart using the "Area" drawing style will fill the area below the line just as in a regular "Area chart" (in a radar chart, "below the line" is the area between the line and the center of the radar chart).



**Figure 378 Area**

If there are many overlapping areas, setting "transparency" in the Series window will enable you to see other series "through" the outer ones. An area radar chart usually works best with few series.

## Line

The figure in Area Drawing Style shows an example of a radar chart using the "line" drawing style. Set the style and width of the line in the ordinary "line/border attributes" of the series.

## Marker

A Radar Chart using the "Marker" style will have markers indicating the points on the y axes. Control the appearance of the markers by the marker attributes on the Series window (color, width and style).

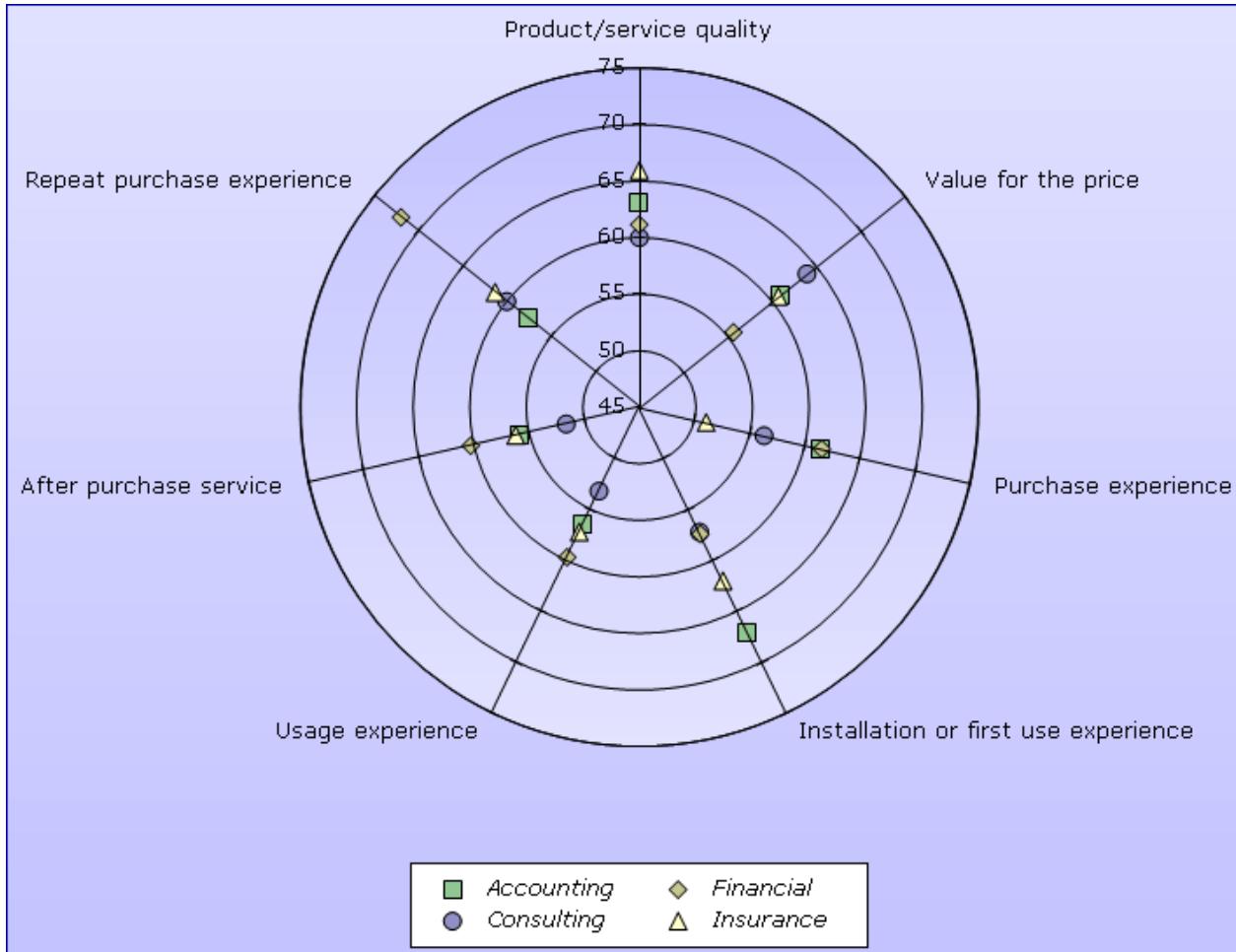


Figure 379 Marker

### Circular Labels Style

Control the layout of the labels around the Radar Chart using the "Circular Labels Style" settings.

#### Circular

Select Circular to position the labels in a circular fashion around the chart area.

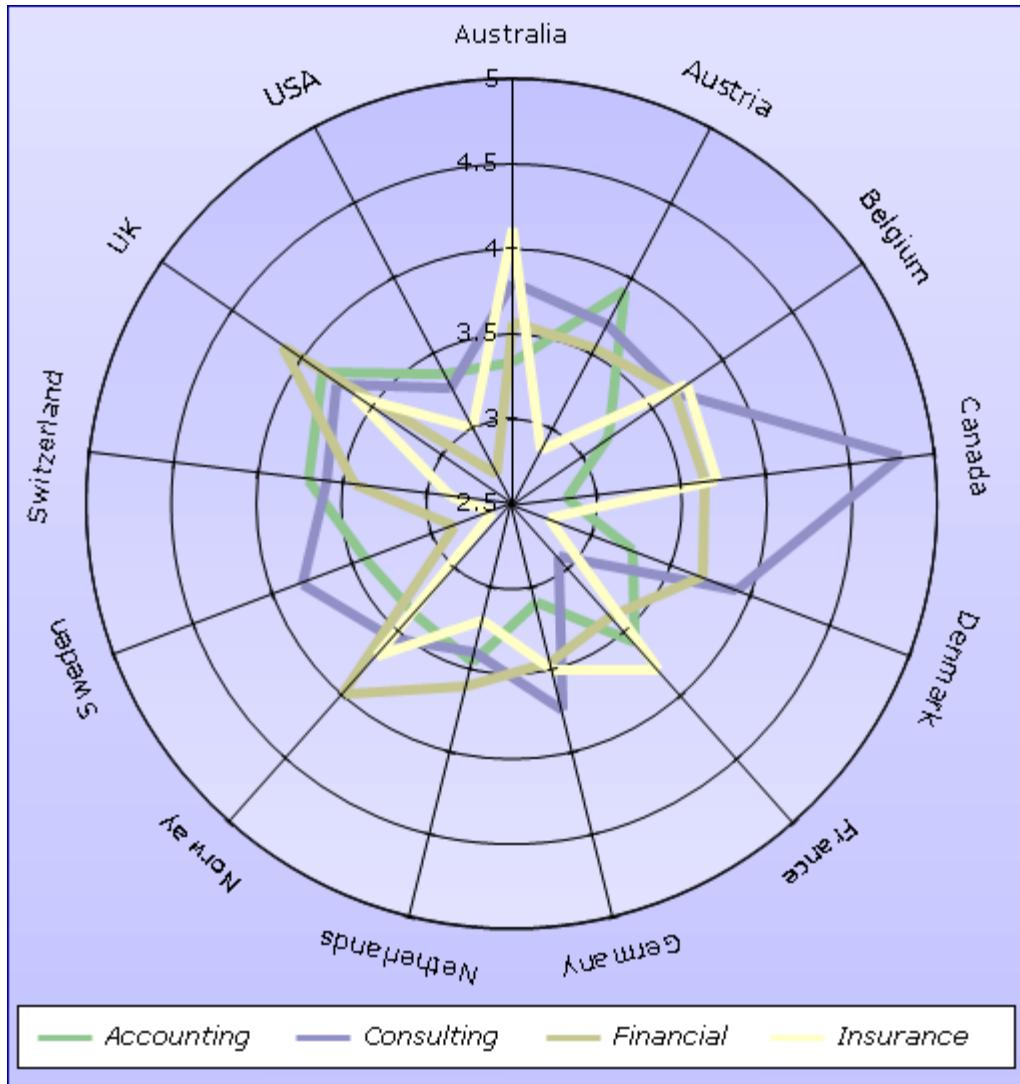


Figure 380 Circular

### Radial

Select Radial to position the Label text at the same angle as the radar sector.

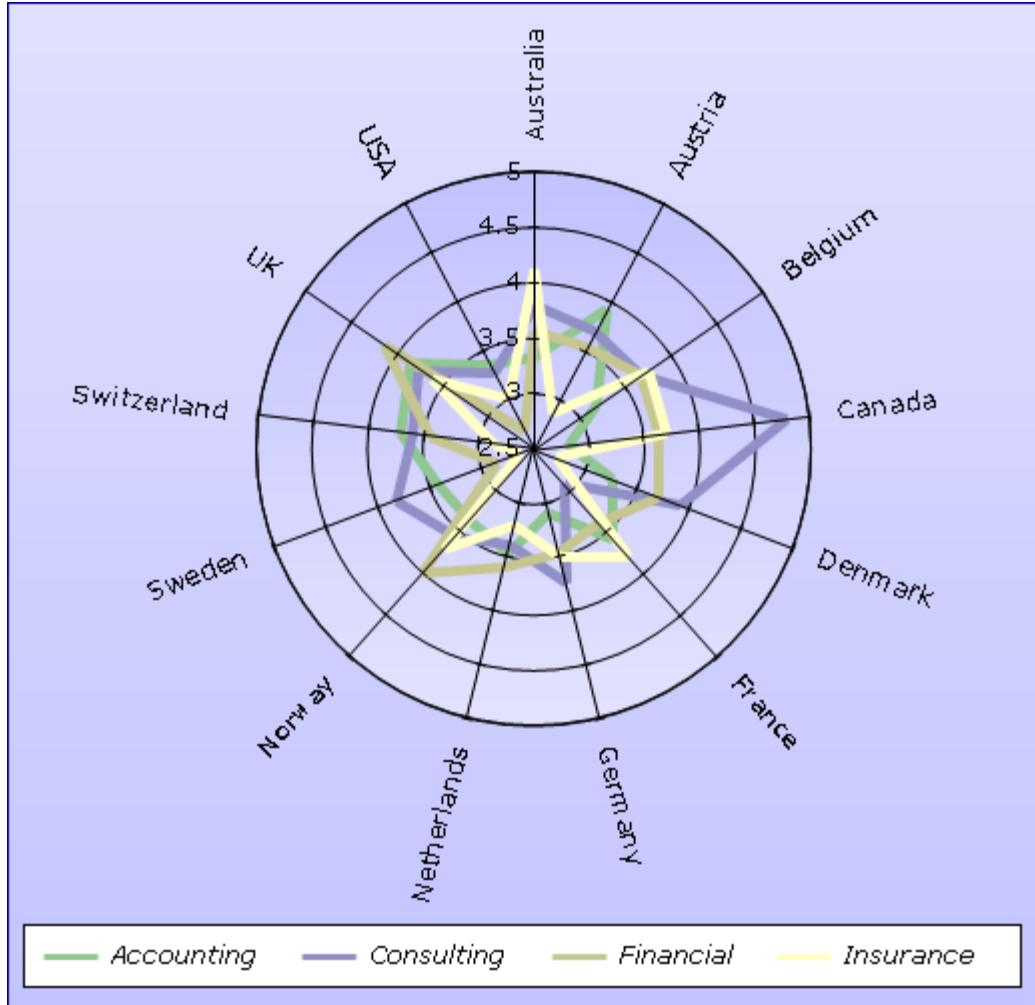


Figure 381 Radial text

#### Horizontal

Select Horizontal to position the Label texts horizontally around the chart.

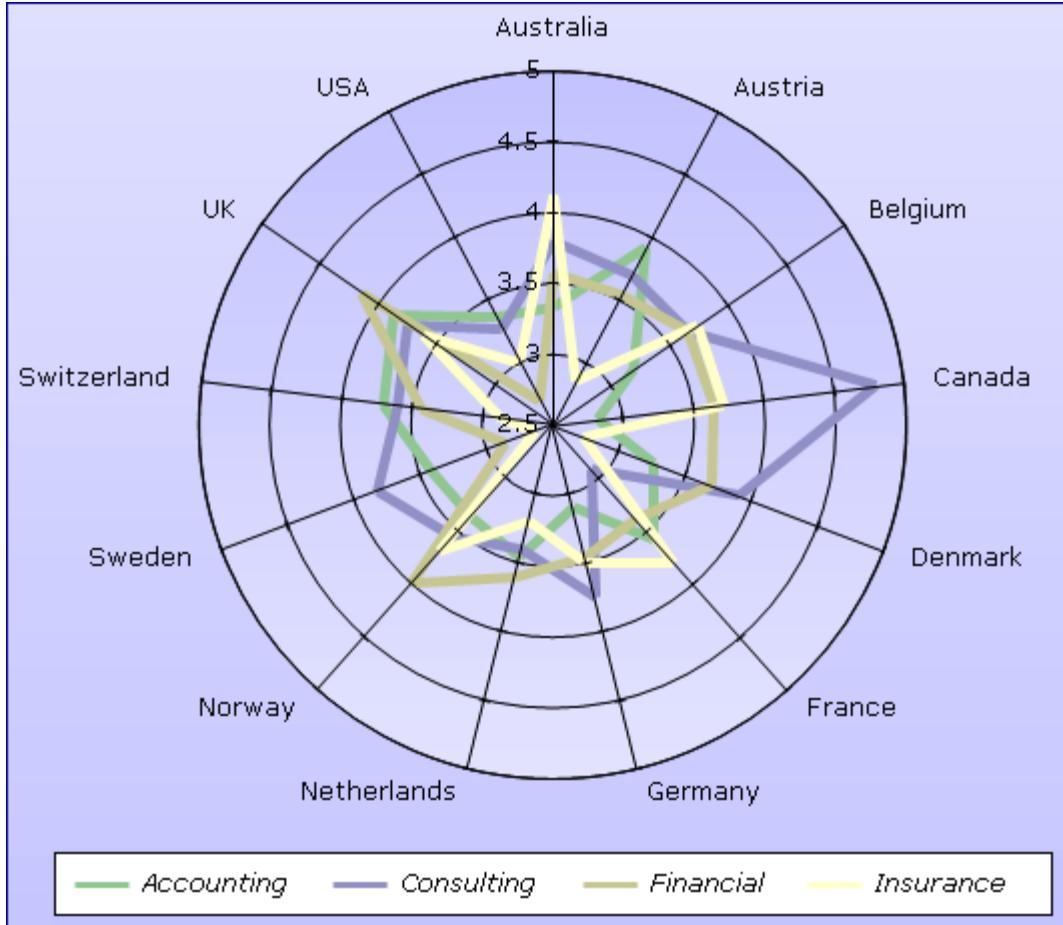


Figure 382 Horizontal text

### Radar Chart 3D Appearance

The circular Radar chart area does not support true 3D. The only property from the Area3DStyle object that affects the Radar chart is the Enable3D property. If you set Enable3D to True, the drawing style for the area background changes to give the appearance of looking down on a 3D cone. No rotation or any other 3D properties are applicable.

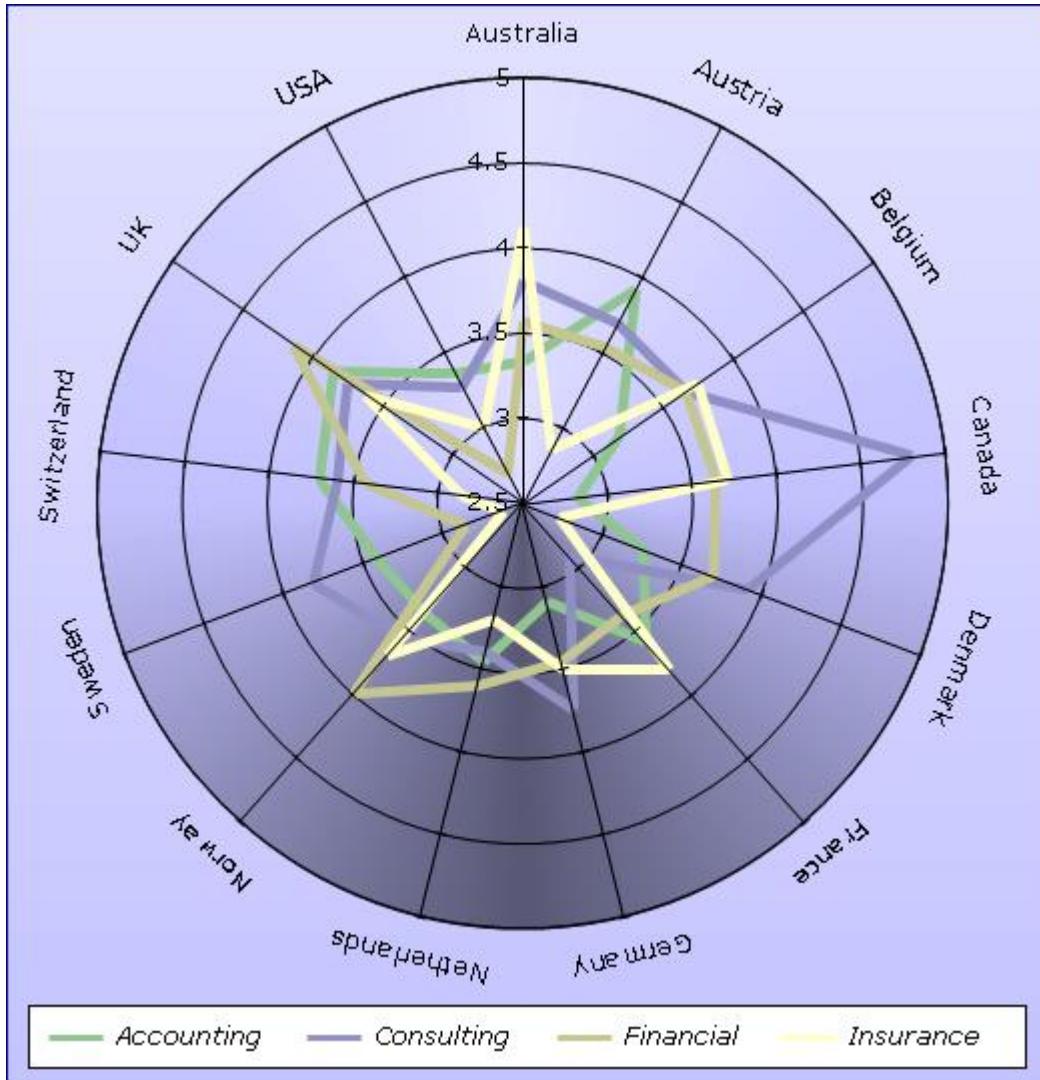


Figure 383 Example of a 3D radar chart

#### 9.5.2.2.9. XY-Plot

An XY-Plot is a chart type based on two series, where the first series gives the X-axis values for the plots and the second series gives the Y-axis values. This is typically used for charts where you need to rate for example several products, services or statements on two dimensions, for example satisfaction and importance.

For example, an XY-plot may be based on the results from a 3D grid question such as the one shown below, where different aspects are rated both on satisfaction and importance.

Evaluation of various customer aspects											
	Satisfaction						Importance				
	1 Very unsatisfied	2	3	4	5 Extremely satisfied	Don't know	1 Not important at all	2	3	4	5 Extremely important
Product/service quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Value for the price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Purchase experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Installation or first use experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Usage experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
After purchase service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
Repeat purchase experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				

**Figure 384 A 3D grid with satisfaction/importance questions**

From this question, an xy-plot as in the figure below can be set up, showing the “top two” box (the percentage or number of respondents who answered 4 or 5 on the questions) on satisfaction and importance.

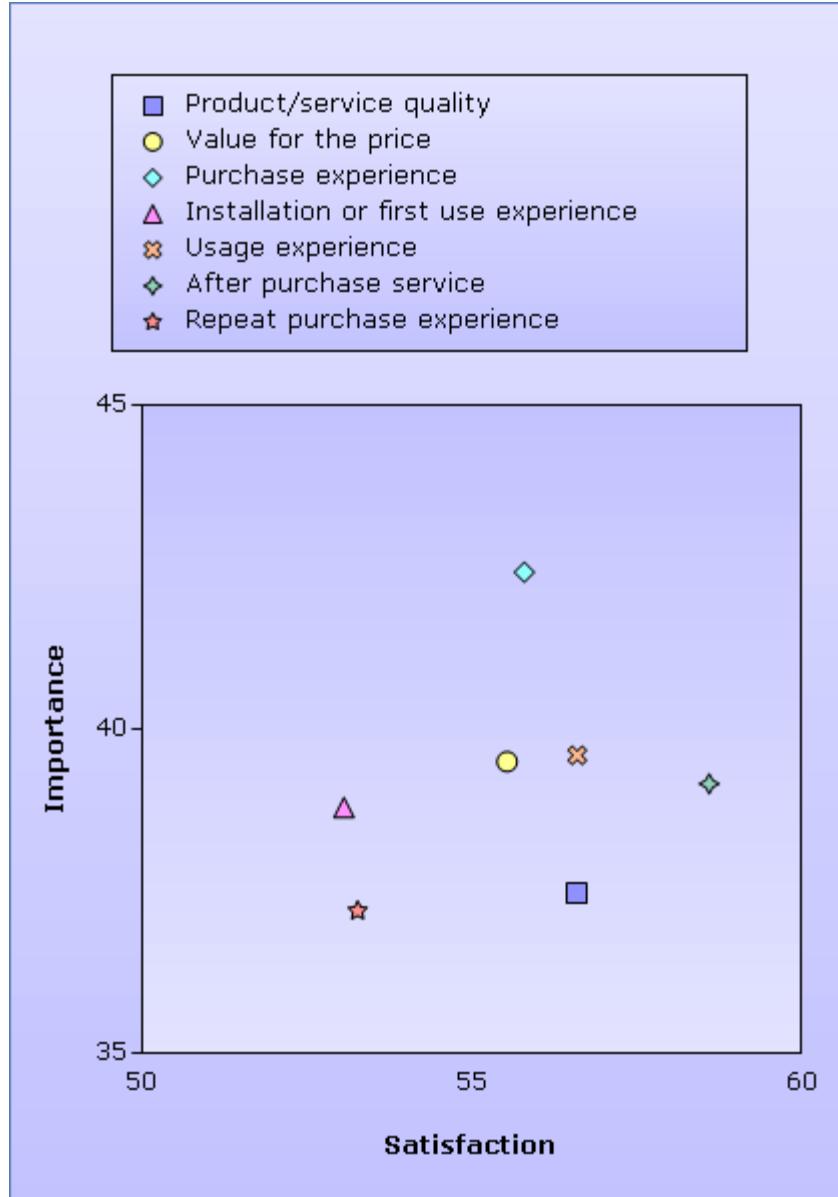


Figure 385 XY-plot

The aggregated table used in this chart is shown below:

	Categories	Categories	
q6 - Satisfaction		Satisfaction	Importance
		Percent favorable	Percent favorable
Product/service quality		56.6%	37.5%
Value for the price		55.5%	39.5%
Purchase experience		55.8%	42.4%
Installation or first use experience		53.1%	38.8%
Usage experience		56.6%	39.6%
After purchase service		58.6%	39.2%
Repeat purchase experience		53.3%	37.2%

**Figure 386 Satisfaction/importance table**

q6 is the satisfaction question (grid question) from the 3D grid. The importance question is a different grid question (q16) from the same 3D grid, and the results from that question are displayed in the same table by setting "Override Field Names" on the second categories object, to replace results from q6 with results from q16.

Override Field Names	
Enabled	<input checked="" type="checkbox"/>
From	q6
To	q16

**Figure 387 Override Field Names settings on the second categories object**

Percent favorable (the top-two box) comes from a Reusable Recoding applied to the scales, where 4 and 5 responses are grouped together in the category called "Percent favorable". Masking is applied so only this answer alternative (alternative 2 in the recoding) is shown, and "Don't know" responses, alternative 3 in the recoding, are ignored (filtered out) (see Categories and Statistics Objects on page 222 for more information).

Ignore	3	<input type="button" value="?"/>
Recoding	Unfavorable/Favorable/DK	<input type="button" value="?"/>
Show Title	<input checked="" type="checkbox"/>	
Upperlevel Comparison	<input type="checkbox"/>	<input type="button" value="?"/>
Mask		
Masking	Show Specified Codes	<input type="button" value="?"/>
Codes	2	

**Figure 388 The Recoding, Masking and Ignore settings on the categories objects**

An example of the recoding is shown below (see Recoding Variables on page 662 for more information).

The interface shows two tables side-by-side. The left table, titled 'Answers', lists six rows with columns for 'Answer Text' and 'Category ID'. The right table, titled 'Categories', lists three rows with columns for 'Category ID' and 'English'. Both tables have 'Add' and 'Remove' buttons.

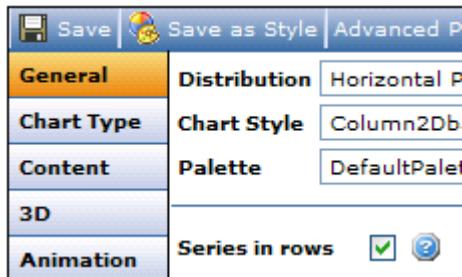
Answers	
<input type="checkbox"/> Answer Text	Category ID
<input type="checkbox"/> Very  unsatisfied  1	1
<input type="checkbox"/>   2	1
<input type="checkbox"/>   3	1
<input type="checkbox"/>   4	2
<input type="checkbox"/> Extremely satisfied 5	2
<input type="checkbox"/>   Don't know	3

Categories	
Category ID	English
>> 1	Add Remove Percent unfavorable
>> 2	Add Remove Percent favorable
>> 3	Add Remove Don't know

**Clear selected**

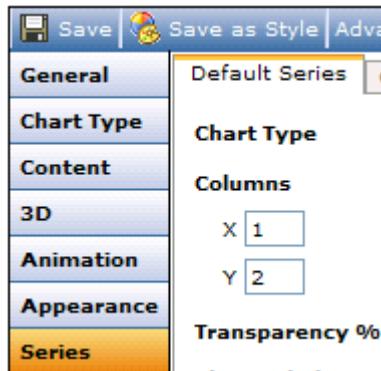
**Figure 389 Recoding**

When creating an XY-plot based on the table above, we want the points to represent the different qualities ("Product/service quality", "Value for the price" etc.). This means that we want the series to form the rows of the table, so the "Series in rows" setting must be applied to the chart.

**Figure 390 Checking the Series in rows box**

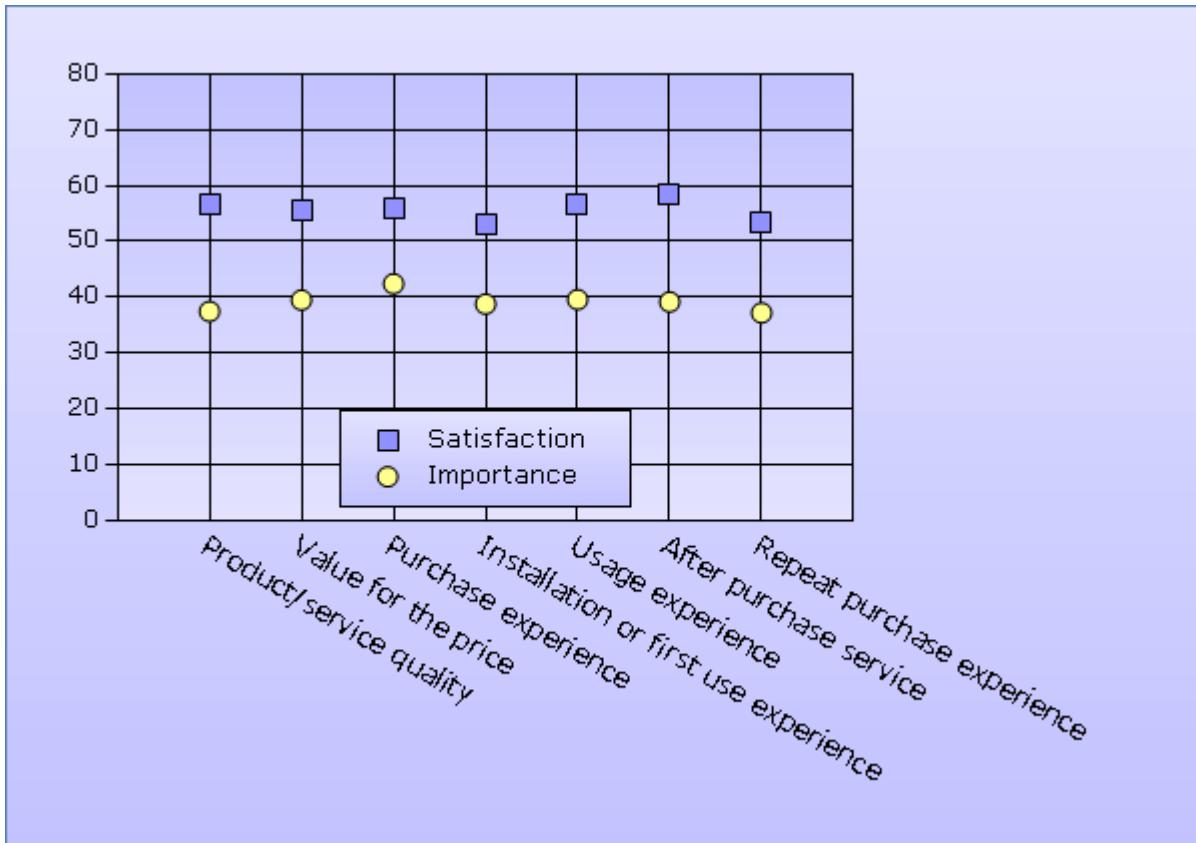
## Columns

The Columns settings on the Series tab control which of the columns in the table are to be used for the X and Y values. They thereby allow you to create XY-plots from tables with more than two columns as you can select exactly which columns are to be used for the X and Y values. These settings default to 1 for the X axis and 2 for the Y axis.

**Figure 391 Column settings**

## Difference between a Point Chart and an XY-Plot Chart

A point chart is similar to an XY-plot, but whereas the XY-plot has one set of X values and one set of Y values in the table, the point chart will have two different sets of Y values. The same table on which we based the XY-plot chart (see XY-Plot on page 301 for more information) could also be represented by the chart below if it was instead set up as a point chart. Here we have set series in columns (turning off "Series in rows") to have one series for "Satisfaction" and one for "Importance". The different points are only distributed along the X axis. There are no X values on the points, but instead there are two different series plotted against the Y axes.



*Figure 392 Point chart*

### 9.5.2.2.10. Marker Attributes

To set the shape, size and color of the markers (the figures representing the points), go to the "Marker Attributes" properties in the Series tab.



*Figure 393 The Marker Attributes properties*

- Color defines the color to be used for the markers. If Color is left blank, the colors specified by the palette selected for the chart in the General tab will be used (see Color on page 325 for more information).
- Width controls the size of the marker in pixels.
- If Style is set to "Auto", the different series will automatically be given different shapes.

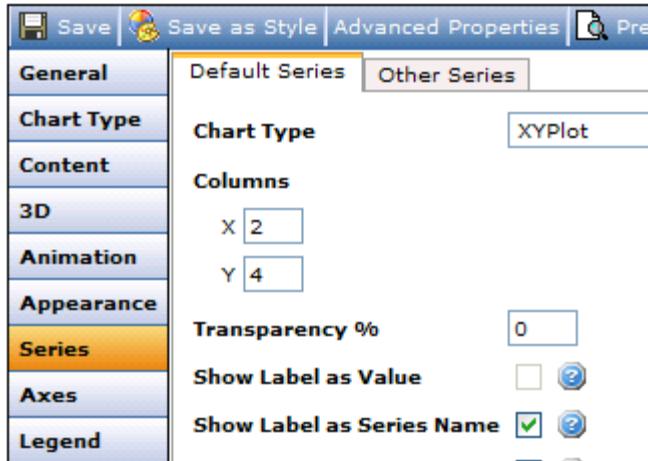
### Show Label as Series Name

If the texts associated with the different points in the XY-plot (see XY-Plot on page 301 for more information) are long, a legend is probably the best solution for showing what the points represent. In addition to the legend, the texts are also provided as tooltips that appear when you point to them with your mouse. With short labels you may want to have the labels next to the points inside the chart area instead of the legend, as in the chart below showing "Value for the price" against "Product/Service Quality" for some products.



Figure 394 Series Name as Label

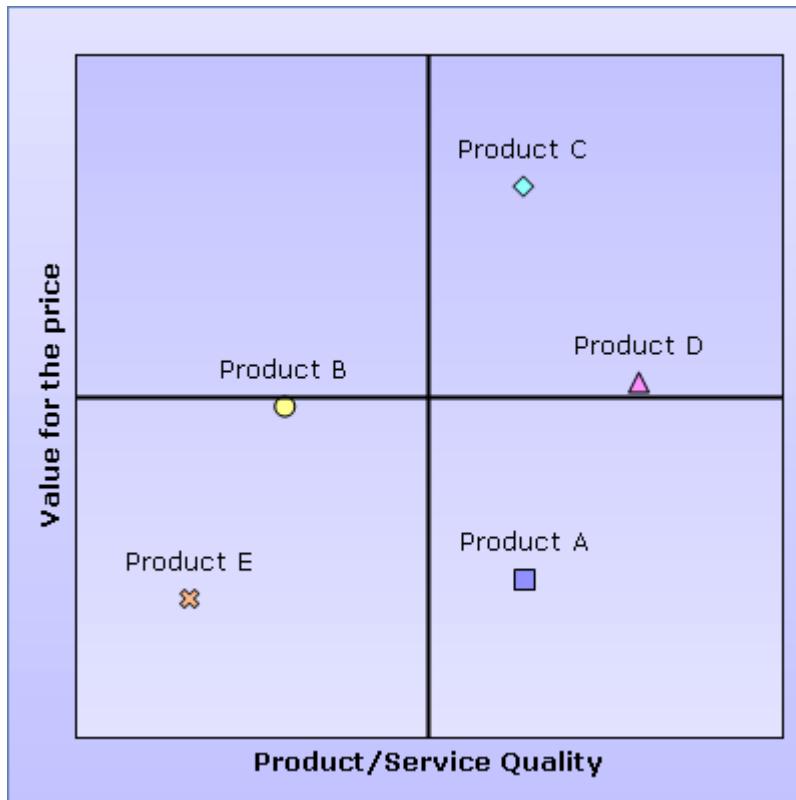
To use the series name instead of the value (the Y values of the plots), check the box for the "Show Label as Series Name" property.



*Figure 395 Show Label as Series Name*

### Quadrant Chart

A Quadrant chart is an XY-plot chart where the chart area is divided into four sections. To create this style, move the X and Y axes to the required positions:



*Figure 396 Example of a Quadrant chart*

To move the X and/or Y axes from the origin (0,0), go to the Axes tab and specify a value for the "Crossing Point" property for the appropriate axis (see Crossing Point on page 346 for more information).

For example, if you set the Crossing Point for the X axis to 55 (as shown below), the Y axis will cross the X axes where X = 55. The same applies for the Y axis.

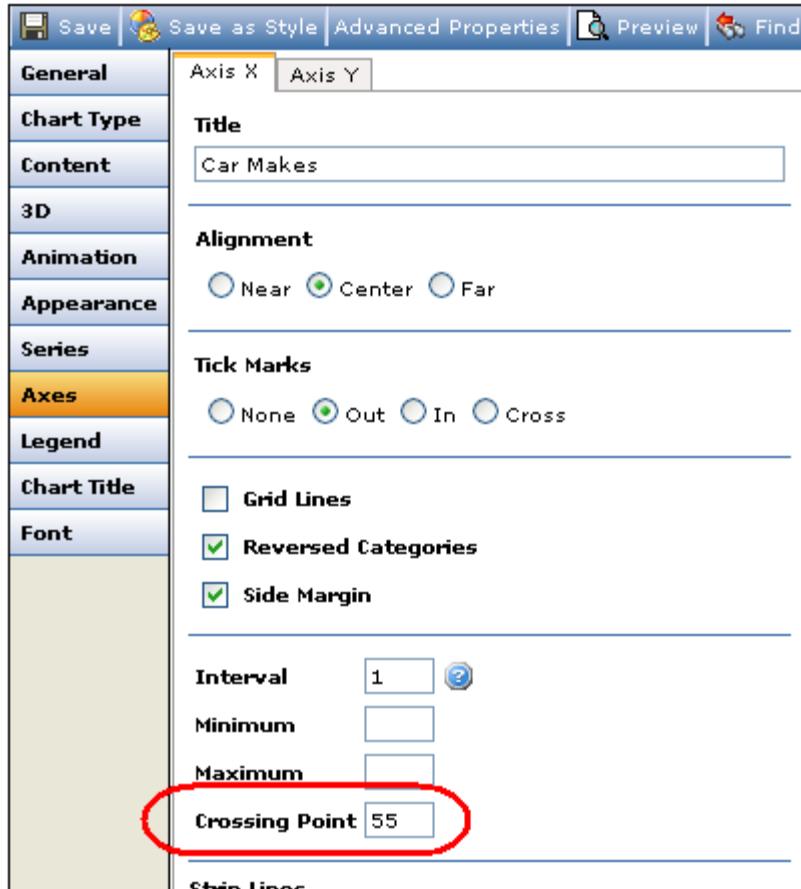


Figure 397 Setting the Crossing Point

### Bubble Chart

A Bubble Chart is an XY-plot where a third dimension (Z) is included. The third dimension controls the size of the markers. An example is shown below, where the size of the bubbles represents the results from a third question on propensity to re-purchase.

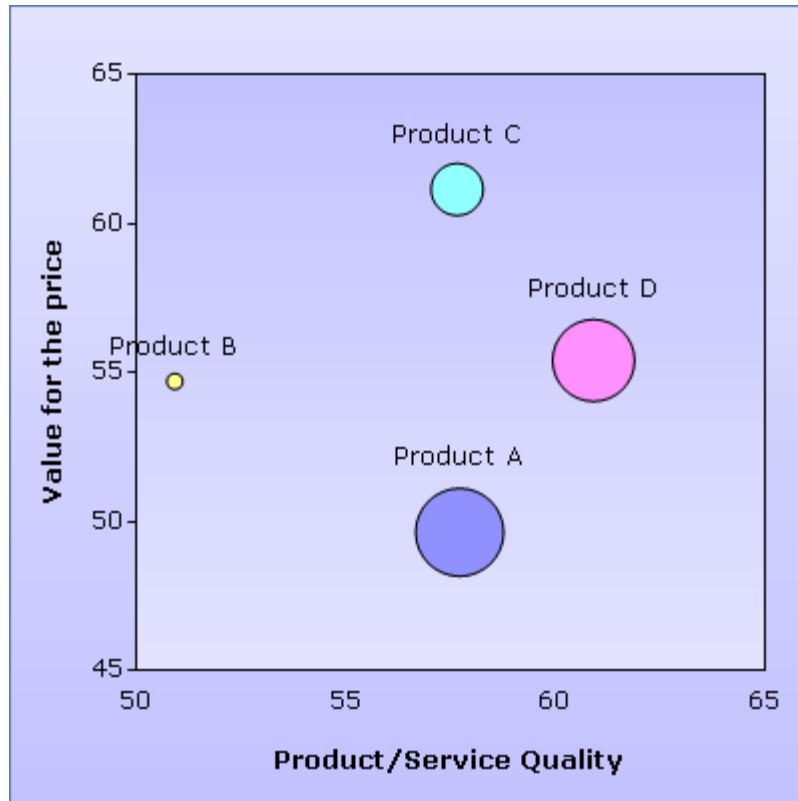


Figure 398 Example of a Bubble Chart

Select Bubble Chart as a sub-type under XY-plot.

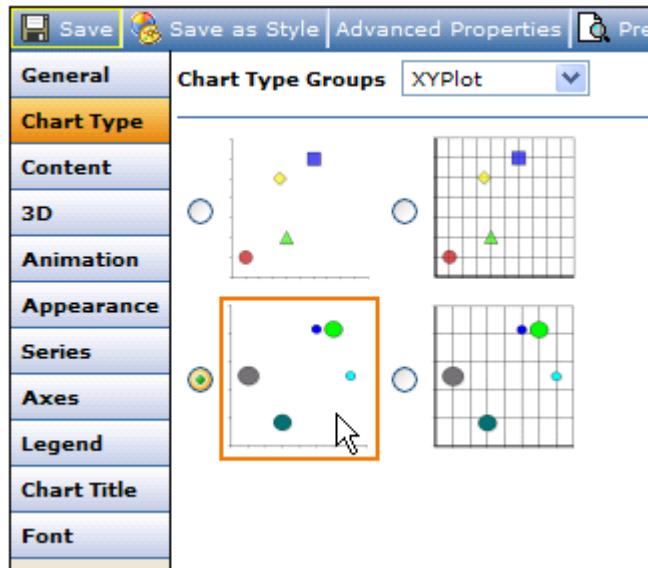


Figure 399 Selecting a Bubble Chart

As with the XY-plot, go to the Series tab and select the columns that are to be used for the X and Y values (see The Series Tab on page 328 for more information). In addition here, you must also specify a column for the Z values, which controls the size of the bubbles. The chart component will automatically adjust the relative size of the bubbles depending on the range of values in the chosen column.

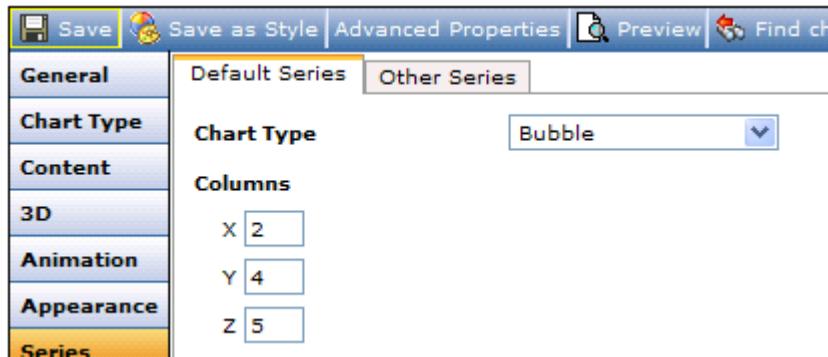


Figure 400 Selecting the columns to be used for the axes and bubbles

You can use marker types other than bubbles.

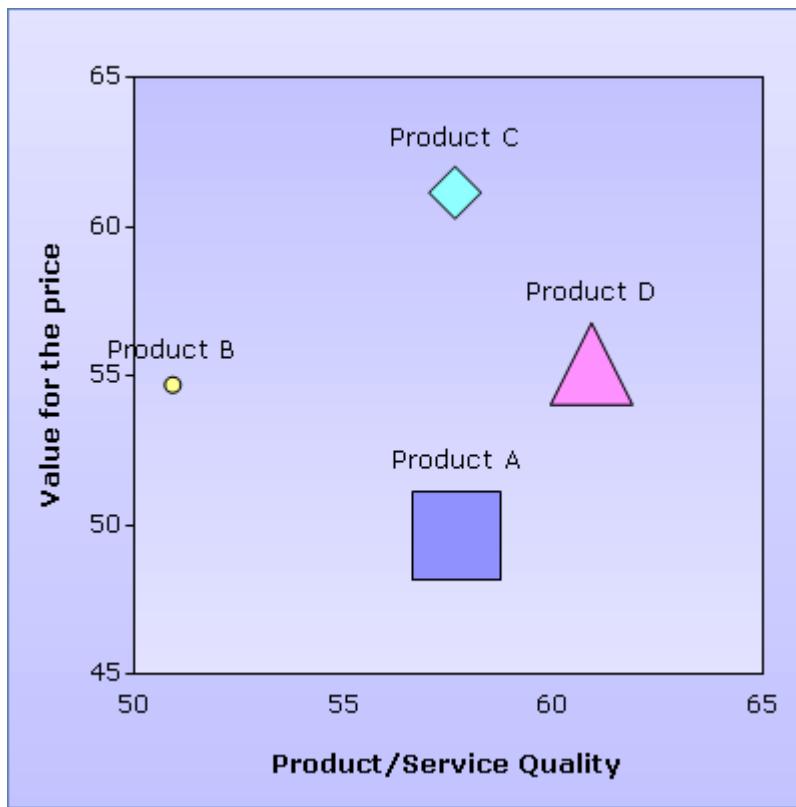
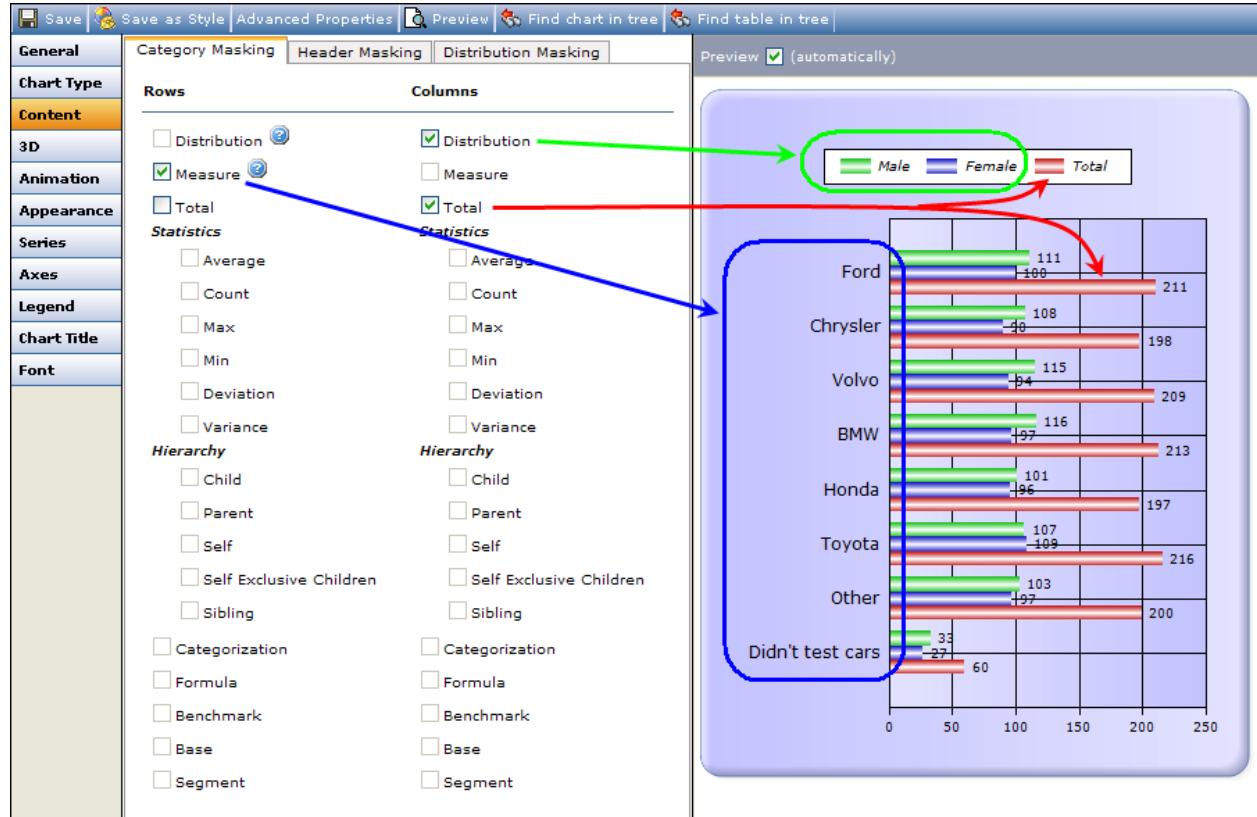


Figure 401 A Bubble chart with different shaped markers

### 9.5.2.3. The Content Tab

The Content tab allows you to decide which categories are to be included in your chart. By selecting the desired categories, you are automatically masking (visually removing) the categories you do not wish to be included (see The Table Designer on page 143 for more information).



**Figure 402 The Content tab (Category Masking)**

Compare the rows and columns that are selected in figure above, with the source table shown below:

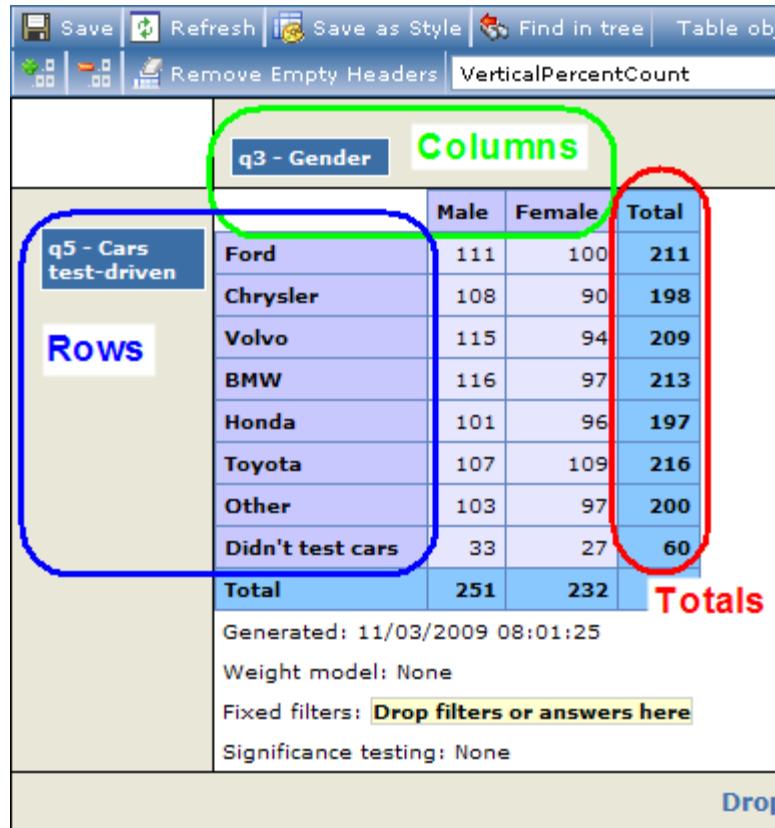


Figure 403 Distribution - Columns

#### 9.5.2.3.1. Category Masking

On the “Category Masking” tab you select the categories that are to be included in (or excluded from) the chart. The terms “Rows” and “Columns” in the chart figure refer to the elements inside “ROWS” and “COLUMNS” (see the figure below). Note that the “Series in rows” setting on the General tab (see Series in Rows on page 275 for more information) does not influence this. Examples of categories are the answer list, the total, and the average. The green ellipse in the figure is the distribution category (answer list) of the elements in Columns.

The screenshot shows a distribution table titled "q3 - Gender" with "Columns" highlighted by a green circle. The table has three columns: "Male", "Female", and "Total". A blue box highlights the "Rows" section, which contains the title "q5 - Cars test-driven". The "Total" column is circled in red. The table data is as follows:

	Male	Female	Total
Ford	111	100	211
Chrysler	108	90	198
Volvo	115	94	209
BMW	116	97	213
Honda	101	96	197
Toyota	107	109	216
Other	103	97	200
Didn't test cars	33	27	60
<b>Total</b>	<b>251</b>	<b>232</b>	<b>Totals</b>

Generated: 11/03/2009 08:01:25  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

Figure 404 Distribution - Columns

### 9.5.2.3.2. Header Masking

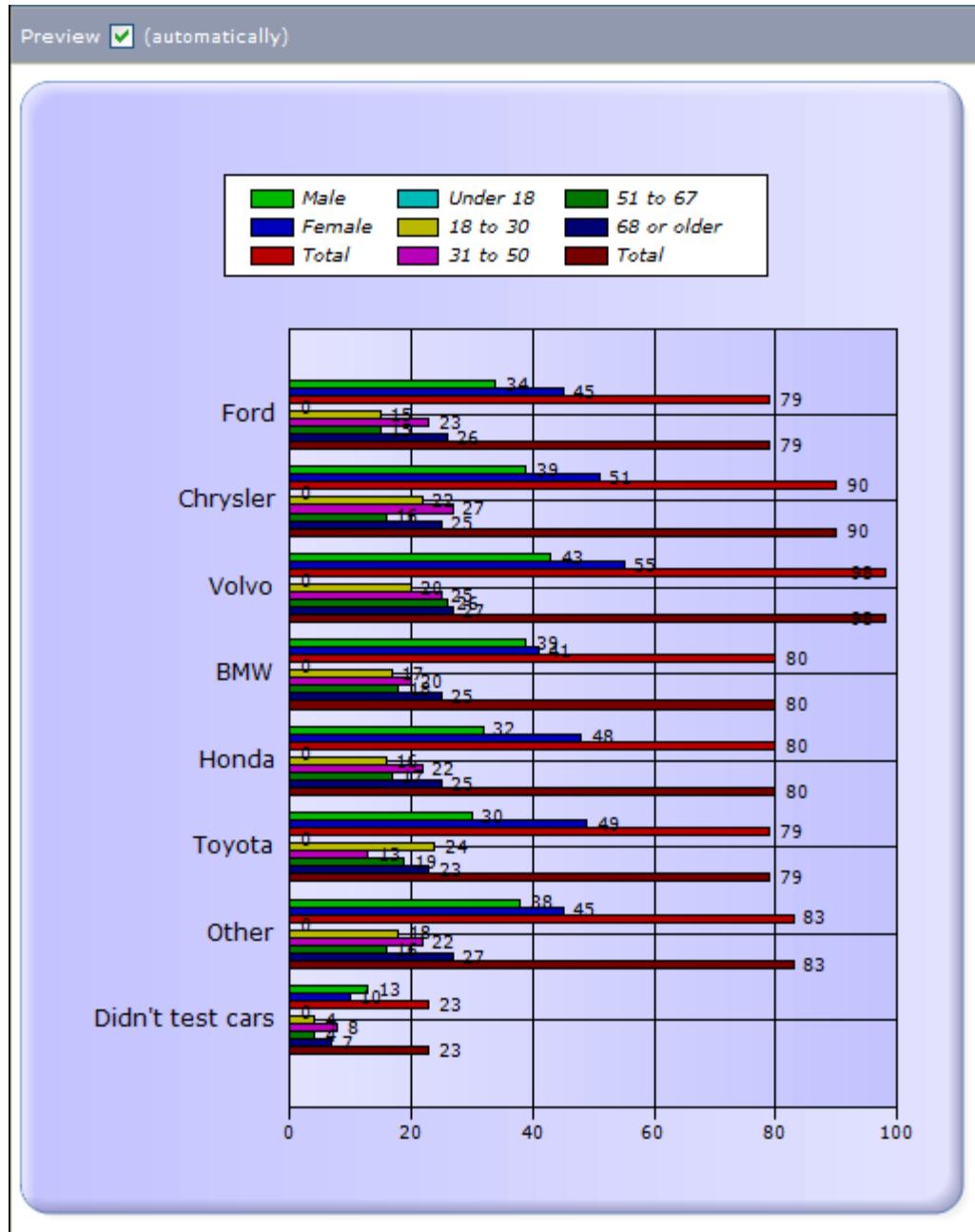
The Header Masking tab allows you to hide, in the chart, elements that are included in the table, so that even though the table may be large you can have the chart display only the information you wish to see. See the table below as an example:

	q3 - Gender   q4 - Age										
q5 - Cars test-driven		Male	Female	Total	Under 18	18 to 30	31 to 50	51 to 67	68 or older	Total	
	Ford	34	45	79	0	15	23	15	26	79	
	Chrysler	39	51	90	0	22	27	16	25	90	
	Volvo	43	55	98	0	20	25	26	27	98	
	BMW	39	41	80	0	17	20	18	25	80	
	Honda	32	48	80	0	16	22	17	25	80	
	Toyota	30	49	79	0	24	13	19	23	79	
	Other	38	45	83	0	18	22	16	27	83	
	Didn't test cars	13	10	23	0	4	8	4	7	23	
	Total	118	132	250	58	41	50	42	59	250	

Generated: 03/12/2009 11:33:38  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

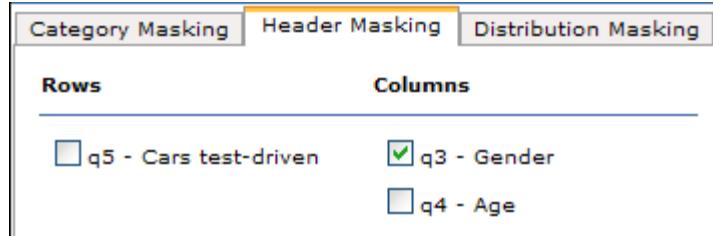
*Figure 405 Table with two elements in Columns*

This is the same table as in the previous topic except that the Age question is added. This now gives the following chart:



**Figure 406 Chart based on a cross-tab with three elements**

The chart shows Distribution and Total for all three questions and it has become rather crowded. The Header Masking tab lists all the questions that have been used to create the table.



**Figure 407 Header Masking**

Check the questions that you wish to hide in the chart. In this case Gender is selected, so the question is removed.

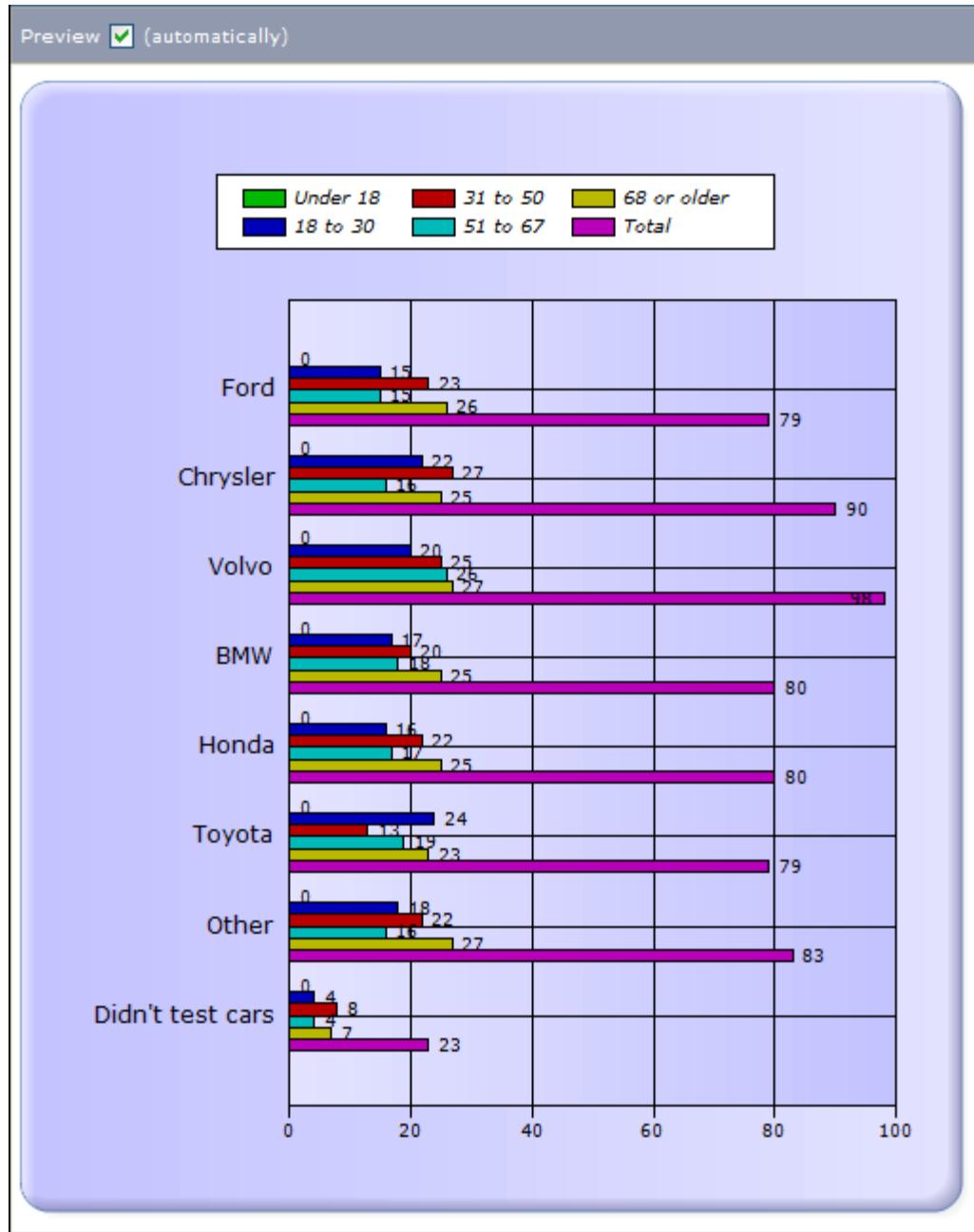


Figure 408 The chart when Gender is masked

### 9.5.2.3.3. Distribution Masking

Use Distribution Masking to mask (visually hide) one or more elements in an answer list or scale list. In the chart below, we have deselected the Total category under Category Masking and set **Show All** under Distribution Masking. This shows all the answers in the chart apart from the totals.

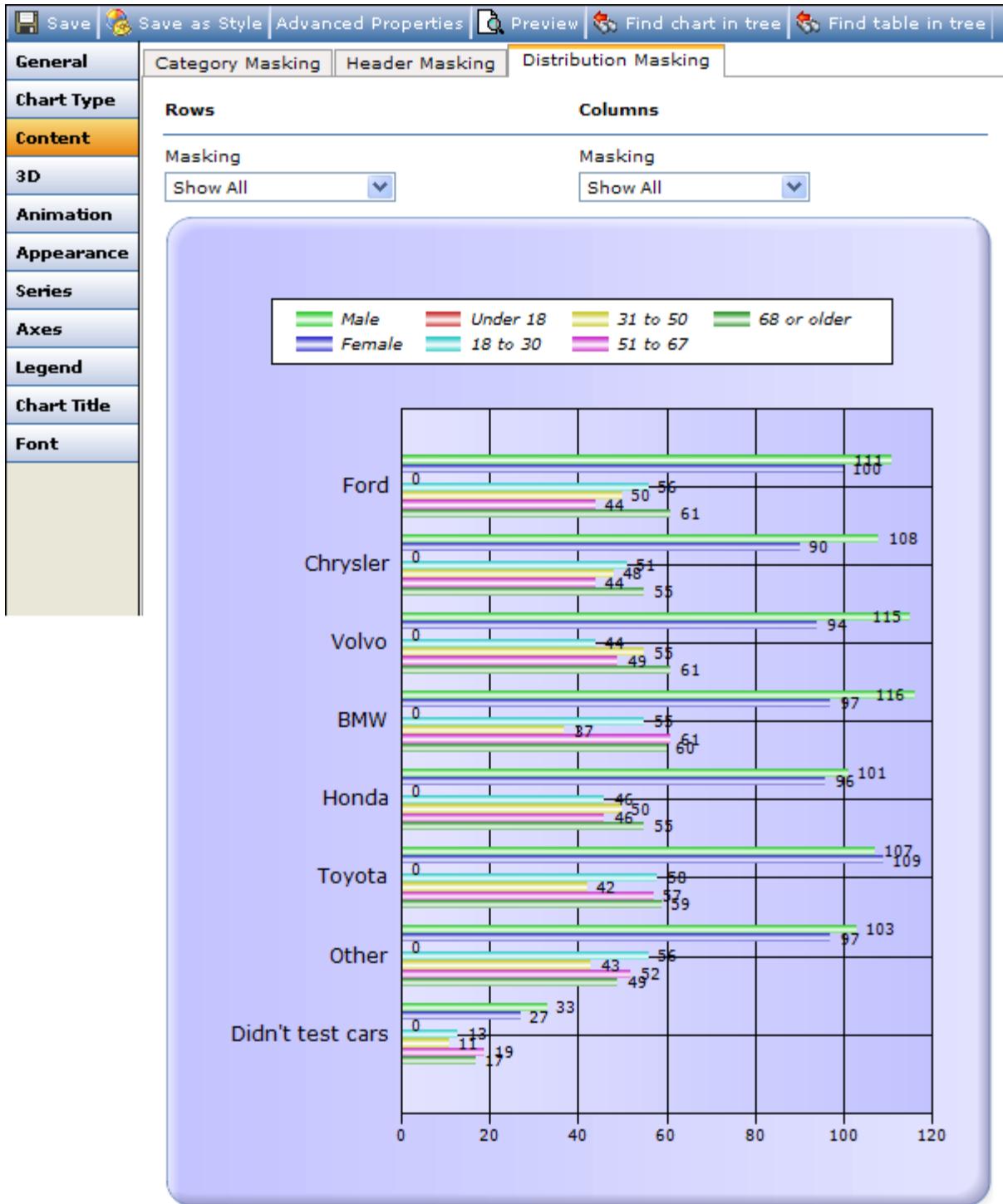


Figure 409 Distribution Masking – Show All

Distribution masking enables you to choose the list elements that the chart is to display. Choose between **Show All**, **Hide All**, **Show Specific Codes**, or **Hide Specific Codes** from the drop-down menu.

If you choose either **Show Specific Codes** or **Hide Specific Codes** from the Masking drop-down menu, you must then specify codes in the open-text field that appears below. In the figure below **Show Specific Codes** is selected, so we must specify which codes are to be shown. Each code must match the corresponding code used for that question in the questionnaire tree.

In this case, the codes **2,3,5** are specified. The codes used for Male and Female are **1** and **2**, while the codes for the Age question are **1** through **5**. The resulting chart therefore shows "Female" and "18 to 30" (because code "2" is entered), and "31 to 50" and "68 or older" (because codes 3 and 5 are entered).

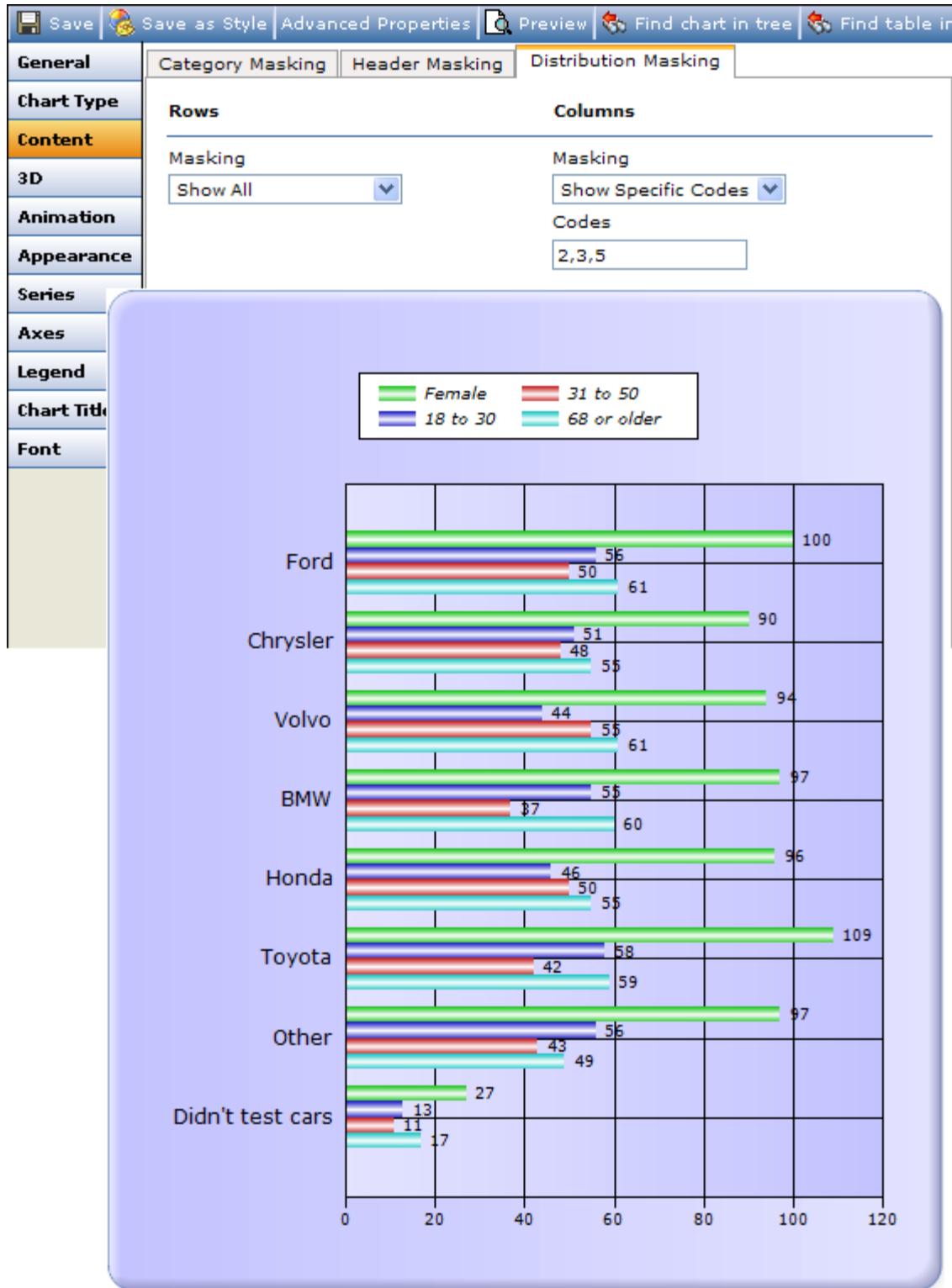


Figure 410 Distribution Masking - Show Specific Codes

### 9.5.2.4. The 3D (Three Dimensional) Tab

Confirmit Report supports the use of 3-dimensional functionality charts. In the figure below, the 3D function is enabled.

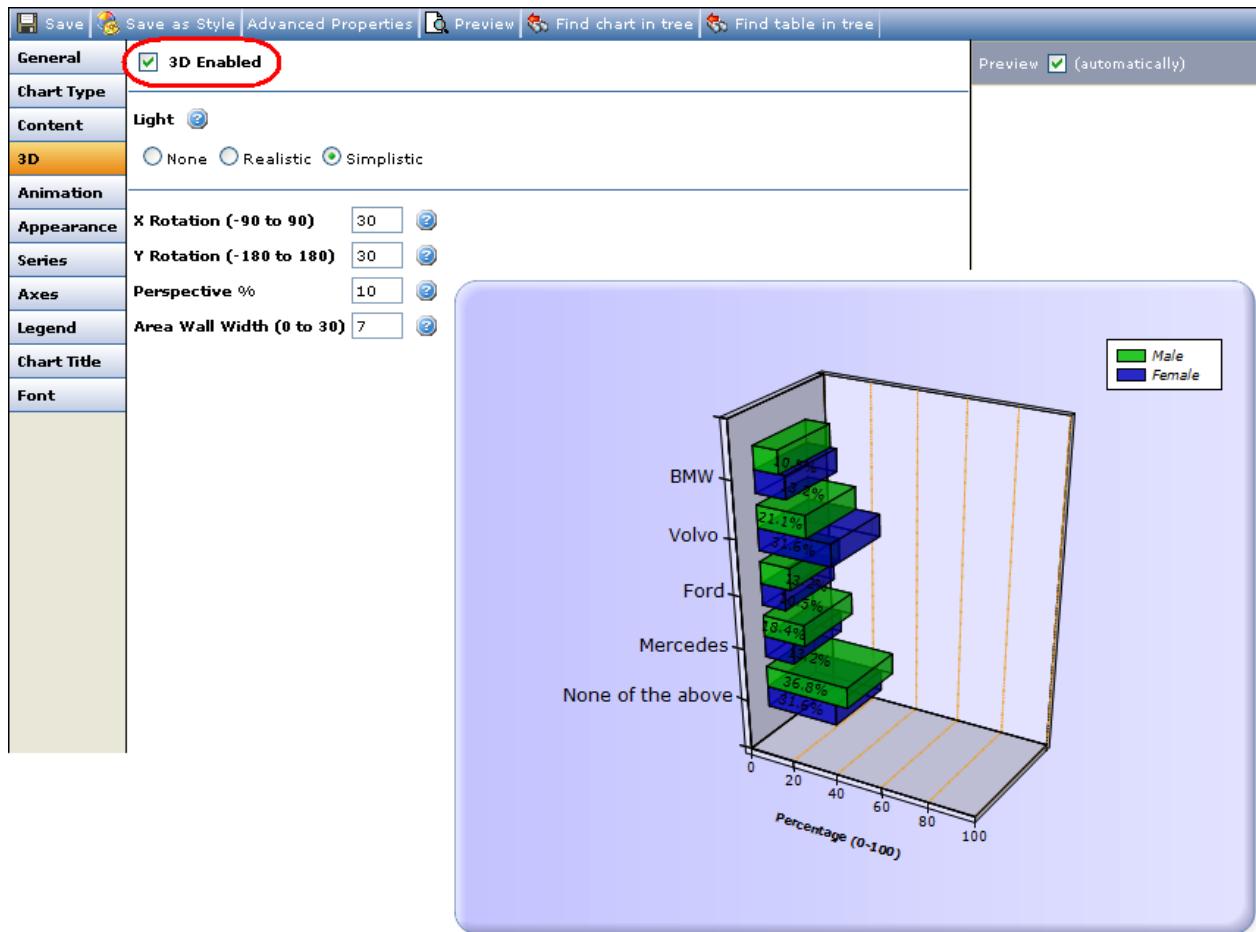


Figure 411 A Bar Chart in 3D

If "3D Enabled" is not selected, the chart is displayed in 2D. Note that you can also choose a 3D chart layout directly from the Chart Type menu.

**Note:** It is usually advisable to avoid 3D graphs as these are difficult to view and interpret. Do not use the 3D functionality merely to give a 2D graph "depth"; the depth gives the brain more to think about and so is confusing.

#### 9.5.2.4.1. Light

A Simplistic lighting style always applies the same hue to the chart area elements (for example backwall, sidewalls, etc.), while a Realistic style will change the hues of the chart area elements depending on the angle at which the light source (which is perpendicular to the screen) strikes the chart area element.

#### 9.5.2.4.2. X Rotation

The X Rotation property sets the angle of rotation around the horizontal axes for the 3D chart area. It is measured in degrees, with a positive value giving counter-clockwise rotation. The range is -90 to 90, with a default value of 30 degrees.

### 9.5.2.4.3. Y Rotation

The Y Rotation property determines the angle of rotation around the vertical axes for the 3D chart area. This is measured in degrees, with a positive value giving clockwise rotation. The range is –180 to 180, with a default value of 30 degrees.

### 9.5.2.4.4. Perspective

The Perspective property sets the percent of perspective for a 3D chart area. The range is 0% to 100%, and the default value is 0%. A perspective projection of any set of parallel lines that are not parallel to the projection plane converges to a vanishing point.

### 9.5.2.4.5. Area Wall Width

The Wall Width property determines the width /thickness) of the walls (for example the backwall, sidewalls, etc.) displayed in the 3D chart area. The range is 0 to 30 pixels.

### 9.5.2.5. The Animation Tab

The animation settings in this tab operate at a local level, on the selected chart. If you wish to set up animation at a global level such that all animation sequences operate identically, go to the appropriate Chart type in the Layout and Styles toolbox (see The Animation Style Tab on page 379 for more information).

**Note:** To create and view animated charts, both designers and viewers must have the Macromedia Flash player from Adobe (<http://www.adobe.com/go/getflashplayer>) installed.

For cool web-based presentations, Reportal has an animation function. Using this you can have your charts fade in, grow from the edge, fly in from the top, or use one of a number of other themes. You can give the animation a start delay, a total duration, and you can have it repeat over a set period. To set up this function, go to the **Animation** tab, check the Animation Enabled box and set the desired options.

**Note:** Animation will only function on web-enabled reports. If the report is exported to Excel, PowerPoint, Word or another application, the animated charts will be exported as pictures and the animation will cease to function.

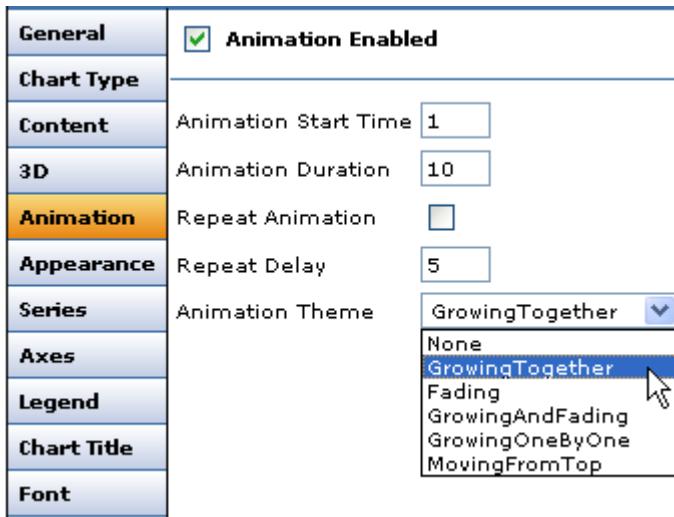


Figure 412 The Animation tab properties

- **Animation Start Time** – the time delay in seconds from when the chart is opened until the animation commences.
- **Animation Duration** – the time taken in seconds for the animation to complete.
- **Repeat Animation** – check to repeat the animation.

- **Repeat Delay** – the time delay between the end of one animation and the start of the next.
- **Animation Theme** – click the down-arrow to open a drop-down list of the available themes, and select one from the list. The options are:
  - o **None** – no animation.
  - o **Growing Together** – uses a combination of growing and fading animation types. Fading is used for markers, data point labels, axis labels, titles and legend items. All other elements use growing animation.
  - o **Fading** – uses only the fading effect for all chart elements. Data points are drawn one by one.
  - o **Growing and fading** – similar to the GrowingTogether theme but differs in that all chart elements may be animated at the same time. This theme also uses a repeat flag for data points which causes a flashing effect.
  - o **Growing one by one** – uses one-by-one drawing for all elements. This theme is a combination of growing and fading animation types.
  - o **Moving from top** – uses Moving Animation for data points. All data points move and grow from point (50, 0) in relative coordinates.

**Note:** An Animation Theme must be selected. If None is shown, then the chart will not be animated.

#### 9.5.2.6. The Appearance Tab

Use the Appearance tab to control the appearance of the lines and the border skin. This main tab contains two sub-tabs of properties; the Colors and Lines tab and the Border Skin tab.

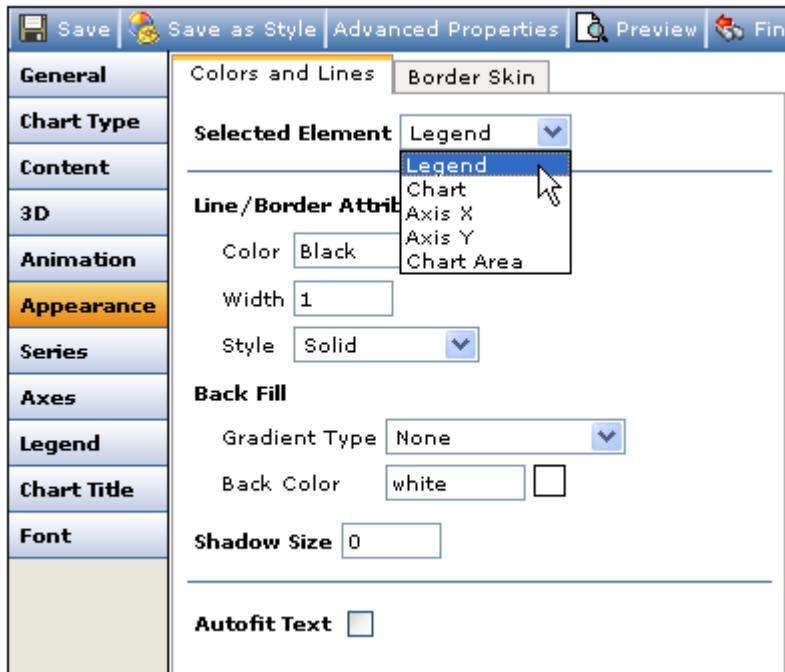


Figure 413 The Appearance tab

Under the “Colors and Lines” tab, first go to the Selected Element drop-down and choose the element you wish to work with from the drop-down menu. Once you have chosen the element, any settings you make to the properties on the tab are applied to that element. When you have made the required settings for that element, you can choose a different element and set up its properties.

Go to the Border Skin tab to set up the chart borders for this chart. Note that if you want all the charts in your report to use the same border skin, then you can set up the border skin in the Layouts and Styles toolbox under Charts.

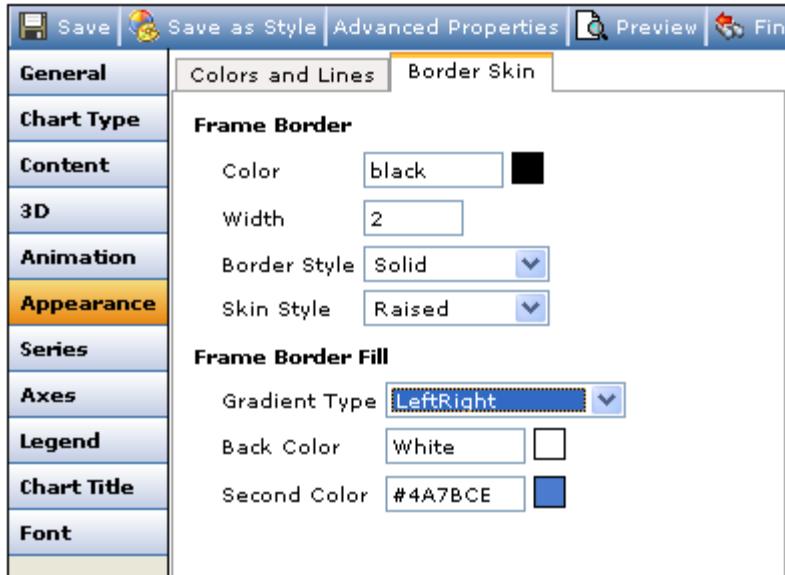
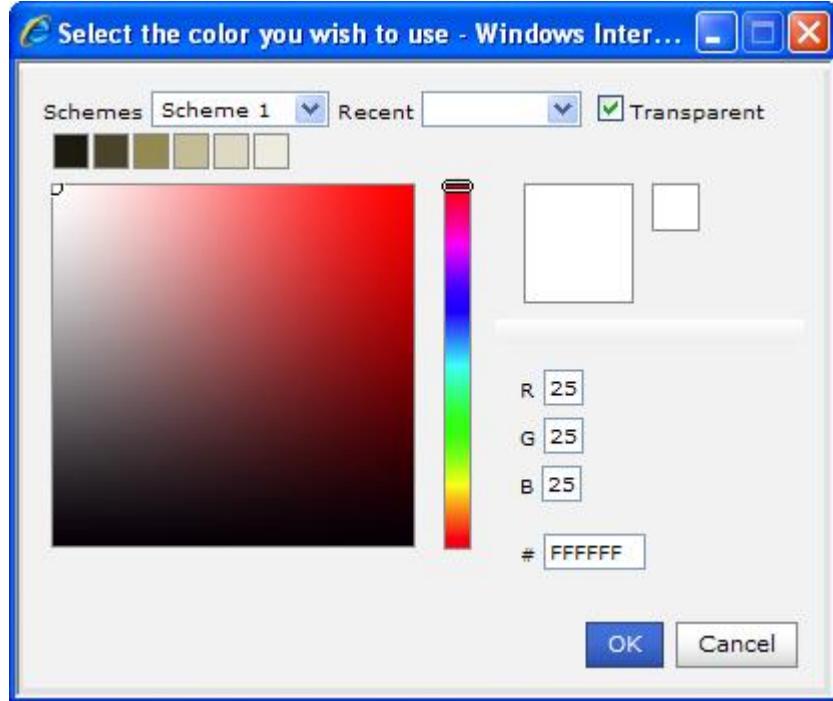


Figure 414 The Border Skin tab

#### 9.5.2.6.1. Color

For all properties related to color, there are three methods of selecting the color to be used:

- You can type a standard HTML color name (such as white, red, steelblue, etc.) into the Color field. The color is added to the sample square beside the field and is applied to the property.
- You can type any valid ARGB (Alpha, Red, Green, Blue) value into the Color field, for example #FFFFFF. Remember to include the '#' symbol in front of the code when using ARGB color codes.
- You can use the color picker. Double-click in the colored sample square beside the Color field to open the Color Picker window.



**Figure 415 The Color Picker**

A number of color schemes have been set up with suggestions for sets of colors that may be useful to you. If you wish to base your colors on a scheme, click the down-arrow beside the Schemes field to open a list and select the desired scheme. Click on a colored sample square to choose that color, and drag the sliders to adjust the color as required.

You can also just use the sliders to find the required color, or type a color code into the RGB or # fields.

Once you have found the desired color, click **OK** to use it for the property.

Once you have used a color, it will be listed in the Recent Colors drop-down. This same drop-down list is available in all the color pickers within Reportal, in all your reports. So you can easily use the same color scheme for different reports, and for areas and elements in the report.

Click **Cancel** to close the window without selecting a color.

**Note:** To remove a previously saved color, delete the color or code from the Color property field and save the change.

When creating charts and selecting colors, the following points should be considered:

- Strong and bright colors strain the eyes so are difficult to look at.
- About 10% of the male population are red/green color-blind, so you should avoid using combinations of red and green for area fills or data emphasis.
- Remember that not all viewers will have access to a color printer. When printing colored diagrams, text etc. on a black/white printer, all the colors will be converted to shades of gray. If you pre-define the shades that are to be used by creating your document using gray shades instead of colors, then you can be sure the printed page will be as you intend it. For example, bright red normally prints out as black on a black/white printer, so black text on a red background is virtually guaranteed to make the printed page unreadable.
- In charts, color gradients can skew the viewer's perception of the colors and can blur edges and boundaries. Both these effects could lead to misinterpretation of the data, so care should be taken to ensure any gradients used cannot cause problems.

### 9.5.2.6.2. Width

This setting determines the width of the border line, in pixels. To disable borders on a chart object, set the border width to 0 or border style to "NotSet".

### 9.5.2.6.3. Gradient Type

If you specify a "Gradient Type", a "Back Color" and a "Second Color" under Back Fill, the background color for the element selected in the "Selected Element" field will gradually change from the first color to the second. For example, the legend in the figure below has a gradient color effect moving from Light green to the color #FFFF99.

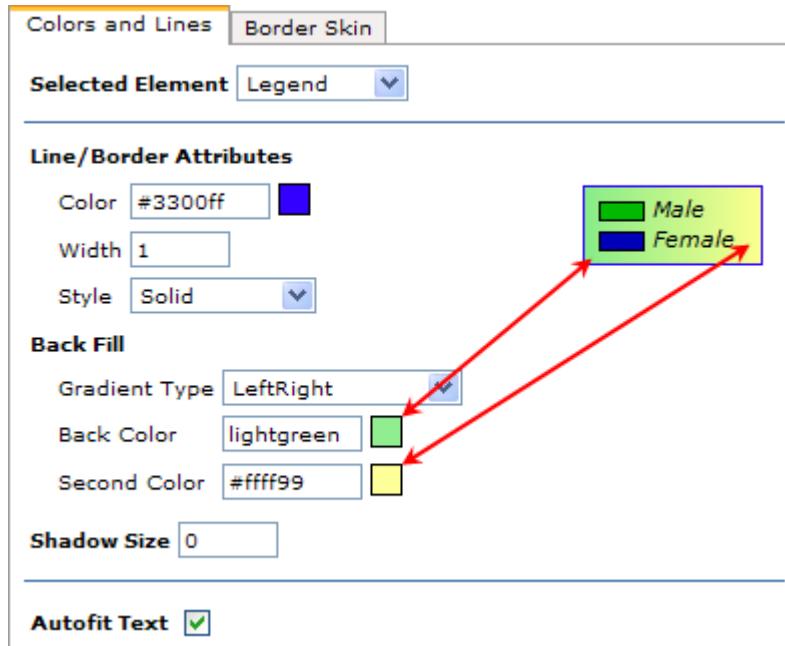


Figure 416 Setting a color gradient for the background

### 9.5.2.6.4. Shadow Size

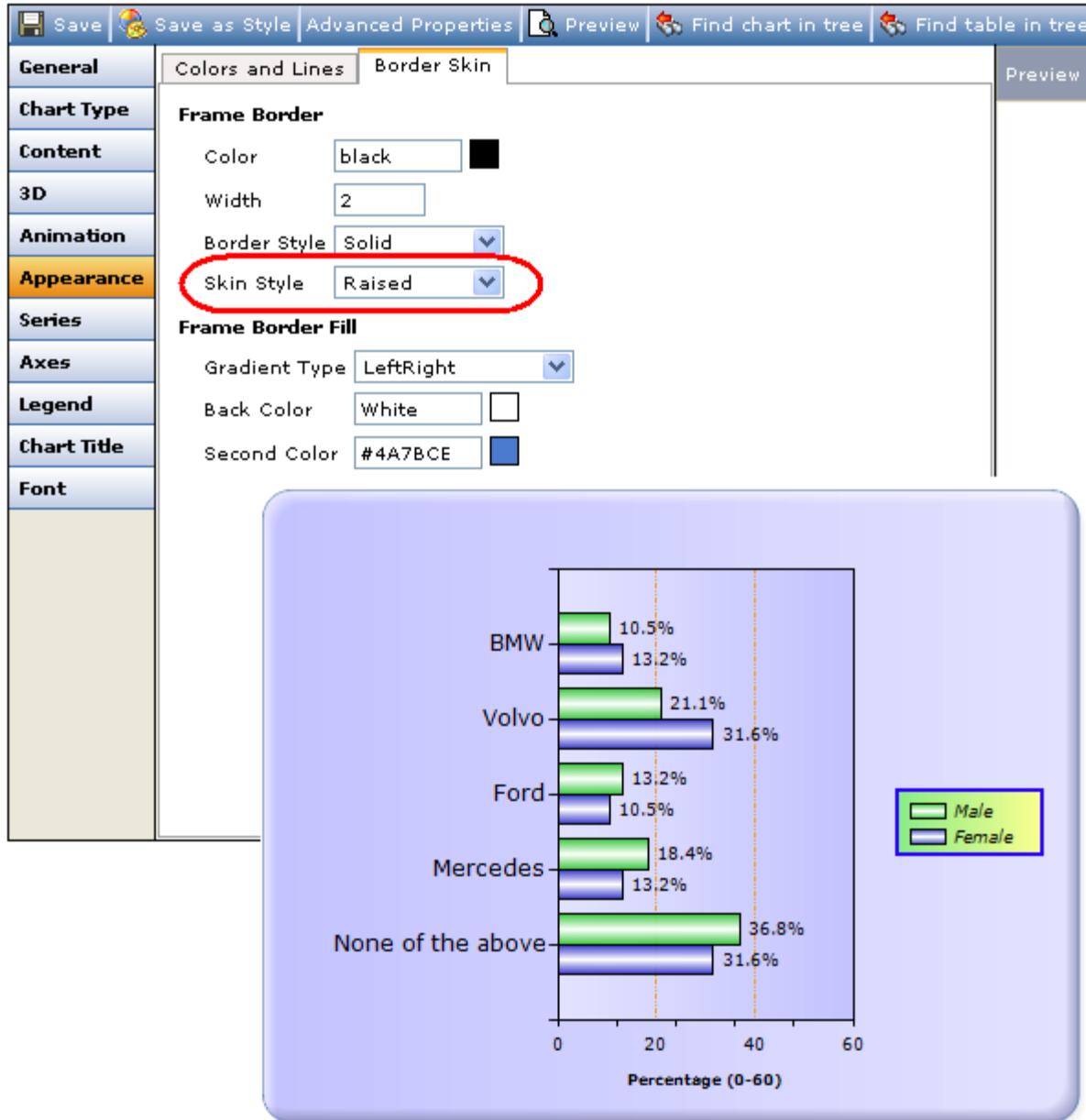
Several of the chart objects can be given shadows. Note that if you use shadows, the effects will be considerably better if you apply the same shadow settings on all objects.

### 9.5.2.6.5. Autofit Text

If Autofit Text is enabled, then the chart element text will automatically be sized to use as much space within the legend as possible without being truncated. If Autofit Text is not enabled, then the font size of the legend text is dictated by the Font Size property. You are recommended to use this setting for the chart legend.

### 9.5.2.6.6. Border Skin Style

The Border skin settings define the style of the chart image's outer borders.



**Figure 417 Setting the border skin**

Under the "Border Skin" tab, choose a "Skin Style" from the drop-down menu (ringed in the figure). To disable the Border Skin, set Skin Style to "None" (see The Appearance Tab on page 324 for more information).

#### 9.5.2.7. The Series Tab

The Series properties enable you to control the look and layout of the chart's data points (series) such that you can present several sets of results on one chart. For example you can combine a bar graph and a line graph to allow the viewer to compare two sets of results.

The Series function has three tabs. You can apply settings on "Default Series", "By Category" (previously termed "Other Series") and "By Position".

- **Default Series** – these are global settings that apply to all series in the chart.

- **By Category** – you can override the global settings with the settings in the By Category tab. This allows you to set specific settings for all series of a specific category represented in the table, for example for all averages. This tab has the same properties as the Default Series tab, plus a Selected Series field and an Enabled checkbox.
- **By Position** – you can override the Default Series and By Category settings with By Position settings. This allows you to set specific settings for up to five particular series, according to the order in which they are located in the series set. You may for example set a specific setting only for the first series (see Using the By Position Function - Example on page 330 for more information).

#### 9.5.2.7.1. The Default Series Tab

Any properties set in this tab apply to all the series in the chart. The properties available will vary depending on which chart type is selected.

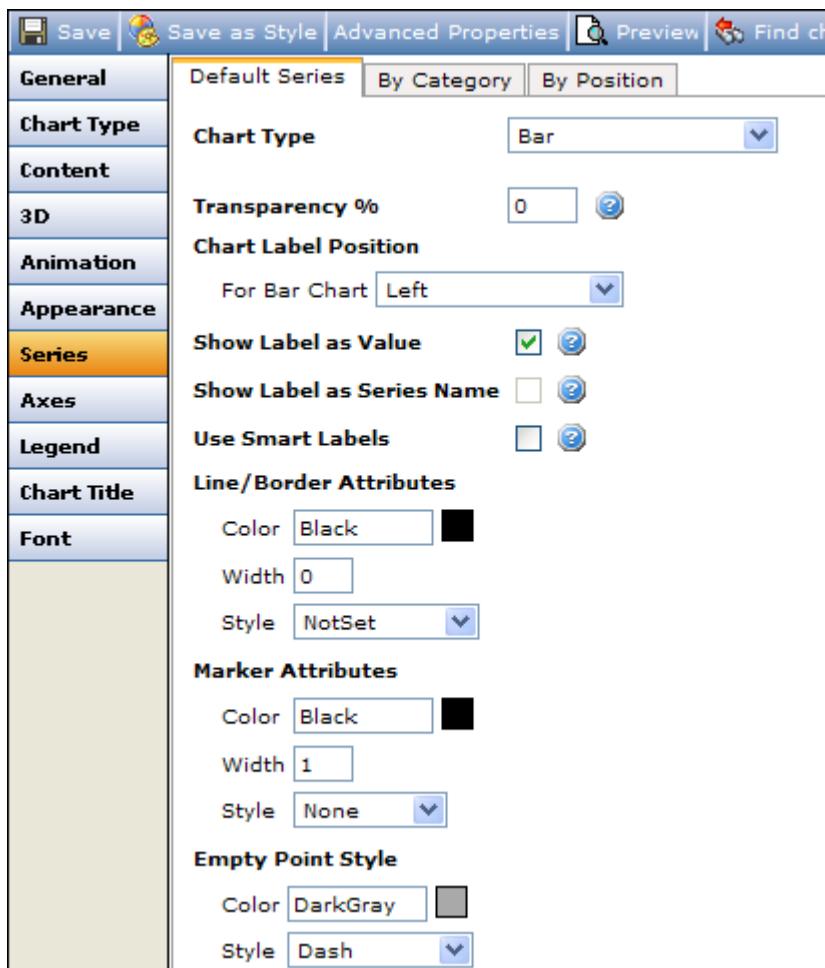


Figure 418 The Series > Default Series tab properties

The full set of properties are as follows:

- **Chart Type** – select the type of layout you wish to use for the chart.
- **Radar Attributes** - sets the look and layout of a radar chart (see Radar Chart on page 293 for more information).
- **Columns** - specify which columns are to be used to provide the data for XY-plot charts (see Bubble Chart on page 309 for more information).

- **Transparency %** – used for visual effect. The series will be partially transparent, to the selected percent.
- **Chart Label Position** - specifies the location of the chart labels for the selected chart type. Note that you can select and save label positions for several different chart types.
- **Show Label as Value** – check to show the marker values on the chart instead of the label text.
- **Show Label as Series Name** – If the texts associated with the series are long, a legend is probably the best place to display them. However with short labels, you may wish to have the labels displayed next to the relevant points inside the chart area instead of in the legend. Check the box to use the function.
- **Use Smart labels** – When using data point labels in charts that have many points or when several points have similar values, it is possible that the labels will collide. Such collisions can make the chart very difficult to read. The Smart Labels function prevents data point label collisions for most chart types (see Using Smart Labels - Example on page 335 for more information). Check the box to use the function.
- **Line/Border Attributes** – the line (for a line graph) or border (for other types) color, width and style. Double-click on the color square to open a color-picker chart.
- **Marker Attributes** – the color, size and shape of the markers.
- **Empty Point Style** - When a line chart in Reportal contains empty points (points with no answers), a dashed grey line is drawn between the previous and the next points. Use the Color and Style properties to specify the look of this line.

#### 9.5.2.7.2. The By Category Tab

The properties on the Default Series tab apply to all the series unless you change the properties for specific series. In the By Category tab you can change the properties for selected categories. Properties set in this tab override those set in the Default Series tab. Note that the table must include a category for this tab to be selectable. The majority of the properties are the same as those in the Default Series tab (see The Default Series Tab on page 329 for more information). Additional properties are as follows:

- **Selected Series** – select the category of series to which you wish to apply settings that override those set in the Default Settings tab.
- **Enabled** – check to enable the By Category settings on this tab for the selected series.

#### 9.5.2.7.3. The By Position Tab

Properties set in this tab override those set in the Default Series and By Category tabs. The majority of the properties are the same as those in the Default Series tab (see The Default Series Tab on page 329 for more information). Additional properties are as follows:

- **Edit layout** – click the link to open the properties sheet for the specified series. The properties here are the same as those on the Default Series tab.
- **Enabled** – check to enable the By Position properties sheet for the specified series.
- **From Start** – in combination with the Position value, specifies whether the position of the series you wish to set the properties for is counted from the left (start) or the right (end) of the table. Check the box if the position is to be counted from the left (start).
- **Position** – used in combination with the From Start setting, specifies the position of the series in the table, counted from either the start or end of the table.

#### 9.5.2.7.4. Using the By Position Function - Example

The figure below shows an example of a chart designed to allow the viewer to compare the top-two fields of a question (percent favorable score) with the results from the previous year. This year's results are presented as stacked columns to show the distribution between scores 4 and 5, while last year's results are presented as a line chart superimposed on the bar chart to indicate the combined percent favorable (4 and 5 scores) of that year.



**Figure 419 Different series settings applied to combine line and stacked columns**

In the table, all three series (the percentage columns) are distributions. Therefore the series categories cannot be used to specify different chart types.

	Agree (4)	Strongly Agree (5)	Last year
I have clear measures for each of my objectives	46.7%	33.3%	93.3%
I know how my job impacts the mission of our company	53.3%	23.3%	66.7%
I know what is expected of me in my job	46.7%	30.0%	66.7%
In the last 12 months my Manager has talked to me about my progress	66.7%	13.3%	83.3%
My co-workers and I work well together to accomplish our organization's goals	56.7%	23.3%	73.3%
My group works well together to accomplish our organization's goals	36.7%	40.0%	73.3%
My Manager has set performance goals for my job	43.3%	23.3%	86.7%
We have prioritized our major goals	36.7%	36.7%	76.7%

**Figure 420 Aggregated table example**

The solution is to set the **Default Series tab > Chart Type** to **Stacked column**, and then apply a different setting for the final series (the Last Year column) using the parameters on the **By Position** tab.

To set series settings **By Position** for a particular series:

1. Go first to the **Series > By Category** tab.
2. Select the series and check the **Enabled** checkbox.

You can enable settings for up to five individual series.

3. Go to the **By Position** tab (see the figure below).
4. State the column's position, and whether this position is from start or the end of the list of series.

In this example we are looking at the last column in the table in the figure above – that is the 1<sup>st</sup> column from the right, or end, of the table. Therefore in the first row in the By Position tab we have specified series number **1** from the end (the Start checkbox is unchecked). The remaining rows in the tab are not enabled.

5. Click **Edit Layout** for the Enabled row to edit the series settings for the series.

A number of additional properties are displayed. In the example below, the chart type is set to **Line** for this series, and the Line Width is set to **3**.

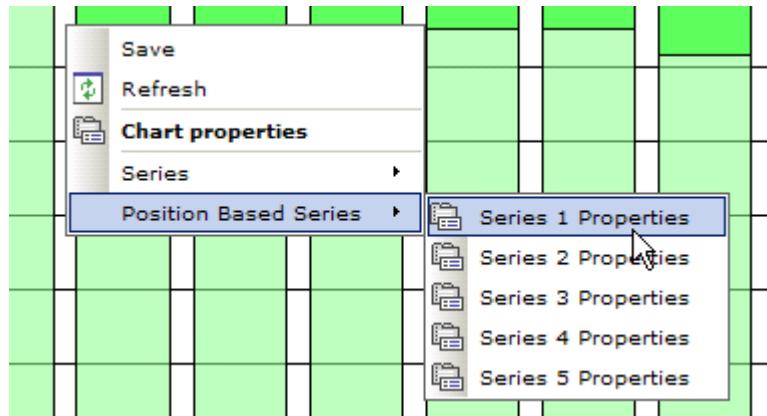
Enabled From Start Position			
<a href="#">Edit Layout</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1
<a href="#">Edit Layout</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4
<a href="#">Edit Layout</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3
<a href="#">Edit Layout</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4
<a href="#">Edit Layout</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5

<b>Chart Type</b>	<a href="#">Line</a>
<b>Transparency %</b>	<input type="text" value="0"/>
<b>Show Label as Value</b>	<input type="checkbox"/> <a href="#">?</a>
<b>Show Label as Series Name</b>	<input type="checkbox"/> <a href="#">?</a>
<b>Use Smart Labels</b>	<input type="checkbox"/> <a href="#">?</a>
<b>Line/Border Attributes</b>	
<b>Width</b>	<input type="text" value="3"/>
<b>Style</b>	<a href="#">Solid</a>
<b>Marker Attributes</b>	
<b>Color</b>	<a href="#">Black</a> <input type="color" value="black"/>
<b>Width</b>	<input type="text" value="1"/>
<b>Style</b>	<a href="#">None</a>

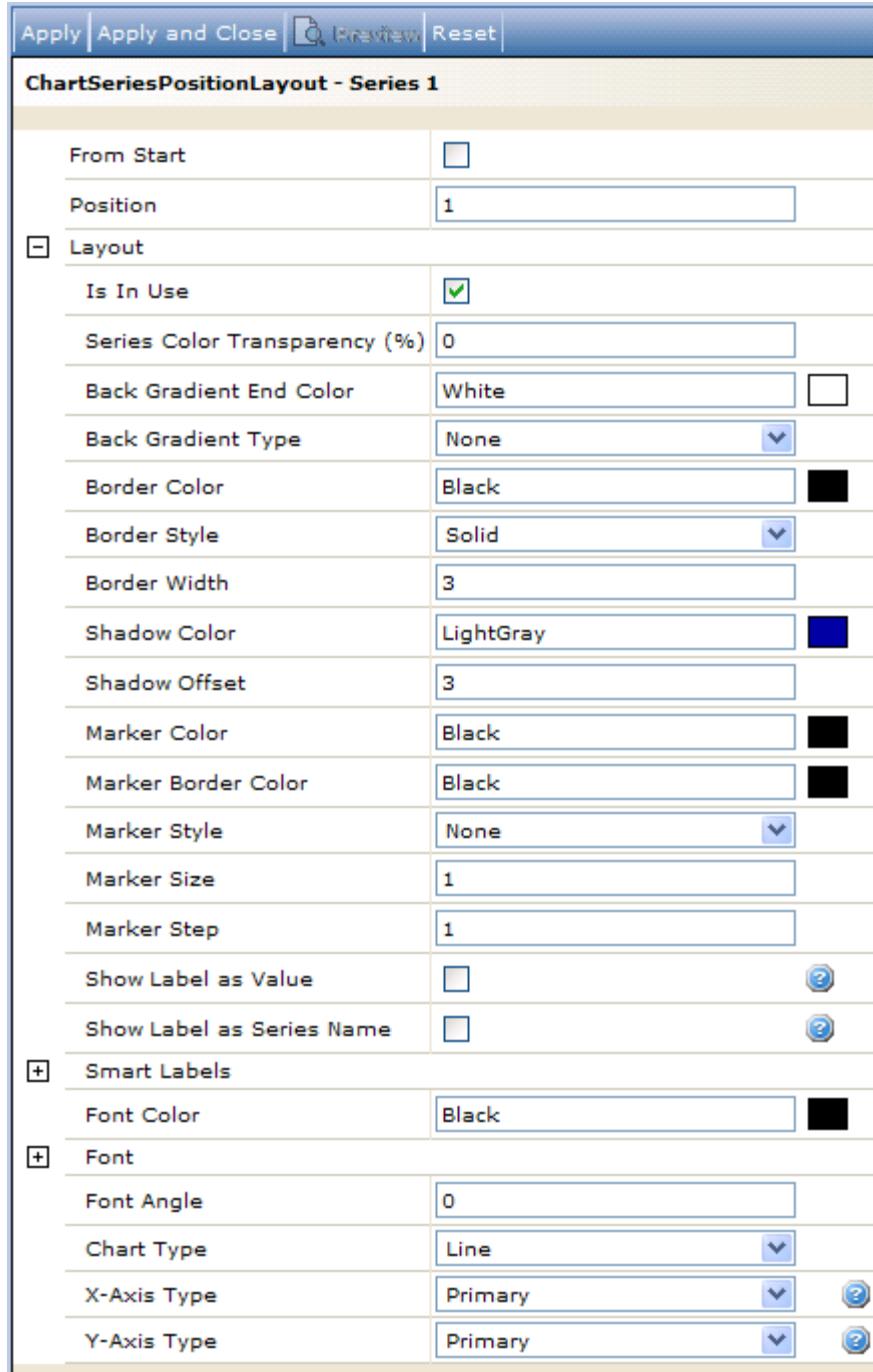
Figure 421 The By Position tab properties

For more advanced settings, click the **Advanced Properties** button in the button bar then right-click on the chart to open the right-click menu. In the menu select **Position Based Series** and then the desired series (see the figure below).



*Figure 422 Position Based Series options in Advanced Properties*

The Advanced Properties sheet for the selected series opens. See the figure below.



**Figure 423 Advanced properties for Position Based Series**

The series here corresponds to the chart designer, but a broader range of settings is available in this property sheet. Here you can define settings for up to five series.

Check the **Is In Use** checkbox, then define the position of the series and whether that position is from the start or the end of the table.

**Note:** The Position Based Series settings are only available if the series handling is category-based.

### 9.5.2.7.5. Using Smart Labels - Example

When displaying data point labels in charts that have many points or when several points have similar values, it is possible that the labels will collide. Such collisions can make the chart very difficult to read.

The Smart Labels function prevents data point label collisions for most chart types and combinations of chart types. The first chart shows a simple Line-Column chart where each data point displays a value label. This case is very simple and is fairly common. There are not a large number of points; however they are similar in value. Note that several point labels overlap and two extend outside of the chart area. The trend is obvious to the eye and the Y-axis labels help you to understand the data but the overlapping labels make the chart very difficult to read.

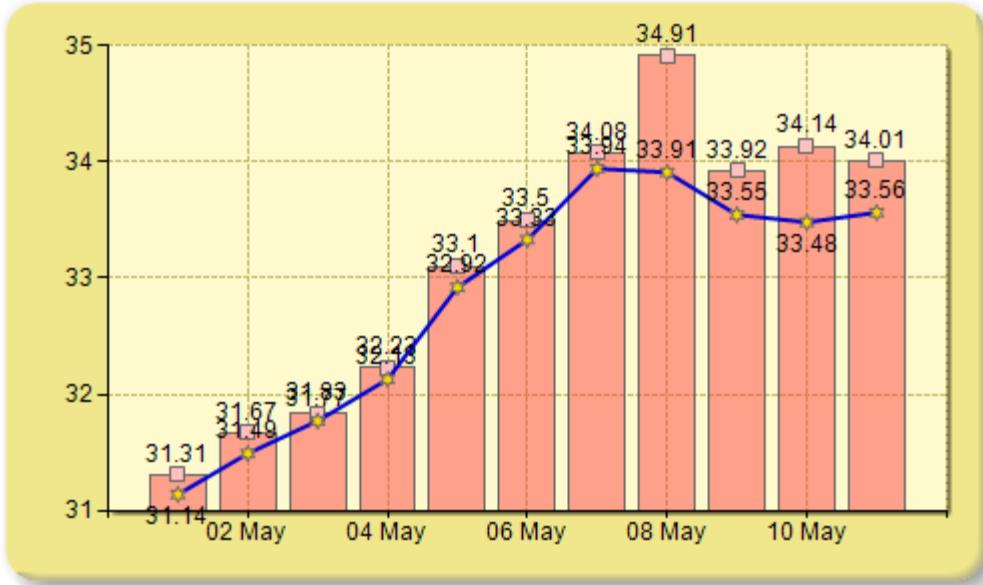


Figure 424 Chart without Smart Labels

The Smart Labels function helps overcome these issues by repositioning the labels based on a set of user-defined rules.



**Figure 425 Chart with Smart Labels**

Smart Labels will first try to reposition an overlapping data point label as near as possible to the data point itself. However when many adjacent points and labels exist it may become difficult, if not impossible, to move the label to an area next to the data point. The chart will then move the data point label to a valid free space. Callout lines will be drawn to link the label to the data point.

You can control the callout line visual attributes. These include the color, line style and width, the type of line terminations and their colors.

The Smart Labels function supports the majority of chart types. However the following chart types are not supported:

- Bar Chart
- Gantt Chart
- Pie Chart
- Doughnut Chart
- Range Column Chart
- Stacked Area Charts
- 100% Stacked Area Charts
- Stacked Bar Charts
- 100% Stacked Bar Charts

Smart Labels take precedence when the data point label is explicitly set to any angle other than 0 degrees. When the label angle is set to anything other than zero, the label angle will be forced to zero.

## How to Enable Smart Labels

The Smart Labels function is disabled by default. To enable this feature

1. In the Chart Designer page, go to the **Series** tab.
2. On the **Default Series** tab, click in the Use Smart Labels box to check it.

The default settings for Smart Labels will normally suffice for most chart users. However customization will provide a greater level of control and will result in more attractive and readable charts. To access the customizable settings:

3. In the toolbar across the top of the Designer window, click **Advanced Properties**.  
The chart opens.
4. Right-click in the chart to open the right-click menu, and select **Series > Default Series Settings, Properties**.  
The Default Series – Default window opens.
5. Scroll down to the Smart Labels parameter and click the + box to expand the parameter list.

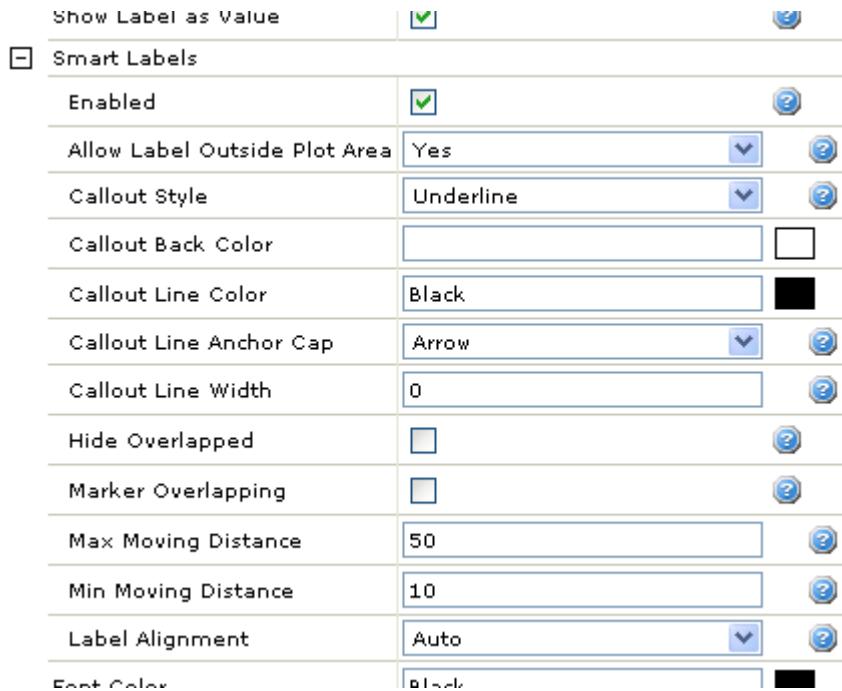


Figure 426 The Smart Labels parameter list

The parameters are described in the following sections.

#### Allow Label Outside Plot Area

This property specifies how far outside of the plotting area the labels may go. The default value allows labels to extend partially outside (up to 50%) but you can select **Yes** to allow the labels to move fully outside the area, or **No** to prevent them moving outside.

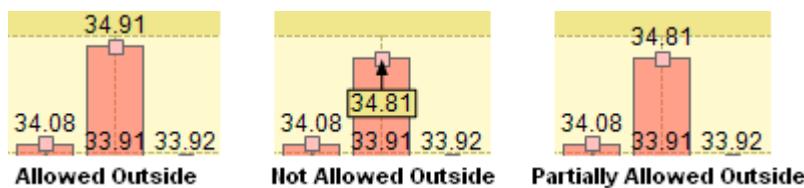
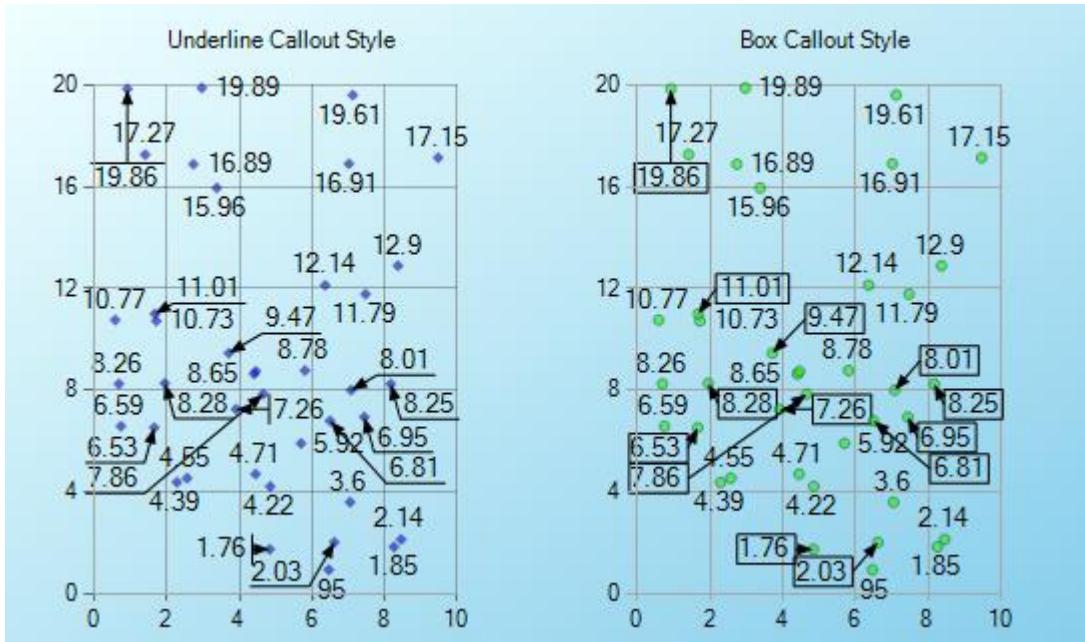


Figure 427 Allow Outside Plot Area Behavior

The possibility for drawing labels outside the plotting area is only used to provide an option, as the chart will only draw a label outside the plotting area if it cannot be drawn within the area without overlapping.

## Callout Style

This property defines what is displayed at the data point label end of the callout line. By default, this is a horizontal line that is drawn from the callout line to underline the data point label.



**Figure 428 Callout Style comparison (Underline and Box styles)**

Possible values for the Callout Style label termination are:

Name	Description
None	Label callout line will terminate without any added style.
Underline	Label callout line will terminate with a horizontal line beneath the label text.
Box	Label callout line will terminate with a box around the label text.

## Callout Back Color

This is the color of the callout label background. To change the color, double-click in the color box to open the color chart, then select the desired color from the chart.

## Callout Line Color

This is the color of the callout line. To change the color, double-click in the color box to open a color chart, then select the desired color from the chart.

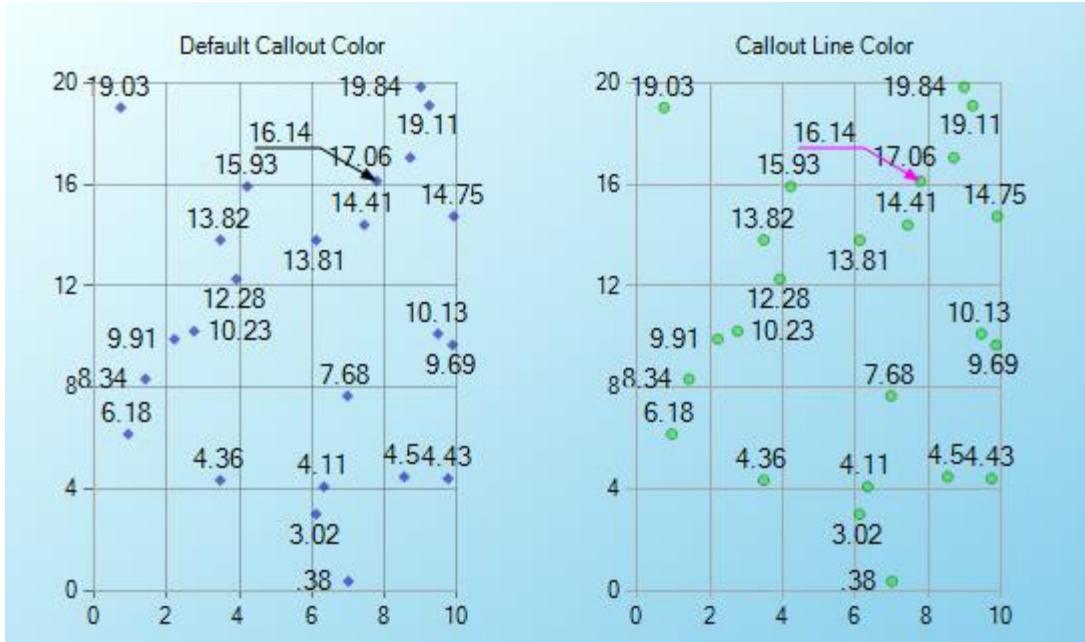


Figure 429 Controlling the callout line color

### Callout Line Anchor Cap

This is the style of the pointer to be used on the end of the callout line. Click the down-arrow beside the field and select from None, Arrow, Diamond, Round or Square.

### Callout Line Width

This parameter controls the pixel width of the callout line. This also scales the styles of the Callout Line Anchor Cap and the Callout Style.

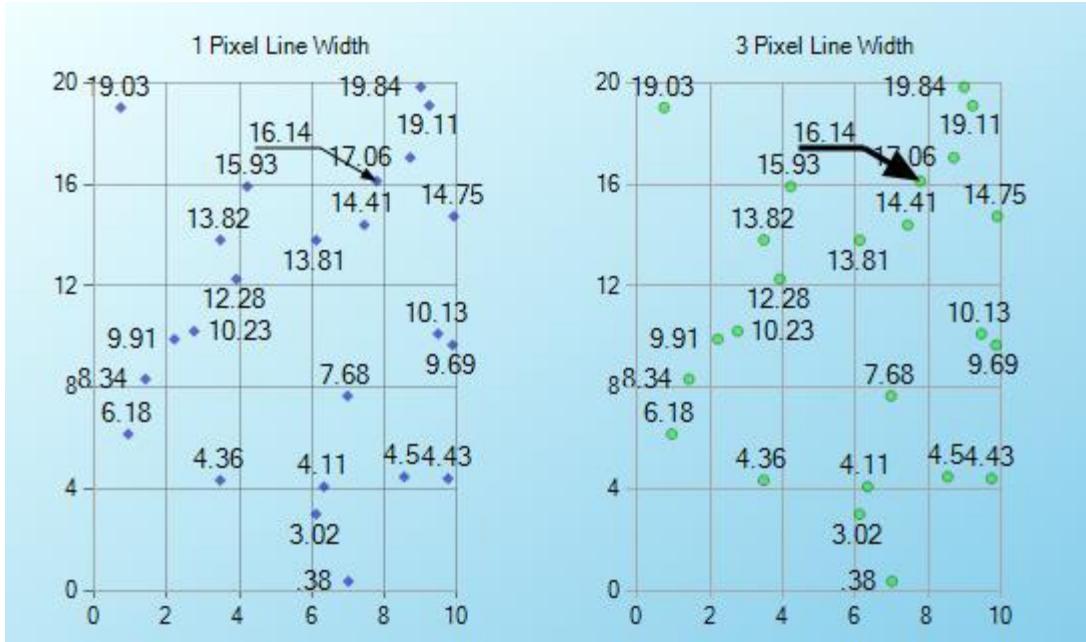


Figure 430 Specifying the width of the callout line

### Hide Overlapped Check Box

This property specifies whether a label can be hidden if overlap issues cannot be resolved. Check the box to specify that labels can be hidden.

If the point cannot be drawn within the region specified by the **Max Moving Distance** and **Min Moving Distance** properties in the directions allowed by **Label Alignment**, and the **Hide Overlapped** box is checked, then the data point label will not be drawn.

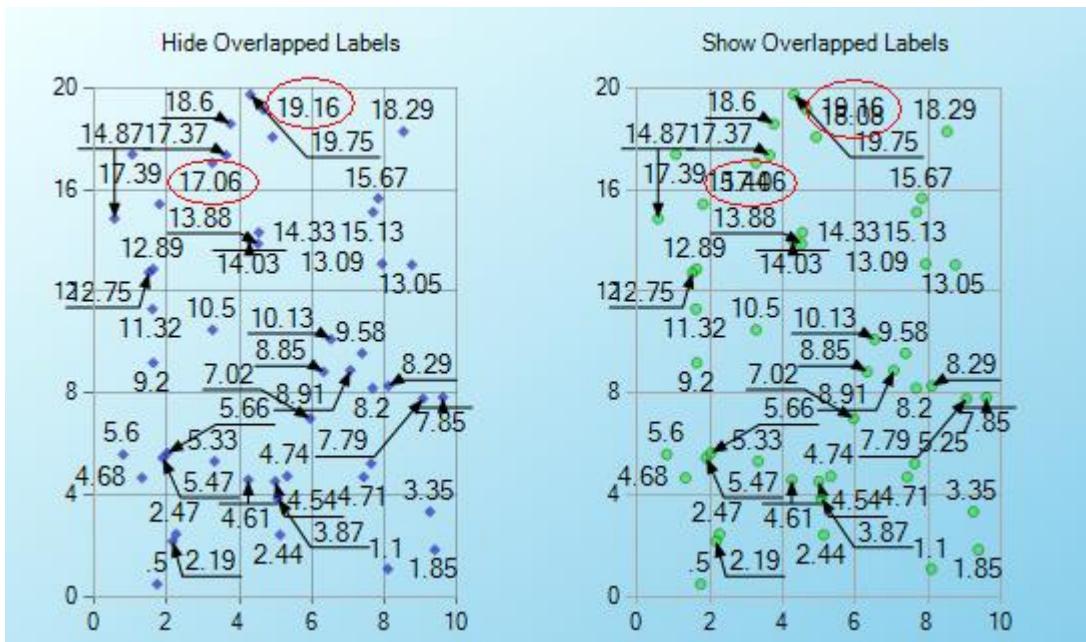


Figure 431 Using the HideOverlapped property

### Marker Overlapping Check Box

This property specifies whether the point labels are allowed to overlap a point marker. By default, this property is switched off to ensure that the labels remain as clear as possible. In cases where the rendered chart has a significant number of data point labels to display, checking the box to allow overlapping may loosen the rules enough for more point labels to be drawn.

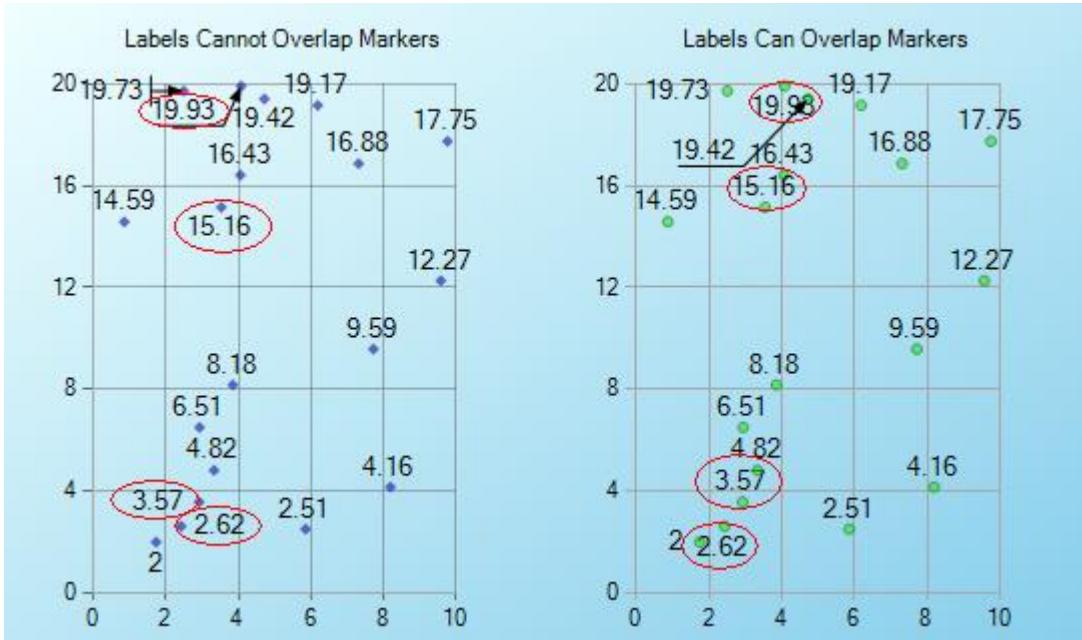
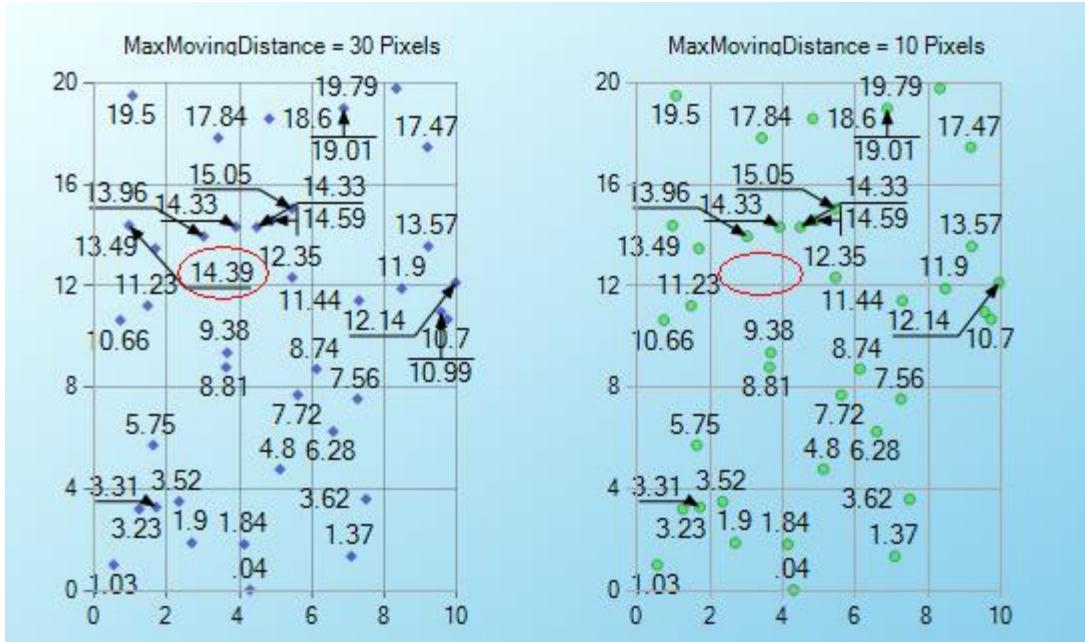


Figure 432 Using the MarkerOverlapping property

### Max Moving Distance

This value defines the maximum distance in pixels from the data point that data point labels are allowed to be moved in the event of overlapping. Type a value into the field.

If the point cannot be drawn within the region specified by the **Max Moving Distance** and **Min Moving Distance** properties in the directions allowed by **Label Alignment**, and the **Hide Overlapped** box is checked, then the data point label will not be drawn.



**Figure 433 Specifying the Max Moving Distance**

In the figure above, note the missing data point label (ringed). This label was not drawn as it could not be moved to a new position without exceeding the **Max Moving Distance**.

### Min Moving Distance

This defines the minimum distance in pixels from the data point that data point labels must be moved in the event of overlapping. When a data point label must be repositioned, the label will be moved by **at least** the number of pixels specified. Type a value into the field.

If the point cannot be drawn within the region specified by the **Max Moving Distance** and **Min Moving Distance** properties in the directions allowed by **Label Alignment**, and the **Hide Overlapped** box is checked, then the data point label will not be drawn.

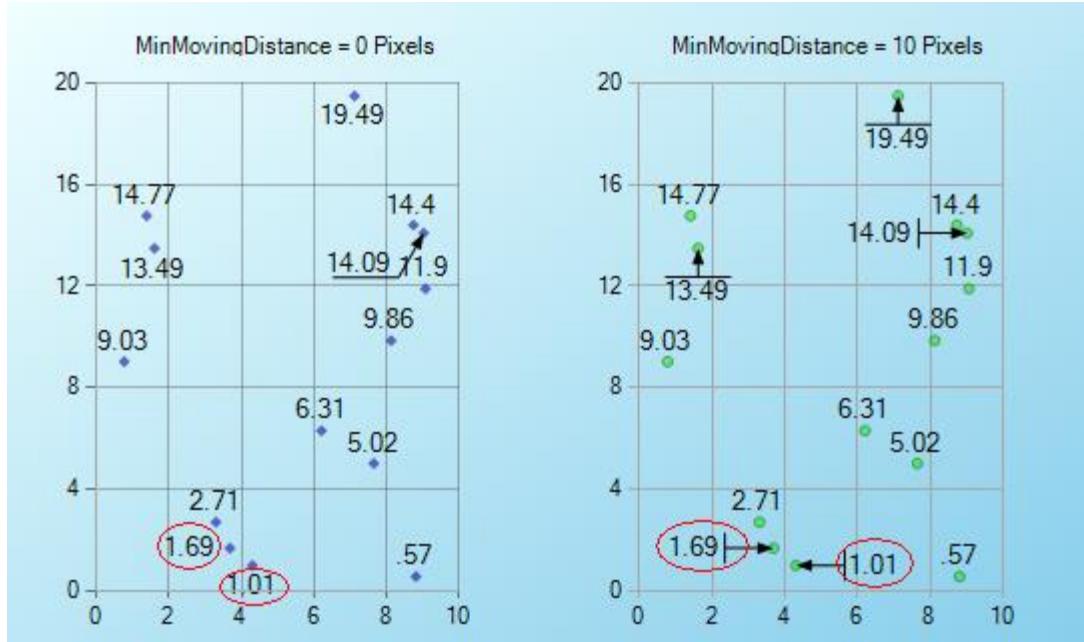


Figure 434 Specifying the Min Moving Distance

### Label Alignment

This property defines the direction(s) in which the data point label can move. The default setting allows the label to be repositioned in all directions **except** to the center of the data point. Click the down-arrow beside the field to open a list of the options. These are as follows:

- **Auto** - Default setting.
- **TopLeft** - Label is aligned to the top-left corner of the data point.
- **Top** - Label is aligned to the top of the data point.
- **TopRight** - Label is aligned to the top-right corner of the data point.
- **Right** - Label is aligned to the right of the data point.
- **BottomRight** - Label is aligned to the bottom-right of the data point.
- **Bottom** - Label is aligned to the bottom of the data point.
- **BottomLeft** - Label is aligned to the bottom-left of the data point.
- **Left** - Label is aligned to the left of the data point.
- **Center** - Label is aligned to the center of the data point.

If the point cannot be drawn within the region specified by the **Max Moving Distance** and **Min Moving Distance** properties in the directions allowed by **Label Alignment**, and the **Hide Overlapped** box is checked, then the data point label will not be drawn.

### Callout Line Style Property

Control the style of the callout line itself using the **CalloutLineStyle** property. The line style can be set to one of several options including solid, dashed and dotted lines.

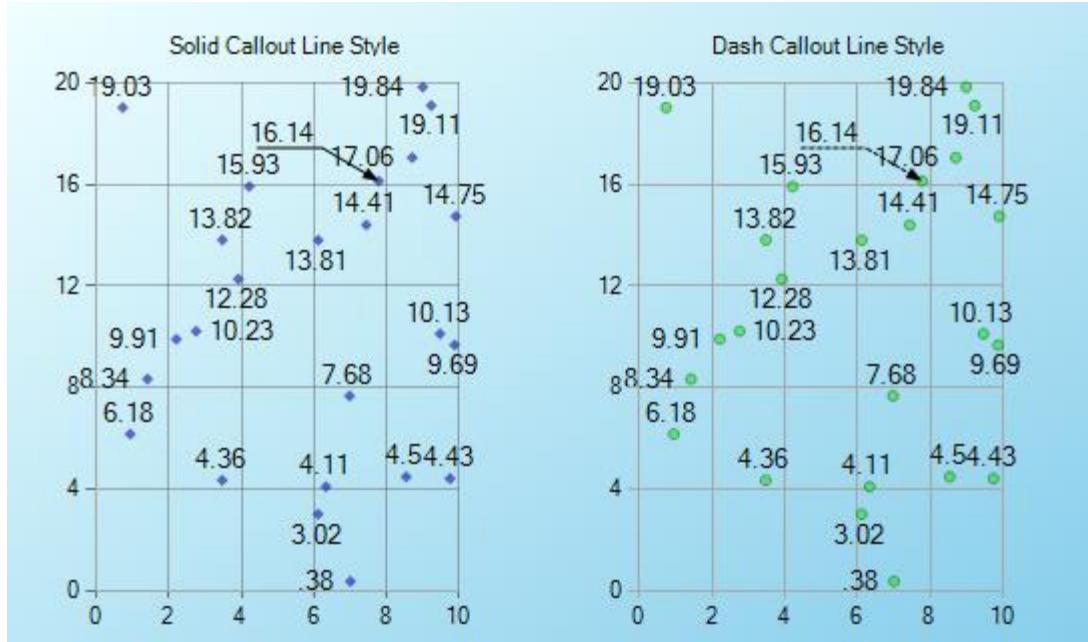


Figure 435 Specifying the callout line style

The default is a solid line. Other options are:

- **NotSet** - Line style not set.
- **Dash** - A dashed line.
- **DashDot** - A line with a dash-dot-dash-dot ... pattern.
- **DashDotDot** - A line with a dash-dot-dot-dash-dot-dot ... pattern.
- **Dot** - A line with a dot-dot ... pattern.
- **Solid** - A solid line pattern.

### 9.5.2.8. Marker Attributes

Use these properties to set the shape, size and color of the markers (the figures representing the points).

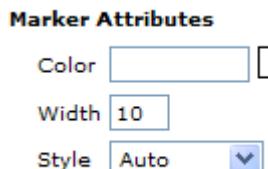


Figure 436 The Marker Attribute properties

- Color defines the color to be used for the markers. If Color is left blank, the colors specified by the palette selected for the chart in the General tab will be used.
- Width controls the size of the marker in pixels.
- If Style is set to "Auto", the various series will automatically be given different shapes.

### 9.5.2.9. The Axes Tab

Use the properties on the Axes tab to specify the look-and-feel of the X and Y axes.

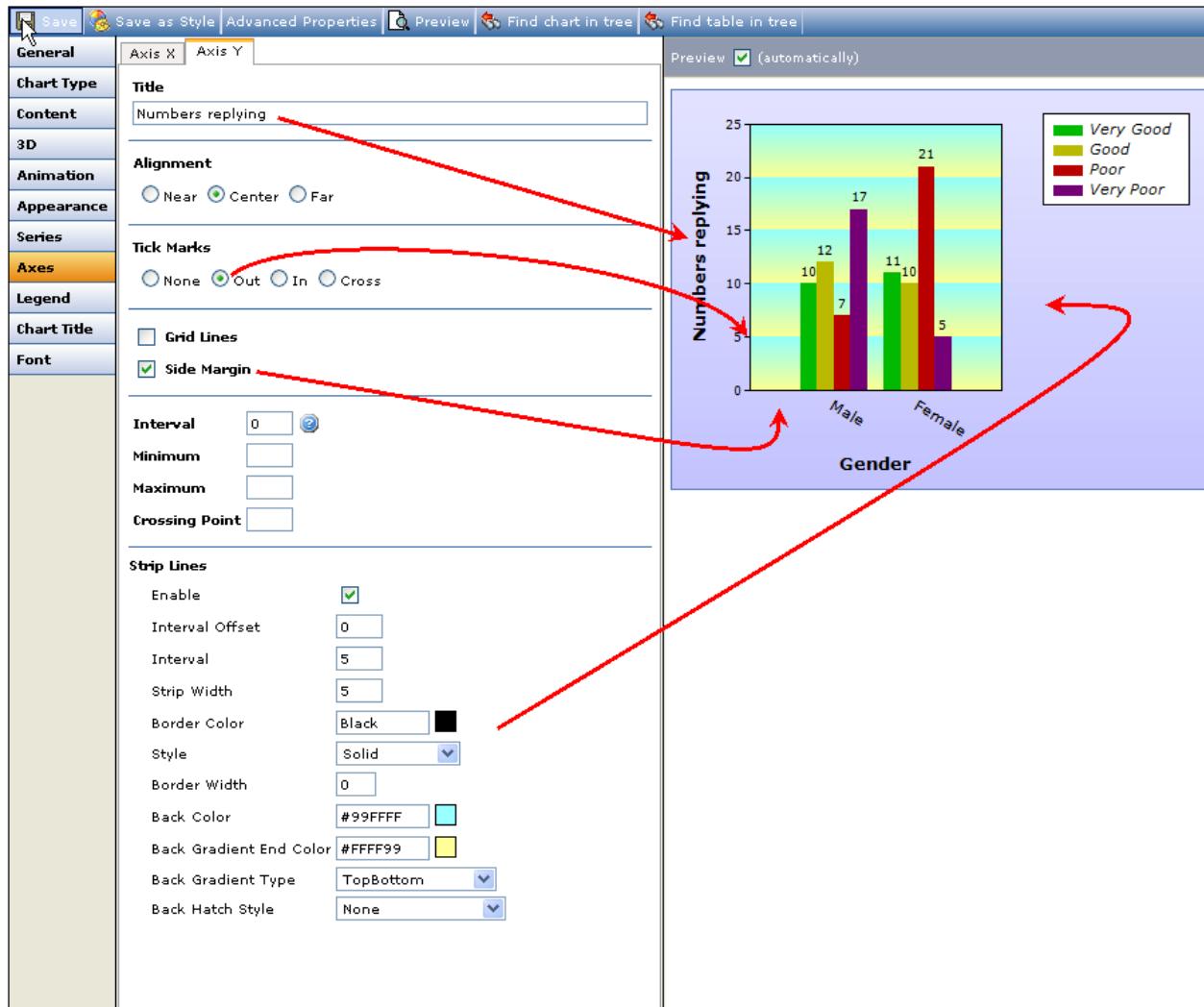


Figure 437 Specifying the look and feel of the X and Y axes

There is one tab for the X axis and one for the Y axis - the properties are identical. The example shows the Y axis.

#### 9.5.2.9.1. Title

You can specify a title for each axis. In the example shown above, the Y axis shows the numbers of respondents who have replied in the different "grades", so the title specified is "Numbers replying".

#### 9.5.2.9.2. Axis Title Alignment

Use this property to position the selected Axis Title relative to the axis line. The options are **Near** (to the zero position), **Center** (centered on the axis line), or **Far** (away from the zero position).

#### 9.5.2.9.3. Tick Marks

Tick marks are the short lines perpendicular to the axes lines that indicate where the labels apply. See the figure above. Tick marks will follow settings for Grid Lines (see Grid Lines on page 346 for more information).

#### 9.5.2.9.4. Grid Lines

This property is used in combination with the Interval, Minimum, and Maximum settings. Add grid lines to the chart area to help the user to understand the information presented. In the example shown above, the lines run from 0% (minimum) to 100% (maximum) with a line at every 20% (interval).

#### 9.5.2.9.5. Side Margins

The Side Margins property determines whether or not there is to be space between an axis and the series. See the figure above.

#### 9.5.2.9.6. Interval

The **Interval** is the space between the labels on the axis. This, together with the minimum and maximum settings, determines how many and how often the labels and grid lines are plotted on the chart. For example, if you set Interval to 2 , Minimum to 10 and Maximum to 30, the axis will have labels and grid lines (if these are selected) on every alternate value from 10 to 30.

#### 9.5.2.9.7. Minimum

The Minimum property specifies the value at which the axis starts.

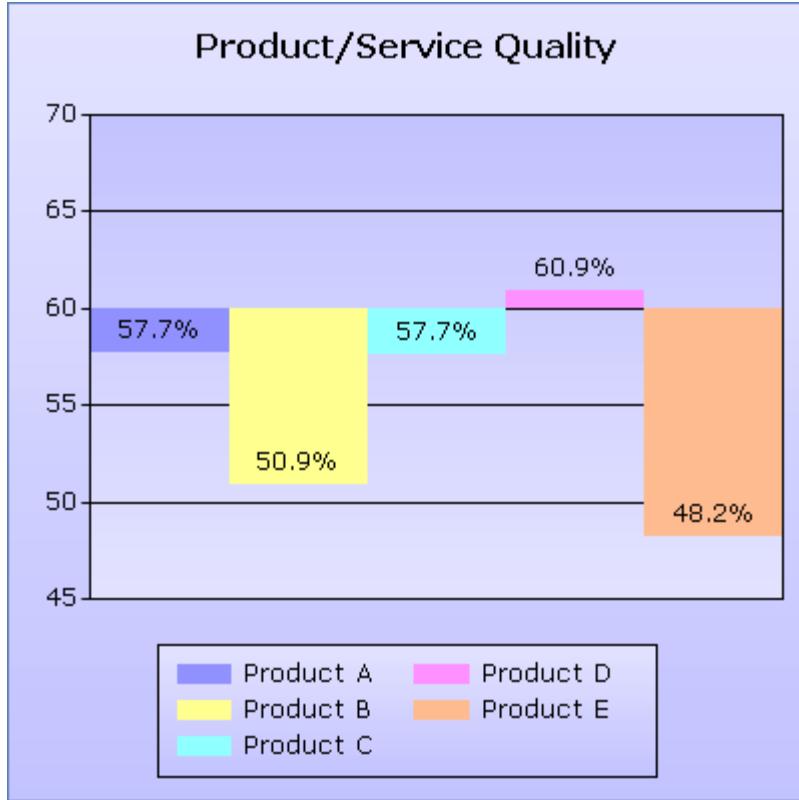
#### 9.5.2.9.8. Maximum

Maximum determines the value at which the axis ends.

#### 9.5.2.9.9. Crossing Point

The Crossing Point parameters on the X and Y axes are used to control where the other axis will cross. By default this is in the origin (0,0), but you may move the crossing point anywhere on the axis, including to negative values.

The figure shows an example of a bar chart in which the product ratings are presented above or below a target of 60%.



**Figure 438 The crossing point on column chart**

To achieve this layout, set the Crossing Point property to 60 on the X axis. The Y axis is then moved upwards to cross the X axis at the 60% value. The columns will be drawn originating at the Y axis, and will be drawn downwards if the value is below 60 and upwards if the value is above 60.

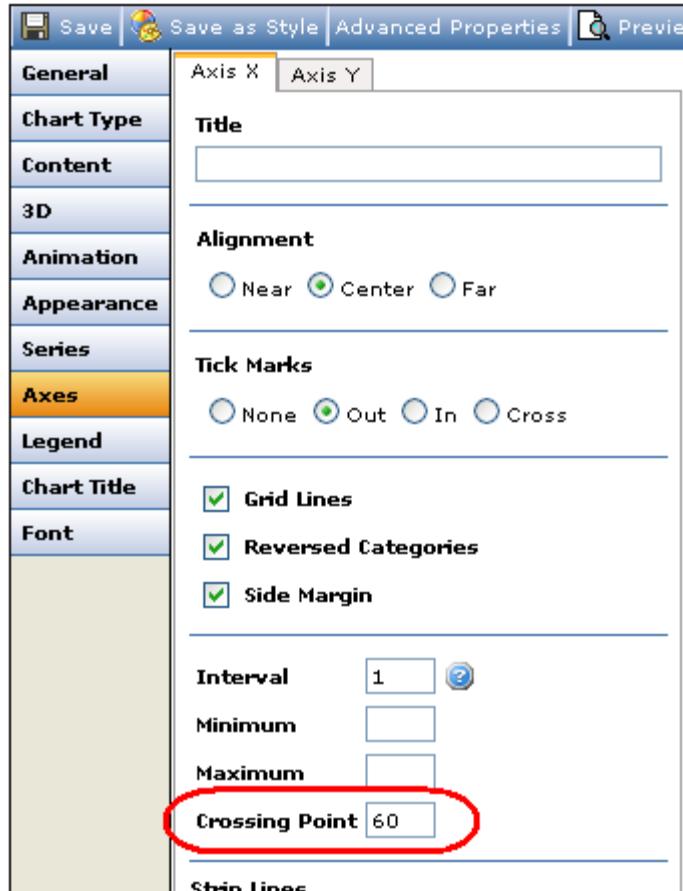


Figure 439 Setting the Crossing Point

In the example below, the Crossing Point on both axes is move from the origin to create a quadrant chart out of an XY-plot or Bubble chart. Here the X and Y axes are used to divide the plot area into four.

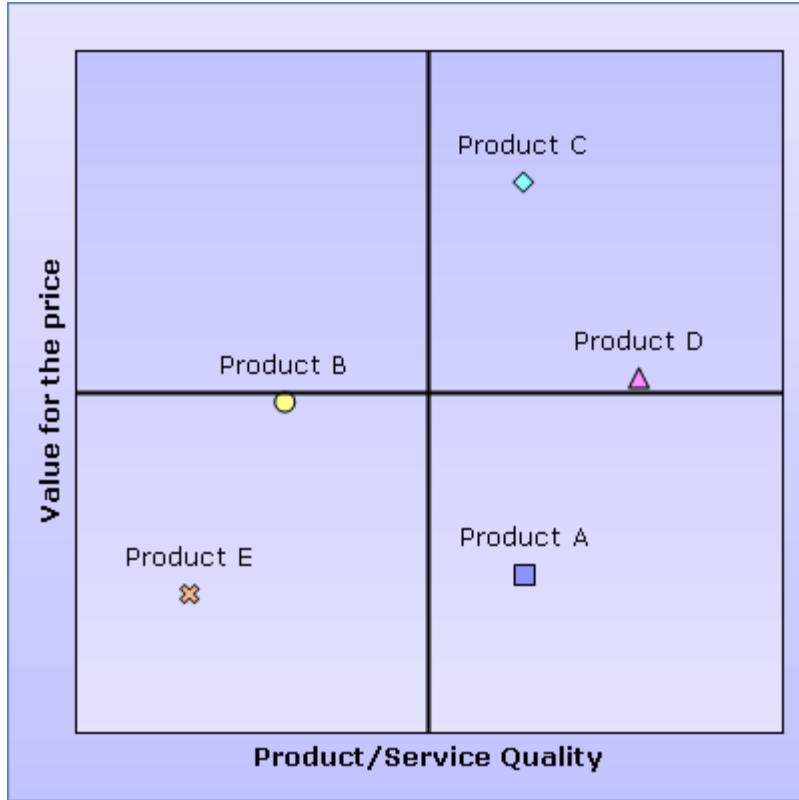


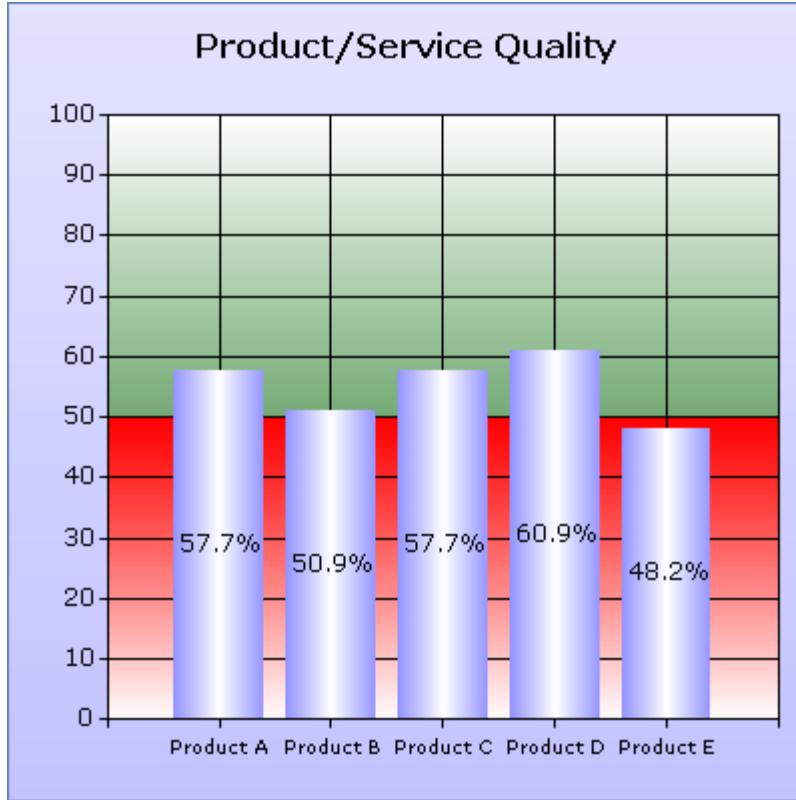
Figure 440 Example of using the Crossing Point to create a Quadrant chart

#### 9.5.2.9.10. Strip Lines

Strip Lines can be used to include patterns and background colors in the chart area, displaying horizontal and vertical lines or strips. Strip Lines are useful for highlighting specific areas within a chart area, allowing users to quickly and easily identify data that falls within a given range.

Strip Lines are set on the axes. Similar to grid lines, strip lines can be either horizontal (set on the Y axis) or vertical (set on the X axis). You may set strip lines on one or both of the axes. The properties are described in the following section.

The example shows how a red strip line can be contrasted against a green background on the plot area to indicate a target of 50% score on a question.



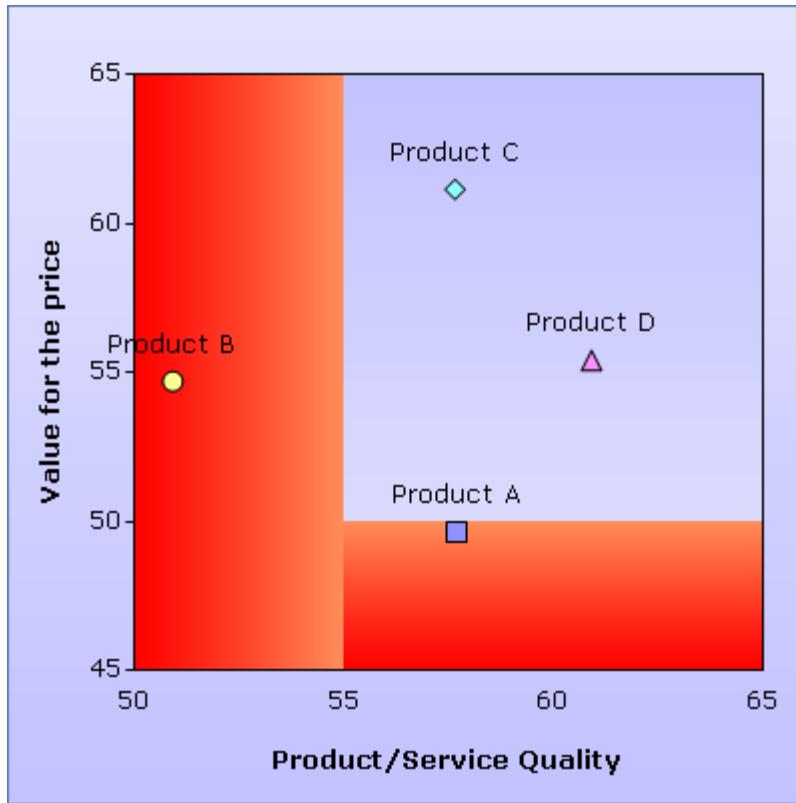
**Figure 441 Strip line used on the Y axis**

Strip lines may also be repeated. The example shows repeated strip lines with gradient are used instead of grid lines.



Figure 442 Repeated strip lines

Strip lines can also be used on both the X and Y axes in a XY-plot/quadrant chart:



**Figure 443 Strip lines on both the X and Y axes**

### Strip Lines Properties

The Strip Lines properties are located under the Axes properties for the X and Y axes. To activate strip lines for an axis, select **Enable**. This displays the other properties.

<b>Strip Lines</b>	
Enable	<input checked="" type="checkbox"/>
Interval Offset	<input type="text" value="0"/>
Interval	<input type="text" value="10"/>
Strip Width	<input type="text" value="10"/>
Border Color	<input type="text" value="Black"/> <input type="color" value="black"/>
Style	<input type="button" value="NotSet"/>
Border Width	<input type="text" value="0"/>
Back Color	<input type="text" value="#C8C8FF"/> <input type="color" value="#C8C8FF"/>
Back Gradient End Color	<input type="text"/> <input type="color"/>
Back Gradient Type	<input type="button" value="LeftRight"/>
Back Hatch Style	<input type="button" value="None"/>

**Figure 444 Strip lines properties**

- **Interval Offset** – sets the starting position (the offset) of a strip line.
- **Interval** – set this property to zero to display one strip/line. Set the property to a value other than zero to display multiple strip lines at the given interval. The lines will be given the specified Strip Width.
- **Strip Width** - specifies the width of the Strip Line. A setting of 0 results in a line being drawn, with the **Border Color**, **Style** and **Border Width** property settings for its color, width and style. None of the Background properties are used when Strip Width is set to 0.
- **Background Color** – sets the initial color of the strip line. This is only used if Strip Width is greater than 0.
- **Back Gradient End Color** – sets a strip line's secondary color. The secondary color is only used when a Back Gradient Type is set. If Back Gradient Type is set to None, the Back Gradient End Color is not used.
- **Back Hatch Style** – sets the hatching style for the strip line.

**Note:** Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

#### **9.5.2.10. The Legend Tab**

The Legend describes the result series. In the chart shown below, the chart area could include a label for each series against the columns. However this risks overcrowding the chart making it difficult to read. The series are therefore displayed in different colors, and the legend (circled) is included, in this case beside the chart, to inform the viewer which color represents which set of results. The Legend tab holds the properties used to set up the legend.

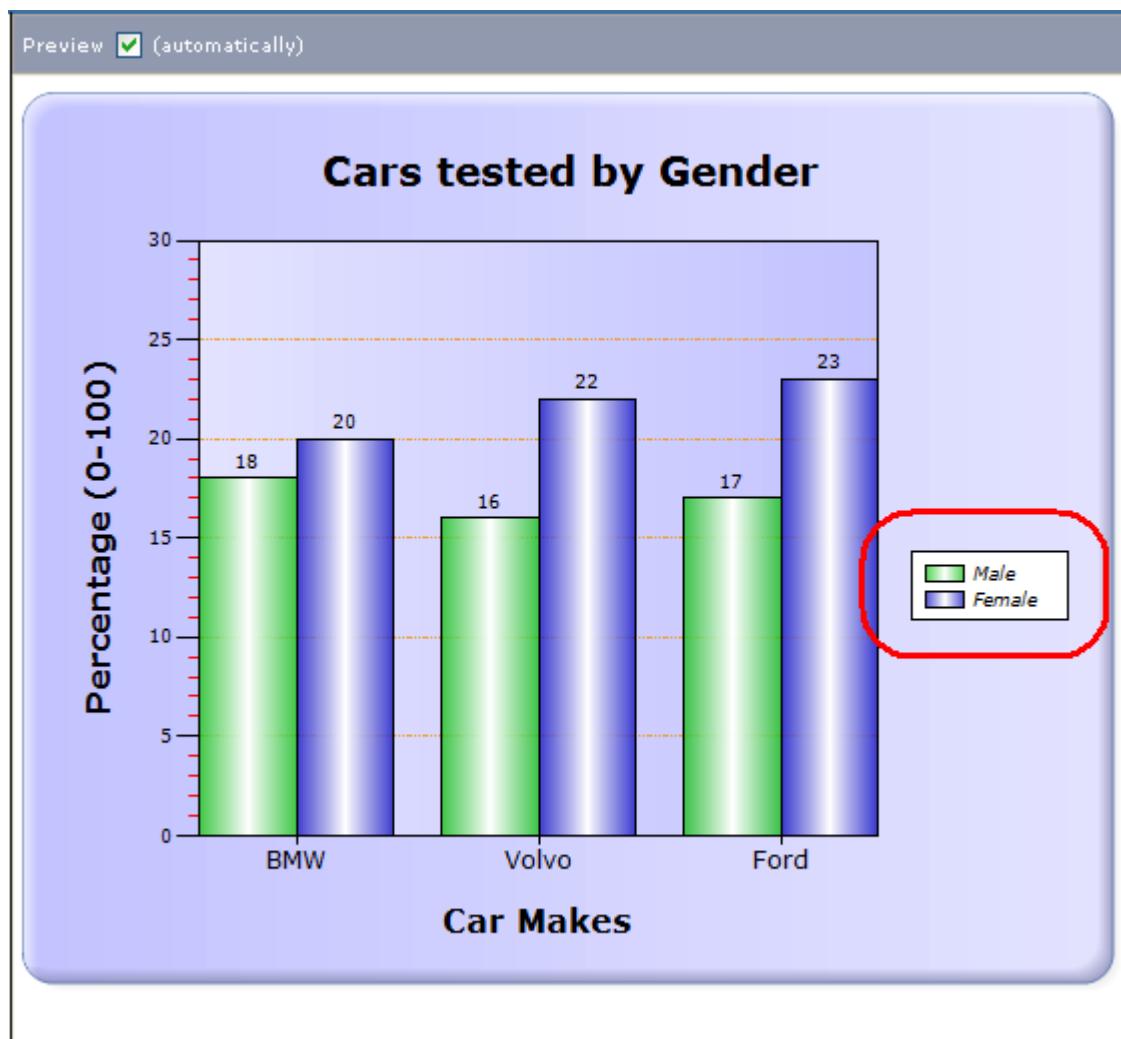


Figure 445 A chart with a legend

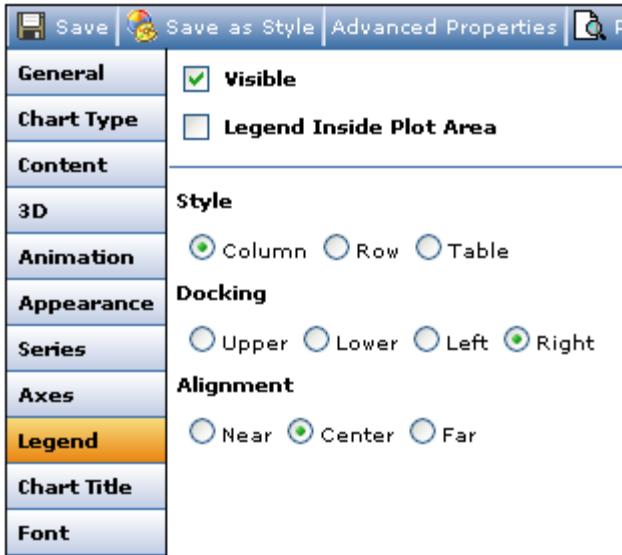


Figure 446 The Chart Designer > Legend tab properties

#### 9.5.2.10.1. Visible

If Visible is selected, the chart legend will be displayed, otherwise it will be hidden. Use this option to show/hide the legend.

#### 9.5.2.10.2. Legend Inside Plot Area

Check this box to display the legend within the chart plot area. Default is outside.

#### 9.5.2.10.3. Style

Style determines the layout of the legend. In the example above the legend is displayed as a "Row". Alternatives are Column or Table. The latter is often best when there are many elements in the legend.

- **Column** - the legend items are displayed using one column with multiple rows.
- **Row** - the legend items are display using one row with multiple columns.
- **Table** - the legend items are display using multiple columns and rows.

#### 9.5.2.10.4. Docking

The Docking property controls where the legend is placed relative to the chart. The legend can be docked to the "Upper", "Lower", "Left" or "Right" of either the entire chart picture or a chart area.

#### 9.5.2.10.5. Legend Alignment

Use this setting to position the legend relative to the chart axis. The options are **Near** (to the zero position), **Center** (centralized relative to the axis), or **Far** (away from the zero position).

#### 9.5.2.11. The Chart Title Tab

You can specify a title for the chart. Type the required text into the Title field. To set the font type, color, size etc. go to the Font tab (see The Font Tab on page 356 for more information).

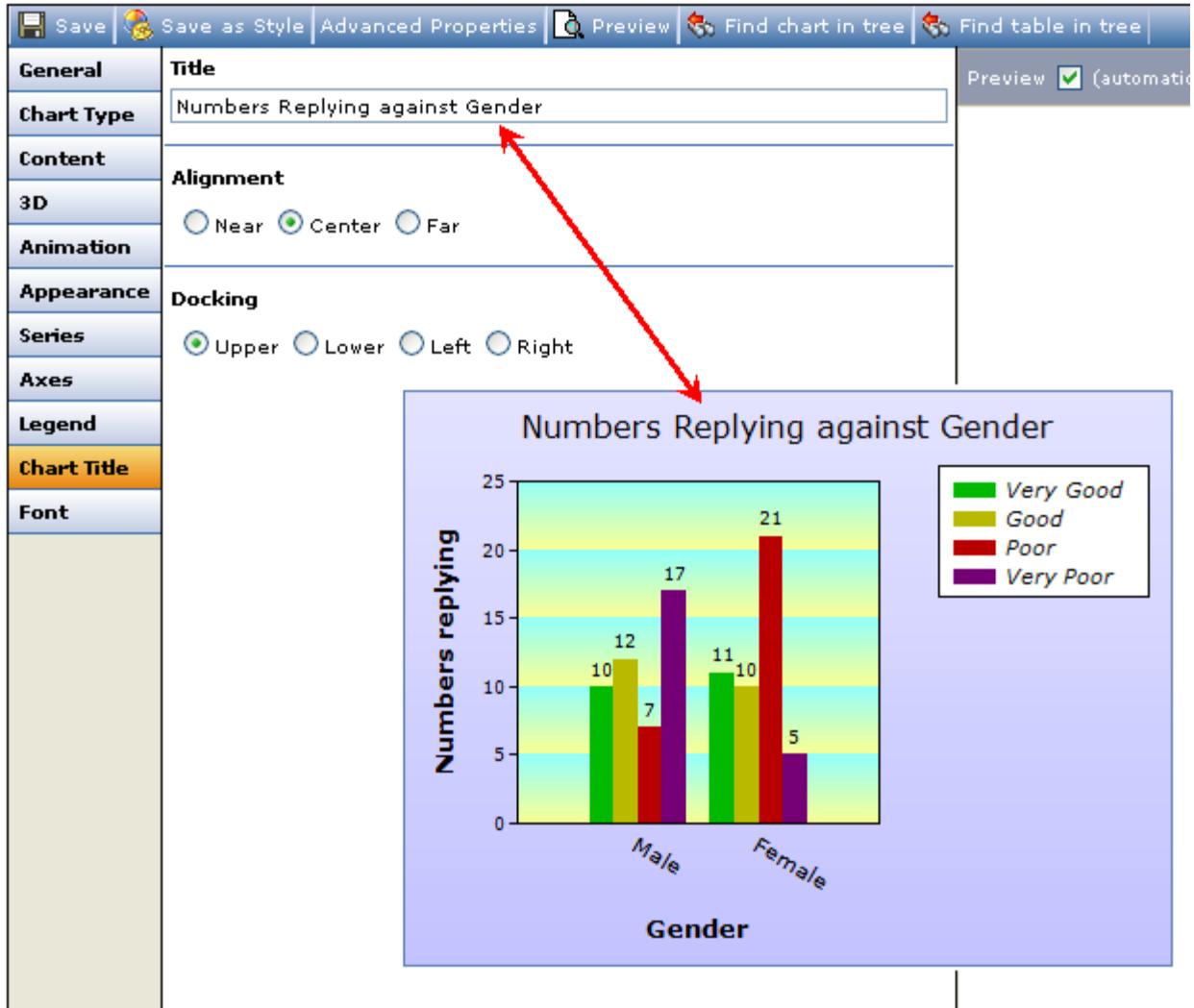


Figure 447 Specifying a chart title

If a chart title has been entered, use "Alignment" and "Docking" to specify where it is to be placed. In the example above, it is placed "Upper" and "Center".

#### 9.5.2.12. The Font Tab

Most charts include text and/or labels. The properties on the Font tab allow you decide the style and layout of all your text items.

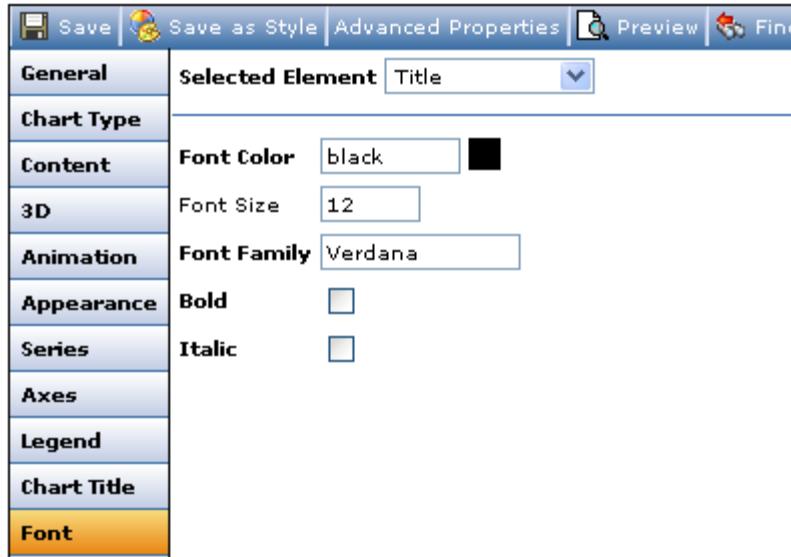


Figure 448 The properties on the Font tab

From the Selected Element drop-down menu, choose the element that you wish to set the font properties for, then make the appropriate settings.

### 9.5.3. Example Procedure – How to Create a Stacked Column Chart

This step-by-step procedure describes how to create a stacked column chart as shown in the figure below. In this example, the information about various qualities has been collected using a grid question as shown in the table below the chart.

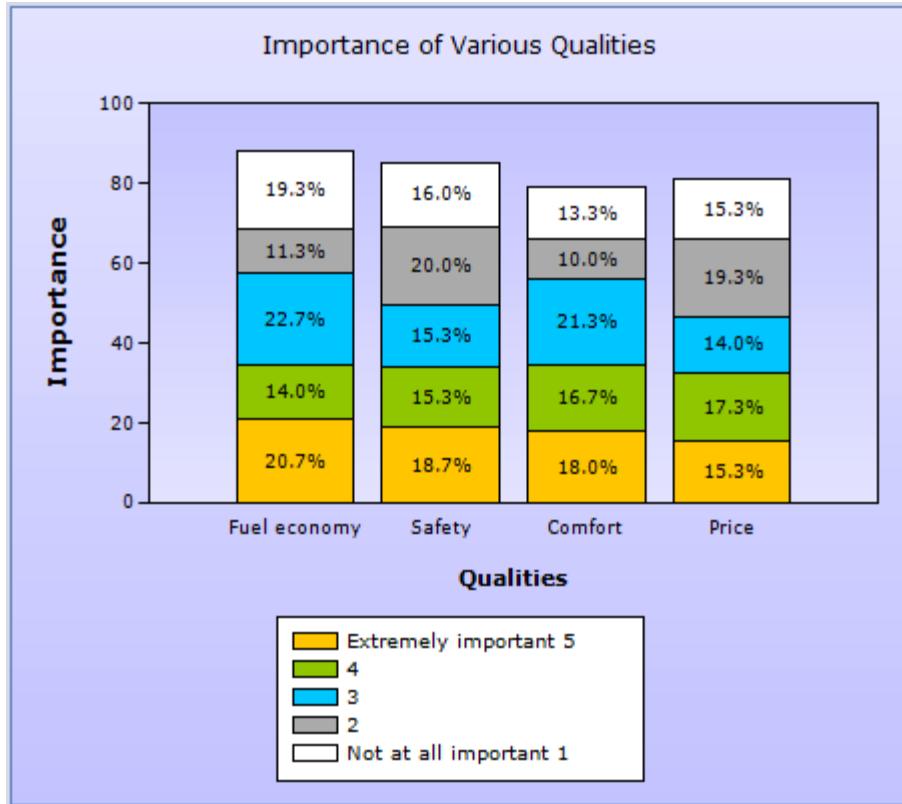


Figure 449 A Stacked Column chart

Please indicate how important the following are to you when choosing a car.

	Extremely important 5	4	3	2	Not at all important 1
Fuel economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comfort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 450 Example of a Rating question

The table for this chart will be created on a new page in the report, called in this case Qualities.

#### 9.5.3.1. Creating and Setting Up the Table

1. Create a page in the report, and on the page, create an Aggregated Table.
2. Double-click the new table object to enter the Table Designer.
3. Drag the **Qualities** question object from the Data Source toolbox and drop it into the cell labeled Drop Rows Here in the Table Designer view, then click the Refresh button in the toolbar.
4. Double-click the **Qualities** question object in the table, or right-click on the object and choose **Properties**.

5. Check the **Collapsed** checkbox and set **Default Stats** to **Avg**.
6. Click **Apply and Close** to apply your changes and close the Properties frame.
7. Drag a **Categories** object from the Table Designer toolbar and drop it into the cell labeled **Drop Columns Here** in the Table Designer.
8. Open the new Categories object **Properties** page, uncheck **Totals** and click **Apply and Close**.
9. Double-click anywhere on the table or right-click and choose **Properties**.
10. To display percentages (rather than counts) in the series, check **Horizontal Percents**.
11. If you do not wish the vertical percents to show in your final table, uncheck **Vertical Percents**.
12. Click **Apply and Close** in the Table Properties page, then click **Save** or **OK** as appropriate to return to the Page Editor for the Qualities page.
13. Click **Save** to save your work.

**Note:** You must complete this procedure before you can create the chart.

Creating and Setting Up the Chart

#### **9.5.3.2. Creating and Setting Up the Chart**

**Note:** As the chart is based on the associated table, you must create the table before you can set up the chart.

1. On the report page, right-click in the location that you wish to add a Chart object, then go to the **Insert Component > Chart** command to create the chart.
  2. Double-click the new Chart object, or right-click and choose **Design**, to open the Chart Designer page.
  3. In the Report toolbox, drag the new Aggregated Table from the Qualities page and drop it into the area labeled **Drop Table Here** in the Chart Designer.
- The Chart Designer view will automatically refresh and the table and a default chart will be displayed.
4. In the **Distribution** field at the top of the page, select **Horizontal Percent**.
  5. In the **Chart Style** field, select **Column2DStacked**.
  6. Uncheck **Series in rows** to flip the axes.
  7. Go to the **Legend** tab. Under the **Style** header select **Column**, under the **Docking** header select **Lower**, and under the **Alignment** header select **Center**.
  8. Click **OK** and then **Save**.

Your chart should appear as below.

**Note:** Colors and shadings will vary depending on the template used for the report.

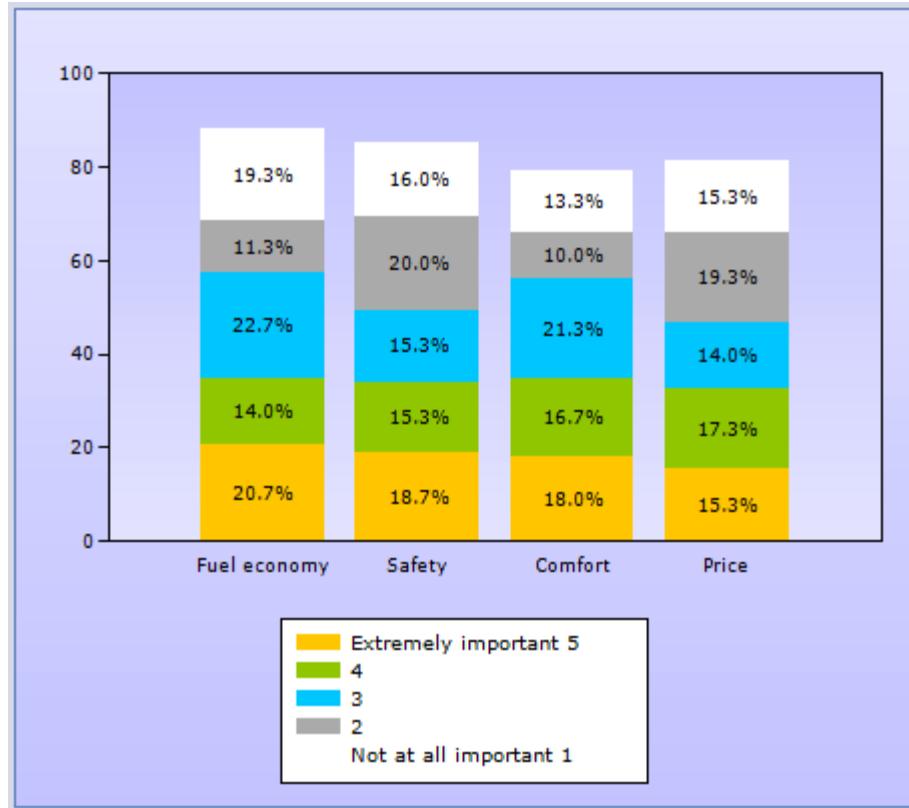


Figure 451 The chart nears completion

If you would like to add border lines around the series' bars, go to the **Series** tab and under **Line/Border Attributes** apply a style and a width. The figure below shows the result of applying those properties. Note that this also adds a border to the colored boxes in the legend.

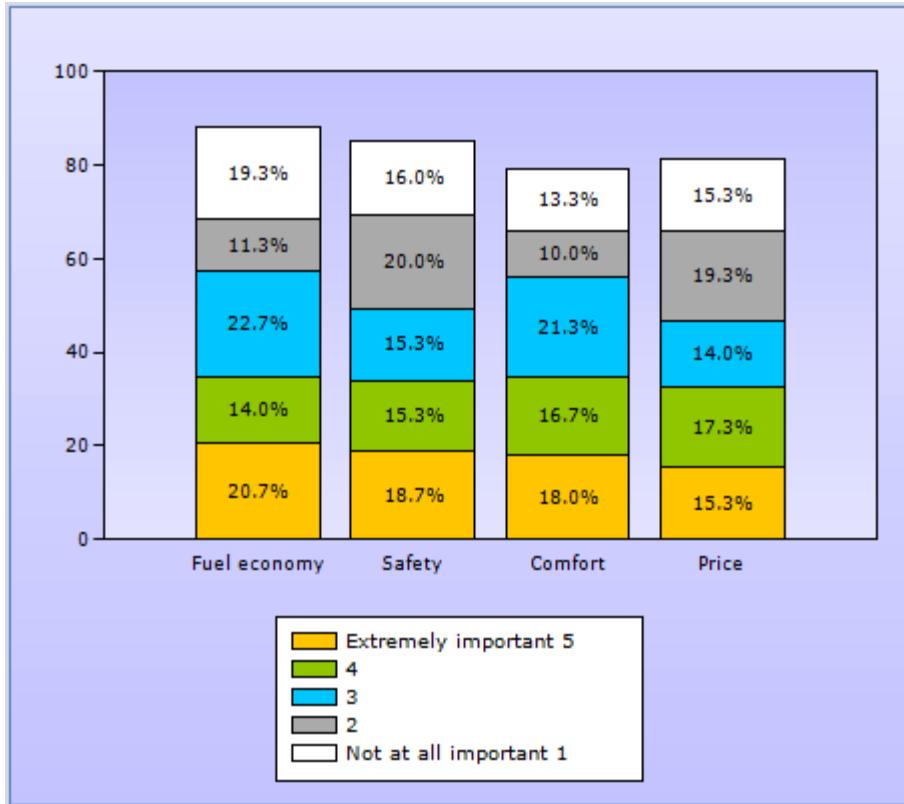
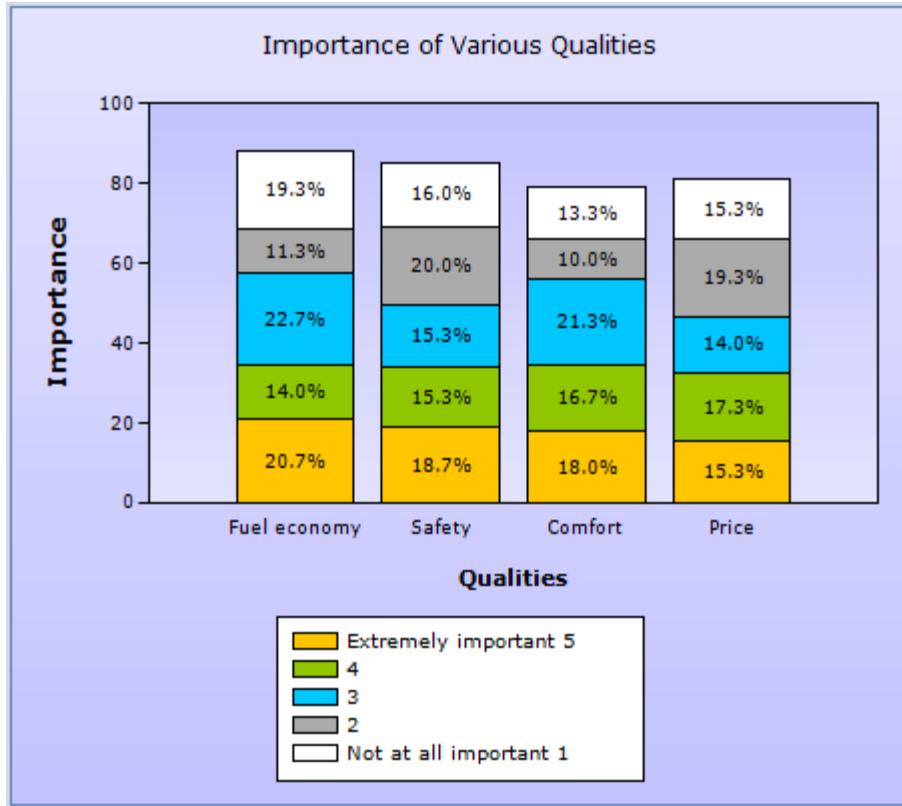


Figure 452 Adding a border to the bar series

If you wish to add a chart title and labels on the X and Y axes, go to the **Chart Title** tab and type the desired text into the Title field.

If you wish to display labels along the X and Y axes, go to the **Axes** tab and make the appropriate settings.

The completed chart will appear as below.



*Figure 453 The completed Stacked Column chart*

Creating and Setting Up the Table

#### 9.5.4. Common Formatting Properties

The chart functionality has a large number of formatting settings available. All are accessible via the various tabs on the Advanced Properties page, however many of the more commonly used settings have also been made available via the tabs on the Chart Designer page. In addition, many of the properties, such as the font and color settings for the various parts of the chart, are identical in all the places where they are used.

Each property is described only once in the documentation. Properties common to several items in the chart (such as font and color settings) are described here. Properties available via the tabs in the Chart Designer page that are not described here are described under The Chart Setting Tabs, while properties accessible via the Advanced Properties page that are not described here or under The Chart Setting Tabs, are described under The Advanced Properties.

**COLOR** - For all of the properties related to color, you can either use the color picker; use a standard HTML color name (like white, steelblue, etc.) or any valid ARGB (Alpha, Red, Green, Blue) value, e.g., (#FFFFFF). Remember to include the '#' symbol in front of the code when using ARGB color codes.

##### 9.5.4.1. Back Color

This property sets the background color of the chart object. The Back Color value will be the first color used if gradient colors are used for the background.

##### 9.5.4.2. Gradient

If you specify a Back Gradient Type, a Back Color and a Back Gradient End Color, the background color will gradually shift from one color to another. To use gradient colors for a chart element's background:

1. Set the primary color via the Back Color property.
2. Set the secondary color via this Back Gradient End Color property.

3. Set the Back Gradient Type property to the desired gradient style.

**Note:** In charts, color gradients can skew the viewer's perception of the colors and can blur edges and boundaries. Both these effects could lead to misinterpretation of the data, so care should be taken to ensure any gradients used cannot cause problems.

#### 9.5.4.2.1. Back Gradient End Color

This property determines the secondary background color of the chart object when gradient colors are applied.

#### 9.5.4.2.2. Back Gradient Type

This property determines the orientation of a chart element's gradient fill. Click the down-arrow to open a drop-down list of the available types, and select the desired type from the list. The options are:

- **None** - no color gradient is applied to the object and the Back Gradient End Color value is ignored.
- **LeftRight** - the color changes from the Back Color value to the Back Gradient End Color value, and the gradient progresses across the chart from left to right.
- **TopBottom** - the color changes from the Back Color value to the Back Gradient End Color value, and the gradient progresses across the chart from top to bottom.
- **Center** - the color gradient progresses across the chart from the center to the outside edge.
- **DiagonalLeft** - the color gradient progresses across the chart from the upper-left corner to the lower-right corner.
- **DiagonalRight** - the color gradient progresses across the chart from the upper-right corner to the lower-left corner.
- **HorizontalCenter** - the color gradient progresses across the chart from the upper and lower edges to the center.
- **VerticalCenter** - the color gradient progresses across the chart from the left and right edges to the center.

#### 9.5.4.3. Shadows

You can give several of the chart objects shadows. If you use shadows, the effect will be much improved if you apply the same shadow settings on all the objects.

##### 9.5.4.3.1. Shadow Color

Use this property to specify the color of the shadow. To create a shadow, set the Shadow Offset property to a value other than zero (0).

##### 9.5.4.3.2. Shadow Offset

This property sets the size of the shadow (the offset), in pixels, of several Chart elements. To create a shadow effect, use a value other than zero (0). A positive value will result in a shadow that shifts down and to the right. A negative value will result in a shadow that shifts up and to the left.

#### 9.5.4.4. Border lines

You can have borders around several of the chart objects. To disable borders on a chart object, set Border Width to 0 and Border Style to "Not set".

##### 9.5.4.4.1. Border Line Color

This property specifies the color of the border line for the applicable Chart object.

##### 9.5.4.4.2. Border Line Width

This property sets the width of the chart element's border, in pixels. To disable the border, set the width to 0.

#### 9.5.4.4.3. Border Line Style

This property determines the line style used for the chart element's border. The line can be solid, dotted, etc. To disable the border, set the style to "Not Set".

#### 9.5.4.5. Font settings

- **Size** - determines the size of the font.
- **Underline** - underlines the text.
- **Strikeout** - strikes out the text.
- **Style** - determines the style of the font: Regular, Bold, Italic, and Bold Italic.
- **Family Name** - determines the font type of the text, e.g. Verdana, Arial, etc.

##### 9.5.4.5.1. Font Angle

This property specifies the angle at which the labels are to be written relative to the axis line. Zero degrees is horizontal, and positive angles rotate the text clockwise. The range of angles is -90 degrees to +90 degrees. Note that you can set the angles individually for each of the primary and secondary X and Y axes.

### 9.5.5. The Advanced Properties

The Chart Designer allows you to set up the most commonly used of the chart settings. However Reportal also has a large number of additional chart properties, located under Advanced Properties.

To access the chart's advanced properties:

1. Click the **Advanced Properties** button in the Chart Designer toolbar.  
The window changes to show only the chart preview.
2. Right-click on the chart and select **Chart Properties** from the drop-down menu.

The Advanced Properties pane opens below the chart preview and table. Within this interface you can set all the properties on the chart in general and on the individual series (see Setting Properties on Series on page 380 for more information).

**Note:** To simplify the layout, the properties in the property sheets are grouped into different categories, and these categories are displayed vertically as buttons in the left column. The subcategories for each main category are displayed horizontally as tabs.

**Note:** The Advanced Property sheet includes many of the properties that are also located in the Chart Designer. The following sections describe the properties that are available on the various tabs, that are not already described under the Chart Designer tabs.

#### 9.5.5.1. The General Tab

The Advanced Properties > General tab holds the properties that apply to the entire chart

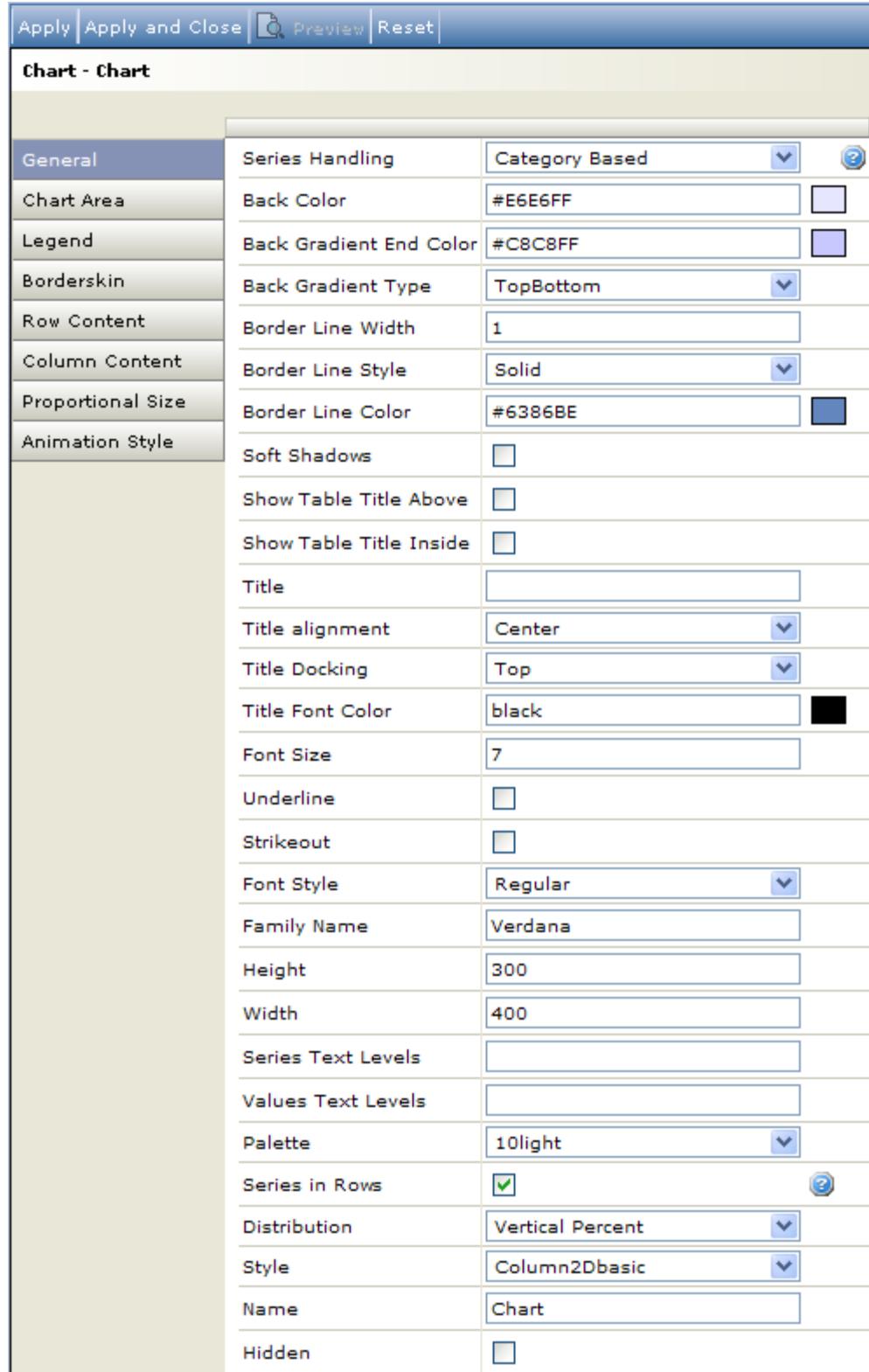


Figure 454 The Advanced Properties sheet, General tab

The following sections describe the properties that have not already been described in the Chart Setting Tabs section.

### 9.5.5.1.1. Series Handling

Series Handling determines how Reportal manages series in a chart. Default is "Category Based", which means that the series in the chart are based on the category of the table content instead of specific elements from specific tables. Examples of categories are distribution (the answer list), totals, and statistical elements such as averages, min, max, and sum. The category based series handling allows you to choose which elements are to be included/excluded from the chart and to set properties for the various categories. These settings can be incorporated into reusable chart styles and will also follow through if the chart (or its page) is duplicated and the content is changed. The chart designer is compatible with category based series handling only.

"Series Based" relates only to the specific items of a specific aggregated table. The figure shows a series based chart. When you right-click here you are working with the series of the specified source table instead of general categories. In other words, with Series Based, your settings are lost if you replace elements in the source table. This is because settings are based on a specific element (for example the Gender question as in the example).

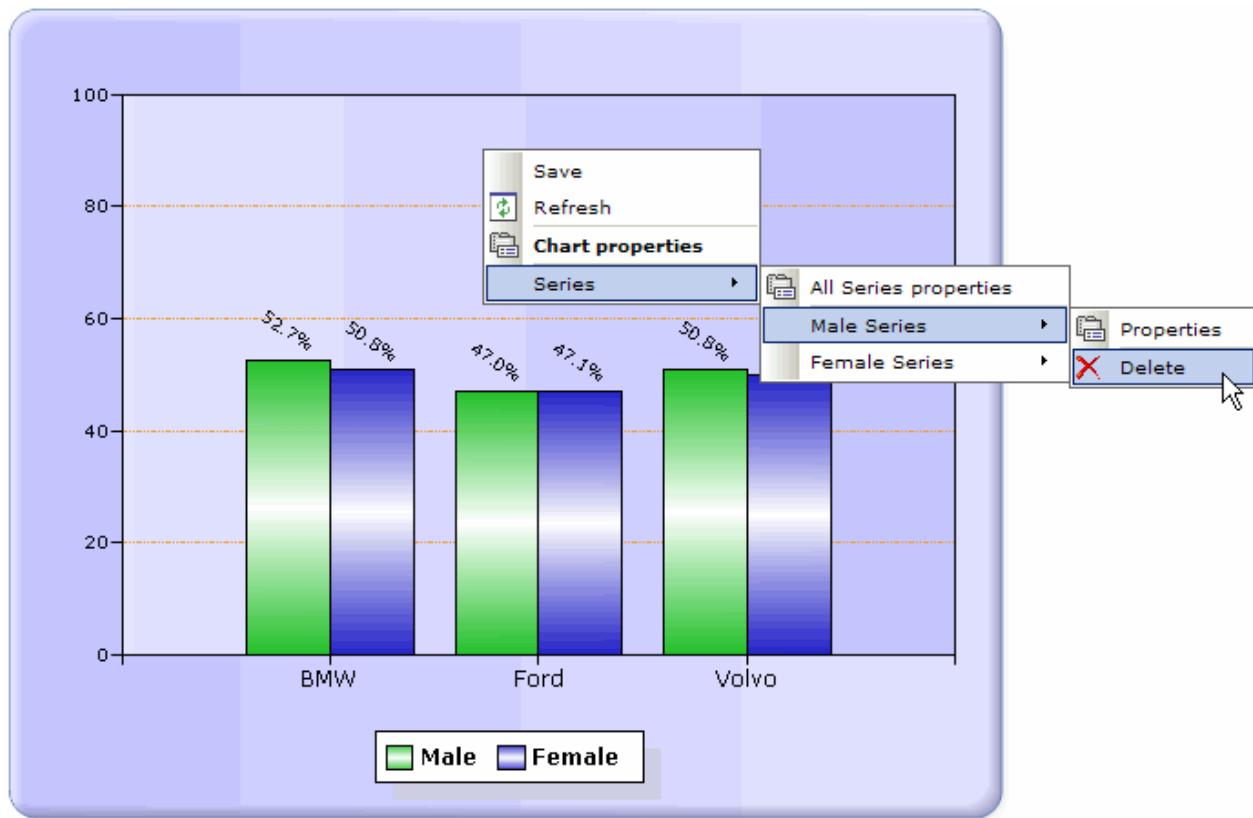


Figure 455 Series Based

### 9.5.5.1.2. SoftShadows

Check this box to give the shadows soft edges. This property will be applied to all shadows implemented.

### 9.5.5.1.3. Underline

Check this box to underline the selected text item.

### 9.5.5.1.4. Strikeout

Check this box to apply the "~~strikeout~~" format to the selected text.

### 9.5.5.1.5. Series and Values Text Levels

The Series Text Levels and Values Text Levels properties are for use when the table has nested elements. The two properties allow you to reduce the number of levels displayed in the chart label texts whilst keeping the full number of levels in the table.

Type an integer into the appropriate field to display that number of label levels in the chart for the Series or Values axis. Note that the inner levels (the labels closest to the chart axes) are displayed first. Note also that the axis labels affected by the properties depend on how the Series and Rows are defined in the chart properties General tab (see Series in Rows on page 275 for more information).

### 9.5.5.1.6. Name

You can give each chart a name. This name will show in the report tree only, and is intended for organizational purposes. The default chart name is "Chart". If you have many charts (and especially if there are several on the same page), giving them unique names will later help you find specific charts in the tree. Type a name into the field and save the changes.

### 9.5.5.1.7. Hidden

Check this option if you wish to hide the chart from the report page. This is intended to be used to hide a chart temporarily from the online report. The alternative is to delete the chart, which implies that if you later wish to include it in the report then you will have to re-create it.

## 9.5.5.2. The Chart Area Tab

The Chart Area tab contains the properties that specify the look and layout of the chart area (see The Parts of the Chart on page 258 for more information). The properties in the Chart Area tab are divided amongst six tabs:

- General - contains the basic properties to control the look of the chart area.
- 3D Style - contains those properties that control the 3-dimensional functionality.
- Primary X and Y Axes - contains those properties that control the primary axes functionality.
- Secondary X and Y Axes - contains those properties that control the secondary axes functionality.

**Note:** For all chart types except pie, doughnut, bar and stacked bar charts, the primary x-axis is the lower horizontal axis while the secondary axis is the upper axis. For bar and stacked bar charts, the primary x-axis is the left vertical axis and the secondary x-axis is the right axis.

See the following sections for further details.

### 9.5.5.2.1. The Chart Area General Tab

This tab contains the properties that define the general look of the chart area, for example the colors, line styles and widths etc.

Chart - Chart		General	3D Style	Primary X-Axis	Primary Y-Axis	Second X-Axis	Second Y-Axis
General	Back Color	#E6E6FF					
Chart Area	Back Gradient End Color	#C8C8FF					
Legend	Back Gradient Type	LeftRight					
Borderskin	Border Width	1					
Row Content	Border Style	Solid					
Column Content	Border Color	Black					
Proportional Size	Shadow Color	gray					
Animation Style	Shadow Offset	0					

Figure 456 The Chart Area &gt; General tab

The properties on this tab are described in Chart Settings Tabs.

#### 9.5.5.2.2. Chart Area – 3D Style

The 3D Style tab contains those properties that control the 3-dimensional functionality. The tab contains three settings that are not described in the Chart Settings section.

Chart - Chart		General	3D Style	Primary X-Axis	Primary Y-Axis	Second X-Axis	Second Y-Axis
General	Enable 3D	<input type="checkbox"/>					
Chart Area	Clustered	<b>1</b>	<input type="checkbox"/>			<a href="#">?</a>	
Legend	Light	Simplistic		<a href="#">?</a>		<a href="#">?</a>	
Borderskin	X rotation (-90 - 90)	30		<a href="#">?</a>		<a href="#">?</a>	
Row Content	Y rotation (-180 - 180)	30		<a href="#">?</a>		<a href="#">?</a>	
Column Content	Perspective (%)	10		<a href="#">?</a>		<a href="#">?</a>	
Proportional Size	Point depth (%)	<b>2</b>	300	<a href="#">?</a>		<a href="#">?</a>	
Animation Style	Point gap depth (%)	<b>3</b>	100	<a href="#">?</a>		<a href="#">?</a>	
	Wall width (0 - 30)	7		<a href="#">?</a>		<a href="#">?</a>	

Figure 457 The Chart Area - 3D Style tab properties

#### Clustered

Check this box to "cluster" the bar and column chart series in the chart area.

When multiple series for bar or column charts are clustered, they are displayed along two distinct rows in a chart area (i.e., each row has a distinct Z-axis position). If the series are not clustered, then their corresponding data points (i.e., data points with either the same collection index or X values) are then displayed adjacent to each other in one row.

Clustering is only applied to column and bar chart series, and is used to clarify the display of two or more categories of data that correspond to one axis label (for example the sales by salespersons plotted on a monthly basis).

### **Point Depth**

Point Depth sets the depth of data points displayed in the 3D chart area. The range is 0-100 percent, and the default is 100 percent. Point Depth is applied to the depth of bar, column, line, pie and spline chart data points only. Setting this property for chart types that cannot have their point depths "stretched" (e.g. point charts) will reserve extra space for the data points, but will not increase their depth.

### **Point Gap Depth**

Point Gap Depth sets the distance between series rows in the 3D chart area. The unit of measurement is expressed as a percentage of the distance between data points in one row. The range is 0 to 100 percent, with a default of 100 percent.

Changing the gap between columns/bars for column and bar chart types using the Point Width custom attribute will affect the Point Gap Depth property value.

#### **9.5.5.2.3. Chart Area – X and Y Axes**

Charts in Confirmit Reportal normally use one X axis and one Y axis. Settings for these two axes are normally found under "Primary X-axis" and "Primary Y-axis". Be aware that you can also operate with a secondary X and a secondary Y axes (see Setting Properties on Series on page 380 for more information). The properties available for the four axes are identical, and within the Chart Area tab there is one page for each of the axes (ringed below).

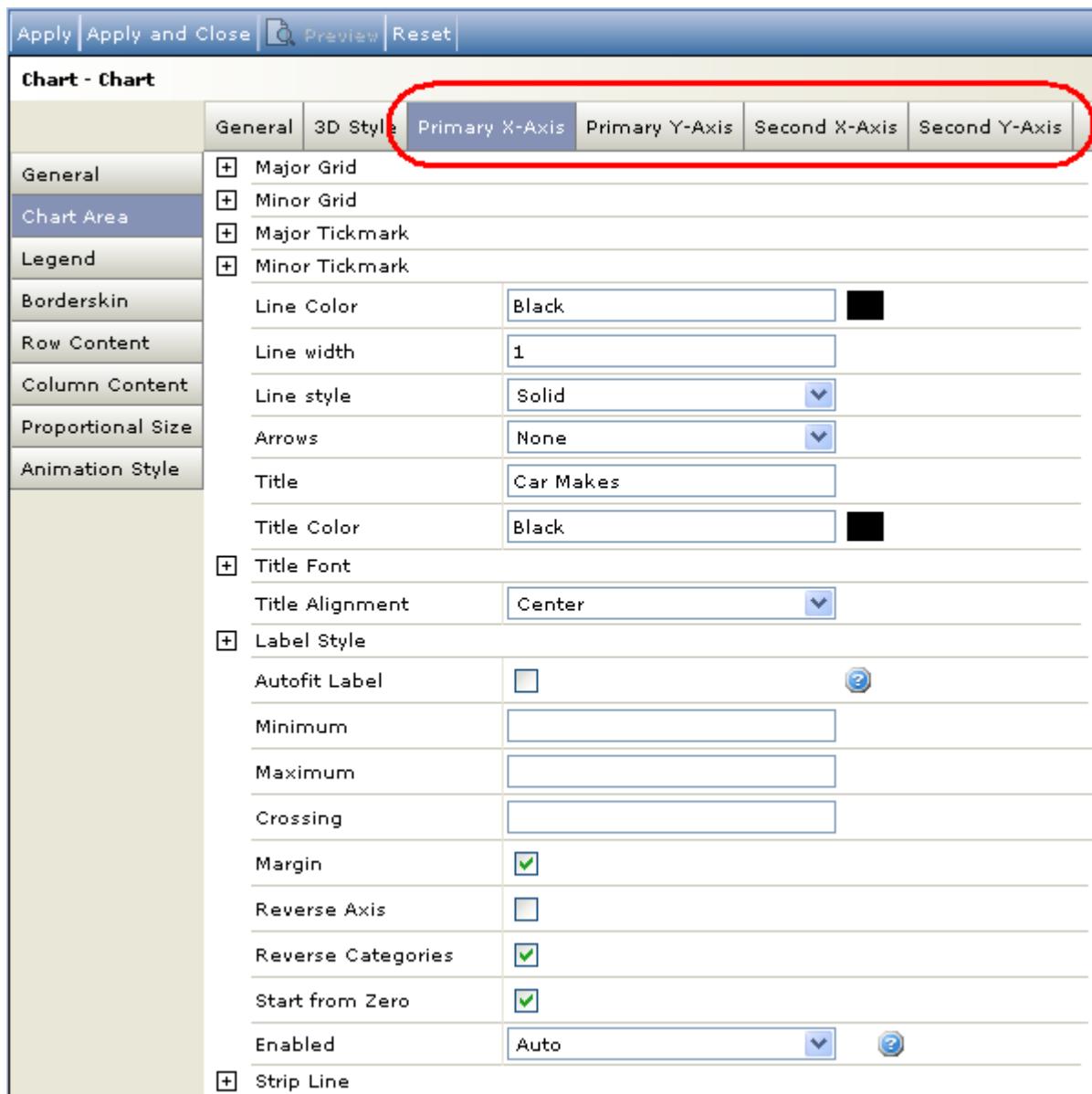


Figure 458 The Primary and Secondary Axes tabs and property groups

### Major and Minor Grid Lines

**Major grid lines** are drawn in conjunction with a data point (e.g., it will be drawn at the same point along the axis as a data point) for categorical axis tick marks. Value axes and major grid lines, by default, are drawn wherever labels occur. **Minor grid lines** are drawn between the major grid lines. These properties are all described in the Chart Settings Tabs section.

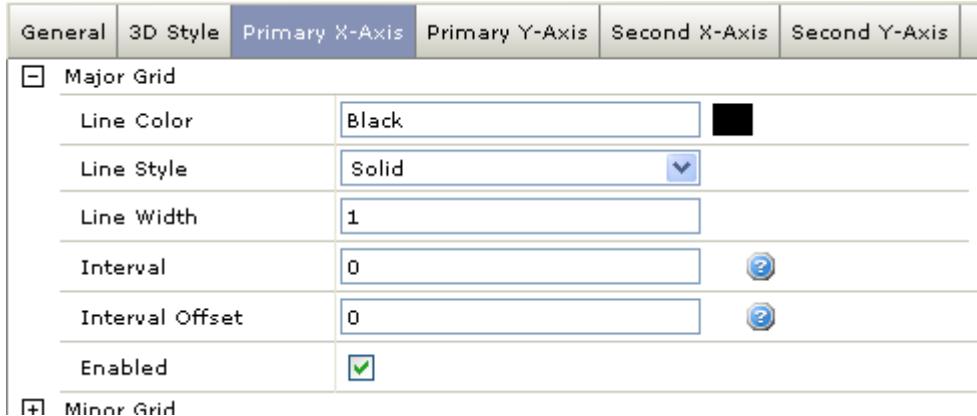


Figure 459 The grid line properties

**Note:** For the minor grid to be displayed properly, it must be enabled and the Interval property must be changed to a non-zero value.

#### 9.5.5.2.4. Major and Minor Tick Marks

Tick marks are the short lines perpendicular to the axes lines that indicate where the labels apply, and divide up the axes to make the chart easier to interpret. For categorical axes, **Major tick marks** are always drawn in conjunction with a data point (e.g., it will occur at the same point along an axis as a data point). Value axes and major tick marks, by default, are drawn wherever labels occur. **Minor tick marks** are drawn between the major tick marks, and can be used to sub-divide the major tick mark intervals. Use the properties on this tab to change the major tick mark frequency, color, etc. These properties are described in the Chart Settings Tabs section.

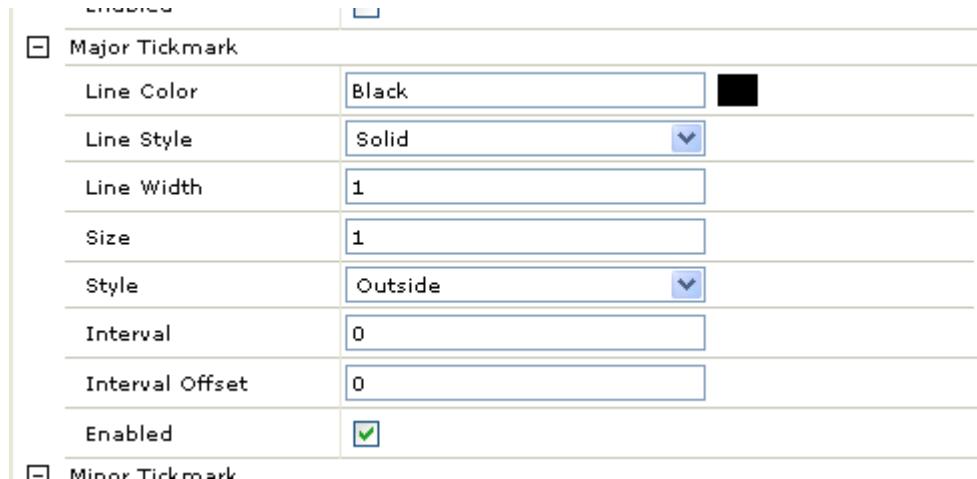


Figure 460 The Tick Mark properties

**Note:** The major tick marks are displayed by default. To display the minor tick marks for an axis, expand the Minor Tick Marks property for that axis, check the Minor Tick Marks "Enabled" box and change the "Interval" property to a non-zero value.

#### The Title Font Properties

Click on the + button to open the Title Font properties as shown below. Note that the font properties are the same as those accessed via the **Chart Settings > Access** tab.

<b>Title Font</b>	
Font Size	<input type="text" value="12"/>
Underline	<input type="checkbox"/>
Strikeout	<input type="checkbox"/>
Font Style	<input type="button" value="Bold"/>
Family Name	<input type="text" value="Verdana"/>

Figure 461 The Title Font properties

## The Label Style Properties

Use these properties to specify the font, layout etc. for the axis labels.

Title Alignment		<input type="button" value="Center"/>
<b>Label Style</b>		
<b>Font</b>		<input type="button" value="Font Color"/>
Font Color	<input type="text" value="Black"/>	<input type="color" value="black"/>
Font Angle	<input type="text" value="0"/>	
Interval	<input type="text" value="20"/>	
Interval Offset	<input type="text" value="0"/>	
Show End Labels	<input checked="" type="checkbox"/>	
Truncate Labels	<input checked="" type="checkbox"/>	
Offset Labels	<input type="checkbox"/>	<input type="button" value=""/>
Enabled	<input checked="" type="checkbox"/>	<input type="button" value=""/>

Figure 462 The properties under Label Style

## Other Label Style Properties

- **Font Color** - sets the color to be used for the label texts.
- **Font Angle** - specifies the angle at which the labels are to be written relative to the axis line. Zero degrees is horizontal, and positive angles rotate the text clockwise. The range of angles is -90 degrees to +90 degrees.
- **Interval** - specifies the spaces between the labels. For example, if the chart axis runs from 0% to 100% and you specify an Interval of 20, then the axis will have 5 labels positioned at intervals of 20%.
- **Interval Offset** - sets the "start point" for the labels. For example, if your chart axis runs from 0% to 100%, you set an interval of 20 and an offset of 10, then the first label will be at the 10% mark, the second at 30%, the third at 50% etc.
- **Show End Labels** - shows or hides the first and last labels on the axis - the "end" labels. For example, if the axis runs from 0% to 100% and the labels are to be displayed every 20%, check the Show End Labels box to show the 0% and 100% labels, or uncheck the box to hide them so the labels run from 20% to 80%.
- **Truncate Labels** - labels that extend outside of the chart area will be truncated if the Truncate Labels box is checked, the Autofit Label property is NOT checked, and the Font Angle property is set to a non-zero value.
- **Offset Labels** - check this box to distribute the axis labels such that they alternate top/bottom or left/right depending on the axis. This could be useful if the labels are long or close together.

- **Enabled** - check this box to activate the Label Style settings.

**Note:** The Offset Labels and Autofit Labels properties are mutually exclusive: If this property is switched on for an axis, the Autofit Labels property for the axis will automatically be switched off, and if you switch on the Autofit Labels property then this property will be switched off. This Property is ignored for Pie, Doughnut and Radar Chart Types.

### The Label Style Font Properties

The font properties available for the Label Style are standard for all text items.



Figure 463 The font properties for the Label Style property

### The Axis Formatting Properties

- **Line Color** - specifies the color of an axis line.
- **Line Style** - specifies the type of line you wish to use for the axis; solid, dotted etc.
- **Line Width** - sets the thickness of the axis line, in pixels. Note that if you set the line width to 0, it will not be displayed.
- **Arrows** - determines whether an arrow-head is displayed at the extremity of an axis, and if so, the style of the arrow-head to be used.

**Note that all properties can be set independently for each of the primary and secondary X and Y axes.**

### Margin

Check the Margin box to provide space between the series and the "other" axis. I.e. If you check the Margin property for the X axis, then the series will be lifted up the X axis providing space between the series and the Y axis.

### Reverse

- **Reverse Axis** - This property sets the axis direction.

Both primary and secondary horizontal axes are normally plotted from left to right, while both primary and secondary vertical axes are plotted from top to bottom. Check the Reverse Axis box for an axis to reverse the plotting direction for that axis.

The plotting direction of an axis affects its own associated labels and tick marks, and also the other axis associated with it (data is plotted using two axes) as the data will be drawn from the opposite direction. For example, if you set the "Reverse" property for the horizontal axis, this will cause its associated vertical axis to move to the right end of the axis.

- **Reverse Categories** - reverses the order of the categories in a bar chart without reversing the axes.

### Start and End Points (Maximum, Minimum and Start from Zero)

If you check the Start from Zero property and the Minimum property is set to Auto, then the minimum value will be zero if all data point values for this axis are positive. Otherwise, the axis will start at the minimum value of the data points. Note that this property applies only to the Y-axes.

- The Minimum property specifies the start point for the axis.
- The Maximum property specifies the maximum or end point for the axis.

### The Strip Line Properties

Strip Lines can be used to include patterns and background colors in the chart area, displaying horizontal and vertical lines or strips. Strip Lines are useful for highlighting specific areas within a chart area, allowing users to quickly and easily identify data that falls within a given range (see Strip Lines on page 349 for more information). The properties available in the Advanced Properties page are as below:

Strip Line	
Interval Offset	<input type="text" value="0"/>
Interval	<input type="text" value="10"/>
Strip Width	<input type="text" value="10"/>
Border Color	<input type="color" value="Black"/> <span style="background-color: black; width: 10px; height: 10px;"></span>
Border Style	<input type="button" value="Not Set"/>
Border Width	<input type="text" value="0"/>
Background Color	<input type="color" value="#CC99FF"/> <span style="background-color: #CC99FF; width: 10px; height: 10px;"></span>
Back Gradient End Color	<input type="color"/> <span style="background-color: white; width: 10px; height: 10px;"></span>
Gradient Type	<input type="button" value="TopBottom"/>
Back Hatch Style	<input type="button" value="None"/>
Enabled	<input checked="" type="checkbox"/>

Figure 464 The Strip Line properties

#### 9.5.5.3. The Advanced Properties Legend Tab

This tab contains the properties for formatting and displaying the chart legend. Note that the majority of the properties are also available via the Chart Designer > Legend tab.

This tab contains two sub-tabs, General and Font.

##### 9.5.5.3.1. The Legend > General Tab

This tab contains properties for formatting the layout, position and color of the legend. Note that the properties on this tab are also accessible via the Chart Designer Legend tab (see The Legend Tab on page 353 for more information).

Chart - Chart		
	General	Font
General	Back Color	#66FF33 
Chart Area	Back Gradient End Color	#FFFF66 
Legend	Back Gradient Type	LeftRight 
Borderskin	Border Color	Black 
Row Content	Border Line Style	Solid 
Column Content	Border Width	1
Proportional Size	Shadow Color	#cccccc 
Animation Style	Shadow Offset	0
	Autofit Text	<input type="checkbox"/>
	Alignment	Center 
	Docking	Right 
	Inside Chart Area	<input type="checkbox"/>
	Legend Style	Column 
	Enabled	<input checked="" type="checkbox"/>

Figure 465 The Advanced Properties > Legend tab General properties

#### 9.5.5.3.2. The Legend > Font Tab

This tab contains the properties for formatting the text used in the legend. Note that the properties on this tab are also accessible via the Chart Designer Legend tab (see The Legend Tab on page 353 for more information).

Chart - Chart		
	General	Font
General	Font Size	7
Chart Area	Underline	<input type="checkbox"/>
Legend	Strikeout	<input type="checkbox"/>
Borderskin	Font Style	Italic 
Row Content	Family Name	Verdana
Column Content		
Proportional Size		
Animation Style		

Figure 466 The Advanced Properties > Legend tab Font properties

#### 9.5.5.4. The Border Skin Tab

Use the properties on this tab to set up the chart borders for this chart. Note that if you want all the charts in your report to use the same border skin, then you can set up the border skin in the Layouts and Styles toolbox under Charts.

The properties on this tab are also accessible via the Chart Designer (see The Appearance Tab on page 324 for more information).

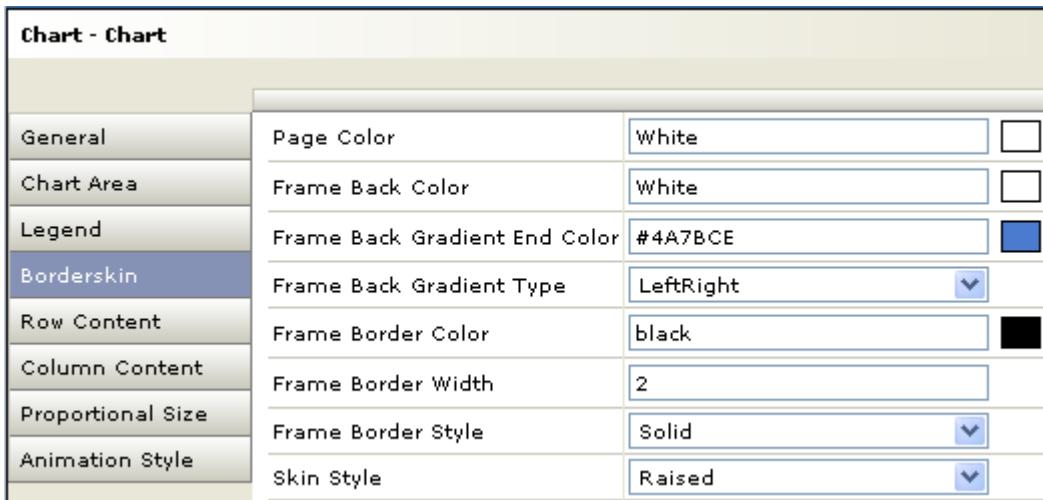


Figure 467 The properties on the Borderskin tab

##### 9.5.5.4.1. Page Color

This property sets the color of that portion of a web page that is exposed due to the shape of a border skin. For example, in the figure, the page area that is not covered by the border skin is the largest rectangle.



Figure 468 BorderSkin Page Color

If you set this property to be transparent, the area will be displayed in black.

##### 9.5.5.4.2. Frame Back

The frame colors are controlled by three properties: Frame Back Color, Frame Back Gradient Color and Frame Back Gradient Type (similar to Back Color, Back Gradient Color and Back Gradient Type).

##### 9.5.5.4.3. Frame Border

The border has three properties: Frame Border Color, Frame Border Width and Frame Border Style. To display a border, the Frame Border Width and Frame Border Style properties must be set.

### 9.5.5.5. The Row and Column Content Tabs

The properties contained in the Row Content and Column Content tabs are identical, so are described only once.

On the Category Masking tab (see the figure below), select the categories that you wish to be included in (or excluded from) the chart. Then go to the Distribution Mask tab and select how you wish the selected items to be handled.

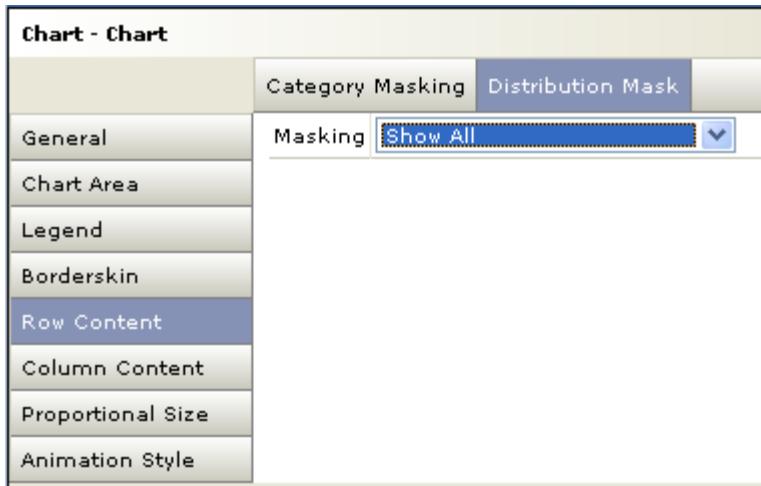
Chart - Chart		Category Masking	Distribution Mask	
General	Benchmark	<input type="checkbox"/>		
Chart Area	Total	<input type="checkbox"/>		
Legend	Average	<input type="checkbox"/>		
Borderskin	Deviation	<input type="checkbox"/>		
Row Content	Variance	<input type="checkbox"/>		
Column Content	Distribution	<input checked="" type="checkbox"/> 		
Proportional Size	Hierarchy Self	<input type="checkbox"/>		
Animation Style	Hierarchy Self Exclusive Children	<input checked="" type="checkbox"/>		
	Hierarchy Parent	<input type="checkbox"/>		
	Hierarchy Sibling	<input type="checkbox"/>		
	Hierarchy Child	<input type="checkbox"/>		
	Categorization	<input checked="" type="checkbox"/>		
	Measure	<input checked="" type="checkbox"/> 		
	Count	<input type="checkbox"/>		
	Min.	<input type="checkbox"/>		
	Max.	<input type="checkbox"/>		
	Formula	<input type="checkbox"/>		
	Base	<input checked="" type="checkbox"/>		

Figure 469 The Row and Column Content Category Masking properties

The properties listed here can also be accessed via the Chart Designer > Content tab (see The Content Tab on page 312 for more information). For more details on the categories, refer to The Table Designer.

#### 9.5.5.5.1. The Distribution Mask Tab

Use this tab to mask (hide) one or more elements in an answer list or scale list.



**Figure 470 The Distribution Mask tab**

Click the Masking field to open a drop-down list of the options, then select the desired option from the list. The options are:

- **Show all** - includes all the items you have selected in the Category Masking tab.
- **Hide all** - hides all the items you have selected in the Category Masking tab.
- **Show Specified Codes** - shows the codes you have specified (see below).
- **Hide Specified Codes** - hides the codes you have specified (see below).

If you choose either "Show Specific Codes" or "Hide Specific Codes" from the drop-down menu, you must specify codes in the open text field that appears. Each code specified must match the corresponding code used for that question in the questionnaire tree.

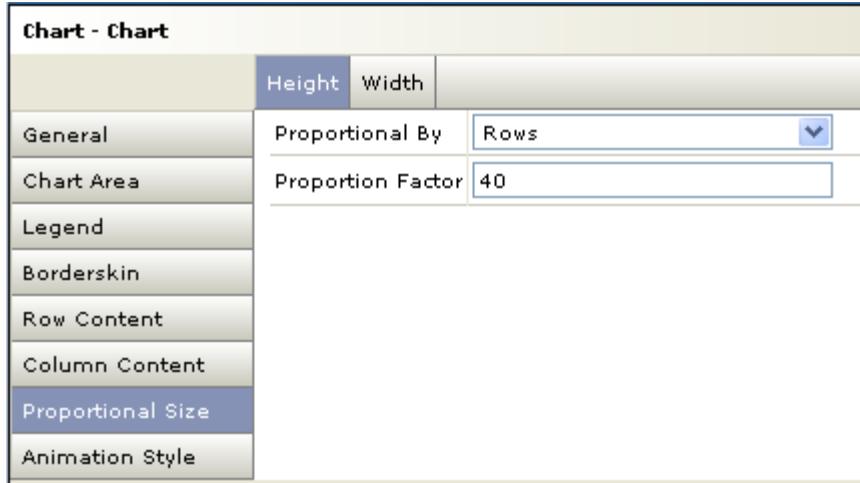
- **Formulas First** - if this option is selected, then any formulas will be calculated before the mask is applied. This will be required if you need to include the masked values in a formula calculation.

For further information, go to the Distribution Masking section.

#### **9.5.5.6. The Proportional Size Tab**

If you wish the size of the chart to vary depending on the content in the table it is based on, use the Proportional Size settings. These settings reduce the requirement to specify chart size locally, so will be useful in scenarios where the content of the chart could vary based on the viewer's selections, such as when using drill-down (see Drill-down on page 435 for more information) and/or parameters (see Parameters on page 428 for more information). This functionality will for example prevent bars and columns being squeezed in the event there are a large number of elements on the page.

The properties on the Height and Width tabs are identical so are described only once.



**Figure 471** The Proportional Size tab

The **Proportion Factor** property is the number of pixels that will be multiplied by the number of items in the rows or columns (depending on your selection) in the table. The total size of the chart will be the sum of the default settings under General and the result from multiplying the proportional factor by the number of rows or columns. For example, if you have 100 pixels in height in the General settings (see The General Tab on page 364 for more information), 8 rows in the aggregated table, and a proportion factor on Rows for Height of 40, the total height will be  $100 + (8 \times 40) = 420$  pixels.

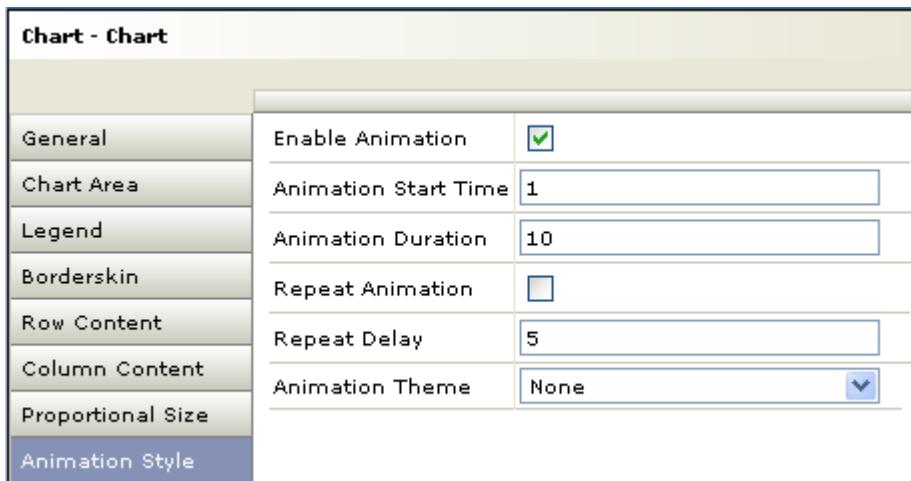
#### 9.5.5.7. The Animation Style Tab

This function enables you to add animation to your charts. The properties described here are also accessible via the Chart Designer > Animation tab (see The Animation Tab on page 323 for more information).

**Note:** You must have the Macromedia Flash Player from Adobe installed on your pc for this function to work. You can download the Flash Player from <http://www.adobe.com/products/flashplayer/>.

**Note:** Animation will only work on web-enabled reports. If the report is exported to Excel, PowerPoint, Word or another application, the animated charts will be exported as pictures and the animation will cease to function.

Click the Animation Style button to open the parameter box.



**Figure 472** The Animation Style properties

Check the Enable Animation box to enable the function and access the remaining properties.

- **Animation Start Time** – the time delay in seconds from when the chart is opened until the animation commences.
- **Animation Duration** – the time taken in seconds for the animation to complete.
- **Repeat Animation** – check to repeat the animation.
- **Repeat Delay** – the time delay between the end of one animation and the start of the next.
- **Animation Theme** – click the down-arrow to open a drop-down list of the available themes, and select one from the list. A theme must be selected. If **None** is shown, then the chart will not be animated. The options are:
  - **None** – no animation.
  - **Growing Together** – uses a combination of growing and fading animation types. Fading is used for markers, data point labels, axis labels, titles and legend items. All other elements use growing animation.
  - **Fading** – uses only the fading effect for all chart elements. Data points are drawn one by one.
  - **Growing and fading** – similar to the GrowingTogether theme but differs in that all chart elements may be animated at the same time. This theme also uses a repeat flag for data points which causes a flashing effect.
  - **Growing one by one** – uses one-by-one drawing for all elements. This theme is a combination of growing and fading animation types.
  - **Moving from top** – uses Moving Animation for data points. All data points move and grow from point (50, 0) in relative coordinates.

## 9.5.6. Setting Properties on Series

The Advanced Properties section describes the "Chart properties". This section looks at the Series.

To access the Series properties:

1. On the Chart Designer toolbar, click the **Advanced Properties** button.  
The window changes to show only the chart preview with the table.
2. Right-click on the chart and select **Series** from the drop-down menu.

A sub-menu opens. The sub-menus provide access to the default series properties and the properties for the various categories. The Properties pages are identical for all the sub-menus, so are described here only once.

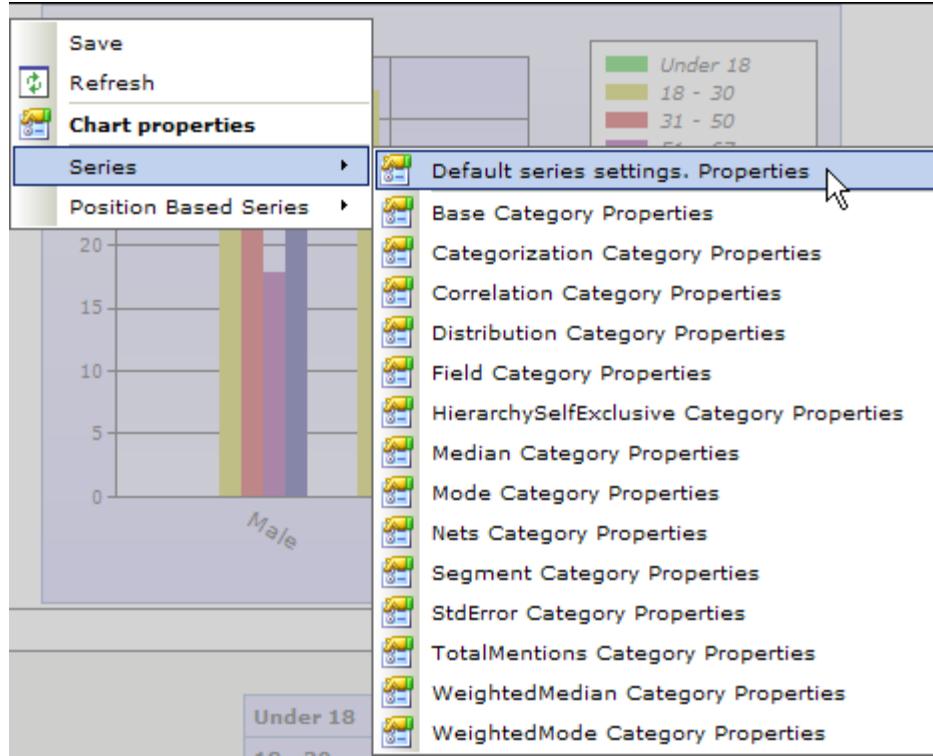


Figure 473 Setting Properties on Series

The chart above is "Category Based" (see Series Handling on page 366 for more information) so the menu allows you to select one of the many available categories or "Default Series Settings". If the chart had been "Series Based", you would have been able to choose between "Male series", "Female series" and "All series".

As an example, go to "Default series settings". The property sheet shown below appears.

**DefaultSeries - Default**

<b>1</b> Is In Use	<input checked="" type="checkbox"/>
Series Color Transparency (%)	30
Back Gradient End Color	White
Back Gradient Type	VerticalCenter
Border Color	black
Border Style	Solid
Border Width	1
Shadow Color	#cccccc
Shadow Offset	0
Marker Color	Black
Marker Border Color	Black
Marker Style	None
Marker Size	0
Marker Step	1
Show Label as Value	<input checked="" type="checkbox"/>
<b>+ Smart Labels</b>	
Font Color	Black
<b>+ Font</b>	
Font Angle	0
<b>2</b> Chart Type	Column
<b>3</b> X-Axis Type	Primary
<b>4</b> Y-Axis Type	Primary

Figure 474 Default series settings

The majority of the properties have been described previously. However the numbered properties are described in the following sections.

#### 9.5.6.1. Is In Use

(Marked '1' in figure above.) If this box is checked, the category will be used. If this property is not checked, the default will be used.

#### 9.5.6.2. Chart Type

(Marked '2' in figure above.) Choose the desired Chart Type for the series selected.

#### 9.5.6.3. X-Axis Type

(Marked '3' in the figure above.) The **X Axis** property, which sets the X-axis type for the series, determines if the series is plotted using the primary or secondary X-axis.

For all chart types except pie, doughnut, bar and stacked bar charts, the primary X-axis is the lower horizontal axis while the secondary axis is the upper horizontal axis. For bar and stacked bar charts, the primary X-axis is the left vertical axis and the secondary X-axis is the right axis.

When data is plotted using the secondary x-axis, remember to set axis properties using the Chart object's AxisX2 property, and not the AxisX property.

#### **9.5.6.4. Y-Axis Type**

(Marked '4' in the figure above.) The **Y Axis** property, which sets the Y-axis type of a series, determines if a series is plotted using the primary or secondary Y-axis.

For all chart types except pie, doughnut, bar and stacked bar charts, the primary Y-axis is the left vertical axis while the secondary Y-axis is the right vertical axis. For bar and stacked bar charts, the primary Y-axis is the lower horizontal axis and the secondary Y-axis is the upper horizontal axis.

When data is plotted using the secondary Y-axis, remember to set the axis properties using the Chart object's AxisY2 property and not the AxisY property.

## 10. The Analyst Toolbox

The Analyst toolbox is available to all Confirmit Authoring users, Reportal designers, and those given the Reportal Analyst access permission.

The Analyst toolbox enables specified users to explore the survey data and check the results without having to go to the trouble of creating a report, pages, charts etc. A user with Analyst permission (the analyst) can create tables directly in the Analyst toolbox, adjusting the details as required, then copy those tables into a report or make the tables available to others such that they can create the report. In addition, users can perform multivariate statistical analyses of the data using such tools as Linear Regression. All functionality and properties that are available to a "standard" Confirmit user in the Reportal Table Designer are available to the analyst user.

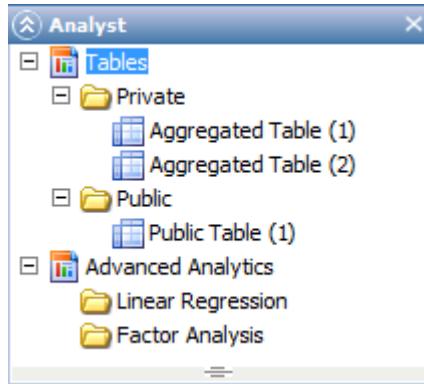


Figure 475 Example of the Analyst toolbox

When you log in to Reportal as an Analyst (not a "standard" user) and open a report , the Reportal functionality available to you is very restricted. Only three toolboxes are displayed; the Analyst, Data Source and Filters. The General menu contains only two items; **Report List** and **Log Off**, and the Report menu contains only **Edit Report**. Note that the Analyst toolbox and functionality is also available to all "normal" Confirmit Authoring and Reportal users.

### 10.1. Allocating the Analyst Permission to a User

**Note: "Standard" Authoring and Reportal users will automatically have the Analyst functionality available.**

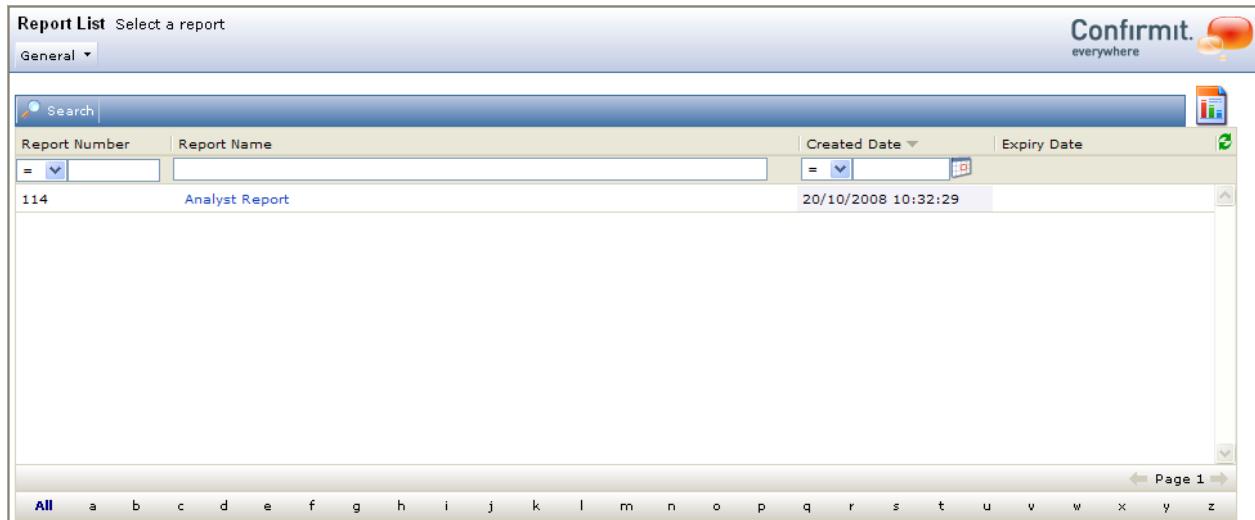
The designer/administrator of a report can allocate Analyst permission to that report to another user. To do so:

1. Go to the **Permissions > End User Permissions** menu command.
2. Find the end user to which you wish to give Analyst permission to the report (note that the end user must be uploaded or created in Confirmit Authoring before he/she will appear in the list).
3. In the Permission Type drop-down, select **Analyst**.

(see Access Control on page 635 for more information).

### 10.2. Logging In as an Analyst

When you log in to Reportal as an Analyst, the Reportal window opens with "reduced functionality". The Report List includes only those reports to which you have been assigned Analyst access, the General menu commands are reduced to just two, and the Create toolbar is not displayed.



**Figure 476 The Report List page for an Analyst**

Click on the appropriate report name to open that report.

### 10.3. Tables in the Analyst Toolbox

Within the Analyst toolbox, any tables that you create in the Private folder will be visible only to the logged-in user - i.e. you. Any tables that you create in or drag into the Public folder will be visible to any user with access to this report. This allows you to check through the data in the Data Source toolbox, and create tables in the Private folder and experiment with layouts until you have the tables required for the report. You can then drag those tables to the Public folder so they become available to other users. Another user with access to the report will then see the tables in his/her Analyst toolbox Public folder, and can then drag the completed tables from their Analyst toolbox and into the report.

**Note: If a user who does not have design access to a report is given the Report Analyst Access permission, then the menu commands and toolboxes available to the user will be restricted.**

The following rules and restrictions apply to the Analyst toolbox Public and Private folders:

- Any analyst can create a table in the Public folder and in his/her Private folder.
- Any analyst can create sub-folders in the Public folder and in his/her Private folder.
- Any analyst can create a table in any Public sub-folder.
- Any analyst can copy a table from his/her Private folder into the Public folder.
- The analyst who created that table can modify or delete that table in the Public folder.
- Any analyst (NOT the creator of the table) can copy any table from the Public folder into his/her Private folder. The copy of the table then becomes private for this analyst, and this analyst can edit the copy without changing the original.
- A Report Designer can copy any table from his/her Private folder or the Public folder into the Report.
- A Public sub-folder can be deleted by any analyst if the sub-folder is empty.
- A Public sub-folder (including all its contents) can be moved to a different area of the Public folder by any analyst at any time.

**Note: Analyst tables may also be created using the Report API, and the demonstration Excel plug-in application that is supplied with the API documentation. Refer to the Report API documentation for further details. For more information on purchasing the Report API, contact your Account Manager.**

### 10.3.1. How to Create a Table

**Note:** You can create folders within the Private and Public folders, so if you have a large number of tables you can set up a folder structure in which to organize them.

To create a table in the Analyst toolbox:

1. Right-click on the **Private** or **Public** folder as appropriate to open the right-click menu.
2. Select **Insert Table Inside**.

A table is created within the folder and the Table Designer page opens with the table.

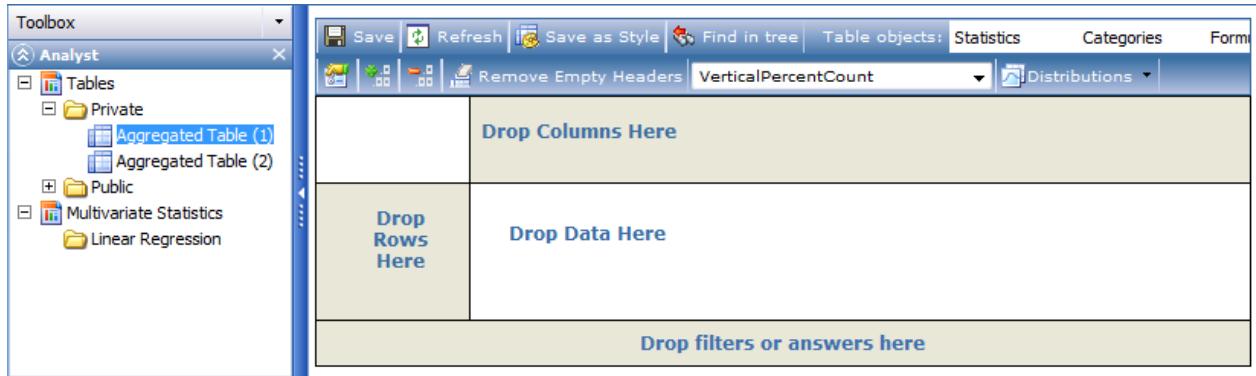


Figure 477 A new table in the Private folder

You can now add data, formulae and statistics to the table using the same methods you would use in "standard" Reportal. The table functionality available to you here is identical to that available in the standard Reportal Table Designer (see The Table Designer on page 143 for more information).

**Note:** The tools available in the table designer toolbar will depend on which item in the table is selected.

3. To rename the table, right-click on it in the folder and select **Rename** from the menu.

Once you have dragged some data from the Data Source into the row and column fields in the table and saved the changes, the Fixed Filters field and some additional information about the table, are displayed. If you wish to include a filter in the table, drag the appropriate questions and/or categories into the field (see Adding a Filter to the Table on page 155 for more information).

The screenshot shows a software interface for creating analyst tables. At the top, there's a toolbar with various icons for saving, refreshing, and finding objects. Below the toolbar, a menu bar includes 'Statistics', 'Categories', 'Formula', and 'Base'. A dropdown menu for 'VerticalPercentCount' is open. On the right side of the interface, there are buttons for 'Distributions', 'Ascending', and 'Descending'. The main area displays a table titled 'Age - Age'. The columns represent age groups: Under 18, 18 to 30, 31 to 50, 51 to 67, 68 or more, and Total. The rows represent gender categories: Male, Female, and Total. The data shows counts and percentages for each combination. For example, under 'Under 18', there are 16 males (42.1%) and 22 females (57.9%). The table also includes generated and weight model information, and fixed filters.

		Age - Age											
Gender - Gender		Under 18		18 to 30		31 to 50		51 to 67		68 or more		Total	
	Male	16	42,1%	16	51,6%	17	53,1%	13	46,4%	17	53,1%	79	49,1%
	Female	22	57,9%	15	48,4%	15	46,9%	15	53,6%	15	46,9%	82	50,9%
	Total	38	100,0%	31	100,0%	32	100,0%	28	100,0%	32	100,0%	161	100,0%
Generated: 28.01.2011 11:02:23													
Weight model: None													
Fixed filters: <a href="#">Drop filters or answers here</a>													
Significance testing: None													
<a href="#">Drop filters or answers here</a>													

Figure 478 Example of an analyst table with some data

### 10.3.2. How to Add an Analyst Table to a Report

All analyst tables that you have created in the report's Private folder, and any that other analyst users have placed in the Public folder, can be copied into any page in the report. They can be copied into the report any number of times. There are several possible ways to copy a table into the report:

1. If the report page into which you wish to copy the table is open in the Page Editor, drag the table from the Analyst toolbox and drop it into the desired location on the page. Click **Save** to save the changes.
2. If the report page into which you wish to copy the table is NOT open in the Page Editor (another page may be open!), you can drag the table from the Analyst toolbox and drop it onto the desired page in the Report toolbox. In this case the table will be added to the bottom of the page. If required, you can then open the page in the Page Editor and reposition the table.

Note that if you drop the table onto the page itself, you must drop the table onto the page's icon in the Report toolbox, not onto the text. You can drop the table onto one of the other components on the page; the table will then be added to the page after that component. When you drop a table onto a page in the Report toolbox, the change is saved automatically.

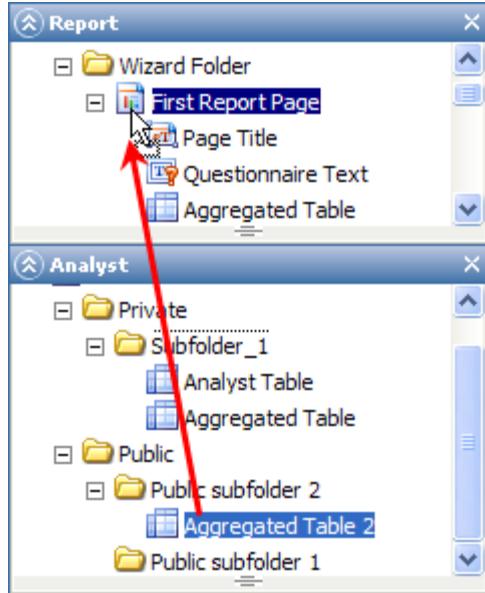


Figure 479 Dragging a table from the Analyst toolbox into a report page

### 10.3.3. The Analyst Table Right-click Menu

In the Analyst toolbox, the tables in both the Private and Public folders have a right-click menu. This menu provides you with additional functionality as listed below.

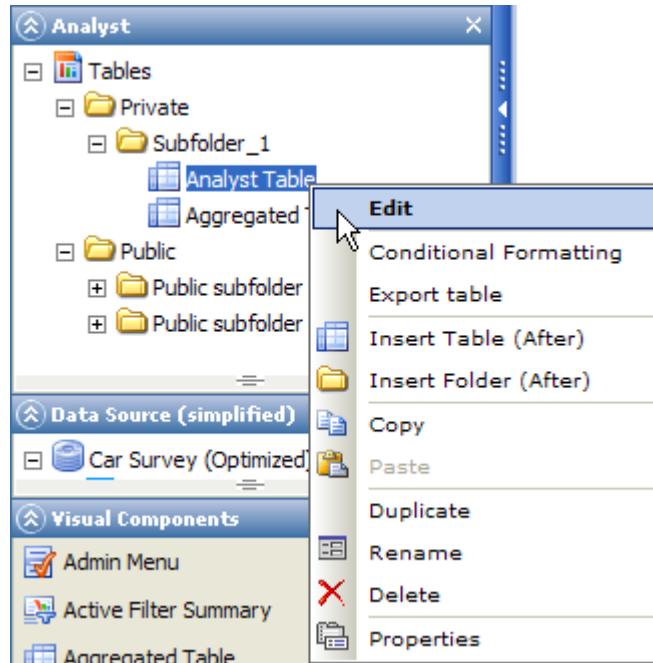


Figure 480 The right-click menu for an Analyst table

The menu items are as follows:

- **Edit** - opens the Table Designer page for the table. You can also double-click on the table in the toolbox to achieve the same result (see The Table Designer on page 143 for more information).
- **Conditional Formatting** - allows you to apply conditional formatting to the table (see Conditional Formatting on page 252 for more information).
- **Export Table** - select to export the table to Excel or PowerPoint (see Exporting Analyst Tables on page 389 for more information).
- **Insert Table (After)** - creates a new table in the Analyst toolbox after the current table.
- **Insert Folder (After)** - creates a new folder in the Analyst toolbox after the current table.
- **Copy** - makes a copy of the table that you can then paste into the same or another folder.
- **Duplicate** - creates a duplicate of the table into the same folder. Change the table name.
- **Rename** - selects the table name so you can change it.
- **Delete** - flags the table for deletion. Confirm the operation to remove the table from the toolbox.
- **Properties** - opens the table Properties page (see The Table Property Sheet on page 161 for more information).

#### 10.3.4. Exporting Analyst Tables

You can export tables from the Analyst toolbox, thereby allowing you to create Excel or PowerPoint files containing the results for viewing, presentation, printing etc. You can export one table at a time, or all tables simultaneously. To do so:

1. In the Analyst toolbox, either right-click on the table you wish to export and select **Export Table**, or right-click on the **Tables** folder (the top level) and click **Export All Tables**.

The Export Table dialog opens.



Figure 481 The Export Table dialog

2. Click the down-arrow beside the Export Format field and select the desired format from the drop-down list.

The options are Excel and PowerPoint.

3. Check the email address to which the export file is to be sent, and edit as appropriate.

4. If you are working in a multi-language report, select the language version you wish to export.

5. Select the task start time.

The options are As soon as possible, and Schedule for later execution. If you select Schedule for later..., additional fields and options become available allowing you to set up the task time.

6. On completion click **OK**.

The table is attached to an email and sent to the specified address.

## 11. Instant Analytics

Instant Analytics is a "standard" simplified report. The general layout of the report is preset and cannot be changed.

The report is accessible to Confirmit Professional users and end users depending on the access permission set for those users.

The report is intended to enable the user to quickly view the survey status, quota information and responses, and interactively perform cross-tab analysis on the data. You can also save reports and export the raw data.

Instant Analytics reports are automatically assigned names that reference the survey number they are based on .

<input type="checkbox"/>	Report Number	Report Name
<input type="checkbox"/>	= ▾	
<input type="checkbox"/>	97991	Instant analytics report on survey [p802109640]
<input type="checkbox"/>	97959	Instant analytics report on survey [p1837398806]

*Figure 482 Instant Analytics reports in the Report List*

The data presented in the tables and charts in the report is updated automatically as respondents reply to the survey.

You can create "versions" of the report by specifying which interview statuses and questions are to be displayed and then saving a copy of the report.

Instant Analytics is described in more details in the Confirmit Authoring Manual.

## 12. Advanced Analytics

This advanced analytics is based on the statistical principle of multivariate statistics, which involves the simultaneous observation and analysis of more than one statistical variable. The technique is used to perform studies across multiple dimensions while taking into account the effects of all variables on the responses of interest.

**Note:** Regression can be performed on up to 10000 records. If you are working with a larger database, apply a filter to reduce the number of records below 10000.

**Note:** Loop questions cannot be used in factor analysis, linear regression and cluster analysis.

### 12.1. Linear Regression

Linear Regression is one of a number of statistical tools that are used to understand how an objective is driven by other variables; for example how "employee satisfaction" depends on salary, relationship with boss, levels of training etc. Perhaps in the example a manager would like to find out which of the variables has the greatest effect on employee satisfaction so that he/she can implement changes to improve the working environment in the company. The stronger the effect a variable has on the objective, the more "important" the variable is, and the analysis will allow the user to model the impact that changes in the variables will have on the objective.

Regression calculations are performed dynamically, based on any filter settings and/or report base settings in preview/view mode in Reportal. If the number of data rows available for the calculation exceeds the system limit (10.000), the "Case selection" setting for the regression run will be employed and 10.000 cases will be used in the calculation.

Linear Regression has two methods:

- Simple Regression (using just two variables)
- Multiple Regression (using several variables)

**Note:** The variables used in a Linear Regression must be Numeric variables or variables that contain a scale. Loop questions cannot be used in linear regression.

This type of analysis is also known as root cause analysis or driver analysis.

**Note:** Linear Regression results (the linear regression runs) can be accessed using scripting. Refer to the Confirmit Scripting Manual for further details.

**Note:** If a report includes Linear Regression statistics and/or charts, these will be included in the export file if the report definition is exported (see How to Export a Report Definition on page 81 for more information) or if the report is exported to Excel or PowerPoint (2003 or 2007) (see Exporting a Report on page 594 for more information).

#### 12.1.1. Simple (Two-Variable) Regression

The Simple Regression analysis uses just two variables, a "dependent variable" and an "independent variable", where the hypothesis is that changes to the independent variable will directly effect the dependent variable in a linear relationship. These variables are plotted against each other on a chart, and a "best fit" linear relationship equation is derived which may have several coefficients. In the chart, the closer the data points are to the line, the better is the "fit" and the more important is the independent variable to the dependent variable (see Linear Regression Example on page 393 for more information)

#### 12.1.2. Multiple Regression

The purpose of multiple regression is to learn more about the relationship between several independent variables and a dependent variable.

For example, a manager might use multiple regression procedures to determine the basic compensation for company employees. An analyst would identify a number of factors or dimensions such as "the amount of responsibility" or "number of people to supervise" that are believed to contribute to the value of a job, and would then usually conduct a salary survey among comparable companies, recording the salaries and respective characteristics (i.e. the values on dimensions) for different positions. This information can then be combined and used in a multiple regression analysis to build a regression equation, resulting in for example:

$$\text{Salary} = (0.5 * \text{Responsibility}) + (0.8 * \text{No_Supervised})$$

Once this regression equation has been determined, the analyst can easily construct a graph of the expected (predicted) salaries for similar positions in similar companies, and the actual salaries of employees in the subject company. The analyst is then able to determine which positions are underpaid (below the regression line) or overpaid (above the regression line), or paid fairly. In this case, because multiple variables impact the regression, a direct linear relationship chart is not available.

The general expression is of the form:

$$Y = a + (b_1 * X_1) + (b_2 * X_2) + \dots + (b_p * X_p)$$

In this equation, the regression coefficients (or *B* coefficients) represent the *independent* contributions of each independent variable to the prediction of the dependent variable. The higher the *B*-coefficient, the greater the impact the variable has on the dependent variable. See the circled values in the illustration below.

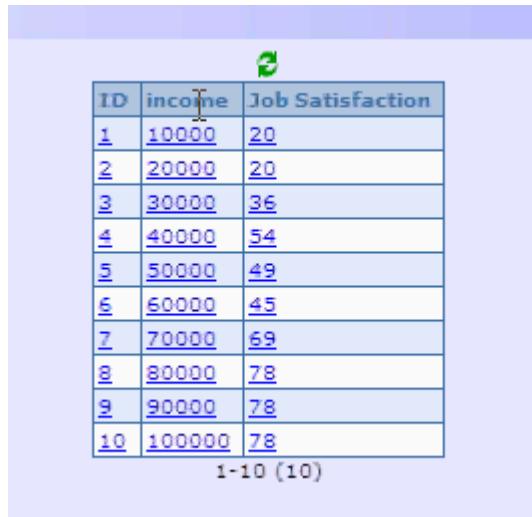
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	3.2	0.377			8.491	0
q3	-0.108	0.061		-0.11	-1.759	0.08
q4	-0.16	0.062		-0.161	-2.592	0.01
q5	-0.035	0.061		-0.036	-0.576	0.565
q6	0.015	0.058		0.016	0.251	0.802
q7	0.134	0.061		0.136	2.179	0.03

Figure 483 Example of the results from a multiple regression run

To create a multiple regression model, add multiple variables in the Independent Variables field, separated by comma (e.g. q3,q4,q5,q6 etc.) - see above.

### 12.1.3. Linear Regression Example

In this example we have a simple data set containing 10 records, where for each respondent we have a value for Income and a value for Job Satisfaction.



The screenshot shows a data grid with three columns: ID, income, and Job Satisfaction. The data is as follows:

ID	income	Job Satisfaction
1	10000	20
2	20000	20
3	30000	36
4	40000	54
5	50000	49
6	60000	45
7	70000	69
8	80000	78
9	90000	78
10	100000	78

1-10 (10)

Figure 484 Example of a simple data set with 10 records

Assume we wish to discover if there is a linear relationship between Income and Job Satisfaction. To do this we can create a Linear Regression:

1. In the Analyst toolbox, expand the Advanced Analytics item (if necessary), right-click on the **Linear Regression** folder and select **Insert Linear Regression Inside**.

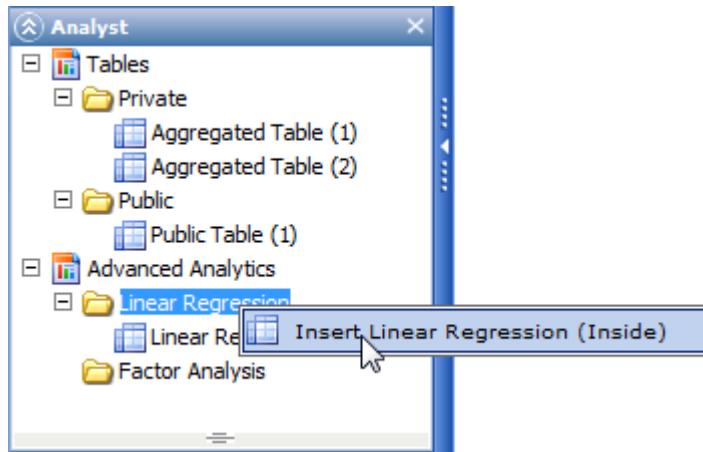


Figure 485 Creating a new Linear Regression object

A new Linear Regression object is created in the folder and the Model Designer page opens.

The screenshot shows the 'Linear Regression Model Designer' interface. At the top, there are three input fields: 'Dependent variable' (labeled 'Drop question here'), 'Independent variables' (labeled 'Drop questions here'), and 'Filter' (labeled 'Drop filter expression here'). Each field has a 'Clear selection' button and a help icon (a question mark inside a circle). Below these fields is a link 'Show advanced settings'. At the bottom right is a large 'Run Linear Regression' button.

**Figure 486 The Linear Regression Model Designer page**

The fields are as follows:

- **Dependent variable** - This field will contain the variable to be analyzed by linear regression analysis. The variable will as a result of the analysis be expressed as a linear function of the independent variables. The field can contain only one variable, and this variable must be numeric. The supported question types are: Numeric, Numeric List, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop a question from the Data Source toolbox to populate the field.
- **Independent variables** - This field will contain the variables that will be used to explain the dependent variable, as a linear function. The field can contain one or more variables, and the variables must all be numeric. The supported question types are: Numeric, Numeric List, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop one or more questions from the Data Source toolbox to populate the field.
- **Filter** - This field may contain a filter to restrict the underlying dataset the linear regression analysis is performed on. The field can contain only filters of type Filter Expression. Drag and drop a filter expression to populate the field. The filter expression can be reviewed or edited by clicking the "..." button.

**Note: Linear Regression does not support parameters, so any parameters used in the filter expression will be ignored and should instead be written as explicit expressions.**

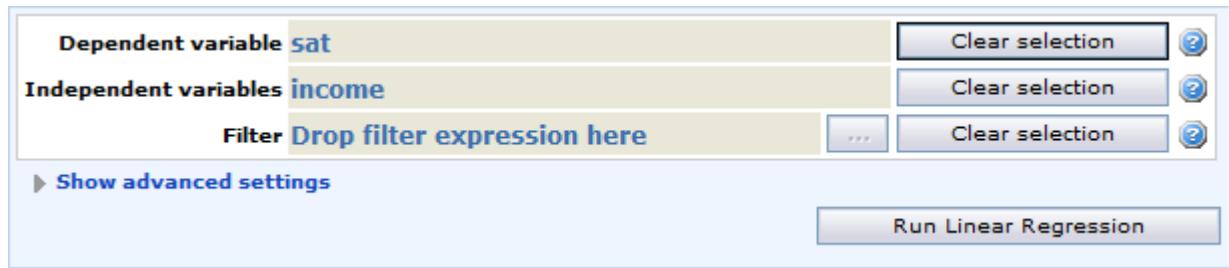
Advanced Settings:

- **Minimum number of Cases** - use this field to specify a minimum number of cases (data rows) that must be available to run the multivariate calculation. The default value is 0, so there is no lower limit. If the number of available cases in the calculation is less than the specified limit, an error message will be displayed.
- **Case selection** - this setting specifies how calculations are to be handled if the number of available cases (data rows) exceeds the system limit for the maximum number of cases allowed in multivariate calculations. The limit is 10.000 data rows. The options are:
  - **Default** - The last 10.000 of the available data rows will be used. This corresponds to the latest collected data.
  - **Random** - A random subset containing 10.000 of the available data rows will be used.
  - **First** - The first 10.000 of the available data rows will be used. This corresponds to the earliest collected data.
- **Data selection** - specifies which data values are to be used for categorical variables in the multivariate calculation. The options are:
  - **Codes** - The variables' answer codes will be used. This requires the codes to be numerical.
  - **Scores** - The variables' answer scores will be used. This requires the answer scores to be specified. Any answers with missing scores will be omitted by list-wise deletion in the calculation.

The Data Selection setting is also available when executing a dynamic regression via scripting.

9. From the report's Data Source toolbox, drag the two variables that are to be the Dependent and Independent Variables (in this case the satisfaction question and the income question respectively), and drop them into the appropriate fields.

**Note: The variables used must be Numeric variables or variables that contain a scale.**



*Figure 487 The Satisfaction and Income variables in place*

Note that several variables can be added to the Independent Variables field, and you can add a filter so you can view a sub-set of the data if required.

- When the variables are in place, click **Run Linear Regression**.

The calculations are run and the results are presented in the area below the Model frame. (see The Regression Data on page 397 for more information).

The screenshot shows the Confrimt Horizons 24 Reportal interface for performing a linear regression analysis. At the top, there are input fields for the dependent variable 'sat' and independent variables 'income', with a 'Filter' placeholder. Below these are three 'Clear selection' buttons and a 'Show advanced settings' link. A large 'Run Linear Regression' button is at the bottom right.

Below the main input area, two run history entries are displayed:

- Run number 2 (19.02.2014 13:51:49) - Dependent variable: sat, Independent variables: (Constant), income, Filter: None**
- Run number 1 (19.02.2014 13:51:38) - Dependent variable: sat, Independent variables: (Constant), income, Filter: None**

Under each run entry, detailed statistical tables are shown:

- Model Summary**: Shows R (0,949), R Square (0,9), Adjusted R Square (0,888), and Std Error of the Estimate (7,63098).
- ANOVA**: Shows the breakdown of sums of squares for Regression (4212,245), Residual (465,855), and Total (4678,1), along with degrees of freedom (1, 8, 9), Mean Square (4212,245, 58,232), F (72,336), and Sig. (0).
- Coefficients**: Shows the unstandardized coefficients (B) and standard errors for the intercept (13,4, 5,213) and 'income' variable (0,001, 0), along with standardized coefficients (Beta) and t-scores (2,571, 8,505) and significance levels (0,033, 0).

At the bottom left of the results area, there is a 'Show/Hide Chart' button and a small icon.

Figure 488 The results in tabular form

Each time a run is performed, a header row of information is presented above the results of that run. This header row gives the Run Number and the date and time of the run, and lists which variables were used in the run. This allows the user to conduct experiments using different variables and filters etc. and return to the most useful results later. Click in a header row to expand or contract that run's results.

**Note: The tables and chart are created using the data available at the time of the run; they are not updated if more data becomes available. To include new data, re-run the regression.**

For simple regressions you can also create a scatter chart:

11. Click the **Show/Hide Chart** button in the lower-left corner of the area.

A chart is displayed below the data tables.

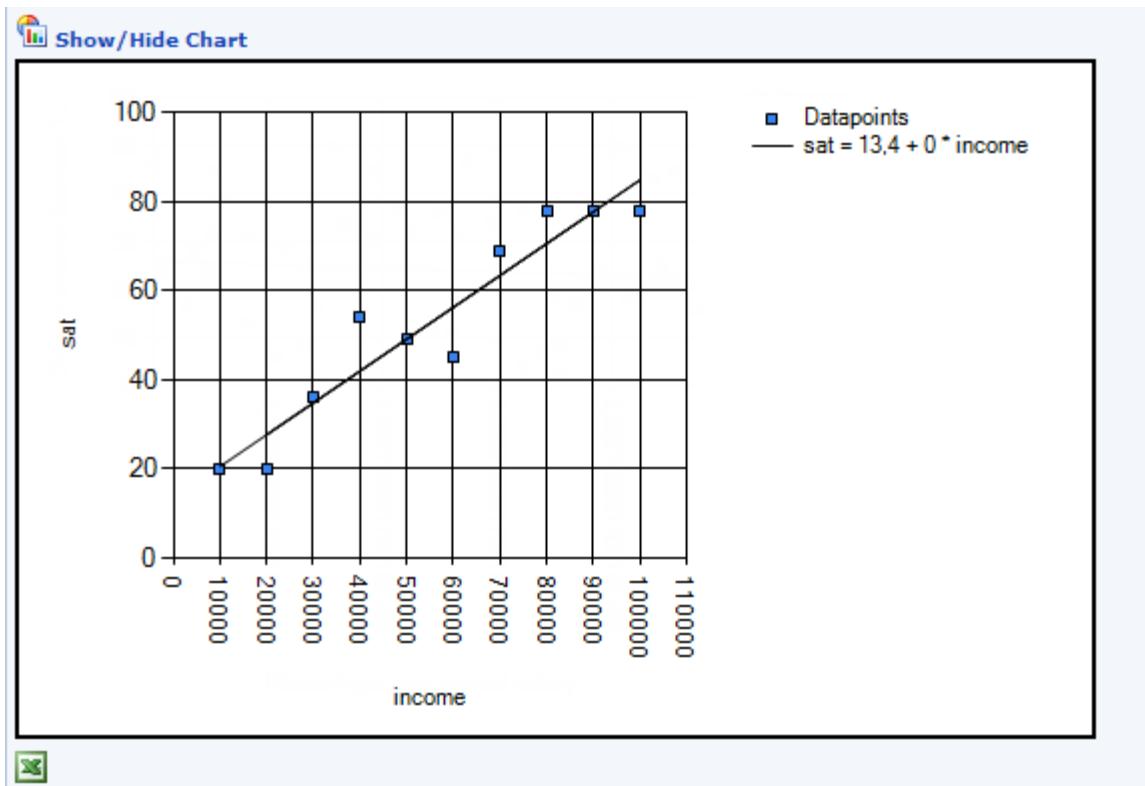


Figure 489 The chart created from the example data

A two-variable regression gives a "best fit" line through the data, and the equation that defines the line. The data from the tables and chart tells us:

- The "start point" for the job satisfaction is 13.4%
- For every \$10000 extra that an employee receives, their job satisfaction increases by 7.15 percentage points.
- The Model Summary table gives an R<sup>2</sup> value of 0.9. R<sup>2</sup> is the "effect", so in this example 90% of Job Satisfaction can be explained by salary.

Click the **Send to Excel** button to export the tables to Excel.

#### 12.1.4. The Regression Data

A Linear Regression run gives a set of tables that present the resulting data.

Model Summary					
R	R Square	Adjusted R Square	Std Error of the Estimate		
0,949	0,9	0,888	7,63098		
ANOVA					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4212,245	1	4212,245	72,336	0
Residual	465,855	8	58,232		
Total	4678,1	9			
Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients		t
	B	Std. Error	Beta		
(Constant)	13,4	5,213		2,571	0,033
income	0,001	0	0,949	8,505	0

Figure 490 Example of the results of a linear regression run

The data presented in the tables is as follows:

- **Model Summary** - This table contains information about how good the regression model fits the data.
  - **R Square** - the Coefficient of determination. This is the proportion of variability in the data set that is accounted for by the linear regression model. The value is between 0 and 1, where 1 is a perfect match between the model and the data.
  - **Adjusted R Square** - This is a modification of R Square adjusted for the sample size and the number of independent variables.
  - **Std Error of the Estimate** - This is a measure of the accuracy of predictions when using the linear regression model on arbitrary data.
- **ANOVA** - This table contains the analysis of variance (ANOVA), which consists of calculations that provide information about levels of variability within a regression model and form a basis for tests of significance.
  - **Sum of Squares** - This column contains the sum of squares for the estimates based on the regression model (SSR), the residuals (SSE) and the total data (SST). SST = SSR + SSE.
  - **df** - Degrees of freedom. For the regression model this is equal to the number of independent variables (p), for the total data this is equal to the number of data observations minus one ( $n - 1$ ), and for the residuals this is equal to the number of cases minus the number of independent variables minus one ( $n - p - 1$ ).
  - **Mean Square** - This is the sum of squares divided by the corresponding number of degrees of freedom.
  - **F** - The F-value is the basis for the hypothesis test of every calculated coefficient being 0 (null hypothesis) versus at least one of the calculated coefficients being different from 0 (alternative hypothesis). Large F-values provides evidence against the null hypothesis. The value is calculated as the Mean Square for the regression model divided by the Mean Square for the residuals.
  - **Sig.** - This is the significance level for the F-value, based on the  $F(p, n - p - 1)$  distribution. Small values for this gives strong evidence for the alternative hypothesis.
- **Coefficients** - This table contains the calculated coefficients for the linear regression model, and an analysis of the significance level for each coefficient. The first row contains the constant term, signifying the base level for the dependent variable.
  - **Unstandardized coefficients** - This column contains the calculated coefficients for the linear regression model (based on least squares estimation), and the standard error for the estimates.

- o **Standardized coefficients** - These coefficients are calculated based on standardized independent variables (variance standardized to 1). These standardized coefficients are used to predict which of the independent variables have the greater effect on the dependent variable, when the independent variables may have different units of measurement.
- o **t** - The t-value is the basis for the hypothesis test of the calculated computed coefficient being 0 (null hypothesis) versus it being different from 0 (alternative hypothesis). Large t-values provide evidence against the null hypothesis. The value is calculated as the estimate of the unstandardized coefficient divided by the corresponding standard error.
- o **Sig.** - This is the significance level for the t-value, based on the t-distribution with  $n - p - 1$  degrees of freedom. Small values for this give strong evidence for the alternative hypothesis.

### 12.1.5. Adding Linear Regression Tables and Charts to a Report

The Visual Components toolbox contains two regression components; Multivariate Statistics and Regression Chart. These components can be added to a report page so the user can view the regression statistics. Proceed as follows:

1. Drag the Multivariate Statistics and the Regression Chart components from the Visual Components toolbox and drop them into your report page in the required locations.
2. Double-click on the Multivariate Statistics component (either in the Report toolbox or in the page) to open the component.
3. To add data to the component, drag the Linear Regression object that you wish to include in the report from the Analyst toolbox and drop it into the Drop Linear Regression Here field.

The page is refreshed and the tables are displayed in the area above the field.

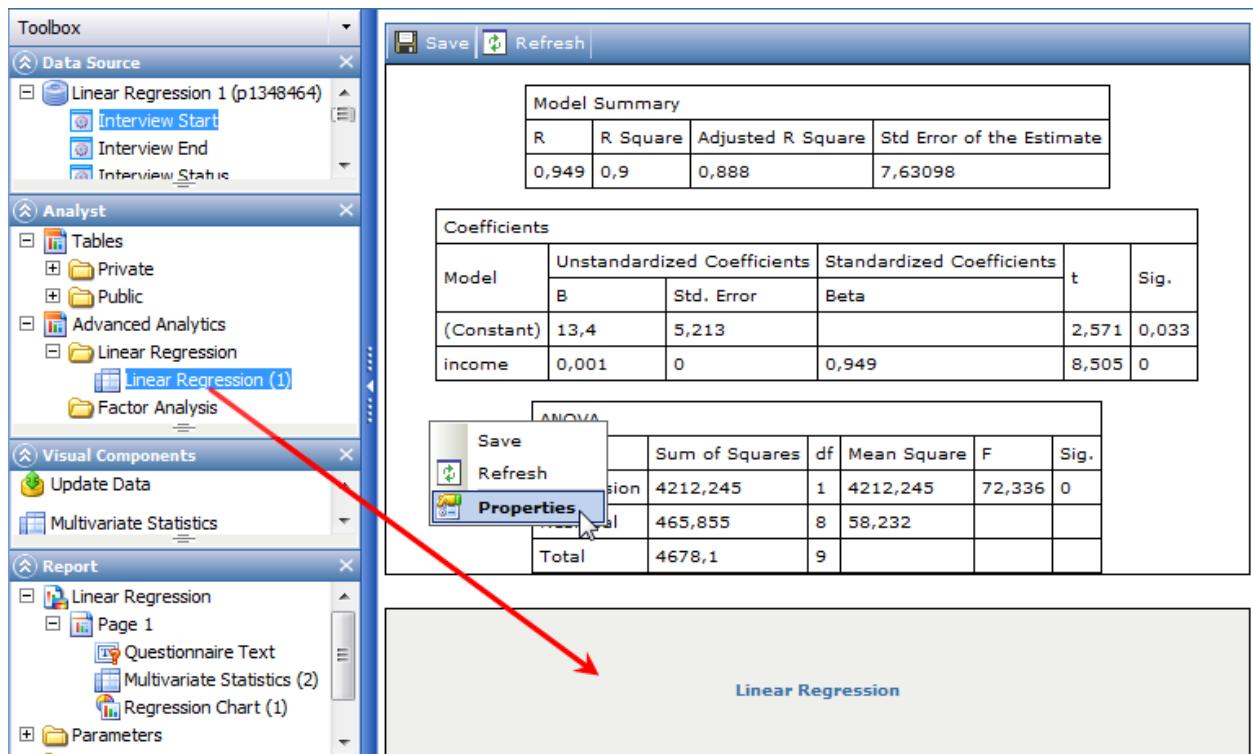


Figure 491 Adding the Multivariate Statistics objects to a report page

4. Right-click in the table area and select **Properties** from the menu.

The Properties page for the object opens.

The screenshot shows the 'Properties' page for a 'Multivariate Statistics' object. At the top, there are three buttons: 'Save', 'Refresh', and 'Properties'. Below these are two tables: 'Model Summary' and 'Coefficients'. The 'Model Summary' table contains the following data:

R	R Square	Adjusted R Square	Std Error of the Estimate
0,949	0,9	0,888	7,63098

The 'Coefficients' table has the following structure:

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	12,4	5,212		2,571	0,022	

Below these tables is a 'Properties' section with tabs: 'Apply', 'Apply and Close', 'Preview', and 'Reset'. The 'Properties' tab is selected, showing the 'Multivariate Statistics - Multivariate Statistics (2)' configuration. The 'General' tab is active, displaying the following settings:

Run Number	Run number 1 (28.01.2011)
Display Summary Table	<input checked="" type="checkbox"/>
Display ANOVA Table	<input checked="" type="checkbox"/>
Display Coefficient Table	<input checked="" type="checkbox"/>
Display Improvement Indexes	<input type="checkbox"/>
Name	Multivariate Statistics (2)
Hidden	<input type="checkbox"/>

Figure 492 The Properties page for the Multivariate Statistics object

5. Select the run number you wish to display in the report, and make the remaining settings as required.
6. Click **Apply** or **Apply and Close**, then save the changes.
7. Double-click on the Regression Chart component (either in the Report toolbox or in the page) to open the component.
8. To add data to the component, drag the Linear Regression object that you wish to include in the report from the Analyst toolbox and drop it into the Drop Linear Regression Here field.  
The chart is displayed in the area above the field .
9. Right-click in the chart and select **Properties** to open the Properties page for the component.
10. Select the run number you wish to display in the report and make the remaining settings as required. Note that the fields of any properties that are changed will be given yellow backgrounds.

The majority of the properties are described in the Chart Settings Tabs (see The Chart Setting Tabs on page 273 for more information) and the Advanced Properties sections (see The Advanced Properties on page 364 for more information). Special properties not described elsewhere include:

**Run Number** - this setting selects which of the previously calculated linear regression runs is to be used to display a regression line for. Only runs containing a single independent variable are shown in the list. Remember that the regression line being displayed in the report will be the calculated line from the time the linear regression was run; it is not updated if more data becomes available.

**Regression Line Color** - the color to be used to present the regression line in the chart.

**Regression Line Width** - the thickness of the regression line in the chart, in pixels.

11. Click **Apply** or **Apply and Close**, then save the changes.

You can now preview the report page.

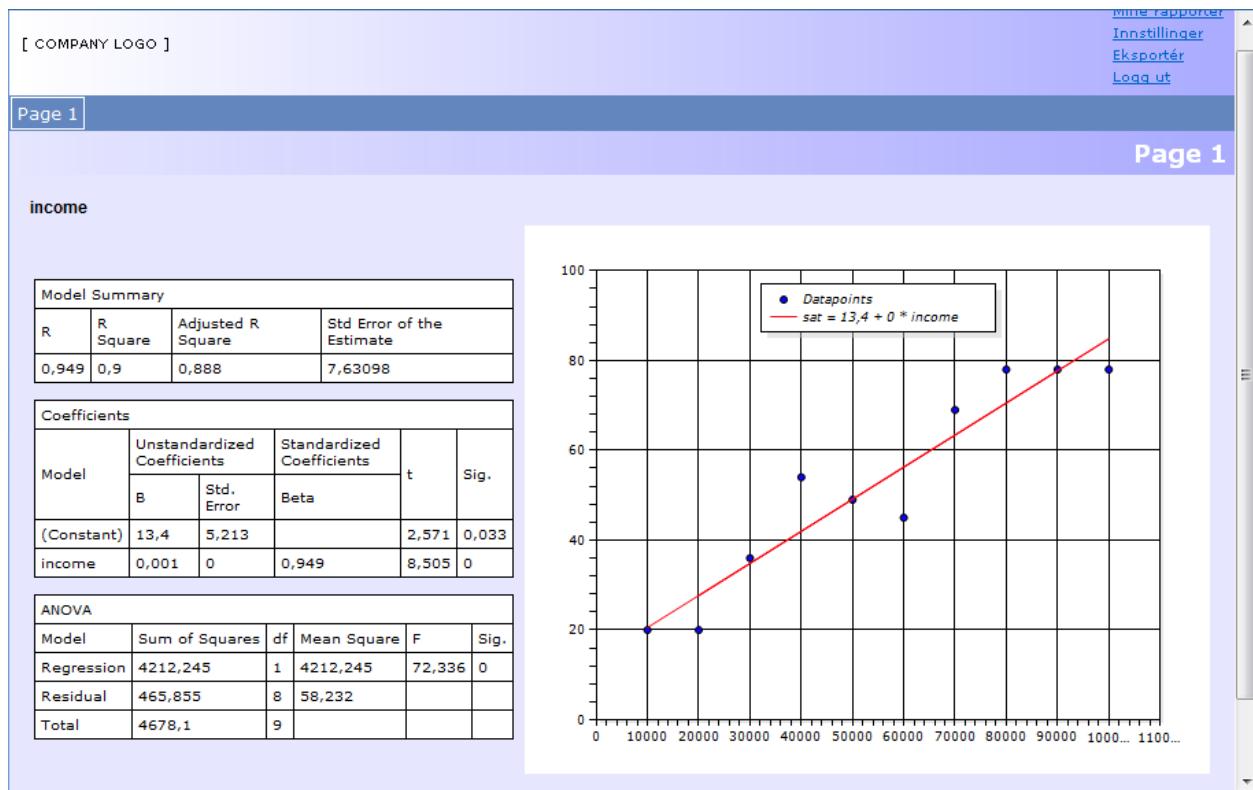


Figure 493 Preview of a report page containing regression tables and a chart

### 12.1.6. The Scripting Model

The scripting model for Linear Regression includes a method for performing a dynamic regression calculation. This scripting model can typically be used in content headers in aggregated tables to specify which data from a linear regression is to be displayed. An example of this:

```

var utils = report.MultivarStatisticsUtils;
var regRun : RegressionRun =
report.MultivarStatisticsUtils.GetDynamicLinearRegressionRun("linear
regression", 1);
var hcb : HeaderContent = table.ColumnHeaders[0];
hcb.SetCellValue(0, regRun.RegCoeff[1]);
hcb.SetCellValue(1, regRun.RegCoeff[2]);
hcb.SetCellValue(2, regRun.RegCoeff[3]);
hcb.SetCellValue(3, regRun.RegCoeff[4]);
var hcbeta : HeaderContent = table.ColumnHeaders[1];
hcbeta.SetCellValue(0, regRun.StandardizedRegCoeff[1]);
hcbeta.SetCellValue(1, regRun.StandardizedRegCoeff[2]);
hcbeta.SetCellValue(2, regRun.StandardizedRegCoeff[3]);
hcbeta.SetCellValue(3, regRun.StandardizedRegCoeff[4]);
var hcpii : HeaderContent = table.ColumnHeaders[2];
hcpii.SetCellValue(0, ((100 -
regRun.IndepVarMeanPercentValues[0])*regRun.StandardizedRegCoeff[1]));
hcpii.SetCellValue(1, ((100 -
regRun.IndepVarMeanPercentValues[1])*regRun.StandardizedRegCoeff[2]));
hcpii.SetCellValue(2, ((100 -
regRun.IndepVarMeanPercentValues[2])*regRun.StandardizedRegCoeff[3]));
hcpii.SetCellValue(3, ((100 -
regRun.IndepVarMeanPercentValues[3])*regRun.StandardizedRegCoeff[4]));

```

An overview of the scripting models available for Linear Regression:

```

MultivarStatisticsUtils:
RegressionRun GetLinearRegressionRun(string linRegName, int runNumber)
RegressionRun GetLastLinearRegressionRun(string linRegName)
RegressionRun[] GetAllLinearRegressionRuns(string linRegName)
RegressionRun GetDynamicLinearRegressionRun(string linRegName, int
runNumber)

```

The first three methods retrieve the static calculations from the analyst toolbox – the last gets the dynamically calculated regression based on a static calculation in the analyst toolbox. This will be the one to use in this case.

Properties on the RegressionRun object:

```

RegressionRun
string DependentVariableName
string[] IndependentVariableNames
string FilterExpression
double[] RegCoeff <- B values
double[] RegCoeffStdError
double[] StandardizedRegCoeff <- Beta values
double[] RegCoeffTValues
double[] RegCoeffTSigValues
double[] IndepVarMeanValues
string[] IndepVarMeanPercentValues
double R
double RSquared
double AdjRSquared
double StdErrorEstimate
double SumSquaredReg
double SumSquaredErr
double MeanSquaredReg
double MeanSquaredErr
double FValue
double FSigValue
double NumObservations
double RegDegreesFreedom
double ResidualDegreesFreedom
DateTime CalculationTimestamp

```

## 12.2. Factor Analysis

Factor analysis is an approach to describing, if possible, the covariance relationships among many variables in terms of a few underlying, but unobservable, random quantities called factors.

Factor analysis is a variable reduction procedure. It is useful when you have obtained data on a number of variables (possibly a large number of variables), and believe that there is some redundancy in those variables. In this case, redundancy means that some of the variables are correlated with one another, possibly because they are measuring the same construct. Because of this redundancy, you believe that it should be possible to reduce the observed variables into a smaller number of underlying factors (artificial variables) that will account for most of the variance in the observed variables.

The actual meaning of these underlying factors is up to the analyst to interpret, based on the variables included in the factor.

**Note:** Loop questions cannot be used in factor analysis.

### 12.2.1. Constraints

Factor Analysis calculations can only be performed based on variables which contain a numeric measurement. Thus only the following questions can be used: Numeric, Numeric list answers, Singles with all numerical codes/scale, and Grid answers with all numerical codes/scale. Note that Grid and Numeric List questions can be dropped onto the variables field, but will be expanded to the corresponding grid/list answer questions.

Only filters of type Filter Expression are supported in Factor Analysis calculations.

Principal component analysis is a large-sample procedure. To obtain reliable results, the minimum number of subjects providing usable data for the analysis should be the larger of 100 subjects or five times the number of variables being analyzed.

### 12.2.2. Factor Analysis Example

The following example is based around a customer satisfaction survey for a hotel, in which we have a question that asks the customer to rate a number of attributes after a hotel stay. The attributes are (variable IDs in brackets):

- Amenities (Q1\_1)
- Friendly and Welcoming (Q1\_2)

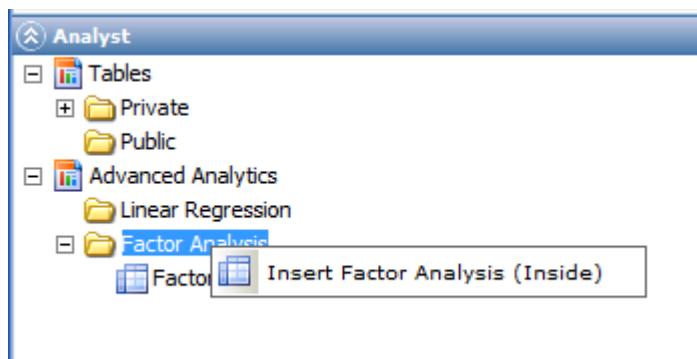
- Breakfast (Q1\_3)
- Parking (Q1\_4)
- Minibar / in-room snacks (Q1\_5)
- Check In Procedure (Q1\_6)
- Room Comfort (Q1\_7)

With each of these attributes measured on the same seven-point scale.

The factor analysis is performed to see if there are any underlying latent factors which will account for most of the variance seen in these seven attributes that we may use instead in further analysis.

#### **12.2.2.1. Creating a New Factor Analysis**

1. In the Analyst toolbox, expand the Advanced analytics folder, right-click on the Factor Analysis folder and select **Insert Factor Analysis (inside)**.



**Figure 494** Creating a new factor analysis object

A new Factor Analysis object is created in the folder.

2. Double-click on the new object to open the Factor Analysis designer page.

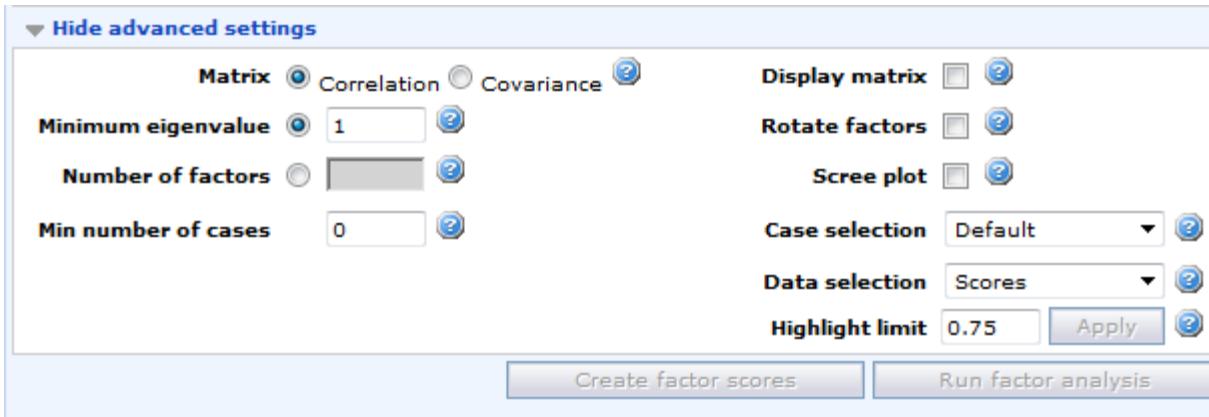
The screenshot shows the 'Factor Analysis' designer page. At the top, there are two input fields: 'Variables' (labeled 'Drop questions here') and 'Filter' (labeled 'Drop filter expression here'). Each field has a 'Clear selection' button to its right. Below these fields is a link 'Show advanced settings'. At the bottom of the page are two buttons: 'Create factor scores' and 'Run factor analysis'.

**Figure 495** The Factor Analysis designer page

The fields are as follows:

- **Variables** - this field will contain the variables that will be used in the factor analysis. The field can contain one or more variables, and the variables must all be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop one or more questions from the Data Source toolbox to populate the field.
- **Filter** - this field may contain a filter to restrict the underlying dataset the factor analysis is performed on. The field can contain only filters of type Filter Expression. Drag and drop a filter expression to populate the field. To review or edit the filter expression, click the "..." button.

Click **Show advanced settings** to reveal the following dialog:



**Figure 496 The Factor Analysis Advanced Settings dialog**

The properties are as follows:

- **Matrix** - states if the factor analysis is to be based on the correlation matrix or the covariance matrix of the underlying data. The default choice is correlation matrix. If the variables in the underlying data have widely different scales, it is recommended to use the correlation matrix in order to get interpretable results from the factor analysis.
- **Minimum eigenvalue / Number of Factors** - these settings are used to calculate the number of factors in the factor analysis. The default setting for a factor analysis is to base the calculation on eigenvalue levels, and the default minimum value for an eigenvalue is 1.0. The "Number of factors" setting is used if you want to include a specific number of factors in the factor analysis, rather than letting the number of factors be based on a minimum eigenvalue (see Determining the Number of Factors to Retain on page 406 for more information).
- **Minimum number of Cases** - is used to specify a minimum number of cases (data rows) required to run the multivariate calculation. The default value is 0, imposing no lower limit. If the number of available cases in the calculation is less than the specified limit, an error message will be displayed.
- **Display matrix** - states if the matrix (correlation or covariance) used as the basis for the factor analysis is shown in the calculation result.
- **Rotate factors** - is used to perform an orthogonal rotation of the factor loadings, in order to make the interpretation of the factors easier. The orthogonal rotation is based on the Varimax algorithm. A Varimax rotation is an orthogonal rotation, meaning that it results in uncorrelated components. The Varimax rotation will not affect the amount of variance explained by the rotated factors compared to the original factors. The algorithm is described in Appendix E (see APPENDIX D: Factor Analysis Formulae on page 754 for more information).
- **Scree plot** - controls if a scree plot is shown for the factors. The plot shows the eigenvalues corresponding to each factor as a curve, and can be used as a graphical interpretation of how much of the total variance that each factor retains, as well as a means to identify the appropriate number of factors for the model.
- o **Case selection** - this setting specifies how calculations are to be handled if the number of available cases (data rows) exceeds the system limit for the maximum number of cases allowed in multivariate calculations. The limit is 10.000 data rows. The options are:  
 o **Default** - The last 10.000 of the available data rows will be used. This corresponds to the latest collected data.  
 o **Random** - A random subset containing 10.000 of the available data rows will be used.  
 o **First** - The first 10.000 of the available data rows will be used. This corresponds to the earliest collected data.
- **Data selection** - specifies which data values are to be used for categorical variables in the multivariate calculation. The options are:  
 o **Codes** - The variables' answer codes will be used. This requires the codes to be numerical.

- o **Scores** - The variables' answer scores will be used. This requires the answer scores to be specified. Any answers with missing scores will be omitted by list-wise deletion in the calculation.
- **Highlight limit** - will apply conditional formatting to cells in the correlations in the correlation matrix and the factors table dependent on a defined threshold. Positive correlations over this threshold are highlighted in green, negative correlations are highlighted in red. The highlight limit can be adjusted and applied to tables without creating a new calculation run by changing the values and selecting the **Apply** button.

### **12.2.2.2. Determining the Number of Factors to Retain**

It is possible to select the number of components extracted in a factor analysis as being equal to the number of observed variables being analyzed. This means that an analysis of your 7-item questionnaire would actually result in seven components. However, In general, you expect that only the first few components will account for meaningful amounts of variance, and that the later components will tend to account for only trivial variance. Part of the analysis, therefore, is to determine how many meaningful components should be retained for interpretation.

In principal component analysis, one of the most commonly used criteria for solving the number-of-components problem is the eigenvalue-one criterion, also known as the Kaiser criterion. With this approach, you retain and interpret any component with an eigenvalue greater than 1.00. The rationale for this criterion is straightforward. Each observed variable contributes one unit of variance to the total variance in the data set. Any component that displays an eigenvalue greater than 1.00 is accounting for a greater amount of variance than had been contributed by one variable. Such a component is therefore accounting for a meaningful amount of variance, and is worthy of being retained.

On the other hand, a component with an eigenvalue less than 1.00 is accounting for less variance than had been contributed by one variable. The purpose of principal component analysis is to reduce a number of observed variables into a relatively smaller number of components; this cannot be effectively achieved if you retain components that account for less variance than had been contributed by individual variables. For this reason, components with eigenvalues less than 1.00 are viewed as trivial, and are not retained.

The Kaiser criterion has a number of positive features that have contributed to its popularity. Perhaps the most important reason for its widespread use is its simplicity: You do not make any subjective decisions, but merely retain components with eigenvalues greater than one.

There can be a number of problems associated with the eigenvalue-one criterion however. It can lead to retaining the wrong number of components under circumstances that are often encountered in research (for example, when many variables are analyzed, when communalities are small). Also, the mindless application of this criterion can lead to retaining a certain number of components when the actual difference in the eigenvalues of successive components is only trivial. For example, if component 2 displays an eigenvalue of 1.001 and component 3 displays an eigenvalue of 0.999, then component 2 will be retained but component 3 will not; this may mislead you into believing that the third component was meaningless when, in fact, it accounted for almost exactly the same amount of variance as the second component. Using a scree plot (see later section) can prove a useful sense check to the data, and whether to manually select a larger number of factors.

### **12.2.2.3. The Factor Analysis Output**

Once variables have been added, and any adjustments to the advanced settings have been made, click **Run factor analysis** to produce a calculation output as in the example below.

**Variables** Q1\_1,Q1\_2,Q1\_3,Q1\_4,Q1\_5,Q1\_6,Q1\_7 Clear selection

**Filter** Drop filter expression here ... Clear selection

**Show advanced settings** Create factor scores Run factor analysis

**Calculation number 1 (19.02.2014 14:14:57) - Variables: Q1\_1, Q1\_2, Q1\_3, Q1\_4, Q1\_5, Q1\_6, Q1\_7, Ma**

**Correlation matrix**

Variables	Q1_1	Q1_2	Q1_3	Q1_4	Q1_5	Q1_6	Q1_7
Q1_1	1	-0,05	0,02	0,46	0,014	-0,02	0,59
Q1_2	-0,05	1	-0,027	-0,04	-0,0011	0,46	-0,025
Q1_3	0,02	-0,027	1	0,086	0,4	0,052	0,1
Q1_4	0,46	-0,04	0,086	1	0,0014	0,026	0,85
Q1_5	0,014	-0,0011	0,4	0,0014	1	0,023	0,017
Q1_6	-0,02	0,46	0,052	0,026	0,023	1	0,06
Q1_7	0,59	-0,025	0,1	0,85	0,017	0,06	1

**Eigenvalues**

Factor	Initial Eigenvalues	% of Variance	Cumulative %	Sum of Squared Rotated Loadings	% of Variance	Cumulative %
Facilities	2,3	32,88	32,88	2,29	32,69	32,69
People	1,47	21,05	53,92	1,46	20,91	53,6
Food and Drink	1,39	19,82	73,74	1,41	20,14	73,74

**Factors**

Variables	Factor 1	Factor 2	Factor 3	Facilities	People	Food and Drink	Communalities
Q1_1	0,75	-0,08	0,084	0,76	-0,054	0,015	0,57
Q1_2	-0,065	0,79	0,32	-0,053	0,85	0,041	0,73
Q1_3	0,17	0,28	-0,77	0,072	0,01	-0,84	0,7
Q1_4	0,9	-0,0083	0,077	0,9	0,009	-0,033	0,81
Q1_5	0,075	0,28	-0,79	-0,026	0,003	-0,84	0,7
Q1_6	0,036	0,82	0,24	0,038	0,86	-0,054	0,74
Q1_7	0,94	0,021	0,075	0,95	0,036	-0,05	0,9

**Show/hide scree plot** Delete calculation Rename calculation

**Figure 497 Example of a Factor Analysis output**

Several variations of the factor analysis can be made, with each calculation run saved separately within the factor analysis object. The most recent calculation run will display first. Calculation runs can be renamed or deleted if required.

Click the **Send to Excel** button  to export the tables to Excel.

The following sections describe each section of the generated analysis output in more detail.

### 12.2.2.3.1. The Correlation Matrix for Factor Analysis

This table contains the correlation matrix that is used as a basis for the factor analysis.

Correlation matrix 							
Variables	Q1_1	Q1_2	Q1_3	Q1_4	Q1_5	Q1_6	Q1_7
Q1_1	1	-0.05	0.02	0.46	0.014	-0.02	0.59
Q1_2	-0.05	1	-0.027	-0.04	-0.0011	0.46	-0.025
Q1_3	0.02	-0.027	1	0.086	0.4	0.052	0.1
Q1_4	0.46	-0.04	0.086	1	0.0014	0.026	0.85
Q1_5	0.014	-0.0011	0.4	0.0014	1	0.023	0.017
Q1_6	-0.02	0.46	0.052	0.026	0.023	1	0.06
Q1_7	0.59	-0.025	0.1	0.85	0.017	0.06	1

Figure 498 The Correlation Matrix

The rows and columns of the correlation matrix correspond to the seven variables included in the analysis: Row 1 (and column 1) represents variable 1, row 2 (and column 2) represents variable 2, and so forth. Where a given row and column intersect, you will find the correlation between the two corresponding variables.

For example, where the row for variable 2 intersects with the column for variable 1, you find a correlation of -0.05; this means that the correlation between variables 1 and 2 is -0.05.

### 12.2.2.3.2. The Eigenvalues Table

This table contains information about the eigenvalues of the Correlation/Covariance matrix.

Eigenvalues 						
Factor	Initial Eigenvalues	% of Variance	Cumulative %	Sum of Squared Rotated Loadings	% of Variance	Cumulative %
1	2.3	32.88	32.88	2.29	32.69	32.69
2	1.47	21.05	53.92	1.46	20.91	53.6
3	1.39	19.82	73.74	1.41	20.14	73.74

Figure 499 The Eigenvalues table

Each eigenvalue will correspond to a factor in the model, and the percentage of total variance of the data that is explained by each factor is also shown. If rotation of factors is chosen in the model, the table will also show the sum of squared loadings and the percentage of total variance explained by the rotated factors

### 12.2.2.3.3. How Factors are Determined

When the factors are created, the first component extracted in a principal component analysis accounts for a maximal amount of total variance in the observed variables. Under typical conditions, this means that the first component will be correlated with at least some of the observed variables. It may be correlated with many.

The second component extracted will have two important characteristics. First, this component will account for a maximal amount of variance in the data set that was not accounted for by the first component. Again under typical conditions, this means that the second component will be correlated with some of the observed variables that did not display strong correlations with component 1. The second characteristic of the second component is that it will be uncorrelated with the first component. Literally, if you were to compute the correlation between components 1 and 2, that correlation would be zero.

The remaining components that are extracted in the analysis display the same two characteristics: each component accounts for a maximal amount of variance in the observed variables that was not accounted for by the preceding components, and each is uncorrelated with all of the preceding components. A factor analysis proceeds in this fashion, with each new component accounting for progressively smaller and smaller amounts of variance (this is why only the first few components are usually retained and interpreted). When the analysis is complete, the resulting components will display varying degrees of correlation with the observed variables, but are completely uncorrelated with one another.

#### 12.2.2.3.4. The Factors Table

This table contains further information about the factors as calculated by the Factor Analysis.

Variables	Factor 1	Factor 2	Factor 3	Rotated Factor 1	Rotated Factor 2	Rotated Factor 3	Communalities
Q1_1	0.75	-0.08	0.084	0.76	-0.054	0.015	0.57
Q1_2	-0.065	0.79	0.32	-0.053	0.85	0.041	0.73
Q1_3	0.17	0.28	-0.77	0.072	0.01	-0.84	0.7
Q1_4	0.9	0.0083	0.077	0.9	0.009	-0.033	0.81
Q1_5	0.075	0.28	-0.79	-0.026	0.003	-0.84	0.7
Q1_6	0.036	0.82	0.24	0.038	0.86	-0.054	0.74
Q1_7	0.94	0.021	0.075	0.95	0.036	-0.05	0.9

Figure 500 The Factors table

The loadings of each variable on each factor are shown, as well as the communalities which show the amount of variance in the specific variable that is explained by the model. If rotation of factors is chosen in the model, the table will also show the loadings for the rotated factors.

When a variable is given a great deal of weight in constructing a principal component, we say that the variable loads on that component. For example, if the question Q1\_1 ("Amenities") is given a lot of weight in creating the first factor, we say that this item loads on factor 1.

These factor loadings are equivalent to bivariate correlations between the variables and the factors. For example, where the rows for the variables intersect with the column for factor 1, you can see that the correlation between Q1\_1 and the first component is 0.75; the correlation between Q1\_2 and the first component is -0.065, and so forth.

Communality refers to the percent of variance in a variable that is accounted for by the retained components (or factors). A given variable will display a large communality if it loads heavily on at least one of the study's retained components.

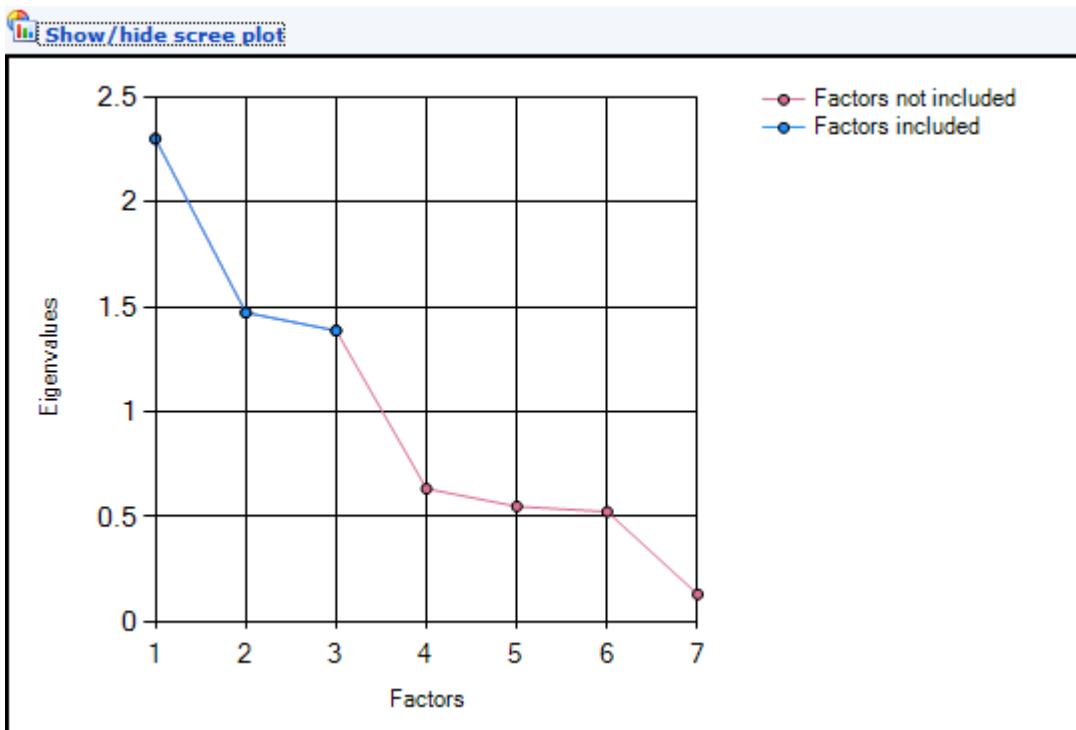
Looking at the results from the example data, we see in the rotated factors (from the cell highlighting) that the strong correlations associated with the variables could be grouped into three underlying factors we could classify as:

- Factor 1: "Facilities" (accounting for the variables Amenities, Parking, Room Comfort)
- Factor 2: "People" (accounting for the variables Friendly and Welcoming, Check-in procedure)
- Factor 3: "Food and Drink" (accounting for the variables Breakfast, Minibar / in-room snacks)

The section “Creating Factor Score Variables in the Data Source” explains how we can create these factor variables in the data source for use in subsequent analyses (see Creating Factor Scores Variables in the Data Source on page 410 for more information). You could then use these three new artificial variables (rather than the seven original variables) as predictor variables in multiple regressions, or in any other type of analysis. In essence, this is what is accomplished by factor analysis: it allows you to reduce a set of observed variables into a smaller set of artificial variables called factors. The resulting factors may then be used in subsequent analyses.

#### 12.2.2.3.5. The Scree Plot

A scree plot is a visual tool plotting the eigenvalues associated with each component. The component numbers are listed on the horizontal axis, while eigenvalues are listed on the vertical axis.



*Figure 501 Example of a Scree Plot*

This plot can be used in determining the number of “Meaningful” factors to retain by looking for a “break” between the components with relatively large eigenvalues and those with small eigenvalues. The components that appear before the break are assumed to be meaningful; those appearing after the break are assumed to be unimportant and are not retained.

Sometimes a scree plot will display several large breaks. When this is the case, you should look for the last big break before the eigenvalues begin to level off. Only the components that appear before this last large break should be retained.

With the example, notice that there is a relatively large break following component 3. The breaks between components , 4-7 are all relatively small, so a three-factor solution seems correct.

#### 12.2.2.4. Creating Factor Scores Variables in the Data Source

Once the analysis is complete, it is often desirable to assign scores to each respondent to indicate where that subject stands on the retained factors. In our example, these were the Factor scores of “Facilities”, “People” and “Food and Drink”. With this done, these factor scores could be used either as predictor variables or as criterion variables in subsequent analyses.

To create the factor scores on the data source:

1. Click on the **Create Factor Scores** button in the top dialog.

The Create Factor Scores overlay opens.



Figure 502 The Create Factor Scores overlay

2. Select the appropriate calculation run that you wish to use for the basis of the variable creation, then input the name that you wish to label each factor score retained.

Once the generation task has been completed, this will create a new selection of variables available in the Data Source toolbox. Under the **Factor Scores** folder, a new sub folder will be created for each set of factor scores created. This folder will include the name of the factor analysis object, and the calculation run name. The factors will be present in sub folders as numeric variables.

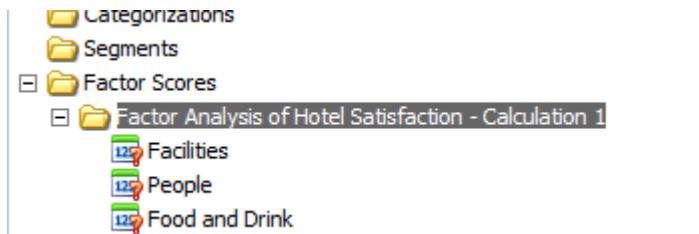


Figure 503 Example of Factor Score variables in the Data Source toolbox

#### 12.2.2.5. Using Factor Scores in Subsequent Analysis

As mentioned earlier, these factor scores can then be used for additional analysis purposes, for example in linear regression calculations or aggregate tables.

	Correlation: Facilities-48	Correlation: People-48	Correlation: Food and Drink-48
<b>Q1_1 - Amenities</b>			
Amenities	0.76	-0.06	-0.01
Friendly and Welcoming	-0.06	0.85	0.03
<b>Q1_2 - Friendly and Welcoming</b>			
Breakfast	0.09	0.02	-0.84
Parking	0.90	0.01	-0.06
<b>Q1_3 - Breakfast</b>			
Minibar / in room snacks	0.00	0.01	-0.84
<b>Q1_4 - Parking</b>			
Check In Procedure	0.04	0.86	-0.06
<b>Q1_5 - Minibar / in room snac...</b>			
Room Comfort	0.95	0.03	-0.08
<b>Q1_6 - Check In Procedure</b>			
<b>Q1_7 - Room Comfort</b>			

Figure 504 Example of using Factor Scores in an aggregate table

### 12.3. Cluster Analysis

Cluster analysis is a class of statistical techniques that can be applied to data that exhibit "natural" groupings. Cluster analysis sorts through the raw data and groups them into clusters, where a cluster is a group of relatively homogeneous cases or observations. Objects in a cluster are similar to each other. They are also dissimilar to objects outside the cluster, particularly objects in other clusters.

Whereas factor analysis reduces the number of variables by grouping them into a smaller set of factors, cluster analysis reduces the number of observations or cases by grouping them into a smaller set of clusters.

Cluster analysis is widely used when working with multivariate data from surveys and test panels. Market researchers use cluster analysis to partition the general population of consumers into market segments and to better understand the relationships between different groups of consumers/potential customers, and for use in:

- Market segmentation
- Product positioning
- New product development

The actual meaning of the clusters is up to the analyst to interpret, based on the variables included in the cluster.

**Note:** Loop questions cannot be used in cluster analysis.

### 12.3.1. Constraints

Cluster Analysis calculations can only be performed based on variables which contain a numeric measurement. Thus only the following questions can be used: Numeric, Numeric list answers, Singles with all numerical codes/scale, and Grid answers with all numerical codes/scale. Note that Grid and Numeric List questions can be dropped onto the variables field, but will be expanded to the corresponding grid/list answer questions.

Only filters of type Filter Expression are supported in Cluster Analysis calculations.

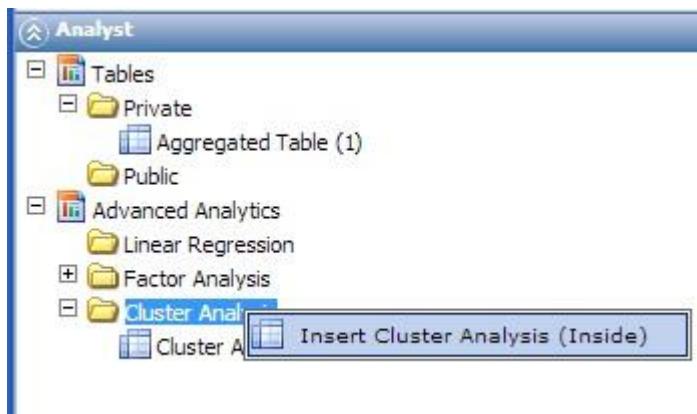
### 12.3.2. Cluster Analysis Example

In the following example we will perform a cluster analysis on some data that contains variables that rate various aspects of the customers' experience with a company. These being:

- How loyal a customer feels towards the company (LoyaltyRating).
- How the customer rates the company service (ServiceRating).
- How the customer rates the actual product (ProductRating).

#### 12.3.2.1. Creating a New Cluster Analysis

1. In the Analyst toolbox, expand the Advanced analytics folder, right-click on the Cluster Analysis folder and select **Insert Cluster Analysis (inside)**.



*Figure 505 Creating a new cluster analysis object*

A new Cluster Analysis object is created in the folder and the Cluster Analysis designer page opens automatically.

The screenshot shows the 'Cluster Analysis' designer page. At the top, there are two input fields: 'Variables' with the placeholder 'Drop questions here' and 'Filter' with the placeholder 'Drop filter expression here'. To the right of each field are 'Clear selection' buttons and help icons. Below these fields is a link 'Show advanced settings'. At the bottom are two buttons: 'Save cluster assignment' and 'Run cluster analysis'.

*Figure 506 The Cluster Analysis designer page*

The fields are as follows:

- **Variables** - this field will contain the variables that will be used in the cluster analysis. The field can contain one or more variables, and the variables must all be numeric. The supported question types are: Numeric, Numeric List answers, Single with numeric codes/scale and Grid elements with numeric scale. Drag and drop one or more questions from the Data Source toolbox to populate the field.
- **Filter** - this field may contain a filter to restrict the underlying dataset the cluster analysis is performed on. The field can contain only filters of type Filter Expression. Drag and drop a filter expression to populate the field. To review or edit the filter expression, click the "..." button.

To adjust the Advanced Settings for the cluster analysis calculation, click **Show advanced settings** to reveal the following dialog:

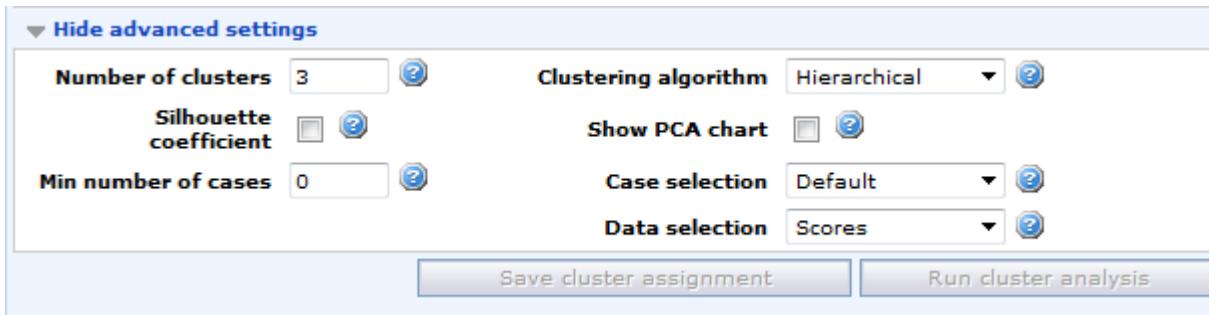


Figure 507 The Cluster Analysis Advanced Settings dialog

The properties are as follows:

- **Number of clusters** - is used to specify the number of clusters to calculate in the cluster analysis.
- **Silhouette coefficient** - controls whether a silhouette coefficient should be calculated for the cluster analysis. This coefficient is the average over all responses of the following measure calculated for each response:

$$(Y - X) / \text{Max}(X, Y)$$

Where

X is the Euclidean distance from the response to the centroid of the cluster which the response belongs to, and Y is the minimal Euclidean distance from the response to the centroid of every other cluster.

The silhouette coefficient has a range from -1 to 1, with -1 indicating a very poor clustering model, and 1 indicating a perfect clustering model. It is common to interpret coefficients > 0.5 to indicate a good clustering model, and coefficients < 0.2 to indicate that the clustering model is sub-par or that the data does not exhibit a cluster structure.

- **Minimum number of Cases** - this field can be used to specify a minimum number of cases (data rows) required to run the multivariate calculation. The default value is 0, imposing no lower limit. If the number of available cases in the calculation is less than the specified limit, an error message will be displayed.
- **Clustering algorithm** - specifies which algorithm to base the clustering on. Two algorithms are available:
  - **K-means** - this algorithm assigns responses into k clusters (the number of clusters specified) such that the sum of squares from responses to the computed cluster centers are minimized:
    1. For each response, move it to another cluster if that would lower the sum of squares from responses to the computed cluster centers.
    2. If a response is moved, immediately update the cluster centers of the two affected clusters.
    3. Repeat until no responses are moved, or the maximum number of iterations (1000) is reached.

The clustering starts with an initial set of cluster centers.

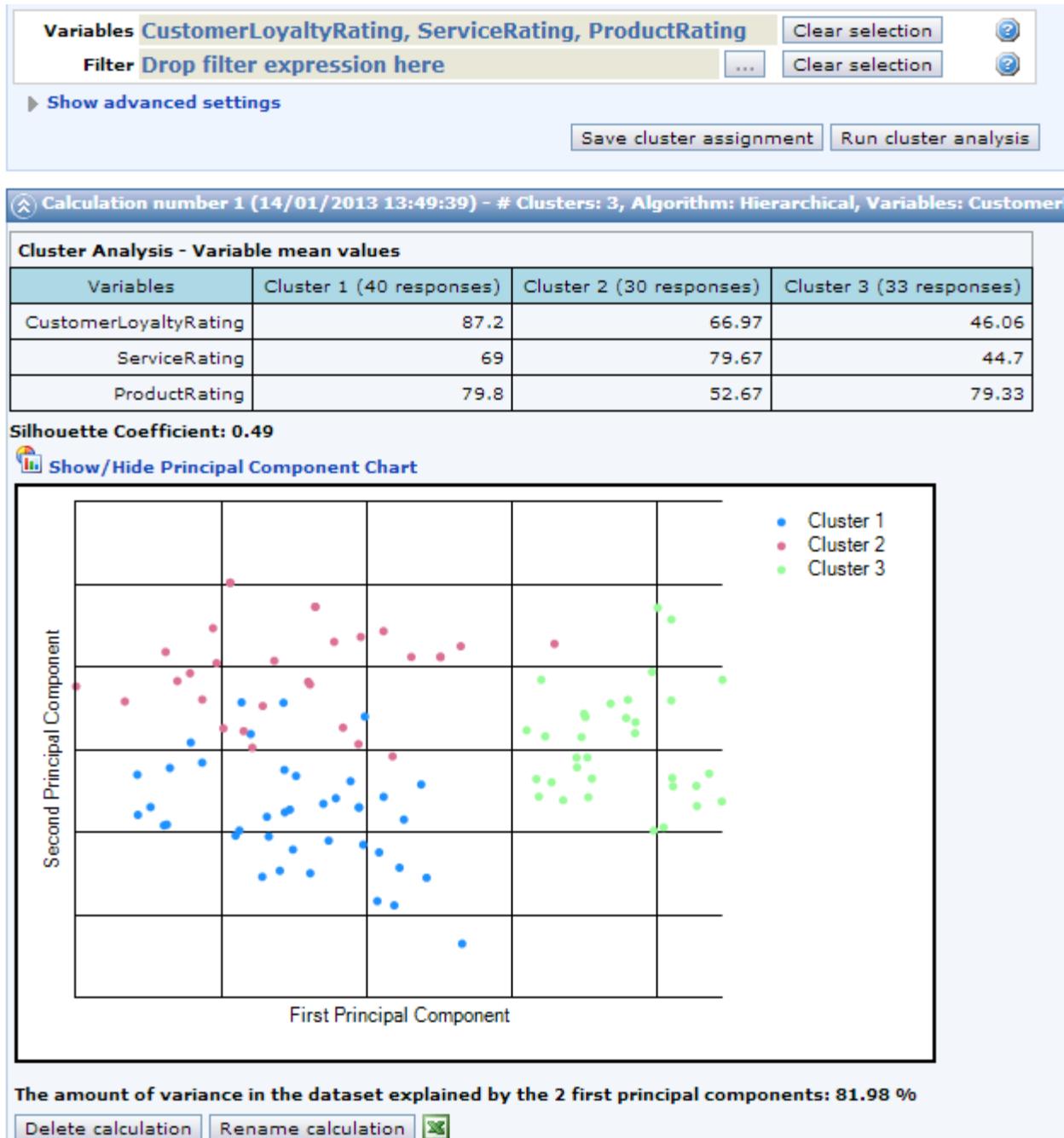
- **Hierarchical** - in this algorithm, each response is initially assigned to its own singleton cluster. The analysis then proceeds iteratively, at each stage joining the two most "similar" clusters into a new cluster, continuing until the specified number of clusters is reached.

The joining is based on a distance measure (Euclidian distance) as well as a linkage measure between clusters (Ward linkage function).

- **Show PCA chart** - controls whether a scatter plot of the two primary principal component scores is shown for the dataset used in the cluster analysis. Principal components are a way to reduce the dimensionality of the underlying dataset, while maintaining as much of the information (variance) as possible.
- **Case selection** - specifies how calculations are to be handled if the number of available cases (data rows) exceeds the system limit for maximum number of cases allowed in multivariate calculations. The limit is 10,000 data rows.
  - **Default** - the last 10,000 of the available data rows will be used. This corresponds to the latest collected data.
  - **Random** - a random subset containing 10,000 of the available data rows will be used.
  - **First** - the first 10,000 of the available data rows will be used. This corresponds to the earliest collected data.
- **Data selection** - specifies which data values are to be used for categorical variables in the multivariate calculation. The options are:
  - **Codes** - The variables' answer codes will be used. This requires the codes to be numerical.
  - **Scores** - The variables' answer scores will be used. This requires the answer scores to be specified. Any answers with missing scores will be omitted by list-wise deletion in the calculation.

### **12.3.2.2. The Cluster Analysis Output**

Once variables have been added and any adjustments to the advanced settings have been made, click **Run cluster analysis** to produce a calculation output as in the example below.

**Figure 508 Example of a Cluster Analysis output**

Several variations of the cluster analysis can be made, with each calculation run saved separately within the cluster analysis object. The most recent calculation run will display first. Calculation runs can be renamed or deleted if required.

Click the **Send to Excel** button to export the tables to Excel.

The following sections describe each section of the generated analysis output in more detail.

### 12.3.2.2.1. The Variable Mean Values Table for Cluster Analysis

The primary output from the cluster analysis is a table displaying the proposed clusters, with a summary of the mean scores for each variable used per identified cluster. This information allows the analyst to understand the characteristics of each cluster and provide insights into identifying and labeling the unique cluster segments.

<b>Cluster Analysis - Variable mean values</b>			
Variables	Cluster 1 (40 responses)	Cluster 2 (30 responses)	Cluster 3 (33 responses)
CustomerLoyaltyRating	87.2	66.97	46.06
ServiceRating	69	79.67	44.7
ProductRating	79.8	52.67	79.33

*Figure 509 The Variable mean values table*

Looking at the results from the example data, we see that there are some defining values in the clusters which we may use to segment our customer base.

- The first cluster contains individuals who have a relatively high product score, and a high loyalty score. We may say that for these people, the quality of the product has a high impact on their loyalty (for example product advocates).
- The second cluster contains individuals that have lower product and loyalty scores, but provide a high rating for service. For these customers, we can say that the quality of the ongoing service is a key element for keeping them loyal.
- In the third cluster, there are low scores for both loyalty and service, despite a relatively high score for the product itself. The customers in this segment are at risk of switching products due to poor service, despite valuing the product itself.

### 12.3.2.2.2. The PCA Chart

If the option to “Show PCA chart” is selected in the advanced properties, then a scatter plot is created to visually illustrate the cluster groupings. Where there are more than two variables used in the cluster analysis, the variables are reduced into the two primary principal components in order to create a two-dimensional chart, whilst retaining as much information about the underlying variables (variance) as possible. The total amount of variance accounted for by the principal components is provided beneath the chart.

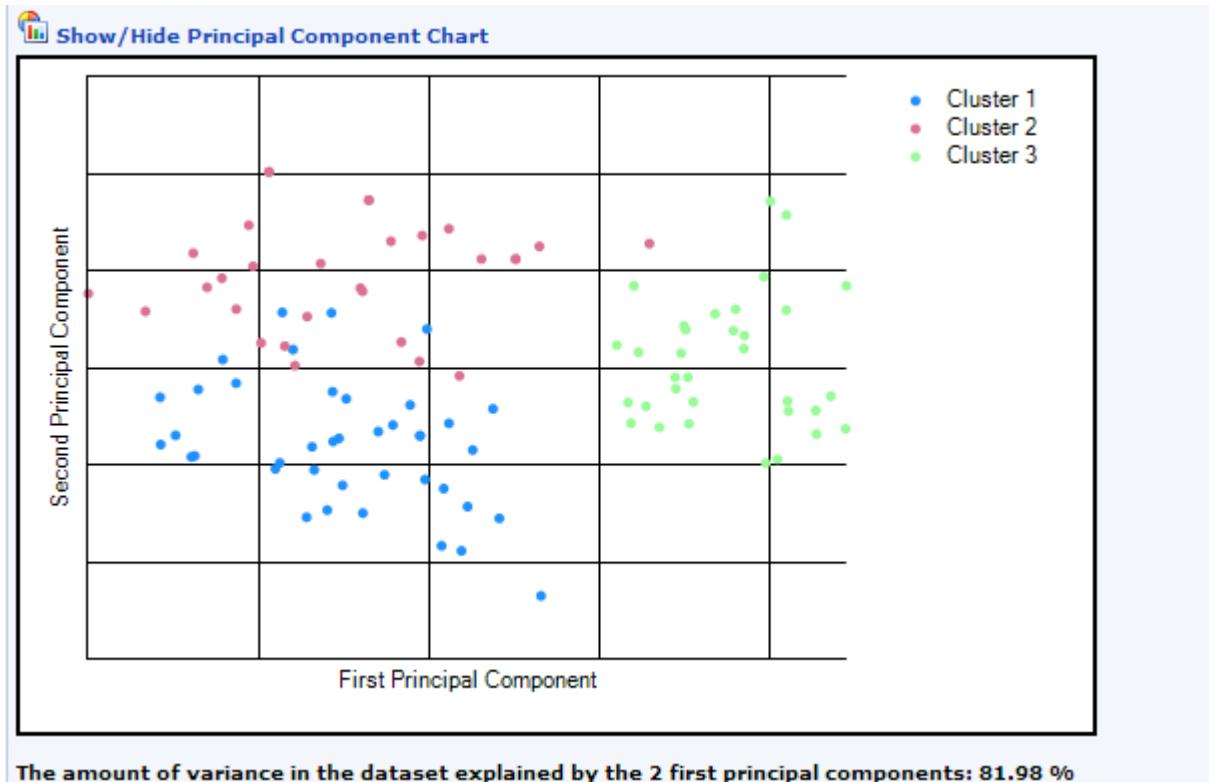


Figure 510 The PCA Chart

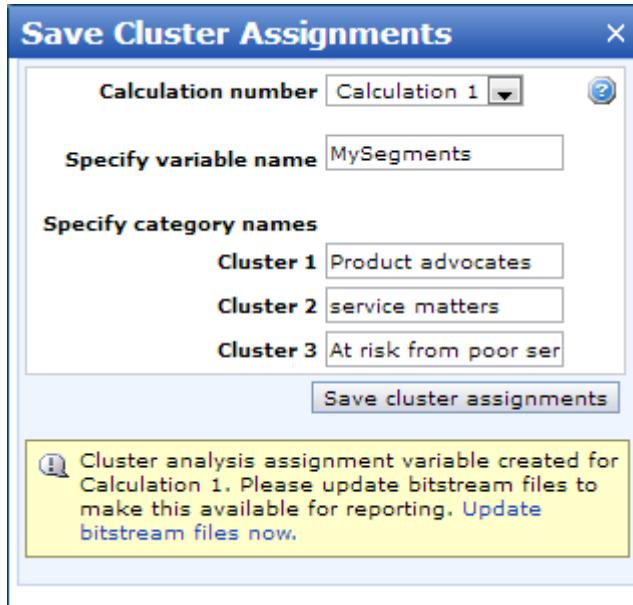
#### 12.3.2.3. Creating Cluster Assignment Variables in the Data Source

Once the analysis is complete, it is often desirable to assign respondents to the identified clusters to utilize the segmentations in further analysis. In our example, we've identified three clusters which can be used in further analysis to understand and classify the respondents.

To create the cluster assignments on the data source:

1. Click on the **Save Cluster Assignment** button in the top dialog.

The Save Cluster Assignments overlay opens.

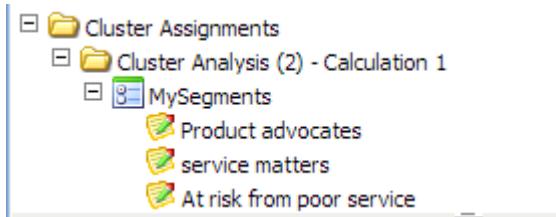


*Figure 511 The Save Cluster Assignments overlay*

2. Select the appropriate calculation run that you wish to use for the basis of the variable creation, and then input the variable name and the name that you wish to label each cluster.

To complete the update of the data source, a BitStream update needs to be performed. This can be selected when creating the cluster assignment variable.

Once the generation task has been completed, this will create a new single categorical variable available in the Data Source toolbox. Under the Cluster assignments folder, a new sub-folder will be created for each cluster assignment created. This folder will include the name of the cluster analysis object, and the calculation run name. The cluster variable will be present in sub-folders as a single categorical variable, with each answer category representing a defined cluster.



*Figure 512 Example of Cluster assignment variables in the Data Source toolbox*

#### 12.3.2.4. Using Cluster Assignments in Subsequent Analysis

As mentioned earlier, these cluster categories can then be used for additional analysis purposes, for example in aggregate tables table and charts, in parameters and filter/segment expressions.

**Note:** Cluster analysis variables are stored in the BitStream files only, so cannot be used in hit lists or verbatim tables.

	MySegments-85									
			Product advocates		service matters		At risk from poor service		Total	
<b>AgeGroup - AgeGroup</b>	< 20	8	20.00%	17	56.67%	0	0.00%	25	24.27%	
	21-40	15	37.50%	11	36.67%	0	0.00%	26	25.24%	
<b>Gender</b>	41-60	0	0.00%	2	6.67%	33	100.00%	35	33.98%	
	> 60	17	42.50%	0	0.00%	0	0.00%	17	16.50%	
	Total	40	100.00%	30	100.00%	33	100.00%	103	100.00%	
	male	23	57.50%	15	50.00%	17	51.52%	55	53.40%	
	female	17	42.50%	15	50.00%	16	48.48%	48	46.60%	
	Total	40	100.00%	30	100.00%	33	100.00%	103	100.00%	

Figure 513 Example of using Cluster assignments in an aggregate table

## 13. Gauges

Gauges offer a simple, clear method of presenting information in your reports. The functionality enables you to add traditional circular gauges and dials to your report pages, and comes with a comprehensive list of customization options to ensure you can get exactly the look and feel you need.

A gauge will normally be used to present simple information, such as the number of respondents who have replied to a survey or the percentages of male and female respondents - basically any data for which values can be indicated by a pointer moving across a scale.

The look and feel of a gauge on a report page is defined by a Gauge Style (see [The Gauge Styles on page 714](#) for more information). A "default" gauge style is provided in the Layout and Styles toolbox > Styles > Gauges folder. This style can be edited and/or others can be created to suit your requirements. A style's properties can be edited and adjusted at any time.

The Gauge on a report page fetches its information from a table on the same page. When you create a gauge (see [How to Add a Gauge to a Page on page 421](#) for more information), you must therefore refer the pointer(s) on the gauge to the appropriate table and cell such that the correct information is presented.

Gauges can be used in View mode, preview mode and with PDF exports.

### 13.1. How to Add a Gauge to a Page

**Note:** The look and feel of a gauge is specified by a Gauge Style. You must create and set up a Gauge Style (see [How to Create a Gauge Style on page 715](#) for more information) before you can create that gauge on a report page.

**Note:** Gauges on a report page fetch the information they are to present from tables on the same page. A table must therefore exist on the page before the gauge can be set up.

To create a gauge on a report page:

1. In the Report toolbox, open the Page Editor for the page on which you wish to create a gauge.
2. Either drag a **Gauge** element from the **Visual Elements** toolbox and drop it into the appropriate cell in the HTML table on the page (as shown in the figure below), or right-click in the table cell and select **Insert Component > Gauge** from the drop-down menu.

A Gauge element is created in the table.

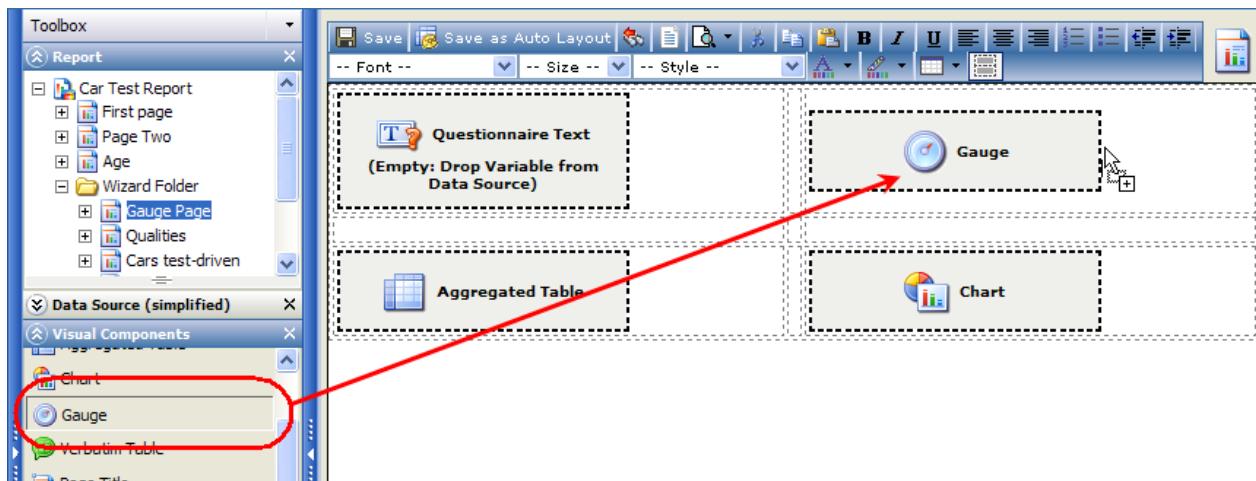
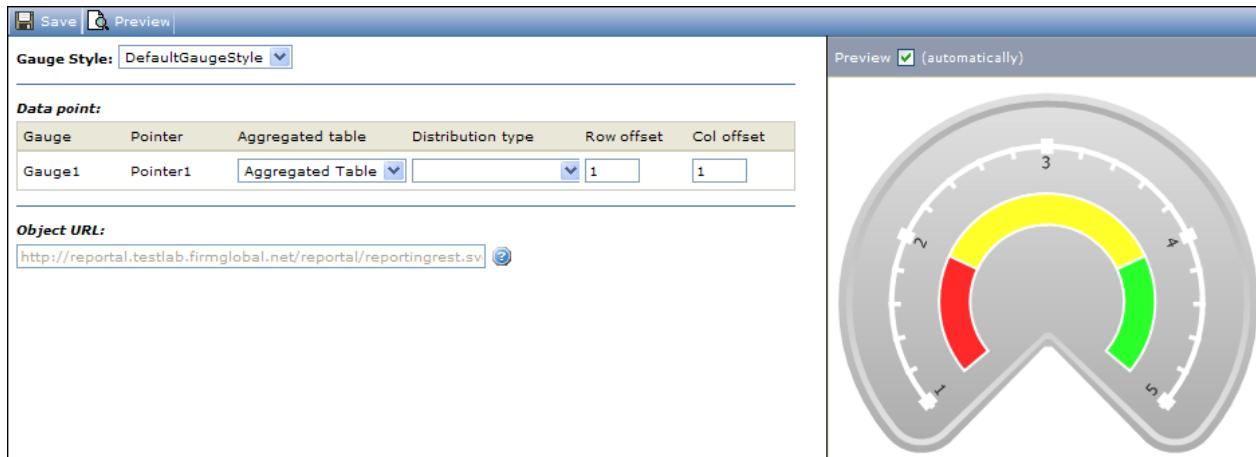


Figure 514 Dragging a Gauge element into a report page

3. Save the changes.

The Gauge element then appears in the Page element in the **Report** toolbox.

- Double-click on the **Gauge** element in the **Report** toolbox to open the Gauge Designer page.



**Figure 515 Example of the Gauge Designer page for a newly created gauge**

If the **Preview (automatically)** box above the preview window is checked, the gauge will appear to the right. If this box is not checked, then you must click the **Preview** button to see the preview.

**Note:** The gauge will appear without a pointer until the data source (the table cell that is to provide the information) has been specified.

- The gauge will appear as defined by the style to which it is linked. To select a different style, click the down-arrow beside the Gauge Style field and select the desired style from the list, as shown in the figure above.

The Data Point table contains one row for each gauge pointer that is specified by the selected style. For example, if you have three gauges in the style, each with one pointer, then the Data Point table will comprise three rows.

- Specify the table and cell(s) from which the data is to be taken for all the pointers in the style.

The properties are as follows:

- **Gauge Style** - lists the available styles. If more than one is available, click the down-arrow beside the Gauge Style field and select the one you wish to use.
- **Gauge** - the name of the gauge to which the pointer applies (a container may include several gauges).
- **Pointer** - the name of the pointer to which the remaining settings in the row apply (a gauge may have more than one pointer).
- **Aggregated table** - the name of the table from which the pointer is to take its data. If the report page contains more than one table then these will be listed - select the desired table from the list.
- **Distribution type** - if the table cell from which you wish to take the data contains more than one data type (e.g. Count and Horizontal %), select the type of data you wish to use.
- **Column offset** - specifies which column in the selected table the data is to be taken from. The first data column (not the "label" column) is column 1, the next is column 2 etc.
- **Row offset** - specifies which row in the selected table the data is to be taken from. The upper-most data row (not the "label" row ) is row 1, the next is row 2 etc.

- Save the changes.
- In the Report toolbox, right-click on the report and select **Preview Report** to view the report with the gauges in place.

## 13.2. Object URL

This property only appears for an object in a report page that is specified as being a Public report (see Report Properties on page 109 for more information).

The Object URL property allows specified objects (tables, charts and gauges) to be viewed individually via a direct URL, without having to open the report. This allows the possibility to embed a table, chart or gauge in other web pages, for example web portals or intranets.

Once a report has been published as Public, then this property becomes visible in the property sheets of the table, chart and gauge objects in that report. Go to the property sheet of a particular object and select the Object URL property to display a further field containing a URL to the object.

Copy the URL displayed in the field, and paste it into the desired web page. The object will then be visible in that web page.

## 14. Verbatim Tables

The Verbatim Table element is used for reporting on open text questions.

**Note:** If you are using data from a Panel as a data source, to see the correct data you must manually set the same filter at the report level as has been used in the Bitstream Variant.

**Note:** A maximum of 1000 answers can be displayed online in one report page (i.e. the first 1000), and up to 65000 will be exported to Excel file. The cell content in the Excel export will be wrapped. The Verbatim table will not be included in PPT exports.

From the Visual Components toolbox drag a verbatim table element into your report page.

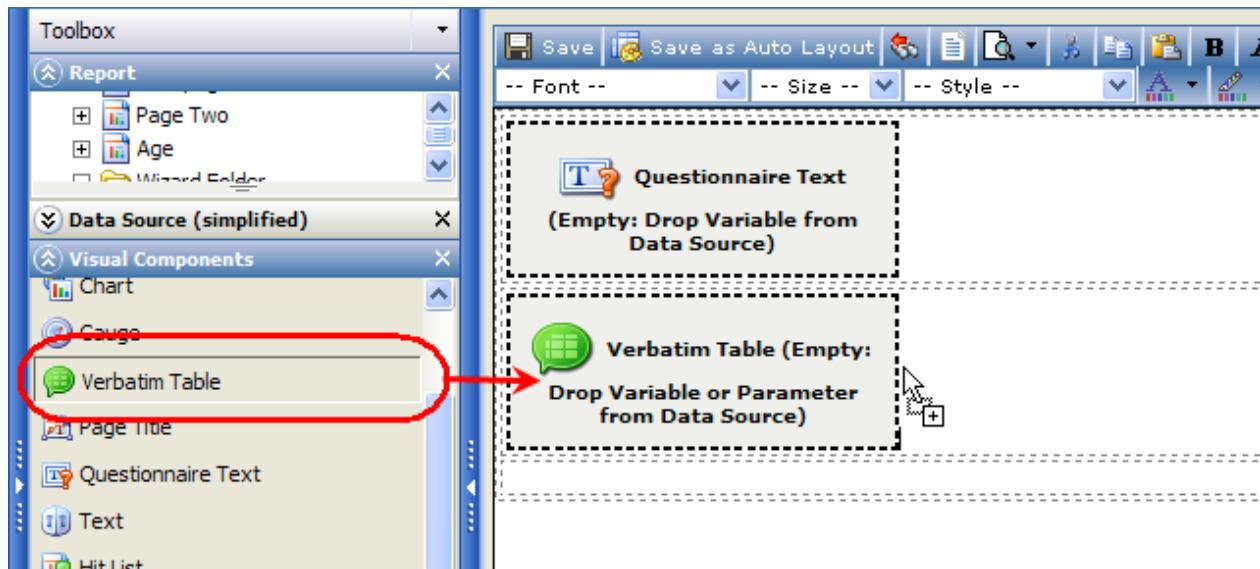


Figure 516 Dragging a Verbatim Table component into a report page

From the Data Source toolbox, drag the desired question text into the Questionnaire Text element and drag the question into the Verbatim Table element. In the example, the open text element being used is an **Other, specify** alternative in a Multi question.

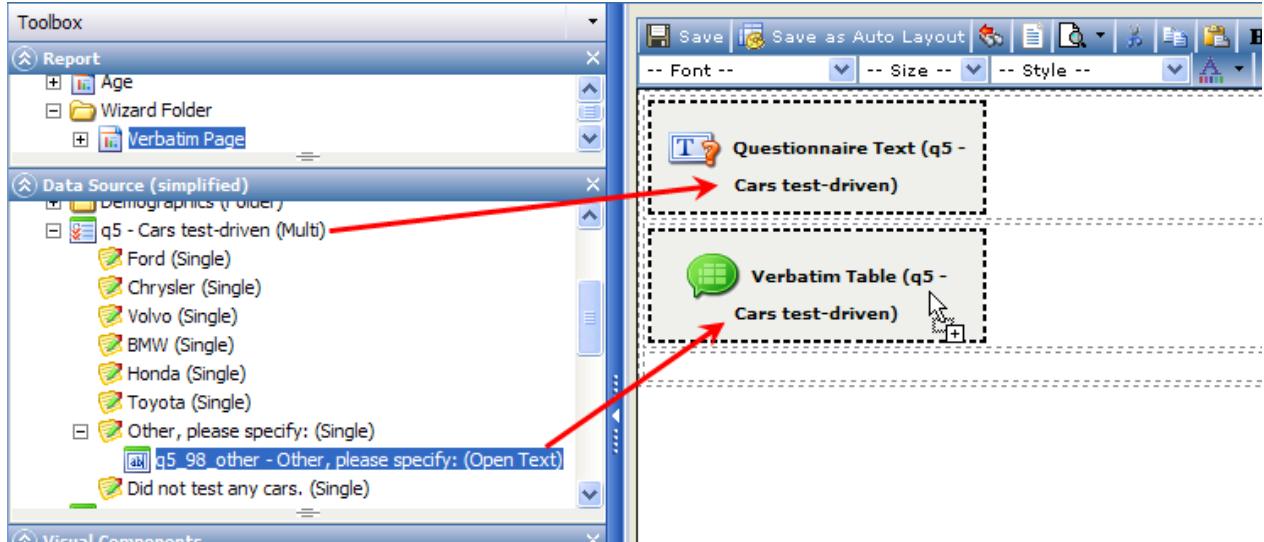


Figure 517 Dragging the question into a Verbatim table element

#### Important

Verbatim tables support the "Include only complete responses" option from the BitStream Files. However, When a data source with Union is used, then this option is only applied to the first project in the union. For example, if a union contains two projects, A and B, where A has all responses and B has completes only, the verbatim table will contain all responses. This may therefore result in inaccurate data, so care must be taken to ensure the "Include..." settings are identical for all projects in the union.

## 14.1. Verbatim Table Properties

To edit the Verbatim Table, right-click on it and choose **Properties**. The Property sheet opens, and here you define the layout and style of the open text object. You can also choose a predefined style from the Style drop-down.

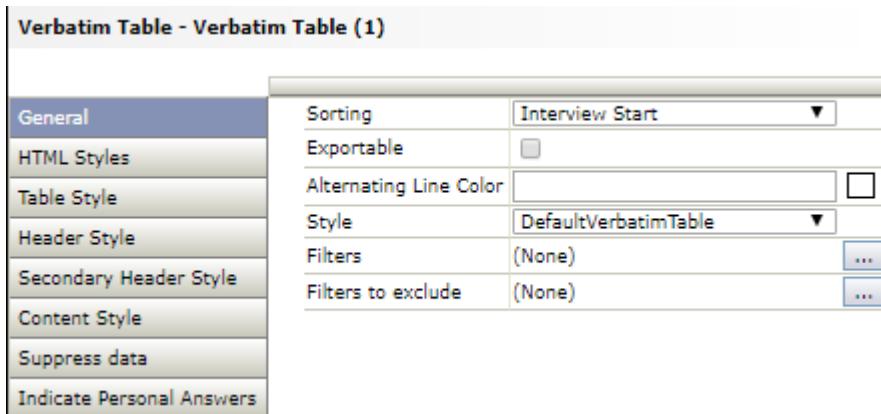


Figure 518 Verbatim Table properties

Once you have set up the properties for the verbatim table, you can save the settings as a style for future use. To do this:

1. Right-click on the verbatim table element in the Report toolbox and select **Save as Style** from the drop-down menu.

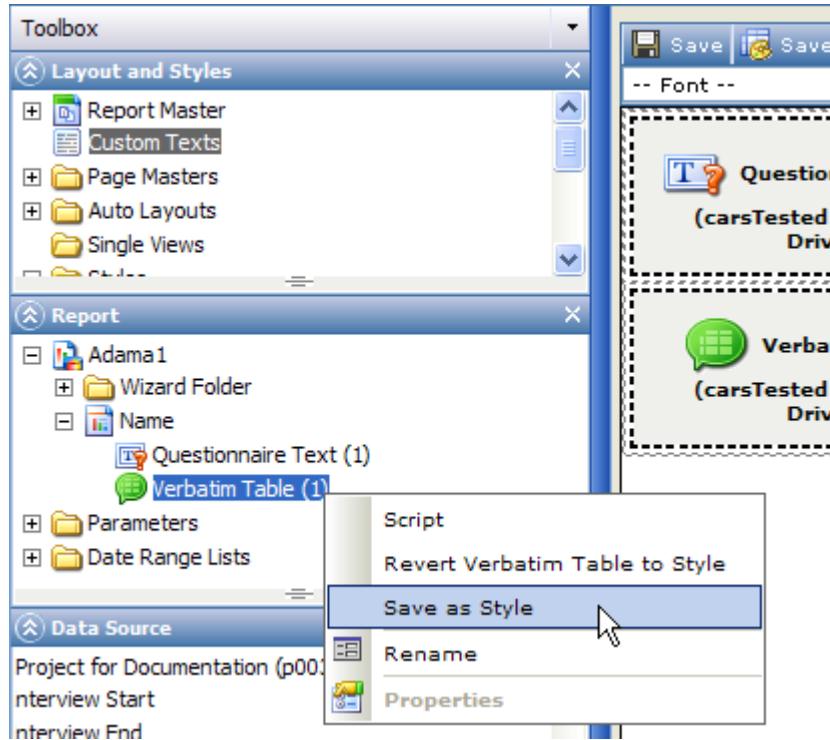


Figure 519 Saving the verbatim table property settings as a style

A Properties dialog opens.

2. Type a name for your new style into the Table Style Name field, and if you wish to update a style of that name that already exists, check the Update... box, then click **OK**.

The new style will be listed in the **Styles > Verbatim Table** folder in the Layout and Styles toolbox.

In the event you have changed the layout of a verbatim table and you later wish to revert the table to its original style or change it to another style:

1. Right-click on the verbatim table element in the Report toolbox and select **Revert Verbatim Table to Style** from the drop-down menu.

A selection box opens in which you can select the style you wish to use from a drop-down list.

2. Make the appropriate selection and click **Save and Close**. Note that this action will clear any style changes previously made to the specified verbatim table.

#### 14.1.1. General Settings

- **Sorting** – defines the order of the verbatim answers. You can sort the table alphabetically, by Interview Start, and by respids in the Respondent list.
- **Exportable** – displays a link above the table to viewers. Viewers can click the link and specify their email address to receive an Excel export of all responses to the open text question according to filter settings. This functionality is especially helpful when there are more answers than the limit of 1000 answers that can be displayed in online reports.
- **Alternating Line Color** – defines the color for every second row in the table.
- **Style** - choose a predefined Verbatim table style.
- **Filters** - you can filter hit lists by having a fixed filter specified on the root, the folder or the page level, and you can specify a filter directly on the hit list. Click the ... button to open the Report Filters page, which lists all the filters available to the report, and select the desired filter. On completion, save the changes..

- **Filters to exclude** - click the ... button to open the Report Filters page, which lists all inherited filters, and select the inherited filters you want to exclude. On completion, save the changes.

#### 14.1.2. The Property Page Tabs

- **Table Style** - settings that apply to the entire table.
- **Header Style** - settings for the header cell, for example the question title.
- **Secondary Header Style** - settings for the header cells that represent the variables of, for example, a Multi open question.
- **Content Style** - settings for the displayed response data.
- **Suppress Data** - (see The Suppress Data Tab on page 177 for more information).
- **Indicate Personal Answers** - activates the functionality for this table (see Indicating Personal Answers on page 510 for more information).

The properties on these tabs have the same functions as the corresponding properties on the Aggregate Table properties tabs.

## 15. Parameters

A parameter is an object that can be included inside aggregated and verbatim tables as a placeholder for a list of questions. Used in combination with a parameter navigator or drill-down functionality, this enables the report viewer to select the questions he/she wishes to see results for in the tables and/or charts. Parameters allow a wide range of different combinations of data to be made available from one page for the viewers.

The example shows a report page consisting of a table and a chart, the chart having been created from the table. The table has one parameter in columns (grid statements on the same five-point scale), and another parameter in rows (background variables). Report Viewers can select which results are displayed via two drop-downs included on the page; one for each parameter. When the viewer changes the results selected in the drop-downs, the table and chart will update and show the results for the new selection.

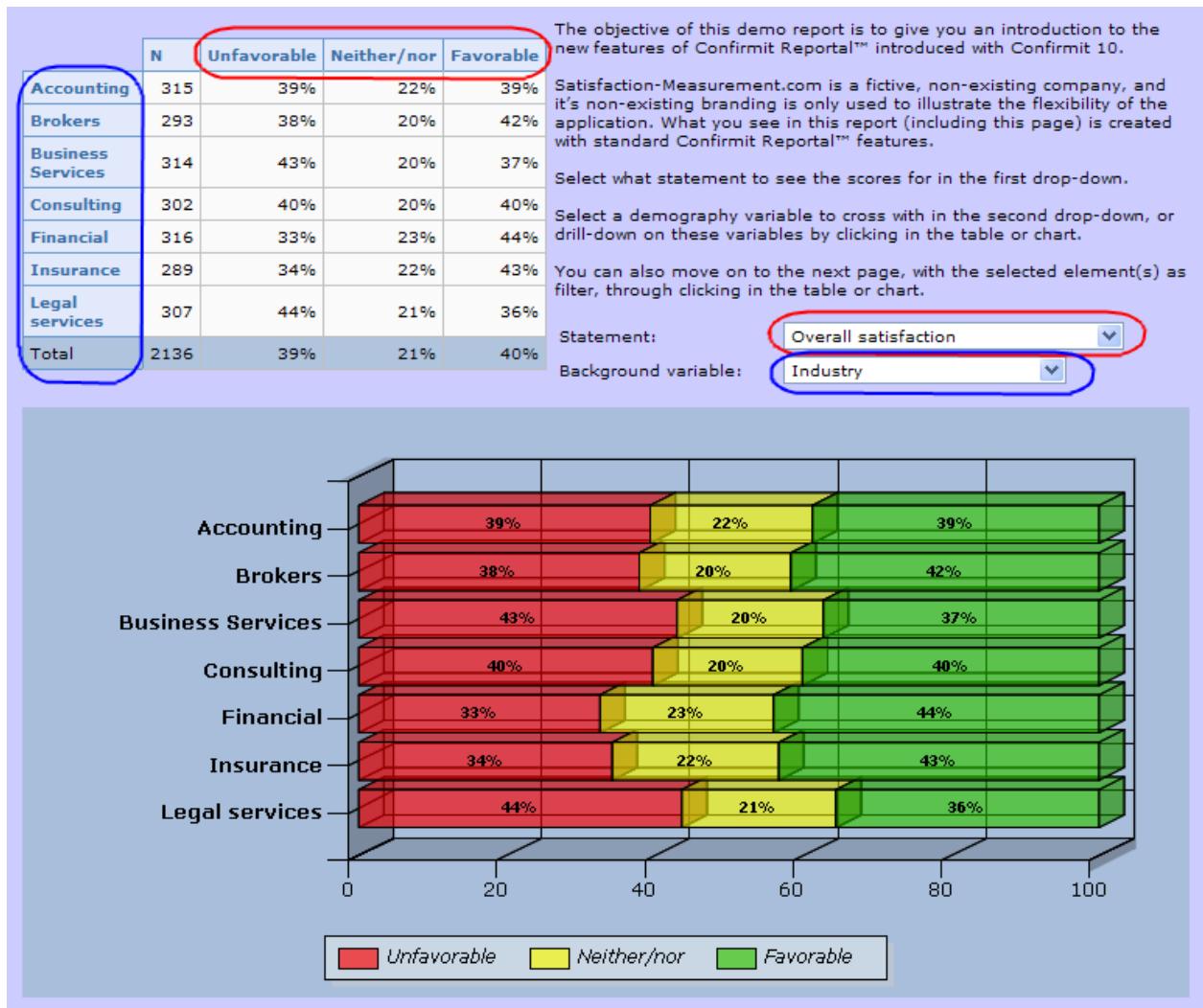
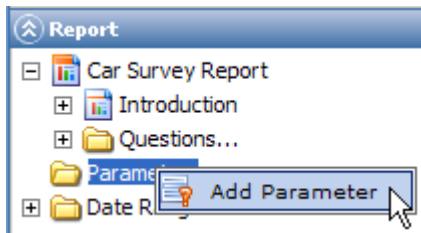


Figure 520 Example of a report page with two parameters

### 15.1. Defining a Parameter

You set up Parameters in the report tree - a **Parameters** folder is located towards the bottom of the tree. To create a new parameter:

1. Right-click on the **Parameters** folder and select **Add Parameter**.



*Figure 521 Adding a Parameter*

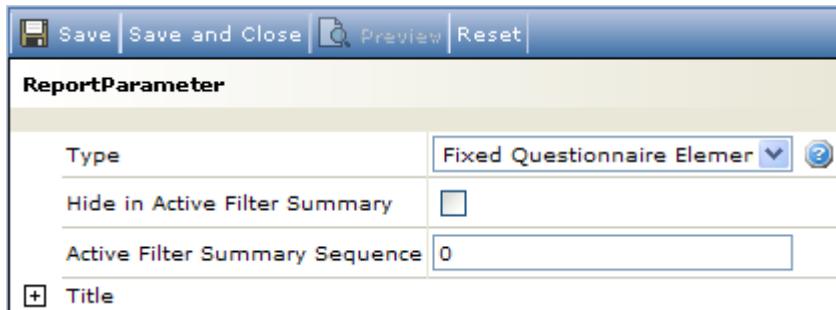
A new parameter is added to the folder.

2. To edit the parameter name, right-click on the parameter and select **Rename**, or press the **F2** key on your keyboard.

Parameters must have unique names consisting of letters, numbers and/or underscore, and starting with a letter or underscore.

3. To modify the parameter properties, right-click on the parameter and select **Properties**.

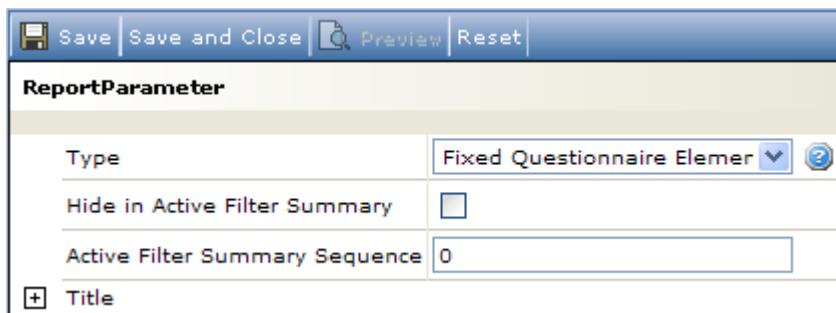
The parameter property pane opens as below.



*Figure 522 Parameter properties*

### 15.1.1. The Parameter Properties

To modify the parameter properties, right-click on the parameter and select **Properties**. The parameter property pane opens.



*Figure 523 The Parameter properties page*

The parameter Type options are as follows:

- **Fixed Questionnaire Element** - you define a list of questions that the viewer can select from. This type is typically used in conjunction with a Navigator on a report page. Add the Navigator to the page and drop the Parameter on the Navigator. To specify the possible values of the parameter, double-click the parameter and add elements from the data source to the Parameter Values tree.
- **Free Questionnaire Element** - the parameter is not defined by a list of questions, but is a placeholder and will be set by a selection made by the viewer in a drill-down (for example, selecting a statement from a grid), thus inheriting the item the viewer selected in a table/chart.
- **Derived Questionnaire Element** - similar to free values, but instead of being set to the item the viewer selected, it can be set to a corresponding item. This is typically used to associate open text variables with for example elements of a grid.
- **Response parameters** - these are used to store answers on a given question. To connect the parameter to a specific question, first set the parameter type in the property sheet, then double-click the parameter and drag the question into the screen. The options are:
  - **String Response** - for string fields. The parameter can hold values that are answers to string-based questions such as single, multi, grid or hierarchy (note that open-text cannot be used). Double-click the parameter to define the question that is to be used to build the list of possible values for the parameter. String response parameters are typically used in List components.
  - **Numeric Response** - the parameter can hold a numeric value and can be used in input components.
  - **Date Response** - the parameter can hold a date value and can be used in calendar components, for example interview\_start.
- **Project** - a parameter type used to store a specific survey project. Possible values for this parameter type must be defined by using scripting, either by adding projects based on a data source node ID (double-click node project in the data source to see the ID) or by using project IDs directly. You are recommended to use data source node IDs as long as your project is in the data source. Then you can easily change the project of the report by replacing the elements in the data source.
- **Segment** - used to store a segment. Create a list of segments by dragging them into the list from the segment part of the data source.
- **Banner** - in the event the report has more than one banner, the parameter allows dynamic selection of banners on a table by the viewer. The user can then choose which banner they wish to use by selecting it in the parameter navigator.
- **Geolocation** - this type of parameter could for example be used in a verbatim table.

The parameter types can be used in a variety of ways, but all of them can be connected to one or more of the List, Hierarchy, and Calendar Input Visual Components. The parameters can be used as follows:

- Build logic based on parameter-selected values in any type of report script.
- Use the parameter values as filters. To do this, create a new filter using the filter expression designer.
- Add the parameter to a table. For a single question, this will show the question masked by the selected values for the parameter.

**Note: The remaining properties available in the property sheet depend on the Type selected above. The properties are as follows:**

- **Hide in Active Summary Filter** - (all) check the box to hide the current value for this parameter from the active filter summary of a page.
- **Active Filter Summary Sequence** - (all) enter a sequence number to be used to sort the items in the active filter summary component. Items with a low number will be displayed before items with a higher number.
- **Corresponding Parameter** - (Derived) the ID of the parameter that this variable is to be derived from.
- **Type** - (Derived) there are 3 different methods of deriving a parameter:
  - **Replace** - a part of the text in the original parameter value (From Text) is replaced by new text (To Text).

- o **Add Prefix** - adds the specified text to the beginning of the variable name. Input the text into the Prefix field.
- o **Add Suffix** - adds the specified text to the end of the original parameter. Input the text into the Suffix field.
- **Multi-select** - (String) check this box if you wish the user to be able to select multiple values for this parameter.
- **Field Source** - (String) there are two different ways of specifying which questionnaire element is to be used when loading lists of possible values for a parameter:
  - o **A fixed field** - a specific questionnaire element in the survey. Double-click the parameter to select the element that is to be used.
  - o **A parameter** - the questionnaire element is derived from the current value of another parameter. The other parameter should be a questionnaire element parameter.
- **Title** - (all) specify the text to be used in the report when referring to the parameter. You can include a title for each report language.

### 15.1.2. The Parameter Designer

To open the parameter designer, double-click on the parameter or right-click the parameter and select **Edit**.

For **Fixed Questionnaire Element**, define the list of questions the viewer is to be able to select from by dragging them from the Data Source into the Parameter Designer.

**Note:** You are recommended to use the designer to insert one question into the parameter for the two other parameter types, so a question is available to use in previews in the table and chart designers. However in the real report, this question will not be used unless it has been selected by the viewer drilling down in a table or chart.

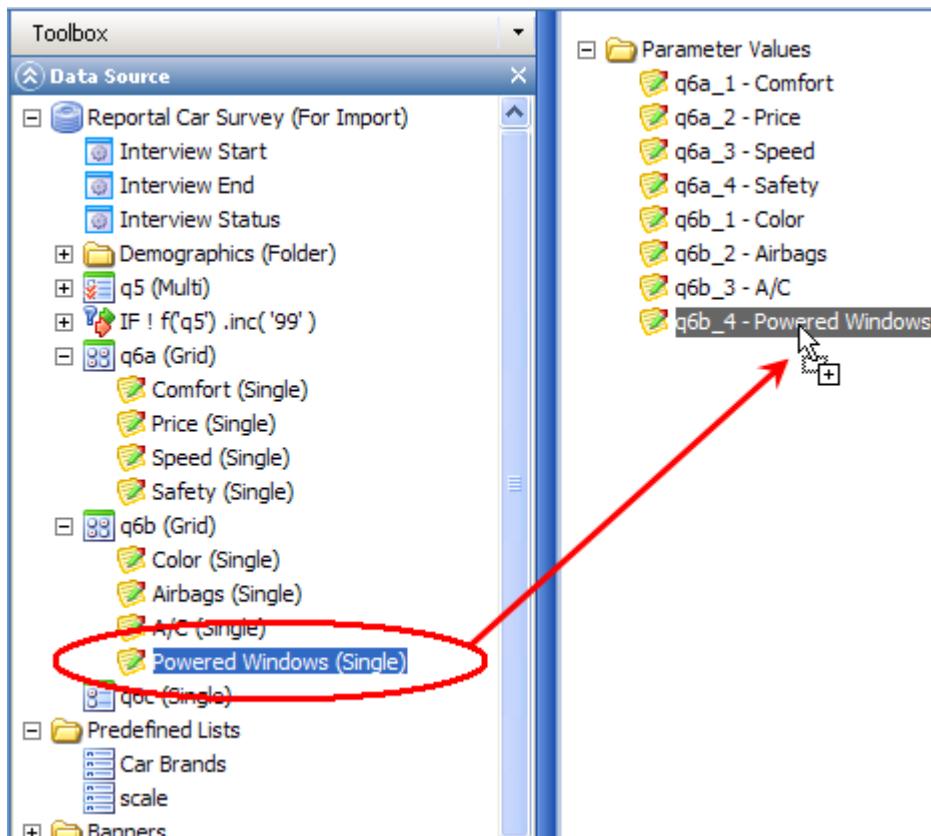
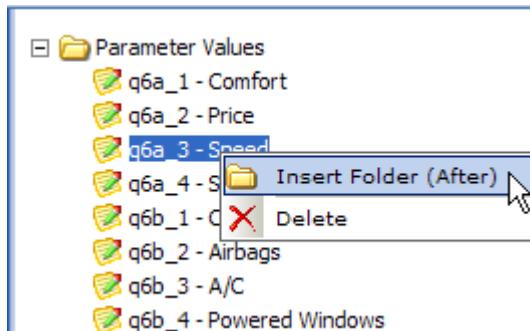


Figure 524 Using the Parameter Designer

Drag-and-drop elements from the Data Source onto the parameter tree. In the figure above, when the "Powered Windows" item is dropped into the designer it will be inserted after "A/C". Note that you can drag entire folders, condition, blocks etc. onto the parameter tree, and you can use standard Windows selection techniques to select multiple items to drag-and-drop.

You can organize the parameter content into folders. To insert a folder into the parameter tree, drag-and-drop a folder from the Data Source or right-click on the tree and select **Insert Folder**.



**Figure 525 Inserting a folder**

Folders will be used to group elements if the "Parameter navigator" is set up as a drop-down menu.

A **Free Questionnaire Element** parameter does not have any particular settings as it is merely a placeholder for the variable the viewer selects using the drill-down functionality.

For **Derived Questionnaire Element** parameters, you must define which variable is to be derived from the viewers' selection. For example, if there is a 3D grid element with a set of 3 statements, which contains a grid question q1 (satisfaction) and a multi open text q2 (comments), the items of the grid would be variables q1\_1, q1\_2 and q1\_3, and the three comments would be in variables q2\_1, q2\_2 and q2\_3.

The screenshot shows the 'ReportParameter' dialog with the following settings:

- Type:** Derived Questionnaire Elem
- Hide in Active Filter Summary:** Unchecked
- Active Filter Summary Sequence:** 0
- Derivation:**
  - Corresponding Parameter:** p1
  - Type:** Replace
  - From Text:** q1
  - To Text:** q2
- Title:**
  - English:** Comments
  - Norwegian:** Kommentar

**Figure 526 The Derived Questionnaire Element properties**

You must have a corresponding "Free values" parameter (p1 in the figure above) that the substitutions will be based on. Then when the viewer clicks on element 1, q1\_1 is set for this parameter.

If you set Derivation Type to "Replace", a part of this variable name will be substituted based on the From and To Text settings. Here "q1" will be replaced with "q2", giving q2\_1. The other two derivation types are Add Prefix and Add Suffix. Add Prefix will add the text you specify to the beginning of the variable name, and Add Suffix will add text to the end of the variable name. An example of the former could be satisfaction questions q1\_1, q1\_2, q2\_1 which had corresponding importance questions imp\_q1\_1, imp\_q1\_2, imp\_q2\_1. An example of the latter could be that you had a set of questions q1, q2, q3 and corresponding comments as q1\_other, q2\_other, q3\_other.

## 15.2. Using Parameters in Report Elements

Once a parameter has been defined, it can be used in aggregated and verbatim tables in the same way as ordinary questionnaire variable. Drag the parameter into the table designer or onto the verbatim table. You can include several parameters in the same aggregated table, in rows and/or columns. The parameters can be freely nested or stacked like other variables.

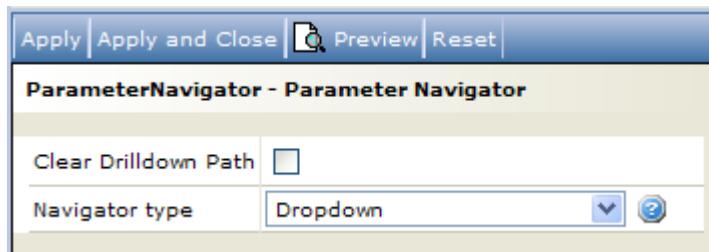
As a parameter can contain several different types of questions, you are recommended to use the default header settings of the table style to set suitable header variable properties for the different questions (see Default Header Settings on page 707 for more information). It is also recommended that you use "proportional size" settings on the charts so they can cope with varying numbers of elements on different questions (see The Proportional Size Tab on page 378 for more information).

## 15.3. Parameter Navigator

To give the viewer the ability to choose items in the parameters, you can either include special "Parameter navigators" on the report pages, or use parameters as viewers drill-down in tables/chart (see Drill-down on page 435 for more information).

A parameter navigator can be inserted into a report page, report master, page master or layout master. To insert a parameter navigator:

1. Either drag-and-drop it from the Visual Components toolbox into the Page Editor, or right-click in the Page Editor where you want the navigator to be placed and select **Insert component > Parameter Navigator**.
2. To define which parameter the navigator is to use, drag the parameter from the report tree onto the navigator.
3. To set the navigator's properties, double-click on the navigator or right-click on it and select **Properties**.



*Figure 527 The Parameter Navigator properties*

- Check the "Clear Drilldown Path" box if drill-down functionality is to be used on the same page, and you want any drill-down filters that are applied to be cleared when the viewer makes a selection for the navigator.
- There are three types of navigators available for parameters: Drop-down, Menu and CSS Menu. For the Menu type you can set a range of settings controlling look and feel. These are described in the Drop-menu section. The menu will reflect the folder structure you set up in the parameter designer, while the CSS Menu option will reflect the folder structure based on a style sheet.

## 15.4. Parameter Overview in Active Filter Summary

The active parameters are listed in the active filter summary for the report page.

<b>Selected Elements:</b>
Background variable: Industry
Measure: Overall satisfaction

*Figure 528 Active parameters in active filter summary*

## 15.5. Exports from Reports with Parameters

As there could be a large number of possible combinations of the elements in the parameters, you must specify what a report-set from a report with parameters is to contain. Do this by defining an export package (see Export Packages on page 601 for more information).

## 15.6. Masking and Filter by Mask for Parameters

You can set global masks and “Filter by Mask” settings on parameters. This allows you to include or exclude one or more answer-list elements from all single and multi questions and grid elements in the parameter, by specifying a code to be masked.

**Note:** The code must be identical for all instances that are to be masked. For example, if you wish to mask all instances of “Don’t Know”, then all the “Don’t Knows” in the questionnaire must have the same code.

These masking properties function in the same way as the masking properties for “normal” table components. See the Answer and Scale Masks and Filter by Mask sections for further information.

<b>Totals</b>	<input type="button" value="▼"/>
Calculation Rule	Avg. of Aggregates
Filter By Mask	<input checked="" type="checkbox"/> 
<b>[-] Mask</b>	
Masking	Show Specified Codes
Codes	1
Formulas first	<input type="checkbox"/> 
<b>[+] Reference Groups</b>	

*Figure 529 The parameter masking options*

## 16. Drill-down

Report's drill-down functionality provides viewers with a flexible, dynamic interface that enables them to drill down inside charts and tables to better analyze the results. In surveys where respondent anonymity is not a requirement, you can even use the drill-down functionality to go all the way down to an individual record.

**Note:** The drill-down functionality is only available to users with Report Viewer or Designer Access. Reports with drill-down functionality can not be made public.

The drill-down functionality is active when previewing or viewing the report; it is not active when previewing the table or chart designer. You make the drill-down functionality available by setting the properties for aggregated tables, and through a "Hit list" object to drill down to individual records.

In aggregated tables, drill-down functionality can be applied to the rows and/or columns of the table. If drill-down is applied to the aggregated table, it will also be applied to a chart based on the table.

**Note:** Drill-down cannot be applied to elements inside nested headers, to interview\_start/interview\_end or to recoded variables.

**Note:** If the report uses the Extended Tabulation Engine (see APPENDIX C: The Tabulation Engine Versions on page 749 for more information), then when the drill-down feature is used on a table containing a recoded question, the extended tabulation engine will always filter by the recoded variable categories. Version 1 of the table engine filters on the original variable).

Note that in order for the drill-down functionality to work, the Target Pages field in the Drilldown tab of the table's property sheet must contain either the list of one or many page IDs (see Go to Page on page 437 for more information) when the user wants to move to a different report page when drilling-down, or the page ID of the very page the user is drilling-down and wants to stay on.

### 16.1. Filter Data

The drill-down type "Filter data" allows the viewers to click on an item in the rows or columns of a table, or an element in a chart, to apply that element as a filter. The filter can be applied to either the same page or to a different page.

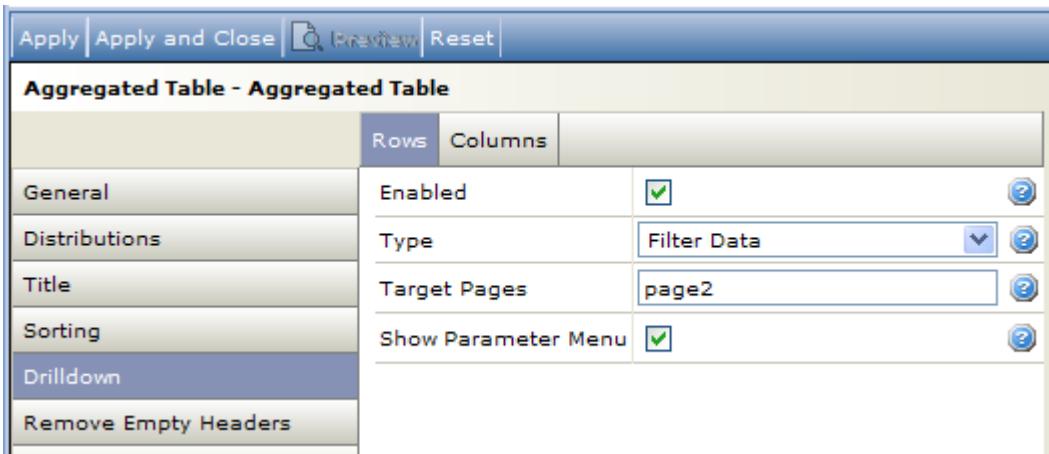


Figure 530 Filter Data

### 16.2. Show Parameter Menu

If the table dimension you apply drill-down functionality to contains a "Fixed values" parameter, you can select "Show Parameter Menu" in combination with "Filter Data" to give viewers the ability to filter by a selection and then break down by another variable in the same table and report page.

A screenshot of a report interface showing a table with four columns: N, Unfavorable, Neither/nor, and Favorable. The rows represent different industries: Accounting, Brokers, Business Services, Consulting, Financial services, Insurance, Legal service, and Total. A mouse cursor is hovering over the 'Consulting' row, which has been selected. A context-sensitive menu is displayed, listing 'Country', 'Financial Turnover', 'Employees', 'Time of product usage', 'Frequency of product usage', and 'Go to Page'. The 'Country' option is highlighted.

	N	Unfavorable	Neither/nor	Favorable
<a href="#">Accounting</a>	315	39%	22%	39%
<a href="#">Brokers</a>	293	38%	20%	42%
<a href="#">Business Services</a>	314	43%	20%	37%
<a href="#">Consulting</a>				40%
<a href="#">Financial services</a>				44%
<a href="#">Insurance</a>				43%
<a href="#">Legal service</a>				36%
Total				40%

Figure 531 Drill-down with Parameter Menu

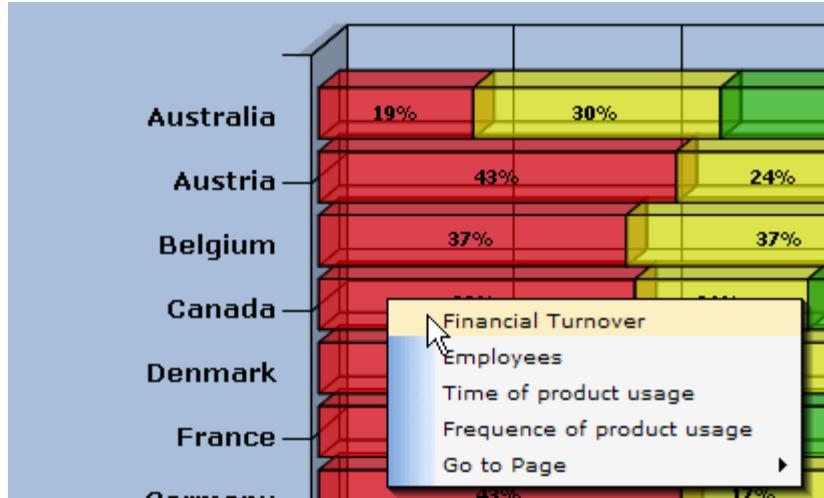
In the example the table has a "Fixed values" parameter in rows containing the background variables "Industry" (active), "Country", "Financial turnover", "Employees", "Time of product usage" and "Frequency of product usage". Drill-down on rows is set to "Filter data", and we have chosen to "Show Parameter Menu". When the viewer clicks on Consulting, the menu pops up listing the other available parameters. When the respondent for example selects "Country", the page will reopen with "Consulting" set as a filter, and results broken down by "Country" in rows.

A screenshot of a report interface showing a table with five columns: N, Unfavorable, Neither/nor, and Favorable. The rows represent different countries: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States of America, and Total. A mouse cursor is hovering over the 'Canada' row, which has been selected. A context-sensitive menu is displayed, listing 'Financial Turnover', 'Employees', 'Time of product usage', 'Frequency of product usage', and 'Go to Page'. The 'Financial Turnover' option is highlighted.

	N	Unfavorable	Neither/nor	Favorable
<a href="#">Australia</a>	27	19%	30%	52%
<a href="#">Austria</a>	21	43%	24%	33%
<a href="#">Belgium</a>	19	37%	37%	26%
<a href="#">Canada</a>	20	20%	51%	41%
<a href="#">Denmark</a>				33%
<a href="#">France</a>				58%
<a href="#">Germany</a>				39%
<a href="#">Netherlands</a>				29%
<a href="#">Norway</a>	28	54%	25%	21%
<a href="#">Sweden</a>	24	54%	13%	33%
<a href="#">Switzerland</a>	18	50%	17%	33%
<a href="#">United Kingdom</a>	29	45%	7%	48%
<a href="#">United States of America</a>	25	24%	16%	60%
Total	302	40%	20%	40%

Figure 532 Drill-down with Parameter Menu 2

For a chart based on this aggregated table, the drill-down works in the same way. The chart element the viewer clicks on will be applied as a filter.



**Figure 533 Drill-down from a chart**

The viewer can drill further in by clicking on a particular country (here Canada) and selecting another variable to break down by, for example "Financial Turnover". This will apply an additional filter and break the results down by a new variable. As the viewer works in this way, he or she is actually creating a drill-down path that is described in the "Active Filter Summary".

### 16.3. Drill-down Path in Active Filter Summary

On pages with drill-down filters applied, the active filter summary (see Date Range Lists on page 559 for more information) will contain the drill-down path. This is a list of the filters that are applied, in which order they were applied.

**Drilldown filters:**  
[No Filters](#) > [Consulting](#) > [Canada](#)

**Figure 534 Example of the drill-down path**

Click on previous steps in the path to go back to a previous filter state.

### 16.4. Go to Page

It is possible to allow the viewer move to a different report page when drilling down. For this, one or more page IDs (see Report Page Properties on page 108 for more information) must be listed in the Target Pages field. If more than one page ID is listed, the IDs must be separated by commas. If just one page is specified and there is no parameter menu, the viewer will be sent directly to that page. If there is more than one page and/or a parameter menu is used, the viewer must select the desired page from the menu.

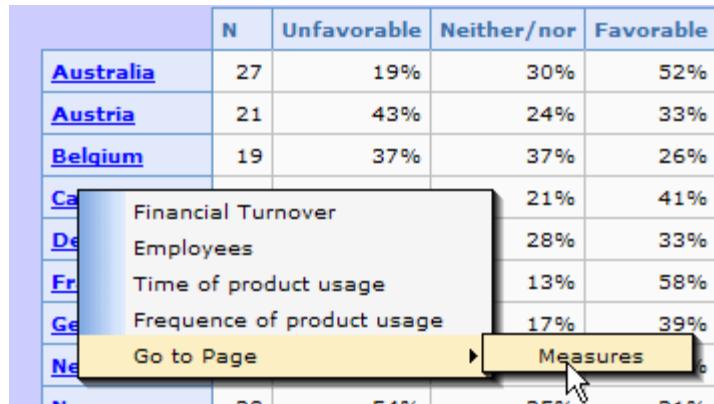


Figure 535 Using Go to page

## 16.5. Set Parameter

Drill-down functionality can be used to set "Free values" or "Derived values" parameters. This allows the action of selecting an item in a table and/or chart on one page to specify the content of a table on another page, rather than applying a filter.

In the example, viewers are being given the ability to look at results from the 3D grid in the figure below.

**Evaluation of various customer aspects**

How satisfied are you with the following aspects of our delivery?

	Satisfaction						Comments
	Very unsatisfied 1	2	3	4	Extremely satisfied 5	Don't know	
Product/service quality	<input type="radio"/>	<input type="radio"/>					
Value for the price	<input type="radio"/>	<input type="radio"/>					
Purchase experience	<input type="radio"/>	<input type="radio"/>					
Installation or first use experience	<input type="radio"/>	<input type="radio"/>					
Usage experience	<input type="radio"/>	<input type="radio"/>					
After purchase service	<input type="radio"/>	<input type="radio"/>					
Repeat purchase experience	<input type="radio"/>	<input type="radio"/>					

Figure 536 3D grid, q1 and q2

In this case the report has three pages. The first shows an overview of all the statements. From this page we would like to give the viewers the option of viewing details of the scores on one page, and the open text responses to the same statement on another page. This can be achieved by using two parameters and the drill-down functionality.

	N	Unfavorable	Neither/nor	Favorable
<a href="#">Product/service quality</a>	2560	22%	7%	71%
<a href="#">Value for the price</a>	2560	19%	9%	72%
<a href="#">Purchase experience</a>	2560	20%	8%	72%
<a href="#">Installation or first use experience</a>	2560	22%	8%	70%
<a href="#">Usage experience</a>	2560	20%	8%	73%
<a href="#">After purchase</a>	2560	21%	8%	74%
<a href="#">Repeat purchase experience</a>	2560	21%	7%	72%

Figure 537 Overview page with drill-down menu

The first parameter, p1, is set to "Free values". The second parameter, p2, is set to "Derived values" with the settings shown below:

ReportParameter	
Type	Derived Questionnaire Elem <input type="button" value="?"/>
Hide in Active Filter Summary	<input type="checkbox"/>
Active Filter Summary Sequence	0
Derivation	
Corresponding Parameter	p1 <input type="button" value="?"/>
Type	Replace <input type="button" value="?"/>
From Text	q1 <input type="button" value="?"/>
To Text	q2 <input type="button" value="?"/>
Title	
English	Comments <input type="button" value="?"/>
Norwegian	Kommentar <input type="button" value="?"/>

Figure 538 The Derived Values parameter settings

The "Free values" parameter p1 can then be included in an aggregated table on the details page (page 3), and the "Derived values" parameter p2 can be included on the comments page (page 4). The drill-down settings for the table showing all the statements are set up as shown below:

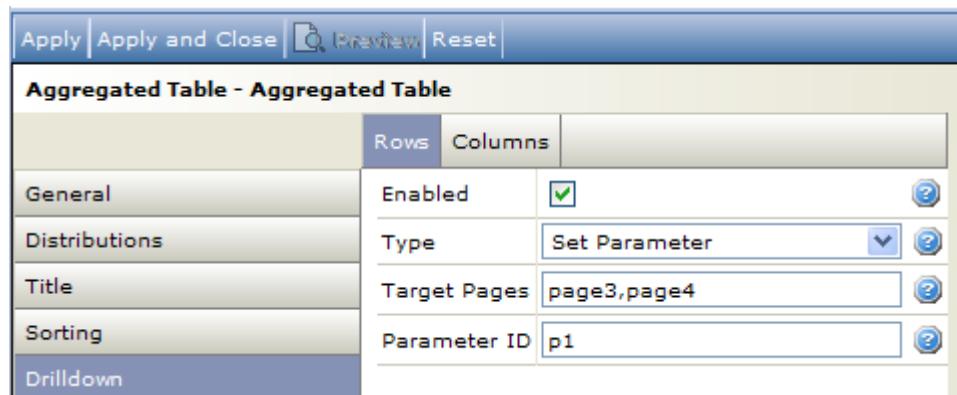


Figure 539 The Set Parameter drill-down

## 17. Hit Lists and Single Views

A Hit List is a component that can be included on a report page to create a table that displays the individual responses to a set of questions. A Single View allows the user to display an additional level of detail of responses when a record in the hitlist is selected by clicking on it. Hit lists and Single views are typically used to provide case management or closed-loop alerting capabilities, as both support the inclusion of a link back to the survey to update or to provide additional information to a record.

**Note:** Hit Lists are not supported for public reports.

### 17.1. Hit Lists

A Hit List is a component that can be included on report pages to create a table that displays the individual responses to a set of questions. The table displays a number of records simultaneously depending on how you set up the hit list, and includes a paging facility that allows you to move backwards and forwards within the set of responses.

Property settings for the hit list columns allow you to specify which columns are to be links so the user can view the details, and whether some or all of the columns in the hit list are to be sortable and/or searchable by the viewers. Additional properties allow you to define the look of the table.

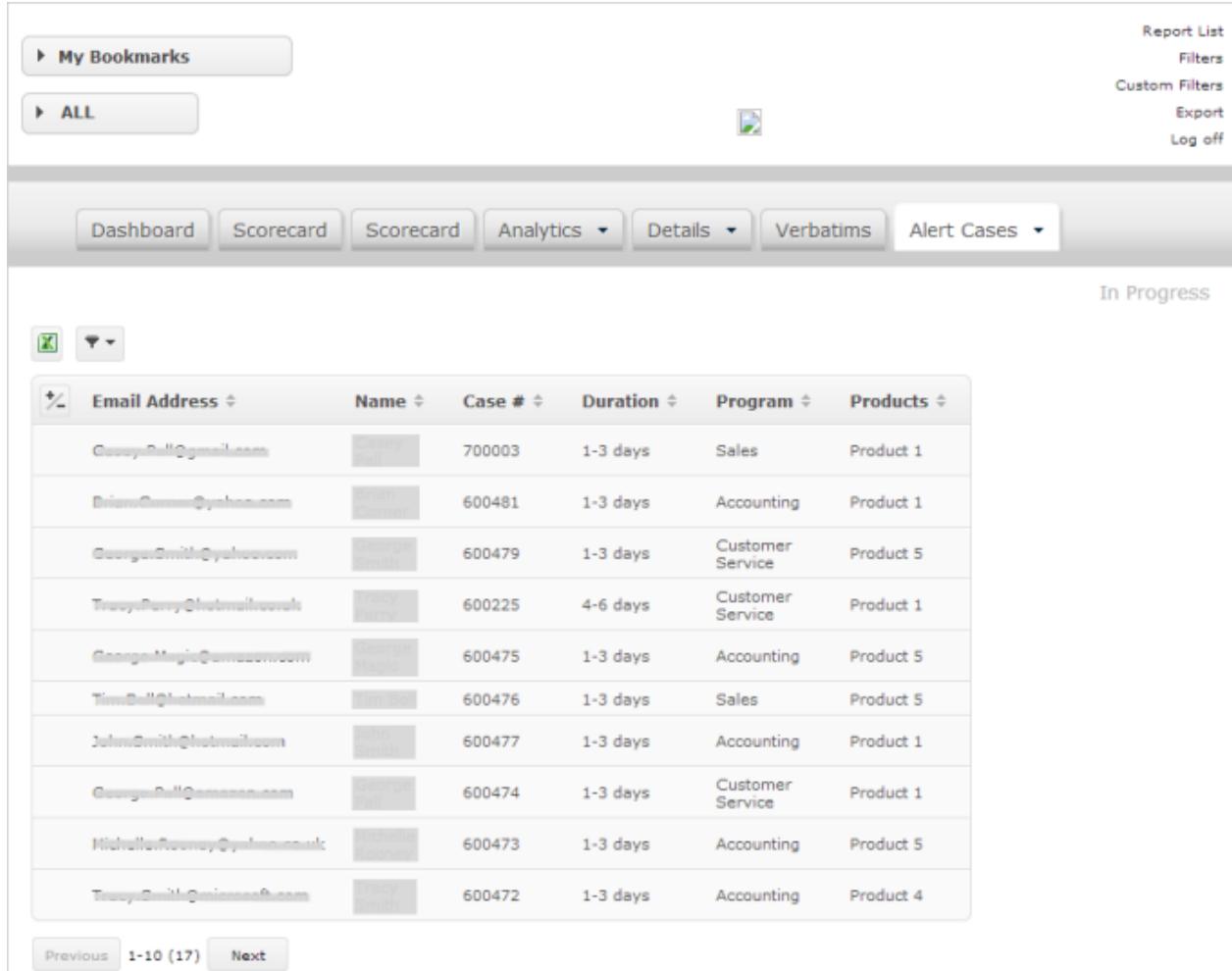
If a column in a hit list contains a valid email address and the column property "Link" is set to yes (see Hit List Field Properties on page 452 for more information), then the clickable link will enable an <a href:mailto...> capability, allowing the viewer to click on the email address and respond directly.

**Note:** Searching in hit lists results in queries being made towards the survey database. To reduce potential performance problems caused by heavy queries on the database, these queries will timeout after a specified period and an error message will be displayed for the user. See also Hit List Layout Properties for further details.

To reduce display times, hit lists are cached using the report's caching specifications (regarding timeout values). The caching is stored depending on ReportId, HitListId, filters and order values. Hit list caching is toggled in the General properties page (see Hit List General Properties on page 449 for more information).

Any questions that can be indexed must be indexed to be used in hit lists with full sort/search functionality. Non-indexed questions may be used, but these cannot be set to Searchable or Sortable (see Hit List Field Properties on page 452 for more information). In the event you use a question that has not been indexed, you will be notified. Refer to the Authoring User Guide for further details on indexing questions.

If you are using data from a Panel as a data source, to see the correct data you must manually set the same filter at the report level as has been used in the BitStream Variant.



The screenshot shows a report interface with a top navigation bar containing 'My Bookmarks', 'ALL', a search icon, and links for 'Report List', 'Filters', 'Custom Filters', 'Export', and 'Log off'. Below the navigation is a secondary menu with 'Dashboard', 'Scorecard', 'Scorecard', 'Analytics', 'Details', 'Verbatims', and 'Alert Cases'. A status message 'In Progress' is displayed. The main content area features a table titled 'Email Address' with columns for Email Address, Name, Case #, Duration, Program, and Products. The table contains 10 rows of data. At the bottom of the table are navigation buttons for 'Previous', '1-10 (17)', and 'Next'.

Email Address	Name	Case #	Duration	Program	Products
Casey.Pull@gmail.com		700003	1-3 days	Sales	Product 1
DebraGarcia@yahoo.com		600481	1-3 days	Accounting	Product 1
GeorgeSmith@yahoo.com		600479	1-3 days	Customer Service	Product 5
TracyPerry@hotmail.com		600225	4-6 days	Customer Service	Product 1
GeorgeMaguire@comcast.net		600475	1-3 days	Accounting	Product 5
TimBull@hotmail.com		600476	1-3 days	Sales	Product 5
JohnSmith@hotmail.com		600477	1-3 days	Accounting	Product 1
George.Pull@comcast.net		600474	1-3 days	Customer Service	Product 1
MitchellRowley@yahoo.com		600473	1-3 days	Accounting	Product 5
Tracy.Smith@comcast.net		600472	1-3 days	Accounting	Product 4

**Figure 540 Example of a hit list**

When the viewer clicks a link in the hit list table, a new page opens with a table listing the answers provided by the selected respondent (see Individual Records on page 455 for more information). You can also add a Single View component to the hit list page in which the respondent information can be presented (see Single Views on page 459 for more information).

Additional columns from a table lookup question (refer to the Authoring User Guide for further details) may be used in a hit list.

In the event a header text in the hit list is longer than 50 characters, it will be truncated. The reader can hover the mouse pointer over the header to view the full text as a tool tip, or override the label in the column properties with a shorten custom text.

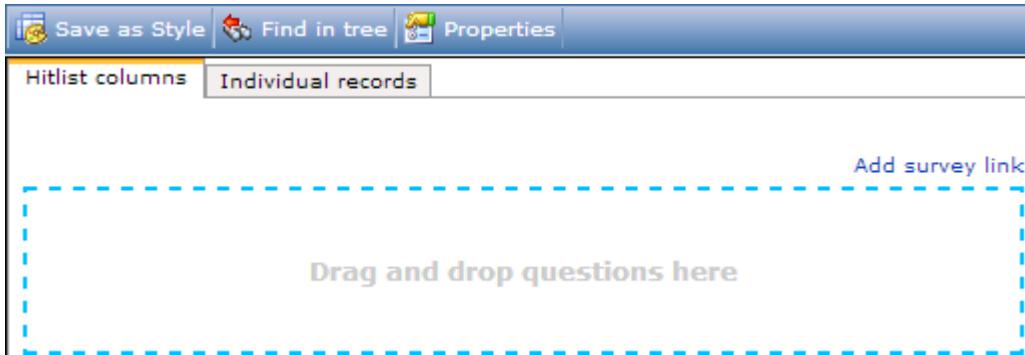
#### Important

Hit lists support the "Include only complete responses" option from the BitStream Files. However, When a data source with Union is used, then this option is only applied to the first project in the union. For example, if a union contains two projects, A and B, where A has all responses and B has completes only, the hit list will contain all responses. This may therefore result in inaccurate data, so care must be taken to ensure the "Include..." settings are identical for all projects in the union.

### 17.1.1. How to Create a Hit List

1. Open the report Page Editor for the page in which you wish to create the Hit List.

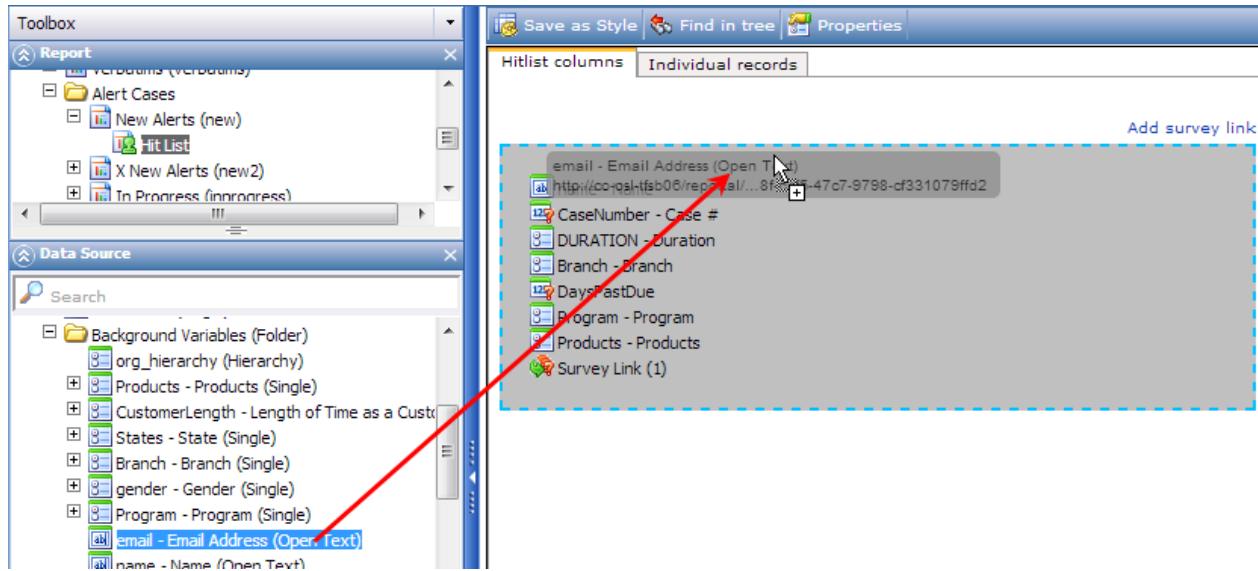
2. To insert a Hit List on your report page, drag-and-drop it from the Visual Components toolbox into the Page Editor or right-click in the Page Editor and select **Insert Component > Hit List**.
3. Save the changes.
4. In the Report toolbox, double-click the Hit List or right-click and choose **Edit** to open the Hit List Designer as shown below.



**Figure 541 The Hit List Designer page**

5. To define which questions are to be displayed in the table, drag-and-drop them from the Data Source onto the Hit List.

You can add to the Hit List any questions from the data source, including Interview Start, Interview End, Interview Status and Extended Status (available for CATI only), and loop reference questions. Grids must be expanded before you can add the elements. Use standard Windows selection techniques for selecting multiple fields.



**Figure 542 Dragging questions from the Data Source into the Hit List designer**

6. To rearrange elements within the hit list or remove them from the list, use standard Windows selection techniques to select the items, then drag them to the desired location or right-click and select **Delete** to remove them.

Each element in the hit list has its own properties sheet (see Hit List Field Properties on page 452 for more information).

### 17.1.1.1. Adding a Survey Link to a Hit List

You can add one or more survey links to a hit list (see The Survey Link Component on page 465 for more information). To do this:

1. Click the **Add Survey Link** link above the hit list designer area.

A Survey Link component is added at the bottom of the list of questions.

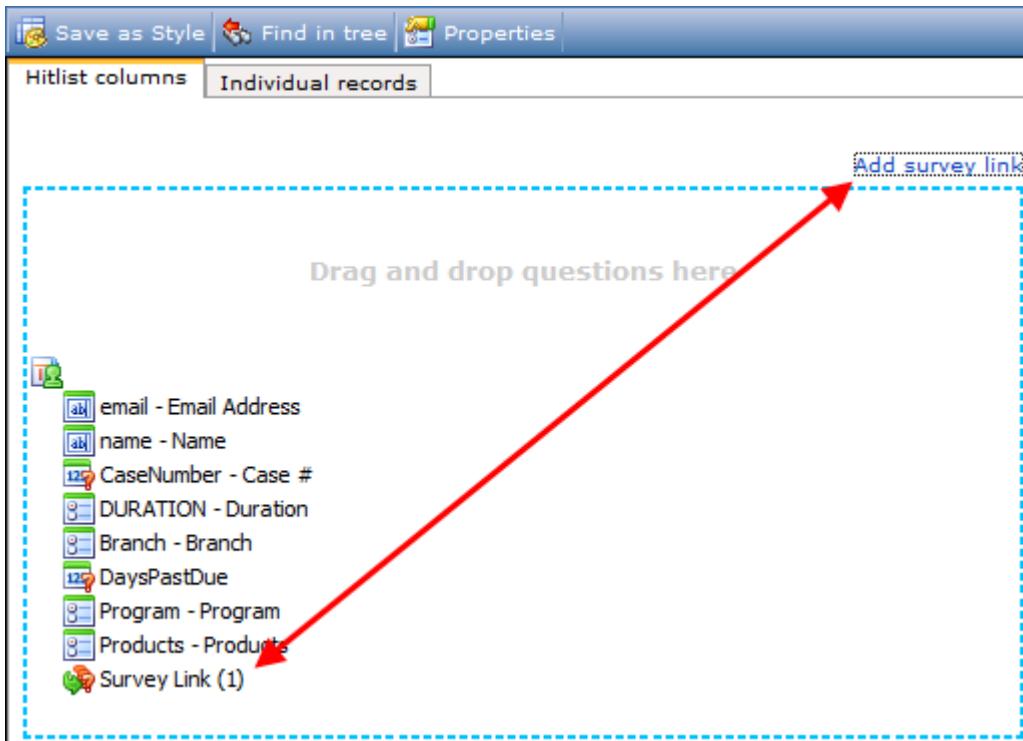


Figure 543 Adding a Survey Link to a hit list

2. Click on the component to select it, then drag it to the desired location in the hit list.
3. Right-click on the component and select **Properties** to set/change the survey link component's properties (see Hit List Field Properties on page 452 for more information).

### 17.1.1.2. Adding Additional Columns from a Table Lookup Question

If you have in the data source a table lookup question where the table includes one or more 'Additional columns' (refer to the Authoring User Guide for further details), these additional columns can be included in a hit list if so desired.

In the Data Source toolbox, expand the table lookup question. In the event the table lookup question included additional columns, these will appear under the question (arrowed in the example below), on the same level as the 'standard' table lookup answers (ringed in the example).

**Note:** When a table lookup question with a lot of answers is expanded in the Data Source toolbox, this can take some time. Therefore only the first 100 answers will be retrieved. In the event the answer you are looking for is outside the top 100, use the search facility to locate the answer.

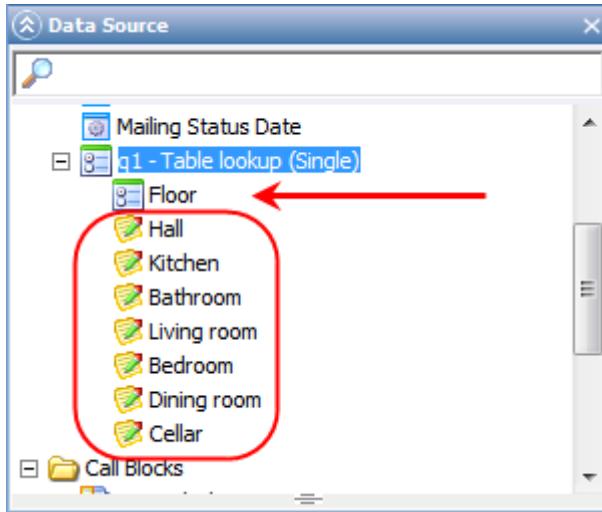


Figure 544 Example of the Data Source toolbox with a table lookup additional column

When you are creating the hit list, merely drag the additional column(s) into the hit list as you would a 'standard' question. The columns will be added to the hit list and will appear in the table as any other column.

If a single view element is added to the report page (see Single Views on page 459 for more information), then the additional columns can also be included here.

#### 17.1.1.3. The Rendering Style Property

When the hit list Rendering Style property is set to v2.0 (see Hit List General Properties on page 449 for more information), the hit list allows report viewers to control which columns in the hit list are to be displayed (in v1.0 this functionality is not available). The report designer will add to the hit list all the columns that he/she wants to be available, but can decide to set some of these columns to be Hidden by default (see Hit List Field Properties on page 452 for more information). When the hit list is rendered for the viewer, a button displays a drop-down list of all the columns that are available in the hit list (including those that the designer has designated as "Hidden"), and the viewer can then select those columns he/she wishes to be displayed.

Email Address	Name	Case #	Duration	Program	Products
Cathy.Phillips@gmail.com		700003	1-3 days	Sales	Product 1
DavidGreen@yahoo.com		600481	1-3 days	Accounting	Product 1
GeorgeSmith@yahoo.com		600479	1-3 days	Customer Service	Product 5
Tracy.Perry@hotmail.com		600225	4-6 days	Customer Service	Product 1
GeorgeMagic@comcast.net		600475	1-3 days	Accounting	Product 5
TimBull@hotmail.com		600476	1-3 days	Sales	Product 5
JohnSmith@hotmail.com		600477	1-3 days	Accounting	Product 1
George.Phillips@yahoo.com		600474	1-3 days	Customer Service	Product 1
MichelleReilly@yahoo.com		600473	1-3 days	Accounting	Product 5
Tracy.Smith@comcast.net		600472	1-3 days	Accounting	Product 4

Previous 1-10 (17) Next

**Figure 545 Example of a hit list using the v2.0 rendering style**

Note that in the example above, the hit list is divided into several pages. Click the **Previous** / **Next** buttons to move between the pages.

The report viewer can click the +/- button (ringed) to open the list of all available columns. He/she can then check the boxes for those columns he/she wishes to see, and click **Apply** to refresh the hit list.

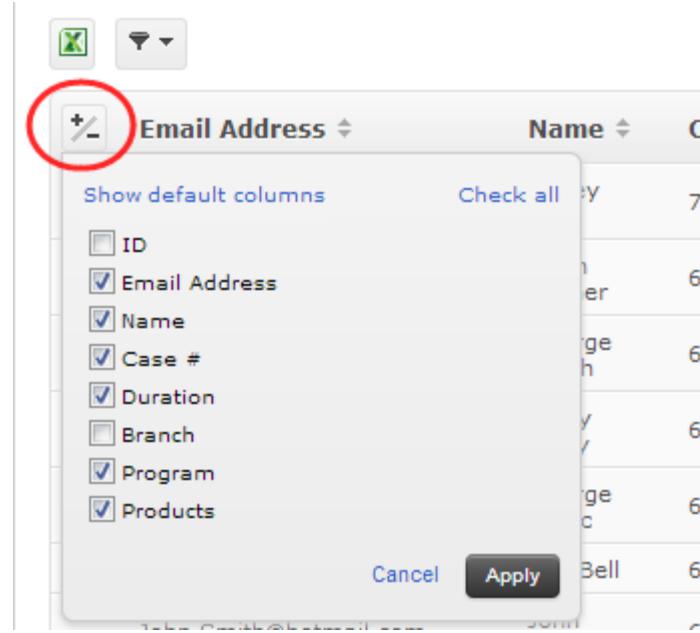


Figure 546 Example of the list of available columns

Click the **Filter** button at the top-left corner of the hit list (ringed) to open a filter drop-down. Here, if the Allow Searching property has been selected for the hit list (see Hit List Layout Properties on page 451 for more information), then the viewer can apply filters to the hit list columns. In this case the Interview End column is being filtered. Additional fields such as date or input fields become available as appropriate when filter options are selected.

Case #	Duration
700003	1-3 c
600481	1-3 c
600479	1-3 c
600225	4-6 c
600475	1-3 c
600476	1-3 c
600477	1-3 c
600474	1-3 c
600473	1-3 c
600472	1-3 c

Figure 547 Example of a hit list filter

### 17.1.2. The Feedback Area

The Feedback area is displayed to the report designer below the Hit List, and lists any changes that you could make to the Hit List to improve performance.

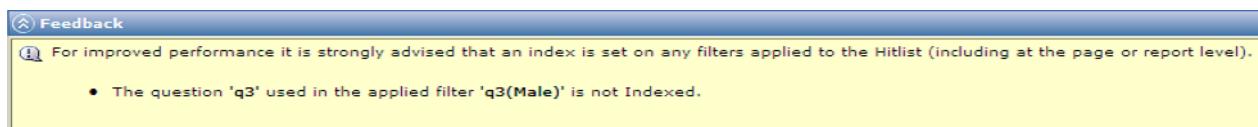


Figure 548 Example of the Feedback area

- For Hit Lists created before Version 15, the feedback area will indicate any variables that are not indexed. You can then go to those variables in Confrimt Authoring and index them.
- For all Hit Lists, the feedback area will indicate any filters used in the Hit List that are not indexed. Note that the indexing of questions used as filters on a Hit List is not mandatory, but indexing them will improve performance.

### 17.1.3. Hit List General Properties

The Hit List General property sheet controls the look and feel of the hit list. To open the property sheet, right-click on the hit list element, either in the Report toolbox or on the Hit List Designer, and select **Properties** from the menu, or in the Hit List Designer page, click the **Properties** button.

**Note that if any changes made to the properties have not been saved, this will be indicated in the Properties header bar. Click Save or Save and Close to save the changes.**

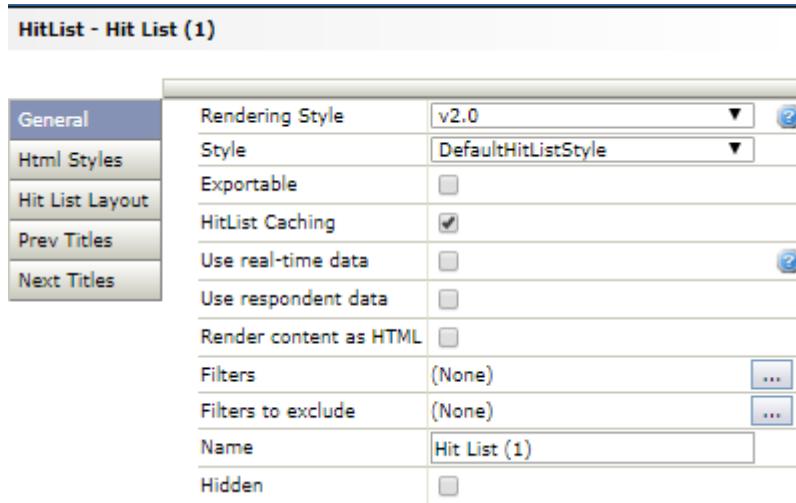


Figure 549 The Hit List > General properties

- **Rendering Style** - sets the appearance and customization possible for the visual component. In Confirmit version 17.5, several components have received additional capabilities to the out-of-the-box appearances and ability to style elements using custom CSS styles (see The Rendering Style Property on page 445 for more information). The Rendering Style version number reflects the following:
  - Version 1: The component rendering style prior to Confirmit version 17.5.
  - Version 2: The component rendering style after Confirmit version 17.5.
 Note that version 2 is the default for all new reports.
- **Style** - select the style to be used for the hit list, from those available in Layout and Styles.
- **Exportable** - when this box is selected, a link is displayed above the table. Viewers can click the link and specify their email address to receive an Excel or PowerPoint export of all responses to the open text question according to the filter settings.
- **Hit List Caching** - hit lists are cached on the Confirmit servers so that new visitors can view the cached lists without them having to be regenerated. Using this method, the servers do not have to re-calculate the lists in the database, thus saving waiting time. Default is selected; uncheck the box if you do not want the hit list to be cached.
- **Use real-time data** - if the report is based on a hub you may be not able to see immediate changes in data due to the fact that it takes time to load data into hub. Check this option to see real-time data in the hitlist. When this option is enabled, the data will be taken directly from survey databases.
- **Use respondent data** - check this option to cross response rates on a survey by background variables (see Use Respondent Data on page 163 for more information).
- **Render content as HTML** - if checked, then the hit list content will be rendered as HTML (i.e. <b>Test</b> will look like **Test** etc.). Otherwise HTML tags will be removed. This affects only view and preview; it does not affect exports.

- **Filters** - you can filter hit lists by having a fixed filter specified on the root, the folder or the page level, and you can specify a filter directly on the hit list. Click the ... button to open the Report Filters page, which lists all the filters available to the report, and select the desired filter. On completion, save the changes.
- **Filters to exclude** - click the ... button to open the Report Filters page, which lists all inherited filters, and select the inherited filters you want to exclude. On completion, save the changes.
- **Name** - type in a name for the hit list. This then identifies the list in the report tree.
- **Hidden** - check this box if you wish to hide the item temporarily from the report page. Uncheck the box to show the item again.

The **Forward** and **Backward** buttons in the hit list use by default the > and < characters. Use the **Prev Titles** and **Next Titles** tabs to specify other text for the buttons. You can specify a text for each button in each selected language.

#### 17.1.4. Hit List HTML Styles Properties

##### The Hit List Tab

The properties on this tab define which HTML layouts are to be used for the various parts of the Hit List. Click the down-arrows beside the fields to select the HTML styles that are to be used for the various items. The styles that are listed are those available in the **Layout and Styles** toolbox, in the **Styles > HTML** folder (see The HTML Styles on page 708 for more information).

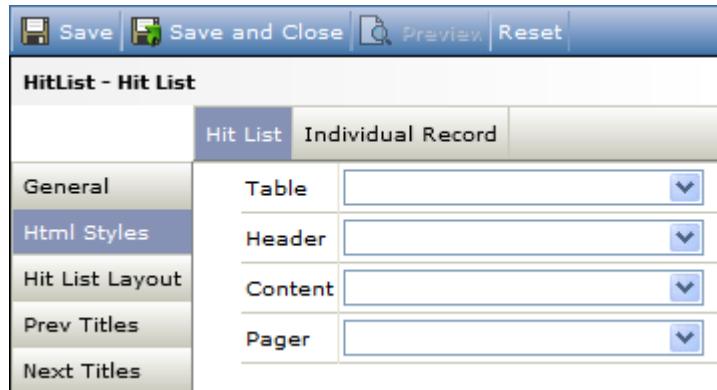
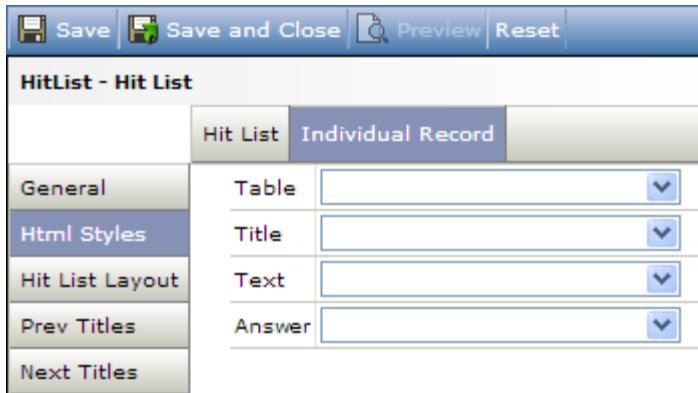


Figure 550 The HTML Styles tab

You can set styles for the Hit List table as a whole, and/or for the various parts of the table.

##### The Individual Record Tab

The properties on this tab define which HTML layouts are to be used for the various parts of the Respondent Overview page. Click the down-arrows beside the fields to select the HTML styles that are to be used for the various items. The styles that are listed are those available in the **Layout and Styles** toolbox, in the **Styles > HTML** folder.



You can set styles for the page as a whole, and/or for the various texts on the page.

### 17.1.5. Hit List Layout Properties

The properties on this tab control the layout of the Hit List. You can apply HTML style settings to the entire Hit List table, to headers, content (the records) and the pager (the back and forward links at the bottom of the table).

HitList - Hit List (1)	
	Details
General	Alternating Line Color <input type="text" value="#F1F1F1"/> <input type="checkbox"/>
Html Styles	Allow Sorting <input checked="" type="checkbox"/>
Hit List Layout	Default Sorting <input type="text" value="q1"/> <input type="button" value="▼"/>
Prev Titles	Allow Searching <input checked="" type="checkbox"/>
Next Titles	Newest Responses First <input type="checkbox"/>
	Exclude ID Column <input type="checkbox"/>
	Exclude Survey ID Column <input type="checkbox"/>
	Table Rows <input type="text" value="30"/>

*Figure 551 The Hit List Layout properties tab*

The properties are as follows:

- **Alternating Line Color** - will be used as the background color on alternate rows.
- **Allow Sorting** - enables the viewer to sort the Hit List by clicking on the various column headers. This property enables/disables sorting on the Hit List level. You can specify individual columns in the Hit List to be sortable by selecting the Is Sortable property in the properties sheet for the individual field (see Hit List Field Properties on page 452 for more information). Note that Sorting settings are saved to presentations and export packages, and are also applied in exports.
- **Default sorting** - Select a variable by which sorting in ascending order will be performed by default. Leaving this field blank sorts the Hit List by Response ID.
- **Allow Searching** - enables the viewer to search in the Hit List. Note that this property enables/disables searching on the Hit List level. In the event Rendering Style is set to Modern, filtering will be available via the Filter button. You can specify individual columns in the Hit List to be searchable by selecting the Is Searchable property in the properties sheet for the individual field (see Hit List Field Properties on page 452 for more information). Note that Searching settings are saved to presentations and export packages, and are also applied in exports.

**Note:** For IE6+, when the user starts to type criteria into a search field, a list of the relevant options appears. The list reduces as the criteria become more exact, and the user can select an option from the list at any time to complete the required criteria. For other browsers, the search criteria boxes function as standard text boxes.

- **Newest Responses First** - sets the default sort-order for the page, when the page is initially displayed, to be descending by ID instead of ascending by ID. This is because in many reports, the first thing a person does when entering the page is to click on the ID column so the current issues are displayed first.
- **Exclude ID Column** - hides the response ID column from the viewer.
- **Exclude Survey ID Column** - when the report is based on a combined data source, then the hitlist contains a column indicating the ID of the surveys used. Check this option to hide the Survey ID column
- **Table Rows** - specifies the number of records that are to be included per page.

### 17.1.6. Hit List Field Properties

Each field that you add to a Hit List (see How to Create a Hit List on page 442 for more information) has its own properties sheet. To open this sheet for a field, double-click on the appropriate field in the Hit List designer, or right-click on the field and select **Properties**.

The Properties sheet for the field opens as shown.

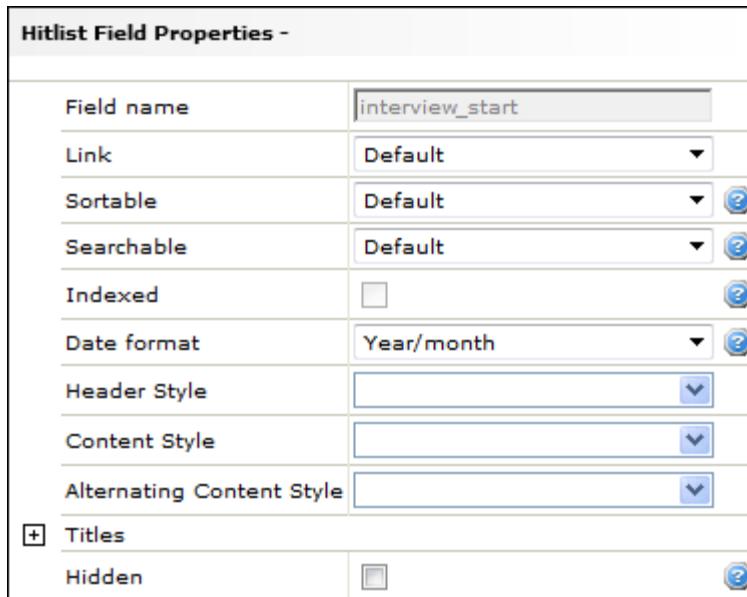


Figure 552 The Properties sheet for a Hit List field

The properties are as follows:

- **Field Name** - the name of the field the property sheet applies to. This is for information only and cannot be changed here.
- **Link** - click the down-arrow and select **Yes** to have the cell content for this field rendered as a link to a new page, the address of which is specified in the cell text if the cell text is the correct URL. The user can specify overriding texts, for example "Click here", instead of displaying the URL as the cell text. If the text is an email address, a new email will be created. Select **No** if you do not want the content to be rendered as a link, or **Default** if you want it to follow the default setting for the hit list.
- **Sortable** - click the down-arrow and select **Yes** if you want the viewer to be able to sort the hit list on this column. Note that you can set all columns in the hit list to be sortable by checking the Allow Sorting property in the Hit List Layout properties sheet (see Hit List Layout Properties on page 451 for more information).

- **Searchable** - click the down-arrow and select **Yes** if you want the viewer to be able to search the hit list on this column. Note that you can set all columns in the hit list to be searchable, except a Geolocation column, by checking the Allow Searching property in the Hit List Layout properties sheet (see Hit List Layout Properties on page 451 for more information). A Geolocation column cannot be made searchable as the user will rarely if ever know the exact coordinates to search for.
- **Indexed** - this property cannot be edited here. This property is included as an indicator for older hit lists. Setting an index on questions improves hit list performance, especially when searching and sorting elements within a hit list. To set a question to be indexed, go to the questionnaire designer in Confirmit Authoring. The setting is a checkbox on the question properties sheet General tab. This property is applicable only for single categorical questions, numeric questions and open text questions with a specified field width. Note that the survey must be re-launched for this property setting to take effect.
- **Date format** - available when the field is a date field. Use Date Format to specify the format of dates displayed. Various options are available. The default date format is MM/DD/YYYY 12:00:00 AM. When using any of the other date formats, you should be careful to choose a format that is logical for your timeseries. For example, it would not normally make sense to use the "Month Day" format for a timeseries spanning several years. If you select the custom date format, an additional field opens allowing you to specify your own format for the dates.
- **Header Style** - can be used to set a style on the hit list header row. The properties in the style then control the layout, font, color, column width etc. (for column width, set a value for the Position > Width property).
- **Content Style** - can be used to set a style on the hit list content rows. The properties in the style then control the layout, font, background color, text justification etc.
- **Alternating Content Style** - can be used to set a style on alternate rows in the hit list content. The properties in the style then control the layout, font, background color, text justification etc.
- **Titles** - type a new title for the hit list column into this field to override the column's default title. One field will be displayed for each language selected for the report. This property may also be useful when using additional columns from a table in the database designer as there is no way in table designer to specify the titles for these additional columns.
- **Hidden** - when enabled this will cause the column to be hidden by default when rendering the hit list. The user can then choose to display the column by selecting it in a drop-down list of those available, accessible via a button on the hit list. Note that this only applies to Hitlists where RenderingType has been set to Version 2.

When Searchable is enabled for a hit list, the viewer has two options:

- The viewer can click the down-arrow beside the search field at the top of the relevant column to open a list of the options in that column, and select the required option from the list.
- The viewer can start typing the required search criteria into the field at the top of the appropriate column. The hit list will be filtered and updated continually as characters are added such that it includes only those rows that match the criteria.

### 17.1.7. Survey Link Field Properties

A Survey Link component that you add to a Hit List (see Adding a Survey Link to a Hit List on page 444 for more information) has its own properties sheet. To open this sheet for a Survey Link component, double-click on the component in the Hit List designer, or right-click on it and select **Properties**. The properties page below appears.

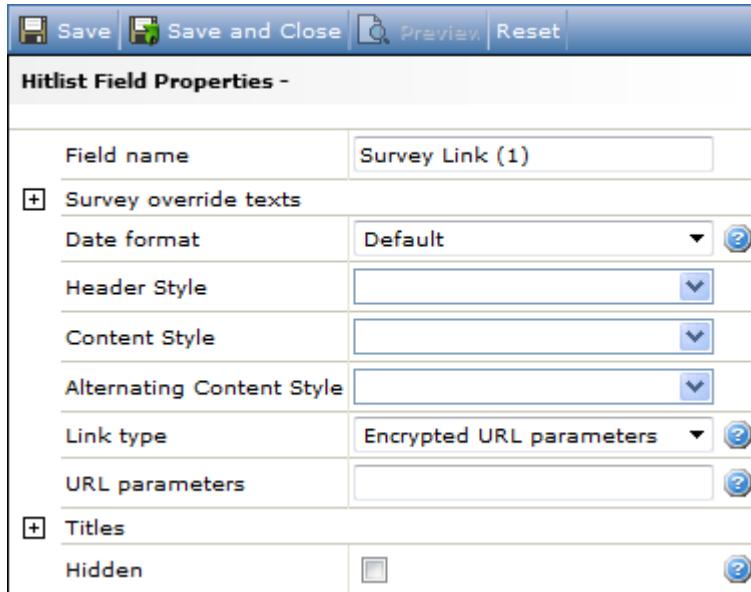


Figure 553 Opening the Properties sheet for a Survey Link component

The properties are as follows:

- **Field Name** - the name of the survey link component the property sheet applies to.
- **Survey override texts** - use this to override the default text in the survey links. By default the links will say "Link to survey". Expand the property using the + button, then add custom link texts for each language.
- **Date format** - use this to specify the format of dates displayed. Various options are available. The default date format is MM/DD/YYYY 12:00:00 AM. When using any of the other date formats, you should be careful to choose a format that is logical for your timeseries. For example, it would not normally make sense to use the "Month Day" format for a timeseries spanning several years. If you select the custom date format, an additional field opens allowing you to specify your own format for the dates.
- **Header Style** - can be used to set a style on the hit list header row. The properties in the style then control the layout, font, color, column width etc. (for column width, set a value for the Position > Width property).
- **Content Style** - can be used to set a style on the hit list content rows. The properties in the style then control the layout, font, background color, text justification etc.
- **Alternating Content Style** - can be used to set a style on alternate rows in the hit list content. The properties in the style then control the layout, font, background color, text justification etc.
- **Link type** - specifies the type of link that is generated for linking back to the respondent's interview. This can be one of 4 types:
  - o Encrypted URL Parameters.
  - o Unencrypted URL Parameters.
  - o Go to question.
  - o Go to call block.

This allows either direct access to a question or call block within the survey, or will simply supply parameters that are appended to the survey URL.

- **URL Parameters** - you can add additional encrypted parameters to the survey URL. By default, the field is empty - leave it empty to open the survey at the beginning. If you wish to add extra parameters to the survey URL, the string you enter here will be incorporated into the encrypted link that can be used for linking back to the respondent's interview. Encrypted parameters can be used in conjunction with links to specific questions or call blocks. In survey authoring, these parameters can be accessed using the UserParameters function.

You can pipe dynamic content into the parameters by using the following 3 primitives:

- o ^userid^ - will be replaced by the username of the logged-on report viewer;
- o ^usertype^ - will be the type of user who is viewing the report. Allowed values are: "EndUser", "Panelist" or "Confirmit";
- o ^role^ - will be replaced by the value supplied in the "Role" field for the logged-on report viewer (applies to EndUsers and Panelists user types only);
- o ^firstname^ - will be replaced with the first name of the logged-on report;
- o ^viewerlastname^ - will be replaced with the last name of the logged-on report;
- o ^vieweremail^ - Will be replaced with the e-mail of the logged-on report viewer.

**For encrypted URLs, multiple parameter values should be separated by a semicolon character.**

- **Titles** - type a new title for the hit list column into this field to override the column's default title. One field will be displayed for each language selected for the report. This property may also be useful when using additional columns from a table in the database designer as there is no way in table designer to specify the titles for these additional columns.
- **Hidden** - when enabled this will cause the column to be hidden by default when rendering the hit list. The user can then choose to display the column by selecting it in a drop-down list of those available, accessible via a button on the hit list. Note that this only applies to hit lists where RenderingType has been set to 'Modern'.

### 17.1.8. Performance Considerations

Searching in Hit Lists results in queries being made towards the survey database. To reduce potential performance problems caused by heavy queries on the database, these queries will timeout after a specified time and an error message will be displayed for the user. Below are some tips that will help to avoid such issues:

- Avoid making open text questions searchable, particularly if the field width is not specified. Select Properties on the question in the Hit List Editor and set "No" on Searchable.
- From Confirmit v15, any fields that can be indexed must be indexed to be used in Hit Lists. To do this, in Professional Designer open the property sheet for the question and check the Indexed box, then re-launch the survey.
- Avoid using Hit Lists on data sources with union. Use Data Processing to merge into one database.

## 17.2. Individual Records

You can allow viewers to click on a respondent in the hit list to display an overview of that record's responses to the questions in the survey.

The screenshot shows a 'Respondent overview' for Brian Corner. Key details include:

- Email Address:** Brian.Corner@yahoo.com
- Case #:** 600481
- Date case was created:** 4/2/2013
- Date resolved:** 4/2/2013
- Telephone Number:** 123-333-0481
- Name:** Brian Corner

Below this, there's a 'Follow up case' button and a 'Filter questions' search bar. A table provides an overall satisfaction rating for different service components:

Overall Sat	Overall Satisfaction
Agent attitude and courtesy	Very Important
Likelihood to Recommend	Very unlikely
Rating of Customer Service	
Time to reach an agent	Satisfied
Agent's knowledge	Very Satisfied
Agent attitude and courtesy	Satisfied
Timeliness of Resolution	Satisfied

At the bottom, navigation buttons show 'Previous', '1 of 4', and 'Next'.

**Figure 554 Example of an individual record overlay**

- **Next/Previous** navigation buttons allow the report viewer to move between respondents.
- Click the **Print** icon in the upper-right corner of the overlay to open the Print Setup page for the current respondent. Here you can select the printer to be used, which pages are to be printed etc.
- Click the **X** button in the upper-right corner of the overlay to return to the hit list.
- If a project contains loops, the report will display each loop iteration separately in the individual record.
- Click the **Follow up case** button to open the follow-up pane (see Survey Link Options in Individual Record View on page 456 for more information).

If a respondent has not provided an answer for a particular question, then that question will not be displayed in the Individual Record for that respondent.

In the event you (the report designer) have added a large number of questions to the overview, the report viewer can use the filter field to find particular questions. Note that the filter will persist over all respondents. That is, if the viewer sets a filter and then uses the **Next/Previous** buttons to move to a different respondent, the filter will remain applied; he/she will not have to retype the filter criteria.

### 17.2.1. Survey Link Options in Individual Record View

The report viewer can click the **Follow up case** button to open a pane in the right half of the window. This pane will present a survey to the report viewer, allowing him/her to answer questions, add information/comments etc. such as for example a "follow-up" survey to the customers' comments in the original report. This follow-up survey could be a standard survey for your company, or one you have created as the report designer, and is added to the Individual Records page using the Survey Links component (see Setting Up the Individual Records Page on page 457 for more information).

The screenshot shows the 'Respondent overview' overlay. At the top left is a user icon. To its right, the email address 'Brian.Corner@yahoo.com' and case number '600481' are displayed. On the far right, there are four fields: 'Date case was created' (4/2/2013), 'Date resolved' (4/2/2013), 'Telephone Number' (123-333-0481), and 'Name' (Brian Corner). A 'Follow up case' button is located at the top center. Below it is a table titled 'Overall Sat' with five rows. To the right of the table is a section titled 'What would you like to do with this alert case?' containing two radio buttons: 'Deal with it now' and 'Escalate to a manager'. Another section below asks 'Please select the manager you would like to escalate this request to:' with four options. At the bottom right are 'Next' and 'Powered by Confirmit' buttons, along with navigation controls for 'Previous', '1 of 4', and 'Next'.

Overall Sat	
Overall Satisfaction	Dissatisfied
Agent attitude and courtesy	Very Important
Likelihood to Recommend	Very unlikely
Rating of Customer Service	
Time to reach an agent	Satisfied
Agent's knowledge	Very Satisfied
Agent attitude and courtesy	Satisfied
Timeliness of Resolution	Satisfied

**Figure 555 The Follow-up Case pane in the Respondent Overview overlay**

Note that the text in the "Follow up case" button can be edited as required (see The Properties on the Individual Records Page on page 459 for more information).

### 17.2.2. Setting Up the Individual Records Page

You set up the Individual Records page for a hit list in the Individual Records tab for that hit list (double-click on the Hit List in the Report toolbox).

Note that this tab is not accessible when the Hit List Rendering Style is set to v1.0 (see Hit List General Properties on page 449 for more information).

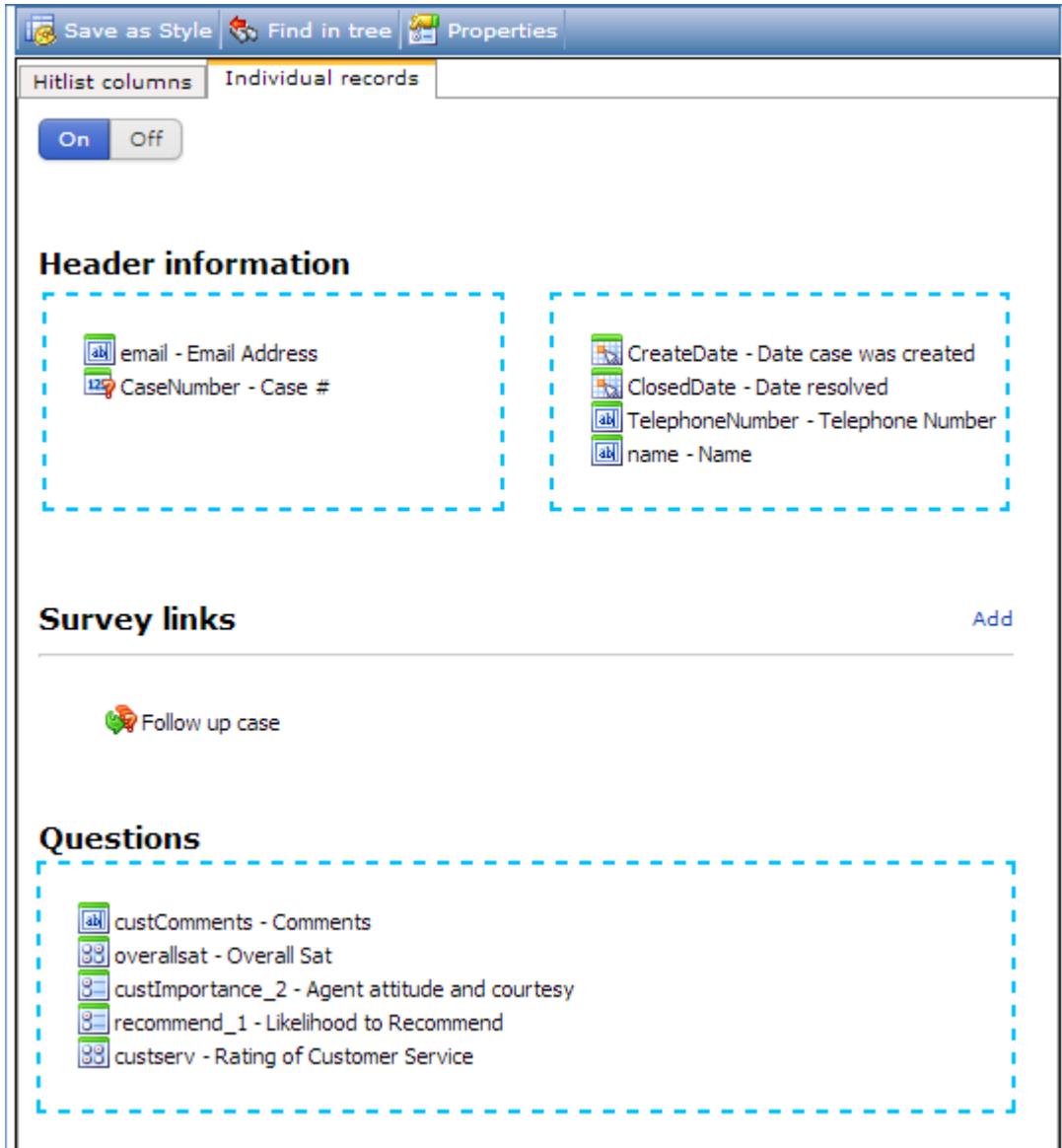


Figure 556 Example of the Individual Records tab for the overview shown in the Individual Records section

Click **On** (towards the upper-left corner of the tab) to allow report viewers to access the individual records for the respondents; click **Off** to prevent access.

The Individual Record page presented to the report viewer has a preset, simple and clear layout. You as the report designer cannot change the actual layout; only the title and text fonts, the information presented and the order in which it is presented.

- To add a question to a frame, drag it from the data source and drop it into the appropriate area.
- To remove a question, right-click on it and select **Delete**.
- To move questions into different frames, or re-order them, merely drag them and drop them as required.
- To edit the table (border widths and colors) and fonts, go to the Individual Record tab in the **Hit List properties > HTML Styles** tab.

For multi or grid questions, you can drag individual answers or the entire question.

The areas are:

- **Header Information** - this two-column area is intended for the general information, for example the name and contact details for the respondent.
- **Survey Links** - is intended to allow you to add surveys such as follow-up questionnaires to allow the report viewers to provide additional information.
- **Questions** - the main information area. Add any questions that you want the viewer to be able to see, to this area.

#### **17.2.2.1. The Properties on the Individual Records Page**

Each item you place on the Individual Records page has its own list of properties. To access these properties, double-click on the item in the Individual Records page, or right-click on it and select **Properties**. The properties list opens towards the bottom of the page.

For all questions placed in the page, either in the Header Information area or in the Questions area, you can select the text that is to be displayed for the item in the Respondent Overview page. For each item, you can select between the Question Title, the Question Text, or you can add a self-defined title for each language that the report is available in.

For the Survey Link field the properties are the same as described in the Survey Link Field Properties section (see Survey Link Field Properties on page 453 for more information), with the addition of the **Open link in new window** - property. Check this box if you want the survey to open in a new window.

### **17.3. Single Views**

You can place a frame on a Hit List page in a report such that when a report viewer clicks on a link in the Hit List, the respondent information is presented in that frame. This functionality is given the name "Single view" because the viewer is looking at a single set of the response data. A single view is completely customizable regarding its appearance and the layout of questions, in comparison to the Individual record view.

The screenshot shows a web-based reporting interface. On the left, there is a grid of data rows, each containing fields for Name, Telephone, Financial Services Sector, and Moment of Truth. A red circle highlights the second row from the top, and a red arrow points from this row towards the right-hand panel. The right-hand panel is titled "Follow-up cases" and contains several sections of information:

- Action this follow-up case | Print these details**
- ADMIN: comments**
  - Current status: Closed - resolved
  - Date case opened: Wed Feb 6 16:23:26 UTC+0 2008
  - Date case closed: Tue Apr 29 08:08:37 UTC+0 2008
  - New satisfaction: Very Satisfied
  - Comments: Call [redacted], was upset about increase in interest rates. After explaining the BOE rates up/down, is now happy.
- Date contact requested: Tue Jan 15 20:56:37 UTC+0 2008**
- Personal details**

Name	Domin Griffin	Address	wmstnsfiyv
Gender	Male	Postcode	lopkyq
Age	13	Email	dk
Income (GBP £)	33779.07	Telephone	svxjzu
- Customer comments**

lu
- Product history**

Product Type	Loan
Moment of Truth	Account Opening
Financial Services Sector	Retail Banking
- Experiences**

Satisfaction	Dissatisfied	Loyalty	Extremely likely = 10
Advocacy	9	NPS	Promoters

At the bottom of the main grid, there are links for "Previous" and "Next", and a page number "1-15 (45)".

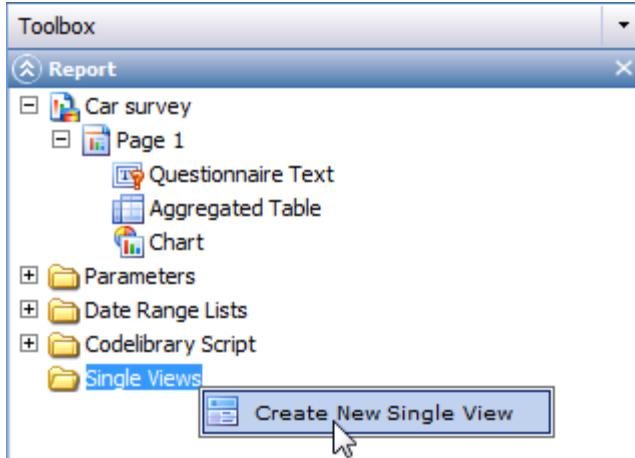
Figure 557 Example of a Single View frame beside the Hit List

You can place a link on this Single View page such that the person viewing the report can open the survey and see the response data as the respondent entered it (see The Survey Link Component on page 465 for more information).

### 17.3.1. How to Create a Single View

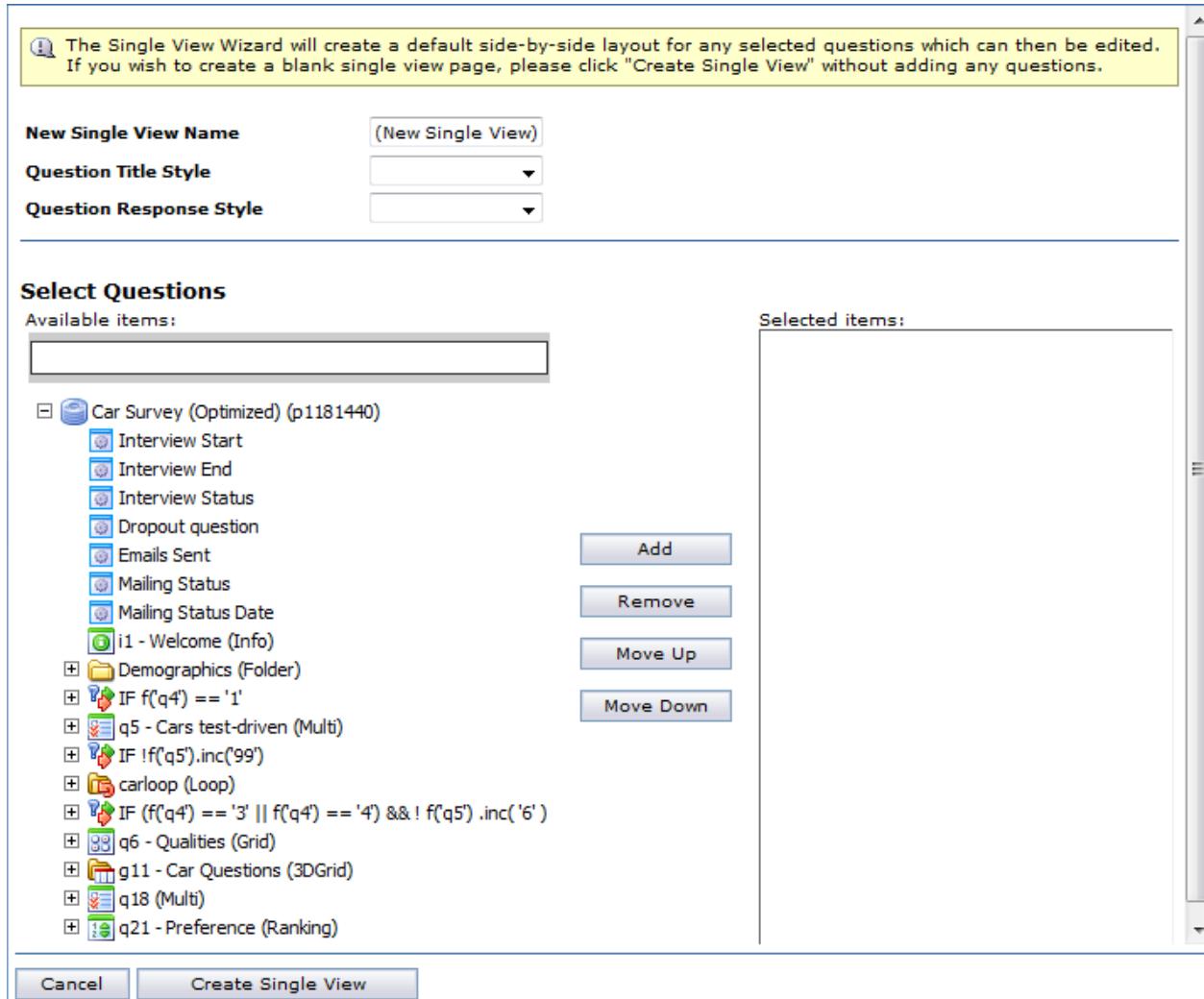
A Single View Wizard allows you to create a Single View quickly and easily.

1. In the Report toolbox, right-click on the **Single View** folder and select **Create New Single View**.



*Figure 558 Inserting a Single View into the Report toolbox*

The Create New Single View page opens.



**Figure 559 Example of the first page of the Single View wizard**

The left column lists all the questions in the data source that are available to be used in the single view.

2. Towards the top of the page, type the name of your new Single View into the name field.
3. Select a question title style and a question response style from the drop-down lists.
4. In the left column, select the questions you wish to use in the single view and click **Add** to copy them into the Selected Items column.
5. The questions will be located in the Single View in the order in which they are listed. Select questions and click **Move Up** and/or **Move Down** as appropriate to list the questions in the desired order.
6. Click **Finish**.

A new Single View element is created in the Single Views folder. This element can now be assigned to a single view placeholder that has been added to a page with a hit list. The element can be edited as required (see How to Edit a Single View on page 462 for more information).

### 17.3.2. How to Edit a Single View

To edit a Single View, proceed as follows:

1. Right-click on the element in the Single Views folder and select **Edit**, or double-click on the element, to open the Page Editor for the Single View element.

This is a WYSIWYG editor, where you can design the Single View layout in the same way as a "normal" report page.

2. Drag and drop the required elements from the Visual Components toolbox into the Single View page editor.

If you type text directly into the table, use the tools in the toolbar across the top of the page to format the text.

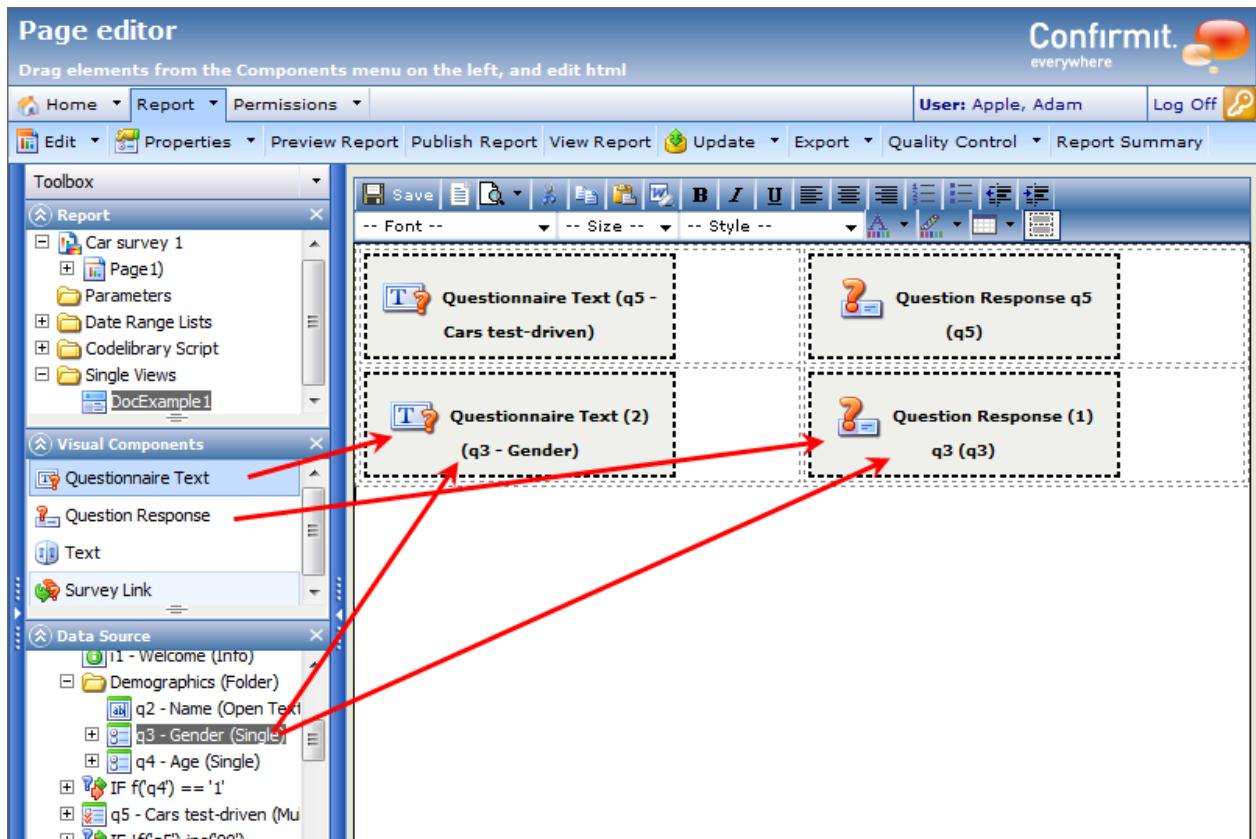


Figure 560 Building the Single View in the WYSIWYG editor

Note that the toolbox now only contains the elements that can be used in Single Views. These are:

- **Questionnaire Text** - adds the question text or title from the selected question into the Single View.
  - **Question Response** - shows the answer to the question.
  - **Text** - a "standard" text element into which you can add any desired text. This would normally be for example a title for the Single View frame, and you can add texts for each report language.
  - **Survey Link** - creates a link into the survey for the selected response.
3. Go to the Data Source toolbox and drag into the appropriate components in the style, the questions for which you wish to display the data.

Once you have designed the Single View style, add a "place-holder" in the actual report page. The Single View element will then be added to the page at this location.

1. Drag a Single View Placeholder element from the Visual Components toolbox and drop it into the page on which you have the Hit List.

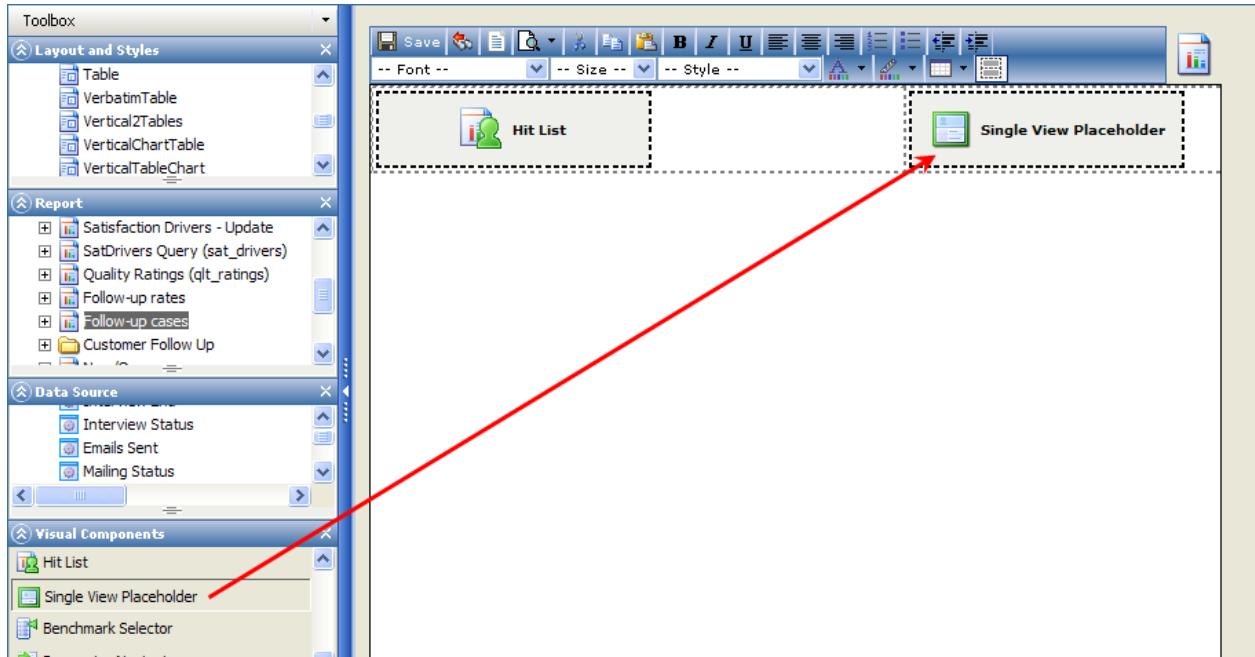


Figure 561 Dragging a Single View placeholder into the Hit List page

2. **Save** the changes.

You must now specify which Single View style you wish to use for this Single View element.

1. Right-click on the element and select **Properties**.

The Properties page opens as shown below.

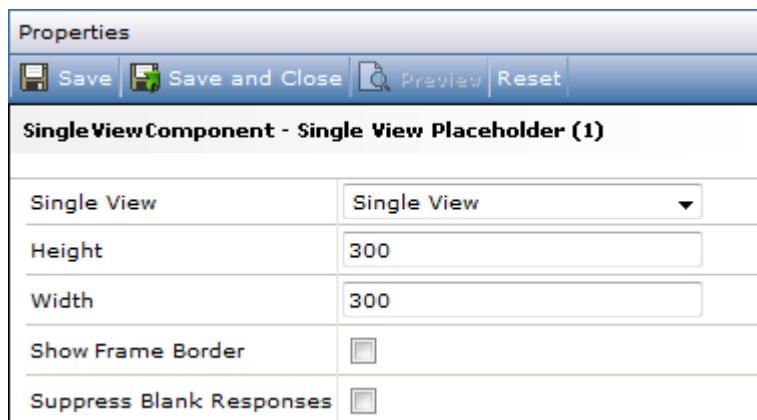


Figure 562 The Single View Placeholder element's Properties page

- Click the down-arrow beside the **Single View** field to open a drop-down list of the single view styles available, and select the desired style from the list.
- Specify the desired width and height for the single view frame, and check the **Show Frame Border** box if you wish a frame border to be visible to the viewer.
- If there are "Unrecorded" values for some variables in the data (not answered questions), you can suppress the data for blank values on header variables. Check the **Suppress Blank Responses** box.

5. Click **Apply** (or **Apply and Close**) to apply the changes, and then click **Save** in the Page Editor to save the changes.

The name of the selected Single View style is added to the placeholder element.

You can now preview the report page to see the results.

### 17.3.3. The Survey Link Component

You can add a Survey Link component to the single view page. This component allows the report viewer to open the survey that is providing the response data, and view the actual data for the selected respondent.

**Note:** By default, the link will open the survey at its first question. However you can add parameters to the link's URL and then use a scripting node in the survey to for example open the survey at a specific page.

1. In the Report toolbox, go to the **Single Views** folder and double-click on the single view page to which you wish to add the Survey Link component.
- The Page Editor opens with the selected page.
2. Add a row or column to the layout table as required.
  3. Drag the Survey Link component from the Visual Components toolbox and drop it into the required position, or right-click in the table cell and select **Insert Component > Survey Link**.

A Survey Link component is created in the Page Editor.

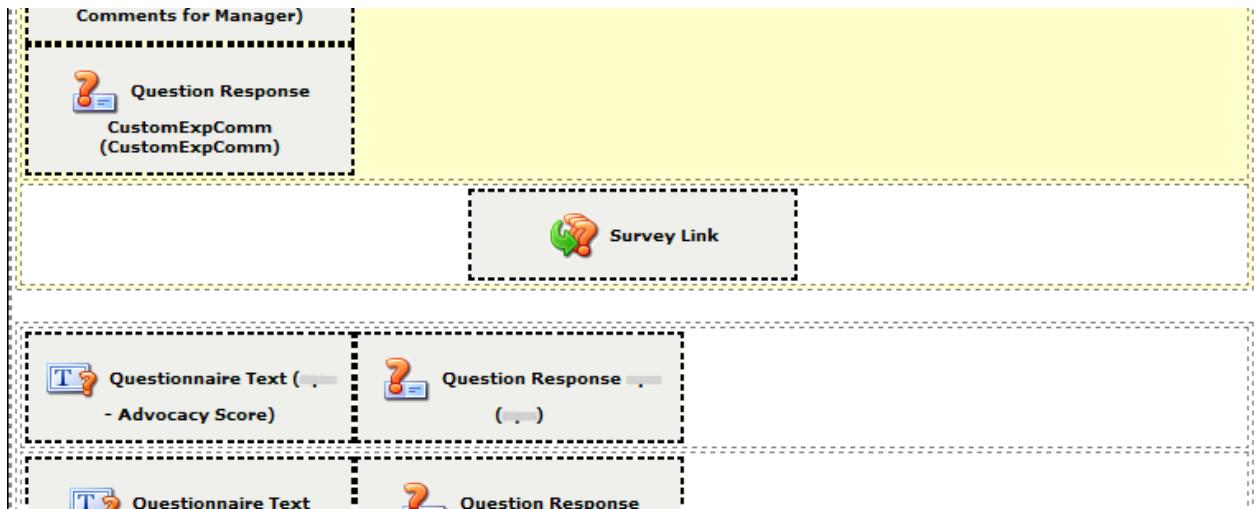
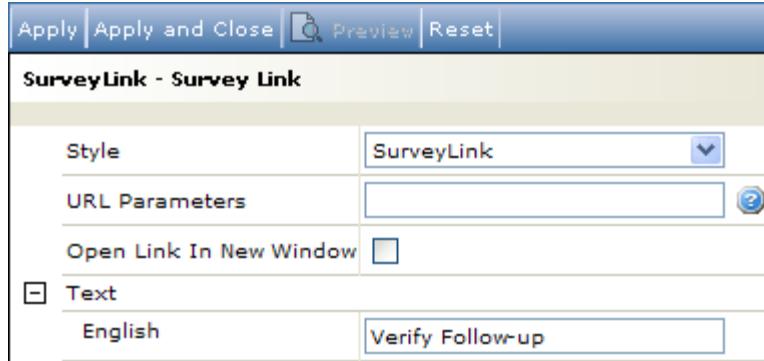


Figure 563 Example of the Survey Link component on the Single Views page

4. Double-click on the Survey Link component, or right-click on it and select **Properties**, to open the Properties page for the component.
5. Select the required style for the component.



**Figure 564** The Survey Link Properties page

By default, the URL field is empty. Leave this field empty to open the survey at the beginning. If you wish to add extra parameters to the survey URL, the string you enter here will be added to the default URL to the survey.

6. Check the **Open Link...** box if you want the survey to open in a new window.
7. Type the text that you wish to be presented in the link button, in the various languages selected for the report, into the **Text** fields.
8. Click **Apply** or **Apply and Close** to save the changes.
9. View or Preview the report to view and test the link.

**Figure 565** The resulting link button on the Single View page

#### 17.3.4. The Single View Right-Click Menu

Right-click on a Single View element in the **Report > Single Views** folder to open the element's right-click menu.

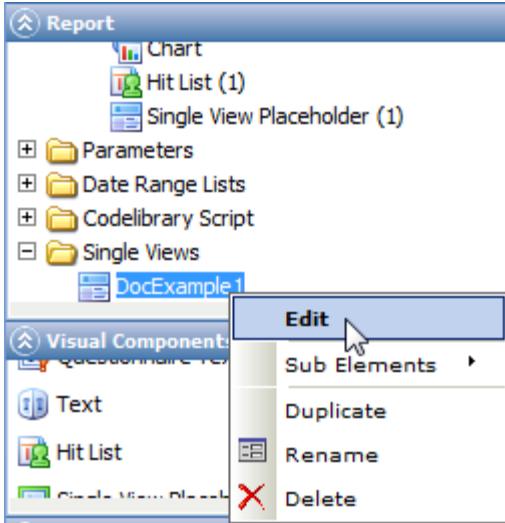


Figure 566 The Single View element's right-click menu

The menu commands are as follows:

- **Edit** - opens the Single View for editing. This has the same effect as double-clicking on the element in the toolbox.
- **Sub Elements** - allows you to edit the settings for groups of elements simultaneously. Any changes you make will be applied to all instances of the selected element that are contained within the Single View object. For example, if you select **Sub Elements > Questionnaire Text**, the properties sheet for the Questionnaire Text elements opens and any changes you make to the properties will be applied to all the Questionnaire Text elements in the Single View object. **Revert All to Style** opens a window in which you can select an HTML style. Click **Save and Close** to apply the selected style to all the elements in the Single View object.
- **Duplicate** - duplicates the Single View element in the toolbox.
- **Rename** - selects the element's name text for editing.
- **Delete** - select and confirm to delete the Single View element from the toolbox.

## 18. Hierarchies

A hierarchy is a type of question where the answers are ranged in more than one level. The respondent "enters" the question at the top level, whereupon the answer options in the next level become viewable. When the respondent selects an answer option in that level, the options in the next level (if one exists) become viewable, and so on. Each answer option in a lower level is accessible through only one option in the higher level. This results in a tree-like structure, with one trunk splitting into several branches, and each branch splitting further and ending finally at a leaf. Each leaf can only be reached by following one specific route through the tree. A hierarchy can have as many levels as required, and as many options in each level as required.

A hierarchy can be used in the Personalized Reporting functionality. When the hierarchy question is used in a report, it acts as a filter for the information presented on the report page. Depending on the permissions allocated, the viewer can then filter the information presented.

When a hierarchy is used in a report, a filter button appears by default in the Navigator bar. You can hide the button if you want to locate a button elsewhere on the page. A Hierarchy component can be placed in the Report Master, whereupon a hierarchy filter button will be located on every report page, or it can be placed on a particular report page (see [on page 469](#) for more information).

### 18.1. Setting Up a Hierarchy in a Report

The hierarchy question itself is set up in Confirmit Authoring in the Database Designer. The question is based on a Single question, and may be balanced or unbalanced. A wizard is available to assist with the creation process.

**Important**

**The question must be indexed.**

Refer to the Confirmit Authoring User Guide for further details.

To set up a hierarchy filter in a report:

1. Create a page in the report (see [How to Create Pages in the Report](#) on page 54 for more information).
2. If one does not already exist, add a table to the page (see [How to Edit the Contents of a Report Page](#) on page 64 for more information).
3. Open the table, then drag the hierarchy question from the Data Source toolbox and drop it into the desired place in the table, then save the changes.
4. In the Report toolbox, select the report (the top-most item in the toolbox) and open the Report Properties ([go to The Report Properties > General Tab for more information](#)).
5. In the Personalized Filter Question property, click the down-arrow beside the field and select the hierarchy question you have added to the table.
6. Ensure the report is not Public (the Public check box is not selected) and set other properties as required.
7. Click **Save and close**.

When you preview the report, the Hierarchy filter button will be included in the Navigation bar.

### 18.2. Setting the Layout

The layout of the hierarchy in the table on the report page can be changed using the Hierarchy Layout property in the Header Layout property sheet for the table. You can give the hierarchy a Flat layout, where all the answer options of all the levels in the hierarchy are listed one after the other, or you can use the Nested layout, where each option of each level in the hierarchy is followed by all the answer options pertaining to that level (see [Hierarchy Layout](#) on page 200 for more information)

You can set the default value for the hierarchy layout (nested or flat) in the default header settings for the table style (see [Default Header Settings](#) on page 707 for more information).

## 18.3.

### 18.4. The Hierarchy Visual Component

The Visual Components toolbox provides a Hierarchy object. You can place this object on any report page, and set it up to function as a filter for example for a table such that the viewer can select the information that is presented.

1. Go to the report and open the appropriate page.
  2. Drag a Hierarchy object from the Visual Components toolbox and drop it into the page.
  3. In the Report toolbox, create a parameter (see Defining a Parameter on page 428 for more information).
  4. Open the parameter's Properties page and set the parameter's Type to String Response.
  5. Double-click on the parameter to open the Parameter Designer page, then drag the hierarchy question and drop it into the parameter.
- Note:** The Hierarchy object supports only hierarchy lookup single questions (refer to the Confirmit Authoring User Guide for further details); "normal" and table lookup single questions are not supported.
6. Save the changes.
  7. Create a table on the report page, add the hierarchy question to one of the axes and create a cross-tab as required.
  8. Save the changes and preview the report.

**Note:** If you wish to place a hierarchy component on a particular report page and do not want to have the hierarchy filter button in the Navigator bar in addition, then you can remove the filter button from the Navigator bar. To do this, go to the Navigator component in the Report Master and uncheck the Show Hierarchy Level property in its Properties sheet (see The Menu Navigator Type on page 697 for more information). This will remove the filter button from the Navigator bar on all pages in the report.

In the example below, a table displays hotel regions against the age groups of the respondents who have answered questions concerning their stays in hotels in the regions. The hierarchy component is located in the title bar.

The screenshot shows a report interface with a blue header bar. In the top left is a placeholder for a logo. Next to it is a button labeled "Overall Hotel Group" with a right-pointing arrow icon. Below the header is a navigation bar with five buttons: "Example page" (highlighted in blue), "Results", "Columns layouts", "Details", and "Bar chart".

## Example page

	Under 18		18 - 24		25 - 34		35 - 44		45 - 54	
<b>Overall Hotel Group</b>	3	9.38%	3	7.50%	2	5.71%	3	9.38%	2	5.41%
<b>London Region</b>										
London	3	9.38%	3	7.50%	2	5.71%	3	9.38%	2	5.41%
<b>Northern Region</b>										
Manchester	1	3.13%	1	2.50%	1	2.86%	4	12.50%	1	2.70%
Liverpool	2	6.25%	4	10.00%	3	8.57%	6	18.75%	3	8.11%
Newcastle	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Leeds	3	9.38%	3	7.50%	8	22.86%	1	3.13%	1	2.70%
Sheffield	0	0.00%	0	0.00%	1	2.86%	0	0.00%	0	0.00%
<b>Midlands Region</b>										
Birmingham	1	3.13%	1	2.50%	2	5.71%	1	3.13%	1	2.70%
<b>Southern Region</b>										
Bristol	1	3.13%	4	10.00%	2	5.71%	1	3.13%	2	5.41%
Portsmouth	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

**Figure 567 The hierarchy visual component on the report page above the unfiltered table**

The user clicks the hierarchy button (in the figure above, the Overall Hotel Group button) to open the top level filter, then clicks the appropriate arrow button to move through the hierarchy.

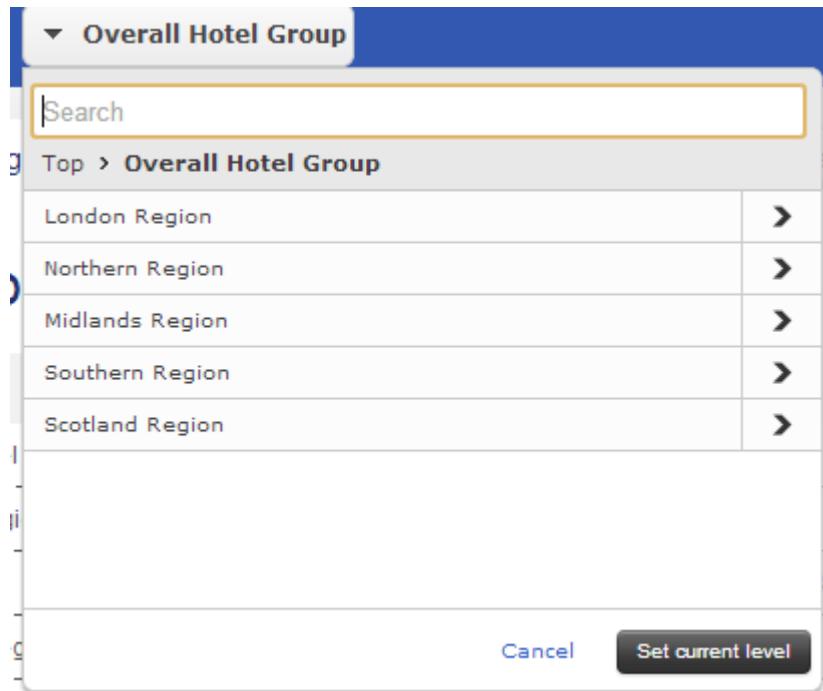


Figure 568 Selecting an option from the hierarchy

The user can also type characters into the Search field to list all instances of the typed character string in the current hierarchy level. Up to 100 hits will be listed; the list will not be displayed until there are 100 or fewer hits to be listed. The search field is not case-sensitive.

A wildcard is automatically added to the end of the character string that is being typed, so the list will be displayed as soon as valid results are available; the user does not have to type a complete word. Note that there is no "pre" wildcard; the typed character string must be at the beginning of a word for that word to be listed. If for example the user types **chest** into the Search field, then **Chester** will be found, but not **Manchester**. The searched-for characters do not need to be the first word in the row - typing **reg** into the field will find all instances of Region, including for example **London Region**.

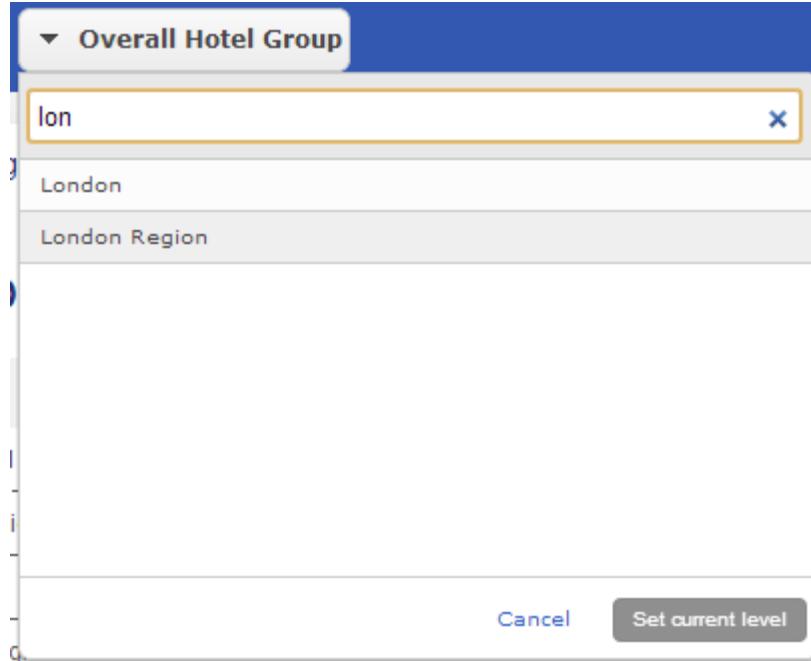


Figure 569 Using the Search field

When the user is selecting options in the hierarchy, a "breadcrumb" trail is displayed so that he/she can follow their location in the hierarchy. The user can click on a level in the breadcrumb to return to that level.

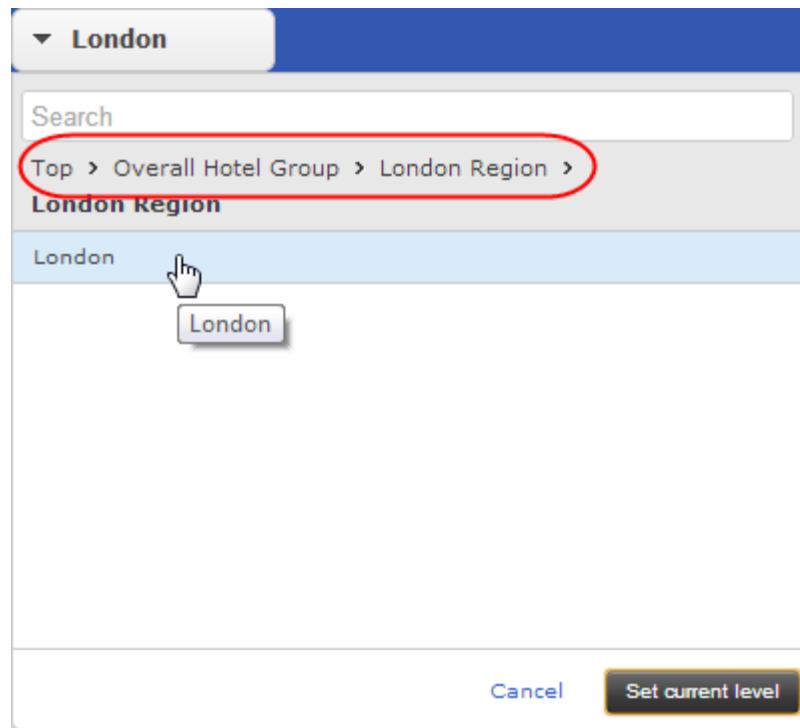
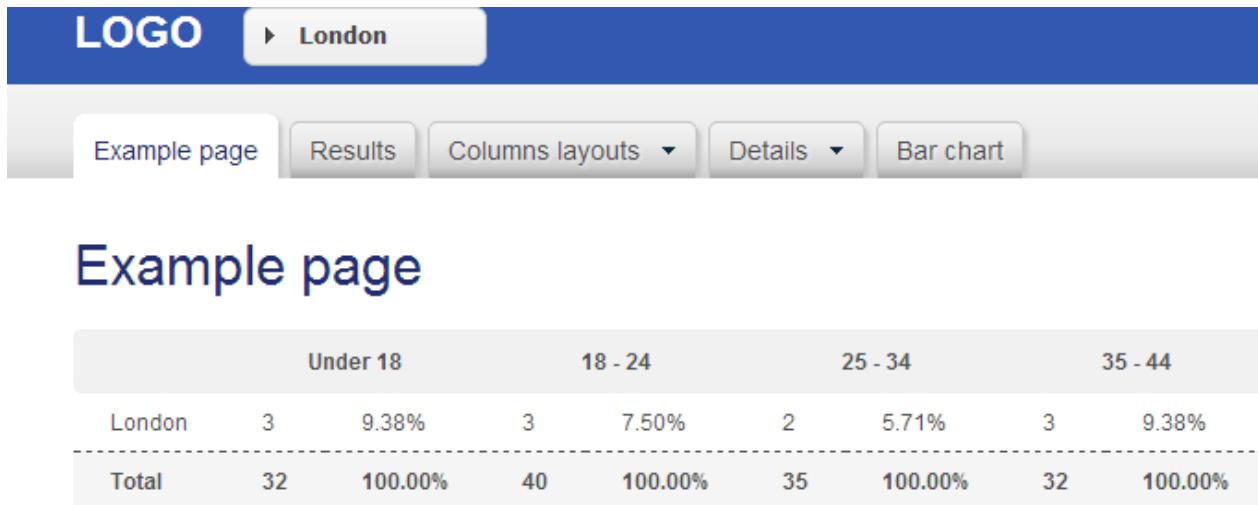


Figure 570 The breadcrumb trail

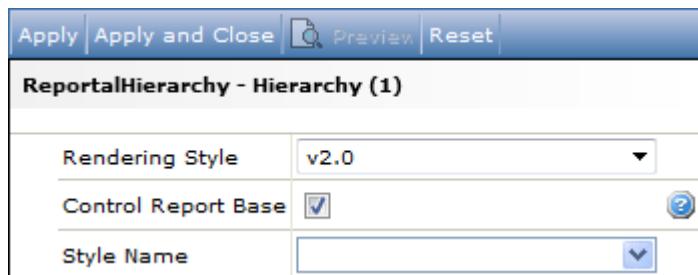
When the user reaches the desired place in the hierarchy, he/she clicks the **Set current level** button to refresh the table.



*Figure 571 Having clicked Set Current Level, the table is updated*

#### 18.4.1. The Component Properties

The Hierarchy component has a set of properties that define how it looks and reacts.



*Figure 572 The hierarchy component's property sheet*

The properties are as follows:

- **Rendering Style** - this property sets the appearance and customization possible for the component. In Version 17.5, several components have received additional capabilities to the out-of-the-box appearances and ability to style elements using custom CSS styles. The version number reflects the following:
  - **Version 1** - the component rendering style prior to Version 17.5.
  - **Version 2** - the component rendering style after Version 17.5. Version 2 is the default for all new reports.
- **Control Report Base** - select this option to allow the hierarchy component to be used to control the personalized user base of the report, in the same manner as the "Set report base" admin menu item.

**Note: this component does not support the multiple selection of bases, regardless of the setting for "Allow multiple selection" in the Report Properties -> General menu.**

- **Style Name** - select the style that is to be used to present the hierarchy button on the report page.

## 18.5. Using the Hierarchy

When the hierarchy question is used in a report, it acts as a filter. In this example, the table on the report page has the hierarchy question placed in the Rows column.

The text and illustrations below describe the use of a hierarchy button located in the Navigation bar. A hierarchy component located "free-standing" on a report page, whilst it may look different, will have the same results.

**Note: In the event the report contains several pages, the Hierarchy filter button will always be placed last in the navigator bar.**

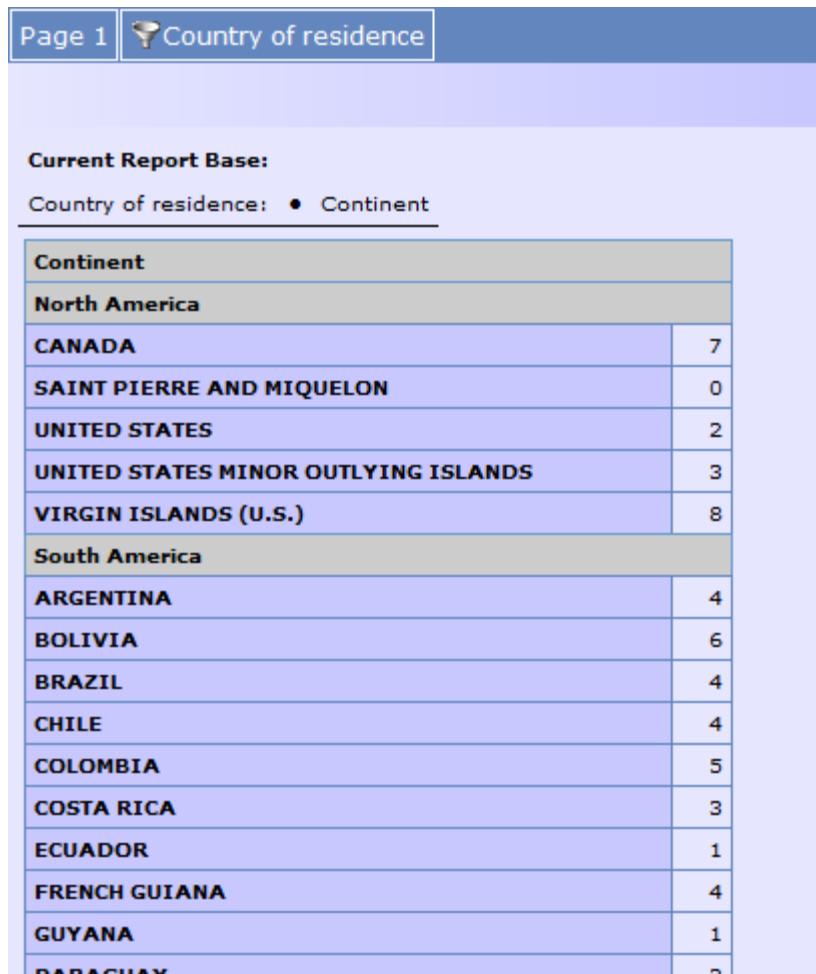


Figure 573 Example of a Hierarchy component on a report page

The user clicks on the filter button in the navigator bar to open the top level of the hierarchy. For each level in the hierarchy they then click on the appropriate arrow to expand the options available for that item.

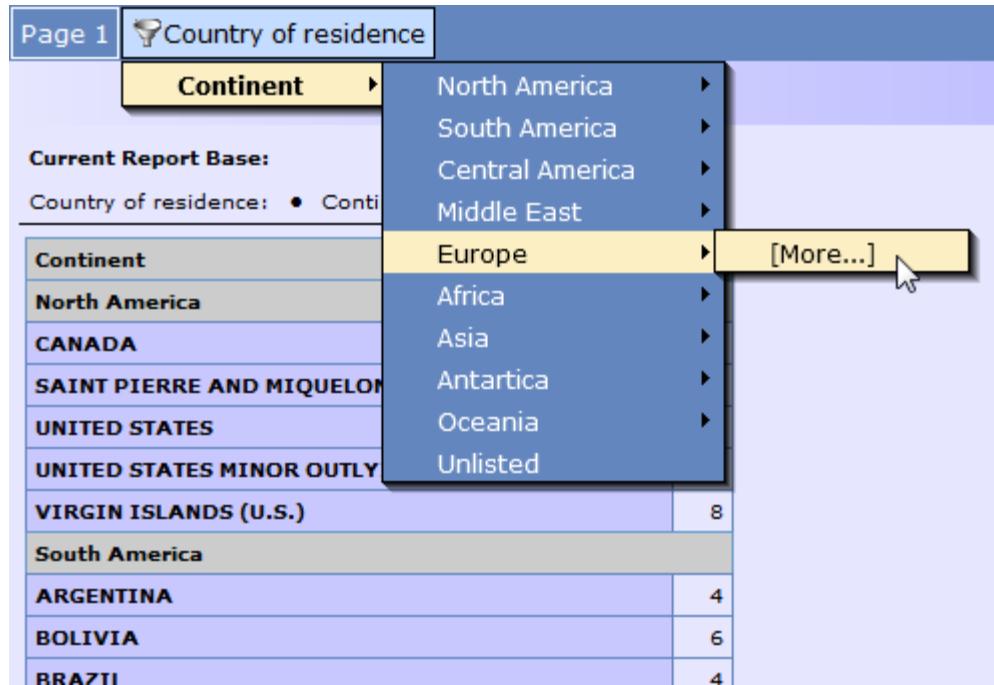


Figure 574 Expanding the Hierarchy component

In this example the lowest level for this item has a considerable number of options, so the last choice is [More]. Click this to open the final list.

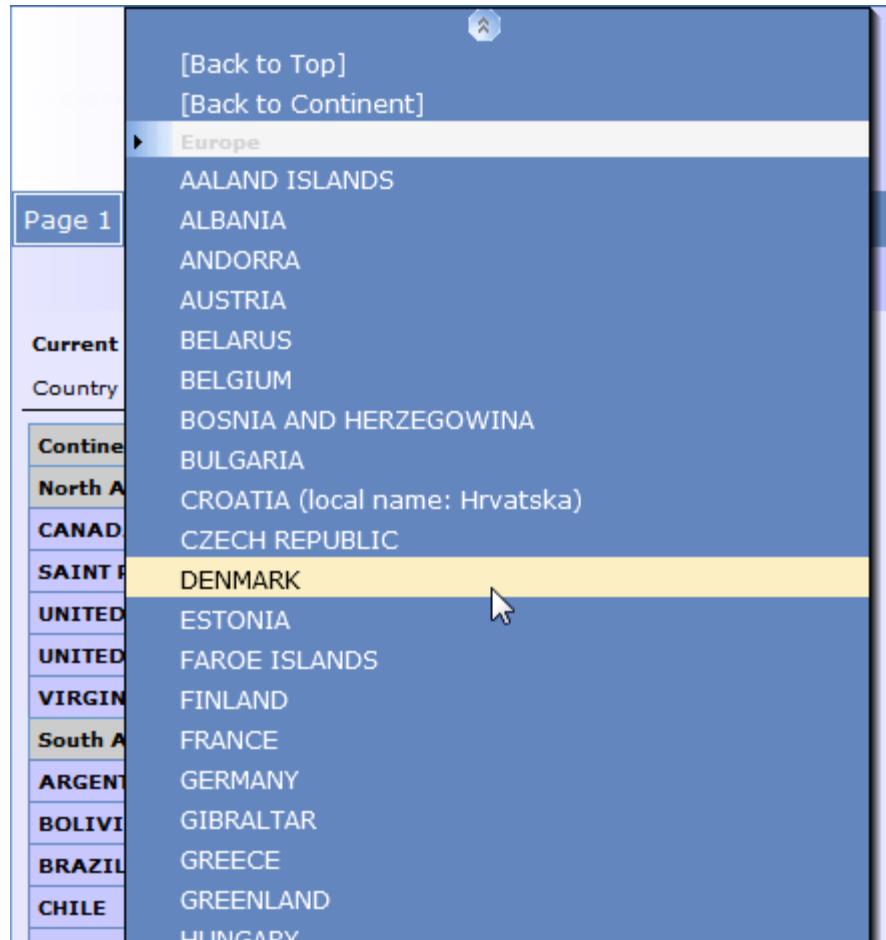


Figure 575 Example of the final More list

When the final selection is made, the table is refreshed to show the selected information.

Page 1	Country of residence		
<b>Current Report Base:</b> Country of residence: • GREECE			
<table border="1"> <tr> <td>GREECE</td> <td>1</td> </tr> </table>		GREECE	1
GREECE	1		
Generated: 9/26/2012 11:54:59 AM			
Weight model: None			
Fixed filters: None			
Significance testing: None			

Figure 576 The filtered table

## 19. Quotas

Within a survey, quotas are used to specify the number of responses the survey designer would like to receive for different sub samples or target groups, or to limit the number of responses for the overall survey. When a quota is reached for a sub-sample, the survey can be closed automatically for respondents belonging to that sub-sample by using conditions and stop nodes, while it remains open for respondents belonging to other sub-samples that have not yet been filled. In addition, Confirmit can send alerts by email to specified addresses when a quota is full.

The Quotas component in Reportal enables you to display in the report the quota information from the source survey. The information is presented in the form of a table, with the quota samples or groups in the rows and the limits, counts etc. in the columns. In the event several quotas are added to the table, a drop-down list is automatically created to allow the viewer to choose which quota information is displayed.

**Note:** Quotas are not supported for public reports.

**Note:** Quota values are pre-aggregated and populated in real time into the Quota component. Therefore any changes to filters will not effect the values displayed in the quota table.

### 19.1. How to Add a Quota Visual Component

You can place a quota table on any page, alone or together with other components. If the source survey contains quotas, then the Quotas folder will be located in the Data Source toolbox.

1. In the Report toolbox, create and/or open the page you wish to place the quota table on.  
When the page is created, it will open at the Page Editor.
2. Drag a Quota component from the Visual Components toolbox and drop it into the page.
3. Double-click in the quota component or right-click on it and select **Properties** to open its Properties page (see Quota Component Properties on page 479 for more information), and set the quota name and other properties as required.
4. On completion, click **Save and Close** to save the changes.
5. Double-click in the quota in the report page to open the Quota Designer page.

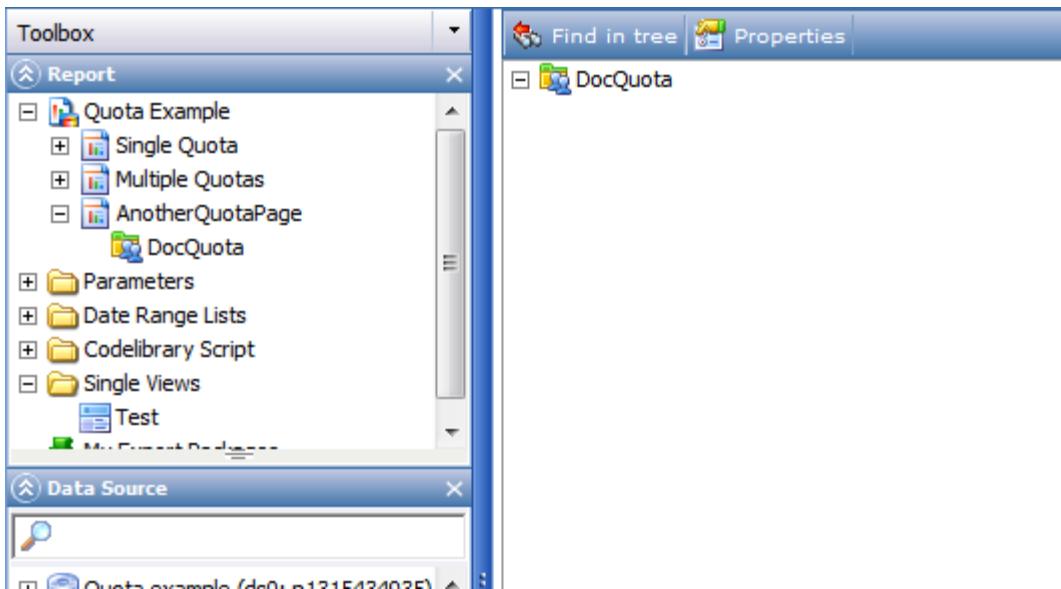
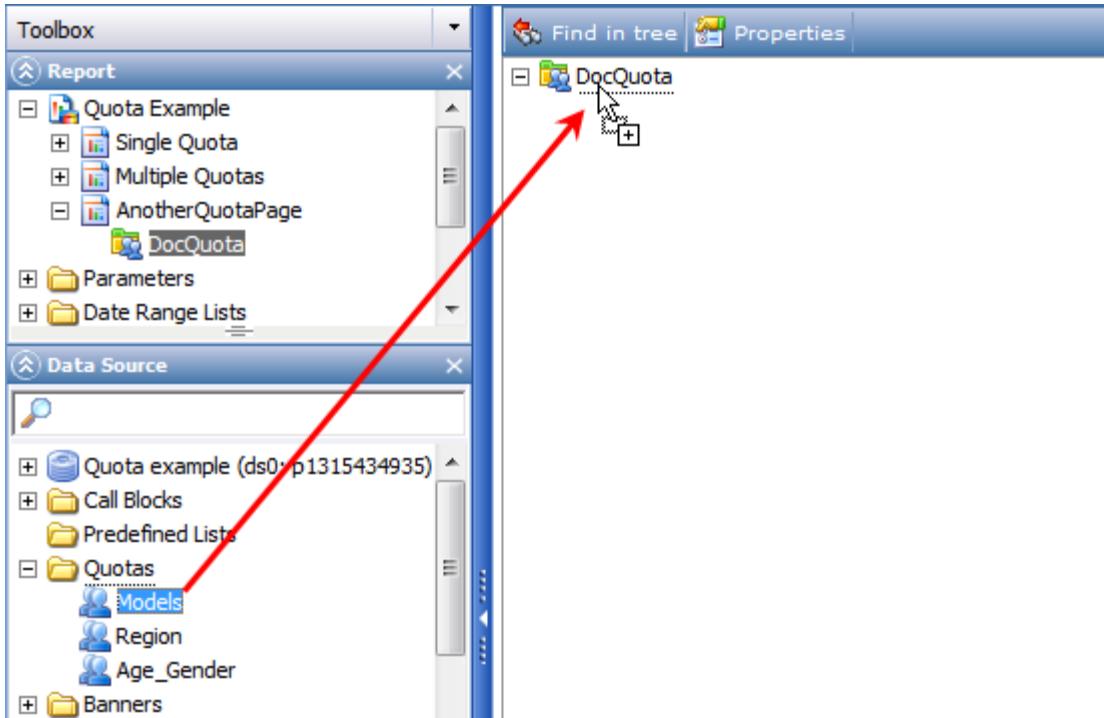


Figure 577 Example of a new (empty) quota in the Quota Designer page

6. In the Data Source toolbox, drag quotas from the Quotas folder and drop them into your new quota component in the Quota Designer page.



**Figure 578 Dragging a quota from the Data Source into the Quota Designer**

You can drag in as many quotas as you need, and you can place them in any order. The order you place them in will be the order in which they are listed in the drop-down list. To re-order the list, drag the quotas to the desired position. Should you wish to remove a quota definition from the list, right-click on the quota and select **Delete**.

## 19.2. Components Containing a Single Quota

If only one quota is added to the table, then the drop-down list is not needed.

age (Single)	Limit	Count	Remaining	Live Count	Live Limit	Percent Achieved
Under 18	0	0	-	0	0	
18 - 30	20	6	14	0	0	30%
31 - 50	25	8	17	0	0	32%
51 - 67	25	8	17	0	0	32%
68 or more	20	12	8	0	0	60%

**Figure 579 Example of a single quota table**

The columns in the quota table are:

- The first column(s) is the list of samples or groups. Note that each sample or group in the quota will be presented in a separate column.

- **Limit** - the quota limit applied within the survey to the sample or group.
- **Count** - the number of responses to that sample or group so far.
- **Remaining** - the number of responses remaining for that sample or group (the Limit minus the Count).
- **Live Count** - if the source is an Optimistic Quota (refer to the Authoring User Guide for further details), this is the number of interviews that are currently running.
- **Live Limit** - if the source is an Optimistic Quota (refer to the Authoring User Guide for further details), this is the preset "maximum overshoot" to cover for eventual non-completes.
- **Percent Achieved** - this is the percentage of the limit that has currently been reached.

Note that all columns can be sortable if the Sortable property box in the Quota Properties page is checked (see Quota Component Properties on page 479 for more information).

### 19.3. Components Containing Multiple Quotas

If several quotas are added to a table, then a drop-down list is automatically added to the page so that the report viewer can select which quota is to be displayed. The display order of the quotas in the drop-down is the order in which the quotas are listed in the Quota component (see How to Add a Quota Visual Component on page 477 for more information).

age (Single)	Limit	Count	Remaining	Live Limit	Percent Achieved
Under 18	0	0	-	0	
18 - 30	20	15	5	0	75%
31 - 50	25	21	4	0	84%
51 - 67	25	17	8	0	68%
68 or more	20	22	-2	0	110%

Figure 580 Example of a multiple quota table

The columns in the quota table are:

- The first column(s) is the list of samples or groups. Note that each sample or group in the quota will be presented in a separate column.
- **Limit** - the quota limit applied within the survey to the sample or group.
- **Count** - the number of responses to that sample or group so far.
- **Remaining** - the number of responses remaining for that sample or group - the Limit minus the Count.
- **Live Count** - if the source is an Optimistic Quota (refer to the Authoring User Guide for further details), this is the number of interviews that are currently running.
- **Live Limit** - if the source is an Optimistic Quota (refer to the Authoring User Guide for further details), this is the preset "maximum overshoot" to cover for eventual non-completes.
- **Percent Achieved** - this is the percentage of the limit that has currently been reached.

Note that all columns can be sortable if the Sortable property box in the Quota Properties page is checked (see Quota Component Properties on page 479 for more information).

### 19.4. Quota Component Properties

Right-click on the quota in the Report toolbox and select **Properties**, or double-click on the quota in the Page Editor, to open the quota's Properties page. This page contains three tabs:

- **General** - contains the basic properties.

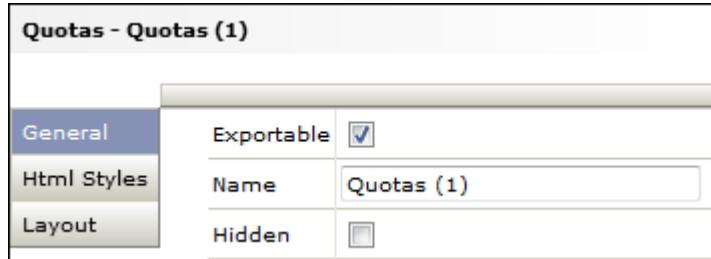


Figure 581 The quota properties General tab

- **Exportable** - check to allow the table to be exported to Excel. An **Export** link is then displayed above the table. Viewers can click the link and specify their email address to receive an Excel export of the Quota table.
- **Name** - the name of the quota component as displayed in the report page.
- **Hidden** - check this box if you wish to hide the component temporarily from the report page. Uncheck the box to show the component again.
- **Html Styles** - the properties on this tab define which HTML styles are to be used for the quota table. You can apply HTML style settings to the entire quota table, to the headers and to the content. Click the down-arrows beside the fields to select the styles that are to be used for the various items. The styles that are listed are those available in the **Layout and Styles** toolbox, in the **Styles > HTML** folder (see The HTML Styles on page 708 for more information).

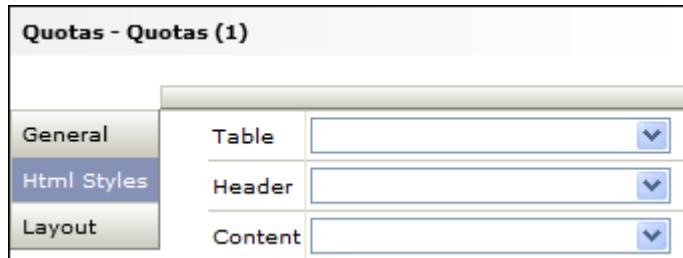


Figure 582 The quota properties Html Styles tab

- **Table** - select a style to define the layout of the table.
- **Header** - select a style to define how the table header row will look.
- **Content** - select a style to define how the table content rows will look.
- **Layout** - the properties on this tab control the layout of the quota table.

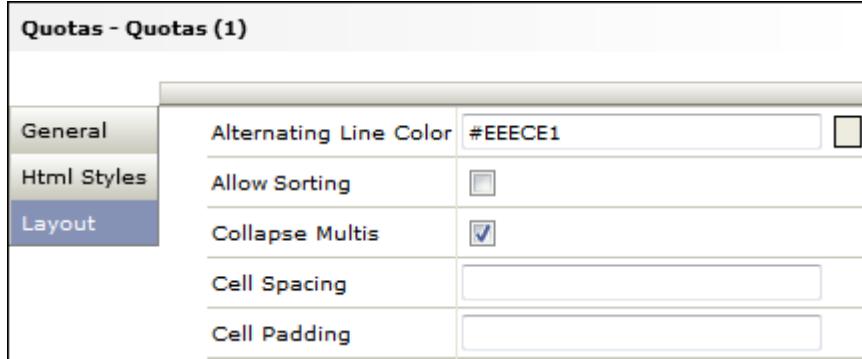


Figure 583 The quota properties Layout tab

- o **Alternating line color** - you can specify that alternate rows in the table are displayed with different background colors. The first color will be that defined in the selected style. Use this property to specify the second color.
- o **Allow sorting** - check this box to allow the viewer to sort the quota table by clicking on the column headers.
- o **Collapse Multis** - if this option is checked (default), a multi variable will occupy one column in the quota table.
- o **Cell Spacing** - type in a value to specify the space, in pixels, around the cells.
- o **Cell Padding** - type in a value to specify the space, in pixels, between the cell contents and the borders of the cell.

## 20. Personalized Reporting

This functionality enables you to filter reports on Single questions, and then assign the filtered reports to specific end users. You can set up a master report and define a variable that is to be used as a personalized filter. Each end user is then assigned a value for this filter, and when they log on, they will receive a report showing the results relevant for them.

**Important**

A question specified as a "personalized filter question" must be of question type SINGLE. It must either be a regular single question, or a single question mapped to a self-referencing hierarchy. Furthermore, it must also be an indexed question (the "Indexed" property must be selected for this question in Professional Designer).

See the Confirmit Authoring User Manual for further information on question properties.

You can use single questions with normal answer lists, table lookup or an unbalanced (parent-child) hierarchy (refer to the Database Designer chapter in the Confirmit Authoring User Manual).

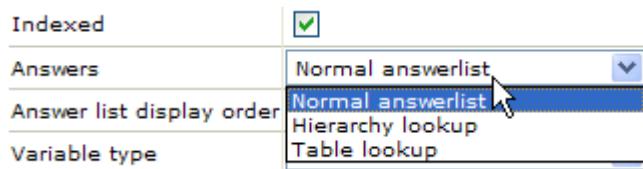


Figure 584 Question properties

Personalized reporting on Single questions is not available in public reports because the end user viewing the report must be identified via log-in. Personalized reports on single questions can either be made available online for viewers and designers, or exported to PDF, MS Excel and MS PowerPoint.

### 20.1. How to Enable Personalized Reporting on Single Questions

To enable Personalized Reporting:

1. Right-click on the report in the toolbox and select **Properties**.
2. Ensure the "Public" property is not selected (arrowed in the figure below).
3. Click the down-arrow by the "Personalized filter question" field (ringed in the figure below), and select the question you wish to use as the personalized filter.

**Note:** This field will not be available if the required criteria are not met - see Important below.

**Important**

A question specified as a "personalized filter question" must be of question type SINGLE. It must either be a regular single question, or a single question mapped to a self-referencing hierarchy. Furthermore, it must also be an indexed question (the property "Indexed" must be selected for this question in Professional Designer).

**Properties (Changes saved)**

Save | Save and Close | Preview | Reset

**Report Root - Documentation Report (398)**

General	Export settings	Cache settings	Drilldown Menu Layout	Titles
Name	Documentation Report			
Data Source	Documentation Report (368)			
Last published	Never published			
Public	<input type="checkbox"/>	<a href="#">?</a>		
Offline	<input type="checkbox"/>	<a href="#">?</a>		
Use Test Data	<input checked="" type="checkbox"/>	<a href="#">?</a>		
Exportable	<input checked="" type="checkbox"/>	<a href="#">?</a>		
Tabulation Engine	Version 1	<a href="#">?</a>		
Default Language	English	<a href="#">?</a>		
Time Zone Offset	0	<a href="#">?</a>		
Week 1	First day	<a href="#">?</a>		
First Day of Week	Sunday	<a href="#">?</a>		
Weight Model	Default	<a href="#">?</a>		
Personalized filter status	On	<a href="#">?</a>		
Personalized filter question	-- No personalized question	<a href="#">?</a>		
Report Languages	(Languages)	<a href="#">...</a>		
Filters	(None)	<a href="#">...</a>		
Keywords	<a href="#">?</a>			

Figure 585 Enabling Personalized Reporting in the Report Properties

When you select a "Personalized filter question", this question will be masked when used in any table in the report, and will show only a level selected in "Select Report Base".

You can switch the personalized filter on and off for the Report, Report Folder, and Report Page in "Personalized filter status". If you select "Default" on Report Page or Report Folder level, it will inherit the setting from the level above (a page belongs to a folder, which may belong to a report, or may be nested inside one or more folders which themselves belong to a report). To override on Report Page or Report Folder level, select **On** or **Off**.

Weight Model	Default
Personalized filter status	On
Personalized filter question	Default On Off
Report Languages	<a href="#">...</a>
Filters	<a href="#">...</a>
Keywords	<a href="#">...</a>

Figure 586 Report Folder Properties

## 20.2. How to Set the Report Base

The Report Base is the group or hierarchy level to which the end user belongs, and the Report Base setting is used in combination with Personalized or hierarchical reporting in Confirmit Reportal. A hierarchy level (a Report Base) is specified for each end user login (Reportal Viewer) whenever a report uses a hierarchy. For a Personalized Report, the Report Base determines on which answer in the indexed "Personalized" question the report is to be filtered.

**Note:** If you as a Confirmit user enter a report page, table, chart etc. that requires you to set the report base, and the report base has not yet been set, then Confirmit Reportal will automatically assign you to the top level of the report base.

For end users, the report base will be pre-set. But when viewing reports and report pages as a report designer, you must select a current report base on which to filter the report. To do this:

1. Go to the **Report > Properties** menu and select **Set Report Base**.  
A pop-up window opens containing the filter question variables.
2. Select a value, and click the **OK** button to save the selection. Click **Clear** to deselect the current base.

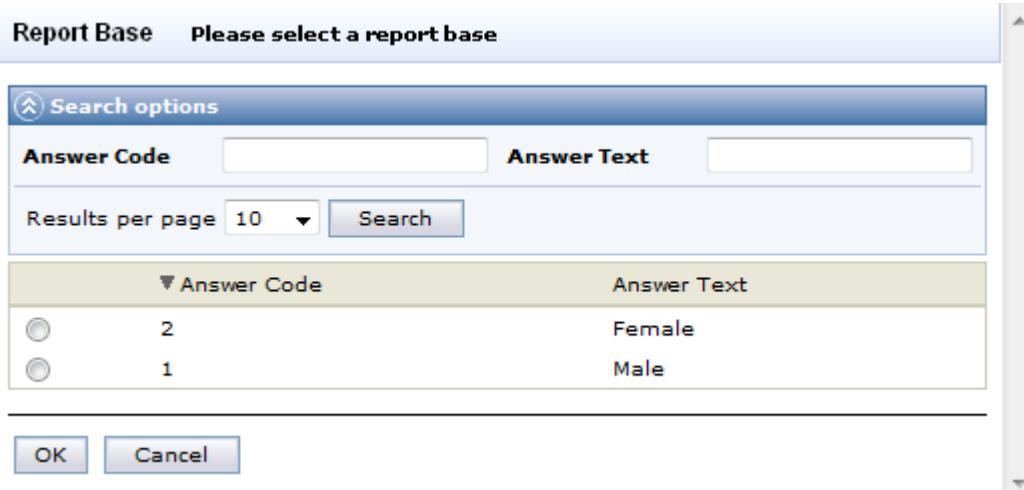
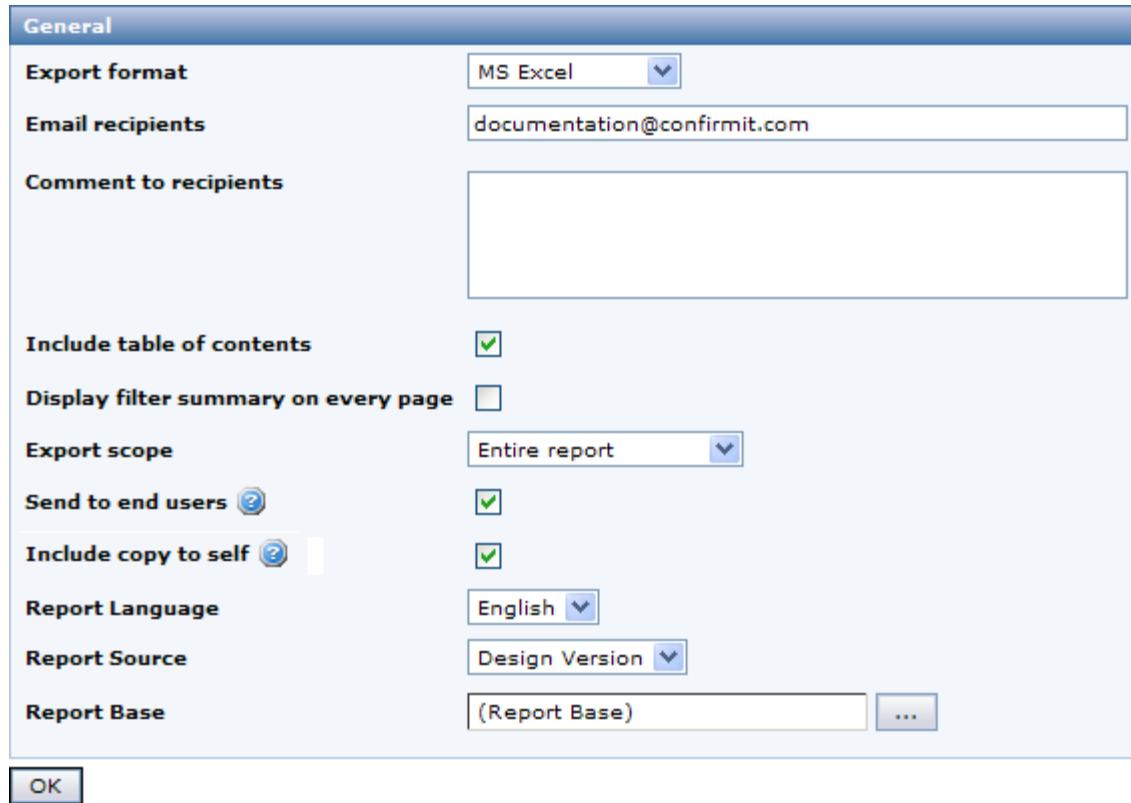


Figure 587 Selecting the report base

When a Personalized Filter is selected on a report, all report pages where Personalized Reporting is enabled will be filtered based on the selected report base.

## 20.3. Exporting Personalized Reports

You can export personalized reports to the same formats as other reports.



**Figure 588 Exporting Personalized Reports**

- **Send to end users**- specifies whether you would like to generate and send exports to all end users who are assigned to any of the report bases you select.
- **Include copy to self**- when exporting from design mode, if you check "Send to end users", you will have the option to avoid sending the exported files to yourself. This will be useful if you wish to generate personalized exports for all your end users but you do not yourself want to receive copies of the emails containing all those files.

Also, when selecting report bases for the export, you can for example select the top hierarchy node, check Include Children, check Send to end users, and uncheck Include copy to self. This will automatically generate exports for all report bases that have end users assigned to them, but not for the levels that do not have any end users assigned. So if you have a hierarchy of 500 levels, but you only have end users assigned to 10 of these, only 10 levels will be generated (and charged for).

You define for which report bases you want the report in "Report Base". You can export any number of personalized reports, but be aware that by selecting "Include children" you can find yourself exporting very large numbers of reports. See the note below.

**Note:** As the export of large numbers of reports can cause performance issues for other users, the number of reports that can be exported in one batch is limited. In the event you attempt to exceed this limit a message will be displayed inviting you to reduce the size of the batch. If you need to export a large numbers of reports simultaneously, contact Confirmit Support.

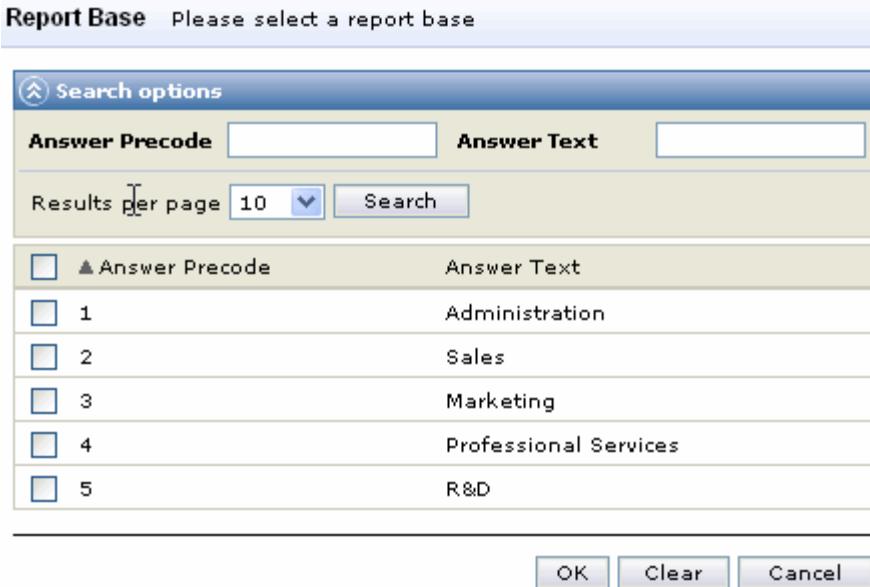


Figure 589 Hierarchy levels

Select the bases you want exports for, and click the **OK** button.

## 20.4. How to Assign a Report Base to an End User

To set up the report base you wish your end users to have access to:

1. Go to the **Permissions > End User Permissions** menu command.

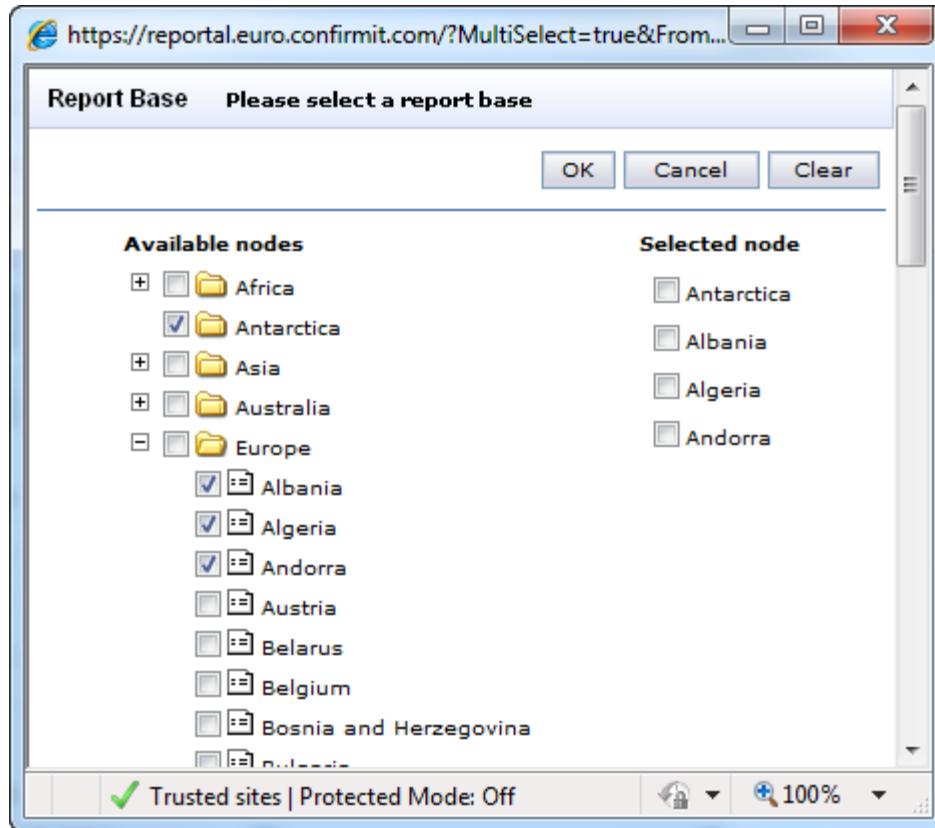
**Note:** The rest of the functionality of the End User Permission screen is described under Access Control (see Access Control on page 635 for more information).

2. Right-click on the user list and select **Search Users**.

The user list opens. At the right of the list is the “Report Base” column .

Figure 590 Setting the end user permissions

3. Find the end users you wish to set the report base for, using the search functionality as required.
4. Click on the ... button beside the Report Base text box (see the figure above) to open the Report Base selection window.



**Figure 591 Selecting the Report Base for the end user**

5. Select a report base for the end user.

You can select more than one report base for an end user. In this case the report bases will be added together.

**Note:** If multiple nodes are assigned in the same hierarchy level to an end user, when the end user logs in to the report he/she will not be asked to choose one node from the drop-down list. In the example above, different hierarchy levels have been selected (a continent and three countries). So in this case the end user will be asked to select one node.

**Note:** It is possible to search for a sub-set of users and then use the report base selection at the top of the screen to assign the same base to a set of end users.

## 20.5. Assigning Multiple Report Bases to an End User

You may assign more than one report base to an end user (see How to Assign a Report Base to an End User on page 486 for more information). If you do so, then when the end users log on to the report they will be presented with the drop-down menu with the list of report bases you have assigned to them :



Figure 592 Example of a Report Base selection drop-down menu

You may specify custom texts in each report language for the drop-down menu and the button (see Custom Texts on page 703 for more information)

The viewer must select the appropriate report base from the list and click **OK**. The first page of the report, with the personalized filter applied, will then open. If the viewer wishes to return to the drop-down list to select a different report base, they can select **Re-enter Report** from the report menu.



Figure 593 Re-entering the report

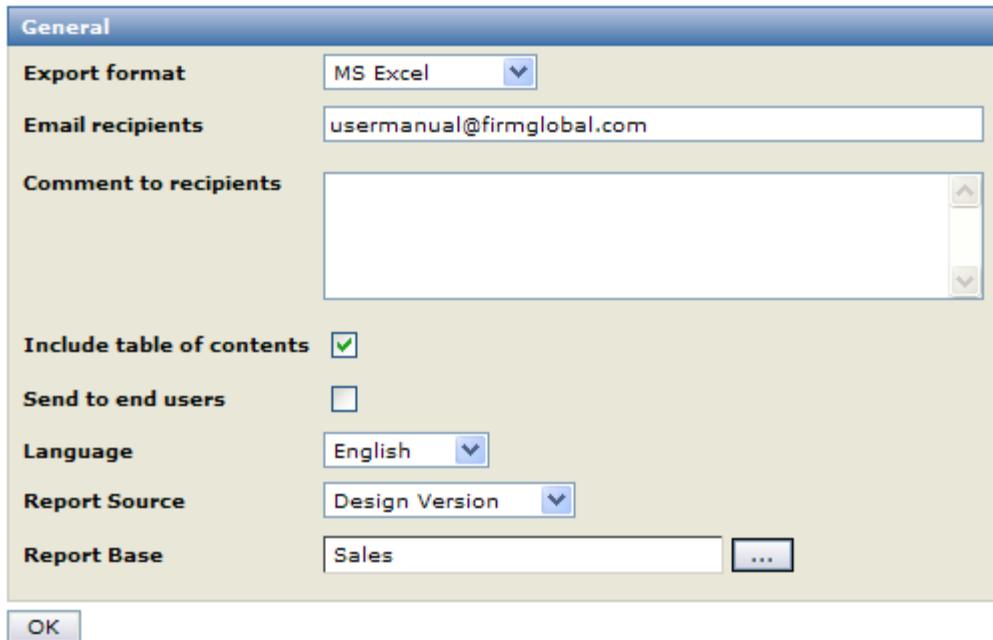
When the end-user is allowed to select multiple report bases, which is enabled by checking the Allow Multiple Selection option on the General tab of the Report Properties (go to [The Report Properties > General Tab](#) for more information), the Select Report Menu is not displayed.

## 20.6. Distributing Exported Personalized Reports to End Users

You can use Reportal to create and distribute PowerPoint or Excel exports directly to the end users. To do this:

1. Go to the **Report > Export > Export Report** menu command.

The Export Report page opens.



**Figure 594** Sending the report to the end users

2. Select the required Report Base, ensure the other properties are as required, then click **OK**.

The reports will be sent directly by email to all the end users with the selected Report Base.

## 20.7. Uploading End Users

In internal HR surveys, the end users who are to be given access to the reports will often also be respondents to the survey, and as respondents, their report base is often uploaded as a background variable. To avoid having to define the same report base twice – first as respondents and then as end users, you can use a wizard to upload the end users directly from the respondent list, from a file or from the FTP location.

**Note:** If "Always use SSL" is set for an end user list (refer to the Authoring User Guide for details), hit list and single view links will be set to be https.

### 20.7.1. How to Upload End Users from a Respondent List

**Note:** This procedure requires that you first set up the end user list and end user company in Confirmit Authoring. Refer to the Administration of End Users chapter in the Confirmit Authoring User Guide for further details.

Once the end user list is defined:

1. In Reportal, go to the **Permissions > End User Permissions** menu command.  
The End User Lists page opens.
2. Find the required end user list, select it and click **Add**.  
The list is added to the hierarchy tree in the left column.
3. Right-click on the list in the hierarchy tree and select **Upload from respondent list**.

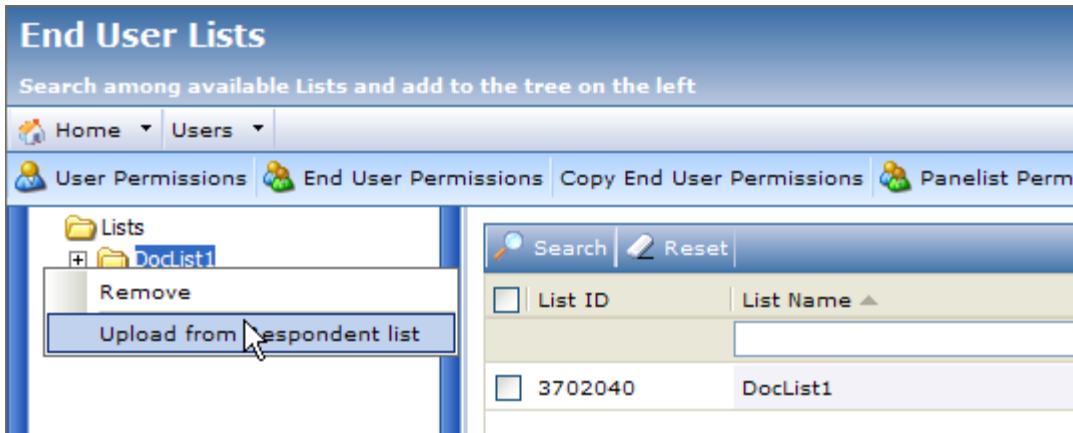


Figure 595 Selecting Upload from Respondent list

4. Select global settings for the end users.

This screenshot shows the 'General' configuration page for uploading end users. It includes the following fields:

- Available licences:** View (81), Design (84)Analyst (88)
- List:** DocList1 (3702040)
- Project:** p0039555
- Company:** DocCompany
- Permission Type:** None
- Expiry date:** 30/11/2010
- Export Units:** 15
- Overwrite existing users:**  (The permissions of any existing end users will be overwritten)

At the bottom, there are buttons for 'Cancel', '< Back', 'Next >', and 'Finish'.

Figure 596 Uploading end users - step 1

The properties are as follows:

- **Company** - Select end user company. All the end users you upload will be assigned to this company.
- **Permission type** - View, Design or Analyst. All the end users will initially be set up with this access. You can change this later for individual end users as required.
- **Expiry date** (Not required) - The date when the end user accesses will be terminated. You can change this later if required.
- **Export units** - Number of exports to PowerPoint or Excel that the end users should be allowed to do. You can change this later if required.
- **Overwrite existing users** - If selected, existing users with the same user ids will be overwritten.

You must now define which of the fields from the respondent list are to be mapped to the relevant end user fields. As an example, assume the respondent list contains the fields **userid**, **password**, **companyno**, **language**, **firstname**, **lastname** and **email**. **userid** and **password** are necessary to provide login details to the end user, **companyno** is the report base, and the remaining fields are optional.

	A	B	C	D	E	F	G
1	userid	password	companyno	language	firstname	lastname	email
2	doc	password		90	9 Adam	Apple	documentation@confirmit.com
3	aa	password		91	9 Adam	Avian	documentation@confirmit.com
4	bb	password		90	9 Belinda	Brant	documentation@confirmit.com
5	cc	password		90	9 Charles	Chaffinch	documentation@confirmit.com
6	dd	password		91	9 David	Dunlin	documentation@confirmit.com
7	ee	password		91	9 Ellen	Eagle	documentation@confirmit.com
8	ff	password		90	9 Fred	Fulmar	documentation@confirmit.com
9	gg	password		91	9 Gareth	Gadwall	documentation@confirmit.com
10	hh	password		91	9 Helen	Hawk	documentation@confirmit.com
11	ii	password		90	9 Ian	Ivorybill	documentation@confirmit.com
12	jj	password		90	9 Janice	Jackdaw	documentation@confirmit.com

*Figure 597 Part of a respondent list*

The fields from the respondent list will now to be mapped to the fields needed for the end user list. The wizard will try to pre-select fields based on the field names in the respondent list (for example "email" will be selected as "Email column"), but you may change this. Note that for fields to appear in the Map Fields page drop-down lists, the variables must be background variables in the project.

- **User ID column (required)** - User id for the end user (for login).
- **Password column (required)** - Password for the end user (for login).
- **Email column (required)** - the end users email (will be used when emailing login details and reports to end user).
- **Language column (not required)**- the report and report interface will be displayed in the language represented by the language code in this column, if available (see the Appendix in the Confirmit User Manual for a listing of language codes). If the language column is not available, you can specify a language for all the end users in "**Specify language**".
- **First name column (not required)** - the first name of end user.
- **Last name column (not required)** - the last name of end user.
- **Report base column (not required)** - the report base to which the end user is to have access.

**Map fields**

User ID column	username	
Password column	password	
Email column	email	
Language column	language	
Specify language	(Specify language if no language column exists)	
First name column		
Last name column		

**Buttons:** Cancel, < Back, Next >, Finish

**Figure 598 Uploading end users - step 2**

In the next screen you search for and select a sub-set of the respondent list, to upload as end users. This could for example be the respondents who are designated as leaders. The result is that the end users are uploaded with all settings, including hierarchy level, in one simple operation.

Available licences (remaining/total) : View (153/204) Design (444/477) Analyst (220/250) - Used Export Units: 0										
Current List: Open list										
				Permission Type	Role	Expiry Date	Export Units	Exported Units	Report Base	
3751931	Open list	aa	Avian	Anna	None				(Report Base)	...
3751931	Open list	bb	Brant	Belinda	None				(Report Base)	...
3751931	Open list	cc	Chaffinch	Charles	None				(Report Base)	...
3751931	Open list	dd	Dunlin	David	None				(Report Base)	...
3751931	Open list	doc	Apple	Adam	None				(Report Base)	...
3751931	Open list	ee	Eagle	Ellen	None				(Report Base)	...
3751931	Open list	ff	Fulmar	Fred	None				(Report Base)	...
3751931	Open list	gg	Gadwall	Gareth	None				(Report Base)	...
3751931	Open list	hh	Hawk	Helen	None				(Report Base)	...
3751931	Open list	ii	Ivorybill	Ian	None				(Report Base)	...
3751931	Open list	jj	Jackdaw	Janice	None				(Report Base)	...

**Figure 599 End users uploaded**

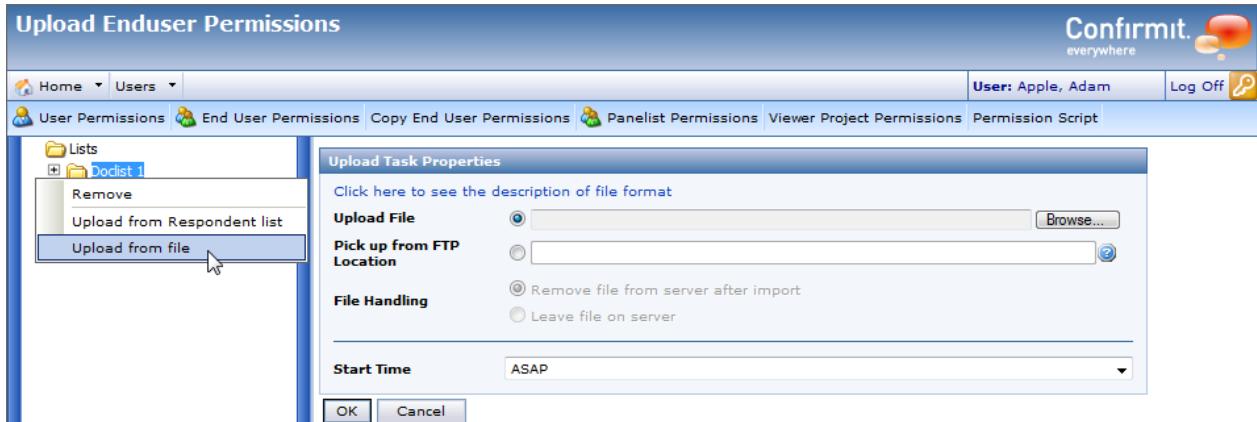
## 20.7.2. How to Upload End Users from a File or FTP

Import files can either be uploaded directly in the browser, or placed on an FTP server and retrieved from there. FTP may be a good option for large volumes of data, as very large files can not be uploaded in the browser. FTP can also allow automation of data flows, as files can be placed on the FTP server by another system/process and picked up by the import task.

**Note: FTP is a chargeable add-on. If you want to use this functionality please contact your account manager.**

Once the end user list is defined:

1. Open the report and go to the **Permissions > End User Permissions** menu command.  
The End User Lists page opens.
2. Find the required end user list, select it and click **Add**.  
The list is added to the hierarchy tree in the left column.
3. Right-click on the list in the hierarchy tree and select **Upload from file**.
4. The Upload Task Properties page opens.



*Figure 600 The Upload Task Properties page*

5. Click on a radio button to select whether you wish to upload a file or pick it up from the FTP location.
6. Browse to and select the file.
7. If picking up from FTP, select whether you wish to copy the file (leaving it on the server) or move it (removing it from the server).
8. Select a start time, then click **OK**.

The upload task will run at the selected time.

## 20.8. Personalized Reporting on Unbalanced Hierarchies

When the single question you select for personalized reporting is an unbalanced (parent-child) hierarchy type question, some additional functionality becomes available. The unbalanced hierarchy type (also known as "self-referenced hierarchy") is described in the Database Designer chapter in the Confirmit Authoring User Guide.

This section of the manual uses the organizational hierarchy of a fictitious company called "The Company", as shown below, as an example.

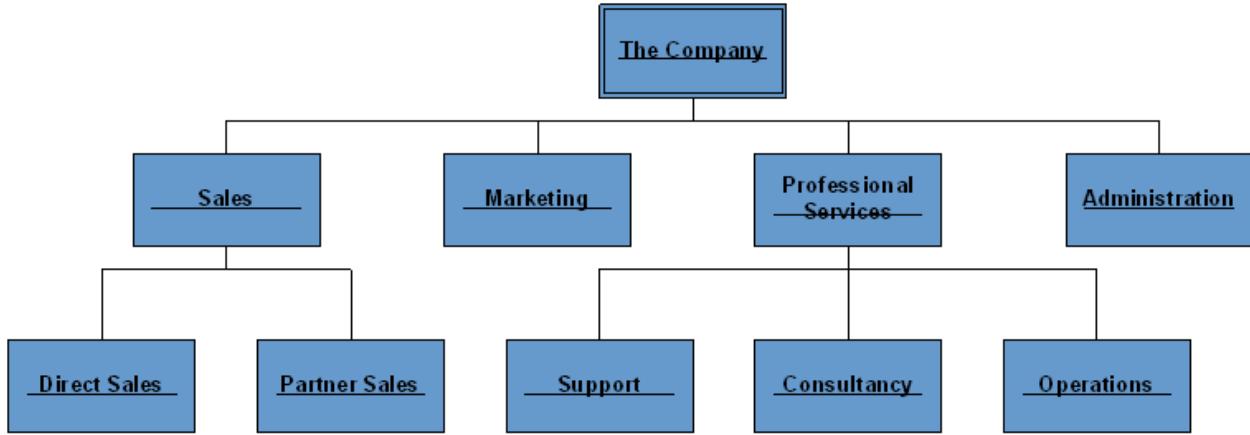


Figure 601 Example hierarchy

### 20.8.1. Personalized Filter Base

When you select a hierarchy variable as "Personalized filter question" in Report Properties, an additional property, the "Personalized Filter Base", becomes available.

The screenshot shows the 'Report Root - User Manual Report (153)' properties dialog. In the 'Personalized filter base' dropdown, the option 'Include children' is selected. Other options shown include 'Include children' and 'Direct level report'.

Data Source	User Manual Report (127)
Last published	11.11.2004 10:30:06
Use BitStream Files	<input type="checkbox"/>
Offline	<input type="checkbox"/>
Use Test Data	<input type="checkbox"/>
Public	<input type="checkbox"/>
Exportable	<input checked="" type="checkbox"/>
Report Languages	(Languages) <input type="button" value="..."/>
<b>Cache settings</b>	
PowerPoint Template	(None) <input type="button" value="..."/>
Default Language	English <input type="button" value="..."/>
Time Zone Offset	0 <input type="button" value="..."/>
First Day of Week	Sunday <input type="button" value="..."/>
Max Aggregated Tables	50
Personalized filter question	department - (p0005050) <input type="button" value="?"/>
Personalized filter base	Include children <input type="button" value="..."/>
Personalized filter status	Include children Direct level report <input type="button" value="..."/>
Weight Model	Default <input type="button" value="..."/>

Figure 602 Setting the Personalized Filter Base

You may wish to set up the personalized report to give the managers just the results from respondents directly connected to his or her department, or to give them results from all respondents connected to their department and all sub-departments (that is, the department's "children").

For example, when you select **Sales** as the current hierarchy level, a **Direct level report** will give a report with the four respondents directly connected to Sales, whereas **Include children** will give a report with all 39 respondents in Sales, Direct Sales and Partner Sales.

### 20.8.2. Set Report Base from a Hierarchy

**Note:** If you as a Confirmit user enter a report page, table, chart etc. that requires you to set the report base, and the report base has not yet been set, then Confirmit Reportal will automatically assign you to the top level of the report base.

To set the Report Base, whilst in the report go to the **Report > Properties > Set Report Base** menu command.

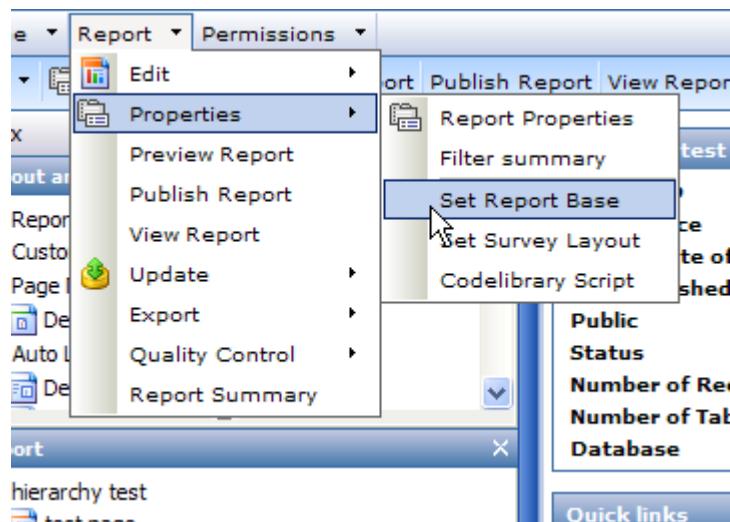


Figure 603 Set Report Base

Note that when setting report base on a hierarchy, the pop-up window will be slightly different from that used for an ordinary single question (see How to Set the Report Base on page 484 for more information). In this case the hierarchy is available as a tree structure. Expand the various branches of the hierarchy by opening the folders, then select a unit and click the >> button to move the unit to **Selected node**.



Figure 604 Selecting a node - 1

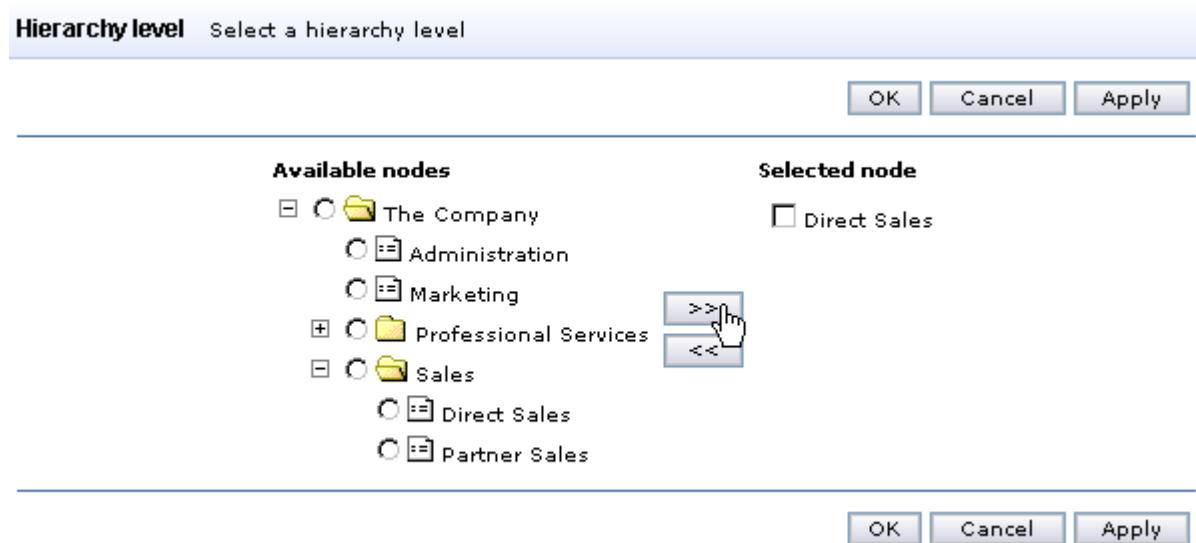


Figure 605 Selecting a node - 2

### 20.8.3. Activating a Personalized Filter Based on a Hierarchy

When you select a Personalized Filter on a report, all report pages where **Personalized Reporting** is enabled will be filtered based on the selected report base. For example, assume the demonstration hierarchy has the distribution of answers shown below.

<b>The Company</b>	<b>Sales</b>	<b>Direct Sales</b>	29	19.3%
		<b>Partner Sales</b>	6	4.0%
		<b>Total</b>	39	26.0%
	<b>Marketing</b>		4	2.7%
	<b>Professional Services</b>	<b>Support</b>	44	29.3%
		<b>Consultancy</b>	28	18.7%
		<b>Operations</b>	17	11.3%
		<b>Total</b>	97	64.7%
	<b>Administration</b>		9	6.0%
	<b>Total</b>		150	100.0%

*Figure 606 Number of Respondents per Department*

For ordinary single questions, when **Personalized Filter Status** is set to **On**, if **Direct Sales** is selected as the current report base then a table similar to the one below (which is on a question that all respondents received), will be filtered, and will only display the results from the 29 respondents in Direct Sales:

Drop Columns Here				
<b>Length of Service</b>	<b>Less than one year</b>	16	55.2%	
	<b>One to two years</b>	6	20.7%	
	<b>Three years or more</b>	7	24.1%	
	<b>Total</b>	29	100.0%	

*Figure 607 Example of a table with a personalized filter*

If you use the hierarchy question itself in the aggregated tables, the hierarchies will have some additional functionality available.

#### 20.8.4. Reference Group Settings

When the personalized filter question itself is used in aggregated tables, it will by default be masked such that it only shows the current report base. You can however also include “reference groups” – other units on the same or other levels in the hierarchy - for comparison.

If you need to change the “reference group” settings, double-click the personalized filter question in the table designer or right-click on it and select **Properties** to open the Properties page.

Hierarchy Layout

<b>Reference Group</b>	
Enabled	<input checked="" type="checkbox"/>
Self	<input checked="" type="checkbox"/>
Parent	<input type="checkbox"/>
Top parent	<input type="checkbox"/>
All parents	<input type="checkbox"/>
All siblings	<input type="checkbox"/>
Max sibling	<input type="checkbox"/>
Min sibling	<input type="checkbox"/>
Number of child levels	0
Levels	<input type="text"/> <input type="button" value="?"/>
Self Excl. Children	<input type="checkbox"/>
Recording <input type="button" value="..."/>	

Figure 608 The Reference Group properties

We will first examine the settings for self and parents when “Set Report Base” is set to “Direct Sales”.

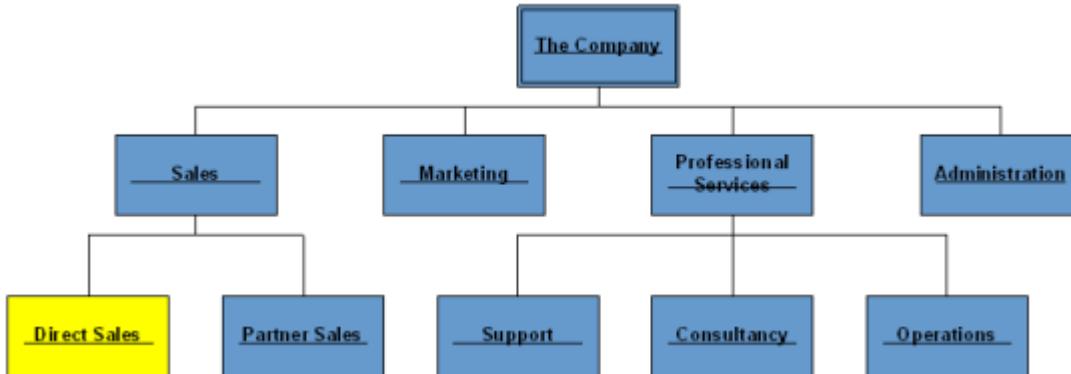


Figure 609 The Current report base set to "Direct Sales"

#### 20.8.4.1. Self

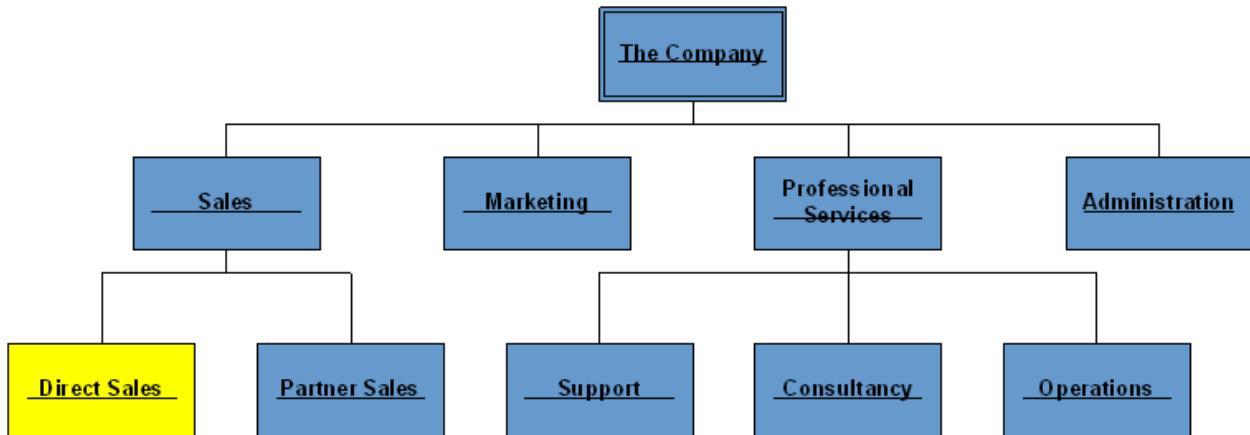
**Self** is the hierarchy unit that is selected in “Set Report Base” - in the example “Direct Sales”. Check this box in the Reference Group to include the currently selected report base in the table (see Reference Group Settings on page 497 for more information).

#### 20.8.4.2. Parent

Parent has three possible options:

- **Parent** – displays the unit immediately above the unit selected as the current report base. In the example below, “Sales”.
- **Top parent** – displays the uppermost unit above the current. In the example below, “The Company”.

- **All parents** – displays all the units directly above the current. In the example below, “Sales” and “The Company”.



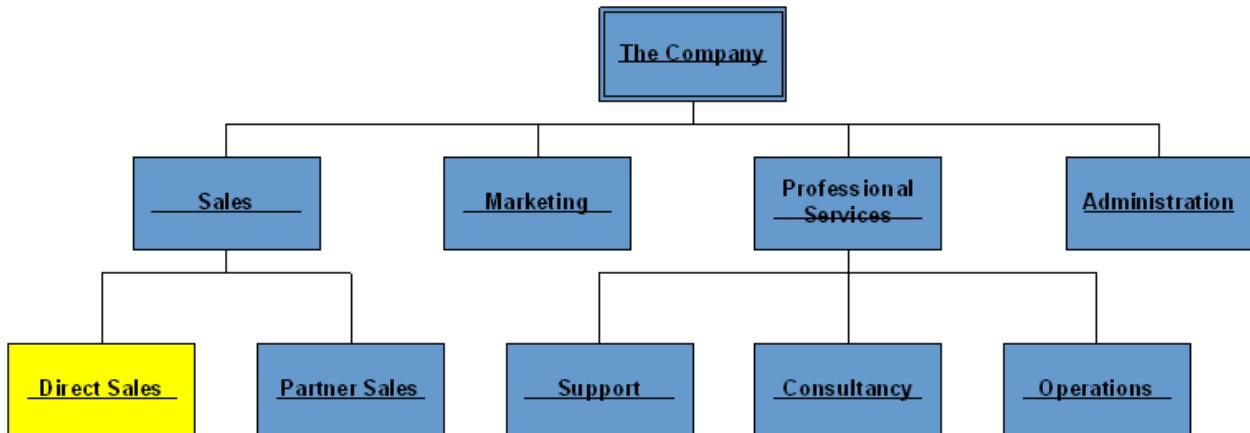
*Figure 610 Direct Sales selected as report base*

#### 20.8.4.3. Siblings

A **Sibling** is a unit on the same level in the hierarchy as the unit selected as the current report base, and within the same branch (so they have the same parent).

The settings for siblings are:

- **All siblings** - displays all the units at the same level as the current, within the same branch. In the example below this would be “Partner Sales”.
- **Max sibling** - displays the maximum (best) result of the units at the same level within the same branch of the hierarchy.
- **Min sibling** - displays the minimum (worst) result of the units at the same level within the same branch of the hierarchy.



*Figure 611 The current report base is set to Direct Sales*

Change the current report base to “Sales”.

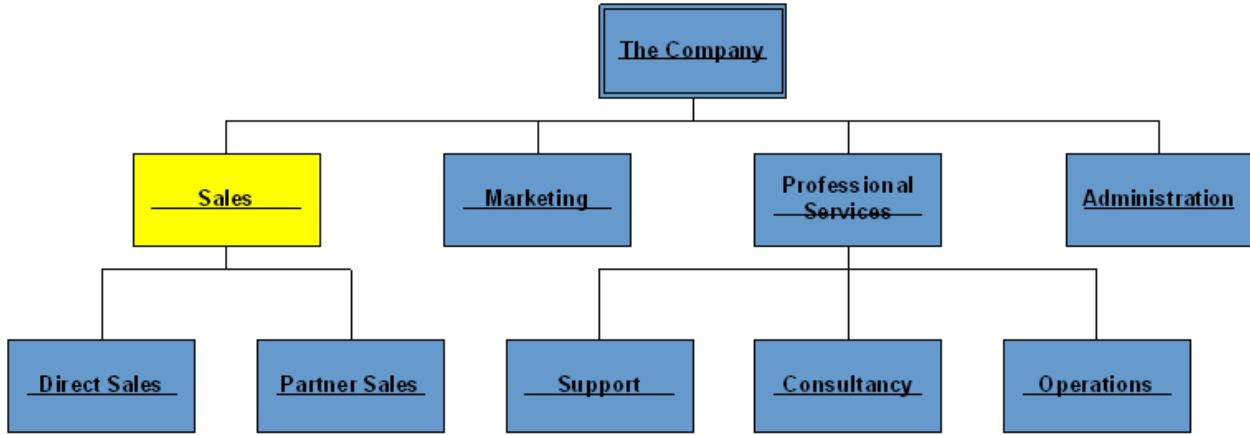


Figure 612 The current report base is changed to Sales

The personalized filter question (department) is crossed with a collapsed grid “Work objectives” where Average is selected. The following table will be the result when “self”, “all siblings”, “max sibling” and “min sibling” are selected as “reference group” settings for the personalized filter question “Department”:

Table objects: Statistics Categories								
	Department		Sales	Administration	Marketing	Professional Services	Max	Min
Work Objectives								
I have clear measures for each of my objectives			2.92	2.78	3.00	3.08	3.08	2.78
I know how my job impacts the mission of our company			2.77	3.11	2.00	2.96	3.11	2.00
I know what is expected of me in my job			3.18	4.00	4.50	3.08	4.50	3.08
In the last 12 months my Manager has talked to me about my progress			2.74	2.56	2.75	2.94	2.94	2.56
My co-workers and I work well together to accomplish our organization's goals			2.90	2.78	2.75	2.97	2.97	2.75
My group works well together to accomplish our organization's goals			3.03	2.22	2.75	3.20	3.20	2.22
My Manager has set performance goals for my job			3.49	3.11	2.25	2.95	3.49	2.25
We have prioritized our major goals			2.95	2.89	1.75	3.18	3.18	1.75

Figure 613 Example of a Sibling table

For each row, the maximum and minimum is selected among the siblings (all the units on the same level, within the same branch in the hierarchy).

#### 20.8.4.4. Children

**Children** are units below the “current report base”. When selecting children, you must define how many levels below the current you wish to include. All children in each of these levels will then be included. For example, with “Sales” selected as in the figure below, and with the “Number of child levels” set to 1, the result will be “Direct Sales” and “Partner Sales”.

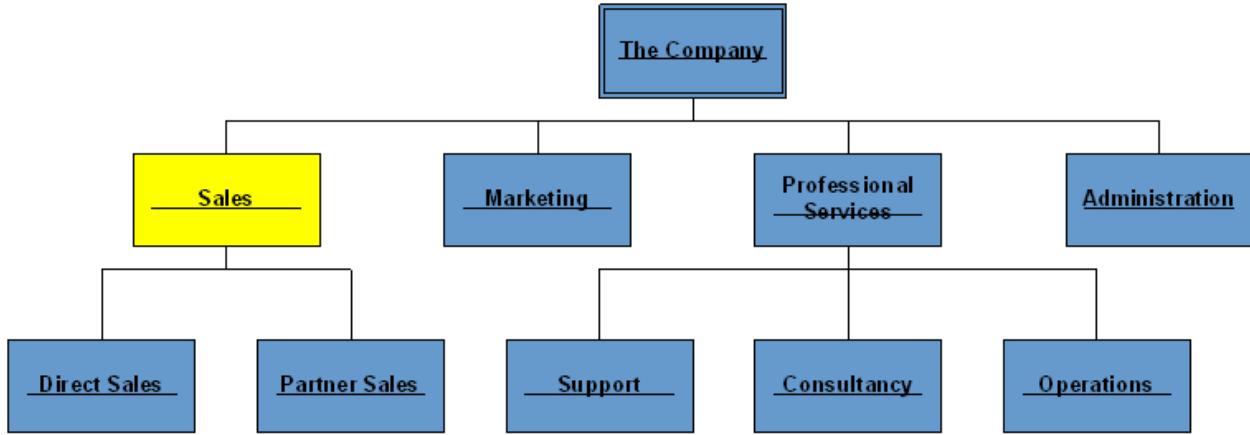


Figure 614 The "children" of Sales

If the "current report base" is changed to the top node, "The Company" (see the figure below), and the "Number of child levels" remains set to 1, the result will be "Sales", "Marketing", "Professional Services", and "Administration". If the top node is left at "The Company", and you then set the "Number of child levels" to 2, then the result will be both the Sales, Marketing etc. level and their children (Direct Sales, Partner Sales etc.) - that is, in this case, the entire hierarchy.

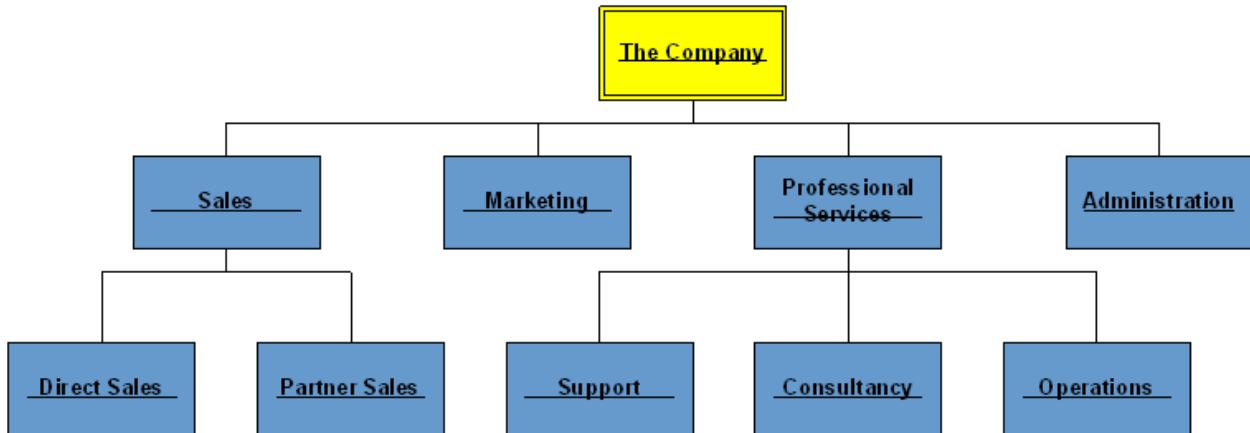


Figure 615 The current report base changed to "The Company"

The figure below shows the resulting table header with "The Company" selected as current report base and "Self" and 2 in "Number of child levels":

The Company	Administration	Marketing	Professional Services	Consultancy	Operations	Support	Sales	Direct Sales	Partner Sales
-------------	----------------	-----------	-----------------------	-------------	------------	---------	-------	--------------	---------------

Figure 616 The resulting table when "child levels" is set to 2

You can select multiple levels, and you can also select levels that are a number of levels below the current level. To select for example The Company and the Direct Sales, Partner Sales etc. level, set "Number of child levels" to 0 and Levels to 2 (do not include direct children, but include the second level (grandchildren)). In the event the hierarchy contains many levels, you can select several levels - separate the desired levels with commas (,).

### 20.8.4.5. Levels

Use this field to specify how many parent levels up from the current level are to be shown for a hierarchy.

The Levels field may contain both absolute and relative indices. All numbers must be separated by commas. Numbers without a sign are absolute level indexes, numbers with preceding + or – are relative indexes. Invalid indexes are ignored.

Multiple selection reports also support “Levels”. The resulting hierarchy in a table will contain all absolute levels and relative levels for every item, from the report base.

### 20.8.4.6. Self Excluding Children

If you wish the scores for Self to include only the direct reports to the selected unit, and not all employees reporting to levels below the current unit, select Self excl. children.

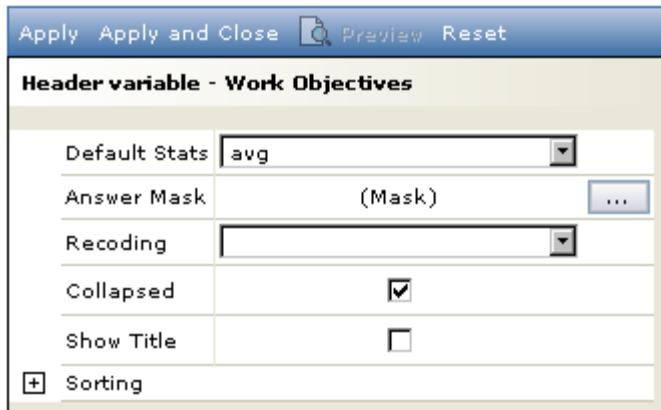
### 20.8.5. Example Table

The figure below shows a typical example table designed by combining a personalized filter question with other table functionality. The report is on a grid question with 8 items in the answer list and a scale from 1-5. “Set Report Base” is “Direct Sales” (see How to Set the Report Base on page 484 for more information).

	Categories	Department								
Work Objectives		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Total	Direct Sales	Sales	The Company
	I have clear measures for each of my objectives	6 20.69%	5 17.24%	6 20.69%	6 20.69%	6 20.69%	29 100.00%	3.03	2.92	3.01
	I know how my job impacts the mission of our company	11 37.93%	4 13.79%	8 27.59%	3 10.34%	3 10.34%	29 100.00%	2.41	2.77	2.90
	I know what is expected of me in my job	6 20.69%	3 10.34%	5 17.24%	7 24.14%	8 27.59%	29 100.00%	3.28	3.18	3.19
	In the last 12 months my Manager has talked to me about my progress	11 37.93%	4 13.79%	5 17.24%	2 6.90%	7 24.14%	29 100.00%	2.66	2.74	2.85
	My co-workers and I work well together to accomplish our organization's goals	7 24.14%	5 17.24%	6 20.69%	5 17.24%	6 20.69%	29 100.00%	2.93	2.90	2.94
	My group works well together to accomplish our organization's goals	6 20.69%	6 20.69%	8 27.59%	4 13.79%	5 17.24%	29 100.00%	2.86	3.03	3.07
	My Manager has set performance goals for my job	3 10.34%	7 24.14%	4 13.79%	7 24.14%	8 27.59%	29 100.00%	3.34	3.49	3.08
	We have prioritized our major goals	3 10.34%	8 27.59%	9 31.03%	2 6.90%	7 24.14%	29 100.00%	3.07	2.95	3.05

Figure 617 Example table

“Work objectives” is a grid question. In the header variable settings of that grid question the collapsed property is set, so the table will have one row for each item in the answer list (each statement). “Avg” is chosen in default stats, so that for the last three columns, where the grid is crossed with the personalized filter question “Department”, the averages for the different units are displayed.



**Figure 618 Header variable settings for "Work objectives" grid**

The "Categories" object is used to provide the proportions of answers on the scale. In Table Properties > Distributions, Horizontal Percentages is selected. The categories results are filtered by the personalized filter, so the table only shows responses belonging to the "Current Hierarchy Level", "Direct Sales".

"Self" and "All parents" are selected in the reference group settings (see Reference Group Settings on page 497 for more information) in the header variable settings of the personalized filter question "Department". This gives the current hierarchy level ("Direct Sales") and the levels above it all the way up to the top level (that is "Sales" and "The Company").

**Note:** When a hierarchical header variable that is also used as a personalized filter question is used in the table, that header variables includes the Hierarchy Layout property. This property controls the layout of the hierarchy levels (see Hierarchy Layout on page 200 for more information).

## 20.8.6. Upper Level Comparison

In addition to the ability to compare results across units relative to the selected item in the hierarchy (see Reference Group Settings on page 497 for more information), you can also choose to show the results of one "reference unit" called "Upper Level Comparison". You can select "Upper Level Comparison" on the Categories and Statistics object in the aggregated tables of a report with a hierarchy as Personalized Filter Question. The functionality allows you to construct for example a table such as the one shown, where the first Categories object shows the results for "Self" (the unit selected as report base) and the second Categories object shows the results for "Upper level comparison".

dimension1 - Work Objectives							
	Categories		Categories				
			Your own unit			Upper level comparison	
			Unfavorable	Neutral	Favorable	Unfavorable	Neutral
I have clear measures for each of my objectives			58.3%	8.3%	33.3%	37.6%	19.5%
I know how my job impacts the mission of our company			50.0%	8.3%	41.7%	33.1%	18.8%
I know what is expected of me in my job			50.0%	16.7%	33.3%	42.1%	19.5%
In the last 12 months my Manager has talked to me about my progress			41.7%	16.7%	41.7%	41.4%	16.5%
My co-workers and I work well together to accomplish our organization's goals			33.3%	8.3%	58.3%	45.9%	18.0%
My group works well together to accomplish our organization's goals			33.3%	41.7%	25.0%	45.1%	15.8%
My Manager has set performance goals for my job			66.7%	8.3%	25.0%	39.8%	21.1%
We have prioritized our major goals			66.7%	16.7%	16.7%	32.3%	17.3%
							50.4%

**Figure 619 Example of Upper Level Comparison**

In the second of these Categories objects, the "Upper level comparison" property is set. In the first categories object, it is not set.

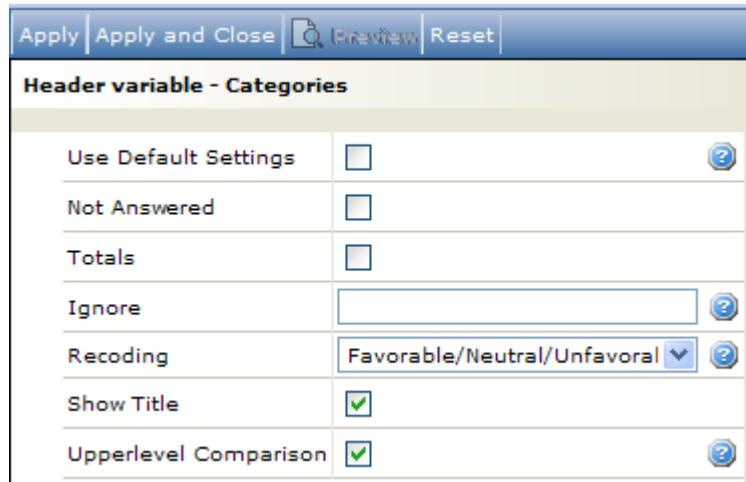


Figure 620 The Upper Level Comparison property on a Categories object

The statistics object has the same property. This means you can use the same technique when you wish to compare averages.

The default unit used for upper level comparison is the parent unit of the "self", that is the parent of the unit selected in current report base or assigned to the viewer (see How to Set the Report Base on page 484 for more information). However it is also possible to set up references to other units to use as "upper level comparison" units, if it is not natural to compare with the parent unit. To do this, define a secondary relation in the hierarchy defining the upper level comparison units. In the figure below, the relation "hierarchy" defines the company hierarchy, whereas the relation "upperlevcomp" defines which units are to be used for upper level comparison. The figure is taken from the definition of the hierarchy in the database designer, which is described in more detail in the Confirmit Authoring Manual.

Number of rows: 10					
	id	English	hierarchy (company)	upperlevcomp (company)	
<input type="checkbox"/>	COMP	The Company			<a href="#">...</a>
<input type="checkbox"/>	SALE	Sales	COMP	COMP	<a href="#">...</a>
<input type="checkbox"/>	MARK	Marketing	COMP	SALE	<a href="#">...</a>
<input type="checkbox"/>	PROS	Professional Service	COMP	COMP	<a href="#">...</a>
<input type="checkbox"/>	ADM	Administration	COMP	COMP	<a href="#">...</a>
<input type="checkbox"/>	DIRSALE	Direct Sales	SALE	SALE	<a href="#">...</a>
<input type="checkbox"/>	PARTSALE	Partner Sales	SALE	DIRSALE	<a href="#">...</a>
<input type="checkbox"/>	SUPP	Support	PROS	PROS	<a href="#">...</a>
<input type="checkbox"/>	CONS	Consulting	PROS	PROS	<a href="#">...</a>
<input type="checkbox"/>	OPS	Operations	PROS	SUPP	<a href="#">...</a>

Buttons at the bottom: Add, Delete, Save, Upload, Export, Switch to runtime.

Figure 621 Secondary relation defining which units are to be used in upper level comparison

There are a few differences between the hierarchy and the units that are used for upper level comparison. "Marketing" is organized directly under "The Company", but for upper level comparison, "Sales" is the unit that will be used. Similarly, "Partner Sales" will be compared with "Direct Sales", but is organized under "Sales", and "Operations" will be compared with "Support", but is organized under "Professional Services".

To specify that this alternative relation is to be used instead of the parents in the hierarchy, go to the "Upper level comparison" tab in the aggregated table property sheet, select "Specify Relation" and specify the Relation Name.

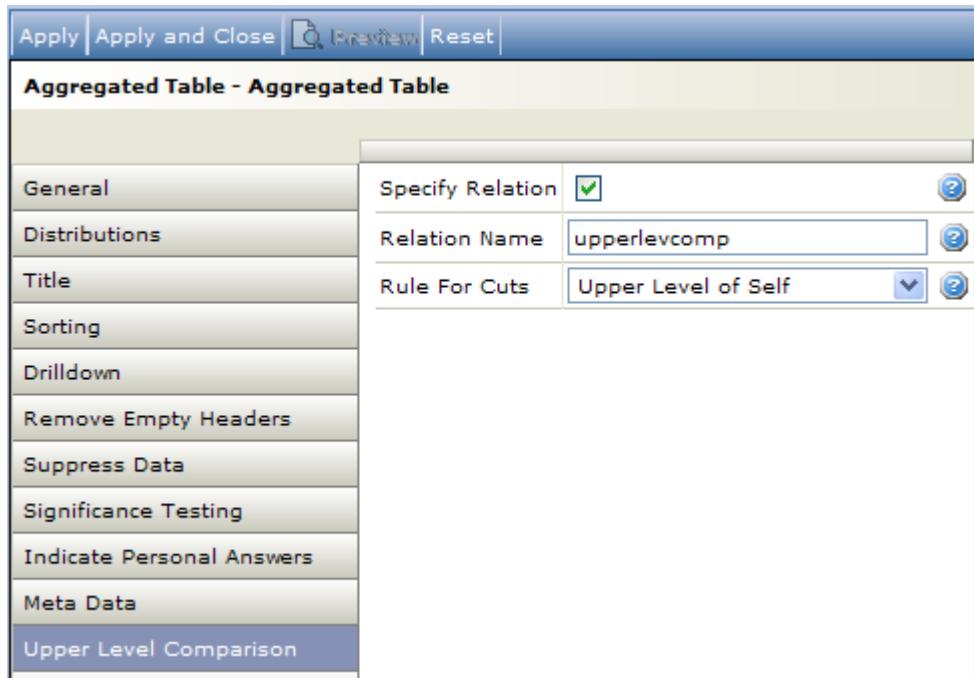


Figure 622 Aggregated table properties for upper level comparison

It is also possible to construct tables to compare a unit and its children, siblings etc. with the results for the same reference unit. The example below shows the averages on a satisfaction statement for a unit "Sales" and its children "Direct Sales" and "Partner Sales", and compares them with the results of the same unit, the upper level comparison of "Sales". This enables you to use formula to calculate the gap between each of these units' averages and the same reference unit (see Formula on page 230 for more information).

dimension6_17 - Considering e...				
department - Department		Average	Average upper level comparison	Gap
Sales	2.8	3.0	-0.2	
Direct Sales	2.8	3.0	-0.2	
Partner Sales	3.0	3.0	0.0	

Figure 623 Upper level comparison of a unit and its children against the same unit

For the department question in the figure above, self and 1 level of children are selected as the reference group settings (see Reference Group Settings on page 497 for more information). The second statistics object has "Upper level comparison" set.

When using upper level comparison across several units in this way, you can choose whether the unit that all the units should be compared with is to be the upper level of self (the upper level of "Sales" in the example above), or the upper level of the children (which would be "Sales" itself in the example above). This is done in the "Rule for cuts" setting in aggregated table properties.

## 20.8.7. Exporting Personalized Reports on Hierarchy

When you export a personalized report that is based on a hierarchy question, the window in which you select the report base(s) presents the hierarchy as a tree.

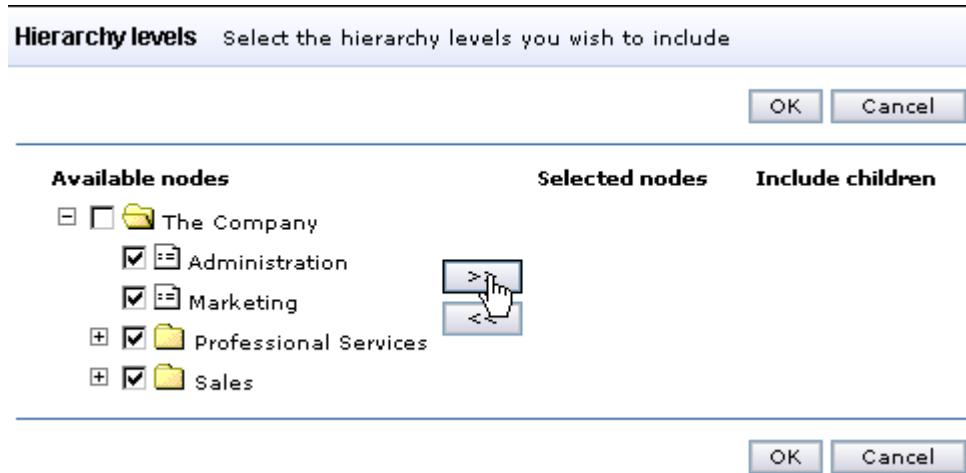
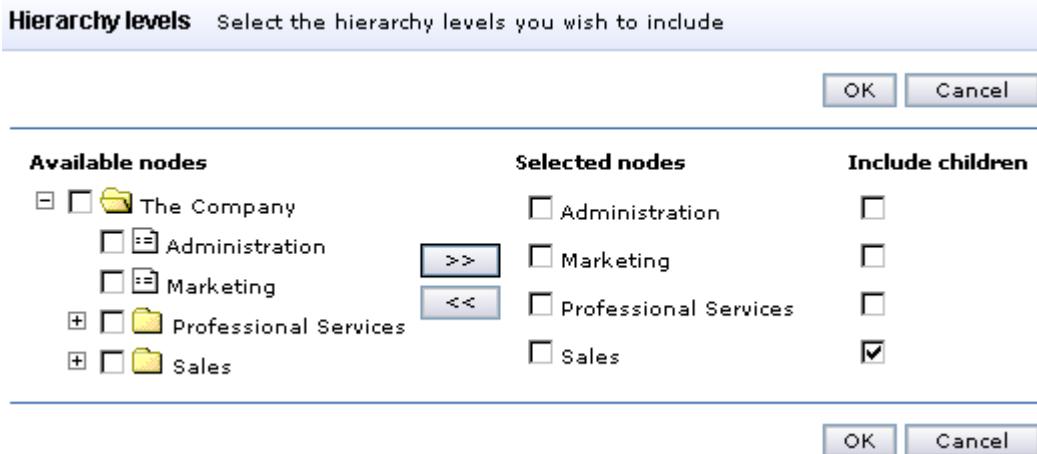


Figure 624 Example of the hierarchy levels

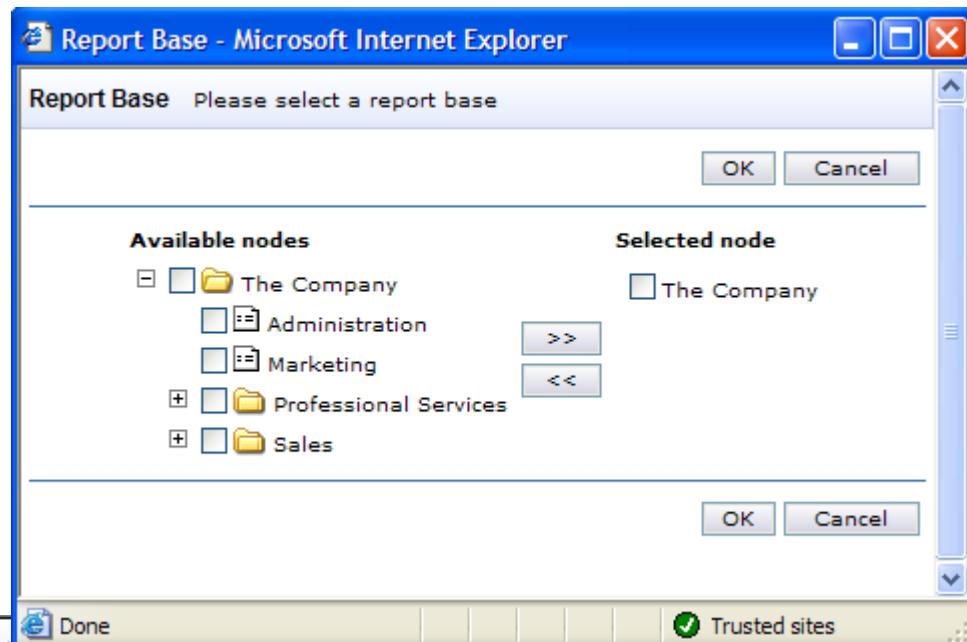
Select the levels for which you want exports, and click the >> button to move them to "Selected nodes".

**Figure 625 The selected nodes**

With "Include children" checked, reports will be generated for the selected level and all levels below the selected level. So with the settings as shown in the figure above, exports will be generated for "Administration", "Marketing", "Professional Services", "Sales", "Direct Sales" and "Partner Sales".

### 20.8.8. Assigning Report Bases to End users

When you are assigning report bases to end users for a hierarchy, you are also presented with the hierarchy tree when you select a report base.

**Figure 626 Selecting the hierarchy level**

The end users will have access to reports that are filtered on their hierarchy level. If there are levels below the level they have access to, they can also select as the current hierarchy level any of the children on the levels below their own.

You can select one or more hierarchy levels. If you select more than one, it will work in the same way as described in How to Assign More than One Report Base to an End User.

To do this as a designer or analyst, go to the **Report > Properties > Set Report Base** menu command.

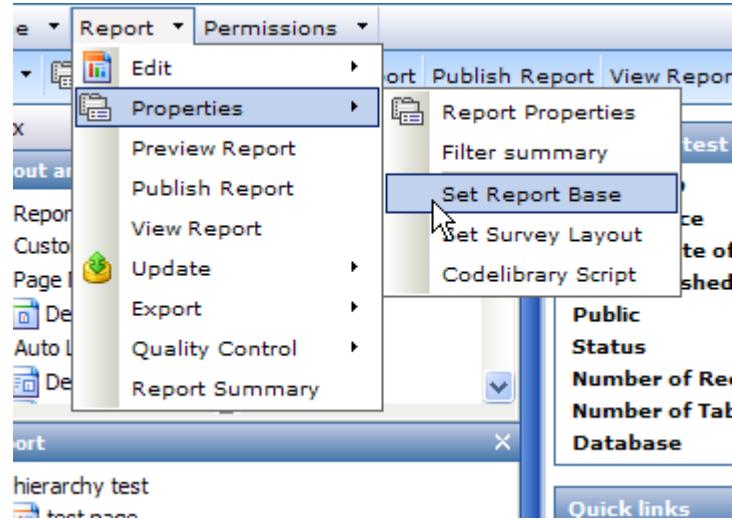


Figure 627 Setting the Current Hierarchy Level as a Designer

To do this as a viewer, go to the **Admin** menu.



Figure 628 Setting the Current Report Base as a viewer

You can also include setting of "Set Report Base" as a part of the Drop Menu Navigator. To do this, select "Show Hierarchy Level" in its properties as shown below.

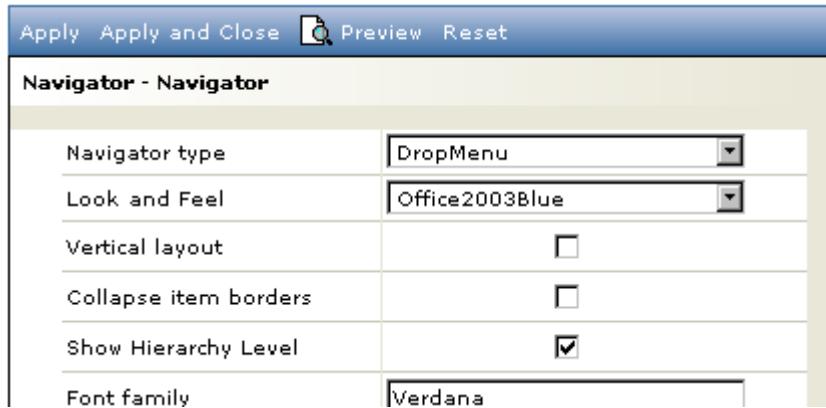


Figure 629 Setting the Show Hierarchy Level in the drop-menu Navigator settings

The viewers will have the hierarchy as the last element of the Drop Menu (see The Menu Navigator Type on page 697 for more information).



Figure 630 Selecting the hierarchy level in the drop-down menu

To avoid having to download the entire hierarchy, with the possible performance problems this would lead to with large hierarchies, only the first levels will be directly available. Lower levels must be selected by first selecting "More", and then moving down.



Figure 631 Selecting an element on the lowest level in the hierarchy

The hierarchy selected will be shown in the Active Filter Summary (see Filter Page for Viewers on page 555 for more information).

## 20.9. Indicating Personal Answers

If your report viewers (those who will be assigned rights to see the reports) are also respondents to the survey, and each of them is uniquely identified by the value stored on a single question in the survey (for example their name), you can use the "Indicate Personal Answers" functionality to highlight their responses in the aggregated and verbatim tables.

To enable this functionality, you must first select a "Personalized filter question" in the report properties (see How to Enable Personalized Reporting on Single Questions on page 482 for more information).

**Note: To be available as a personalized filter question, the question that identifies the end user must have the Indexed property. This must be set up in the question's properties in Confirmit authoring.**

Instead of enabling the personalized filter on the report (or folder, page or table), which would mean that the results would be filtered on this question, you can enable "Indicate Personal Answers" on the aggregated or verbatim tables. This means that instead of filtering the table on the personalized filter question, the personalized variable will be used to highlight the viewer's own responses in the aggregated or verbatim table. This can only be done if there is only one response corresponding to the viewer for the personalized filter question.

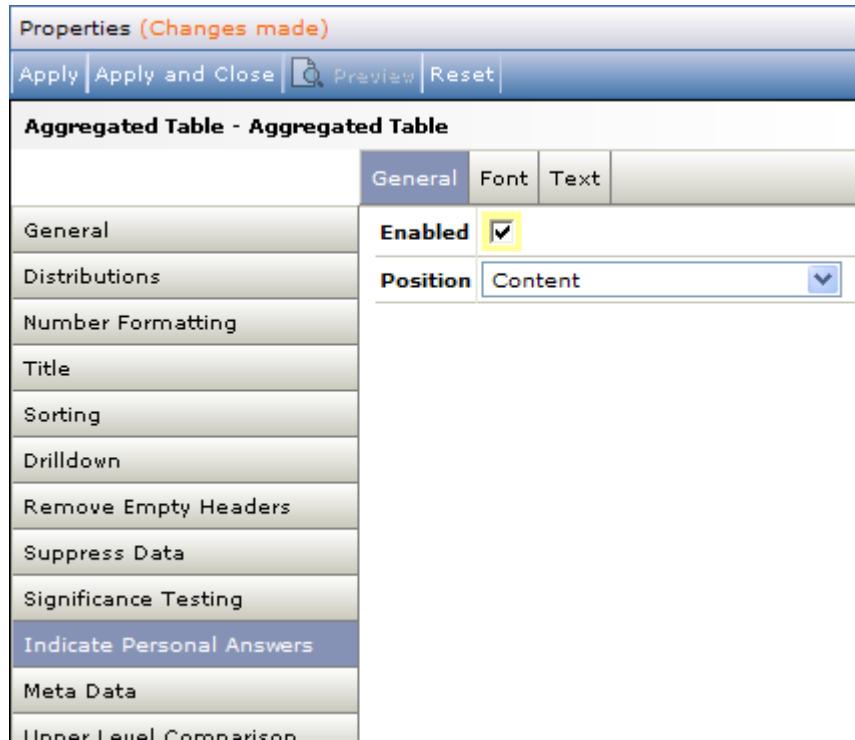
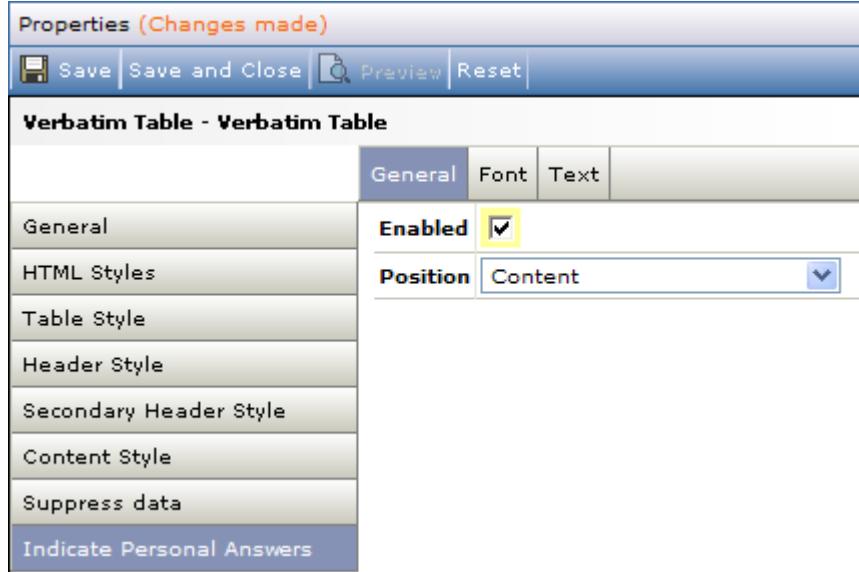


Figure 632 Enabling the Indicate Personal Answers functionality for an aggregated table



**Figure 633 Enabling the Indicate Personal Answers functionality for a verbatim table**

You can highlight the viewer's own responses by highlighting the content of the cells that correspond to his/her own answers. In aggregated tables, if you set the Position property to "Content", the Font and Text alignment settings will be applied to the counts, vertical and/or horizontal percents corresponding to the respondent's answer, as in the figure below.

		q3 - Age						
			Under 18	18 to 30	31 to 50	51 to 67	68 or more	Total
q7 - Favorite		MTV	0.0%	8.1%	12.8%	10.0%	12.0%	<b>10.7%</b>
		EuroSport	0.0%	9.9%	<b>12.1%</b>	12.5%	12.8%	<b>11.8%</b>
		CNN	0.0%	10.6%	11.7%	10.7%	10.5%	<b>10.9%</b>
		Discovery	0.0%	12.0%	9.3%	13.7%	12.0%	<b>11.7%</b>
		EuroNews	0.0%	9.2%	9.0%	10.0%	10.9%	<b>9.7%</b>
		BBC World	0.0%	14.1%	11.7%	11.1%	13.2%	<b>12.5%</b>
		Other	0.0%	12.0%	9.3%	10.0%	8.6%	<b>10.0%</b>
		No Particular Favorite	0.0%	24.0%	24.1%	22.1%	19.9%	<b>22.6%</b>
		Total	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Figure 634 Using content highlighting to indicate personal answers**

In the example above, the current viewer has answered "Eurosport" on the Favorite question and is in the Age group "31 to 50". We have set bold, italic and blue color in the font settings to indicate his/her responses. In a verbatim table, it will be the cell with the viewer's own open text response that will be highlighted.

Instead of highlighting the content, you can use a character to indicate the viewer's responses. This character can be placed before ("Prefix") or after ("Suffix") the cell content. If it is an aggregated table where the cells have more than one data point (i.e. if you combine counts and vertical and/or horizontal percents, the character will be placed in the first data point). The figure below shows an example where the \* character is used as a suffix (again, the EuroSport / 31 to 50 cell).

The screenshot shows a report interface with a toolbar at the top containing Save, Refresh, Save as Style, Find in tree, Table objects, Statistics, Categories, and other icons. Below the toolbar is a table titled 'q3 - Age'. The table has a row for 'q7 - Favorite' which contains a list of media sources. The last row of the table is 'Total'. The column headers are 'Under 18', '18 to 30', '31 to 50', '51 to 67', '68 or more', and 'Total'. The data for 'EuroSport' includes an asterisk (\*) after the percentage value.

	q3 - Age						
q7 - Favorite		Under 18	18 to 30	31 to 50	51 to 67	68 or more	Total
	MTV	0.0%	8.1%	12.8%	10.0%	12.0%	10.7%
	EuroSport	0.0%	9.9%	12.1%*	12.5%	12.8%	11.8%
	CNN	0.0%	10.6%	11.7%	10.7%	10.5%	10.9%
	Discovery	0.0%	12.0%	9.3%	13.7%	12.0%	11.7%
	EuroNews	0.0%	9.2%	9.0%	10.0%	10.9%	9.7%
	BBC World	0.0%	14.1%	11.7%	11.1%	13.2%	12.5%
	Other	0.0%	12.0%	9.3%	10.0%	8.6%	10.0%
	No Particular Favorite	0.0%	24.0%	24.1%	22.1%	19.9%	22.6%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 635 Using a suffix to indicate personal answers

## 21. Filter Designer

You can apply filters within your reports to filter the information presented. Filtering will mathematically remove certain respondents from parts or all of your report.

Filters can be applied on all levels:

- The entire report - right-click on the report name in the Report toolbox and go to **Properties > General** tab.
- At the folder level - right-click on the folder in the Report toolbox and go to **Properties > General** tab.
- At page level - right-click on the page in the Report toolbox and go to **Properties > General** tab.
- At table level - double-click on the table in the Report toolbox to open the Table Designer, then right-click on the table and select **Table Properties**. You can also apply a filter to for example all the tables in a folder, by right-clicking on the folder in the Report toolbox, then selecting **Sub Elements > Table**. This opens a combined property sheet for all the tables in the selected folder.

**Note:** Filters applied to reports or elements in a report such as folders or pages will be inherited by all levels lower in the report than the object the filter is applied to. The applied filters will then be listed in the properties pages for these levels. For example, if a filter is applied at the Report level, then it will be listed in the Filters property on the Page Properties sheet for all pages in the report, and in the filter bar for all tables in the report.

In Reportal, we differentiate between two types of filters:

- **Static filters** – set up by the Confirmit user and cannot be influenced by the report viewer.
- **Dynamic filters** – also set up by the Confirmit user, but the viewer can activate these as required (see Filter Page for Viewers on page 555 for more information).

Static filters have several “levels” of complexity:

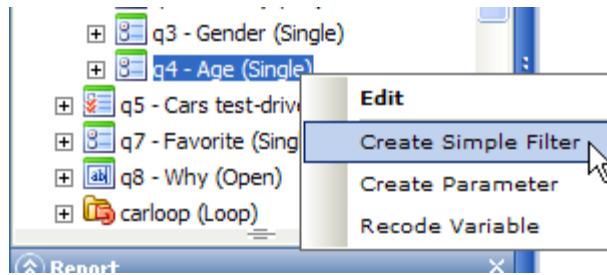
- A **Simple filter** is based on one question or one system variable such as Interview Status (see How to Create a Simple Filter on page 513 for more information).
- A **Filter Expression** enables you to create simple scripts by selecting functions from lists. The scripts are then assembled automatically by Reportal (see Filter Expressions on page 518 for more information).
- A **Filter Tree** enables you to combine multiple questions using AND and OR operators, to display a specific group or cut of the entire database (see How to Create a Filter Tree on page 522 for more information).
- A **TGL Filter** is similar to a Filter Expression, but uses a different type of code. It enables you to create scripts by selecting functions from lists, and the scripts are assembled automatically by Reportal (see TGL Filters on page 531 for more information).
- A **Filter Script** is a fully coded filter script - for advanced users only (see Scripting in Reportal on page 564 for more information).

**Note:** The code used in standard filters and TGL filters is not interchangeable; you cannot use the TGL language in a standard filter expression or standard filter code in a TGL filter. However, you can use either type of filter to do the same job, and you can use both types of filter in the same report.

### 21.1. How to Create a Simple Filter

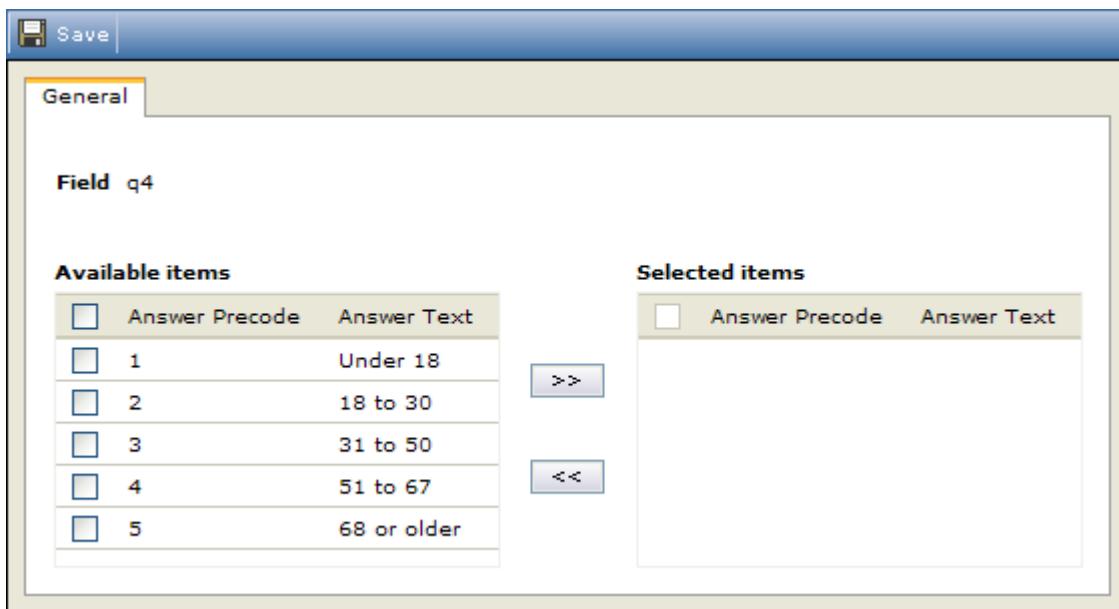
A Simple filter is based on one question or one system variable such as Interview Status. To create a Simple filter:

1. In the Data Source toolbox, right-click on a question and choose **Create Simple Filter** from the menu.



**Figure 636** Creating a simple filter for a question

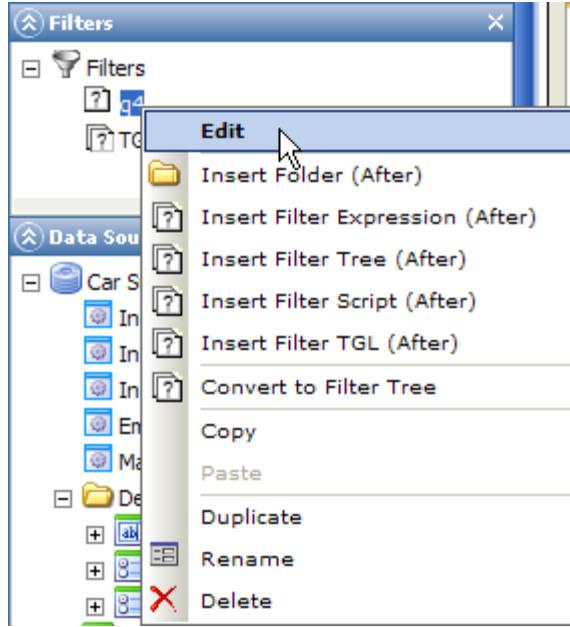
The Filter Designer page for the Simple filter opens. All answer alternatives in the question are displayed in the Available Items field.



**Figure 637** Example of a Filter Designer page for a simple filter

2. In the Available Items field, select the items to be used in the filter by ticking the appropriate check boxes.
  3. Click the **>>** button to move the selected items to the Selected Items column (or you can move items individually by double-clicking the item).
- The question is placed in the Filters toolbox.
4. Save the changes.

If you later wish to edit the filter, right-click on the filter name in the Filters toolbox and choose **Edit** from the menu. The Filter page opens as shown above.



**Figure 638** The Filter right-click menu

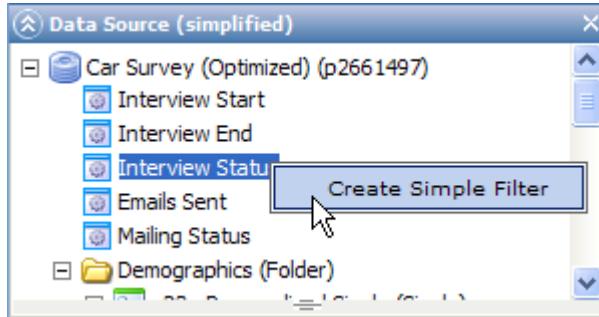
Simple filters can be converted to Advanced filters (see How to Create a Filter Tree on page 522 for more information).

**Note:** You can also create filters simply by dragging questions or question categories from the Data Source toolbox and dropping them into the Fixed Filters field in the Table Designer page or into the gray bar below the table (see Adding a Filter to the Table on page 155 for more information).

### 21.1.1. Creating a Simple Filter on Interview Status - Example

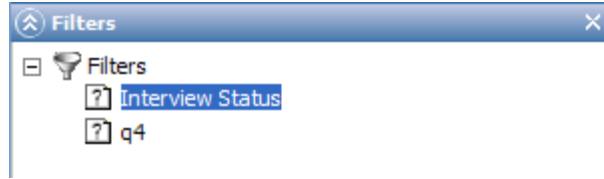
Assume you wish to display only complete responses in your report. To do this you must define a filter using the Interview Status item in the Data Source.

1. In the Data Source toolbox, right-click on the Interview Status element and select **Create Simple Filter** from the drop-down menu.



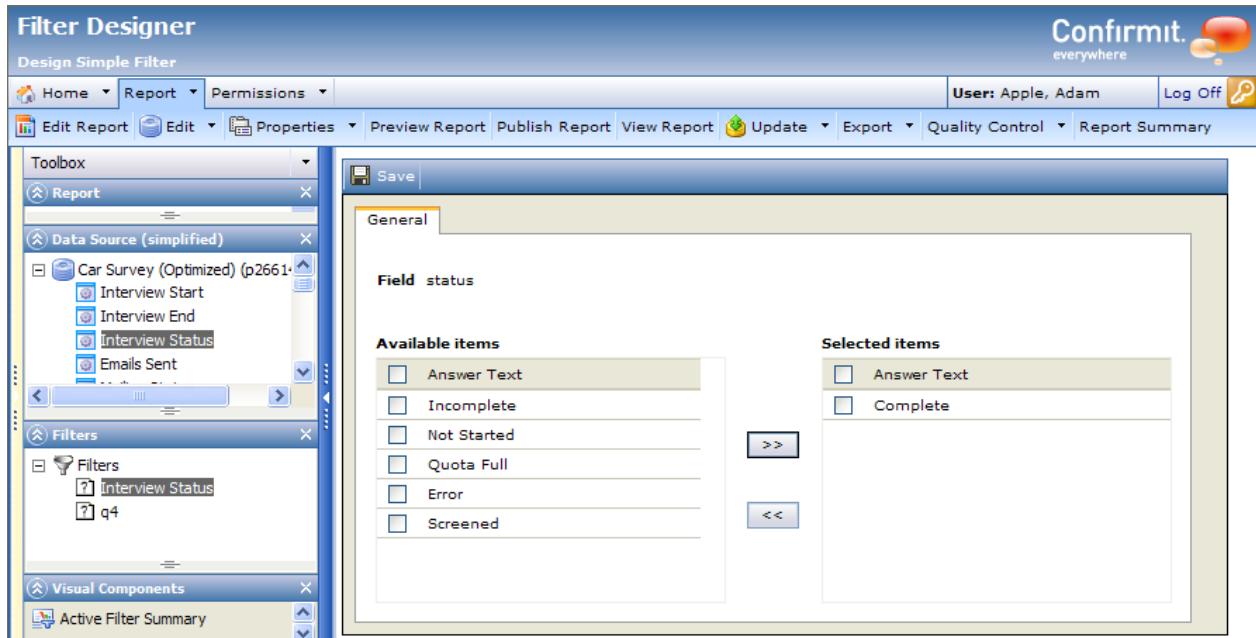
**Figure 639** Creating the filter on the Interview Status element

A new filter element "Interview Status" is added to the Filters toolbox.



**Figure 640** The new filter in the Filters toolbox

2. To rename the filter and define its properties, right-click on the element in the toolbox and choose the appropriate option from the menu.



**Figure 641** Defining Complete as the filter

3. Select **Complete** in the Available Items column, then click the **>>** button to move it to the Selected Items column.
4. Click **Save** to save the changes.
5. To apply the filter to the entire report, right-click on the report name in the Report toolbox and choose **Properties**.

The Report Properties page opens.

**Note:** Any filters already added to the element will be listed in the Filters row. In the case below, none have been added as yet so the row shows (Filters). In the event the list of filters added to the element is too long to be displayed in its entirety, place the mouse pointer over the list to display it in full.

6. Click the button beside the Filters property.

Properties (Changes made)

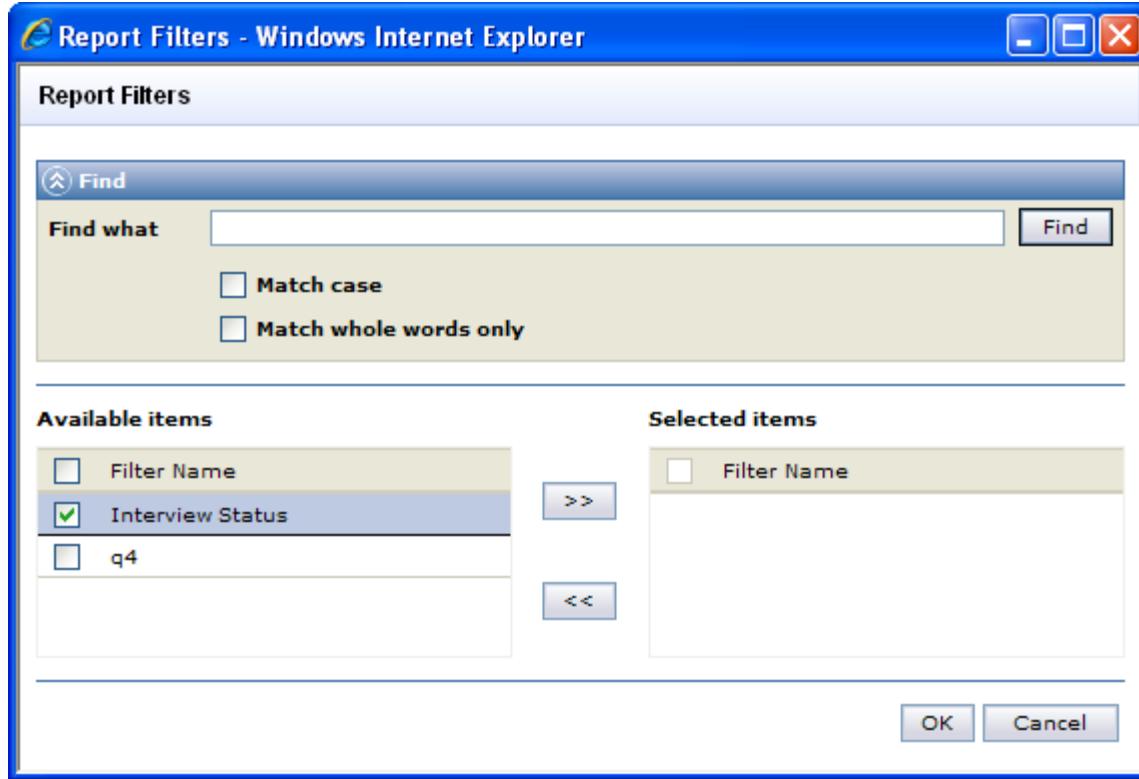
Save Save and Close Preview Reset

**Report Root - Car Test Report (932)**

	General	Export settings	Cache settings	Drilldown Menu Layout	Titles
<b>Name</b>	Car Test Report				
<b>Data Source</b>	Car Test Report (902)				
<b>Last published</b>	03/12/2009 08:49:34				
<b>Public</b>	<input type="checkbox"/>				
<b>Offline</b>	<input type="checkbox"/>				
<b>Use Test Data</b>	<input checked="" type="checkbox"/>				
<b>Exportable</b>	<input checked="" type="checkbox"/>				
<b>BitStream Variant</b>	Rapid Results Data				
<b>Tabulation Engine</b>	Version 1				
<b>Default Language</b>	English				
<b>Time Zone Offset</b>	0				
<b>Week 1</b>	First day				
<b>First Day of Week</b>	Sunday				
<b>Weight Model</b>	Default				
<b>Personalized filter question</b>	q23 - (p2661497)				
<b>Report Languages</b>	(Languages)				
<b>Filters</b>	(None)				

Figure 642 The Report Properties page

The Report Filters Activation window opens.



*Figure 643 Activating the filter*

Here you activate and deactivate the filters as required.

7. In the Available Items list, select the filter(s) you wish to activate.
8. Click the **>>** button to move the selected filter(s) into the Selected Items list.
9. Click **OK** to activate the filter(s) and close the window.

On completion, click **Save and Close** in the Properties window.

**Note:** You can activate filters on individual Report pages using the same procedure.

Note that any filters applied to the entire report, as in this procedure, will be inherited by the individual tables within the report. These filters will then be indicated in the "Drop filters or answers here" fields in the tables as "Inherited", as shown below (see Adding a Filter to the Table on page 155 for more information).



*Figure 644 A report filter inherited by a table*

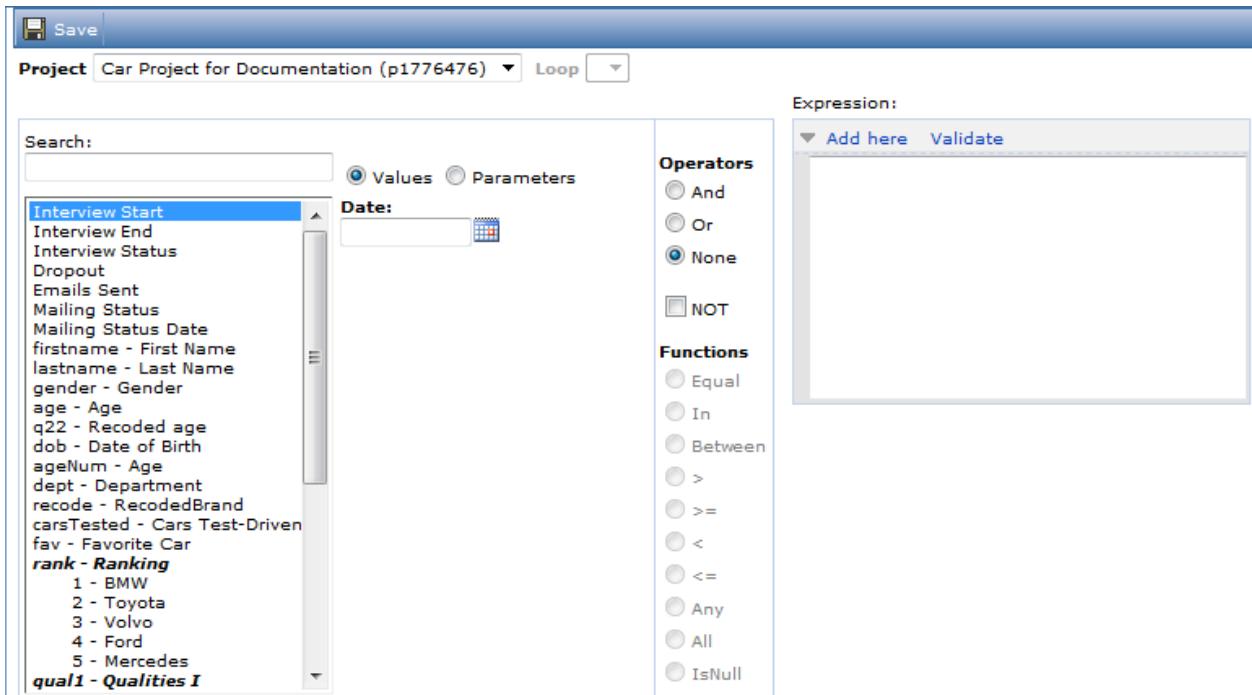
## 21.2. Filter Expressions

This functionality enables you to create simple scripts by selecting functions from lists. The scripts are then assembled automatically by Reportal.

**Note:** The code used in standard filters and TGL filters is not interchangeable; you cannot use the TGL language in a standard filter expression or standard filter code in a TGL filter. However, you can use either type of filter to do the same job, and you can use both types of filter in the same report.

## 21.2.1. How to Create a Filter Expression

1. In the Filters toolbox, right-click on the **Filters** object and select **Insert Filter Expression** from the menu.  
A New Filter Expression object is created in the Filters toolbox.
2. In the Filters toolbox, right-click on the New Filter Expression object and select **Rename** from the menu.  
The object name becomes a text editing field.
3. Type into the field a logical name for the object.
4. Click out of the field to close the text editor.
5. Double click on the **New Filter Expression** object or right-click on it and select **Edit**, to open the Filter Expression Designer page.



**Figure 645 Example of the Filter Expression Designer page**

This page is where you create the filter expression that is the overall filter for the users. You can select criteria from the list and assemble them using the operators and functions, or if you have the required knowledge you can write the expression directly into the data field (see Reportal-Specific Functions in Filter and Segment Expressions on page 530 for more information).

**Note:** To use the Mailing Status, Mailing Status Date or Emails Sent objects, the underlying project will need a respondent list uploaded and emails will have to have been sent.

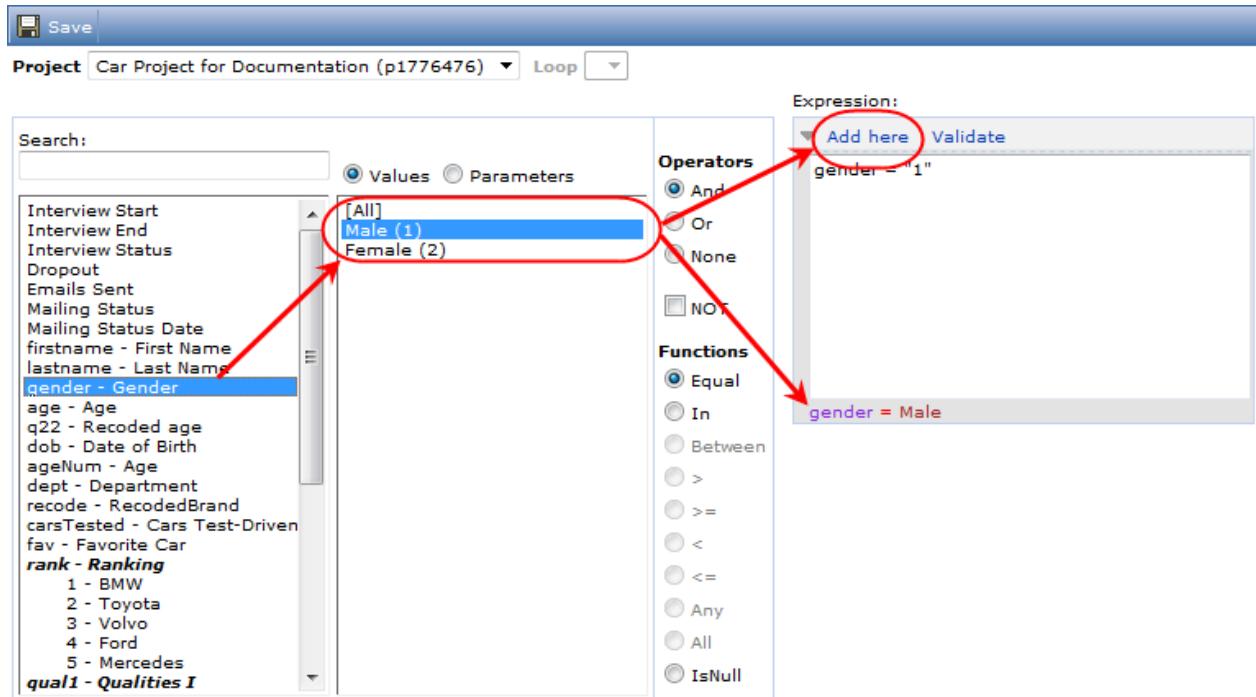
**Note:** You can also select the required answers from the questions in the Data Source by holding down the Ctrl key on your keyboard whilst clicking on the required answers. Then right-click in one of the selected answers and select New Filter Expression from the drop-down menu.

### 21.2.1.1. Creating the Filter Expression

1. In the left column, search for or browse to the question you wish to start your expression with, and click on it to select it.

The Values or Parameters (depending on the option selected) that apply to the question will be listed in the second column. Note that you can select hierarchical variables here; in this case the nodes will be listed in the second column. Expand the levels as necessary to find the node you wish to use for the filter.

2. Click on the required Value/Parameter to select it.
3. Select the radio button for the **None** operator (you cannot start an expression with the operators **And** or **Or**), and check the **NOT** box if required.
4. Select the appropriate function and type any text or values into the Text or Number fields as required.
5. Click **Add Here** (see the following figure) to add the criteria to the field.

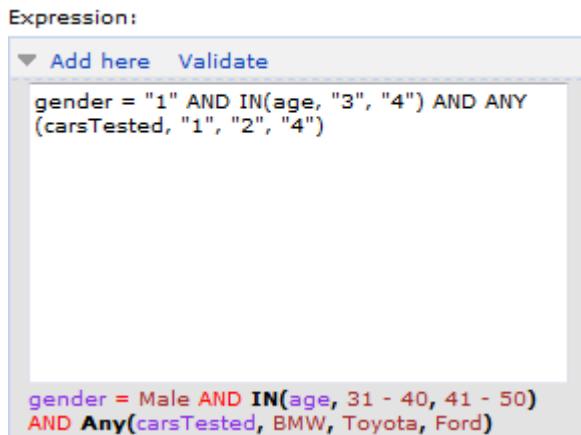


**Figure 646 Adding criteria to the data field**

Note that the coding is displayed in the white text field and the expression is “written” below the field in full with colors to denote the functions.

6. Select and add criteria until you have the required expression.

The expression in the example below will show Males between the ages of 31 and 50 who have indicated that they have test-driven one or more of the three cars (Toyota, Ford or BMW).



*Figure 647 Example of a complete expression*

If you type in your expression “manually” (see Reportal-Specific Functions in Filter and Segment Expressions on page 530 for more information), click **Validate** to run an automatic validation check for the expression.

7. Click **Save** to save the changes.

#### **21.2.1.2. The Filter Expression Designer Data Fields**

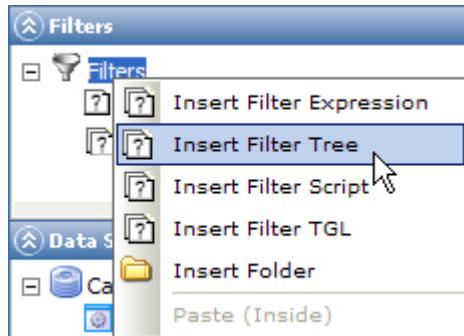
- **Project** – the projects selected for the report are listed here. Click the down-arrow and select from the list the project you wish to use.
- **Loop** – if the project includes loops, these are listed here. Click the down-arrow and select from the list the loop you wish to use.
- **Search** – in the event the report contains many questions, use the Search facility to find the question you are interested in. type a character or string of characters into the Search field. As you type, Confirmit reduces the question list to show only those questions that include that character or series somewhere in the question name.
- **Values** – if the answers to the selected question have specific values that you wish to use in the filter (for example, Male or Female), select the Values radio button to list the value options of the selected question.
- **Parameters** – if the filter is to vary depending on selections made by the user, then the filter will need to use parameters. Select this radio button to list the parameters that have been created for the report.
- **Date** – when the selected question contains date data, this field will be accessible.
- The Operators:
  - **And** – a conjunction operator to be used when more than one criteria must be satisfied. For example, the panelist must be male and must be married.
  - **Or** – a conjunction operator to be used when one or more criteria must be satisfied. For example, the panelist must have network access from home or from work.
  - **None** – this is not a conjunction operator. Use when adding the first criteria in the expression.
  - **Not** – the negative operator. Use for example when you want panelists who are not in banking though any other profession is acceptable.
- The Functions (these will be active depending on the criteria selected):
  - **Equal** – use when you want the selected criteria to be equal to a specific value, for example when you want panelists of a specific age or you want the criteria to be Yes or No.
  - **In** – use when the criteria value is to be one of a range or set of values.

- o **Between** – use when you want the criteria to be between two values, for example between two dates.
- o **>** (Greater than) - use when the criteria is to be greater than a specified value.
- o **>=** (Greater than or equal to) - use when the criteria is to be greater than or equal to a specified value.
- o **<** (Less than) – use when the criteria is to be less than a specified value.
- o **<=** (Less than or equal to) – use when the criteria is to be less than or equal to a specified value.
- o **Any** – use if the filter is to return TRUE if any (one or more) of the selected values is found.
- o **All** – use if the filter is to return TRUE only if all the selected values are found.
- o **IsNull** - use if the filter is to return TRUE if the question is not answered.
- Other data fields:
  - o **Text area** – type text as required into this field. The field is only accessible for certain pre-defined criteria.
  - o **Paste area** – here you can paste in, for example, a list of values copied from a document.
  - o **Number** – here you can type in numerical characters only. Use in conjunction with a Function (see above) when, for example, you want a criteria to have a specific numerical value. The field is only accessible for certain pre-defined criteria.
  - o **End Number** – when the Number field is open, if you also select the Between function, a second numerical data field appears. This enables you to input a second number such that you can specify the criteria must have a value between the two given numbers.

### 21.3. How to Create a Filter Tree

You can define advanced filters that are based on several questions and combined these questions using AND and OR operators. These types of filters are called Filter Trees. To create an advanced filter:

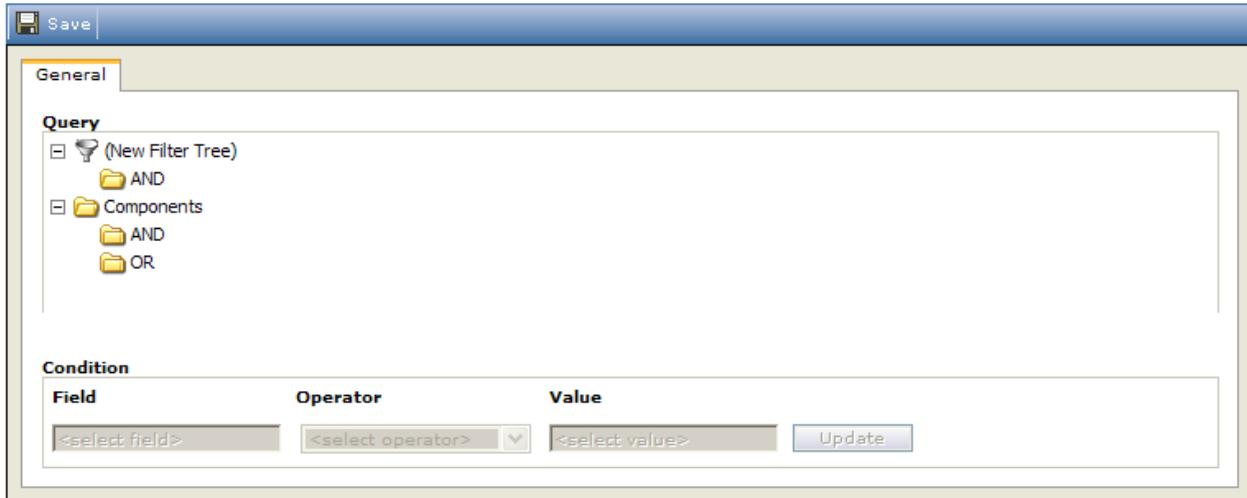
1. In the Filters toolbox, right-click on the **Filter** item and choose **Insert Filter Tree** from the menu.



*Figure 648 Inserting a filter tree into the Filter folder*

A New Filter Tree element is created in the Filters toolbox.

2. Rename the filter tree as appropriate, then double-click on it to open the Advanced Filter Designer page.



**Figure 649 The Advanced Filter Designer page**

3. Drag the questions you wish to include in the filter from the Data Source toolbox and drop them into the filter folders.
- Two types of relations can exist between the elements in a filter: they can be linked using the AND operator or using the OR operator. These objects are available in the Components branch. Drag them as required to the filter branch. You can also define levels in advanced filters.
4. Save the changes.

### 21.3.1. Creating a Filter Tree - Example

**Note: The following example is based on a fictitious survey that is intended to discover the respondent's TV-viewing preferences.**

The following example describes how to build a filter on two single questions (Gender and Age), one multi question (TV Channels Today) and one grid question (Satisfied with Present Package).

The filter is required as follows:

- The first level of the filter is to be: Male respondents under 51, and who have either EuroNews or BBC World.
- In the second level of the filter, these respondents should be satisfied with News or Documentaries.

Proceed as follows:

1. In the Filters toolbox, right-click on the Filter item and choose **Insert Filter Tree** from the menu.

A new filter element is created in the Filters toolbox.

2. Give the new element a logical name.

3. Double-click on the new element or right-click on it and select **Edit**.

The Design Advanced Filter page opens.

4. Drag the questions from the Data Source and drop them into the AND folder.

To insert the first element into the folder, point at the folder icon when releasing the mouse button.

To activate the Condition builder, click on the question. For single questions the operator will always be IN, and for multi questions the operators will be AND or OR.

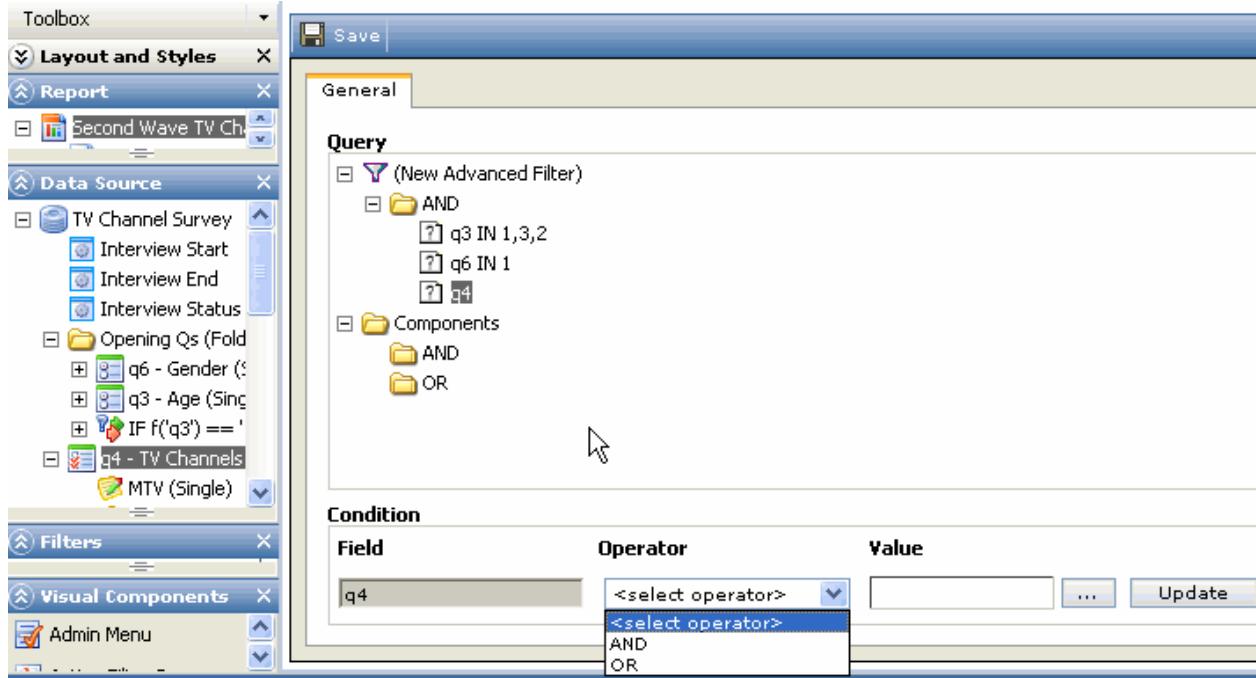


Figure 650 Questions dragged into the AND folder

In the figure, the filters on questions q3 and q6 have already been defined.

5. To select the answer alternatives, click on the ellipses button in the lower-right corner of the page.  
A new window opens, allowing you to choose the answer alternatives.

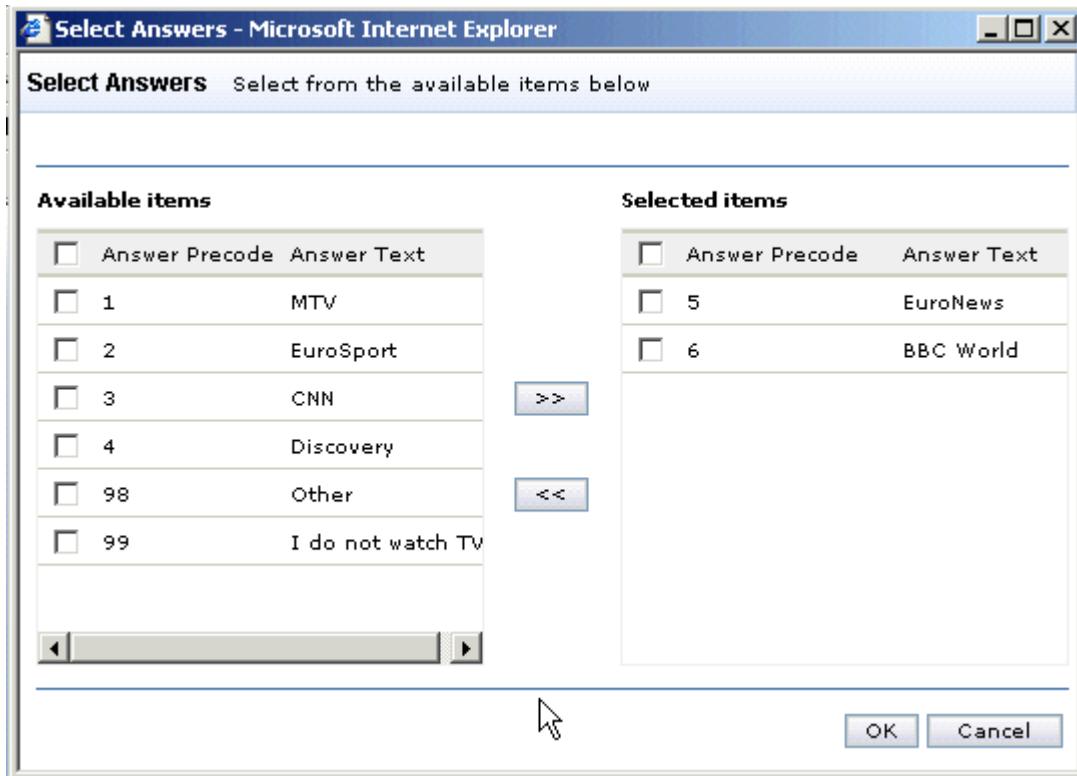
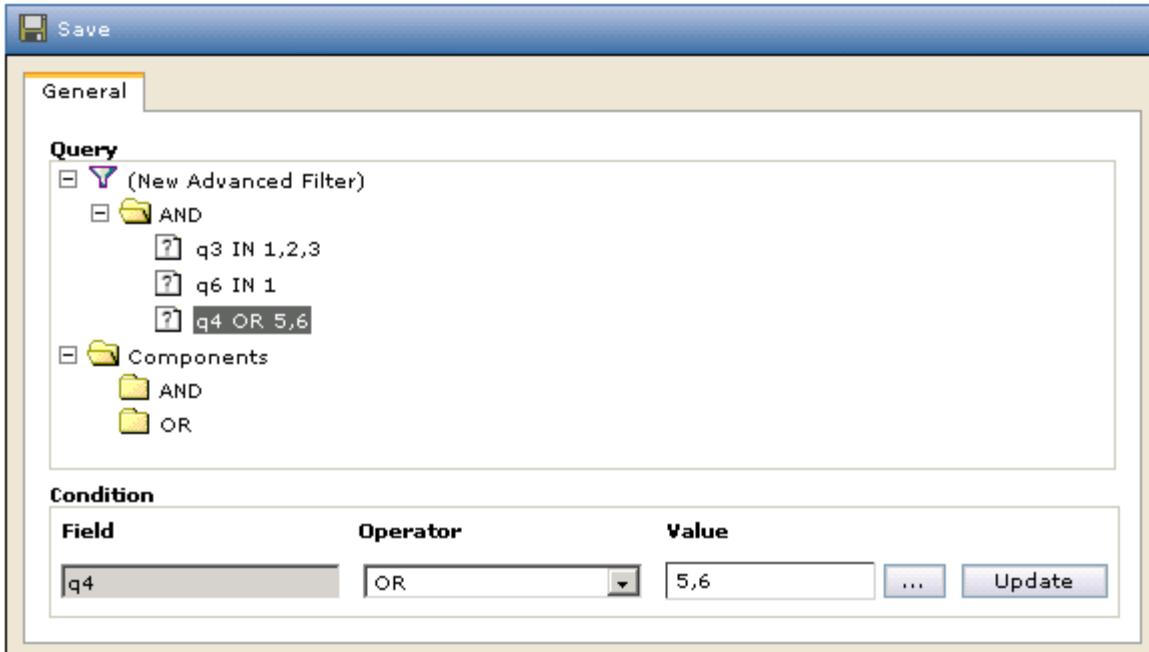


Figure 651 Selecting the answer alternatives for a filter

6. In the Available Items column, select the required answer alternatives, then click the **>>** button to move them to the Selected Items column
7. On completion, click **OK**.
8. In the Advanced Filter Designer window, click the **Update** button to update the changes.

All three questions in the filter are now linked together using the AND operator. The two elements in q4 are linked together using OR.



*Figure 652 Filter on q4 updated*

9. Drag the OR folder up from Components and drop it inside the filter (drop it onto the text of the last element to insert it into the AND folder).
10. Drag the q5 grid question from the Data Source and drop it into the OR folder created in the previous step.

**Note: You cannot drag the entire grid question into the filter. You must expand the question by clicking on its icon, then drag the single elements (answer alternatives) into the filter.**



*Figure 653 Example of an expanded grid question*

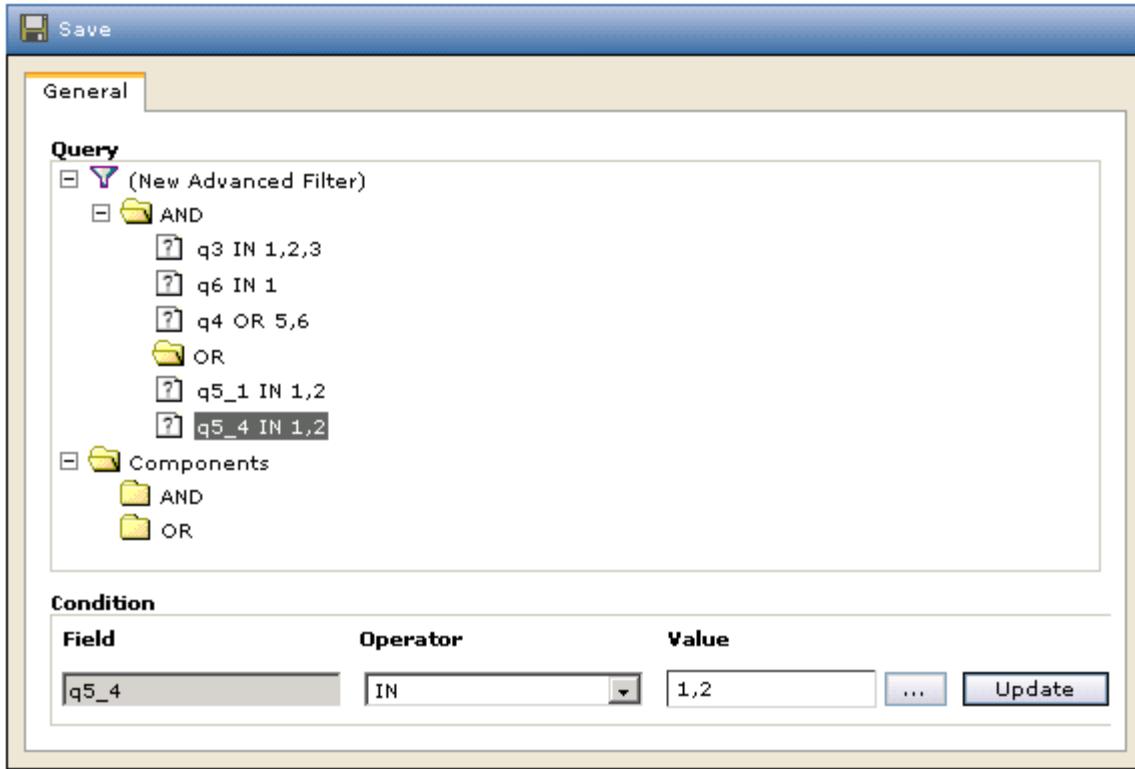


Figure 654 Filters defined on a grid question

11. Save the changes.

The logic in advanced filters can easily be inverted, both on the elements and the folders. Inverting the logic means inserting NOT to achieve the opposite result. To do this, right-click on the folder and select Invert Logic from the menu.

You can change the AND and OR folders to the other alternative. To do this, right-click on the folder and select **AND <-> OR** from the menu.

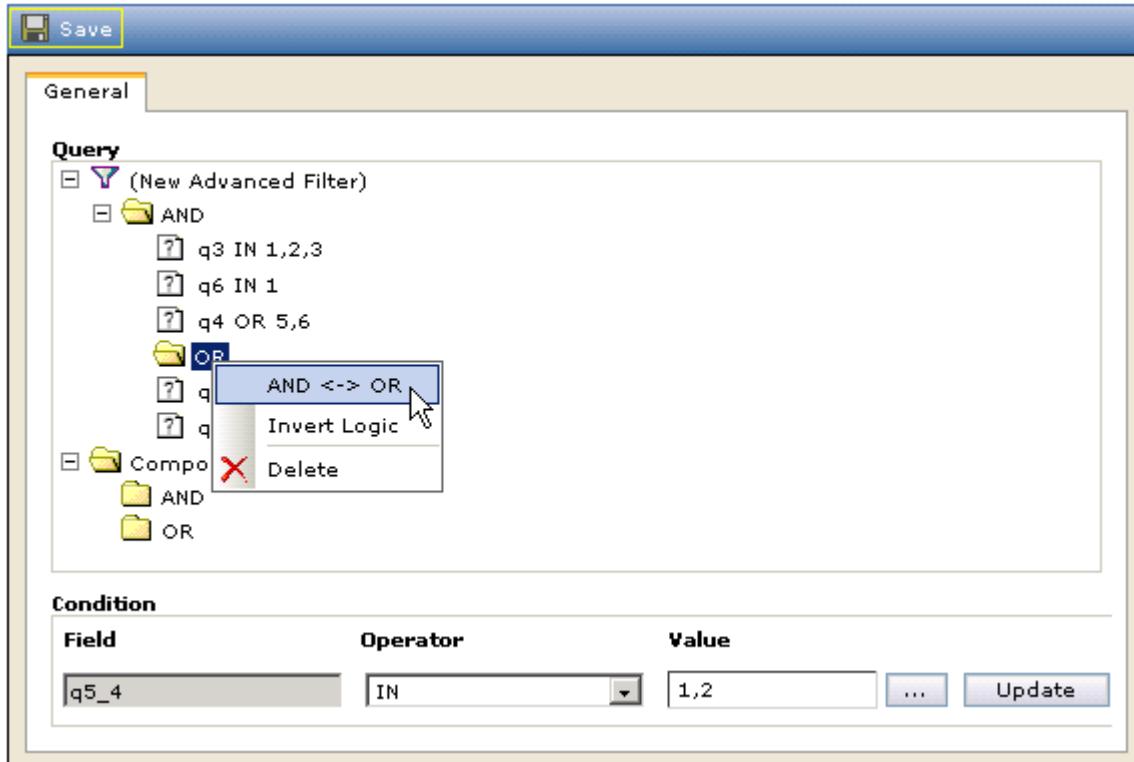


Figure 655 Changing the filter logic

### 21.3.2. Operators for Numeric Questions, Interview Start and Interview End

When defining filters on Numeric questions, Interview Start and Interview End, the Condition builder contains a number of operators.

#### 21.3.2.1. Operators for Numeric Questions

When defining filters on Numeric questions, the operators in the Condition builder are as follows:

- = - equal to.
- $\neq$  - is not equal to.
- < - less than.
- > - greater than.
- $\leq$  - less than or equal to.
- $\geq$  - greater than or equal to.

When defining a filter on a numeric question, you must enter the Value manually.

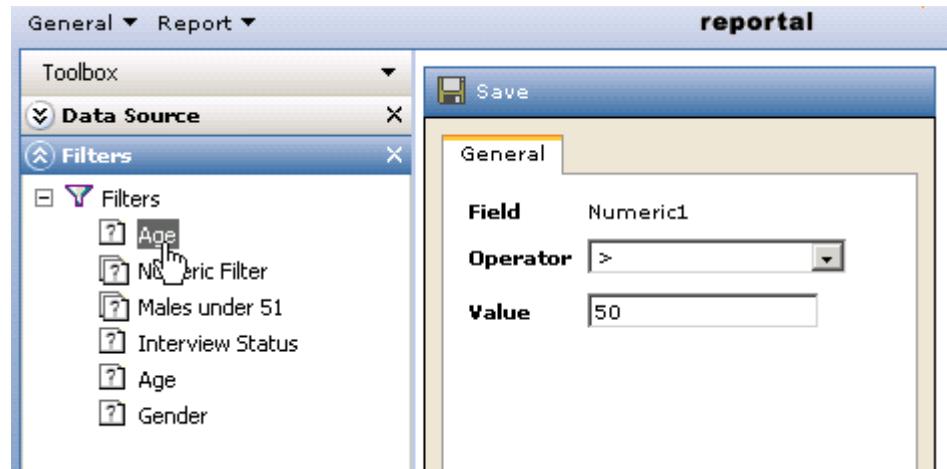


Figure 656 A simple numeric filter

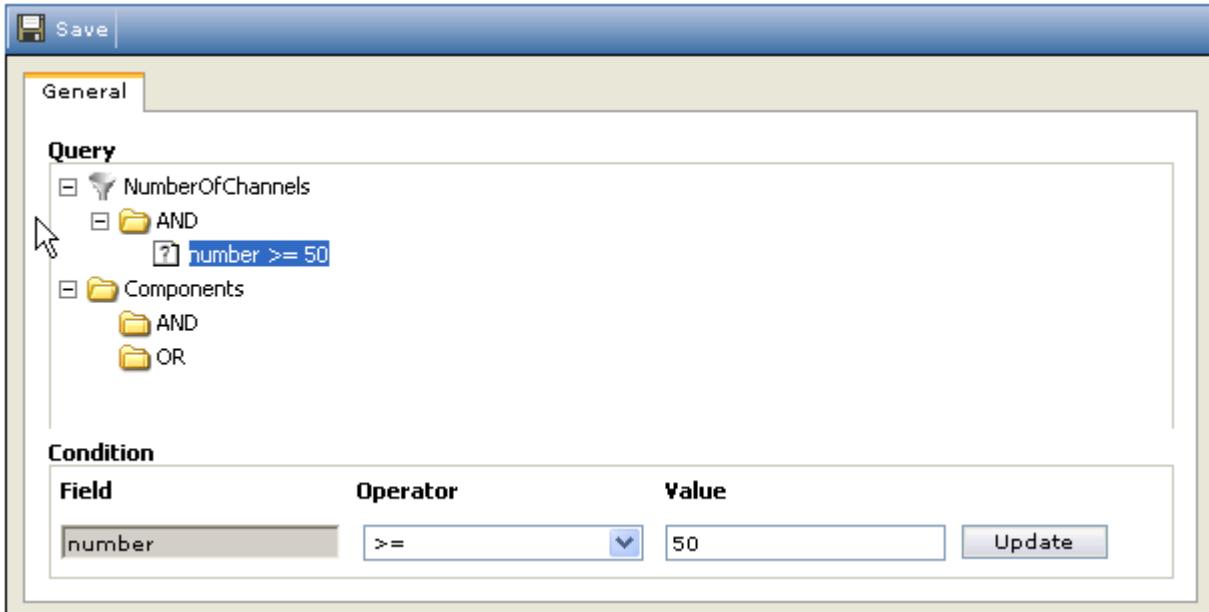


Figure 657 An advanced filter on a numeric question

**Note:** Numeric List questions must be expanded first, and the single items can then be dragged into the filter designer.

Operators for Interview Start and Interview End

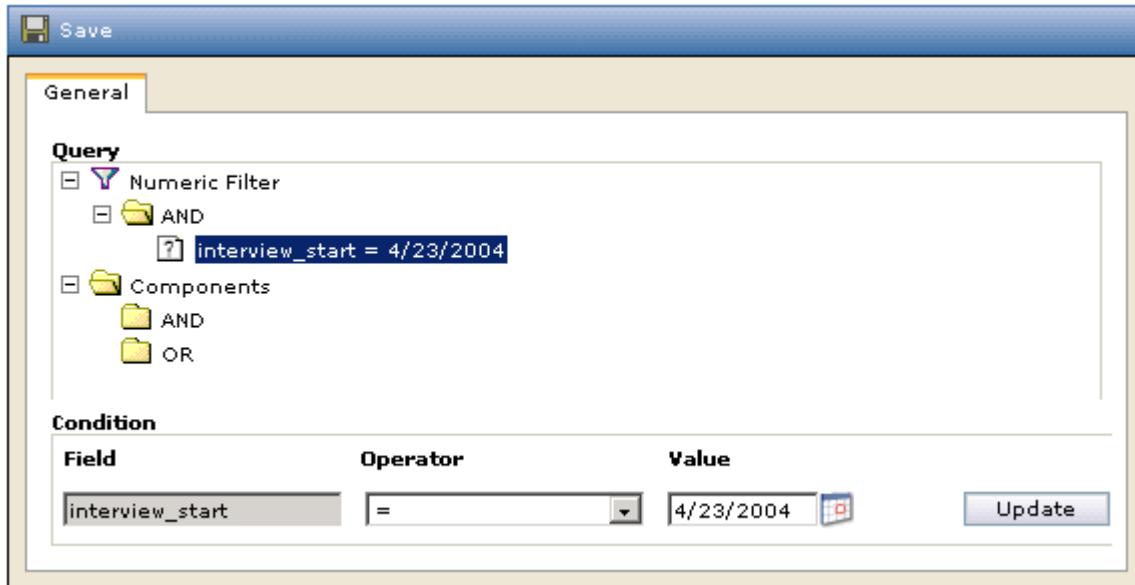
### 21.3.2.2. Operators for Interview Start and Interview End

When defining filters on Interview Start and Interview End, the operators in the Condition builder are as follows:

- = - equal to.
- <> - is not equal to.
- < - less than
- > - greater than.

- <= - less than or equal to.
- >= - greater than or equal to.

In addition,a calendar button is displayed next to the Value field. To define the Value for the filter, click on the button to open a calendar, and select the appropriate date.



*Figure 658 Defining a filter on Interview Start*

## 21.4. Reportal-Specific Functions in Filter and Segment Expressions

Below are listed the Reportal-specific functions that can be used in filter and segment expressions.

Function	Description
All(multiquection, val1, val2,...)	True for respondents answering all of the given values on a multi-punch question.
Any(multiquection, val1, val2,...)	True for respondents answering at least one of the given values on a multi-punch question.
PValDate(parameter)	Returns the current value of a Date Response parameter.
PValStr(parameter)	Returns the current value of a single-select String Response parameter.
PValStrArr(parameter)	Returns the current value(s) of a multi-select String Response parameter.
PValNum(parameter)	Returns the current value of a Numeric Response parameter.
PValInHier(parameter, hierarchyquestion)	True for respondents having answered something that is on a level below the parameter hierarchy node for the given hierarchical question.
Rolling(datequestion, unit, useFrom, from, useTo, to)	<p>True for respondents having a value for the date question within the given rolling date limits.</p> <ul style="list-style-type: none"> <li>• Units: year, quarter, month, week, day.</li> <li>• useFrom: True if the from value is used.</li> <li>• from: start of the rolling time relative to current date, measured in the given unit.</li> <li>• useTo: True if the to value is used.</li> </ul>

- |  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>• to: end of the rolling time relative to current date, measured in the given unit.</li> </ul> |
|--|---|

For example:

```
filter.Expression = "Rolling(interview_start, \"week\", true, -3, true, 0)";
```

Will filter by the last 4 weeks

```
filter.Expression = "Rolling(interview_start, \"week\", true, -1, true, -1)";
```

Will filter by the previous completed week

**Important:**

**When using any of the PVal.. functions in a logic expression, if the given parameter is not set, the logic expression returns true.**

For example:

```
PValStr("p1") = "x" AND q1 = "2"
```

Is translated to

```
true AND q1="2"
```

if the parameter p1 does not have a value.

## 21.5. TGL Filters

You can use the TGL Expression language to specify filters and segments. The procedures for creating filters and segments are similar. TGL Filters use the same TGL expression language as that used in Confirmit Pulsar Web. The TGL expression language allows additional expressions and functions not previously available in Reportal (see TGL Filter Operators and Functions on page 536 for more information).

When you wish to create a TGL filter, you can either write the expression manually or use the Expression Builder functionality (see Using the TGL Expression Builder on page 531 for more information).

**Note: Standard filters and TGL filters are not interchangeable; you cannot use the TGL language in a standard filter expression or standard filter code in a TGL filter. However, you can use both types of filter in the same report.**

### 21.5.1. Using the TGL Expression Builder

1. In the Filters toolbox, right-click on the **Filters** folder and select **Insert Filter TGL**.

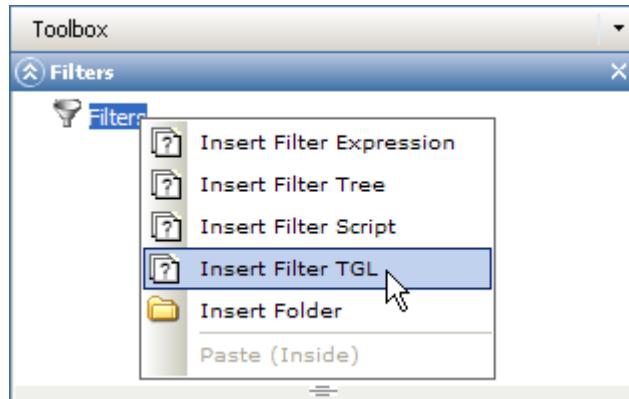


Figure 659 Creating a TGL filter

A new filter is created in the **Filters** folder and the TGL Filter Designer window opens.

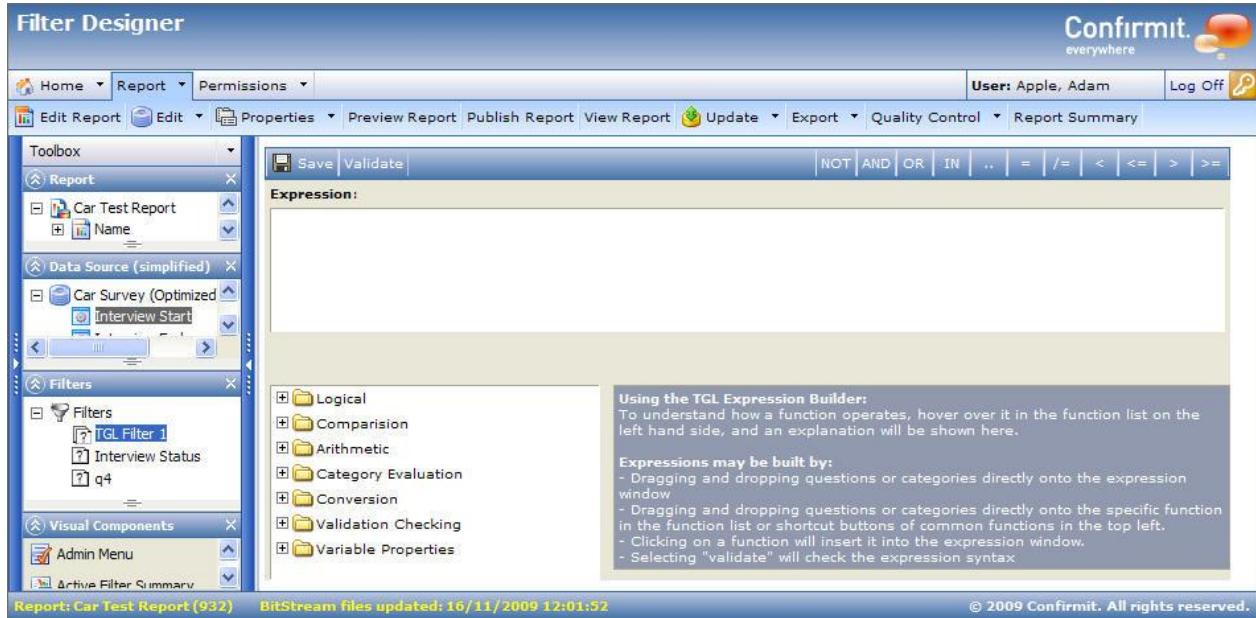


Figure 660 The TGL Expression Builder page

**Note:** To open the filter designer later so you can edit an existing expression, double-click on the filter in the Filters folder or right-click on the filter and select Edit.

Click on a folder in the lower-left frame of the Expression page to expand the folder so you can view the functions contained within. Place the mouse cursor over a function to see a description of the function in the lower-right frame.

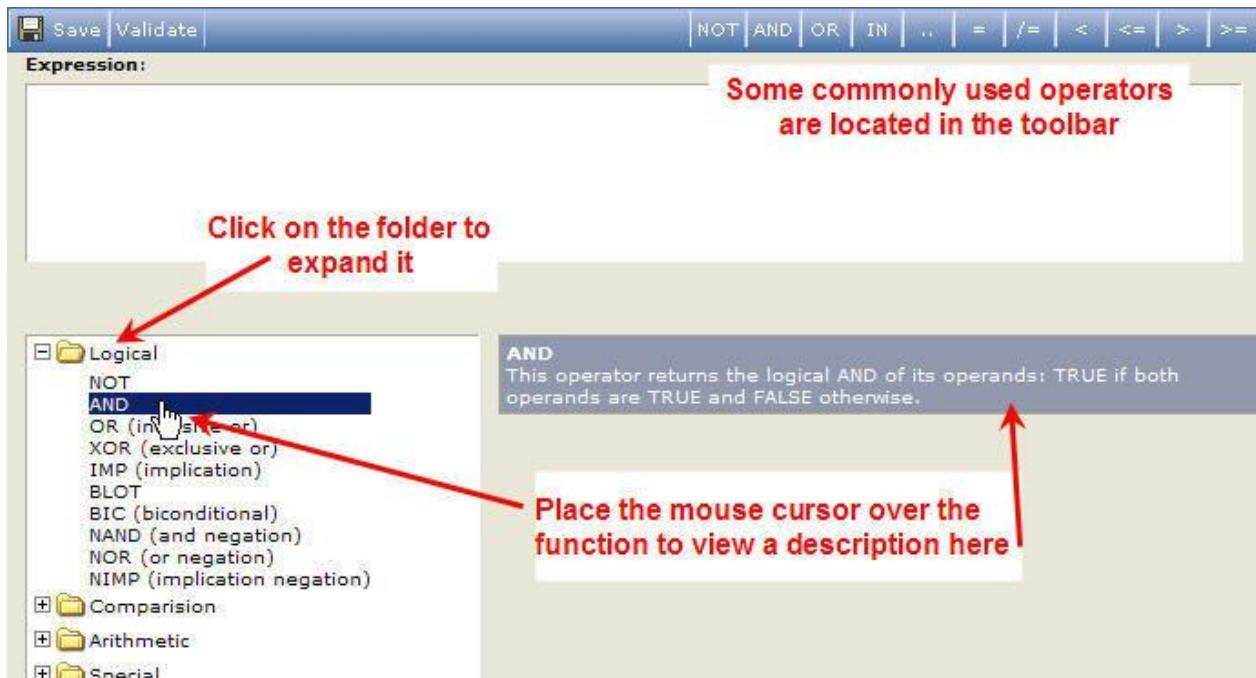


Figure 661 Viewing the functions and associated descriptions

To build your expression you can:

- Drag and drop questions or categories directly into the Expression frame.
- Click on an operator in the operator list to insert it into the Expression frame.
- Click on an operator button in the toolbar to add that operator to the Expression frame.
- Drag and drop questions or categories directly onto the specific operator in the operator list, or onto the appropriate shortcut button in the Expression Builder toolbar, to add the operator and the question/category to the expression.
- Click **Validate** in the toolbar to check the expression's syntax while you are building it. In the event of an error, a message is presented to indicate the error's location.
- Click **Save** to save the expression. The expression's syntax is checked on saving, and in the event of an error, a message is presented to indicate the error's location.

### 21.5.2. Example of a TGL Filter Expression

This section describes in a step-by-step procedure how to create a TGL Filter expression. The project used as the basis for the example in this procedure is a fictitious "Car Survey" project. Assume you wish to create a TGL Filter expression to find the following:

*Males between the ages of 18 and 50, who test-drove Fords or Chryslers, and who have a salary of over \$100,000*

Proceed as follows:

1. Create or open a TGL filter (see Using the TGL Expression Builder on page 531 for more information).

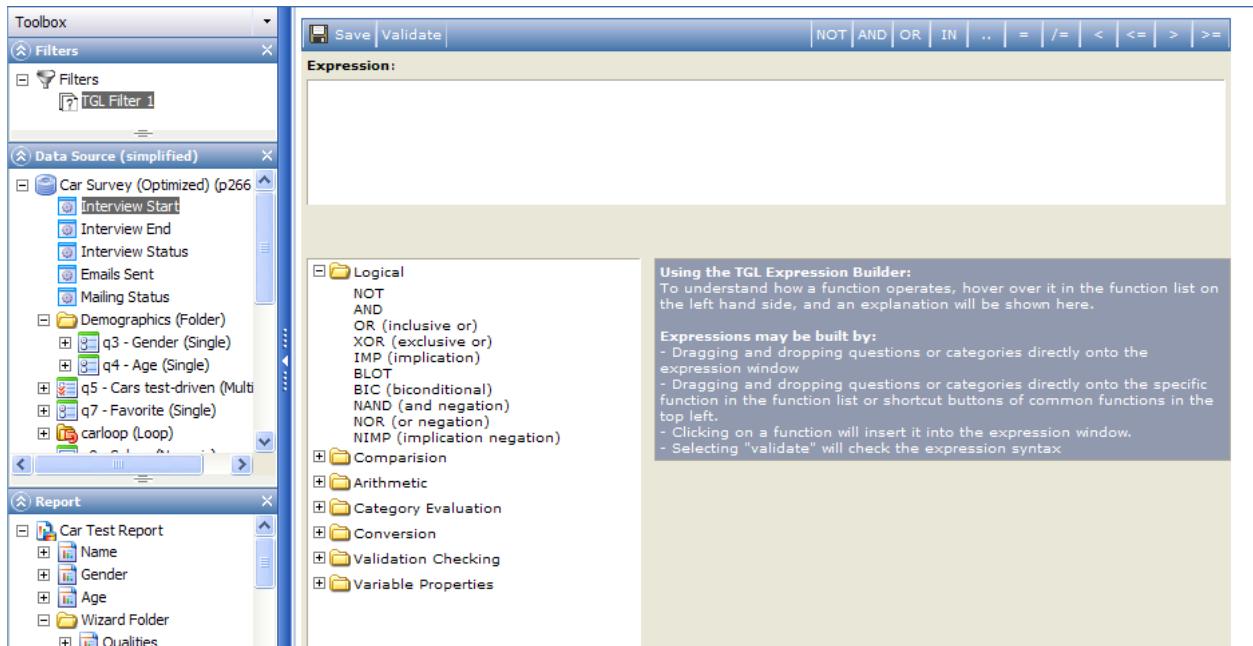


Figure 662 The new, empty, TGL Expression Builder

2. In the data Source toolbox, find the question you wish to add to the Expression Builder, expand it to access the answer options, then drag the required answer option into the expression builder or double-click on the answer option to move it.

For this example, drag the **Male** answer option - this is "question 3, code 1".

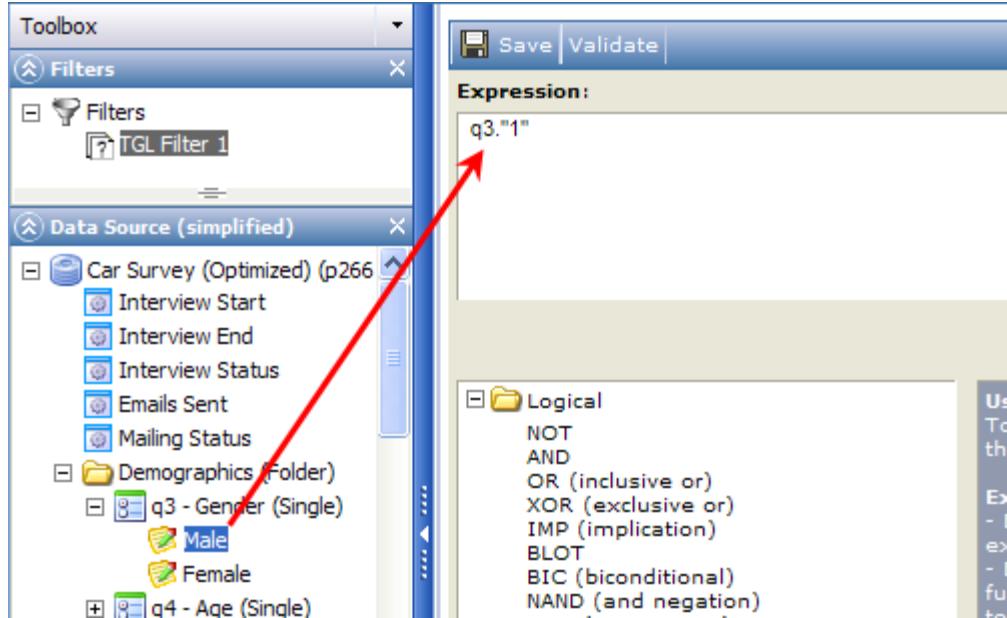


Figure 663 Dragging the first question into the Expression Builder

We now need an operator, in this case the AND operator.

3. In the Operator list, expand the **Logical** folder and click on **AND**.

The AND operator is added to the expression.

**Note:** Several of the more commonly used operators are included in the toolbar towards the upper-right corner of the Expression Builder frame. You can click these as appropriate instead of having to look for them in the Operator folders below. You can also drop an answer option directly onto a button in the toolbar or an operator in the operator list to add the operator and the answer option to the expression.

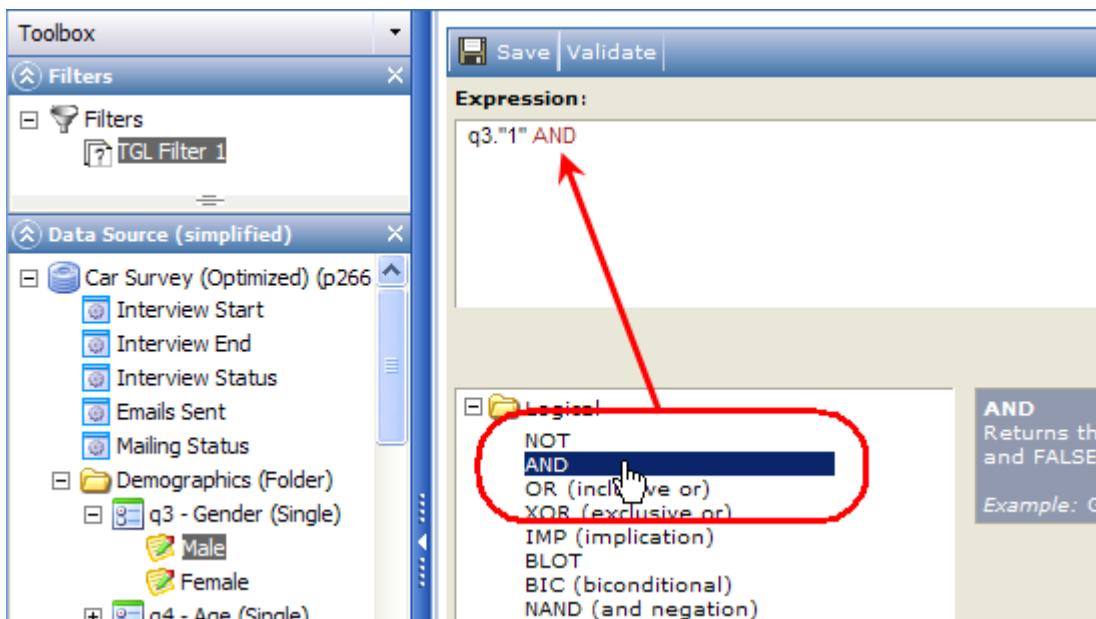


Figure 664 Adding an operator to the expression

Next, we need a combination of the age groups 18-30 and 31-50. The age must be accepted if the respondent is one or the other, so we need to add the "18-30" answer, the OR operator, followed by the "31-50" answer. In addition, this combination must result in one "value", so the two age groups must be enclosed on brackets.

4. After the AND operator, type a ( character from your keyboard.
5. Using the same drag-and-drop or double-click methods as previously, add the **18-30** answer, **OR** operator, and **31-50** answer to the expression.
6. On completion, type the ) character to enclose the answers.

The expression will then be:

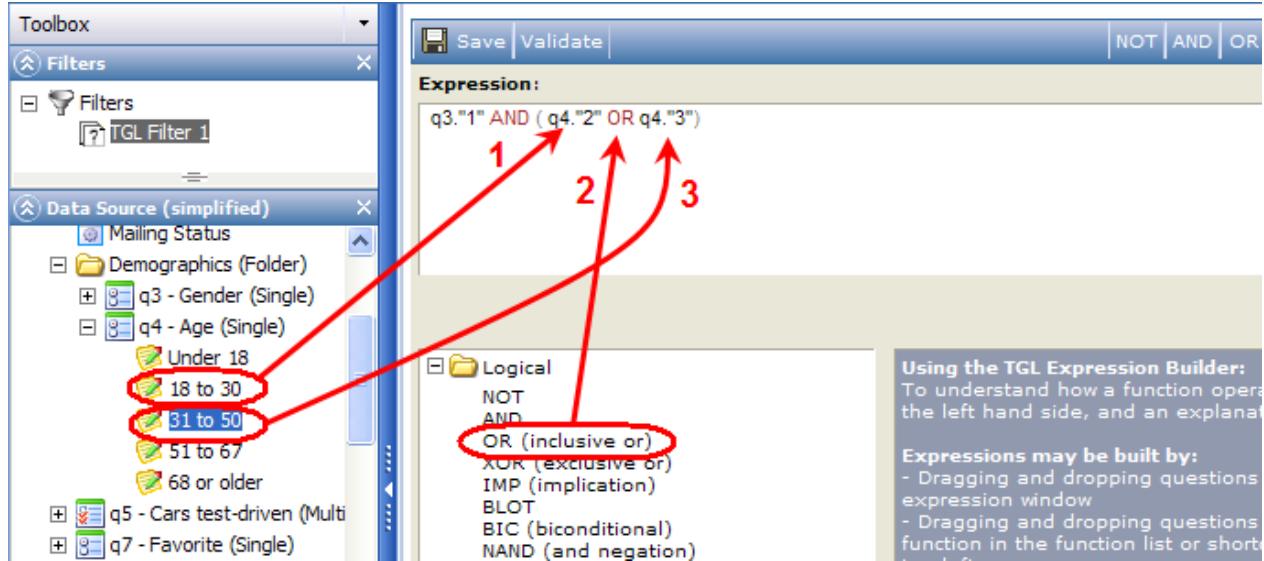


Figure 665 Adding the next part of the expression

Now we need to add the cars that the respondent test-drove; in this case Ford or Chrysler. This part of the expression needs an AND operator before it so that the respondent must be in the right age group and have tested the cars, and the two car options must be separated by an OR operator. Again, the sub-expression must be enclosed in brackets.

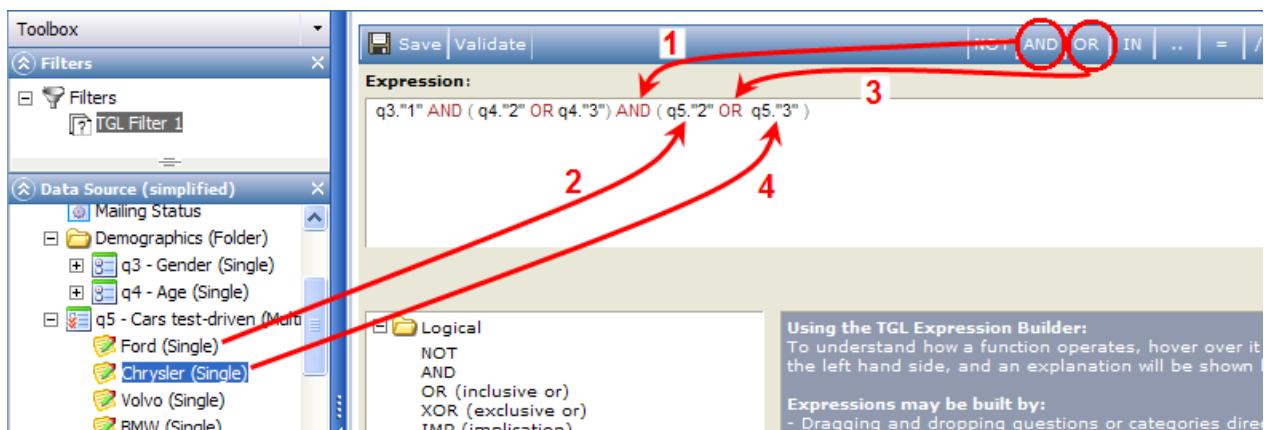


Figure 666 Adding the cars that have been test-driven

Finally we need to add the salary constraint. This requires the Salary question (this is an open question so it has no answer options), a "greater than" operator ( $>$ ), and the specified value. You type in the value using your keyboard; the other parts are added in the same way as previously. The final expression will be:

**Expression:**  
q3."1" AND ( q4."2" OR q4."3" ) AND ( q5."2" OR q5."3" ) AND q9 > 100000

Figure 667 The final expression

- Save the expression.

In the event you have made a mistake and the expression is not valid, you will be presented with a red "Expression not valid" message. This message includes a rough explanation to point you to the error.

The completed filter can be used in your report in the same places and under the same circumstances as other filters.

### 21.5.3. TGL Filter Operators and Functions

#### Logical operators

Logical operators return a value of either TRUE or FALSE within and expression.

- NOT (NOT)** - Use: NOT arg1. Returns the opposite condition. The expression is true only if its operand is false and false if its operand is true.
- AND (AND)** - Use: arg1 AND arg2. The expression is true only when both elements are true.
- Inclusive OR (OR)** - Use: arg1 OR arg2. The expression is true if either one or both elements are true.

**Note:** The following logical operators (AND, NOR, BLOT, XOR, BIC, IMP, NMIP) are also defined within the expression builder, but can be built from a combination of the AND, OR and NOT logical operators.

A comparison table of the outcomes from two arguments (1= TRUE, 0= FALSE) for each logical operator is shown below:

Arg 1 a1	Arg 2 a2	AND	OR	NAND	NOR	BLOT	XOR	BIC	IMP	NIMP
0	0	0	0	1	1	0	0	1	1	0
0	1	0	1	1	0	1	1	0	1	0
1	0	0	1	1	0	0	1	0	0	1
1	1	1	1	0	0	0	0	1	1	0

#### Comparison operators

- Equal to (=)** - The expression is true when the operand values are equal.
- Not equal to (!=)** - The expression is true when the operand values are not equal.
- Less than (<)** - The expression is true when the value of the left operand is less than the value of the right.
- Less than or equal to (<=)** - The expression is true when the value of the left operand is less than or equal to the value of the right.
- Greater than (>)** - The expression is true when the value of the left operand is greater than the value of the right.

- **Greater than or equal to ( $\geq$ )** - The expression is true when the value of the left operand is greater than or equal to the value of the right.

### Arithmetic operators

- **Plus (+)** - The left operand is added to the right operand. Operands must be of the same numeric type, i.e. integer or real.
- **Minus (-)** - The right operand is subtracted from the left operand. Operands must be of the same numeric type, i.e. integer or real.
- **Multiplication (\*)** - Accepts arithmetic (real or integer) operands and produces the product of them. If one operand is real, the result is also real.
- **Division (/)** - Divides the first operand by the second. Accepts both real and integer operands and always yields a real result.
- **Integer division (DIV)** - Divides the first operand by the second and removes any fractional part of the result. Only accepts integer operands and always yields an integer result. e.g. 10 DIV 3 returns 3.
- **Modulo (MOD)** - Calculates the remainder from the division of the first operand by the second operand. The result is an integer. The result has the sign of the second operand. e.g. 5 MOD -3 returns -2.
- **Remainder (REM)** - Calculates the remainder from the division of the first operand by the second operand. The result is an integer. The result has the sign of the first operand. e.g. 5 REM -3 returns 2.
- **Random (RANDOM)** - Use: RANDOM<(arg)>. Calculates random numbers. RANDOM(arg) returns a random integer in the range 0 to the specified argument minus one. RANDOM returns a random number in the range 0 to 1.
- **Maximum (MAX)** - Returns the maximum value of the argument. You can also compare integer and real operands (integers are converted to real operands before the comparison) and logical and bit string operands (logical operands are converted to a bit string of length 1). Single variables are not directly compatible with bit strings in this context. When you want to use a single variable as a bit string, use the .ALL construct.
- **Minimum (MIN)** - Returns the minimum value of the argument. The same conditions for MAX apply.
- **Exponent (EXP)** - Calculates the exponent of its argument. You can use integer and real operands, the result is returned as a real value.
- **Absolute value (ABS)** - Returns the real value of operand, as the same type (e.g. -23 as 23, -45.6 as 45.6).
- **Power (\*\*)** - Calculates a in power b, if a is the left operand, and b is the right operand. Operands can be either integer or real.

### Category Evaluation

- **Concatenation (&)** - The right operand and the left operand are joined together, returning a string of the same type. For example, "10" & "11" becomes 1011. Operands must be of the same type, that is, two bit strings or two character strings.
- **Membership (IN)** - Calculates whether the left operand occurs within the specified range. There are two forms:
  - o The first tests whether a scalar (integer or real) expression, represented by the left operand, fits into the specified range. Range operands can be either integer or real.
  - o The second accepts a bit string as the left operand. The second argument is the range of indexes, which specifies the sub-string of this string.

Range operands should be integer expressions or symbolic category names, resolvable with respect to the first operand of the membership operator. The result is true if at least one bit in the specified sub-string is set to 1, and false otherwise.

- **Membership negation (NOT IN)** - the opposite of the IN operator above.
- **Range (..)** - Can only be used with other operators. When the symbolic category name contains blanks or non-alphanumeric characters, enclose it in double quotation marks (i.e. representing it as a character string constant).

- **Extraction (.)** - Extracts sub-strings from bit or character strings. When the symbolic category name contains blanks or non-alphanumeric characters, enclose it in double quotes (i.e. to be represented as a character string constant).
- **Bit count (COUNT)** - Counts the number of responses above a specified filter limit and returns the result as an integer. This can be used to obtain a logical value for filters and a real value (fixed point number) for weights.
- **Numerical arg1 (BITS)** - Returns a bit string of the length specified by the first argument and selected bits specified by other arguments. The first argument must be an integer constant. This may be useful for creating masks for variables with long category lists.
- **ALL** - Returns true if all of the bits in the bit string are set to 1, false otherwise. If the bit string is unrecorded, false is returned.
- **ANY** - ANY returns true if at least one of the bits in the bit string is set to 1, false otherwise. If the bit string is unrecorded, false is returned.

## Conversion

- **Conversion to integer (INTEGER)** - Converts real and logical operands to integer values.
- **Conversion to real (REAL)** - Converts integer and logical operands to real values.

## Validation Checking

- **IIF** - Use: IIF (logical\_cond, arg1, arg2). IIF is an IF statement that is dependent upon the truth of a condition. This function returns the first argument if the condition is satisfied, and the second argument otherwise. Only one of arguments one and two is actually evaluated. The arguments should have compatible types. The type of the result will be the more general type of the argument types, e.g. if argument 1 is an integer and argument 2 is real, the result type is also real. IIF(I, -I, I) returns an absolute value.
- **INVALID** - Use: INVALID(arg). This function returns true if the argument value is INVALID, false otherwise.
- **ISNULL** - Use: ISNULL(arg1, arg2). ISNULL substitutes reasonable defaults for unrecorded values. ISNULL returns the first argument when it is not UNRECORDED, i.e. has a value. ISNULL returns the second argument only when the first is UNRECORDED. ISNULL(arg, 0) substitutes 0 instead of unrecorded values.
- **MAKENULL** - Use: MAKENULL(). MAKENULL always returns the unrecorded value of type integer. It can be used to produce unrecorded values artificially (e.g. in scaled analysis). This example limits the scaled value only to categories from 1 to 3, other categories are not taken into account: IIF(ARG IN 1..3, ARG.I\_SCALE, MAKENULL())
- **MAKENULLIF** - Use: MAKENULLIF(logical\_condition, arg2). MAKENULLIF can be considered a short-cut of a more complex construct using Makenull(). MAKENULLIF returns the unrecorded value if the condition is satisfied, and the second argument otherwise. The type of unrecorded value is the same as the second argument, which may have any valid type. This example limits the scaled value only to categories from 1 to 3, other categories are not taken into account: MAKENULLIF(ARG IN 1..3, ARG.I\_SCALE)
- **UNRECORDED** - Use: UNRECORDED(arg). UNRECORDED can be used to test explicitly for NULLs in data. This function returns true if the argument is UNRECORDED, false otherwise.

## Variable Properties

- **Length (LENGTH)** - Use: var\_name.LENGTH. The LENGTH attribute allows you to insert the number of categories for a multiple or single type variable into an expression as an integer operand, without knowing what the number is. Example: when the single variable *status* has 10 categories, *status.length* returns 10.
- **Real scale (R\_SCALE)** - Use: var.R\_SCALE. This attribute has the same functionality as the I\_SCALE attribute, but for real scales. Example: where *status* is a single variable with 5 categories, with an integer list of (0.5,1.0,2.5,2.3,2.4) and a category value 3 in the data *status.r\_scale* returns 2.5.
- **Integer scale (I\_SCALE)** - Use: var.I\_SCALE. The I\_SCALE attribute can be used with single variables that have a list of integer scales, each of which is associated with a particular category. The attribute returns a value from the I\_SCALE list which corresponds to the current value of the variable. If no such value exists in the I\_SCALE list, the attribute yields an unrecorded value. Example: where *status* is a single variable with 5 categories, with an integer list of (5,10,25,23,24) and a category value 3 in the data *status.i\_scale* returns 25.

## 21.6. Filtering on Hierarchy Questions - Example

The Hierarchy control enables the viewer to filter reports on a hierarchy question. You can add for example a hierarchy, a result table and a **Refresh** button to a report page such that the viewer can select a particular item in the hierarchy and refresh the table to see the results only for the selected hierarchy item.

The following is an example of how you can set up a hierarchical filter:

**Note: The report in this case must be based on a questionnaire that includes a hierarchy question.**

1. Create the report and/or report page as required.
2. Add a Parameter to the report (see Parameters on page 428 for more information).
3. Right-click on the parameter and select **Properties**.  
The parameter's Properties page opens.
4. Set the Type to **String Response**, save, and close the Properties page.
5. Double-click on the parameter or right-click and select **Edit** to open the Parameter Designer page.
6. Drag the hierarchy question from the Data Source toolbox and drop it into the "Drop a Question Here" area in the Parameter Designer.
7. Save the changes.  
The Data Source ID and Question ID of the Hierarchy question appear in the Parameter Designer.
8. In the Report toolbox, double-click on the report page on which you wish to place the hierarchy, to open the Page Editor for that page.
9. Create an HTML table on the page as required.
10. Drag a Hierarchy element from the Visual Components toolbox and drop it onto the page, then save the changes.
11. In the Report toolbox, drag the parameter that you created earlier, into the Hierarchy element on the report page, then save the changes.
12. In the Filters toolbox, right-click on the Filters folder and select **Insert Filter Expression**, then rename the filter as appropriate.
13. Double-click on the filter to open the Filter Expression Designer page, then in the filter, type the expression:

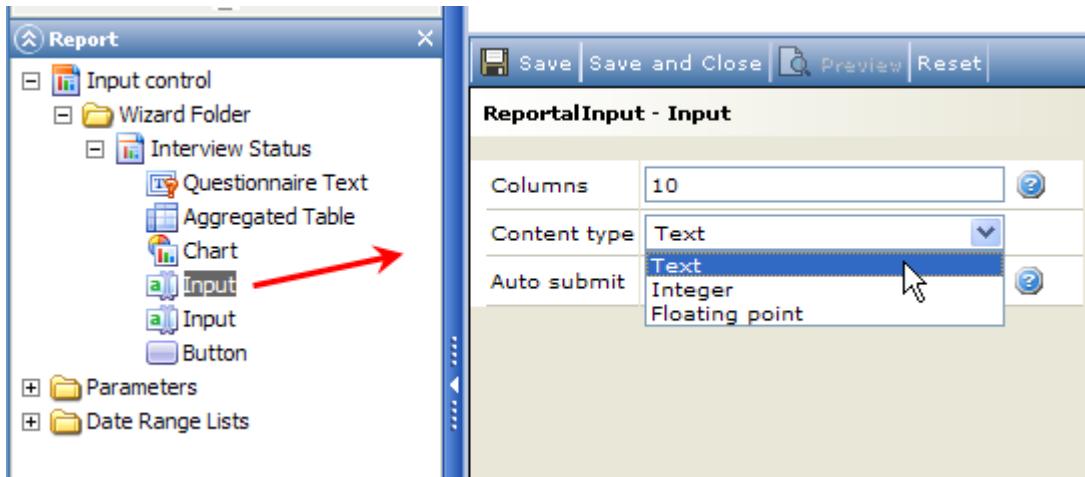
```
hierarchyQuestionId = PValStr("parameterId")
```
14. Save the changes and return to the report Page Editor.
15. From the Visual Components toolbox, drag a **Button** component into the report page.
16. Double-click on the button element to open the button's Parameters page, and set the Target Page property to the page on which the result table/chart is to be displayed.  
This will enable the viewer to refresh the page after using the filter.
17. Select a Style for the button and type into the Label field the text you wish to appear on the button, for example **Refresh**.
18. Click **Apply** or **Apply and Close**, then save the changes.
19. Create the result table and/or chart on the required report page.

## 21.7. Filtering on Input Controls - Example

The Input control available in the Visual Component toolbox enables the viewer to filter reports on an Input field.

The following is an example of how you could provide two different input controls on a report page so the viewers can filter the data. One input control is set up for numerical input (the user can type in a number) while the other is set up for open text input. The button allows the viewers to refresh the table and chart after they have changed the inputs.

1. Open the Page Editor for the page on which you wish to place the Input controls.
2. From the Visual Component toolbox, drag two **Input** controls and a **Button** and drop them into the desired locations on the page, then save the changes.
3. Open the Properties page for each Input control in turn and set the **Content Type** of one to **Text** and the other to **Integer**.



**Figure 668 Specifying the Content Type for an Input control**

4. Go to the Report toolbox, and create two parameters in the Parameters folder (see Parameters on page 428 for more information)
5. Open the Properties page for each parameter in turn and set the **Type** of one to **Numeric Response** and the other to **String Response**.



**Figure 669 Specifying the Type for a Parameter**

6. Reopen the Page Editor and drag the **p\_numeric** parameter (or whatever you have called it) into the numeric (Integer) Input control and the **p\_string** parameter into the Text Input control.
7. On the report page, create an aggregate table based on the question containing the data you wish to allow the user to filter.
8. In the Filters toolbox, create two filter expressions (see How to Create a Filter Expression on page 519 for more information).
9. Rename the filters Numeric and String to simplify identification.
10. In the Numeric filter, type the required expression and save the changes.

In the example, the expression used is `q_numeric > PValNum("p_numeric")`. This expression will show in the table and chart all data with a value greater than the value the user types into the Input control. Note that the "p\_numeric" in the expression is the name you have given to the numeric parameter, and is case-sensitive.

11. In the String filter, type the expression `q_open = PValStr("p_string")` and save the changes.

This expression will show in the table and chart all data corresponding to the text string the user has typed into the Input control. Note that the "p\_string" in the expression is the name you have given to the text string parameter, and is case-sensitive.

12. Connect the filters to the aggregated table.

To do this, go to the table and open its Properties page. On the General tab, click the ... button beside the Filters property to open the Report Filters window. In this window, select the two filters and click **OK**.

13. Double-click on the Button control or right-click on it and select Properties to open the button's Properties page. Leave the Target Page blank so the current page is re-displayed (refreshed) and add suitable text to the Label field, for example **Refresh**.
14. Click **Apply and Close**, and then **Save** so save the changes.
15. Go to the Report > Preview Report menu command to view and test the setup.

## 21.8. Filtering on Calendar Controls - Example

The Calendar control, available in the Visual Component toolbox, enables the report viewer to filter the report on dates.

The following is an example of how you could provide a calendar control on a report page so the viewer can filter the data based on a date. In this case, the control will display the response data from respondents who started the interview after the date selected by the viewer in the Calendar control. You can of course use other date data from the Data Source (for example Interview End or from a date-related question), and the appropriate valid expression, to achieve the result you require. The button that is included on the page allows the viewer to refresh the table and chart after they have changed the input date. Proceed as follows:

1. Create a new parameter (see Parameters on page 428 for more information) and rename it `p_interview_start`.
2. Right-click on the parameter in the Report toolbox and select **Properties**.
3. Click the down-arrow beside the Type field to open the drop-down list, then set the parameter Type to **Date response**.
4. Open the Page Editor for the page on which you wish to place the Calendar control, drag a Calendar control from the Visual Components toolbox and drop it into the appropriate place on the page.
5. From the Report toolbox, drag the parameter you have created and drop it onto the Calendar control.
6. In the Filters toolbox, right-click on the **Filters** folder and select **Insert Filter Expression** (see Filter Expressions on page 518 for more information).
7. Type the expression below into the Expression field. On completion click **Validate** to check that you have typed it correctly.

```
interview_start < PValDate("p_interview_start")
```

8. Return to the report page and add an aggregated table. Build the table such that it contains data appropriate to the calendar control so you can test and see the results (see The Table Designer on page 143 for more information).
9. Connect the filter to the table (go to the table's Properties page, click the Filters button and select the filter you have created here).
10. Drag a button from the Visual Components toolbox and drop it onto the page so you can refresh the page after changing the date control.

You can now add some data to the project, then Preview the page and check that the data displayed changes depending on the date you select in the date control.

The screenshot shows a report page with a blue header bar containing the title 'Calendar Page'. Below the header is a 'Refresh' button. A date field '23/11/2007' with a calendar icon is present. The main content area contains a table with four rows:

A	39	35.5%
B	36	32.7%
C	35	31.8%
<b>Total</b>	<b>110</b>	<b>100.0%</b>

Below the table, the following information is displayed:

- Generated: 11/23/2007 7:07:16 AM
- Weight model: None
- Fixed filters: InterviewStartFilter
- Significance testing: None

Figure 670 Example of a report page with a Calendar control filter

## 21.9. Filter Summary

The Filter Summary can be used to identify which filters have been used on which pages in the report. To access the summary page, go to the **Report Menu > Properties > Filter Summary** menu option.

The screenshot shows the 'Report' menu open, with the 'Properties' dropdown menu visible. The 'Filter summary' option is highlighted with a mouse cursor. Other options in the dropdown include 'Report Properties', 'Set Survey Layout', and 'Codelibrary Script'.

Figure 671 Opening the Filter Summary page

The Filter Summary page opens .

The screenshot shows the 'Filter Summary' page with a table listing nodes and their filter details. The table has columns for Node Type, Node Name, Node Path, Filter Type, and Filter Name. A checkbox at the top left allows filtering by nodes without filters.

Node Type	Node Name	Node Path	Filter Type	Filter Name
Confirmit Horizons Webinars	Confirmit Horizons Webinars	Confirmit Horizons Webinars		
Final Report	Confirmit Horizons Webinars \ Final Report	Confirmit Horizons Webinars \ Final Report	dept(Administration,Marketing),gender(Male)	
Summary Results	Confirmit Horizons Webinars \ Summary Results	Confirmit Horizons Webinars \ Summary Results	carsTested(Toyota,Volvo)	
Aggregated Table	Confirmit Horizons Webinars \ Summary Results \ Aggregated Table	Confirmit Horizons Webinars \ Summary Results \ Aggregated Table	carsTested(Toyota,Volvo),gender(Male)	

At the bottom, there are status indicators: a green circle for 'Introduced', a blue circle for 'Inherited', and a red circle for 'Redundant'.

Figure 672 Example of the Filter Summary page

The page shows which filters have been applied to the report, page folders, pages or individual items. Each filter will have an indicated status:

Type	Description
Introduced	The top level where the filter is present.
Inherited	A filter applicable to an item as a filter has been assigned at a higher level (e.g. a folder level filter applying to the pages contained in the folder).
Redundant	Indicates the application of a filter that has no action due to the presence of an existing filter at a higher-level. For example, if the filter <b>gender(male)</b> is applied to a folder and you then explicitly apply the same filter to a page inside the folder, the page inherits its parent folder's filter anyway, so applying the same filter to the page makes it redundant.

- Click on the node name to find the appropriate page / folder / item in the report tree toolbox.
- Tick “Show folders and pages without filters” to show all the pages of the report, whether or not a filter has been applied.

## 21.10. Personalized End-User Filter

This functionality is similar to Personalized Reporting (see Personalized Reporting on page 482 for more information). It enables you to filter reports on filter expressions rather than on Single questions. You can set up a master report and define for each end user a personal expression that is to be used as a personalized filter. When they log on, they will receive a report showing the results relevant for them.

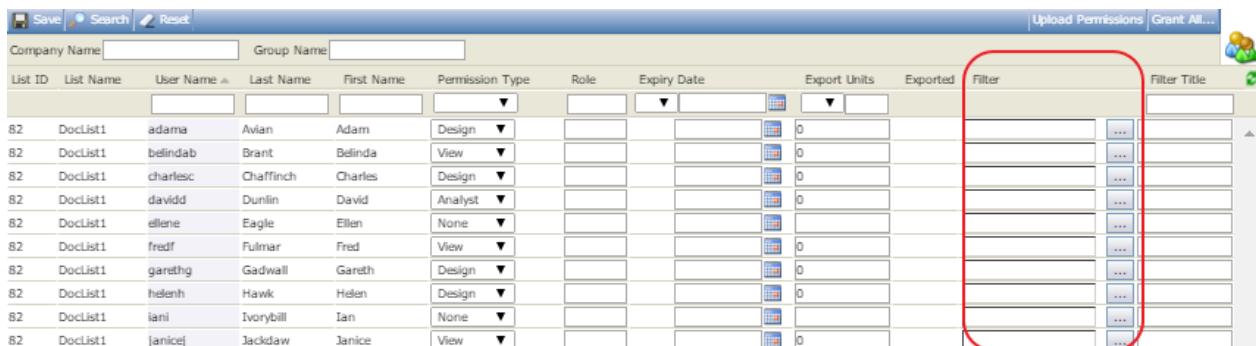
To create a personalized end-user filter:

1. Go to the **Permissions > End User Permissions** menu command.

**Note: The rest of the functionality of the End User Permission screen is described under Access Control (see Access Control on page 635 for more information).**

2. Right-click on the user list and select **Search Users**.

The end user list opens. At the right of the list is the “Filter” column .

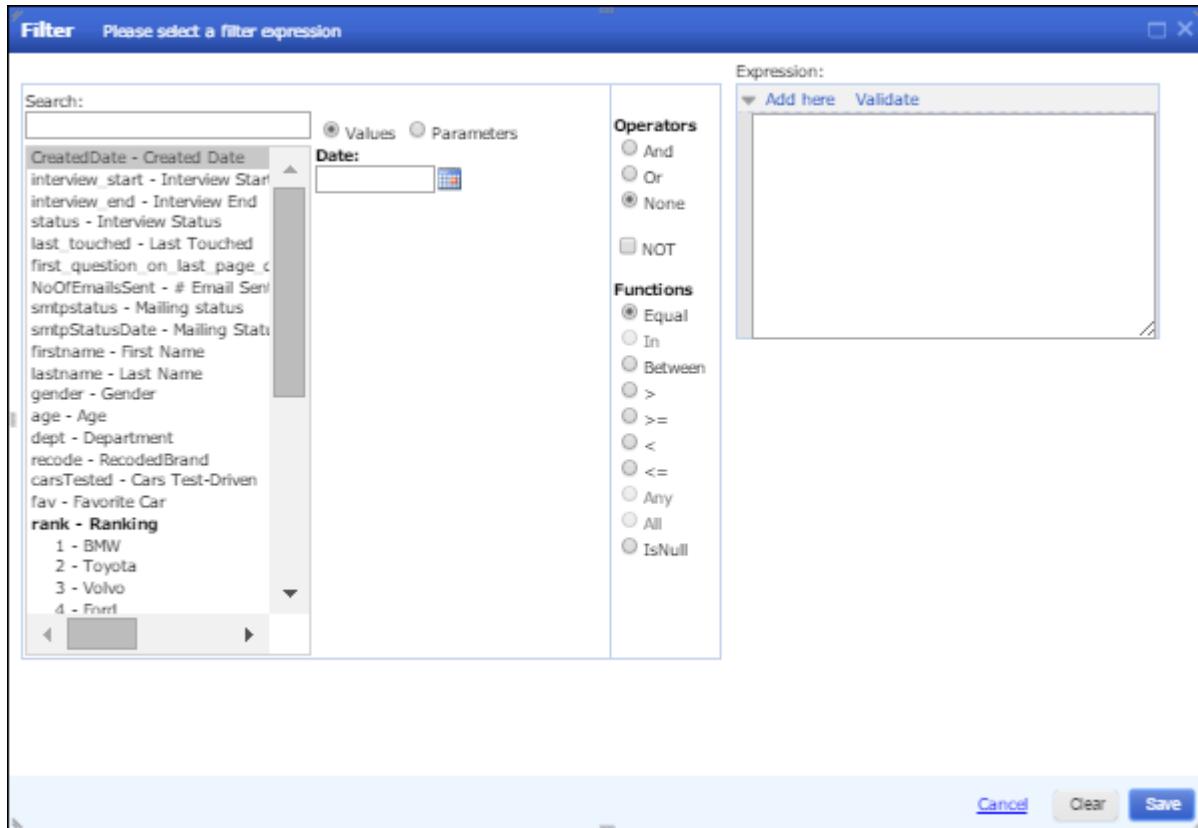


The screenshot shows a table of user permissions. The columns include List ID, List Name, User Name, Last Name, First Name, Permission Type, Role, Expiry Date, Export Units, Exported, and Filter. A red box highlights the 'Filter' column, which contains a text input field and a browse button for each user row.

List ID	List Name	User Name	Last Name	First Name	Permission Type	Role	Expiry Date	Export Units	Exported	Filter	Filter Title
B2	DocList1	adama	Avian	Adam	Design				0	...	
B2	DocList1	belindab	Brant	Belinda	View				0	...	
B2	DocList1	charlesc	Chaffinch	Charles	Design				0	...	
B2	DocList1	davidd	Dunlin	David	Analyst				0	...	
B2	DocList1	ellene	Eagle	Ellen	None				0	...	
B2	DocList1	fredf	Fulmar	Fred	View				0	...	
B2	DocList1	garethg	Gadwall	Gareth	Design				0	...	
B2	DocList1	helenh	Hawk	Helen	Design				0	...	
B2	DocList1	ian1	Ivorybill	Ian	None				0	...	
B2	DocList1	janicej	Jackdaw	Janice	View				0	...	

**Figure 673 The end user filter expression column**

3. Find the end users you wish to set the personalized end user filter for, using the search functionality as required.
4. Click the ... button beside the Filter text box (see the figure above) to open the Filter Expression Designer page .



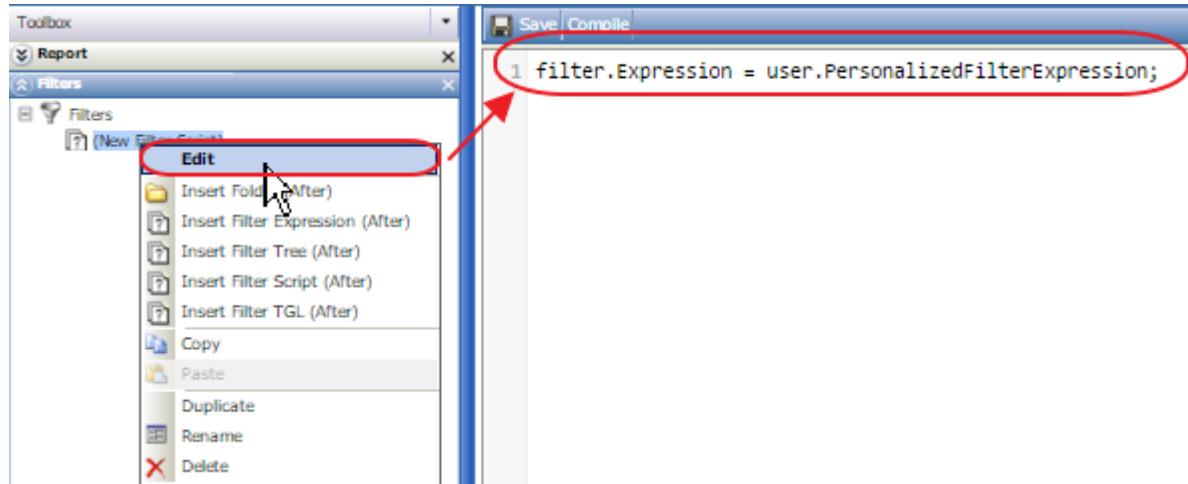
**Figure 674 Defining the filter expression for the end user**

5. Define the end user filter expression (see Creating the Filter Expression on page 519 for more information).
6. Optionally, you can type the filter title in the **Filter Title** field. To display the personalized filter title in a Report when viewed by the end-user, add a Text component and apply a script to it (see Scripting in Text Elements on page 130 for more information) using the `user.PersonalizedFilterTitle` syntax as in example below:

```
text.Output.Append("personalized filter is: " +
    user.PersonalizedFilterTitle);
```

7. Repeat steps 4 and 5 for each user you wish to assign an end user filter to. Alternatively, you can use the **Grant All...** button in the upper-left corner to define a filter expression for all users by selecting the **Set** option and then clicking the ... button in the Filter group.
8. Go to the **Edit Report** menu command. The Report Editor page opens.
9. In the Filter tree, right-click and select **Insert Filter Script**. The new filter script will be created.
10. Right-click the new filter and select **Edit**. The Script Editor pane opens.
11. Enter the following script code:

```
filter.Expression = user.PersonalizedFilterExpression;
```



*Figure 675 Linking the filter to the personalized end user filter expression*

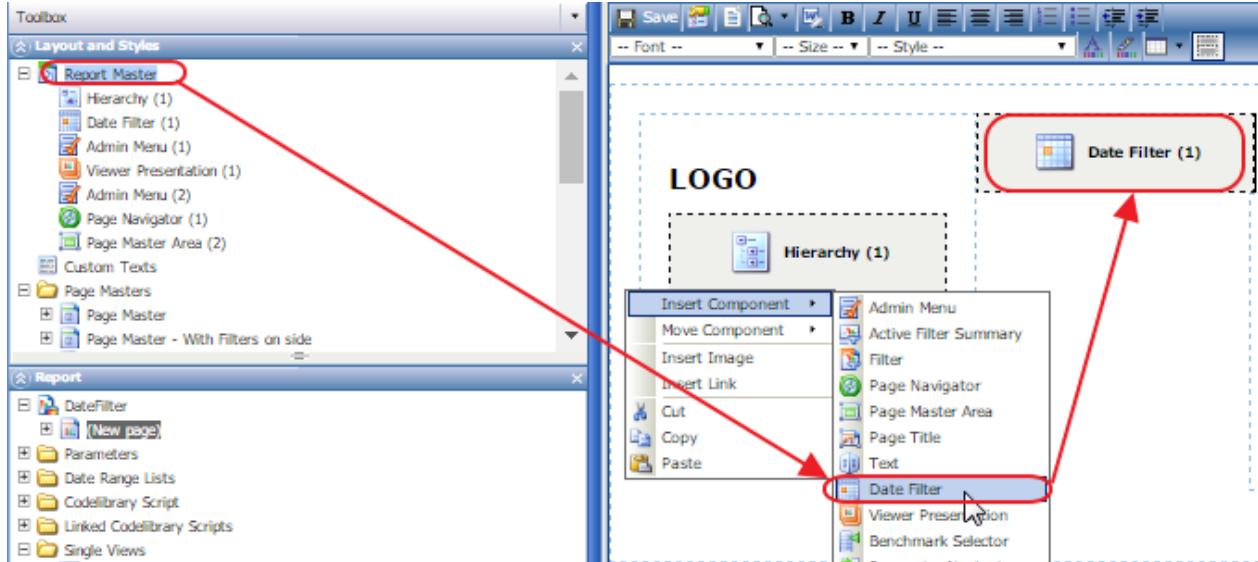
12. Click **Save**.

## 21.11. The Date Filter Component

The Date Filter component allows you to filter the report or a report page by different time periods (custom date ranges, days, weeks, months, quarters, years).

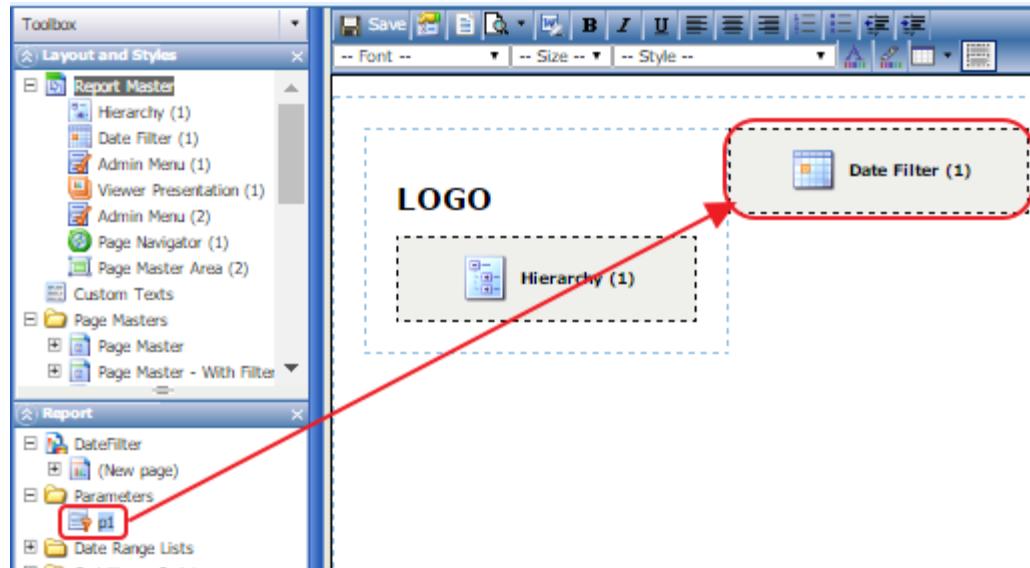
To create a Date Filter:

1. Add a Date Filter component to a report master or page.



*Figure 676 Adding a Date Filter to the Report Master*

2. Create a Parameter of type: String Response (see Defining a Parameter on page 428 for more information).
3. Associate the Parameter with the Date Filter by dragging it on top of the Date Filter.



**Figure 677 Associating the parameter with the Date Filter**

The Date Filter component should now have the parameter name on it.

4. Create a Filter Script (see Filter Scripts on page 585 for more information). Paste the script below into it.

**Note: If you have changed the parameter name from the default (p1), you need to edit the script accordingly to refer to the name you have given the parameter.**

```
filter.Expression=report.DateRangeUtils.GetRollingDateRangeExpression('interview_start','p1');
log.LogDebug("filter"+filter.Expression);
```

Here you need to provide the parameter name ("p1" in the example) and the name for the date ("interview\_start" in the example). State, report and log should be left as is.

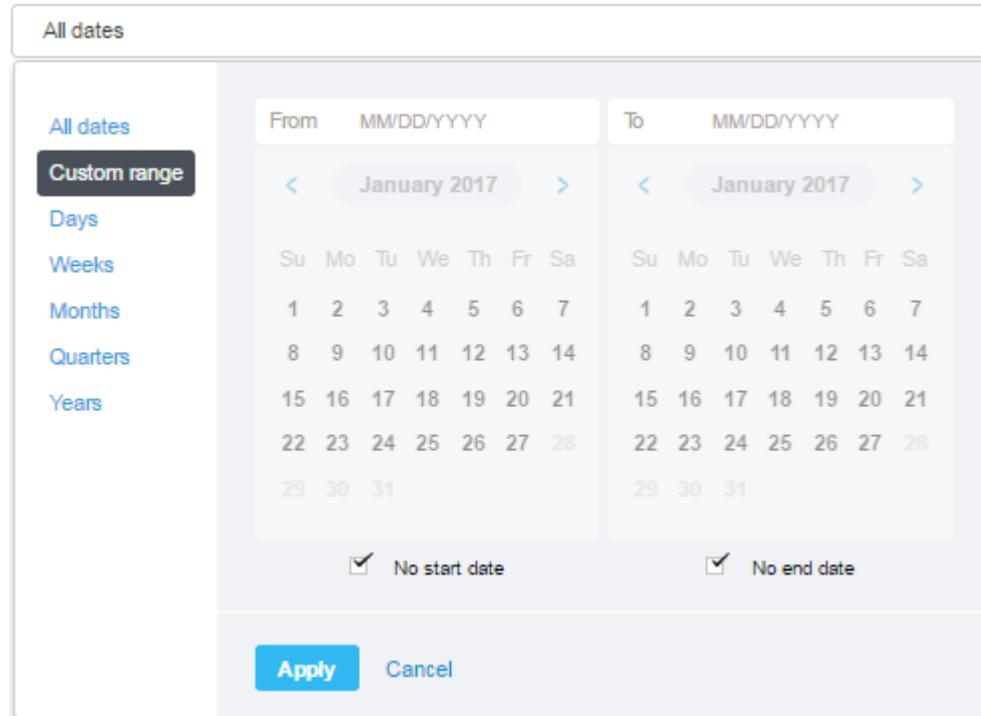
5. Enable the Filter for the report/page (see Creating a Simple Filter on Interview Status - Example on page 515 for more information).

### 21.11.1. Applying the Date Filter

By default, the **All dates** value is set for the Date Filter, which means that the Date Filter is not applied. You can change the default values by adding a custom render script (that will pre-define Date Filter values) to any report component/page (see Date Filter Scripts on page 585 for more information). Also, you can output the Date Range value(s) as text in a Text Component by adding a custom render script (see The Date Filter Component on page 585 for more information).

To apply the Date Filter:

1. Click **All dates**. The Date Filter menu opens.



**Figure 678 Example of a Date Filter**

2. Select the appropriate filtering method and click **Apply** to apply the filter to the report/report page. Available filter criteria are:
  - **Custom range** - selecting this displays the custom date range tab. Define a date range by selecting the start and end dates of the range either by means typing the dates in the input fields in the <DD.MM.YYYY> format or by navigating through the calendar using the arrow buttons and clicking the date. You can check the **No start date** or **No end date** option to make the date range open in either direction.
  - **Days** - selecting this displays the days tab where you can set the day(s) to filter the report/report page by:
    - **Today**;
    - **Yesterday**;
    - **Previous days** - specify the relative date interval by typing an integer number up to 999 in the input field. Check the **Include today's date** option if desired.
  - **Weeks** - selecting this displays the weeks tab where you can set the week(s) to filter the report/report page by:
    - **Current week to date**;
    - **Previous week(s)** - specify the relative date interval by typing an integer number up to 100 in the input field;
    - **Selected week** - select the week via the calendar control.
  - **Months** - selecting this displays the months tab where you can set the month(s) to filter the report/report page by:
    - **Current month to date**;
    - **Previous month(s)** - specify the relative date interval by typing an integer number up to 100 in the input field;

- o **Month** - select the month and the year from the drop-down menus.
  - **Quarters** - selecting this displays the quarters tab where you can set the quarter(s) to filter the report/report page by:
    - o **Current quarter to date**;
    - o **Previous quarter(s)** - specify the relative date interval by typing an integer number up to 50 in the input field;
    - o **Quarter** - select the quarter and the year from the drop-down menus
  - **Years** - selecting this displays the years tab where you can set the year(s) to filter the report/report page by
    - o **Current quarter to date**;
    - o **Previous year(s)** - specify the relative date interval by typing an integer number up to 15 in the input field;
    - o **Year** - select the year from the drop-down menu.
3. Click **Apply** to apply the filter to the page components.

## 22. The Filter Panel

The Filter Panel allows report designers to create global filters so that report viewers can easily and quickly filter the data that is presented in their report. The report designer adds a Filter Panel component to the page master and includes the required filters(see How to Create a Filter Panel on page 549 for more information), thereby providing these filters to every page in the report that uses that page master.

When a report viewer applies filters via the Filter Panel, those filters will not be saved across Reportal sessions; the filters will be reset the next time the user opens the report. However the report viewer can apply filters to a report and bookmark relevant pages, and the filtered data will then be available via those bookmarked pages (see My Bookmarks on page 588 for more information).

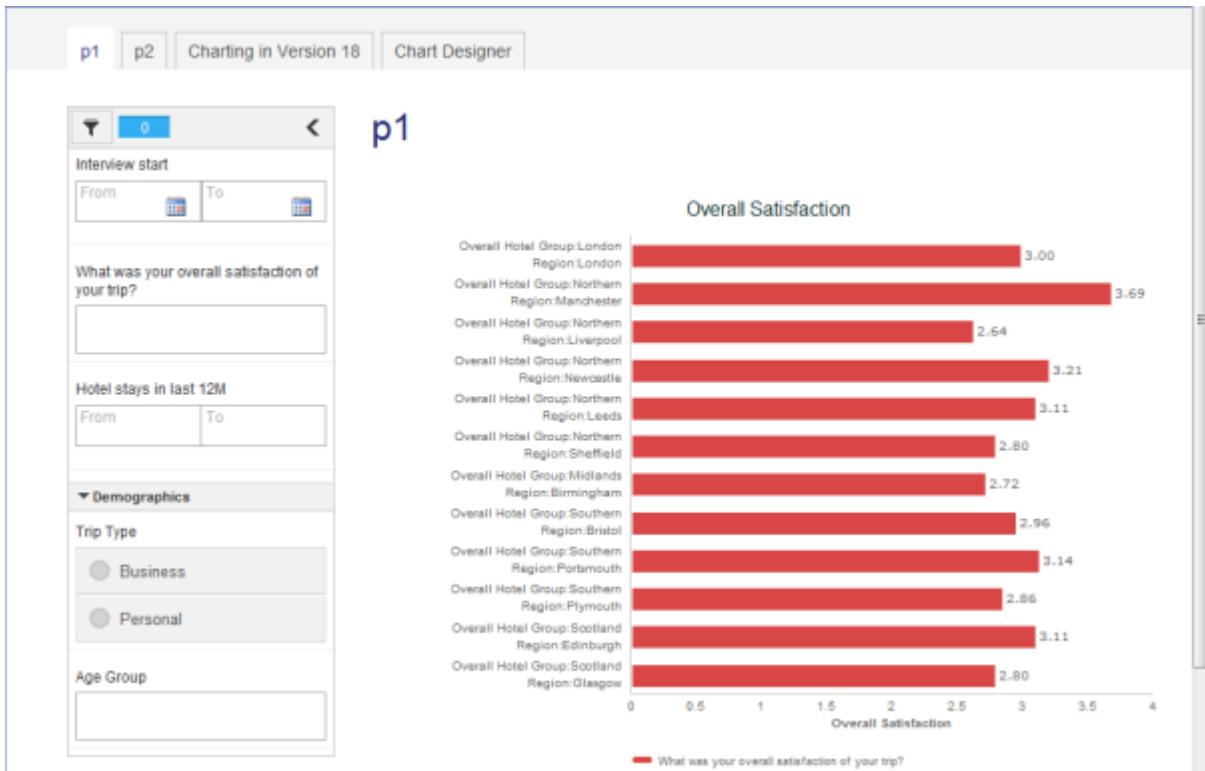


Figure 679 Example of a Filter Panel used in a report

### 22.1. How to Create a Filter Panel

To create a new Filter Panel in a Page Master:

1. Open the Page Editor page for the Page Master in which you wish to place the Filter Panel.
2. Drag a Filter Panel object from the Visual Components toolbox into the desired location in the Page Master.
3. Save the changes.
4. Right-click in the Filter Panel component and select **Designer** to open the Filter Designer.

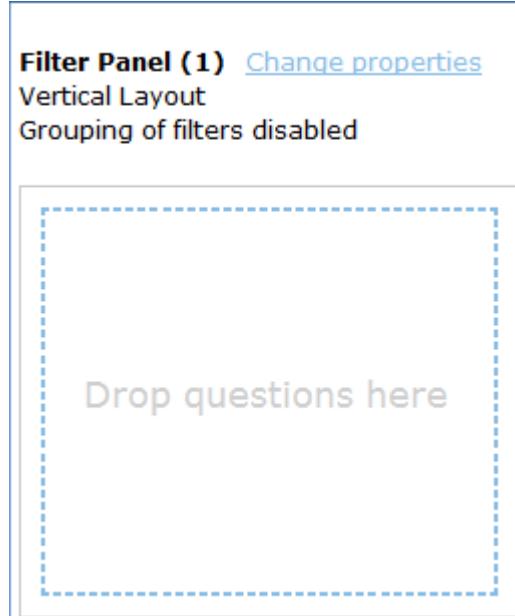


Figure 680 A new filter panel in the Filter Designer

5. Drag the required questions from the Data Source toolbox and drop them into the field.
6. Re-order the questions by dragging them to the desired location.

You can set properties for the Filter Panel (see Filter Panel Properties on page 552 for more information), and you can group similar filters (see Filter Panel Groups on page 550 for more information).

Changes to the Filter Panel and Page Master are saved automatically as you make them.

**Note:** If you have created a new page master to hold your filter panel or you have several page masters available, you will need to select the page master with the filter panel for each page in the report that is to include the filter panel. Go to the page in the Report toolbox, right-click and select Properties, then select the appropriate Page Master.

## 22.2. Filter Panel Groups

In the event you want to have several filters in the filter panel, you may wish to arrange those filters into logical groups within the panel. You can add as many groups to the filter panel as necessary.

1. Open the filter panel's Properties page (right-click on the Filter Panel component in the toolbox and select **Properties**, or click the **Change properties** link) and check the Filter Groups box, then save the changes (see Filter Panel Properties on page 552 for more information).

The **Create new filter group** button now appears in the filter panel designer.

**Filter Panel (1)** [Change properties](#)

Vertical Layout

Grouping of filters enabled

-  Gender - Please select your gender
-  AgeGroup - Please specify your age group

**Create new filter group**

2. Click the **Create new filter group** button.

A group field opens below the button.

**Filter Panel (1)** [Change properties](#)

Vertical Layout

Grouping of filters enabled

-  Gender - Please select your gender
-  AgeGroup - Please specify your age group

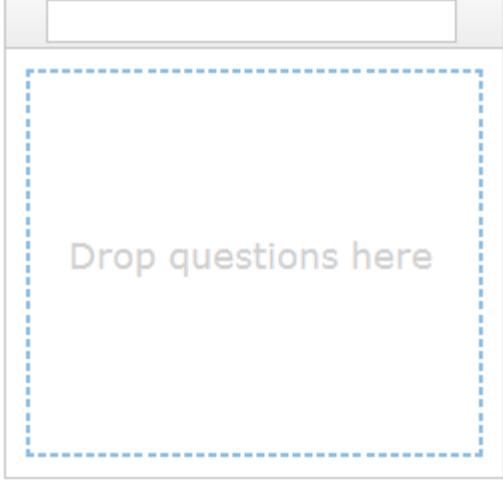
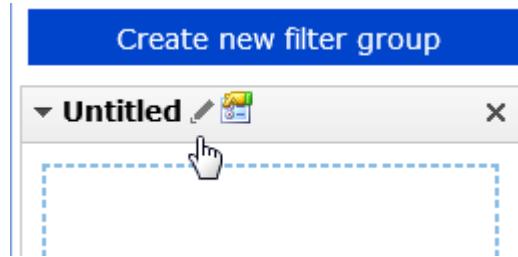
**Create new filter group**Drop questions here

Figure 681 Creating a new group in the filter panel

3. Click in the Title field and add a title for your new group if required.



*Figure 682 Adding a title for the group*

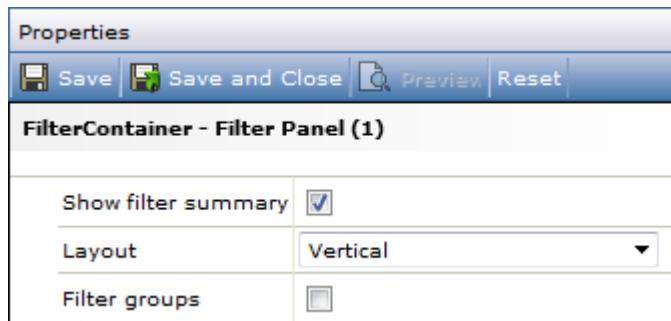
4. Drag the required questions from the Data Source toolbox and drop them into the field.
5. Re-order the questions by dragging them to the desired location.

To delete an unwanted group, click the X icon beside the group name. You then have the possibility to "undelete" if you change your mind. To confirm the deletion, click the X icon again.

Changes to the Filter Panel and Page Master are saved automatically as you make them.

### 22.3. Filter Panel Properties

The Filter Panel component has three properties that you can set. Right-click on the Filter Panel component and select **Properties** to open the Properties page .



*Figure 683 The Filter Panel Properties page*

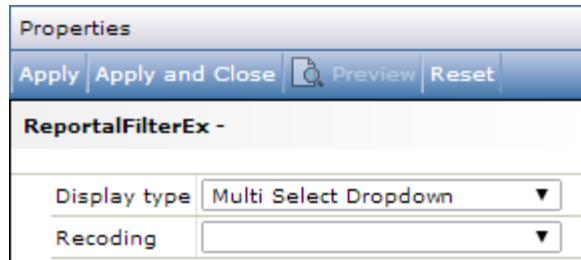
- **Show filter summary** - check this box to allow the user to see a summary of the filters that are applied to the report.
- **Layout** - the filter panel can be arranged in a vertical column or in a horizontal row across the page. Select as desired. Note that if you intend to have four or more filters in the panel then you are recommended to use the Vertical layout.
- **Filter groups** - in the event you want to have several filters in the filter panel, you may wish to arrange those filters into logical groups within the panel. Check this box to enable the Groups functionality (see Filter Panel Groups on page 550 for more information).

On completion, click **Save** or **Save and close** as appropriate to apply the changes to the Filter Panel.

### 22.4. Filter Question Properties

The questions that you add to a Filter Panel each have their own Properties page. Here you can set the type of selection options that the filter will show, and you can recode questions.

1. In the Filter Panel Designer page, right-click on a question and select **Properties**.



**Figure 684** The properties page for a single question

The Display type property allows you to specify the type of selection the report viewer can perform on this filter. The options available will depend on the question type:

- Single and Multi questions:
  - **Multi Select Drop-down** - the user can select multiple options from a drop-down list. The user will be able to search in the drop-down for the desired options.
  - **Multi Select Buttons** - the user can select multiple options by clicking the appropriate buttons.
  - **Single Select Drop-down** - the user can select only one option from a drop-down list. The user will be able to search in the drop-down for the desired options.
  - **Single Select Buttons** - the user can select only one option by clicking the appropriate button.
- Numeric questions:
  - **Slider** - when the numeric question has limiting values defined, this option will be available. The user can move a slider between the two limiting values.
  - **Numeric input** - the user must type numerical characters into the fields.
- Date questions:
  - **Date picker** - the user can select a specific date from a pop-up calendar.
  - **Date range list** - the user can specify a range of dates

In the event the question has been recoded, you can select one of the recoded variables from the drop-down list.

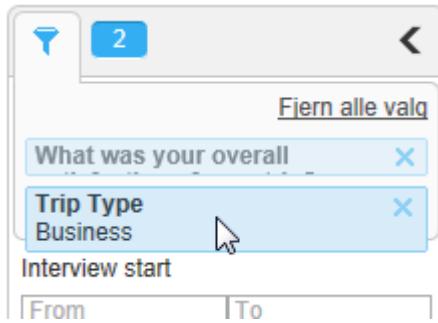
## 22.5. Using the Filter Panel

The Filter Panel can include three general types of filter controls:

- **Date pickers** - based on for example the date the interview started or dates given as answers to a question such as "When did a certain event occur?". The report viewer clicks in the field to open a calendar and selects a date from the calendar.
- **Buttons** - the report viewer can select a single option or multiple options (depending on the setting) from a list of the options available in the filter.
- **Dropdown lists** - the report viewer can select a single option or multiple options (depending on the setting) from a drop-down list. The report viewer can search in the drop-down for the desired options.
- **Sliders** - when a numeric question has limiting values defined, the control can be set as a slider. The report viewer then moves the slider between the two limiting values to select a value.
- **Numeric input** - the report viewer must type numerical characters into the fields to select a value or range of values.

Note that the data may take a few seconds to update. Refresh the page (open a different page then return to the original page) to force an update.

The number of filters that have been applied to the data is shown at the top of the Filter Panel. Click the **Filter** icon to show a summary of the filters that have been applied in the panel. Hover your mouse pointer over a filter summary to display the details.



*Figure 685 Example of a filter summary*

## 23. Filter Page for Viewers

You can include a "filter page" in your report such that the viewers can choose which filters are to be applied to the report. It would be logical to place the filter page close to the beginning of the report such that the filters are applied to all the data.

**Note:** Only Single questions, Table Lookup (Database Designer) single questions, Interview start, Interview end, and Interview status can be used in the Filter Page for Viewers.

A filter page can only be used in password-protected reports where licensed viewers have access. In Public (Open) reports, only Static filters can be used.

You can only have one filter page in a report.

An **Admin** menu is presented on the Filters page, and when a viewer enters a report he/she can click the **Filters** link in the **Admin** menu.

The screenshot shows the Confirmit Admin interface. On the left, there is a sidebar with a tree view showing a report structure. The root node is 'My first report', which contains two children: 'Favorite TV Channel' and 'Satisfaction with News'. Below the tree, there are links for 'Report list', 'Preferences', 'Filters' (which is highlighted with a mouse cursor), and 'Logout'. On the right, a main content area titled 'Favorite TV Channel' displays a table with data for males. The table has three columns: Channel, Male, and Percentage. The data is as follows:

	Male	
MTV	10	21,3%
EuroSport	9	19,1%
CNN	9	19,1%

Figure 686 Example of the Filters link in the Admin menu

A new window then opens with the filter options listed, as in the example below. The layout of this page is specified by the Rendering Type property in the Filter Properties page.

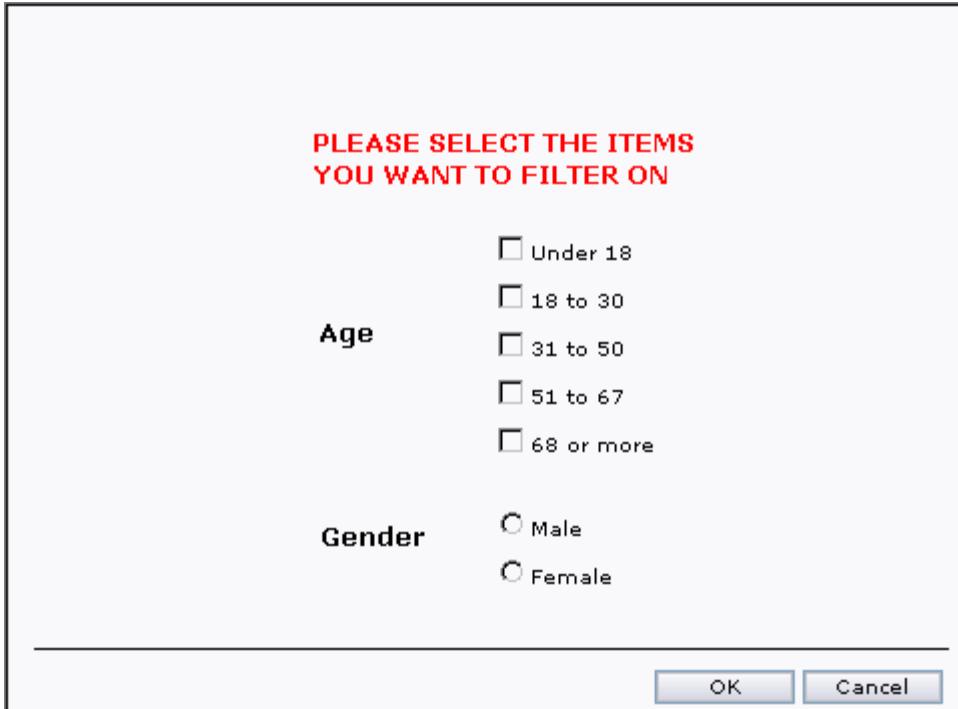


Figure 687 Example of a Filter page for viewers

The viewer can then select and activate a filter, and the report pages will be redisplayed with the filter applied to the results in the tables and charts.

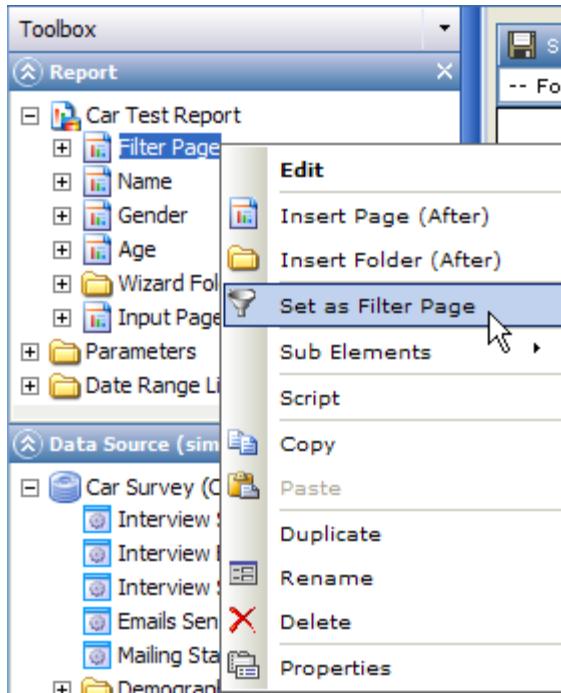
**Note:** The rendering of large reports uses considerable system resources. So in the event a number of viewers ask for the same "heavy" report to be rendered simultaneously, this can degrade operations throughout the system. A configuration setting is therefore available to the system administrator to limit the number of simultaneous rendering operations for a specific report. When set, if the system receives a request for a report that is currently being rendered by X number of other users, an error message will be returned and the viewer will have to try again later. The error will be logged as an event in the Reportal Monitor, allowing the system administrator to identify "problematic" reports and take the appropriate action.

The following sections describe how to set up a filter page for Viewers.

### 23.1. How to Create a Filter Page

You can insert a new report page in your report and define it as a Filter page. To do this:

1. Create a new page in the report.
2. Right-click on the page and select **Set as Filter Page** from the menu (see the figure below).
3. Rename the page as appropriate.



**Figure 688 Setting a new page in the report as a Filter page**

Edit the filter page as you do any report page:

4. Insert an HTML table onto the page so you can position the filters as required.
5. Drag Filter components from the Visual Components toolbox and drop them into the required cells in the table.

**Note:** Only Single questions, Table Lookup (Database Designer) single questions, Interview start, Interview end, and Interview status can be used in the Filter Page for Viewers.

**Important:**

In the event you wish to use a Table Lookup single question in a filter, then the Rendering Type property for that filter must be set to AutoComplete.

6. Drag from the Data Source the questions you want to set up as the filters, and drop them into the filter elements in the table.

**Note:** Only a restricted number of components are available in the Visual Components toolbox.

## 23.2. The Filter Page Properties

To edit a filter's properties, right-click on the filter in the Page Editor and select **Properties** from the menu, or double-click on the filter in the Page Editor. The Properties page opens .

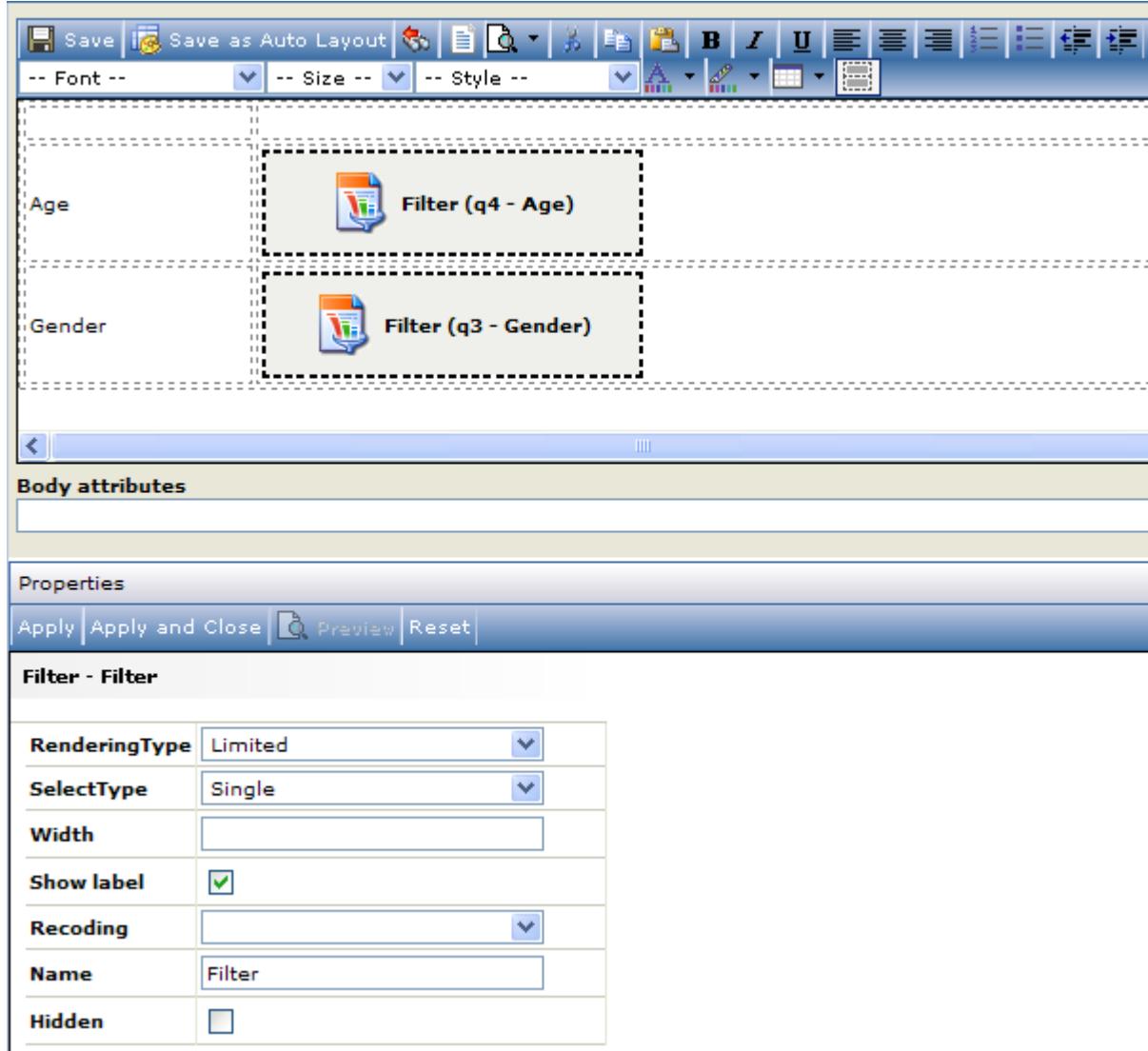


Figure 689 The Filter page properties in the Page Editor

### 23.2.1. RenderingType

The **Rendering Type** property enables you to specify how you wish the filter to be presented. The options are:

- **Expanded** – displays the categories in a column.
- **Limited** – presents the categories in a drop-down.
- **Autocomplete** - provides a filtering possibility for filters with long answer lists. When this option is selected, the user is presented with a scrollable answer list with a text field located above the list. The user can then type the first few characters of the required category into the text field, and the answer list is reduced to just those categories that include the typed text. The filter will find all examples of the specified criteria; for example if the category options comprise a long list of names including "David Carlson" and "Carl Davidson", and the user types "DAV" into the field, both names would be found.

### 23.2.2. Select Type

This property determines whether one or several categories can be chosen for a filter.

- **Single** – allows the viewer to choose only one category.
- **Multiple** – allows the viewer to choose several categories.

### 23.2.3. Height and Width

This property is available when the Limited rendering type is selected.

- **Width:**
  - o When Single Select is chosen, **Width** will determine the width of the drop-down box.
  - o When Multiple Select is chosen, **Width** will determine the width of the box where the categories are displayed.
- **Height:**
  - o Only available for Multiple Select type, **Height** will determine the height of the box where the categories are displayed.

### 23.2.4. Show Label

This property is available when Rendering Type is set to Limited and Select Type is set to Single. When this property is chosen, the question title from the questionnaire will be used as a label in the drop-down box.

### 23.2.5. Interval

This property is only available for Interview\_start and Interview\_end. When this property is chosen, the viewer will be able to define a From – To interval for which the results are to be displayed.

## 23.3. Date Range Lists

You can include dynamic filters (Date Range lists) on a filter page. These lists can be set on filters that are based on time series (Interview start / Interview End). Use the Date Range Lists to define and specify any number of time intervals that the viewer can then select on the filter page. The report viewer can then view the data from the pre-defined periods. You can define different time units for each date range in the list, for example the last quarter of last year, or the period from 6 weeks before the current date until the current date.

### 23.3.1. How to Create a Date Range List

1. In the Report toolbox, right-click on the Date Range List folder and select **Add Date Range List**.  
A new list component is added to the folder.
2. Right-click on the new component and select **Edit**.  
The List Editor page opens.

ID	Type	Rolling Unit	Use from-date	Use to-date	From	To	Break By	Then By	Current rolling value	English	Norwegian

Figure 690 The Date Range List Editor page

3. Click the **Add** button.  
A line is added to the list.

ID	Type	Rolling Unit	Use from-date	Use to-date	From	To	Break By	Then By	Current rolling value	English	Norwegian
range1	Rolling	Year	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	0	Year	-	From 1/1/2012 Through 12/31/2012		

Add    Delete

**Figure 691 The List with a new line**

4. Select the Type (Rolling or Fixed), and the unit to be used.

**Rolling** creates a filter that provides data in a time period relative to the current date, and you must then set up the Unit and period to be used.

**Fixed** creates a filter that provides data between two fixed dates. You must then select the dates to be used.

5. Select whether you wish to use From and/or To dates.

6. If these are to be used, use the From and To fields to specify the time period or dates you wish the filter to span (depending on the Type selected).

Note that negative values are dates in the past. So for example, to create a date range from a date six weeks in the past until a date four weeks in the past, select Rolling Unit to be **Week**, check both the Use From and Use To Date boxes, then enter **-6** in the From field and **-4** in the To field.

The list has two "break by" settings that can be used when tables are to pick up date range list settings from a data range page filter. This allows you to set up for example a rolling unit of a year, broken into Quarters and Months, or a rolling unit of a month, broken into weeks and days.

Note that when you make the selections, the Current Rolling Range is updated to reflect the input.

7. Click **Save** to save the changes.
8. Repeat the procedure as many times as necessary to build up the required list of date ranges.

### 23.3.2. How to Add a Date Range List to a Filter Page

1. Create a filter page and add an HTML table.
2. Drag a Filter element from the Visual Components toolbox into the new filter page.
3. From the Data Source toolbox, drag a time series component (Interview Start / End) into the filter element.
4. Double-click on the Time Series component in the filter element to open its Properties page.

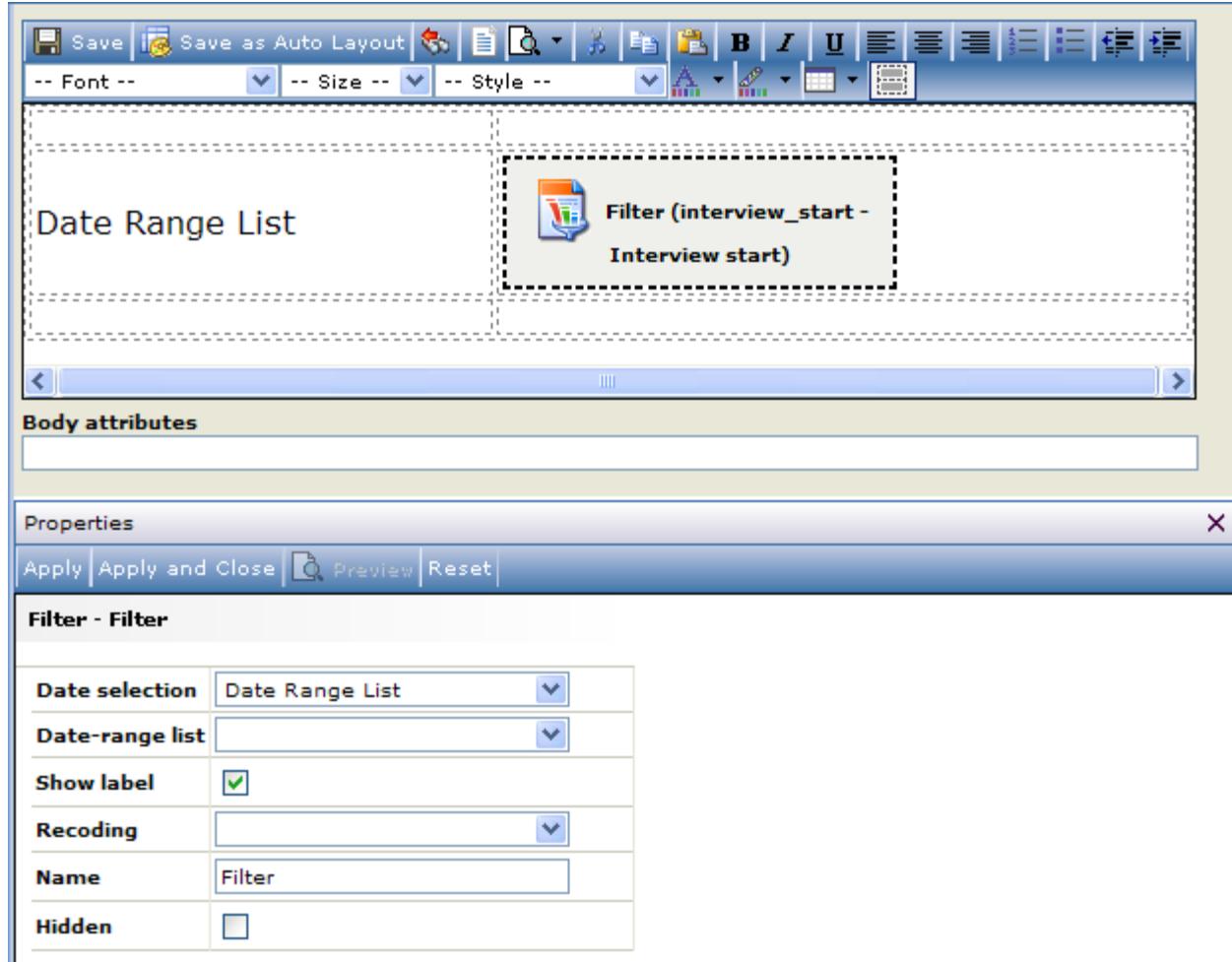


Figure 692 The Date Range List filter properties

5. Click the down-arrow beside the Date selection field to open a drop-down list, and select **Date Range List**.  
The Date-range list property appears.
6. Click the down-arrow beside the Date-range list field to open a drop-down list of the lists available, and select the Date Range List you wish to use.
7. Click **Apply**, then **Save**, to save the changes.  
The Date Range List is now available on the filter page.

## 23.4. Active Filter Summary

When a Viewer chooses to apply a filter, the information about the activated filters will be displayed where the Active Filter Summary component is inserted in the report page. If the report uses parameters (see Parameters on page 428 for more information) or drill-down (see Drill-down on page 435 for more information) the active parameter or drill-down filter will also be displayed in the active filter summary.

The screenshot shows a web-based reporting interface for Confrimt Horizons 24. At the top right, there is a navigation menu with links to 'Report List', 'Preferences', 'Filters', 'Export', and 'Log off'. Below the menu, there are four buttons: 'Add Page', 'New Folder', 'Export', and 'Organize'. The main title of the report is 'Gender'. On the left, there is a section titled 'Gender' with a table:

	Under 18	18 to 30	31 to 50	51 to 67	68 or older	Total
<b>Male</b>	0	68	0	0	0	68
<b>Female</b>	0	0	0	0	0	0
<b>Total</b>	0	68	0	0	0	68

On the right, there is a section titled 'Filtering on the following values:' with two dropdown menus:

- Age:  18 to 30
- Gender:  Male

Below the table, there are several status messages and links:

- Generated: 12/2/2008 12:05:18 PM
- Weight model: None
- Fixed filters: Interview Status
- Significance testing: None
- Last data update: 02/12/2008 10:31:47
- The data is being updated...
- [Click here to refresh the page](#)

Figure 693 Example of the Active Filter Summary

## 23.5. Default Values

You can preset the filter such that when the viewer opens the report there will already be a filter set in the report page. The difference between this and setting a fixed filter on the report is that the viewers will be able to open the filter page and turn the filter off or modify it.

To set a default filter on a filter page:

1. Right-click on the filter page in the report tree and select **Default Values** from the menu.

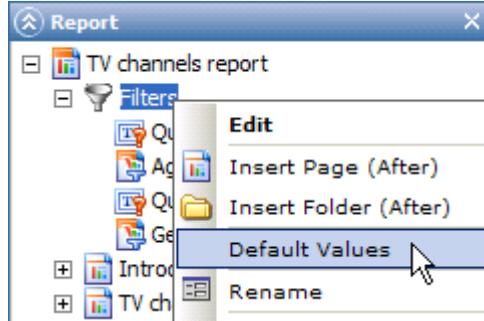


Figure 694 Selecting Default Values

The filter page opens in the frame towards the right side of the pane.

2. Select the desired filter and click **Save** to apply default values for the filter.

To clear the current settings, click **Clear**.

A screenshot of the 'Default Values' filter configuration dialog. It has a header with 'Save' and 'Clear' buttons. The main area contains the message 'PLEASE SELECT THE ITEMS YOU WANT TO FILTER ON'. Below this, there are two sections: 'Age' and 'Gender'. Under 'Age', there are five checkboxes: 'Under 18' (unchecked), '18 to 30' (unchecked), '31 to 50' (checked), '51 to 67' (checked), and '68 or more' (unchecked). Under 'Gender', there are two radio buttons: 'Male' (selected) and 'Female' (unchecked).

Figure 695 Setting Default Values

## 24. Scripting in Reportal

The Reportal scripting capability enables developers to leverage the power of Confirmit Reportal with greater flexibility for report interface customization. Scripting functionality is added to Reportal to enable the user to, for example:

- Perform custom permission control.
- Build aggregated table definitions based for example on user information (e.g. enduser role or company) or parameter values (e.g. selected project and question/question type).
- Build the domain (valid values) of parameters dynamically.
- Mask a parameter domain dynamically, based for example on information about the user (usertype, company or role).
- Send email.

The target audience for using Reportal Scripting is developers familiar with programming in Microsoft developer tools. The scripting Language is Microsoft JScript.NET.

A syntax highlighter is enabled by default in all areas in Reportal where scripts can be written. If the BETA CodeCompletion component is not enabled, this syntax highlighting will be used. When the syntax highlighter is in use, each time the **Tab** key is pressed, the current line of script is indented one step. Each press of the **Shift-Tab** keys removes one indent from the line. Note that the **Tab** key does not insert a tab in the text. To disable the syntax highlighting, in Confirmit Authoring go to the User Settings page and check the “Disable script highlighting” box. Refer to the Authoring User Guide for further details.

For detailed information on scripting, refer to the Confirmit Scripting Manual.

### 24.1. Where is Scripting Used in Reportal?

You can add scripts to a range of elements at various levels in Reportal:

- **Report level** - at the Report Level you can define your Permission script and implement common functions available in a Codelibrary script.
- **Page level** - at the Page level you can add a script that runs once the report page is submitted. This script is primarily used to validate values and combinations of values in input controls on the page. You can also use scripting to hide a page from, for example, a particular role.
- **Parameters** - parameters have domain scripts, mask scripts and filter summary scripts.
- **Visual Components** - all visual components have a Hide expression. Additionally, component definitions for the following components can be changed dynamically using a render script:
  - o Tables
  - o Charts
  - o Gauges
  - o Verbatim Tables
  - o Texts
  - o Hit Lists
  - o Admin menu
  - o Admin menu-like options in navigator
- **Filters** - filter expressions can be built dynamically from a script by adding Filter Scripts within the Filter Toolbox.

### 24.2. Caching of Tables

Using aggregated tables in data sources containing large data-sets will degrade performance. In Reportal, performance is improved by caching the data-sets used by the tables, and in View mode all tables are cached by default (tables are not cached in Preview mode).

**Note: For tables created prior to Confirmit v15 SP1, if you add a script to a table, caching is disabled for that table**

Even if the script does not do anything (it may just be a script comment), it still prevents caching of the table. Therefore, adding scripts to a table that was created before SP1 will degrade performance for the report viewers.

Performance of affected tables can however be significantly improved. It is possible to explicitly enable caching for scripted tables by adding the following code to the table script:

```
table.Caching.Enabled = true;  
table.Caching.CacheKey = "X"; //can use any string value
```

This code will function for most scripted tables. The table cache will then take into account any context that may affect the table, for example filters, report base, parameters and benchmark, and will cache different versions of the table for every variation of these. So even if the script modifies these properties, caching can still be enabled.

The `table.Caching.CacheKey` property can be used if you want to explicitly control the cache criteria for a table. This might be useful if the table is likely to vary by factors other than the properties mentioned above. Note that this property is not optional, so it must be set to a string value even when it is not used. The same value can be used for all tables.

To check whether caching will function for a table, enable caching and verify that the table dynamics (for example report base, filters, drilldowns etc.) still function correctly in View mode.

**Note: Tables created after Confirmit v15 SP1 will be cached by default. However, if required it is possible to disable caching by setting `table.Caching.Enabled=false` in the table script.**

**Important**

Caching should be used whenever possible as it will improve performance and take load off the system.

## 24.3. General Concepts

The following sections outline the concepts used in Reportal scripting.

### 24.3.1. Accessing Survey Content

There are two main approaches that can be used to retrieve Survey content, for example questions, ids, answers, texts etc. when scripting in Reportal:

- The first is to access the Report's data source,
- The second is to access a Project's definition.

In addition it is possible to access tables in Database Designer.

### 24.3.2. Methods

- **report.DataSource**

By using this method you have access to the project(s) defined in the Report's data source. The input parameter is the data source nodeid(s).

- **confirmit.GetProject**

By using this method you can access a project by using the Project Id as input to the GetProject method.

- **confirmit.GetDBDesignerSchema**

By using the schemaid as input to the GetDBDesignerSchema, you can access information in Database Designer tables. Content of Database Designer tables can be used to mask or populate dynamic lists, or control access to various components of your report.

### 24.3.3. Guidelines

The parameter type **Project** in Report allows you to use projects that are not in the Reportal data source . This may be useful if you have a portal that is used for new projects that are added on a regular basis. In this case there are three things you must do:

1. Add projects to the domain of a project parameter from the parameter domain script.
2. Grant users access to "your" (report designer's) projects.
3. Explicitly grant access to projects from the report permission script.

When granting users access to your projects, it is important that sufficient access measures are included in the permission script to avoid unintentional access to variables in the projects that are available from the code.

### 24.3.4. Question Category

To combine multiple questions in a project into different categories, each question in a survey can be defined to belong to one or more Question Categories. The Question Category can be used to display the questions in a drop-down menu, grouped by the defined Category, as shown in the example. Note that this is a way to group your questions by category, and no calculations will be applied to your questions by category.



Figure 696 Example of the Question Category drop-down

To set this up, you must first create a resource survey which will hold the question categories. Proceed as follows:

1. Create a project in Confirmit Authoring, where you insert a single question type which can be called Categories.
2. Enter the different categories in the Answers tab.

The screenshot shows the Confirmit Horizons 24 Report User Guide interface. On the left, the 'Questionnaire Tree' pane displays a hierarchical structure of survey components, including 'Resource Survey (p451581090)', 'categories - Categories (Single)', 'Scales and Lists', 'Quotas', 'Invitation and reminder emails', 'Call Blocks', 'Start block', 'End block', 'Confirmit Default Blue', 'Themes', 'Page Layouts', 'Question Skins', and 'HTML Styles'. On the right, the 'Answers' pane shows a table with columns 'English', 'Precode', and 'Weight'. The table contains the following data:

English	Precode	Weight
Reliability	reliability	
Craftmanship	craftmans	
Driving Experience	drivingexp	
Customer Care	customerca	
Overall Satisfaction	overall	

**Figure 697 The Resource survey**

When the resource survey is in place, you can define in your projects which category the questions belong to.

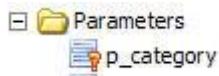
- Under Question Properties for your Grid, Multi or Single question, you have a Question Category field. Enter into this field the code of the Category to which the question is to belong. Note that if a question is to belong to several categories, you must enter the codes separated by semi-colons. Ensure there are no spaces between the categories and semi-colons.

The screenshot shows the 'Question Category' property dialog. It includes fields for 'Default answer precode', 'Refused answer precode', 'Question Category' (containing the value 'reliability;customercare;overall'), 'Exclude translation', and other options.

**Figure 698 The Question Category property**

When all questions have been categorized in the survey, the report can be setup.

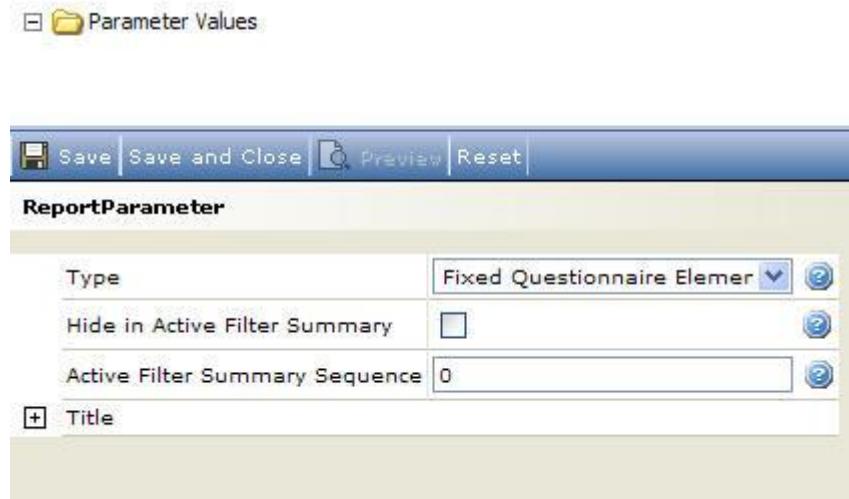
- Create a parameter in the Report toolbox, and name it for example **p\_category**.



**Figure 699 The Parameter**

The Parameter Values folder for this parameter should be empty.

- Under Properties, set the Type to **Fixed Questionnaire Element**.



**Figure 700 The Parameter properties**

You must now script the functionality for this parameter.

6. Right-click on the **p\_category** element and select **Script**. Enter a customized script based on the following:

```

Domain
Disable Code Completion BETA

1 var resourceProject : Project = this.report.DataSource.GetProject("resource_survey");
2 parameter.Items.AddRange(project.GetQElementsGroupedByCategory(resourceProject, "categories", false));
3

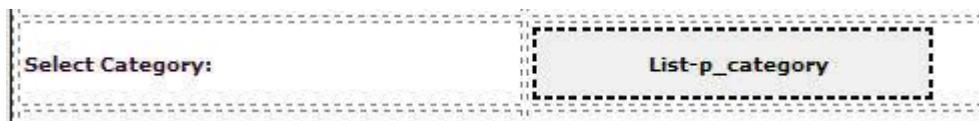
```

**Figure 701 Example of the Category script**

The GetProject method, will take in as a parameter either the data source name (which is named `resource_survey` in the example), or the project id. The `GetQElementsGroupedByCategory` method will take in as parameters the defined resource project, the question id of the categories question. The third parameter is a Boolean, where you can select if the Grid questions included in a parameter should be collapsed or expanded.

When the Parameter is in place, it must be included in a List element. The List element can be included on a Query report page where the report viewer can select a report query.

7. Drag the **p\_category** parameter to the List object.



**Figure 702 The Parameter in the List object**

8. Right-click on the List object, and select **Properties**, then set up the properties as required.



*Figure 703 The List properties*

The List properties are as follows:

- **Type** - defines the List type you would like to display.
- **Auto Submit** - should be selected if there are other elements on the page that depend on the selection made on in this List. The page will then refresh when a selection is made.
- **Auto Complete** - includes a type-in-box, where the letters you type in will display the list that matches.
- If Type (above) is set to Drop-down, you can add an **Empty Row** which will be shown by default before a selection is made; check the box as required.
- **List Style** - defines the style of the list frame.
- **Items Style** - is the style of the elements within a Category.
- **Group Headers Style** - is the style of the Header elements in your List.

#### 24.3.5. The Role Column

A Role column is included in maintenance screens for Reportal end-users and panelists. This column enables you to allocate a role to a user or panelist, giving you another method of specifying access to the report.

**Note:** The only place this role can be used is within Reportal scripts, by calling the `user.HasRole` method.

### 24.4. The Syntax Highlighter

The Syntax Highlighter functionality means that while scripting you no longer need to remember the functions, or look up which properties belong to which classes and which parameters the various methods accept. Instead, all these are available at the touch of a button. The highlighter automatically color-codes key words, and provides lists of selectable options under specific conditions while scripting.

The Syntax Highlighter functionality is on by default for a survey, but you can switch it off in the User Settings (see The User Settings Page on page 22 for more information).

The following script editing areas support the highlighter capabilities:

- Script nodes in authoring
- Validation and masking of questions
- Reportal scripting

- Data Processing scripting
- JavaScript editors

To use the highlighter, start typing into the scripting area the function you wish to use, then press the **Ctrl+Space** keys on your keyboard. A drop-down list of all the functions corresponding to the text string you have typed, opens. To open a complete list of all the available functions, press **Ctrl+Space** without first typing anything into the scripting area.

The figure below shows the Syntax Highlighter in action:

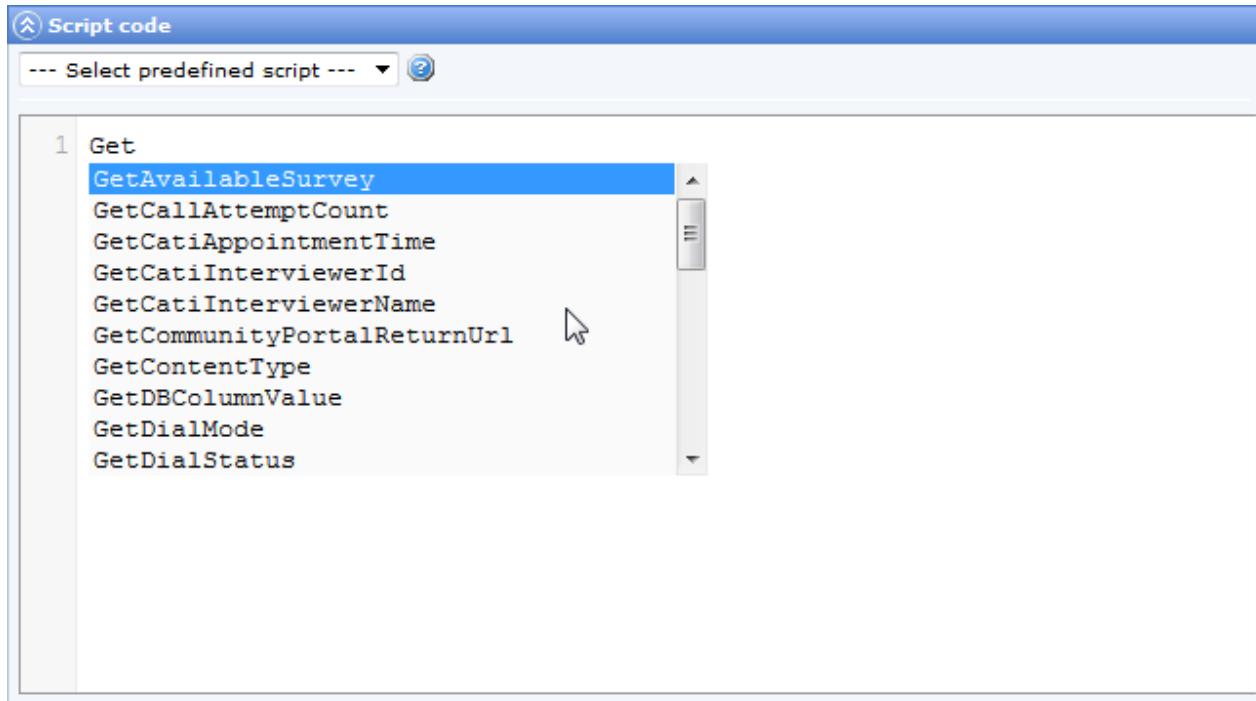


Figure 704 Example of the Syntax Highlighter in action

#### 24.4.1. Using the Syntax Highlighter

When writing code, you can automatically get a list displayed with classes, functions, methods or properties relevant to the context you are in, covering both Confirmit-specific and general JScript.NET constructions. To display the list:

1. Press **CTRL+space** to display the list.  
If you have already started typing, the list will be filtered according to the typed string. After the name of a class or variable, the list will appear automatically when you type period (.).
2. Type more characters to reduce the number of items in the list and jump directly to a member in the list. Use the arrow buttons to move up and down in the list.
3. Press **Enter** to select an item.

On functions and methods, a parameters list will automatically pop up to give you information about the number, names and types of parameters required by a function, template, or attribute. The parameter in bold indicates the next parameter that is required as you type the function. Where there are different versions of the function with different parameter lists, you can select which parameter list you wish to view.

```
1 GetRespondentUrl("q1", false)
```

```
GetRespondentUrl(id: String, isCallBlock: Boolean, userParameters: String, params: String[])
GetRespondentUrl(questionId: String, params: String[])
GetRespondentUrl(questionId: String, isCallBlock: Boolean)
GetRespondentUrl()
```

Figure 705 Example of the Syntax Highlighter functionality in use

To view parameter information:

1. After the name of a function or method, type an open parenthesis (as you normally would) to open the Parameters list.

The declaration for the function will pop up under the insertion point. The first parameter in the list appears in bold. To switch among functions, use the UP or DOWN arrow keys. As you type the function parameters, the bold changes to reflect the next parameter that you need to enter.

2. Press **ESC** at any time to close the list.

Use **Tab** to indent lines of code. Lines of code within curly brackets, { and }, will automatically be indented. To indent several lines of code in one operation, mark all the code you want to indent and press **Tab**. To un-indent, press **Shift+Tab**.

#### 24.4.2. Syntax Highlighter Limitations

The Syntax Highlighter has some limitations. No autocompletions are available for implicitly typed objects (objects returned by functions etc.) so

Typing:

```
f()
```

will not result in an autocomplete suggestion.

Typing:

```
var d = new Date();
d.
```

will not result in an autocomplete suggestion.

Typing:

```
var myDate: Date;
myDate.
```

will result in an autocomplete suggestion.

## 24.5. Script Types

The script types available in Reportal Scripting are described in the following sections. For each of the script types the following structure is used:

- Where do I find the script editor for this script?
- What's the main purpose of this script?
- Short description of the script type.
- Some simple examples of the script type.

For a full list of all methods, the Confirmit Reportal Scripting Object Model is described in the document “Confirmit Reportal Scripting”, which can be downloaded from the Scripting section of the User Manual page in the Confirmit Extranet (<http://extranet.confirmit.com>).

### 24.5.1. Report Level Scripts

Report Level scripts comprise:

- Code Library scripts
- Linked Code Library scripts
- Permission script

#### 24.5.1.1. Codelibrary Script

<b>Editor:</b> Report Toolbox > Codelibrary Script	<b>Main purpose:</b> Write common script classes available from any other scripts in the report. Multiple Codelibrary scripts can be added to a report, stored in the Codelibrary Script folder node in the Report toolbox. Many classes can be added to each script.
<b>Description:</b>	
In this script you can write your own classes. These classes will typically be used as follows:	
<ul style="list-style-type: none"> <li>• When you have some common logic that should be used from several of the other scripts in the report.</li> <li>• When the logic in a hide script is too complex to be expressed in an expression, you can implement this logic in a common class and just call this method from the hide script.</li> </ul>	
If you want to use any of the objects available in other scripts, you must pass them as parameters to the code library script.	
To add a new script, in the Report toolbox right-click on the <b>Codelibrary Script</b> folder node and select <b>Add Codelibrary Script</b> .	
<b>Example - Codelibrary:</b>	
<pre>class MyLib{     function MultiplyBy100(value : Decimal) : Decimal     {         return value * 100;     } }</pre>	
<b>Example - Use the library in a Text component:</b>	
<pre>if(!state.Parameters.IsNull("p_decimal")) {     var lib : ReportCommon.MyLib = new ReportCommon.MyLib();</pre>	

```

    var val : Decimal = state.Parameters.GetDecimal("p_decimal");
    output.Append(lib.MultiplyBy100(val));
}

```

All Codelibrary scripts will be stored in the Codelibrary Script folder node in the Report toolbox. Any Codelibrary scripts that already exist in a report when Confirmit v16 is installed will be moved automatically to this folder. You can export all Codelibrary scripts at once in a .zip archive by right-clicking on the **Codelibrary Script** folder node and selecting **Export scripts**.

#### **24.5.1.2. Linked Code Library Script**

<b>Editor:</b> Report Toolbox > Linked Codelibrary Script	<b>Main purpose:</b> Provide a means of hosting common Reportal script code in an external repository, such as Github, that can be then referenced in Reportal reports. Using a linked code library allows companies to easily maintain and update common code snippets that may be used across several reports, without the need for changing the code in each individual report.
--	---

#### **Description:**

This type of script is similar to the Codelibrary Script.

It has several specific properties:

- **Source Control Type** - Git Hub
- **Shared Code Library URL** - indicates an URL pointing to a ZIP archive stored at an external resource, e.g. GitHub. For the GitHub, there are two kinds of URLs supported:
  - UI:  
[https://github.com/user\\_name/repo\\_name/archive/f09a2af4285d6917da222c73455b6a7bacdb90d5.zip](https://github.com/user_name/repo_name/archive/f09a2af4285d6917da222c73455b6a7bacdb90d5.zip)
  - API:  
[https://api.github.com/repos/user\\_name/repo\\_name/zipball/f09a2af4285d6917da222c73455b6a7bacdb90d5](https://api.github.com/repos/user_name/repo_name/zipball/f09a2af4285d6917da222c73455b6a7bacdb90d5)

The API URL has the following varieties:

- The latest version of a branch: [https://api.github.com/repos/user\\_name/repo\\_name/zipball/master](https://api.github.com/repos/user_name/repo_name/zipball/master).
- A particular version of a branch (by a commit SHA):  
[https://api.github.com/repos/user\\_name/repo\\_name/zipball/f09a2af4285d6917da222c73455b6a7bacdb90d5](https://api.github.com/repos/user_name/repo_name/zipball/f09a2af4285d6917da222c73455b6a7bacdb90d5).
- A Tag: [https://api.github.com/repos/user\\_name/repo\\_name/zipball/Tag1](https://api.github.com/repos/user_name/repo_name/zipball/Tag1).
- **API Key** - a security key. For the GitHub, it is an OAuth2 access token bearer.
- **Auto Check Version** - when this option is checked, the version will be queried every time, when the report is opened in designer. If a new version detected, the library is updated. A message will be sent to the Quality Control validation window.

**This option is not applicable when the Enforce Updating option is turned on.**

- **Enforce Updating** - checking this option enforces the update which will be done ignoring ETag, even when the version is the same.
- **Last Updated** - this indicates the date of the last update.
- **ETag** - this indicates the SHA code of the current imported library version. It is taken for ZIP and used to detect a version change.
- **Updated by** - this indicates the username of the last user, who downloaded the library scripts.

To add a new script, in the Report toolbox right-click on the **Linked Codelibrary Script** folder node and select **Add Linked Codelibrary Script**.

**Example - Linked Codelibrary:**

### 24.5.1.3. Permission Script

<b>Editor:</b> Permissions > Permission Script	<b>Main purpose:</b> Validate that the current user really has permission to all current values of all parameters. Can also be used to initialize required values for report parameters.
---	---

**Description:**

This script is always called first for each page in the report and before exporting any object to MS Office or other format for that report.

Even though you for example mask content of a parameter used in a dropdown to limit the user's access to specific values, you should also write a permission script taking care of the permission control, for the following reasons:

- Even though input controls are masked, hostile users may try to hack the report using a tool to post other values to the input controls.
- If a report user for example has access to a specific parameter value on a certain point of time, he can save a page with the given value to one of his private folders (Viewer Presentation component). As report designer, you may want to revoke this access at some point of time. If so, the permission script will deny this user access to the previously saved page.

In some cases you may want to design a report using projects that are not in the report data source. This may be the case if you are continuously making new projects available to a report and do not want to modify the report and re-publish it each time. Two steps are required to achieve this:

1. Go to the Viewer Project Permission page and grant access to projects outside the data source.
2. Explicitly grant access to required projects in this script.

If you like to initialize or change parameter values based on other parameter values, this can also be done in this script. Alternatively use the page script for this. These two scripts are the only scripts where you are allowed to change parameter values.

**Example - Allow access to project not in datasource:**

```
// Authorizes project outside datasource
state.AuthorizeProjectAccess ("p0559090");
```

**Example – Raise permission denied:**

```
var unit : String = state.Parameters.GetString("p_unit");
if(user.UserId == "someuser" && unit != "someunit")
    HasPermission = false;
```

**Example – Derive a parameter from another**

```
if(state.Parameters.IsNull("p_project"))
    state.Parameters["p_question"] = null;
```

## 24.5.2. Page Level Scripts

Page Level scripts comprise:

- Page Validation scripts
- Page Hide scripts
- Image Render scripts for PowerPoint export

To access the Page Script functionality:

1. Right-click on the report page in the Report toolbox and select Script from the drop-down menu.

The Page Script page opens.

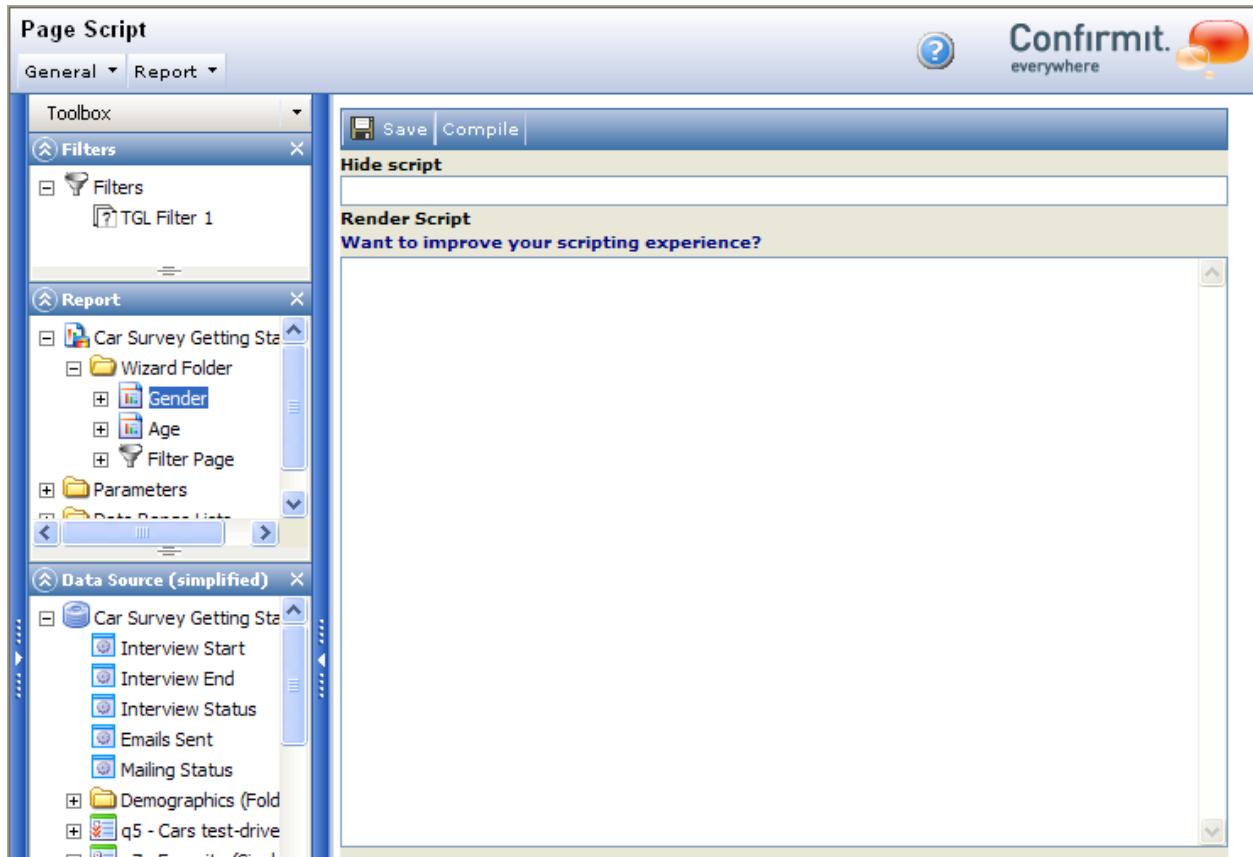


Figure 706 The Page Script page

2. Type the required script into the appropriate field, compile to test it, and save.

**Note: All visual components on a page that have Hide scripts also have a Hide script in the Report Master.**

### 24.5.2.1. Page Validation Script

<b>Editor:</b> Report Tree > Page > Script	<b>Main purpose:</b> Validate the inputs made on the page and stop users from moving to other pages if input is not valid.
<b>Description:</b>	
Some pages that you design in Reportal may sometimes have several input controls. Sometimes, it may be required to validate the combination of values in these controls. That should be done from this script.	
Add all validation errors into the validation error collection in the pageContext object. Then use these values from one or more Text controls to output these messages.	
If the validation error collection has any items, Reportal will stop any navigation away from this page.	
<b>Example – Validate a page:</b>	
<pre>if(page.IsSubmit) {     if(state.Parameters.IsNull("p_date_1")    state.Parameters.IsNull("p_date_2"))         this.pageContext.ValidationErrors.Add("Please fill both dates");     else{var d1 : DateTime = state.Parameters.GetDate("p_date_1");         var d2 : DateTime = state.Parameters.GetDate("p_date_2");         if(d2 &lt; d1)             {                 this.pageContext.ValidationErrors.Add("End date should after start date");             }         } }</pre>	
<b>Example – Write validation error message from a Text component</b>	
<pre>for(var s in pageContext.ValidationErrors)     output.Append(s + "&lt;br&gt;");</pre>	

### 24.5.2.2. Page Hide Script

You can use this functionality to hide a report page or a visual component on a page from, for example, a specific role. If the expression in the Hide Script field evaluates to TRUE, the page will be hidden.

**Note: All visual components on a page that have Hide scripts also have a Hide script in the Report Master.**

A possible scenario could be that you wish to selectively hide a report page based on the viewer's role. "Role" is a text field found under Enduser Permissions (see Giving Report Access to End Users on page 639 for more information).

For this example, assume that you have a number of end users; some having the role of "Manager", while the others have the role of "Consultant". Assume you have created a page that you wish to be accessible only to those with the Manager role; you want to hide it from the end users with the Consultant role.

1. Right-click on the page in the Report toolbox and select **Script** from the drop-down menu.

The Page Script page opens, with the Hide Script field towards the top.



Figure 707 The Hide Script field

2. In the Hide Script field, enter the script `user.HasRole("Consultant")`.

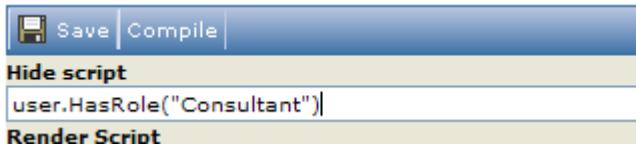


Figure 708 The script

For the managers this script will evaluate to FALSE, so they will be able to see the page. However for the consultants it will evaluate to TRUE, so the page will be hidden.

#### 24.5.2.3. Image Script for PowerPoint Export

<b>Editor:</b> Report Tree > Page > Script	<b>Main purpose:</b> Allow to display multiple images on one slide of the PowerPoint export presentation in a user-defined order.
<b>Description:</b>  This script links image files that are referenced by ID ("Image1" as in example below) and URL ("isa/BDJPFRDMEYBPBKLVADAYFQCAVIOEQJM/Logo1.png" as in example below) to their placeholders on a slide in the slide layout used for PowerPoint export (see How to Create a Custom Presentation Layout on page 614 for more information). The slide layout must have the picture placeholders added with the corresponding image IDs specified. Both local and global image URLs are supported.	
<b>Example – Add an image to a page:</b> <pre>report.AddPPTImage ("Image1", "isa/BDJPFRDMEYBPBKLVADAYFQCAVIOEQJM/Logo1.png")</pre>	

#### 24.5.3. Parameter Scripts

Parameter scripts comprise:

- Domain script
- Mask script
- Filter Summary script

### 24.5.3.1. Domain Script

<b>Editor:</b> Report tree > A Parameter > Script > Domain	<b>Main purpose:</b> Load the domain for a parameter.
<b>Description:</b>	
Script used to build up the domain for a parameter. Without scripting, the domains for parameters are loaded different ways depending on parameter type:	
<p><b>Projects</b> - Connect the parameter to a question in a survey containing the project IDs that you want to load. Double-click the parameter to open the page where you can connect the project to a question.</p> <p><b>Questionnaire Elements</b> - Manually build a hierarchical structure of questionnaire elements from the parameter designer page (double-click parameter to get there).</p> <p><b>Segments</b> - Do it the same way as for questionnaire element, except that you drag segments into the tree structure.</p> <p><b>String Response</b> - Connect parameter to a question the same way as for the project parameters. This makes the domain implicitly load the answer list of that question.</p> <p>If you use a domain script for a parameter, you override the default way of loading the domain. You have to do this loading explicitly from within the script.</p> <p>The advantage is that you can then load the domain differently, for example depending who the user is and what other selections the user has made for other parameters. Typically, you can do this based on the user's role or some other information from a database designer table relating user's to elements in lists.</p>	
<p><b>Projects Example:</b></p> <p>To tie one or more projects to a report, include a parameter to your report.</p> <ol style="list-style-type: none"> <li>Under parameter properties, select <b>Type Project</b>.</li> <li>Right-click on the parameter, and select <b>Script</b>.</li> <li>To include projects to your report, add the following script:</li> </ol> <pre> var p : Project = this.confirmit.GetProject('pxxxxxxx'); parameter.Items.AddProject(p); p = this.confirmit.GetProject('pxxxxxxx'); parameter.Items.AddProject(p); </pre> <ol style="list-style-type: none"> <li>In the GetProject method, include the id of your project.</li> <li>To use this parameter, include a List element in your report.</li> <li>Drag &amp; drop the Questionnaire Elements Example project parameter.</li> </ol> <p>The Questionnaire Elements can be used to include questions from a project into a drop-down menu. If you have several projects in your report, you can script which questions to display depending on the project selected in the project parameter (p_project).</p> <ol style="list-style-type: none"> <li>Create a new parameter and rename it for example p_questions.</li> <li>Right-click on it and select Script, then enter the following code:</li> </ol> <pre> if(state.Parameters.IsNull("p_project")) </pre>	

```

return;

//Checks to see if a project has been selected. If not, nothing is
returned.

var pid : String = state.Parameters.GetProjectId("p_project");
var project : Project = confirmit.GetProject(pid);
//The project selected is defined

var questions : Question[] = project.GetQuestions();
parameter.Items.AddQuestions(questions);
//The questions in the project selected are included in the parameter.

```

If you do not wish to include OpenText and MultiOpen questions in the parameter, since these will not work in Aggregated Tables, the following code can be used instead of the last line;  
`parameter.Items.AddQuestions(questions);`

```

for(var i : int=0; i<questions.length;i++)
{
    if (questions[i].QuestionType != QuestionType.OpenText &&
questions[i].QuestionType != QuestionType.MultiOpen)
parameter.Items.AddQuestions(questions[i]);
}

```

This script will iterate through the questions, and check if they are QuestionType OpenText or MultiOpen. If not, they will be added to the questions parameter.

#### **24.5.3.2. Mask Script**

<b>Editor:</b> Report tree > A Parameter > Script > Mask	<b>Main purpose:</b> Mask the domain of a parameter.
<b>Description:</b>	
For these types of parameters, you can add a mask script to mask the parameter domain for example based on other selections. This script is typically used when the original domain can be loaded the default way, but the list of values should be masked in some way.	
You can choose whether to use inclusive or exclusive masks, i.e. whether the keys you add to the mask are those that should be included in or excluded from the domain.	
Mask script only applies to project, segment questionnaire element and string response parameter types.	
<b>Example – Removing a question from domain:</b>	
<pre> mask.Access = ParameterAccessType.Exclusive; mask.Keys.Add("q4"); </pre>	

### 24.5.3.3. Filter Summary Script

<b>Editor:</b> Report tree > A > Script > Filter summary	<b>Main purpose:</b> Customize the filter summary label of a parameter.
<p><b>Description:</b></p> <p>For some parameters it will make sense not to have one line in filter summary for each parameter. For example, if you use one parameter to choose which question to filter by, and another to select the filter values.</p> <p>In these cases you can choose to hide one of the parameters from the filter summary and customize your own label for the other one to have the filter on one line.</p> <p><b>Example – Customize filter summary for filter:</b></p> <pre>if(state.Parameters.IsNull("p_filter_q")    state.Parameters.IsNull("p_filter"))     return; var q : QuestionnaireElement = state.Parameters["p_filter_q"]; state.LoadParameterLabel("p_filter_q"); state.LoadParameterLabel("p_filter_a"); output.Append(q.Label + "("); var first : boolean = true; for(var r : ParameterValueResponse in a) {     if(first)         first = false;     else         output.Append(", ");     output.Append(r.Label); } output.Append(")");</pre>	

## 24.5.4. Component Scripts

All visual components in Reportal have a "hide" expression. If this expression evaluates to true for a component, then this component is hidden from the report viewer. Additionally some components have "render" scripts used to dynamically modify the properties for the component before the component is rendered/displayed.

Note that you can use the **CTRL+s** keyboard shortcut to save changes when writing component scripts.

### 24.5.4.1. Render Scripts

Render scripts can be defined for the visual component types, to set properties for the components dynamically.

- Hide script
- Aggregated Table script
- Verbatim Table script
- Chart script

- Gauge script
- Hit List script
- Text script
- Date Filter script

#### **24.5.4.2. Hide Script**

Used to dynamically hide or show visual components on a report page.

<b>Editor:</b> Report tree > A Component > Script > Hide	<b>Main purpose:</b> Hide a Reportal component conditionally. All components in Reportal can include a Hide expression.
<b>Description:</b> A typical Hide expression could for example check whether or not a parameter is null. If more complex logic is required, consider using a script library function to implement this logic.	
<b>Example - Checking parameter:</b> <pre>state.Parameters.GetString("p_show_hide") == "hide"</pre>	
<b>Example – Calling a library function</b> <pre>new ReportCommon.MyLib().DoHide(state.Parameters)</pre>	

**Note: All visual components on a page that have Hide scripts also have a Hide script in the Report Master.**

#### **24.5.4.3. Aggregated Table Script**

<b>Editor:</b> Report tree > A Table > Script > Render	<b>Main purpose:</b> Dynamically change the aggregated table based on for example parameter values or user information.
<b>Description:</b> Use this script to dynamically add, remove or change headers for aggregated tables. If a table already has a banner or a parameter header, this script is called after the banner header is substituted with the header from within the banner and the parameter headers are substituted with a header for the current value for that parameter.	
<b>Example – Changing numbers of decimals:</b> <pre>if (!state.Parameters.IsNull("p_table_dec")) {   var pv : ParameterValueResponse = state.Parameters["p_table_dec"];   table.Decimals = pv.NumericValue; }</pre>	

**Example - Adding a header:**

```
var hf : HeaderFormula = new HeaderFormula();
hf.Type = FormulaType.Expression;
hf.Expression = "4";
table.RowHeaders.Add(hf);
```

**Example – Changing a header:**

```
var hf : HeaderFormula = table.RowHeaders[0];
hf.Expression = "9";
```

**Note: If you add a script to a table, caching is disabled for that table (see Caching of Tables on page 564 for more information).**

**24.5.4.4. Verbatim Table Script**

<b>Editor:</b> Report tree > A Table > Script > Render	<b>Main purpose:</b> Dynamically change the verbatim table based on for example parameter values or user information.
---	--

**Description:**

Most typical use of this script would be to dynamically set the questionnaire element of the table based on a parameter, but you can also change other properties of the verbatim table.

**Example – Set questionnaire element:**

```
var q : QuestionnaireElement = state.Parameters["p_question"];
verbatimTable.QuestionnaireElement = q;
```

**Example – Set sorting property:**

```
verbatimTable.Sorting = VerbatimSortingType.RespondentId;
```

**24.5.4.5. Chart Script**

<b>Editor:</b> Report tree > A Table > Script > Render	<b>Main purpose:</b> Dynamically change the chart based on parameter values or user information.
---	---

**Description:**

One way of using charts scripts is to allow the report user to decide dynamically the chart type and set the chart type based on a parameter in a script.

If you set up a report in which the user can choose which question is to be used in tables and possibly also add one or more questions to the column headers, you may have to implement some logic regarding the parts of a table that are to be included in the chart.

#### Example – Setting chart type:

```
if (!this.state.Parameters.IsNull("p_chart_type"))
{
    var ct : String = this.state.Parameters.GetString("p_chart_type");
    switch(ct)
    {
        case "pie":
            chart.Series.SeriesDefault.ChartType = ChartTypes.Pie;
            chart.SeriesInRows = true;
            break;
        case "column":
            chart.Series.SeriesDefault.ChartType = ChartTypes.Column;
            break;
        case "bar":
            chart.Series.SeriesDefault.ChartType = ChartTypes.Bar; break;
    }
}
```

#### Example – Setting part of table:

```
chart.RowHeadersMask.AddHeader("benchmark");
```

### 24.5.4.6. Gauge Script

<b>Editor:</b> Report tree > A Gauge > Script > Render	<b>Main purpose:</b> Dynamically change the gauge based on parameter values or user information.
<b>Description:</b> In this script you can add, remove or change exactly the same values as you can modify in the gauge style designer and gauge designer.	
<b>Example – Changing size of an existing circular gauge:</b>	

```
var cg : CircularGauge = gauges.GetGauge("Gauge1");
cg.Size.Height = 50;
cg.Size.Width = 50;
```

### 24.5.4.7. Hit List Script

<b>Editor:</b> Report tree > A Hit List > Script > Render	<b>Main purpose:</b> Dynamically change the Hit List based on for example parameter
--	--

	values or user information.
<b>Description:</b>	
In this script you can add, remove or change columns of the Hit List, and you can change the properties of the Hit List itself.	

**Example – Adding a column:**

```
var column : HitListColumn = new HitListColumn();
column.QuestionnaireElement = state.Parameters["p_question"];
hitlist.Columns.Add(column);
```

**24.5.4.8. Text Script**

<b>Editor:</b> Report tree > A Table > Script > Render	<b>Main purpose:</b> Dynamically set the text of a Text component based for example on parameter values or user information.
<b>Description:</b>	
If a Text component has a script, any text set in the property sheet of the component will be overwritten. If your report is multilingual, you must also check the current language of the report to add the proper texts. One workaround for this may be to add your dynamic texts to an answer list in a multilingual Confirmit project and get the texts by using the project.GetQuestion() and question.GetAnswer methods.	
<b>Example – Add some text:</b>	
<pre>if(report.CurrentLanguage == 9)     text.Output.Append("XXX"); else if(report.CurrentLanguage == 20)     text.Output.Append("YYY");</pre>	
<b>Example – Add some text based on an answer text:</b>	
<pre>var p : Project = report.DataSource.GetProject("ds0"); var q : Question = p.GetQuestion("q_text"); var t : Answer = q.GetAnswer("text1"); text.Output.Append(t.Text);</pre>	

## 25. Report Base Script

<b>Editor:</b> When used on a component level: Report tree > A Table > Script > Render  When used on a page level: Report tree > A Page > Script > Render	<b>Main purpose:</b> Dynamically define the Report Base.
<b>Description:</b> The syntax used in case of an unbalanced hierarchy is as follows:	
<code>user.SetReportBase ("ID\$TableID\$RelationID", "ID\$TableID\$RelationID")</code>	
Since the unbalanced hierarchies are based on a single table, the tableID is omitted:	
<code>user.SetReportBase ("ID\$RelationID")</code>	
<b>Example - used with a balanced hierarchy:</b>	
<code>user.SetReportBase ("H_PLY\$Subregions\$Regions", "H_LIV\$Subregions\$Regions")</code>	
<b>Example - used with an unbalanced hierarchy:</b>	
<code>user.SetReportBase ("adm\$Firm1")</code>	
<b>Example - used with a single variable:</b>	
<code>user.SetReportBase ()</code>	

### 25.0.1. Filter Scripts

<b>Editor:</b> Filter tree > Insert a filter script > Script	<b>Main purpose:</b> Dynamically create a filter expression.
<b>Description:</b> Build your filter expression dynamically based on parameter values. Expression syntax is the same as for regular filter expressions.	
<b>Example – Setting filter expression:</b>	
<code>filter.Expression = "gender = \"male\"";</code>	

#### 25.0.1.1. Date Filter Scripts

<b>Editor:</b> <ol style="list-style-type: none"> <li>1. Filter tree &gt; Insert a filter script &gt; Script</li> <li>2. Report tree &gt; A Component &gt; Script &gt; Render</li> </ol>	<b>Main purpose:</b> Dynamically create a date range filter based on a date range defined in the Date Filter component and filter content in report components / on report pages as well as set the text of a Text component.
<b>Description:</b> There are the following date filter scripts: <ol style="list-style-type: none"> <li>1. Filter script for the Date Filter component - it defines a particular Date Filter component via a start date variable ('interview_start' in the example below) and a parameter name ('p2' in the example below) (see Filter Scripts on page 585 for more information). It is created and stored as a Filter script and assigned to a relevant Date Filter component by dragging it onto the component.</li> <li>2. Date range pre-defining script - overrides the default ALL DATES value (see The Date Filter Component on page 545 for more information). It is stored as a render script of an arbitrary component (but not a Date Filter) or a page in the report (see Render Scripts on page 580 for more information).</li> <li>3. Date Filter Text component script - outputs the date range set in the linked Date Filter as a text string in a Text component. It is created and stored as a render script of a Text component (see Render Scripts on page 580 for more information).</li> </ol>	
<b>Example – a Filter Script for the Date Filter component:</b> <pre>filter.Expression=report.DateRangeUtils.GetRollingDateRangeExpression('interview_start','p2'); log.LogDebug("filter"+filter.Expression);</pre>	
<b>Example – a script that pre-defines Date Filter values:</b> <pre>var p2_value = state.Parameters.GetString('p2'); var endDate = DateTime.Now; var start = new DateTime(endDate.Year, 1, 1); var di: DateInfo = report.DateRangeUtils.GetDateInfo('p2'); text.Output.Append(di.Range.start);</pre>	
<b>Example – a Date Filter Text Component script:</b> <pre>var di: DateInfo = report.DateRangeUtils.GetDateInfo('p2'); text.Output.Append(di.Range.start);</pre>	

## 25.1. Validation

To avoid publishing reports that contain errors, Reportal has built-in features to verify that no scripts contain syntax errors.

On preview and compilation of a report, if script errors are found, an error frame will appear showing a list of the errors. The list contains links that lead to the page where the error is located. There is also a Debugging tab in the frame which will contain a list of any debugging errors found during preview.

1. To access the Validation functionality without publishing the report, go to the **Report > Quality Control > Validate Report** menu command or enter an element containing a script and choose **Compile** from the menu.

Reportal will start to run through the script(s) checking the code. A new pane opens in the lower-right part of the window, displaying the message "Please wait, loading list...". Once the checking process is finished, any errors discovered will be displayed in the pane.

The Question ID column displays the question ID or the script ID where the error is located. The Error column provides a short summary of the error type.

2. Click the error link to open the erroneous script, in the frame above the error pane.

Any errors are stored from when a report is published to the next time it is published, and from preview to preview. This applies to both Runtime and Validation errors.

You can at any time view a list of any errors that may have been discovered. Go to the **Report > Quality Control** menu command and select **Validation Errors**, **Runtime Errors** or **Debug Errors** as appropriate. Note that these are three tabs on the same page, so you can easily switch from one to the other.

## 26. My Bookmarks

In reports where viewers are given access to dynamic functionality such as a filter page, parameters or drill-down, the viewers may need a way to store pages with interesting results so they can return quickly to those pages later. You can provide this facility by including the **My Bookmarks** visual component in the report.

**Note:** The Viewer Presentation component must be added to the Report Master (see The Viewer Presentation Component on page 701 for more information).

Using the Viewer Presentation component, the viewers can create "bookmark folders" in which they can store bookmarks to report pages which have the dynamic settings such as filters and parameter selections applied. The viewer can then go directly to those pages without having to remember and reapply settings.

**Note:** This functionality is not available for public reports.

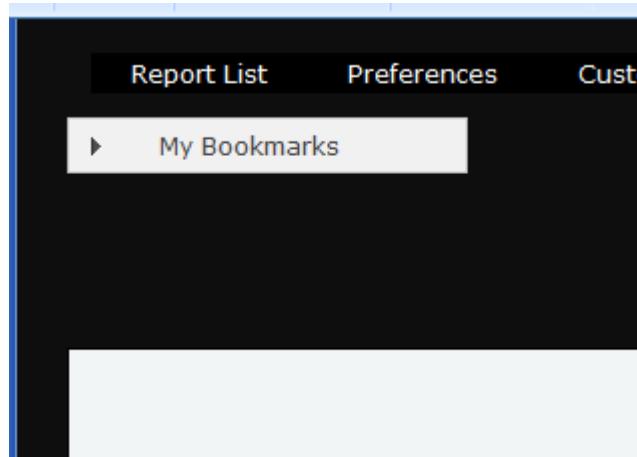


Figure 709 An example of the My Bookmarks component used on a report page

Once the My Bookmarks component is available, the viewer can create bookmark folders and then set up report pages and save bookmarks to those pages in the folders in the My Bookmarks component. The viewer can name the pages to simplify location later (by default they will be given the names of the report pages), and the viewer can then just click on the links to reopen the page with the same settings applied.

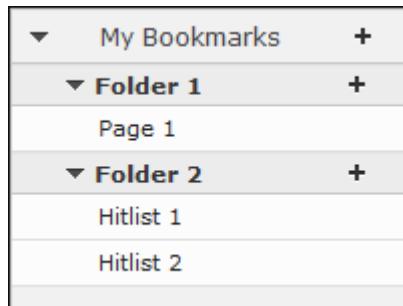


Figure 710 Folders and bookmarks listed in the Presentation component

The viewer can reorganize his/her folders and bookmarks, change names, duplicate, export folders and delete pages. The folders of bookmarks can be exported to Excel, PowerPoint or PDF.

To make the My Bookmarks functionality available to the report viewers, drag the **Viewer Presentation** component from the **Visual Components** toolbox and drop it into a suitable location in the Report Master.

## 26.1. How to Create a New Bookmark Folder

**Note: These instructions are for the report viewer.**

Report viewers can create any number of bookmark folders into which they can save specific report pages, including all dynamic functionality, for easy access later. Viewers can create bookmark folders at any time.

1. Click in the My Bookmarks component.
2. Click the **Add Folder** (+) button.

An input field opens as shown below.

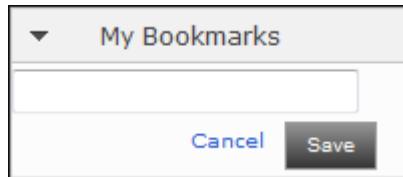


Figure 711 The New Folder dialog

3. Type a name for the new bookmark folder into the field.

This will be the text listed in the "My Bookmarks" drop-down.

4. On completion, click **Save**.

The new bookmark folder is added to the drop-down list in the My Bookmarks control. The viewer can now add report pages to the folder.

## 26.2. How to Add Bookmarks to a Folder

**Note: These instructions are for the report viewer.**

To add a bookmarked page (including all dynamic functionality) to a folder:

When you have the report page that you wish to save open on your display:

1. In the My Bookmarks control, click the arrow on the left to open a drop-down list of the bookmark folders available
2. In the appropriate folder, click the **Add Page** button.

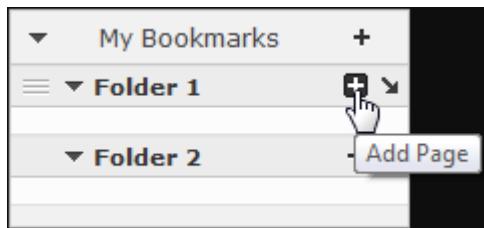


Figure 712 Adding a report page to a bookmark folder - 1

The dialog shown below opens, with the name of the selected report page listed.

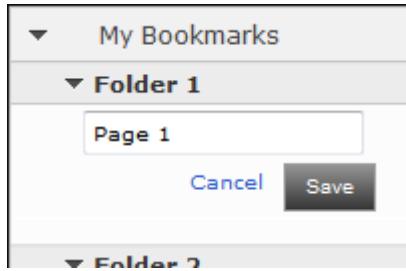


Figure 713 Adding a report page to a bookmark folder - 2

3. If you wish to use a different name for the report page, type the required name into the field.
4. Click **Save**.

The page is listed in the My Bookmarks control, under the selected folder. Later you can go to the folder and select the page, which will open as you have saved it complete with all settings and dynamic functionality.

### 26.3. How to Organize your Bookmarks

**Note:** These instructions are for the report viewer.

The folders and bookmarks are initially listed in the bookmarks control in the order in which they were added to the list, with the newest at the top. Once you have several folders or bookmarks listed, you can organize them and edit them as you wish.

1. To reorganize the folders and/or the bookmarks, move the mouse cursor over the bars towards the left side of the appropriate folder or bookmark, then when the cross-pointer appears click and drag the folder/bookmark to the desired place.



Figure 714 Organizing the folders and bookmarks

Or, move the cursor onto the appropriate folder or bookmark - an arrow button appears towards the right side of the item. Left-click on the arrow button to open the menu, then select **Move up** or **Move down** as appropriate.

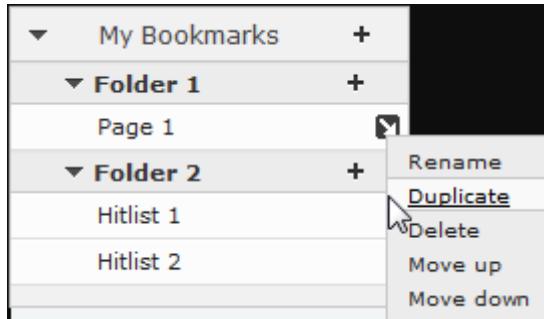


Figure 715 The editing menu for a bookmark

Using the items in this menu you can also rename the folders and bookmarks, duplicate them and delete them.

**Note:** A folder has an additional item in the menu - Export. This allows you to export the pages in the selected folder (see How to Export a Bookmark Folder on page 591 for more information).

## 26.4. How to Export a Bookmark Folder

**Note:** These instructions are for the report viewer.

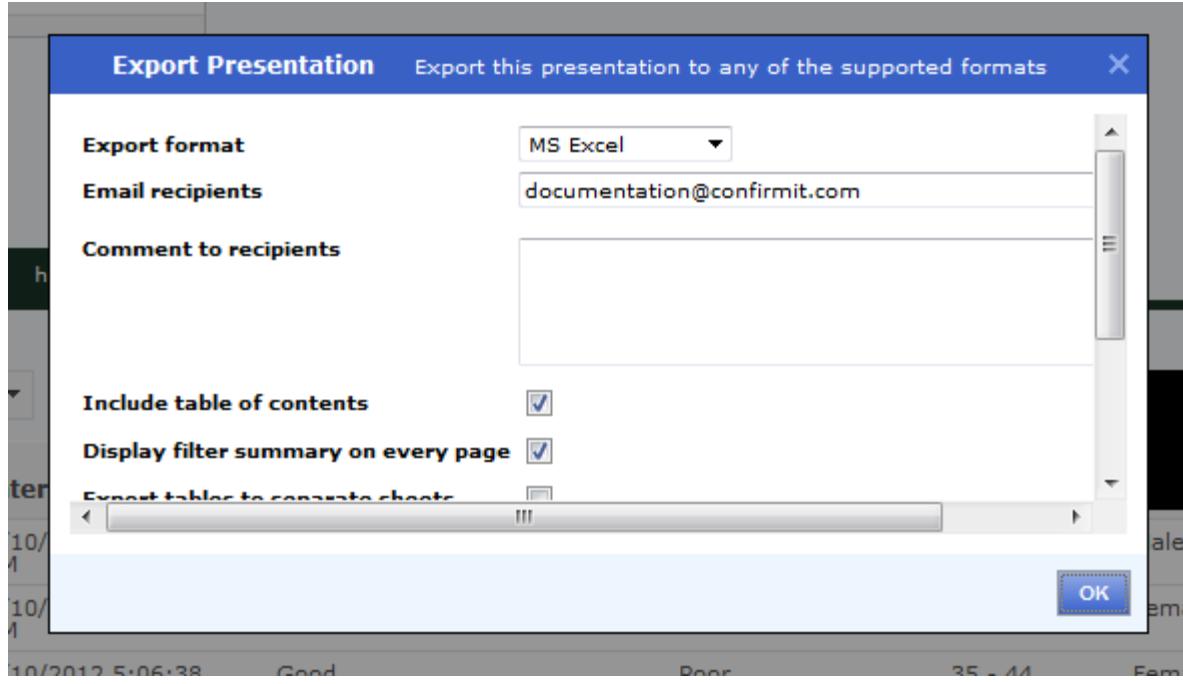
Once a viewer has added report page bookmarks to a bookmark folder, if the report creator has given permission (see The Viewer Presentation Component on page 701 for more information) then the viewer can export the folder. Note that to be exported, the folder must contain at least one page.

1. In the My Bookmarks control, select the folder you wish to export.
2. Click the arrow button to open the menu, then select **Export**.

Note that this button will not be available if the report creator has unchecked the **Show Export Button** box for the Viewer Presentation component (see The Viewer Presentation Component on page 701 for more information).

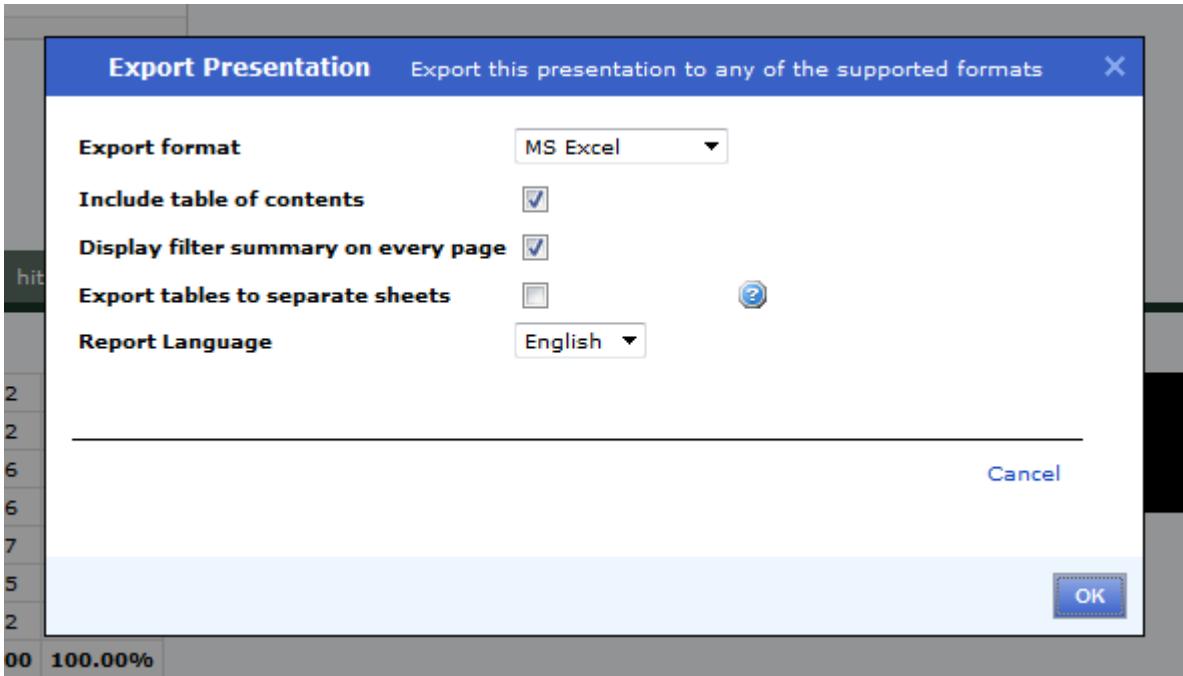
The Export Presentation overlay opens. Note that if your company has licensed the FTP add-on, then Download will be available as an option in Report Properties (see The Report Properties > Export Settings Tab on page 113 for more information). The layout of the Export Presentation overlay will then depend on the export delivery method selected in the Report Properties.

- If Email is specified, the dialog will be as shown below.



**Figure 716** The Export Presentation dialog when Email is specified

- If Download is specified, then the dialog will be as shown below.



**Figure 717** The Export Presentation dialog when Download is specified

- If User Defined is specified, then a Delivery Method item will be available in the overlay, and the user can select which method he/she wishes to use from a drop-down list.

2. Select the format that you wish to export to and make any further selections as necessary.

**Note:** When exporting a presentation the "Display filter summary on every page" box cannot be deselected as the recipient will need the filter summary information to interpret the data in the presentation (see Exporting a Report on page 594 for more information).

3. Select whether you wish to export immediately or schedule for later.
4. On completion, click **OK**.

The Export Presentation task commences. If Email is specified, the selected presentation is zipped, attached to an email, and sent to the specified email address. If Download is specified, the selected presentation is zipped and saved to the FTP site.

**Note:** If the Save dialog does not appear, then you need to make a setting in your Internet browser as follows: Go to Tools > Internet Options > Trusted Sites and click the Custom Level button. In the Security Settings - Trusted Sites Zone window, Browse down to the Downloads settings (about 1/3 of the way down the list) and set "Automatic prompting for file downloads" to "Enable". Click OK and OK to save the change.

## 27. Exports

This chapter describes the functionality available to you when you wish to export your reports to a different format, for example MS PowerPoint.

### 27.1. Exporting a Report

**Note:** The Report Export functionality is a Reportal add-on and is subject to payment. Also, some functionality is available only to those with particular permissions.

**Important**

Microsoft™ will not support Office 2003™ after 8th April 2014. As from Confirmit version 18 it will therefore no longer be possible to produce exports in Office 2003™ format. Go to Report Properties > Export Settings and ensure the export format is set to Office 2007™ or above.

Reportal Designers can export Reportal reports to MS Excel, MS PowerPoint and Adobe PDF. The report that is to be exported is zipped, attached to an email, and sent to the recipients whose addresses are listed in the Email Recipients field.

1. Go to the **Report > Export > Export Report** menu command to open the General export format options page.

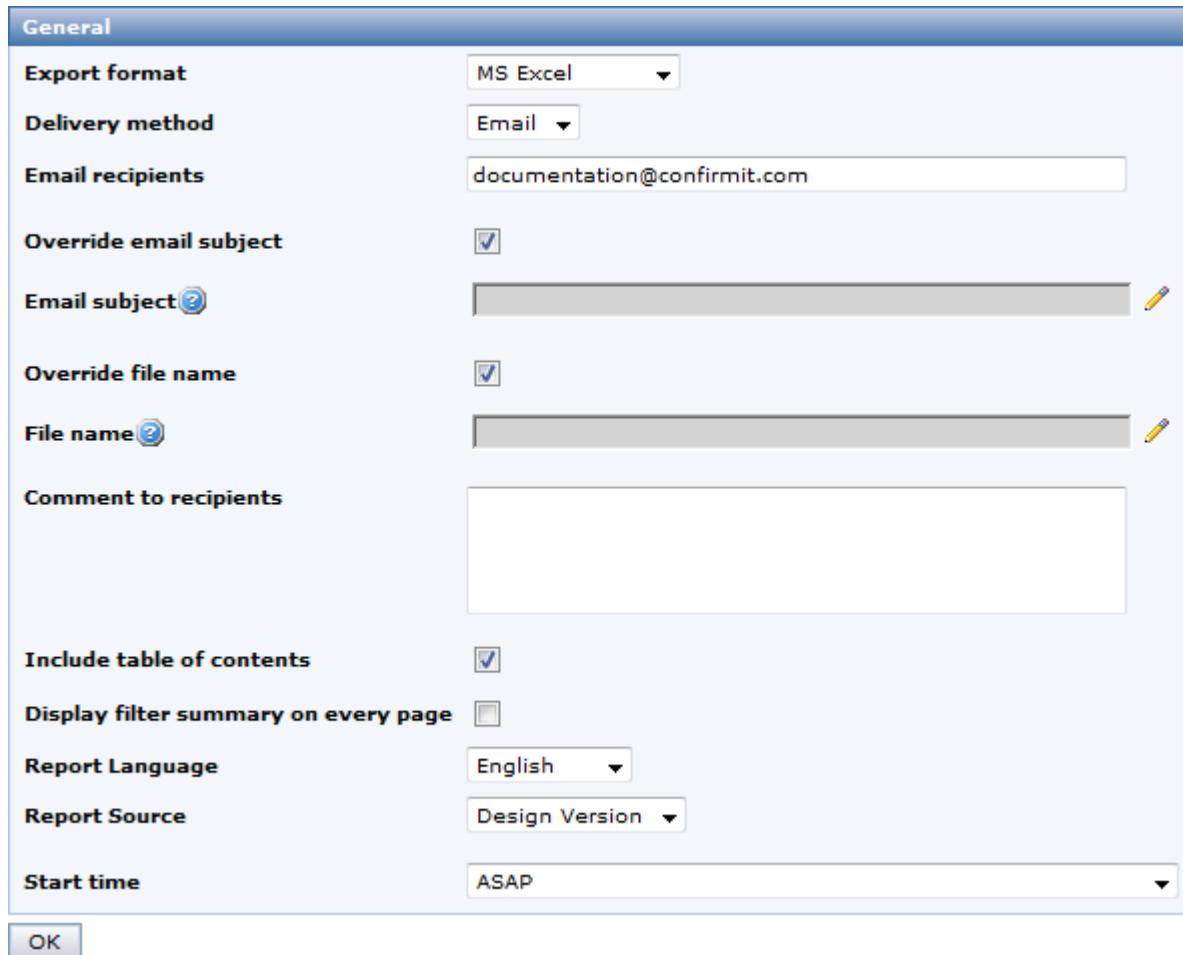


Figure 718 Choosing the Export Format

2. In "Export format", choose between MS Excel, MS PowerPoint and PDF.

**Note:** The remaining fields and options in the General page change depending on your selection. Also, if the report is personalized, the Send to End Users option becomes available.

If you select a PDF export: Choose the page orientation (Landscape or Portrait) and the paper size (A3, A4, A5, B4, B5, Legal, Letter or Tabloid). Note that both 32-bit and 64-bit operating systems are supported for PDF export.

If you select MS PowerPoint: Go to the **Report > Properties > Report Properties** menu command to open the report's Properties page, and select the PPT template that is to be used in PPT exports. PPT templates that are uploaded into Confirmit via **Home > PowerPoint Templates > ...** will be available in the report properties.

3. Type the email addresses of the people who are to receive the report into the Email Recipients field. The current user (you) is the default recipient. Note that if you wish to add multiple email addresses to the field, use a comma (,) or a semi-colon (;) as the separator;
4. If the Override email subject box is checked, you may specify your own email subject. This can be a combination of text and system defined parameters which will substitute information based on the export task context. Toggle the "write/view" icon to write into the field and view the result (see The Report Properties > Export Settings Tab on page 113 for more information).
5. If the Override file name box is checked, you may specify your own file name for the export. This can be a combination of text and system defined parameters which will substitute information based on the export task context. Toggle the "write/view" icon to write into the field and view the result (see The Report Properties > Export Settings Tab on page 113 for more information).
6. Type any comments into the Comments field. This text will appear in the body of the email.
7. Check the "Display filter summary on every page" box if required.

**Note:** When performing an Excel export, check the "Display filter summary on every page" box if you wish to include the filter summary with the export. The box is checked by default for PPT exports, and in this case the filter summary will be presented in the format specified by the PPT template selected for the report (see above).

8. If the project is multilingual, choose the export language from the **Language** drop-down.
9. In the event you have made changes to the report but have not yet published them, in **Report Source** choose whether you wish to export the last published version of the report or the design version.
10. If you have the Professional User permission, you can select whether you want to run the task as soon as possible or schedule it to run at a later time. If running later, you can also make it a recurring task.

**Note:** If you are a Professional user and your company has licensed the FTP and PGP Encryption add-ons, you will also have the ability to export to FTP and perform encryption.

11. When you are ready, click **OK**.

The Task window opens, the export task is given a Task ID and is added to Confirmit batch tasks. The task will be performed as soon as possible, and while it is running the status will be displayed in the Task window.

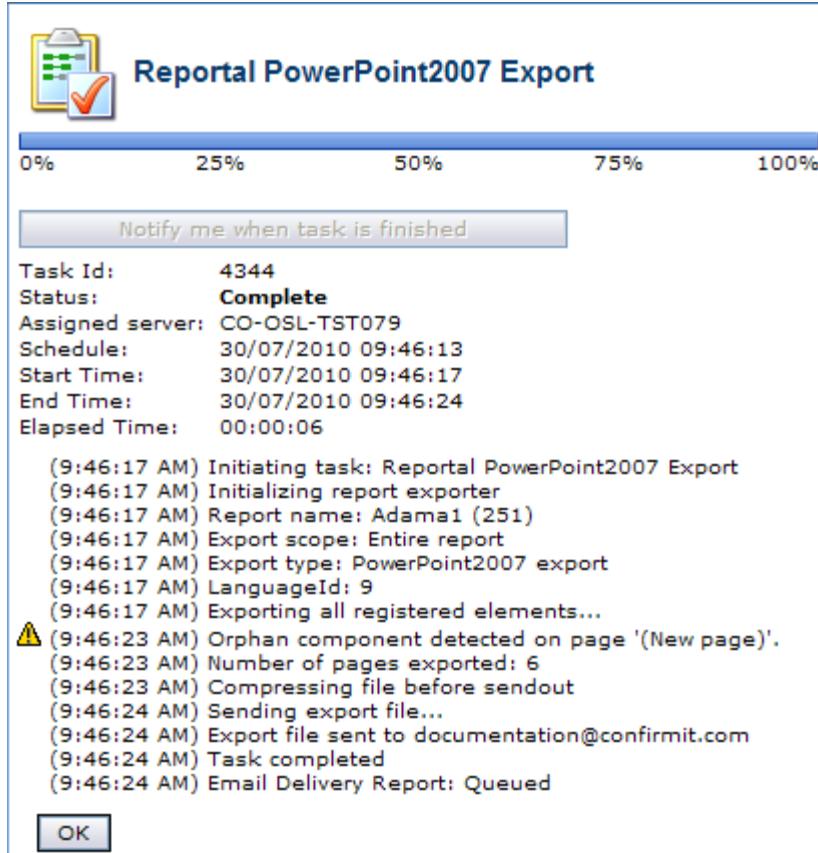


Figure 719 The task is in the queue

On completion of the task, an email is sent to the specified email address(es) with the report attached.

**Note:** If you close the task window before the task is completed, to view the status open Confirmit Authoring and go to the Home > Tasks menu command. Here you can search for the batch task using the specified Task ID or any of the other criteria.

### 27.1.1. MS PowerPoint Slide Layout Settings

You can define the layout of the MS PowerPoint slides on each Report page, and in Layout Masters.

1. Open the Report page's Properties page by right-clicking on the report page and choosing **Properties** from the menu.

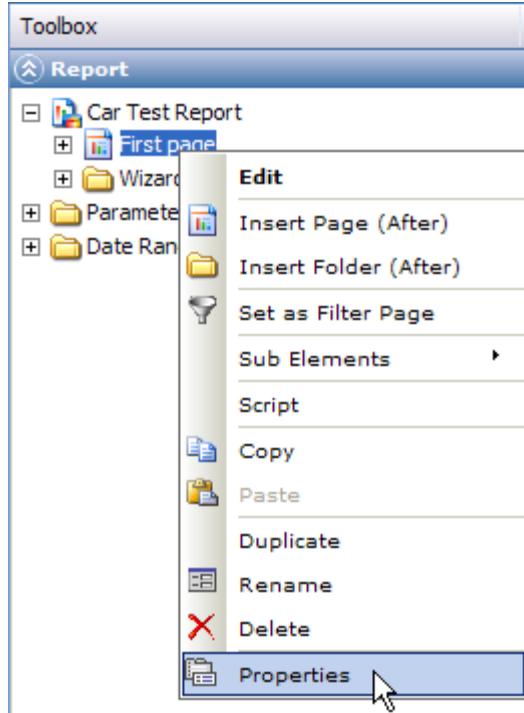


Figure 720 Report page properties

The property sheet opens.

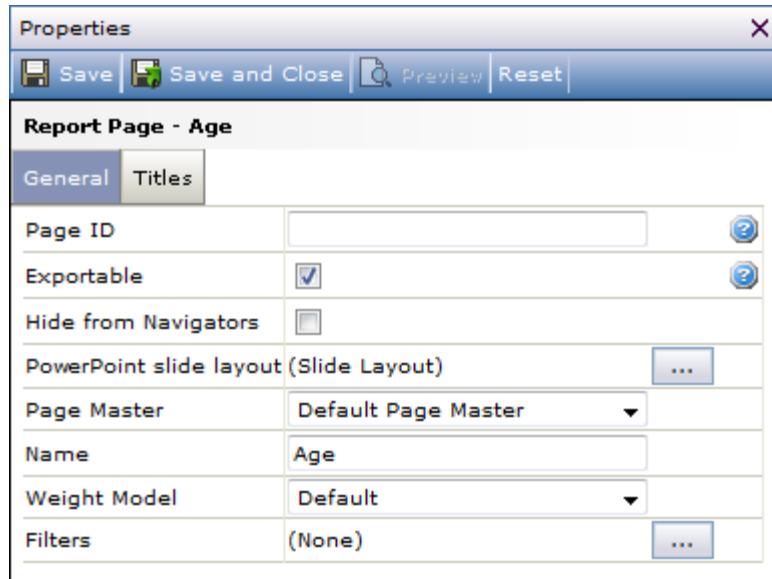
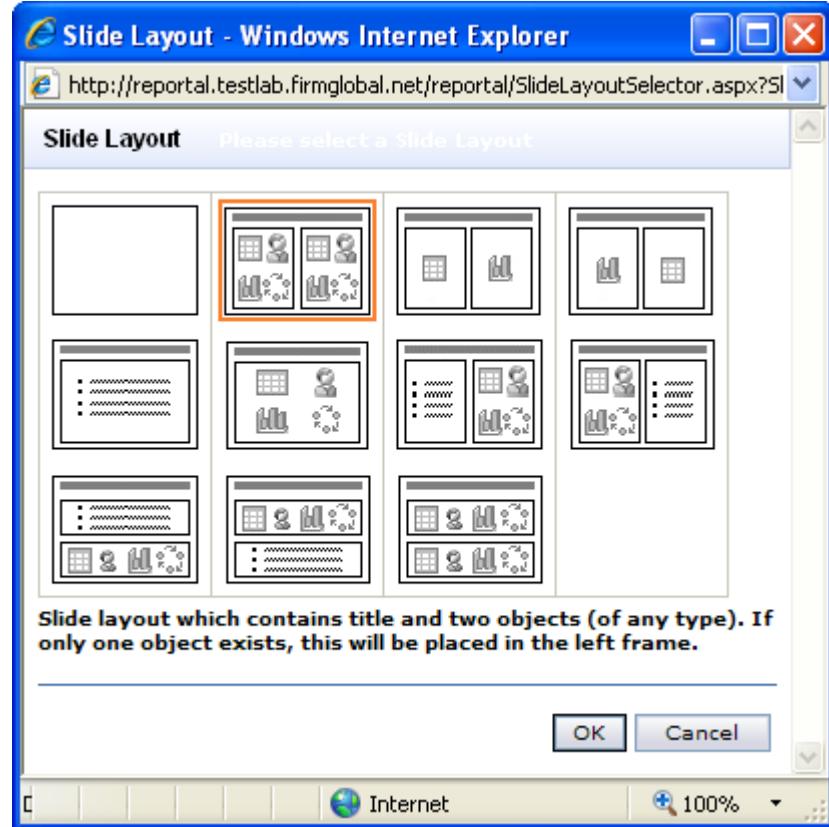


Figure 721 Example of a Report page property sheet

2. Click on the ellipses button next to "PowerPoint slide layout" to open a pop-up window with available layouts.

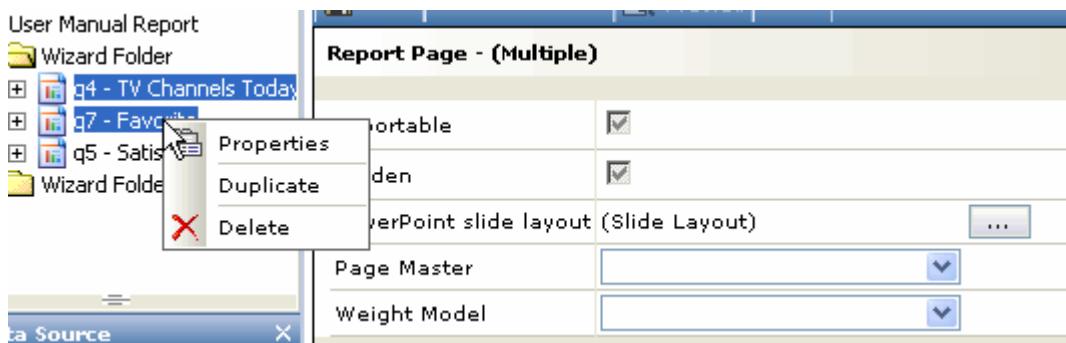


*Figure 722 Selecting the slide layout*

Point at a layout to display a short explanation of it at the bottom of the window.

3. To choose a layout, click on it to select it and click on the **OK** button.
4. In the Report page property sheet click the **Save** or **Save and close** button.

You can also select multiple objects for editing. Highlight the pages you want to edit, right-click and choose **Properties**. The Report Page property sheet for multiple objects opens.



*Figure 723 Editing multiple objects*

**Note:** This property sheet includes only properties that are not page-specific.

### 27.1.2. Selecting the PowerPoint Template

On the Report level, by going to the **Report > Properties > Report Properties** menu command, **Export Settings** tab, you can choose among the MS PowerPoint templates that you have available. You can upload additional templates (see How to Upload a PowerPoint Template on page 599 for more information).

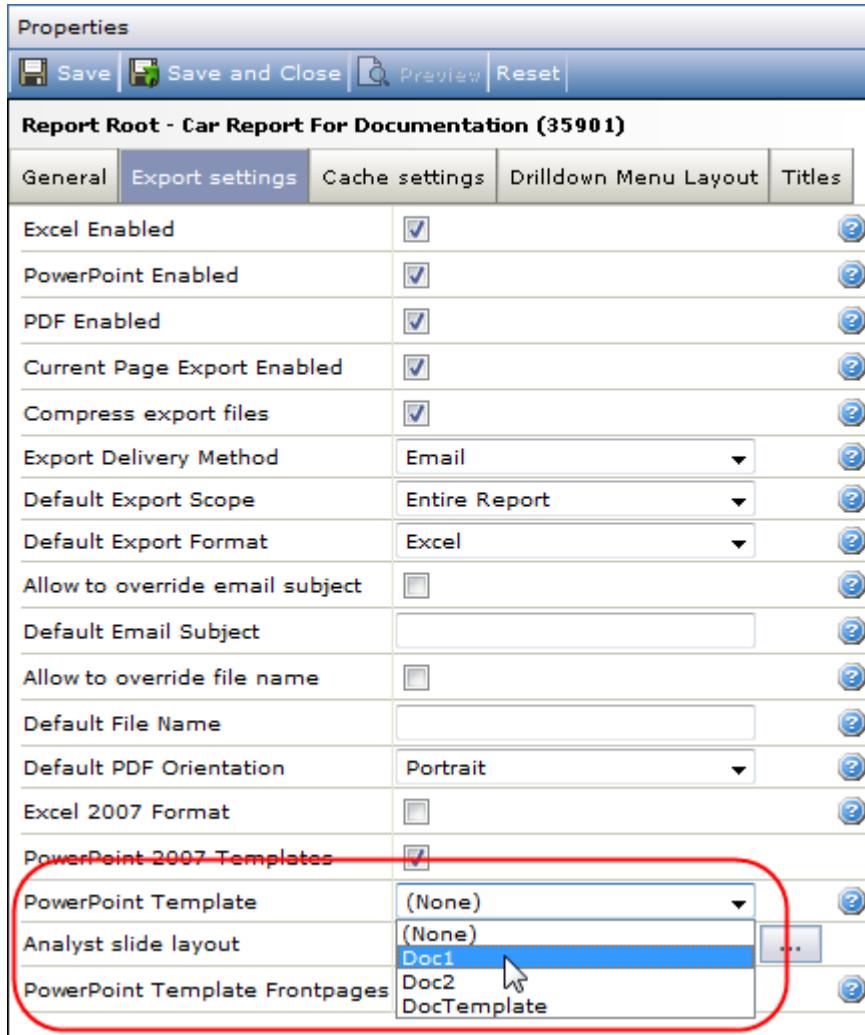


Figure 724 Choosing the PPT template

The exported slides will then have the selected design. If no template is selected, the default Confirmit template will be used.

**Note:** Access additional properties by expanding the various property groups such as Cache Settings and Drilldown Menu Layout.

### 27.1.3. How to Upload a PowerPoint Template

If you have a PowerPoint template that you wish to use when exporting a report, you can upload the template to Reportal.

**Note:** This procedure is for PowerPoint 2007 templates.

1. Log on to Reportal.

2. Go to the **Home > PowerPoint Templates > PowerPoint 2007** menu command.

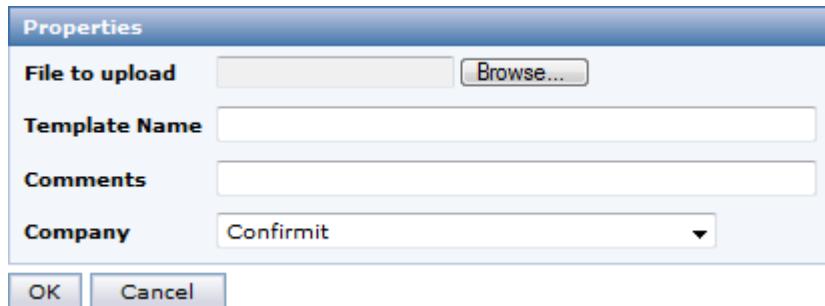
The PowerPoint Templates list opens, listing all the PowerPoint templates to which you have access.

Template Name	Created By	Comments	Created Date	Company Name
DocTemplate	Apple, Adam		19.10.2011 08:54:01	User Guide Company
Doc2	Apple, Adam		19.10.2011 08:53:26	User Guide Company
Doc1	Apple, Adam		19.10.2011 08:52:57	User Guide Company

**Figure 725 Example of a PowerPoint Templates list**

3. Click the **New Template** button located towards the upper-right corner of the list.

The PowerPoint Presentation Properties dialog opens.



**Figure 726 The PowerPoint Presentation Properties dialog**

4. Click **Browse** to open a standard Windows file selection dialog, then browse to and select the template you wish to upload.
5. Type the desired name for the template into the Template Name field, and add comments as necessary.
6. The Company field displays the name of the company to which the template will be uploaded; default is the company you are registered with. If required (and if you have access), you can upload the template to a different company - select the required company from the list.
7. Click **OK**.

The selected template is uploaded and added to the list. This template can now be selected in the **Report Properties > Export Settings** tab (see Selecting the PowerPoint Template on page 599 for more information), and used when exporting the report.

#### 27.1.4. Excluding Content from PDF Exports

There might be content in the online report that you do not want to be included in the PDF exports, such as logos, menus, headers and footers etc. All navigators and the **Admin** menu are automatically excluded from the exports, but if there is additional content you would like to exclude, you can add the following HTML code to the bottom of the Report Master (edit it in HTML mode):

```
<STYLE media=print>
.noprint{display:none;}
</STYLE>
```

If this is included in the report master, elements that you do not want included in the PDF exports can be wrapped inside a div, for example:

```
<div class=noprint>
Content that will not be included in PDF exports.
</div>
```

Such divs can be wrapped around elements in the report master, page master and pages.

**Note: Images using standard links will not be displayed when they are exported to PDF. Instead, a small red X will be displayed in their place. You must use the full URL to an image if it is to be displayed correctly after export. This is due to a limitation in PDF, not Confirmit.**

## 27.2. Export Packages

Exporting a report that includes parameters to PPT, Excel, or PDF can potentially result in a huge number of pages (see below). The Export Package functionality is therefore included to enable you to define the content (the pages and parameter settings) that is to be included in exports.

**Note: You must use export packages for reports that include parameters. For reports without parameters, export packages can be used though they are not obligatory.**

You can define several export packages for a report, thereby giving the viewers a range of standard exports to choose from when exporting.

**Note: If you nest parameters, you can potentially generate a very large number of report pages. For example, if two nested parameters p1 and p2 have 100 questions and 25 questions respectively, then 2500 versions of the page will be created. An export unit will be counted (and on the SaaS Environment, charged for) for every 100 pages included in an export file (1-100 pages = 1 export charge, 101-200 pages = 2 export charges etc.).**

### 27.2.1. How to Create an Export Package

Export packages are stored in the My Export Packages folder located towards the bottom of the Report toolbox. To add a new export package:

1. In the Report toolbox, right-click on the My Export Packages icon and select **New Export Package** (the only option).

A new export package is created in the folder.

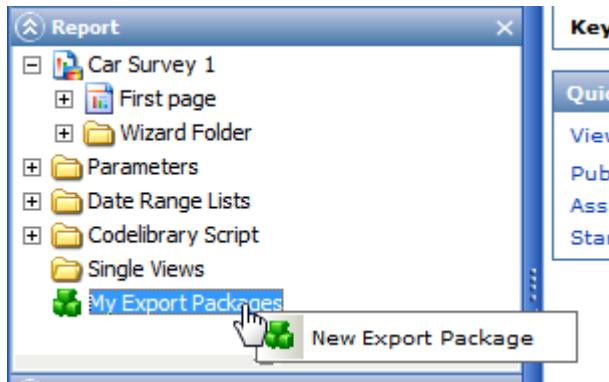


Figure 727 Creating a new Export Package

2. Right-click on the new item and select **Rename**, then type in the desired name for the new package.
3. Double-click on the new package to open the Add Page to Package page.

The report is displayed as the viewers will see it, with the page navigation menus, trees or drop-downs that can be included on the report page depending on how you have set the report up. You can navigate to particular pages, apply filters etc.

- Browse to the pages you wish to add to the package and for each page click the **Add Page to Package** button at the top of the screen (see the figure below) to add the page to the export package.

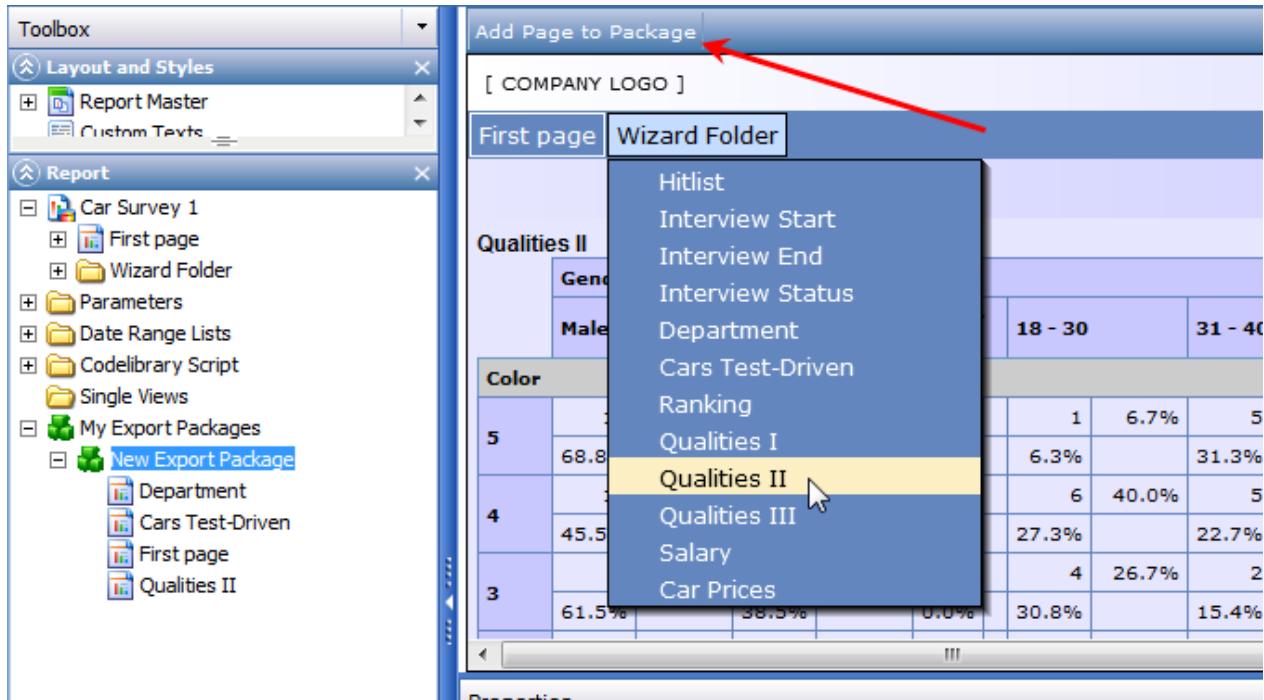


Figure 728 Adding a page to an Export Package

**Note:** You can also use standard Windows selection techniques (Ctrl and Shift) to select several pages from the report, then use drag-and-drop to add the selected pages to the package. Pages added in this way will take the default state.

Use drag-and-drop techniques to reorganize the pages inside the export package. You can also rename the pages as required.

### 27.2.2. Reports with Parameters

For reports with fixed value parameters (where a list of questions is specified) you can also iterate through those questions, building pages for each question in the list. To do this:

- Create the Export Package (see How to Create an Export Package on page 601 for more information).
- Double-click on the Export Package to open the Add Page page, then browse to the page you wish to add to the package.
- Click the **Add Page to Package** button to add the page to the package.  
Note that any parameter value can be selected, this is immaterial.
- Drag the parameter itself from the Parameters folder in the Report toolbox to the export package.  
The iterator will then appear as a folder in the export package.
- Drag the page in the package such that it is located under the parameter.

The page will now be exported once for each value of the parameter; the export will iterate through the parameter for each page under the parameter.

If you have several parameters on a page, you can nest the parameters inside each other to iterate through all possible combinations of the iterators. However, see the Note below.

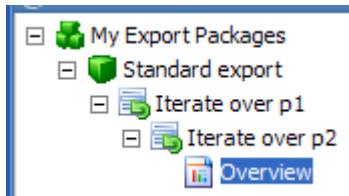


Figure 729 The Overview page will be iterated through the values of the two parameters on that page

**Note:** If you nest parameters, you can potentially generate a very large number of report pages. For example, if the parameter p1 has 100 questions and p2 has 25 questions, then 2500 versions of the overview page will be created. An export unit will be counted (and on the SaaS Environment, charged for) for every 100 pages included in an export file (1-100 pages = 1 export charge, 101-200 pages = 2 export charges etc.).

**Important**

Confirmit has tested this functionality to work with a large number of elements, and no physical limit is specifically implemented into the software. However, complex tables based on large data sets will take a long time to process, and some thresholds may be encountered in rare cases. In such a case, Confirmit will request that the report is reduced in size so that its generation will not cause performance degradation issues on the server environment.

### 27.2.3. Overriding the User State

The Override User State feature allows you to set specific filters on selected Export Package pages, and instruct the pages to ignore any other filters set by the viewer. You can select which individual elements of the user state are to be preserved in the Export package (for example report base, parameter selections only etc.), or you can override all user state settings. You can also select several pages from the package and set the Override User State for all simultaneously.

**Note:** When the Override User State setting is applied to a page, a viewer will not be able to change the filter settings for that page. I.e. If the page already has filters set on it when it is added to the Export Package then the viewer will not be able to change those filter settings, and if the page has no filter set then the viewer will not be able to apply a filter to the page.

1. In the Export Package, select the pages you wish to work with, right-click on the page(s) and select **Properties** from the menu.
2. Expand the **Override User State** list and check the boxes for the elements you wish to override.
3. Save the changes.

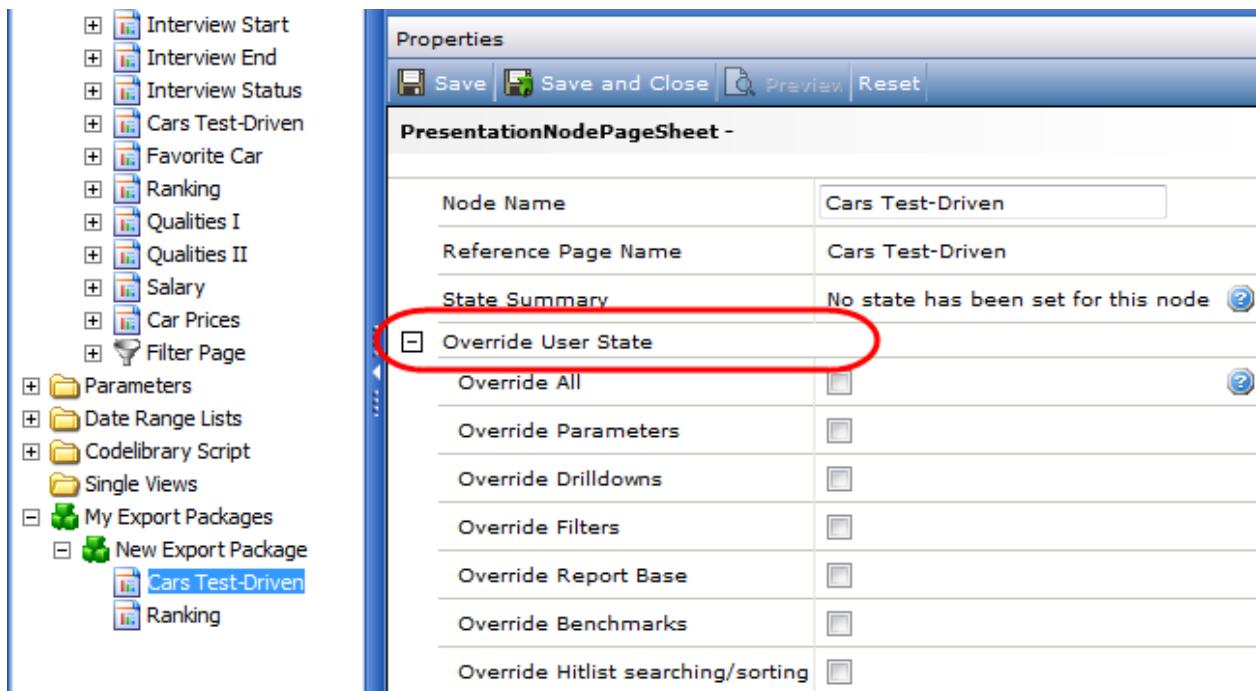


Figure 730 The Override User State checkboxes

Now when a viewer views the export report, he/she can only view the page with the specified filters, irrespective of which other filters the viewer attempts to apply.

The other properties on this page are as follows:

- **Node Name** - the name of the node within the export package.
- **Reference Page Name** - the page in the data source to which the export package node refers.
- **State Summary** - a summary of the dynamic state (custom filter, drilldown-level, report base, etc.) this node held at the time it was added to the export package.

### 27.3. The PowerPoint Add-in

PowerPoint 2007 and the Reportal PowerPoint add-in enable you to create customized PowerPoint layouts to be used when exporting Reportal reports to PowerPoint presentations. The main benefit of this feature is that now users can create and use their own highly customized presentation layouts instead of choosing standard presentation layout variants when exporting reports to old pre-2007 PowerPoint format. The add-in links the Reportal report to the PowerPoint presentation, allowing you to update the data in the presentation in the event the survey data changes (for example additional data becomes available).

The PowerPoint add-in functionality can only be used by Reportal users and Analysts. It is not available to Report viewers.

**Note:** For SaaS customers, the PowerPoint add-in functionality is included in the license. For On-Premise customers, the functionality is a Reportal add-in and is subject to payment.

**Note:** The add-in must be downloaded and installed on each individual computer used by the Reportal users who will be working with the functionality.

**Note:** The Reportal PowerPoint add-in requires Microsoft PowerPoint 2007 (Service Pack 2) installed on your computer. If you do not have Microsoft PowerPoint 2007 (Service Pack 2) installed, a viewer application can be downloaded from Microsoft.

The Reportal PowerPoint enables users to design PowerPoint presentations using Reportal objects. The add-in links the PowerPoint objects to Reportal objects, and populates the PPT objects with data from the linked Reportal objects. The following Reportal objects are supported:

- Tables (by default as native PowerPoint tables).
- Active Filter Summary.
- Page titles.
- Questionnaire Texts.
- Text.
- Specific table content (specific cells, rows, columns or headers).
- Gauges.
- Charts (as images or native PowerPoint charts).
- Images.

The add-in also enables you to upload previously-created PPT presentations to the Reportal servers, and to run batch export tasks.

**Note:** If a report containing uploaded PowerPoint 2007 presentations is duplicated, the presentations will also be duplicated. All references to Reportal objects (such as pages or tables) in each presentation are updated to refer to appropriate objects of the new report.

### 27.3.1. How to Install the Reportal PowerPoint Add-in

**Note:** Before installing the Reportal PowerPoint add-in, ensure that you have Microsoft PowerPoint 2007 (Service Pack 2) installed on your computer. If you do not have Microsoft PowerPoint 2007 (Service Pack 2) installed, a viewer application can be downloaded from Microsoft.

1. Go to the **Home > PowerPoint Templates > Download PPT Add-in** menu command.
2. Run the executable file provided.

The installation dialog window opens.

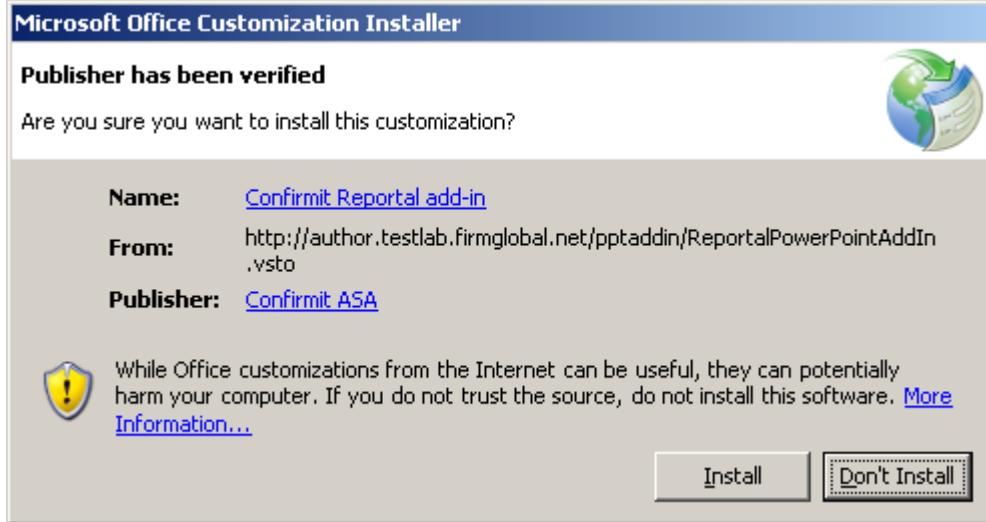


Figure 731 The installer window

2. Click **Install**.

The installation proceeds.

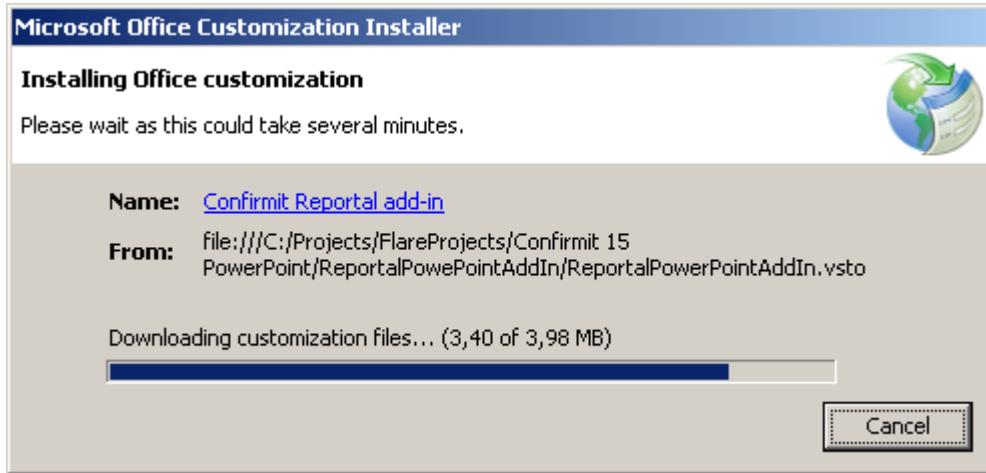


Figure 732 The installer window step 2

When the installation is complete, the dialog changes to that shown below.

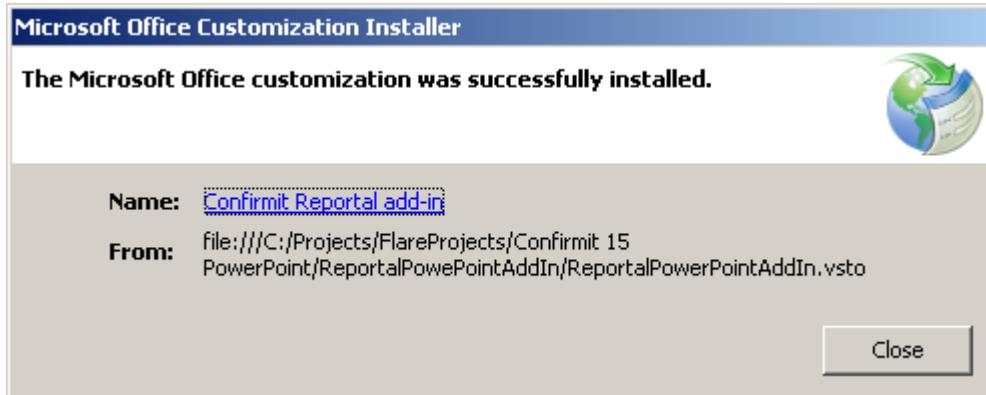


Figure 733 The Installation Completed window

3. Click **Close**.

The add-in is installed, and the necessary tools will be available in the PowerPoint application. You now need to configure the server and proxy settings (see Configuring the PowerPoint Add-in on page 606 for more information).

### 27.3.2. Configuring the PowerPoint Add-in

After you have installed Reportal PowerPoint add-in you must configure it. Note that the configuration settings are saved and remembered, so you will only need to repeat this procedure if the server or proxy settings need to be changed.

1. Run Microsoft PowerPoint 2007.
2. Go to the **Reportal** tab.

The Reportal add-in ribbon opens.

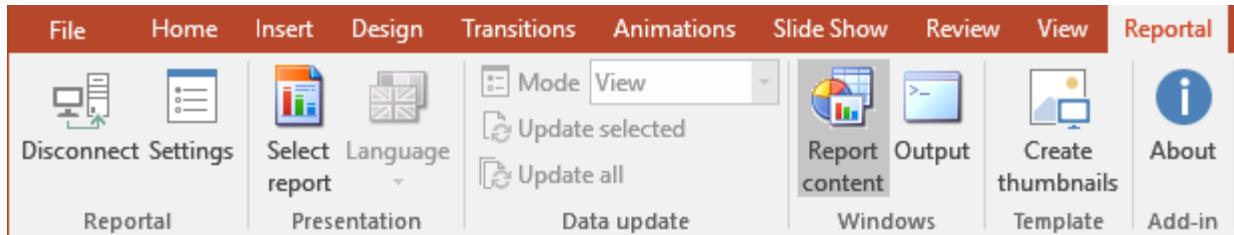


Figure 734 The Report add-in ribbon

3. Click **Settings**.

The Reportal PowerPoint add-in properties window opens.

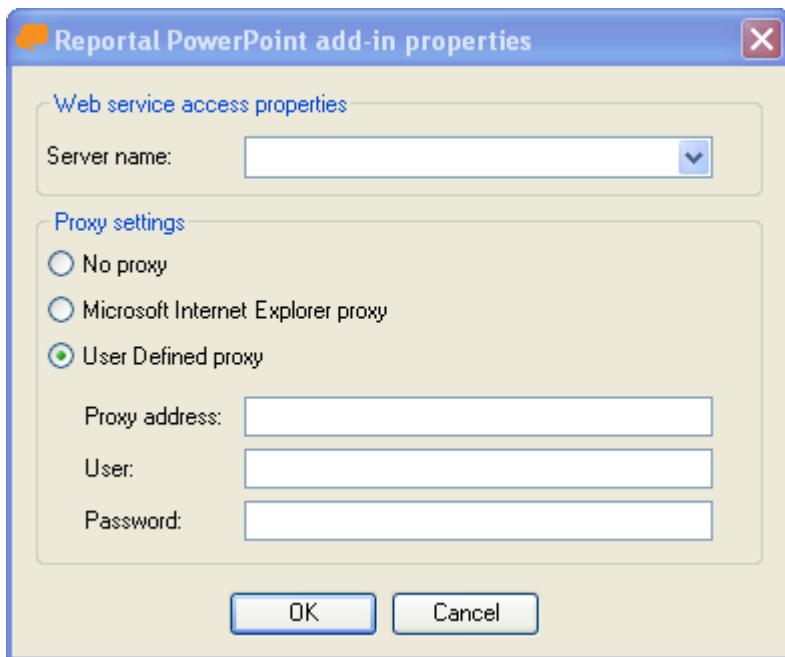


Figure 735 The Properties window

4. In the Server name combo-box, type the URL of the server you are using to create your Reportal reports, or select it from the drop-down list by clicking on the down-arrow.
5. Choose the proxy settings in the Proxy settings group.
  - o **No proxy**– no proxy will be used.
  - o **Microsoft Internet Explorer**– default Internet Explorer proxy settings will be used.
  - o **User Defined proxy**– when this option is selected, enter the proxy server URL, the user name and password in the corresponding fields.
6. When you have made the appropriate settings, click **OK** to save them and close the window.

You are now ready to commence using the PowerPoint add-on with Reportal.

### 27.3.3. Using the PowerPoint Add-in

With the old Reportal PowerPoint export functionality, once you had selected a PowerPoint template from the list of those available to you, you had to use it as it was. The new PowerPoint add-in enables you to create new layouts and edit them as required. And once you have exported a report to PowerPoint, you can continue to make changes, and also update the data presented in the slides. The add-in provides an easy means for creating and managing report-based presentations. The basic procedure is as follows:

In Reportal -

1. Create your report.

In PowerPoint -

2. Create your template (refer to the PowerPoint user documentation for details).
3. Create thumbnails of the slide layouts (see Creating Thumbnails on page 610 for more information).

In Reportal -

4. Load the template into Reportal.
5. Open your report and link the template to the report.
6. Select a default slide to be used by analysts, as necessary.
7. Select which slide layout is to be used for each page in the report.
8. Build your export package(s) (see Export Packages on page 601 for more information).
9. Export the report to PowerPoint (see Exporting a Report on page 594 for more information).

In PowerPoint -

10. Open the exported report.

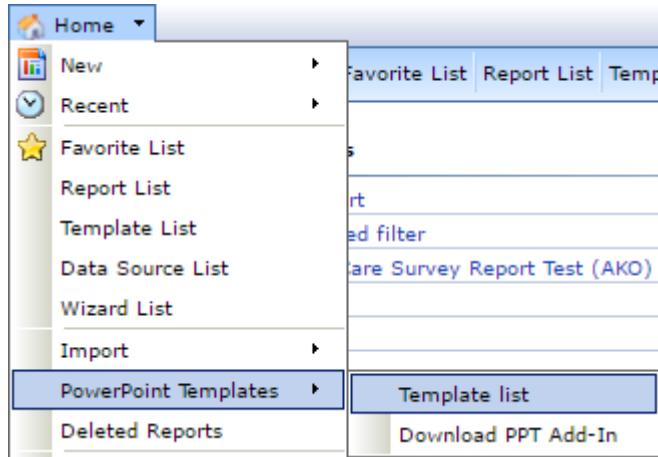
You can now change the report page layouts in PowerPoint, and build presentations as required. You can then go back to Reportal and export the presentations, including all annotations, formatting and other changes, to for example the appropriate levels in a hierarchical base .

**Note:** If a Reportal report page has more items on it than there are placeholders available in the PowerPoint template, then the export will create enough PowerPoint slides to ensure all the items on the report page are exported. For example, if a report page includes six items and the template only has two placeholders, then the export will create three slides for that page.

### 27.3.4. How to Create a New Presentation

To create a new presentation, proceed as follows:

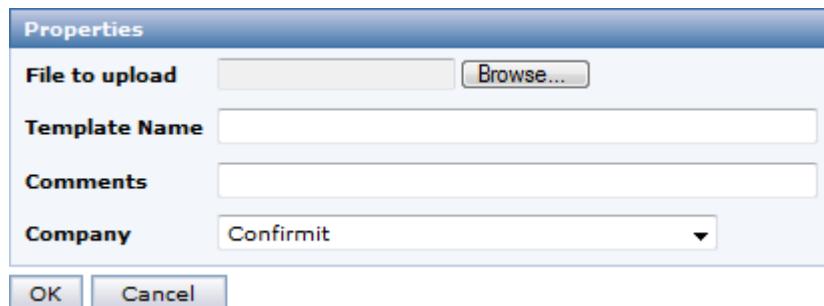
1. Using the PowerPoint add-in, create a layout to be used as a template (don't forget to create thumbnails), and save the layout as a PowerPoint template (see Using the PowerPoint Add-in on page 608 for more information).
2. In Reportal, go to the **Home > PowerPoint Templates > Template List** menu command.
3. The PowerPoint Templates list opens.



**Figure 736 Example of the PowerPoint Templates list page**

4. In the upper-right corner of the window, click **New Template**.

The PowerPoint Presentation Properties dialog opens.

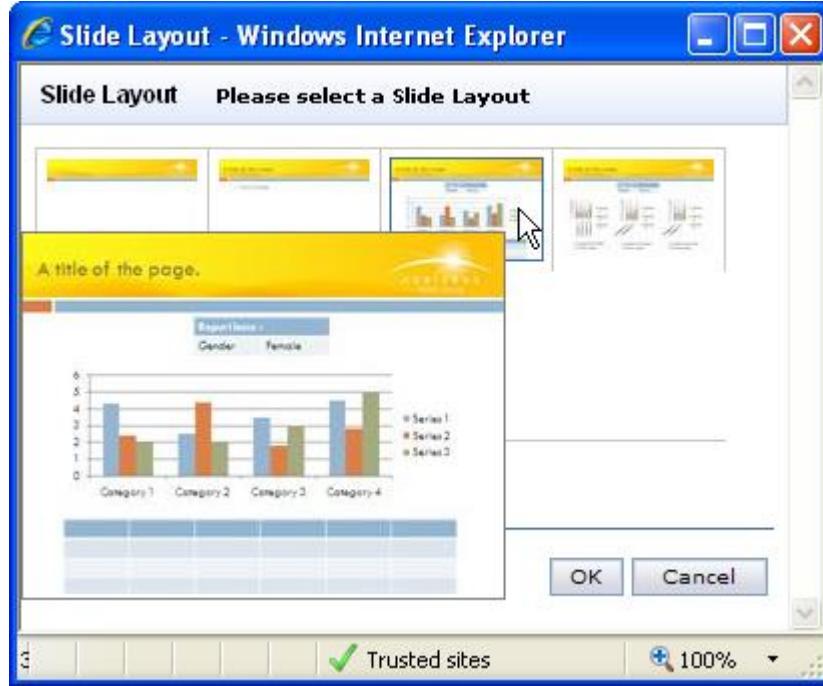


**Figure 737 The PowerPoint Presentation Properties dialog**

5. Click **Browse** to open a file selection window, then find and select the PowerPoint template you created in point 1 of the procedure above.
6. Type in a suitable file name, and a comment as necessary, then click **OK**.
7. The new template is uploaded into Reportal and added to the template list.
8. Open the report you wish to work with and go to the **Report > Properties > Report Properties** menu command to open the report's Properties sheet.
9. On the Export Settings tab, click the down-arrow beside the PowerPoint Template field to open a list of the templates available.
10. Find and select the template you wish to use.

**Note:** A message box will appear telling you that you must assign slide layouts to report pages. Click OK to close the message box.

11. If required, click the ... button beside the Analyst Slide Layout field to open the Slide Layout Selection Window.



**Figure 738 Example of the Slide Layout Selection window showing thumbnails of the slides available**

**Note:** Thumbnails will only be displayed if you have created them for the template (see Creating Thumbnails on page 610 for more information).

12. Select a slide layout to be used as default for the Analysts, then click **OK**.
13. Click **Save and Close** to save the changes and close the Properties pane.
14. For each page in the report; open its Properties page, click the PowerPoint Slide Layout button to open the Slide Layout selection window (see above), select the slide layout you wish to use for that page and click **OK**, then click **Save and Close** for the Properties page to save the changes.

**Note:** If you wish to use the same slide layout for several pages, you can select multiple pages in the Report toolbox using standard Windows techniques, then right-click on the selection and choose Properties. If you wish to use the same slide layout for all the report pages in a folder, right-click on the folder and select Sub-Elements > Pages. In both cases this will open a combined Properties sheet for all the selected pages, in which you can specify the slide layout to be used.

15. You can now export the report to MS PowerPoint (see Exporting a Report on page 594 for more information).

### 27.3.5. Creating Thumbnails

You can create thumbnail images of the slides you have in the template. Once you have done this, when the template is uploaded to Reportal and selected as the layout template for a report, when you are specifying which slide layouts are to be used for which page (see How to Create a New Presentation on page 608 for more information), the thumbnail images will be displayed in the selection window. This will simplify the layout selection process.

**Note:** If you do not create thumbnails for the template, the "image" in the selection window will show only a red X. You will then need to base your slide layout selections on the slides' text descriptions.

To create thumbnails:

1. In PowerPoint, go to the **Reportal** ribbon menu and click the **Create Thumbnails** button.

The thumbnail creation procedure is run and a progress bar is displayed. The operation may take a few seconds, depending on the number of thumbnails that need to be created. On completion, the progress bar is closed and PowerPoint returns to focus.

### 27.3.6. The Reportal PowerPoint Add-in Ribbon

The Reportal PowerPoint add-in ribbon, which is displayed when the Reportal tab is selected, is as shown below.

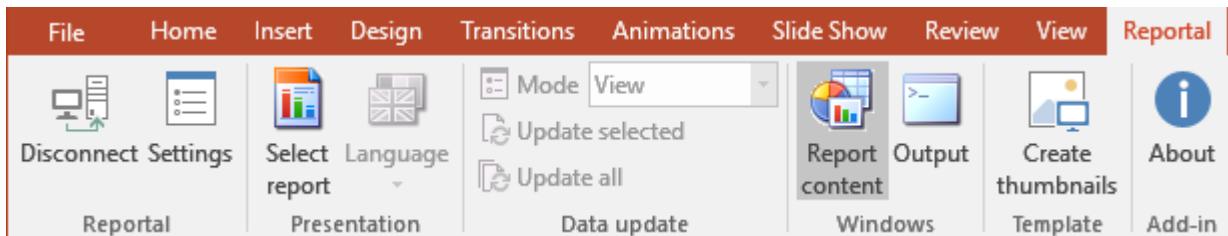


Figure 739 The Reportal PowerPoint ribbon

The controls are as follows:

- **Connect\Disconnect** – connects and disconnects the add-in to/from the Reportal server you have specified in Settings below. Log in using the user name and password you use when logging in to Reportal. The grayed out functionality in the ribbon becomes available once you have connected.
- **Settings** - opens the PowerPoint Add-in Properties dialog in which you configure the add-on (see Configuring the PowerPoint Add-in on page 606 for more information).
- **About** - opens an information window with version details.
- **Select report**– this control is only available when the add-in is connected to the server. Click to open the Select Report window. This window lists the reports to which you have access. Select the report you wish to use as a template (see The Select Report Dialog on page 612 for more information).
- **Mode**– select the report display mode from the drop-down list. This list becomes available after a report has been selected and retrieved from the server. The following modes are available:
  - **Design** – in this mode, only the unpublished content of the report is displayed.
  - **View** – in this mode, only the published content of the report is displayed.
  - **Analyst** – in this mode, analyst tables may be accessed.
- **Language**– choose the language to be used for the presentation from the drop-down list of the languages available for the report. The list becomes available after a report has been selected and retrieved from the server.
- **Refresh**– click to refresh the selected shape(s) (see How to Refresh the Data in a Presentation on page 621 for more information).
- **Refresh All**– click to refresh all shapes (see How to Refresh the Data in a Presentation on page 621 for more information).
- **Report content**– click to display/hide the Reportal sidebar (see The Report Content Sidebar on page 613 for more information).
- **Output** – click to display/hide the Output window (see The Output Window on page 613 for more information).
- **Create thumbnails**– click to create thumbnails of the layouts. This enables automatic thumbnail previews when you later need to select layouts (see Creating Thumbnails on page 610 for more information).

### 27.3.6.1. The Select Report Dialog

The Select Report dialog allows you to choose the report that is to be used for the presentation. This dialog opens when you click **Select Report** on the Reportal PowerPoint toolbar (see The Reportal PowerPoint Add-in Ribbon on page 611 for more information). Note that you can select more than one report if required.

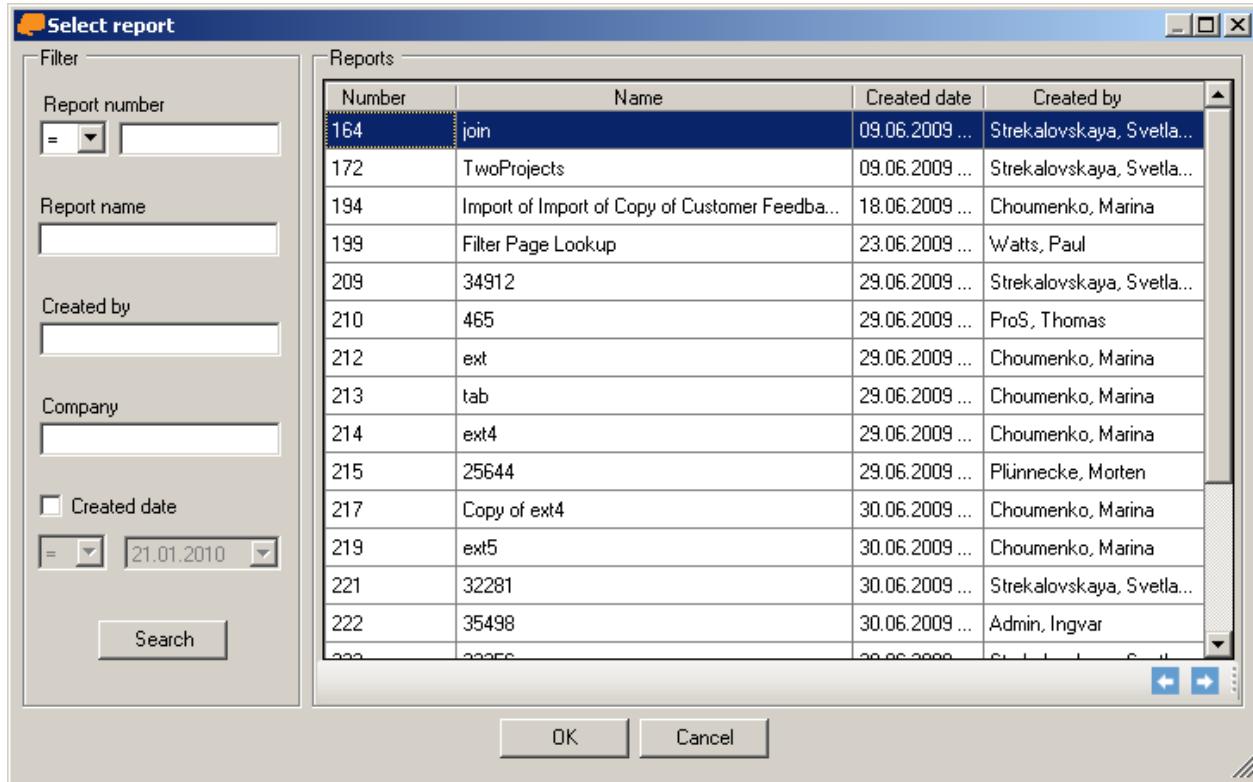


Figure 740 Example of the Select Report dialog

By default, the Reports pane contains a list of all the reports available to you. In the event the list is too long to be displayed as one page, use the **Next Page** and **Previous Page** buttons in the lower-right corner of the pane to navigate through the list, and/or use the search facility to reduce the list to manageable proportions.

- To filter and search the Reports list, define the required search criteria in the Filter group box then click **Search**. The search results displayed in the Reports pane will include only those reports that match the specified criteria.
- You can search by Report Number, Report Name, by the date the report was created or by the name of the person creating the report, or by the name of the company creating the report.
- When searching by Report Name, Created By or Company, you can enter just the initial part of the corresponding name as a string of an arbitrary length.
- When searching by the report creation date, which is enabled by checking the **Created date** box, you can enter the date manually or select the date in the calendar box that is opened by clicking on the down-arrow.
- For Report Number and creation dates ("Created Date", which is enabled by selecting the check box), you can select the operators: equal, less than, less than or equal to, equal to, greater than, and greater than or equal to.

Click on a record in the Reports pane and press **OK** to select that report and close the dialog, or press **Cancel** to close the dialog without selecting the report.

### 27.3.6.2. The Report Content Sidebar

The Report Content sidebar opens in the right part of PowerPoint window when you have selected a report to be used for a presentation (see The Select Report Dialog on page 612 for more information). To display or hide the Report Content sidebar, click the **Report Content** button on the Reportal add-in ribbon (see The Reportal PowerPoint Add-in Ribbon on page 611 for more information). The sidebar is divided into two panes.

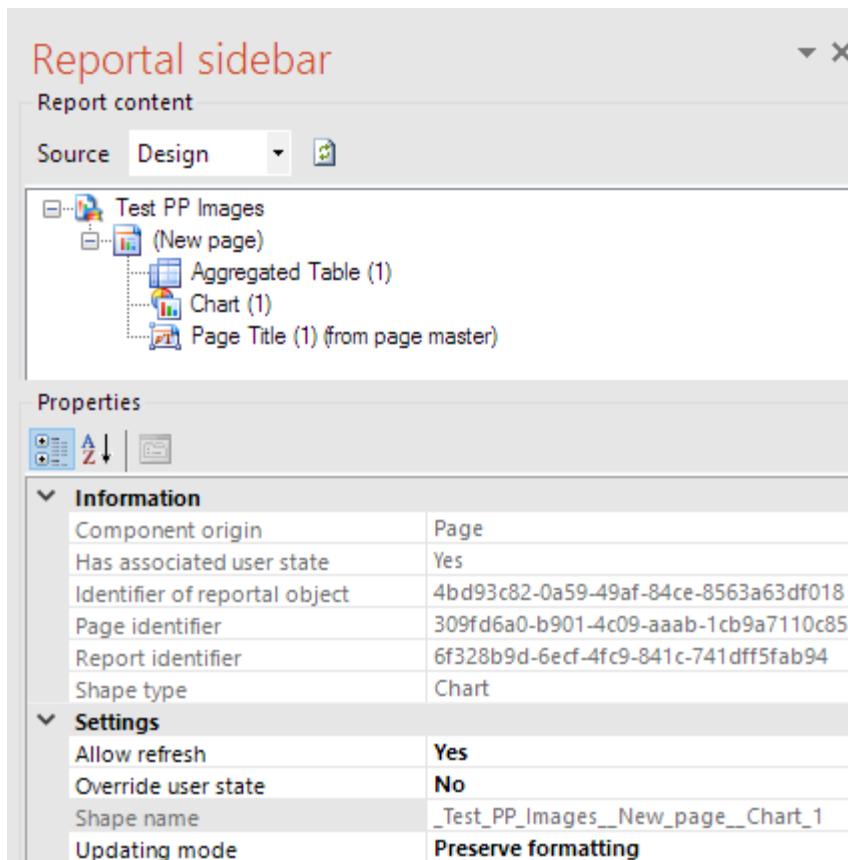


Figure 741 The Report sidebar

The upper Report pane displays the report structure as a hierarchical tree. Depending on the display mode selected in the Source menu or the menu of the Reportal add-in ribbon, the structure of the view can vary (see The Reportal PowerPoint Add-in Ribbon on page 611 for more information). In the event the Reportal report is edited, click the **Refresh** button to refresh the tree.

**Note:** In the event a report tree object (a folder, page, page component etc.) is hidden in Reportal, either by the component's property setting or by script, then it will not be visible in the Report pane.

The lower Properties pane displays the properties of the object selected in the upper pane. The content of this pane can be ranked by property name by clicking the **Alphabetical** button , or it can be divided into categories by pressing the **Categorized** button . The properties within the Information category can only be viewed, whereas the properties within the Settings category can be edited by selecting appropriate values from the drop-down list.

### 27.3.6.3. The Output Window

The Output window displays a log that contains information on the operations that have been performed. To display or hide the window, click the **Output** button on the Reportal add-in ribbon (see The Reportal PowerPoint Add-in Ribbon on page 611 for more information).

To clear the content of this window, click the **Clear output window** button  located in the right frame of the window.

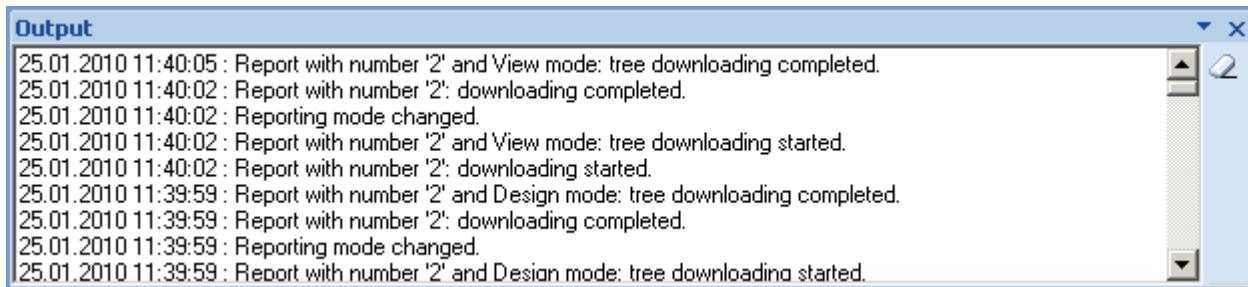


Figure 742 Example of the Output pane

### 27.3.7. How to Create a Custom Presentation Layout

PowerPoint 2007 and the Report PowerPoint add-in enable you to create customized PowerPoint layouts to be used when exporting Reportal reports to PowerPoint presentations.

Each slide layout in the customized layout template can be assigned to any particular page in the report . The report objects in the exported slide will be placed onto placeholders according to the assigned slide layout, such that one placeholder will contain one object. Most placeholder types support several Reportal object types by default. However, you can edit the Report object assignment for every placeholder.

#### Important

When creating a template using several placeholders of the same type (see the table below for the placeholder types available), the order in which the placeholders are added to the template is critical for the layout of the resulting export. When exporting a report to a PowerPoint presentation, the export takes the first component on the page (e.g. the top-left component), and puts it into the first placeholder that was added to the template. It then takes the second component on the page (e.g. the top-right component) and places it into the second placeholder that was added to the template. And so on. You must therefore ensure that the placeholders are added to the template in the correct order, corresponding to the layout of the components on the report page.

**Note:** For general information on working with PowerPoint presentation slide layouts, refer to the PowerPoint end user documentation. This topic describes only specific steps related to assigning Reportal objects to slide layout placeholders.

To add placeholders and edit the assignment of Reportal objects to placeholders in a slide layout:

1. Run PowerPoint.
2. In the **View** menu, in the **Presentation Views** group, click **Slide Master**.
3. In the pane that contains the slide masters and layouts (on the left side of the window), click the layout that you want to add a text placeholder to.
4. Select a slide layout by clicking an appropriate slide layout in the left panel.

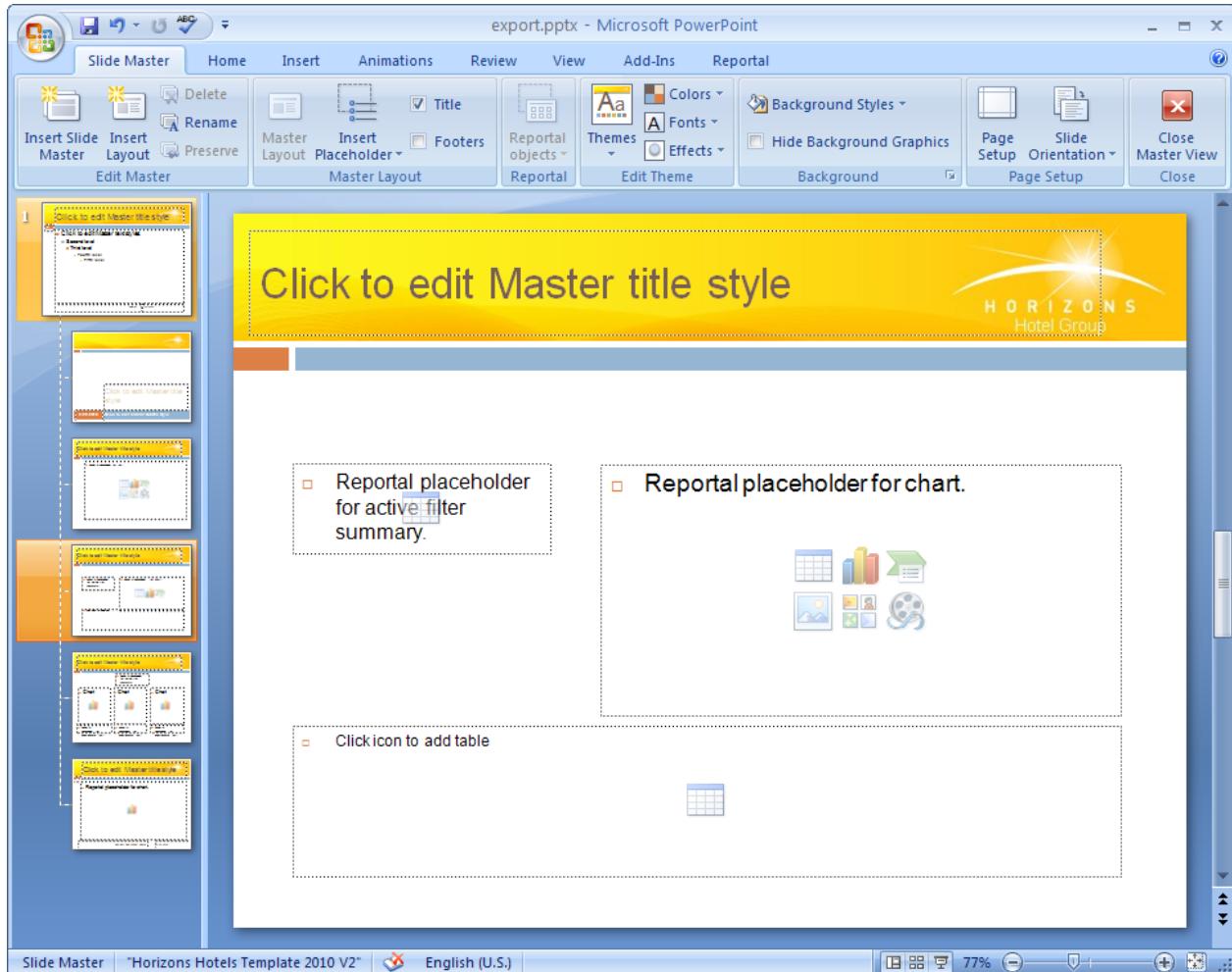


Figure 743 Selecting a slide layout

5. On the **Slide Master** tab, in the **Master Layout** group, click **Insert Placeholder**, and then click the placeholder you wish to add to the page.

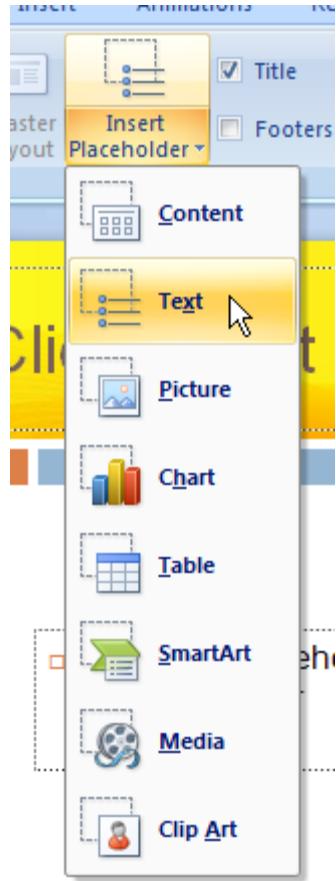


Figure 744 Adding a placeholder to a page

6. Use the mouse pointer to draw the size of your text placeholder, then edit the prompt text in the placeholder as necessary.
7. Enter the selecting mode by clicking on the placeholder's border.

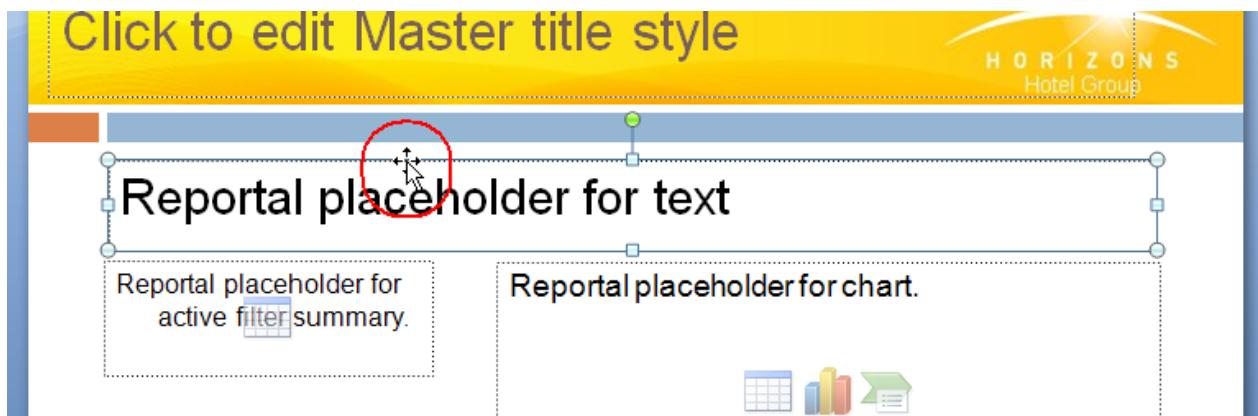
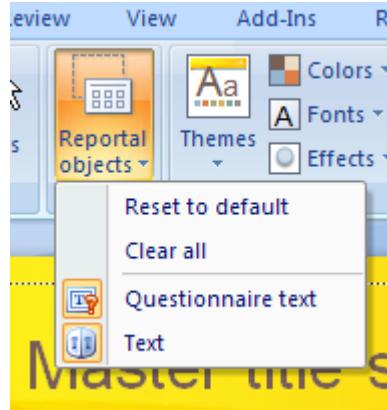


Figure 745 Selecting a placeholder

8. Click the **Reportal Objects** menu.

The list of Report objects supported by the selected placeholder opens. In this case, as the selected placeholder is a Text item, only Text objects are listed.



*Figure 746 Report objects list*

Each placeholder type supports a specific set of objects that are displayed as menu buttons. A highlighted menu button indicates that the corresponding shape type is assigned to the selected placeholder. Most placeholder types support several Report object types. The table below lists the PowerPoint slide layout placeholder types that support Report shapes:

Placeholder supported Report objects		Assigned by default (default set)
Type		
Header	Page title	Page title
Content	Active filter summary, Chart, Chart image, Questionnaire text, Gauge, Text, Table	Chart, Questionnaire text, Gauge, Text, Table
Text	Questionnaire text, Text	Questionnaire text, Text
Picture	Chart image, Gauge, Image	Chart image, Gauge, Image
Chart	Chart	Chart
Table	Active filter summary, Table	Table

- To assign the default set of shape types to the selected placeholder, choose **Reset to default**. When the default set of shape types is assigned to a placeholder, an original placeholder text remains without any changes.

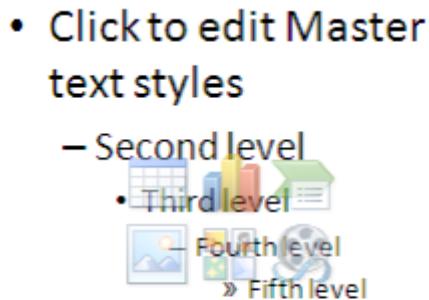


Figure 747 Example of a placeholder text (default shape type set)

- To change the set of the shape types assigned to the placeholder, click the **Reportal Objects** ribbon menu and select or deselect the appropriate menu buttons (repeat the process to select/deselect multiple shape types). When the set of the assigned shape types is customized (different from the default set), the placeholder displays the list of the shape types assigned to the placeholder.

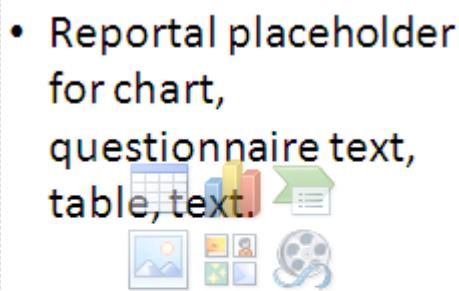


Figure 748 Example of a placeholder text (custom shape type set)

- To 'un-assign' all shape types, click **Clear all**. When all shape types are un-assigned from the placeholder, its text changes appropriately.

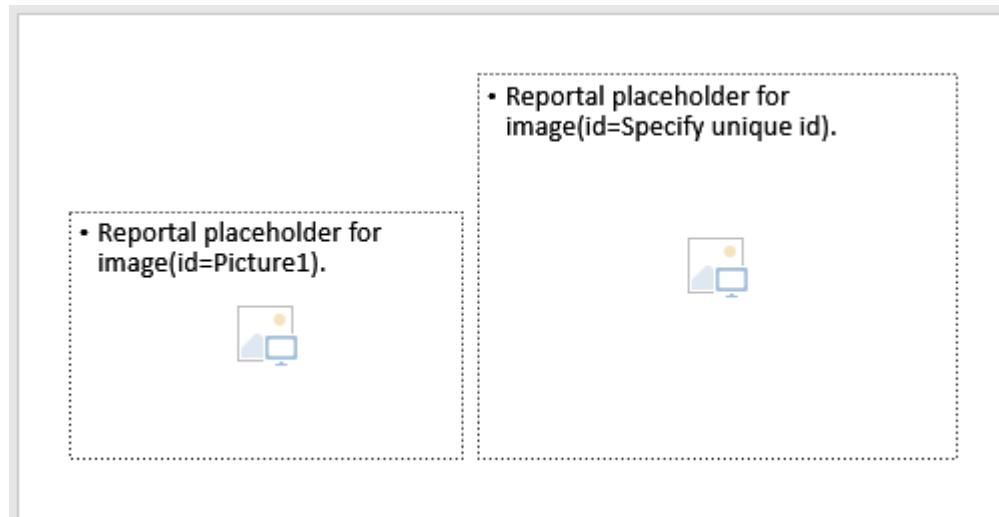
- Placeholder does not support Reportal objects.



*Figure 749 Example of a placeholder text (all shape types are unassigned)*

**Note:** If a Reportal report page has more items on it than there are placeholders available in the PowerPoint template, then the export will create enough PowerPoint slides to ensure all the items on the report page are exported. For example, if a report page includes six items and the template only has two placeholders, then the export will create three slides for that page.

- When adding image objects to picture placeholders, you must specify an arbitrary unique ID for each image (e.g. id=Picture1) in its picture placeholder. These IDs must be then used in the image script for PowerPoint exports (see Image Script for PowerPoint Export on page 577 for more information) to assign the image file to the placeholder.



*Figure 750 Example of picture placeholders with the Reportal image object assigned*

When you have finished editing the layout, save the file as a PowerPoint template. You can now upload the file to Reportal (see How to Upload a PowerPoint Template on page 599 for more information).

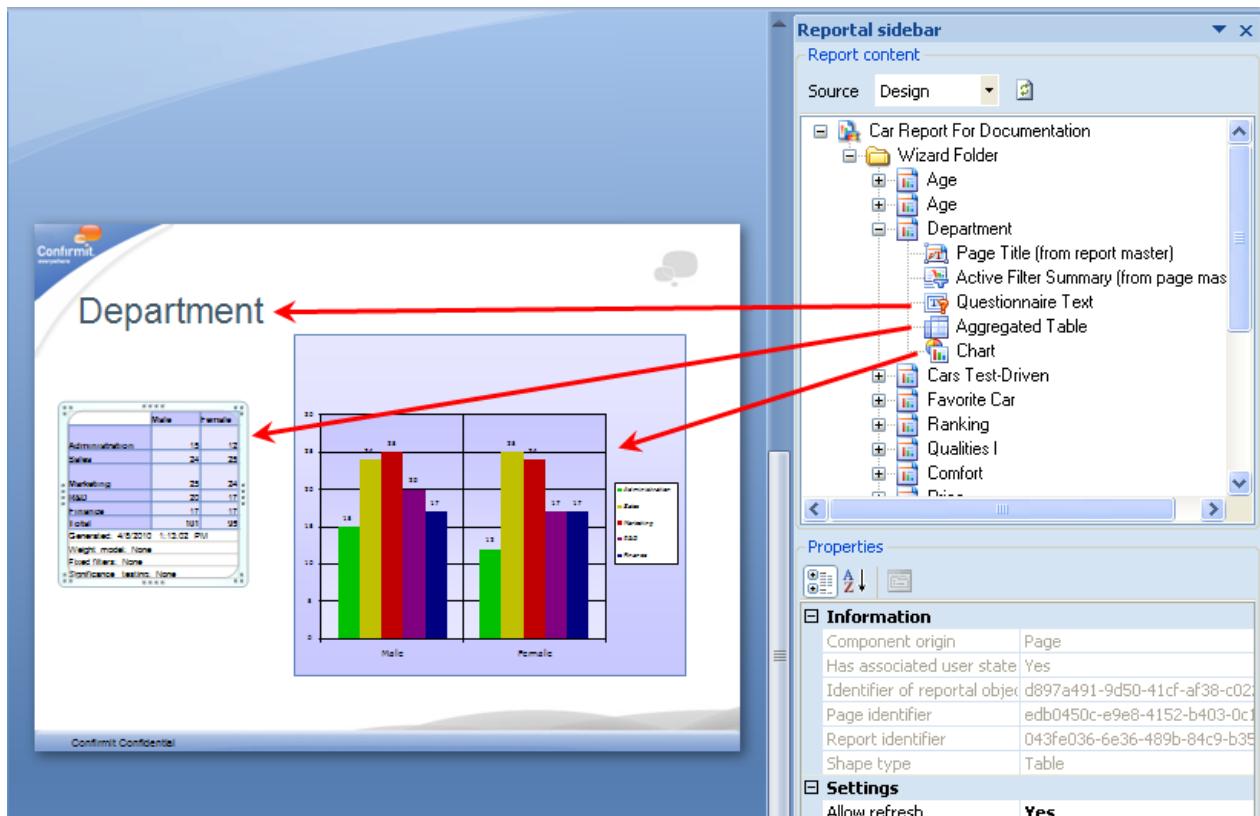
### 27.3.8. How to Add an Object to a PPT Slide

You can add objects to a PowerPoint slide directly from the Report Content sidebar. To do this:

1. Open the slide to which you wish to add an item.

2. Click on the PowerPoint slide where you want the item to appear.
3. In the Report Content sidebar, double click on the item that you wish to add to the presentation.

The item will appear in the current PowerPoint slide at the selected location. You can now size and position the item on the PowerPoint slide as required using drag-and-drop.



*Figure 751 Adding items from the Report sidebar to a slide*

By default, tables and charts are added as native PowerPoint objects. This means that you can format the tables and charts using PowerPoint's formatting menus and options. However you can also add a chart as a static image or a table as an embedded Excel object. To do this, right-click on the item in the Report Sidebar and select the appropriate icon.

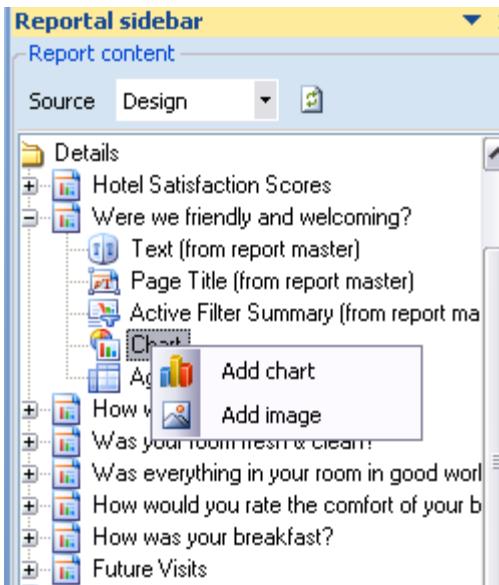


Figure 752 Selecting Chart or Image from the sidebar

### 27.3.9. How to Refresh the Data in a Presentation

In the event your survey data changes after you have created your PowerPoint presentation, if you open the presentation file via the Reportal add-in then you can update the data in the presentation.

**Note:** This allows you to update the data values that are presented. If the actual report changes, for example a column is added to or removed from a table, then you must either recreate the object (see How to Add an Object to a PPT Slide on page 619 for more information) or refresh it (see How to Refresh an Object in a Presentation on page 622 for more information).

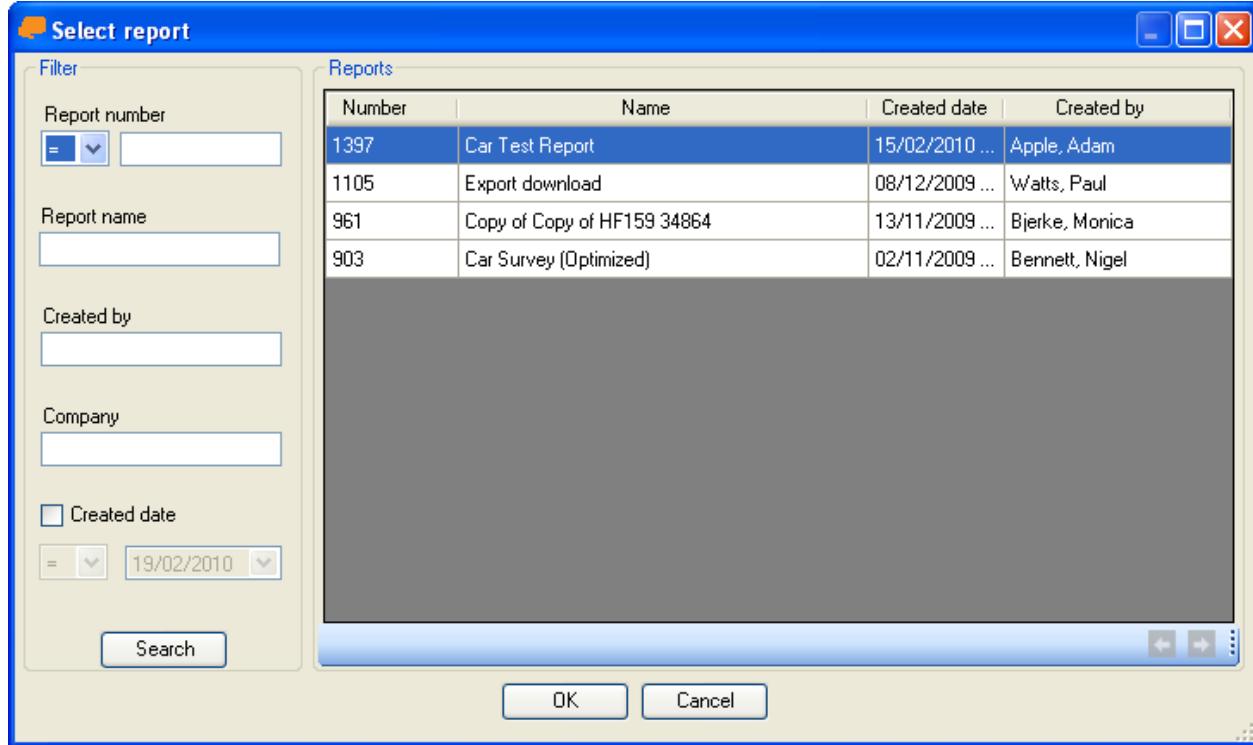
1. In PowerPoint, go to the Reportal ribbon and click **Connect**.

The Reportal Authentication dialog opens.



Figure 753 The Reportal Authentication dialog

2. If necessary, type your Reportal user name and password into the appropriate fields, then click **OK**.  
PowerPoint will be connected to Reportal, and the Report Content and Output Window become available.
3. In the Reportal ribbon, click **Select Report** to open the Select Report window.



**Figure 754 Example of the Select Report window**

4. Select the report you wish to work with and click **OK**.

In the event the list is extensive, enter search criteria into the filter fields in the left column and click **Search** to reduce number of reports displayed.

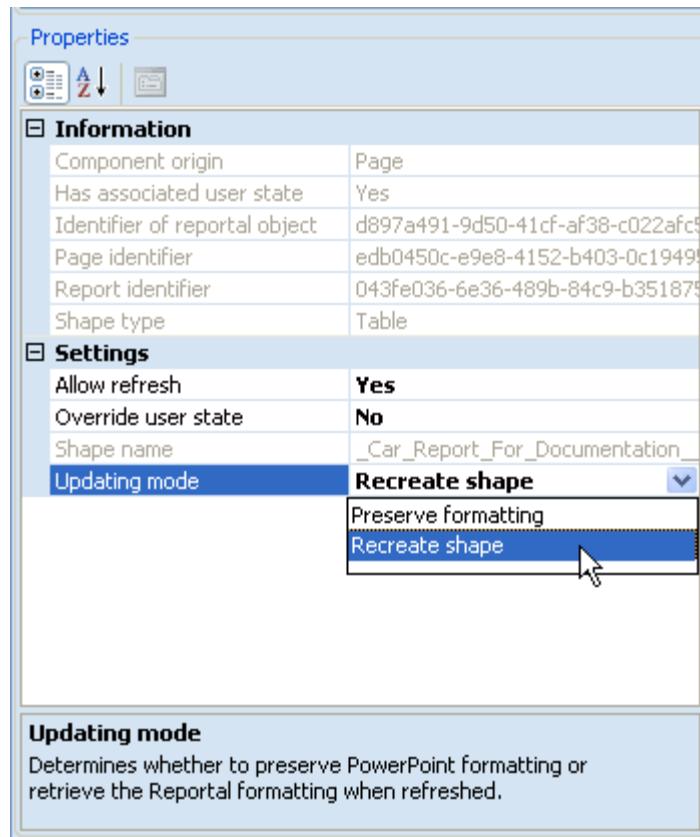
The report is shown in the Report Content pane (click **Report Content** in the Report ribbon to open this pane).

5. Using standard Windows techniques, select the objects you wish to refresh in the presentation.
6. Click **Refresh**, or merely click **Refresh All** to update the entire presentation.
7. On completion, save the presentation.

### 27.3.10. How to Refresh an Object in a Presentation

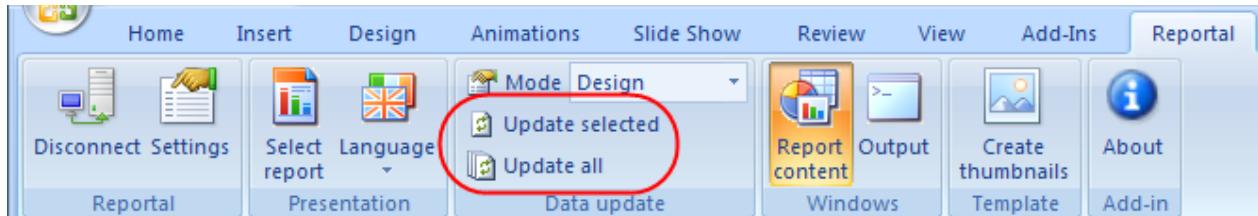
In the event your survey data changes after you have created your PowerPoint presentation, you can refresh the data in the presentation whilst maintaining any PowerPoint formatting that you may have added to the object (see How to Refresh the Data in a Presentation on page 621 for more information). However if the actual report changes, for example a column is added to or removed from a table, then you must either delete and recreate the object manually (see How to Add an Object to a PPT Slide on page 619 for more information) or refresh it (which is the same process but done automatically by PowerPoint). Be aware that both these actions will remove any PowerPoint formatting that you may have applied to the object.

1. In PowerPoint, go to the slide that holds the object you wish to refresh.
2. Click in the object to select it.
3. In the Properties column, click in the Updating Mode field to open the drop-down list, then set the mode to **Recreate Shape**.



**Figure 755** Setting the updating mode for an object

4. In the Report ribbon, click either **Update selected** to update only the selected object (this button is only available when an object is selected), or **Update all** to update all the objects on all the slides in the presentation.



**Figure 756** The Update buttons

**Note:** Update All will refresh the entire presentation, and all objects that have the Recreate Shape property set will be renewed. Any PowerPoint formatting that has been applied to these objects will be reset to the default values and will have to be reapplied to each object individually.

5. Set the Updating Mode property as required (see the note above) and save the presentation.

## 27.4. Exporting a PowerPoint Presentation

Once you have created a PowerPoint presentation, you can export it as required.

1. Go to the **Export > PowerPoint Presentations** menu command.

The Presentation List opens.

Presentation Name	Created By	Comments
DocPresentation	Apple, Adam	
Another presentation	Apple, Adam	

Figure 757 Example of the PowerPoint Presentation list

- Click on the blue **Presentation Name** link for the presentation you wish to export.

The General properties dialog for exports opens.

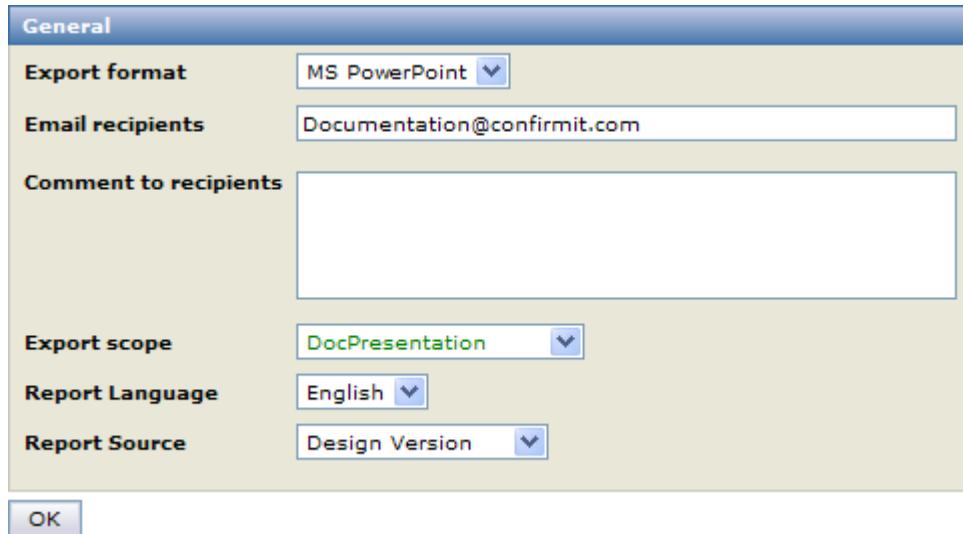


Figure 758 The General properties dialog

- Check that the recipient's email address is correct. Default is the currently logged-on user - you.
- Add a comment as necessary.
- Select the Export Scope. Default is the presentation you selected in point 2 of this procedure. The options are:
  - o **Entire report** - the report rather than the PowerPoint presentation is exported.
  - o All the presentations available to you are listed in the drop-down. Click on the desired presentation to change your selection if necessary.
- Select the language you wish the presentation to be exported in (all the languages available in the report are listed).
- In the event you have made changes to the report but have not yet published them, in **Report Source** choose whether you wish to export the last published version of the report or the design version.
- Click **OK**.

An export task commences and the presentation is exported as specified.

## 28. Benchmarks

**Note:** A benchmark project must be set up in Confirmit Authoring, therefore, except for the section on using benchmarks in tables, this chapter is only relevant for users holding a Confirmit Authoring license.

The Benchmark functionality in Reportal gives you the ability to combine the aggregated results from the survey with other results or numbers in the same tables, and consequently also build charts where the survey results calculated in Reportal are compared with these uploaded numbers.

Typical examples of this could be:

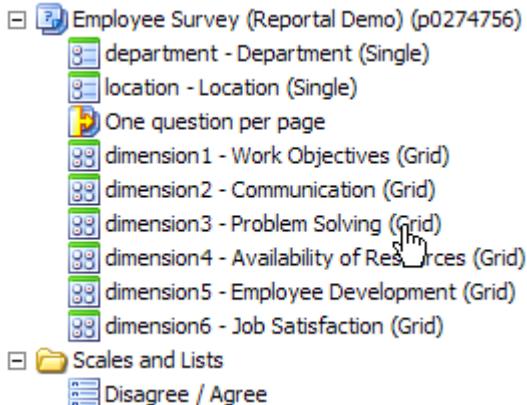
- results from last year's survey (where you do not have the actual responses, only the aggregated numbers).
- an industry benchmark.
- targets (for example, the target for the department is an average score of 4.1 or above on this question).
- marketing spending in the same period.
- results from multi-variable analyses on the data set in a 3rd party tool.

The benchmark functionality gives you the ability to upload such values for all questions, and combine them with the results Reportal calculates from the survey responses.

The benchmark functionality also gives you the ability to upload different sets of benchmarks and link them to your survey variables. For example, you could have one set of benchmarks for the entire data set, but separate benchmark numbers for each department, country etc.

### 28.1. How to Create a Benchmark Project

This example uses the Employee Satisfaction Survey shown in the figure below:



*Figure 759 Example from an Employee Satisfaction survey*

This survey contains a number of statements within 6 grid questions (dimension1 - dimension6). We want to upload benchmarks for the statements in these grids, grouped on the department and location variables.

To include benchmarks when reporting on this survey, a separate project must be created to which the benchmarks are to be uploaded, and this project must be defined to be of the special category "Benchmark". This must be done in Confirmit Authoring. The easiest way to do this is:

1. In Authoring, duplicate the Employee Survey project (do this from the **Project Management > Overview** page).
2. On the Overview page of the duplicate, change the name of the project as appropriate and select "Benchmark" in "Categories and Keywords" (see the figure below).

**Note: Benchmark is a special project type that is only used to enable you to upload and include these benchmark numbers in reports.**

The screenshot shows the 'General' tab selected in the top navigation bar. The form contains the following fields:

- Project ID:** p391183290
- Project Name:** Benchmarks from Car Project for Documentation
- Company:** User Guide Company
- Description:** (Empty text area)
- Languages:**
  - Available:** Afrikaans, Albanian, Arabic, Arabic (Algeria), Arabic (Bahrain)
  - Selected:** English
- Categories and Keywords:**
  - Available Categories:** Template Library, Registration Project, Update Profile Project
  - Selected:** Benchmark (This field is circled in red.)
- New Keyword:** (Text input field and Add button)
- Creator:** Apple, Adam
- Created:** 09/04/2010 10:29:07

Figure 760 Selecting the Benchmark category in the Project Overview

Now, for our example we want to use Department and Location as variables to filter or cross-tab the results with, and we want to upload benchmark numbers for the dimensions grids. The variables we want to filter or cross-tab the results with should remain as in the original project. The variables we want to upload benchmarks for must be of a type that we can upload numbers to, and must have the same field names as in the original survey.

There are two types of questions in Confrimt that will accept numeric data: The Numeric question and the Numeric List question. The Numeric question accepts one value, and can be used when you need benchmarks for single-input questions respondents have answered. The Numeric List questions accept one value for each item in the answer list, and can be used when you need benchmarks for multi-input questions respondents have answered.

In the example above we have several grid questions, so we must replace the grid questions with Numeric List questions, making sure that we use the same question ids and have identical answer lists.

## 28.2. How to Import Benchmark Values from a File

Once the Benchmark project is created (see How to Create a Benchmark Project on page 625 for more information), you can upload the benchmark values into the Benchmark project by using Confirmit's standard data import functionality. However you must first generate the survey database - go to the **Designer > Launch Survey** menu command .

**Note:** It is also possible to input the results through a web interview, but it will usually be easier to do this as a data import. Therefore it is not necessary to create interview files.

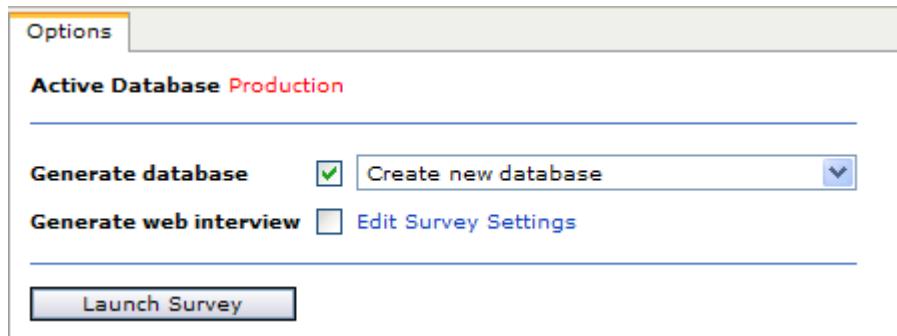


Figure 761 Generating the database

The import file must have a unique key field (to allow Confirmit to distinguish between the different rows), a column for each of the two single questions (department and location) and a column for each of the items in all the grids. The figure below shows an example of the first part of such an import file in Excel:

respid	department	location	dimension1_1	dimension1_2	dimension1_3	dimension1_4	dimension1_5	dimension1_6	dimension1_7	dimension1_8	dimension2_1	dimer
1			3,884	3,516	4,317	1,284	3,131	2,963	3,827	2,224	2,514	
2		1	3,266	2,814	4,184	3,269	1,516	2,243	3,835	2,69	2,742	
3		2	2,669	3,062	2,293	3,909	2,147	1,086	1,664	3,071	2,427	
4		3	2,659	4,298	1,329	4,556	3,458	1,831	4,638	1,094	1,518	
5		4	3,454	2,719	1,672	1,822	4,352	2,62	4,429	1,262	3,006	
6		5	3,442	2,19	2,322	2,306	1,546	2,963	3,945	3,16	1,387	
7	1		2,566	2,666	4,343	4,836	4,167	1,228	2,122	1,22	2,231	
8	2		4,945	2,514	1,161	3,694	3,878	1,829	3,456	3,82	1,435	
9	3		1,467	4,755	2,238	4,846	3,791	2,263	1,385	4,034	2,306	
10	4		4,965	4,033	2,021	3,995	2,536	4,065	1,767	2,216	3,889	
11	5		3,57	2,134	1,064	3,709	2,033	2,721	3,383	2,216	1,479	
12	6		3,038	3,468	3,098	1,949	4,691	3,598	4,605	4,792	1,141	
13	7		3,115	3,081	1,155	3,605	1,175	2,972	1,688	4,282	1,339	
14	1	1	1,416	1,237	3,04	3,769	1,587	3,33	3,397	2,431	1,561	
15	1	2	2,291	2,33	1,958	1,153	3,568	1,274	4,859	2,871	2,29	
16	1	3	2,763	2,072	1,57	2,143	2,12	4,232	4,486	4,845	2,086	
17	1	4	2,467	3,733	1,721	2,63	2,325	3,401	1,152	4,819	3,414	
18	1	5	3,731	1,342	1,722	3,65	4,864	3,634	3,962	1,79	2,542	
19	2	1	2,049	1,771	1,006	4,695	4,654	2,454	4,654	2,161	1,87	
20	2	2	2,472	1,874	3,304	4,608	2,299	3,186	3,104	4,271	1,923	
21	2	3	2,59	4,232	1,858	3,305	3,697	4,984	4,699	4,988	4,243	
22	2	4	3,016	1,763	3,944	3,923	1,493	3,522	3,176	4,788	2,072	
23	2	5	2,308	3,547	1,915	1,734	1,413	4,368	4,461	1,084	1,102	

Figure 762 Example of a Benchmark import file

The first row in this example file contains the question ids.

In the second row in this example, both **department** and **location** are left empty. When using benchmarks in reporting, the benchmarks for the dimensions variables in the following columns will then be displayed in tables where the results are not filtered or crossed with any of those variables – i.e. the values in this row represent the benchmarks for the total set.

The following five rows include a code for **location**, corresponding with the codes in the answer list for that question in the survey (see the figure below).

	Location	Precode
<input type="checkbox"/>	English	
<input type="checkbox"/>	Denmark	1
<input type="checkbox"/>	France	2
<input type="checkbox"/>	Japan	3
<input type="checkbox"/>	United Kingdom	4
<input type="checkbox"/>	United States	5

Figure 763 Example of an answer list for a Location question

In these five rows the cells for **department** have been left empty. This means that the following benchmark values will be displayed in tables where the results are filtered or crossed with **location** only.

The rows with respids 7-13 contain the codes corresponding to the answer list of the **department** question (see the figure below).

	Department	Precode
<input type="checkbox"/>	English	
<input type="checkbox"/>	Accounting	1
<input type="checkbox"/>	Customer Service	2
<input type="checkbox"/>	Finance	3
<input type="checkbox"/>	Human Resources	4
<input type="checkbox"/>	Legal and Copyright	5
<input type="checkbox"/>	Research and Development	6
<input type="checkbox"/>	Sales	7

Figure 764 Example of an answer list for a Department question

For these rows, the cells for **location** have been left empty. So the following benchmarks values will be displayed in tables where the results are filtered or crossed with **department** only.

The rest of the import files have benchmarks for all the possible combinations of **department** and **location**, so these benchmark values will be displayed when the results are filtered or crossed with both **department** and **location**.

Save the Excel file as a tab-delimited ASCII file, and upload the benchmark values to the benchmark project using the data import functionality (see the Confirmit Authoring Manual).

You do not necessarily have to upload benchmark values for all possible combinations as has been done in this example. That depends on what you need to use the benchmarks for in Reportal. However, if you cross-tab or filter a table including benchmarks, they need to be defined for that filter or the benchmarks will be empty.

## 28.3. How to Connect the Benchmarks to the Survey

To attach the benchmarks in the benchmark projects to the results in the original survey:

1. Open the original survey and go to the **Reporting > Benchmark Projects** menu command.

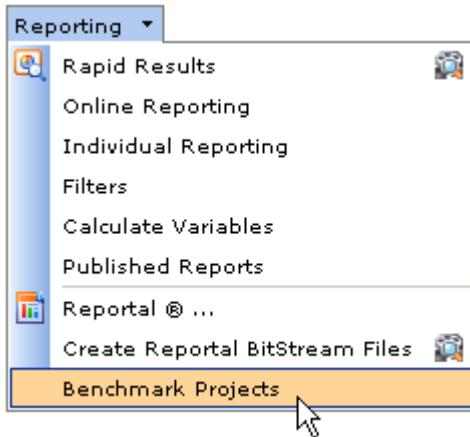


Figure 765 Selecting Benchmark Projects

A list of available Benchmark Projects opens.

2. In the Available Projects column, click in the check-boxes for the required projects to select them.
3. Click on the **>>** button to move the selected projects to the Benchmark Projects column.
4. Click **Save** to save the changes.

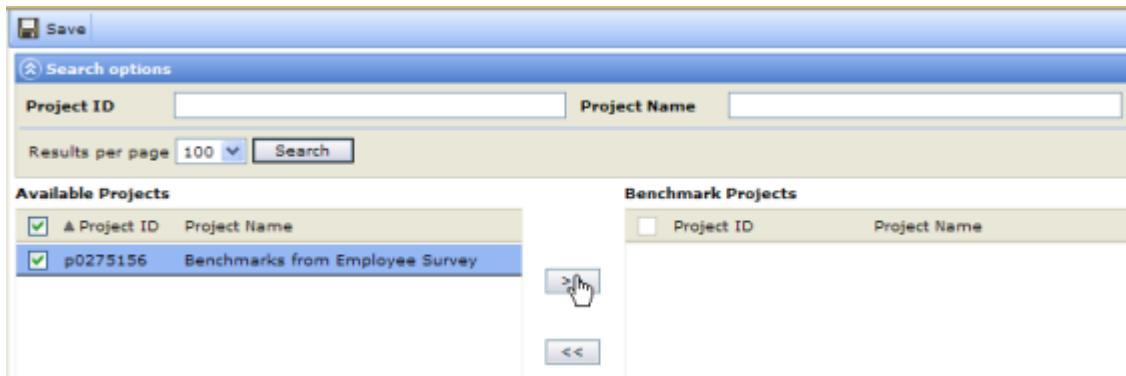


Figure 766 Selecting from the list of available Benchmark Projects

## 28.4. Using Benchmarks in Reports

You can use the Benchmark functionality to create tables such as that shown in the figure below. In the table, the column containing the Benchmark values is the last column, with "Last year" as its column header. The rest of the table holds aggregated results from the survey.

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Total	AVG	Last year
<b>I have clear measures for each of my objectives</b>	11 14,9%	11 14,9%	20 27,0%	15 20,3%	17 23,0%	<b>74</b> <b>100,0%</b>	3,2	3,3
<b>I know how my job impacts the mission of our company</b>	18 24,3%	18 24,3%	8 10,8%	19 25,7%	11 14,9%	<b>74</b> <b>100,0%</b>	2,8	2,8
<b>I know what is expected of me in my job</b>	16 21,6%	16 21,6%	9 12,2%	13 17,6%	20 27,0%	<b>74</b> <b>100,0%</b>	3,1	4,2
<b>In the last 12 months my Manager has talked to me about my progress</b>	11 14,9%	16 21,6%	17 23,0%	13 17,6%	17 23,0%	<b>74</b> <b>100,0%</b>	3,1	3,3
<b>My co-workers and I work well together to accomplish our organization's goals</b>	24 32,4%	13 17,6%	17 23,0%	10 13,5%	10 13,5%	<b>74</b> <b>100,0%</b>	2,6	1,5
<b>My group works well together to accomplish our organization's goals</b>	14 18,9%	15 20,3%	11 14,9%	14 18,9%	20 27,0%	<b>74</b> <b>100,0%</b>	3,1	2,2
<b>My Manager has set performance goals for my job</b>	16 21,6%	10 13,5%	15 20,3%	16 21,6%	17 23,0%	<b>74</b> <b>100,0%</b>	3,1	3,8
<b>We have prioritized our major goals</b>	12 16,2%	14 18,9%	15 20,3%	19 25,7%	14 18,9%	<b>74</b> <b>100,0%</b>	3,1	2,7

Generated: 11/24/2004 10:30:35 AM

Fixed filters: Denmark

Benchmark Details:

Last year

Location: Denmark

**Figure 767 Example of a table with Benchmarks**

The page with this table has been filtered on location, and the filter has been set to "Denmark" (see the text immediately below the table). This means that the Benchmark results for Denmark will be displayed (the benchmark values in the second row of the imported file (see How to Import Benchmark Values from a File on page 627 for more information)):

respid	department	location	dimension1_1	dimension1_2	dimension1_3	dimension1_4	dimension1_5	dimension1_6	dimension1_7	dimension1_8
1			3,884	3,516	4,317	1,284	3,131	2,963	3,827	2,224
2		1	3,266	2,814	4,184	3,269	1,516	2,243	3,835	2,69

**Figure 768 Extract from the Benchmark import file**

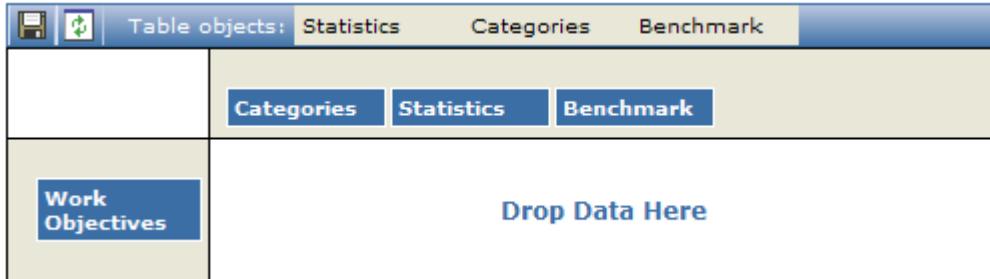
The text used in the heading of the benchmark column is fetched from the "Project Title" of the Benchmark project. You can define Project Titles for all the languages of the survey.

General		Permissions	Active Languages	Project Status	Url Setup
Project ID	p0275156				
Project name	Benchmarks for Employee Survey				
Company	User Manual Company				
Description					
<b>Project Titles</b> English Last year					

**Figure 769 Example of a Project Title**

The table shown in the first figure in this section was set up as follows:

When one or more Benchmarks are connected to the survey you are reporting on, an object called "Benchmark" is available in the Table Designer. You can drag this object into rows or columns of the project, and it will fetch benchmark values based on the variables that it is crossed with. In the example, it is crossed with the first grid object, **dimension1 Work Objectives** in the project (see the first figure in section 21.1. How to Create a Benchmark Project).



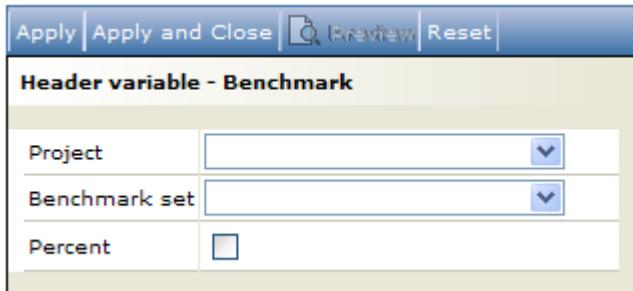
*Figure 770 The Benchmark object in the Table Designer*

See the Categories and Statistics Objects section for further details.

In the header variables of the grid "Work Objectives", the "Collapsed" property is set so that only one row is displayed for each statement in the grid.

## 28.5. Properties of the Benchmark Object

To access the property sheet for a Benchmark object, right-click on it to open the drop-down menu and select **Properties**, or double-click on it.

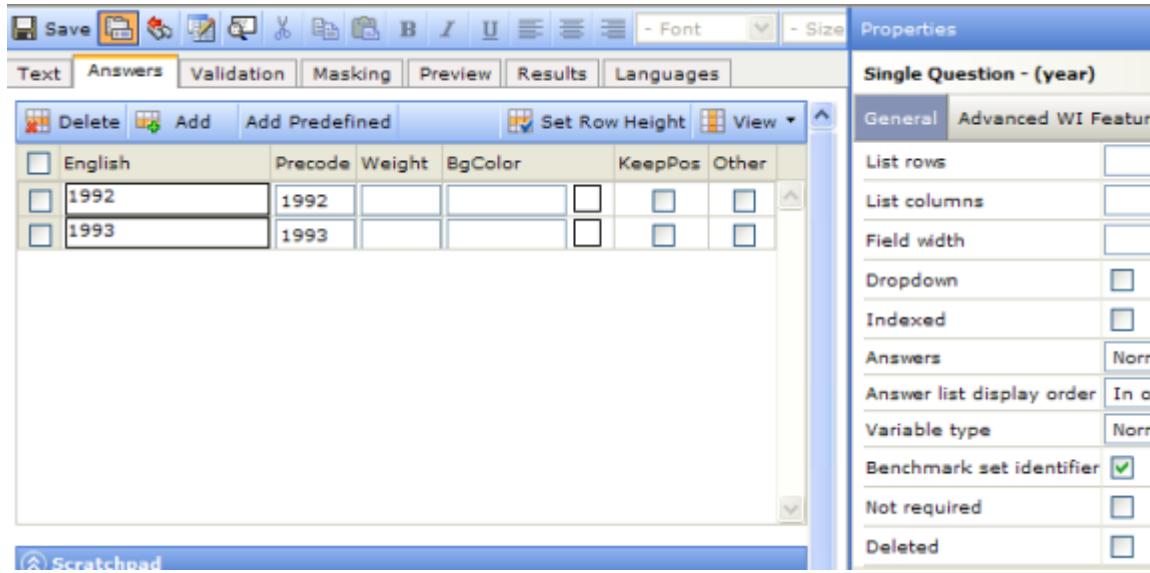


*Figure 771 The Benchmark object's properties sheet*

- If you have connected more than one benchmark project to your survey, select the project the benchmarks are to be fetched from. If only one project is connected to the survey, this is not necessary.
- Benchmark Set is explained in the following section.
- Check the Percent box if the uploaded values are to be displayed as percentages. This functions in the same way as in Excel, so that for example  $0.20 = 20/100 = 20\%$  ( $0.2$  will be displayed as  $20\%$ ).

## 28.6. Benchmark Set

You may have several "sets" of benchmarks within the same project, for example the results from different years. You may wish to be able to change the Benchmark set that is compared with the survey results in different tables. In this case, you can define a variable in the benchmark project as the "Benchmark Set Identifier", for example with a single question "year" added to the Benchmark project in the example.



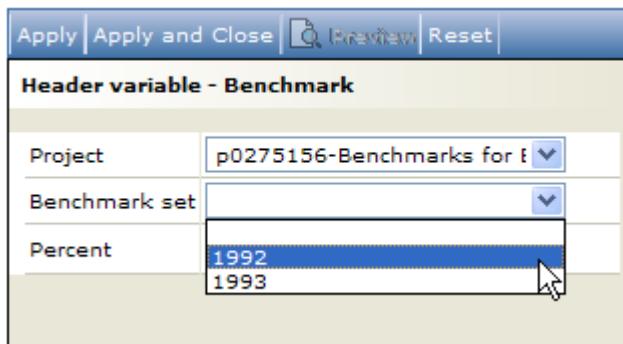
**Figure 772 Properties for the year question**

Year must then be included in the import file to distinguish between the different benchmark sets there.

respid	year	department	location	dimension1_1	dimension1_2	dimension1_3	dimension1_4	dimension1_5	dimension1_6
1	1992			3,884	3,516	4,317	1,284	3,131	
2	1993			3,266	2,814	4,184	3,269	1,516	
3	1992		1	2,669	3,062	2,293	3,909	2,147	
3	1992		2	2,659	4,298	1,329	4,556	3,458	
4	1992		3	3,154	2,710	1,672	1,822	4,352	

**Figure 773 Extract from the Benchmark import file**

Once you have specified the benchmark project, you will be able to select which of the benchmark sets is to be used in properties on that benchmark project.

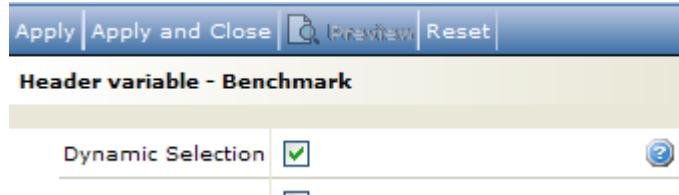


**Figure 774 Selecting the Benchmark Set that is to be used**

The benchmark set you have selected will be visible in "Benchmark Details".

## 28.7. Benchmark Selector

When several benchmark sets are available, you can allow the viewer to choose which benchmark set is to be used in the table/charts. To do this, check the "Dynamic Selection" property on the benchmark as shown.



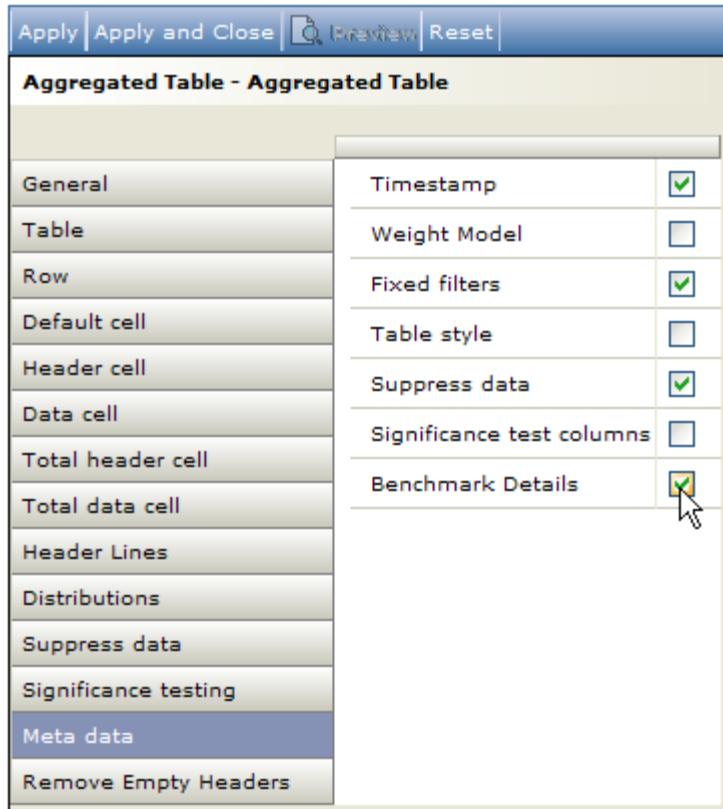
*Figure 775 Dynamic Selection on Benchmark*

You can then include a component called "Benchmark Selector" into the report page. To do this, either drag it from the "Visual Components" toolbox or right-click, go to "Insert component" and select **Benchmark Selector**. This applies for the Report Master, Page Master, Layout Master or Report Page.

The benchmark selector will be included as a drop-down on the report page, giving the viewer the ability to dynamically select the benchmark set that is be compared with the results.

## 28.8. Benchmark Details

When using a project with Benchmarks in Reportal, you can choose to display "Benchmark Details" in the table's metadata. To do this, go to the Table Properties page > Meta data tab, check the Benchmark Details box and save the changes.



*Figure 776 Displaying the Benchmark Details*

The tables will then include information about the benchmark set (if relevant) and filter (if relevant), or just the name of the benchmark (project title of benchmark project).

The example below shows that the report page is filtered on location Denmark, and the benchmark set 1992 is used:

Benchmark Details:  
1992  
Location: Denmark

**Figure 777 Benchmark Details example 1**

The example below shows an instance where no benchmark is set, but the page is filtered on location Denmark. Here the benchmark name (project title) is used instead of the name of the benchmark set.

Benchmark Details:  
Last year  
Location: Denmark

**Figure 778 Benchmark Details example 2**

The example below shows an instance where there is no filter on the page, i.e. showing totals. In this case, only the benchmark name (project title) is shown.

Benchmark Details:  
Last year

**Figure 779 Benchmark Details example 3**

## 29. Access Control

**Note:** This section is only relevant for users holding a Confirmit authoring license. Users with access only to Confirmit Reportal Designer are not allowed to give access to other users.

### 29.1. Access Control on Reports

You can give access to a report to four types of users:

- Confirmit Authoring users within or outside your company.
- Reportal Designers.
- Reportal Analysts.
- Reportal Viewers.

The last three must either be uploaded or created as End users in Confirmit before you can give them access. See the Confirmit Authoring User Manual for further information on End Users.

#### 29.1.1. Reportal Designer, Analyst and Viewer Access

Access to Reportal, for analyzing the data, designing and viewing the reports, is controlled by the licenses purchased by the client. In addition to the standard Confirmit User license, which gives full access to Reportal, three other types of license are available to allow access by non-Designated Users:

- **Reportal Designer Access (RDA)** - enables Confirmit Clients to allow non-Designated Users to design their Reportal reports for a limited period.
- **Reportal Analyst Access (RAA)** - enables Confirmit Clients to allow non-Designated Users access to the Analyst functionality. This functionality allows users to analyze the data and create tables without having to create full reports and/or report pages (see The Analyst Toolbox on page 384 for more information).
- **Reportal Viewer Access (RVA)** - allows non-Designated Users (for example one of the Confirmit Client's customers) to view Reportal reports, again for a limited period.

**Note:** Two licensing models are available for Reportal end-users and panelists:

1. **Limited User License** - One RDA license gives design access to one specified person, for one report at a time, for a defined period. For example, if one person wishes to work on two reports simultaneously then two RDAs are required, or if three people wish to collaborate in the design of one report then three RDAs are required. RDAs are allocated by the Confirmit License Manager. One RVA license allows one specified person to view one report for a defined period. If two people wish to view the same report, or if one person wishes to view two reports, then two RVAs are required. RVAs are allocated by the Confirmit Client's System Administrator.

2. **Unlimited User License** - One end-user can be assigned view access to as many reports as required with 1 RVA license. The license in use will at all times be the highest permission available to the end-user. So in the event one end-user has been assigned view permission to 5 reports and that end-user is then granted design permission to a 6th report, this will then no longer count as 1 RVA license but will release the RVA license and instead acquire 1 RDA license. With the highest permission (RDA), an end-user can be assigned any combination of RVA/RDA/RAA licenses to any number of reports.

Note that the "quantity" of RDAs, RAAs and RVAs purchased can be allocated as required by the Confirmit Client, though they must be allocated to named individuals.

The quantities of RDAs, RAAs and RVAs available to a Confirmit Client, and their use, is defined in the Confirmit User License. For further information, contact your Confirmit Account Manager.

**Note:** RDA users cannot conduct recoding in Reportal as they do not have access to the data source.

#### 29.1.2. Giving Report Access to other Confirmit Authoring Users

You can give report access to other Confirmit Authoring users. There are four levels of access you can grant to another Confirmit user:

- **View** – the user can view the report but not perform any changes.
- **Design: Write** – the user can add changes to the report.
- **Design: Delete** – the user can add changes and delete elements from the report.
- **Design: Administrate** – the user can make any changes to the report, and grant access to other users.

To give access to a report:

1. Right-click on the report and choose **User Permissions** from the menu, or go to the **Permissions > User Permissions** menu command.

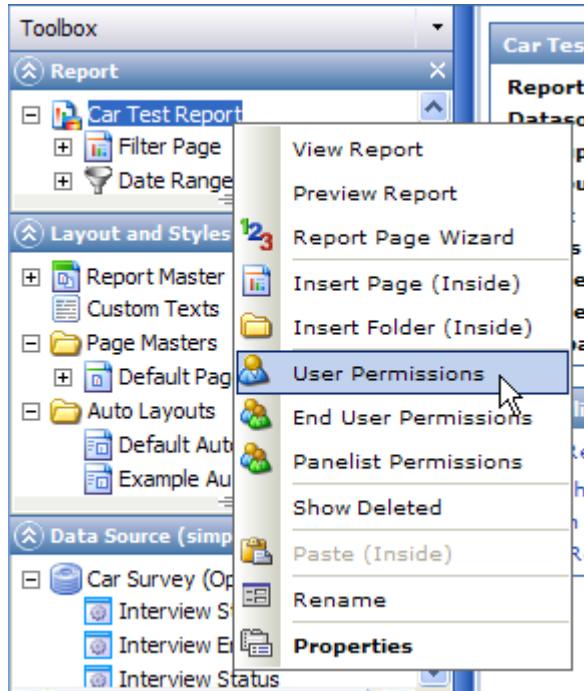


Figure 780 Selecting User Permissions in the menu

The Confrimt-user Permissions page opens .

User Name	Last Name	First Name	Permission Type
acestero	Cestero	A.J.	None
ACL	dfs	sf	None
addmodify1_mb	Jalla	Jo	None
addmodify2_mb	Jalla	Jo	None
addmodify3_mb	Jalla	Jo	None
addmodify4_mb	Jalla	Jo	None
addmodify5_mb	Jalla	Jo	None
adm	d	a	None

Figure 781 Example of the User Search list

2. Here you can search for users in your Own company or in the Other users list (the users you have added to the object permissions list by inserting their user key in the Add users box in Confirmit). In the event the list is extensive, you can add search criteria to the search fields above the columns, and you can sort the columns by clicking on the column headers. Click **Reset** to remove all search criteria and re-display the full list.

You can either give access to each user individually, or use the **Grant All** option for a group of users if they are to be granted the same level of permission. To give the same permission to all users, click the **Grant All** button in the page's toolbar. This opens the **Grant all...** overlay. Select the permission you wish to grant and click **Grant All**. Note that the selected permission will be granted to all the users who are currently listed on the page. If you wish to grant a particular permission to a sub-set of users, conduct a search such that only those users are listed before you open the **Grant all...** overlay.

### 29.1.3. How to Copy End User and Panelist Permissions

If you need to give the same end users or panelists permissions to several reports, you can copy these permissions from report to report instead of repeating the entire process for each report. To do this:

1. Open for editing, the report **into which** you wish to copy the end user or panelist permissions from another report.
2. Go to the **Permissions > Copy Permissions** menu command.

A list of all the reports to which you have access is displayed.

The screenshot shows the 'Copy Permissions - Step 1 of 2' page. At the top, there's a navigation bar with 'Home', 'Report', 'Permissions', 'User Permissions', 'End User Permissions', 'Panelist Permissions', 'Copy Permissions' (which is selected), 'Viewer Project Permissions', and 'Permission Script'. The 'Copy Permissions' tab is active. On the left, a 'Toolbox' panel contains sections for 'Layout and Styles' (Report Master, Custom Texts, Pane Masters), 'Report' (Test report, Parameters, Date Range Lists), 'Analyst' (Tables, Private, Public), and 'Data Source'. The main area features a search bar with 'Search' and 'Reset' buttons. Below it is a table with columns: Report Number, Created Date, Created By, and Company Name. The table lists 13 reports, all created by Admin, Paul, and assigned to Confirmit. The last entry is for Admin, Inaver.

Report Number	Created Date	Created By	Company Name
1371	10/02/2010 15:50:46	Admin, Paul	Confirmit
1370	10/02/2010 15:50:28	Admin, Paul	Confirmit
1369	10/02/2010 15:48:45	Admin, Paul	Confirmit
1368	10/02/2010 15:48:07	Admin, Paul	Confirmit
1367	10/02/2010 15:45:16	Admin, Paul	Confirmit
1366	10/02/2010 15:44:13	Admin, Paul	Confirmit
1365	10/02/2010 15:43:04	Admin, Paul	Confirmit
1327	02/02/2010 14:30:27	Admin, Inaver	Confirmit

Figure 782 Example of the Report list in Permissions

3. Select the report from which you want to copy the current report's permissions.
4. Click the **Next** button.

The Copy Permissions Options dialog opens as shown below.

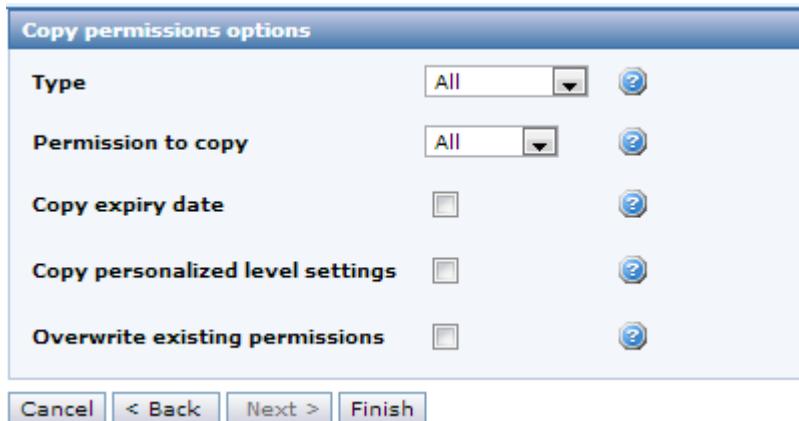


Figure 783 The Copy Options page

5. From the Type drop-down, select the type of end user permission to copy.  
This may be end user list permissions, panelist permissions, or the permissions for both sets of user types in a single operation.
6. From the Permissions to Copy drop-down, select the permissions you wish to copy. The options are All, View, Design, or Analyst.
7. Check the Copy expiry date box if you also wish to copy the expiry date.
8. Select whether you wish to copy the report base and role fields as part of the operation.  
Note that for report base, the target report must use the same personalized question as the report from which the permissions are being copied from.
9. Check the Overwrite existing permissions option if you wish any existing permissions for the report to be overwritten.
10. Click **Finish**.

The permissions are copied from the selected report to the currently open report and a confirmation message is presented on completion. Note that this summary window provides links allowing you to go directly to the permission edit windows to continue editing the permissions, or back to the report.

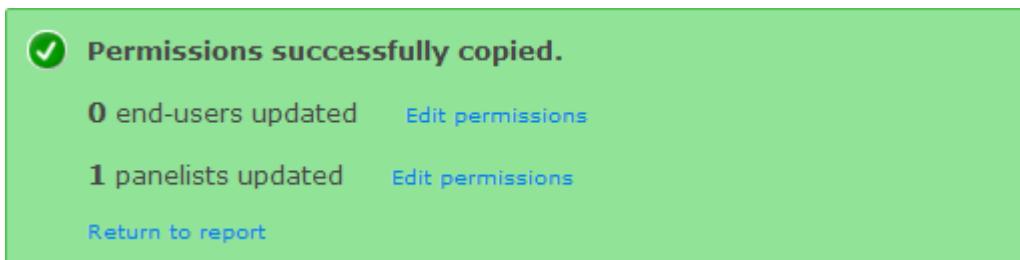


Figure 784 Example of the completion confirmation message

#### 29.1.4. Giving Report Access to End Users

There are three levels of Report End user access:

- Designer access.
- Analyst access.
- Viewer access.

To enter the End User Permissions interface, either open your report then go to the **Permissions > End user Permissions** menu command, or right-click the Report in the Report toolbox and select **End User Permissions** from the menu.

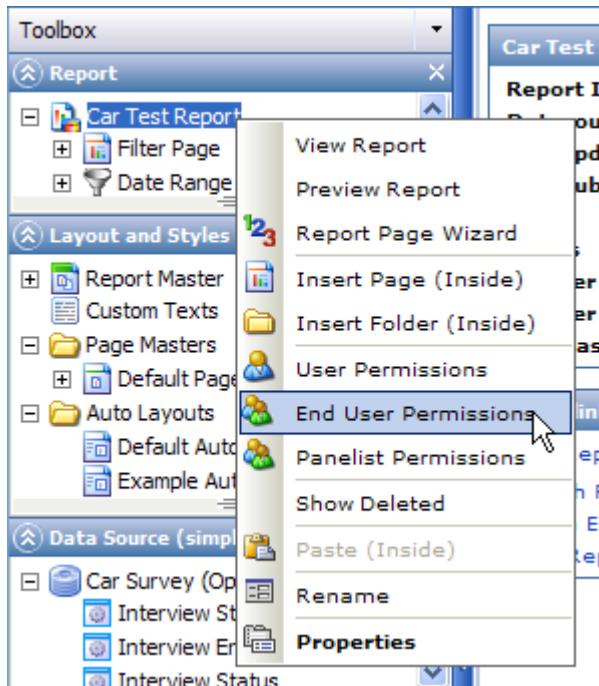


Figure 785 Selecting End user Permissions in the Report menu

The End User Lists page is displayed as shown below.

The screenshot shows the 'End User Lists' page. At the top, there's a search bar with placeholder text 'Search among available Lists and add to the tree on the left'. Below the search bar is a navigation bar with links for 'Home', 'Users', 'Upload from Respondent list', 'Copy End User Permissions', 'Edit Report', and a user dropdown 'User: AppleAdmin, Adam | Log Off'. On the left, there's a sidebar titled 'Lists' with a tree view showing 'Open list' under 'Users (11)' and 'Companies' under 'Another company (5)'. The main area contains a table with columns 'List ID', 'List Name', 'Creator', and 'Created Date'. The table lists several user lists, such as L1, L2, Test, etc., with their respective creators and creation dates.

List ID	List Name	Creator	Created Date
145342	L1	1, t	28/05/2009
2488956	L1	1_mb, T	20/10/2009
2488960	L2	1_mb, T	20/10/2009
2490903	Test	1_mb, T	20/10/2009
4667205	Test for CR	Account, EMK Test	05/01/2010
1017573	einars	Admin, Einar	27/07/2009
1004829	SZ	Admin, Ingvar	23/07/2009
1093391	SX1	Admin, Ingvar	29/07/2009
855494	List1	admin, Robert	22/07/2009
1600043	List1	admin, Robert	18/08/2009

Figure 786 The End User Lists page

Use this page to search for the list of the users to whom you wish to grant access. In the event the list of lists is extensive, you can add search criteria to the various search fields then click the **Search** button to reduce the quantity displayed. You can also sort the entries by clicking on the column headers. Click **Reset** to remove all search criteria and sorting, and display the full list.

Add the required lists to the List tree in the left frame by selecting the lists then clicking the **Add** button at the bottom of the page. If you wish to remove a list from the tree, right-click on the list name in the tree and select **Remove**.

When you expand the list folder, the User, Group and Company folders are displayed. The number of users belonging to each group or company is displayed next to each folder, as shown in the left column below.

This screenshot is similar to Figure 786 but shows a specific action. A red arrow points from the 'Add' button at the bottom of the list table to the 'Add' button in the 'Add to list tree' dialog box. Another red arrow points to the 'Open list' item in the 'Users (11)' folder in the left sidebar. The list table shows a single row selected with a checkmark, and the footer indicates '1 of 98 selected.'

Figure 787 Example of a list added to the list tree

Right-click on the items that have user numbers identified to either search for specific users, or grant access directly from the menu.

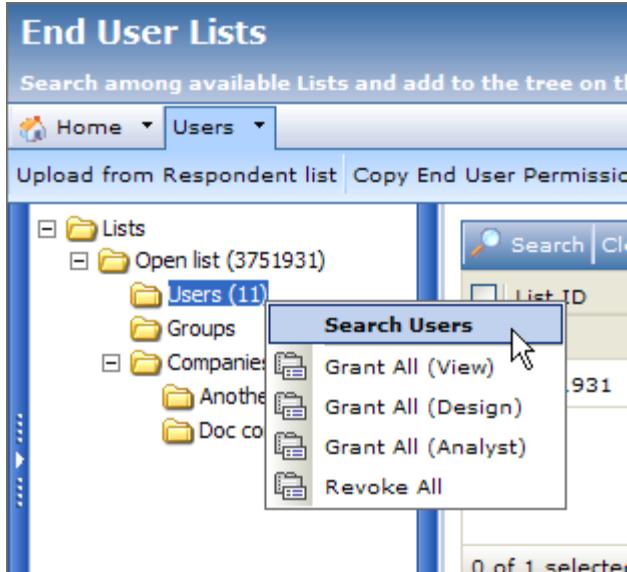


Figure 788 List Items displayed

If you click **Search Users**, all users in the current list and the number of available Viewer and Designer licenses will be displayed.

Available licenses (remaining/total) : View (57/100) Analyst (97/100) Design (93/100) - Used Export Units: 0											
Current List: DocList1											
Link: <a href="https://reportal.testlab.firmglobal.net/reportal/login.aspx?PortalId=82">https://reportal.testlab.firmglobal.net/reportal/login.aspx?PortalId=82</a> Copy to clipboard											
<a href="#">Save</a> <a href="#">Search</a> <a href="#">Reset</a> <a href="#">Upload Permissions</a> <a href="#">Grant All...</a> <a href="#"></a> <a href="#"></a>											
List ID	List Name	User Name	Last Name	First Name	Permission Type	Role	Expiry Date	Export Units	Exported	Filter	Filter Title
82	DocList1	adama	Avian	Adam	None						
82	DocList1	belindab	Brant	Belinda	None						
82	DocList1	charlesc	Chaffinch	Charles	None						
82	DocList1	davidd	Dunlin	David	None						
82	DocList1	ellene	Eagle	Ellen	None						
82	DocList1	fredf	Fulmar	Fred	None						
82	DocList1	garethg	Gadwall	Gareth	None						
82	DocList1	helenh	Hawk	Helen	None						
82	DocList1	ianni	Ivorybill	Ian	None						

Figure 789 All users displayed

- Use the Role field to allocate different roles to the various users. Then when scripting in Reportal, you can call user roles by using the `user.HasRole` method. Note that if you wish to assign multiple roles to a user, you can do so by listing the roles separated by commas (,).
- Use the Expiry Date field to specify the Expiry date for the report end users.
- Use the Export Units field to specify the number of PPT or Excel exports of the entire report each end user can order.
- Use the Filter and Filter Title fields to specify the Personalized End-User Filter expression and title, respectively (see Personalized End-User Filter on page 543 for more information).

Note that you can upload RVA permissions to the list (see How to Upload RVA Permissions on page 642 for more information).

### 29.1.4.1. How to Upload End Users from a Respondent list

You can add the respondents from the respondent list in the Data Source project to your end user list as users (see How to Upload End Users from a Respondent List on page 489 for more information).

1. When in a report, go to the **Permissions > End User Permissions** menu command.

The End User Lists page opens.

2. In this page, go to the **Users > Upload from Respondent List** command .

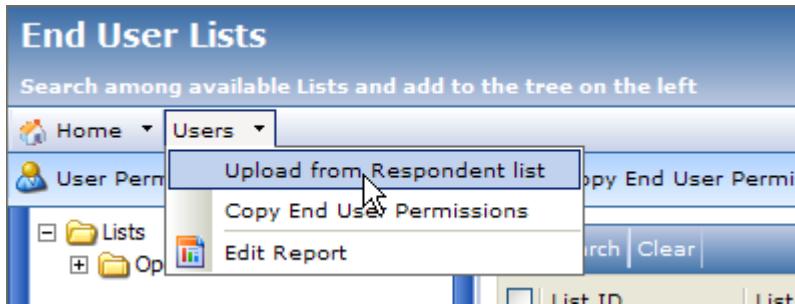


Figure 790 Uploading from Respondent list

The Upload from Respondent List page opens at step 1. From here the procedure is the same as when uploading end users for personalized reporting .

This functionality is most relevant in connection with Personalized Reports (see Exporting Personalized Reports on Hierarchy on page 506 for more information).

### 29.1.4.2. How to Upload RVA Permissions

When you have a list of end users attached to a project, you can also upload Report Viewer Access permissions for those end users. To do this:

1. Open the relevant project.
2. Go to the **Permissions > End User Permissions / Panelist Permissions** menu command as appropriate.
3. Open the list of users and double-click on the **Users** folder.

The End User Permissions / Panelist Permissions page opens.

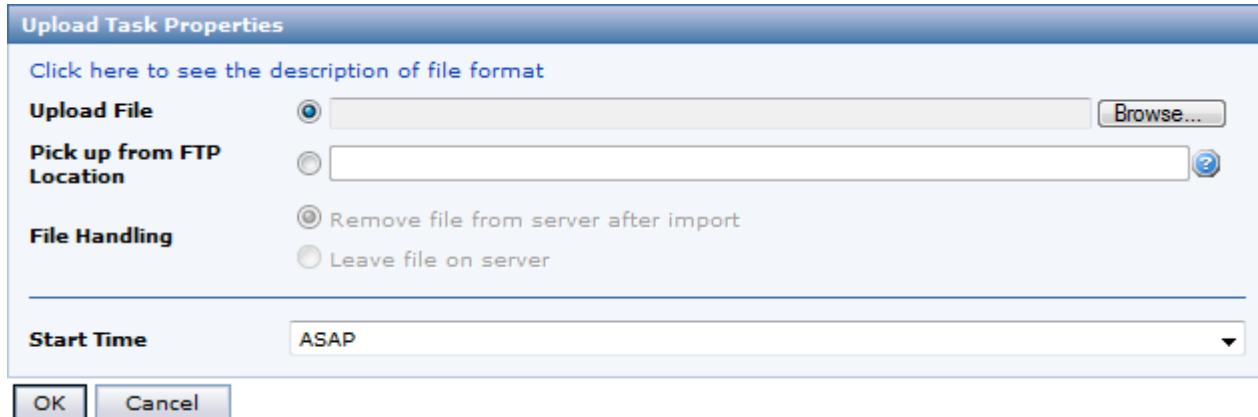
A screenshot of the 'End User Permissions / Panelist Permissions' page. On the left, there's a sidebar with 'Lists', 'DocList1', 'Users (21)', 'Groups', and 'Companies'. The main area shows a table with columns: List ID, List Name, User Name, Last Name, First Name, Permission Type, Role, Expiry Date, Export Units, Exported, Filter, and Filter Title. The table contains data for 82 users in DocList1, including Adam, Brant, Charles, David, Ellen, Fred, Gareth, and Helen. There are buttons for 'Save', 'Search', 'Reset', 'Upload Permissions', and 'Grant All'. At the bottom, there's a toolbar with icons for search, export, and refresh.

List ID	List Name	User Name	Last Name	First Name	Permission Type	Role	Expiry Date	Export Units	Exported	Filter	Filter Title
82	DocList1	adama	Avian	Adam	None ▾						
82	DocList1	belindab	Brant	Belinda	None ▾						
82	DocList1	charlesc	Chaffinch	Charles	None ▾						
82	DocList1	davidd	Dunlin	David	None ▾						
82	DocList1	ellene	Eagle	Ellen	None ▾						
82	DocList1	fredf	Fulmar	Fred	None ▾						
82	DocList1	garethg	Gadwall	Gareth	None ▾						
82	DocList1	helenh	Hawk	Helen	None ▾						

Figure 791 Example of an End User Permissions list

4. Click the **Upload Permissions** button.

The Upload Task Properties dialog opens.



**Figure 792 The Upload Task Properties dialog**

**Note:** The FTP Pick up functionality is a chargeable add-on. If your company has licensed the add-on then the option will be available in the window. If you wish to use this functionality and it is not available to you, contact your account manager.

**Note also that the Panelist Permissions file must be located in a folder called PanelistPermissionsUpload on the FTP server.**

The remainder of this process is the same as for uploading end users (see How to Upload End Users from a File or FTP on page 492 for more information).

Note that the end user permissions file must be prepared as a tab-delimited text file, with column headings in the first row. The end user permissions data file must contain some or all of the columns listed below. Ensure the spelling of the column names is exactly the same as the names in the left column of this table. These texts are case-sensitive.

Field Name	Description	Required?
username	A unique user ID within the company that the user will be connected to. Maximum number of characters is 50	Yes
permissiontype	Permission type can be: V = Viewer access Y = Analyst access W = Designer access Blank = no access permission	No (but if it is not included, no end users will have access to the report).
role	The role that the end user is to be assigned	No
exportunits	Number of export units assigned to the end user	No
expirydate	Date of expiry for report access. Dates must be in the format YYYYMMDD	No
codes	The codes of the units or answers in the personalized filter the end user should have access to. If providing more than one code, the codes must be separated with commas.	No
table	If you are using the codes field to assign personalized filter/report base, this column should be included. It is the name of the table in the database designer holding the codes.	No

The upload file could look as below:

```

RVAUploadList.txt - Notepad
File Edit Format View Help
username permissiontype codes
aa V BALeader
bb V BALeader
cc Y
dd W
ee W BALeader
ff Y

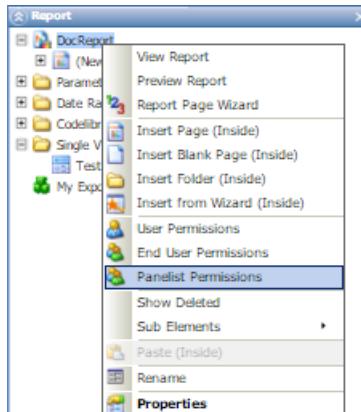
```

*Figure 793 Example of an RVA permissions .txt file for upload*

### 29.1.5. Giving Report Access to Panelists

You can give panelists access permission to reports. To do this:

1. Either open your report then go to the **Permissions > Panelist Permissions** menu command, or right-click the Report in the Report toolbox and select **Panelist Permissions** from the menu.



*Figure 794 Selecting Panelist Permissions in the Report menu*

The Panelist Permissions page opens. If a panel is not selected then you will have to select one.

PanelistId/Respid	Username	Name	Permission Type	Role	Expiry Date	Export Units	Exported	Filter	Filter Title
=					=		=		

No items available

*Figure 795 The Panelist Permissions page*

2. In this case, click **Select Panel**.

A new window, listing all the panels to which you have access, opens.

3. Select a panel and click **OK**.

Reportal returns to the Panelist Permissions page, with the selected panel displayed.

Current Panel: Doc Panel (p1847909718) Available licenses (remaining/total) : View (254/1000) Analyst (78/100) Design (39/75) - Used Export Units: 0 Link: <a href="https://reportal.euro.confirmit.com/reportal/login.aspx?PortalId=p1847909718">https://reportal.euro.confirmit.com/reportal/login.aspx?PortalId=p1847909718</a> Copy to clipboard									
<input type="button" value="Save"/> <input type="button" value="Search"/> <input type="button" value="Reset"/> <span style="float: right;"> <input type="button" value="Remove Panel"/> <input type="button" value="Upload Permissions"/> <input type="button" value="Grant All..."/> </span>									
PanelistId/Respid	Username	Name	Permission Type	Role	Expiry Date	Export Units	Exported	Filter	Filter Title
1	AdamApple	Adam Apple	None ▾				0		...
2	LenaBrown	Lena Brown	None ▾				0		...
3	JohnSmith	John B. Smith	None ▾				0		...
4	CindyClark	Cindy Clark	None ▾				0		...

**Figure 796 Example of the Panelist Permissions page with a panel selected**

4. You can now allocate permissions to panelists individually or to all simultaneously.

To give the same permission to all panelists, click the **Grant All** button in the page's toolbar. This opens the **Grant all...** overlay. Select the permission you wish to grant and click **Grant All**. Note that the selected permission will be granted to all the panelists who are currently listed on the Permissions page. If you wish to grant a particular permission to a sub-set of panelists, conduct a search such that only those panelists are listed before you open the **Grant all...** overlay.

The permission control functions in the same way as the interface for end users described above.

Panelists can log into Reportal using the project number of the panel as the portal id, and the same username and password as they use for access to the panelist portal.

#### 29.1.5.1. How to Upload Panelist Permissions

In addition to assigning permissions to the panelists manually via the Panelist Permission interface, you can also upload a file of panelist permissions. This file must be a tab-delimited ASCII file with column headers in the first row. The following column headers are used in this file:

Field	Description
username	If you are not using <b>panelistid</b> or <b>responseid</b> (see below), this field is required, and must be the in the first column in the tab-delimited ASCII file. This field uniquely identifies the panelist.
panelistid	If you are not using <b>username</b> or <b>responseid</b> , this field is required, and must be the in the first column in the tab-delimited ASCII file. This field uniquely identifies the panelist.
responseid	If you are not using <b>username</b> or <b>panelistid</b> (see above), this field is required, and must be the in the first column in the tab-delimited ASCII file. This field uniquely identifies the panelist.
permissiontype	Permission type can be V (for view – viewer access), Y (for Analyst) or W (for write – designer access). Optional, but if not included, no panelists will have access to the report.
role	The role that the panelist is to be assigned. Optional.
exportunits	Number of export units assigned to the end user. Optional.
expirydate	Date of expiry for report access. Dates must be in the format YYYYMMDD. Optional.

codes	The codes of the units or answers in the personalized filter the panelist should have access to. If providing more than one code, the codes must be separated with commas. Optional.
table	If you are using the codes field to assign personalized filter/report base, this column should be included. It is the TABLE ID of the table in the database designer holding the codes.

**Important**

**username, panelistid or responseid provide a way to uniquely identify a panelist. One, and only one, of the three options must be used.**

1. To upload a file, click **Upload Permissions**.

The Upload Properties window opens.

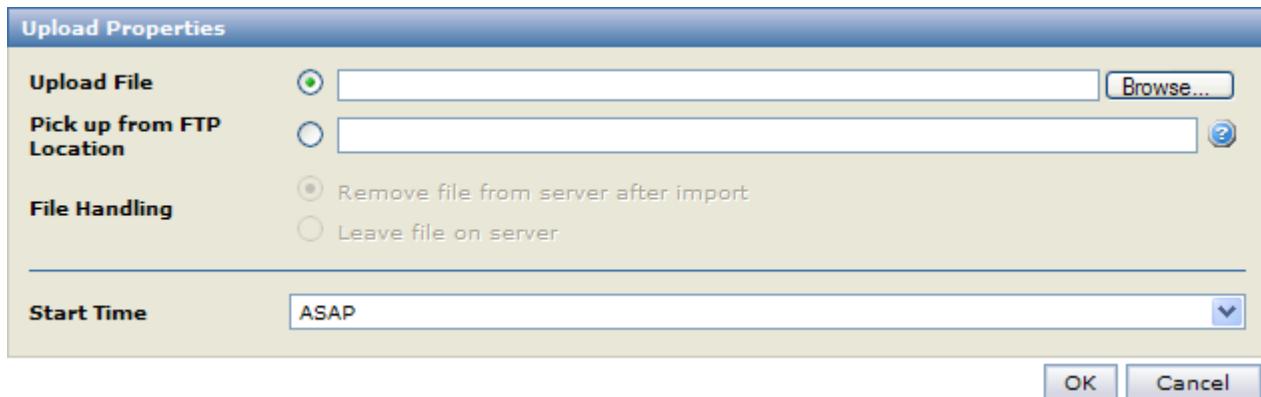


Figure 797 The Upload Properties window

Here you can either upload a file from your network, or if your company has licensed the FTP add-on you can pick up a file from the FTP location.

**Note:** The FTP Pick up functionality is a chargeable add-on. If your company has licensed the add-on then the option will be available in the window. If you wish to use this functionality and it is not available to you, contact your account manager.

Note also that the Panelist Permissions file must be located in a folder called PanelistPermissionsUpload on the FTP server.

2. A) To upload a file, select **Upload File** and either type the path to the file into the field or click **Browse** and browse to the file.  
B) To pick up a file from the FTP location, select **Pick up...** then type the name of the file into the field. Select whether you wish to copy the file from the FTP server (leaving it on the server) or move it (delete it from the server).
3. Select when you wish the upload operation to commence.  
Note that if you schedule for later execution you can set the task to recur at preset intervals such that the panelist permissions are kept up-to-date.
4. On completion, click **OK**.

The task commences as specified and the panelist permissions are uploaded. Once the permissions file has been uploaded, they can be edited singly or together as described above.

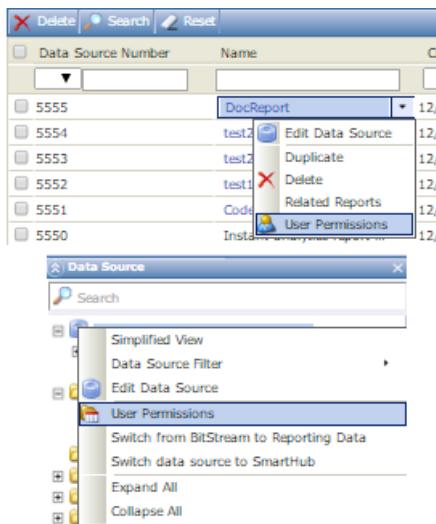
## 29.2. Access Control on Data Sources

You can give access to Data Sources only to Confirmit users. Data Sources have five levels of access:

- **None** - the user has no access to the data source.
- **Read** - the user can view the data source but can not change it in any way. A user must have at least Read access to be able to create a report using the data source.
- **Write** - the user can make changes to the data source and can create new segments, banners etc. but cannot delete data.
- **Delete** - the user can make changes to the data source, create new segments, banners etc. and can delete data.
- **Administristrate** - the user has full administrative rights to the data source.

To give access to a user:

1. Go to the Data Source List and select the data source you wish to provide access to, or open the project and go to the Data Source toolbox.
2. Right-click on the data source and select **User Permissions** from the drop-down menu.



**Figure 798 Selecting User permissions in the Data Source menus**

The Confirmit User Permissions page opens. This contains a searchable list of all the users registered for your company. Here you can either give access to each user individually, or use the **Grant All** option for a group of users if they are all to be granted the same level of permission.

3. To give access to a user, click the down-arrow beside the Permission Type field for the appropriate user and select the desired permission level.

To give the same permission to all users, click the **Grant All** button in the page's toolbar. This opens the Grant all... overlay. Select the permission you wish to grant and click **Grant All**. Note that the selected permission will be granted to all the users who are currently listed on the Permissions page. If you wish to grant a particular permission to a sub-set of users, conduct a search such that only those users are listed before you open the Grant all... overlay.

4. On completion, save the changes.

**Note: RDA users cannot conduct recoding in Reportal as they do not have access to the data source.**

### 29.3. Access Control on Templates

You can give access to Reportal templates only to Confirmit users. Templates have the same four levels of access as Reportal reports: View, Design: Write, Design: Delete and Design: Administristrate.

To give access, enter a template and go to the **Template > User Permissions** menu command.

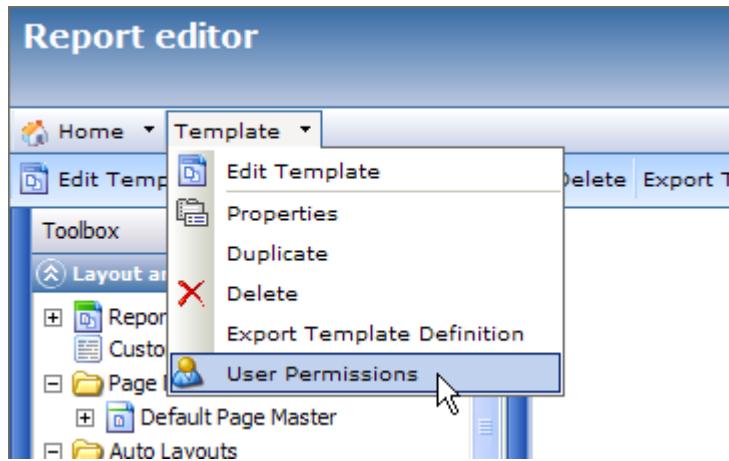


Figure 799 Selecting the **Template > User Permissions** menu

A search list similar to that described in section Giving Report Access to other Confirmit appears.

Here you can either give access to each user individually, or use the **Grant All** option for a group of users if they are to be granted the same level of permission. To give the same permission to all users, click the **Grant All** button in the page's toolbar. This opens the **Grant all...** overlay. Select the permission you wish to grant and click **Grant All**. Note that the selected permission will be granted to all the users who are currently listed on the page. If you wish to grant a particular permission to a sub-set of users, conduct a search such that only those users are listed before you open the **Grant all...** overlay.

## 30. The Data Source

The Data Source is the source of the information that is to be used in the report's tables and charts. The source can comprise one or more projects. The data source on which the report is based is displayed in the Data Source toolbox (see Toolboxes on page 28 for more information).

Factor scores for the responses used in a factor analysis can be created and added as variables in the Data Source toolbox. These scores can be used for reporting in aggregate tables and in linear regression. The scores are numerical, and are recalculated when the project Reportal BitStream files are updated. Note that any additional new responses that satisfy the selection criteria will be given factor scores.

**Note:** This section is only relevant for users holding a Confirmit Authoring license. Users with access only to Confirmit Reportal Designer do not have the access permission necessary to set up and edit data sources.

**Note:** The "complete" data source can be fairly complicated. Reportal therefore allows you to elect to display this in Simplified mode. This mode hides all survey logic but retains the questions, folders etc. allowing you to concentrate on the important parts of the data source. To activate the Simplified mode, right-click on the data source (the top item in the Data Source toolbox) and select Simplified View. When this view is selected, the text (simplified) is displayed in the Data Source toolbox header. To see the full Data Source, right-click on the data source and select Simplified View again to deselect.

### 30.1. The Data Source List

The Data Source List lists all the data sources that are available to you. To open this list:

1. Go to the **Home > Data Source List** menu command.

The Data Source List opens.

The screenshot shows the 'Data Source List' interface. At the top, there is a navigation bar with links for Home, New, Recent, Report List, Template List, Data Source List (which is highlighted), Import, Deleted Reports, and License Overview. On the right side of the header, there is a user profile for 'User: Adam Apple' and a 'Log Off' button. Below the header, there is a search bar with fields for 'Delete' and 'Search'. The main area displays a table of data sources. The columns are: Data Source Number, Name, Created Date, Created By, and Last accessed. There are two entries in the list:

Data Source Number	Name	Created Date	Created By	Last accessed
886	Import of Recoding Report	05/11/2009 09:36:23	nigelb	05/11/2009 11:04:40
873	Car Survey (Optimized)	02/11/2009 12:58:58	Bennett, Nigel	02/11/2009 12:58:58

**Figure 800 Example of the Data Source List**

In this page you can search for a particular data source using the search criteria fields above the list (see Searching in Lists on page 37 for more information), and you can create a new data source .

From this page you can edit, duplicate or delete a selected data source, and set related reports and user permissions for it. To access this functionality, right-click on the appropriate Data Source Name or click on the down-arrow beside the name to open the drop-down menu.

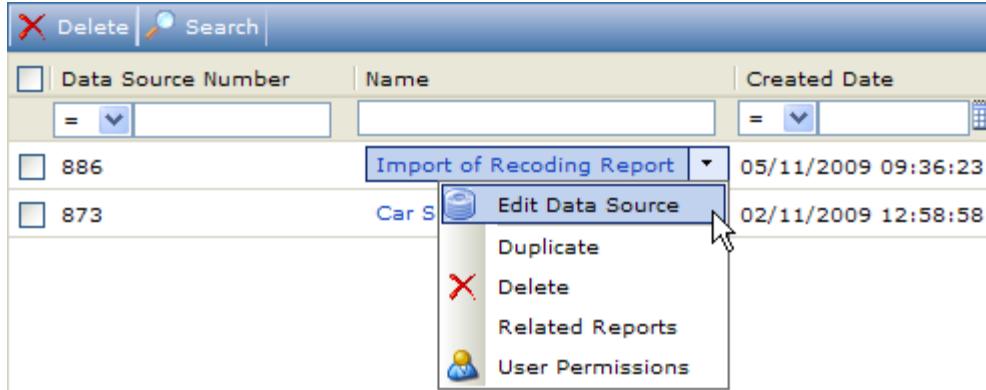


Figure 801 The Data Source drop-down menu

## 30.2. How to Create a New Data Source

You can create a new Data Source either as a part of the “Report Wizard” or as a separate process by using the “Data Source Wizard”. When you use the “Report Wizard,” the data source will be assigned the same name as the report.

**Note:** When creating or editing a datasource based on a professional panel, only one professional panel can be in the datasource, and the panel must have one or more BitStream variants (see The Report Properties > General Tab on page 110 for more information).

To use the Data Source Wizard:

1. Go to the **Home > Data Source List** menu command and click the **New Data Source** button in the toolbar, or click **Data Source** in the Create New column.

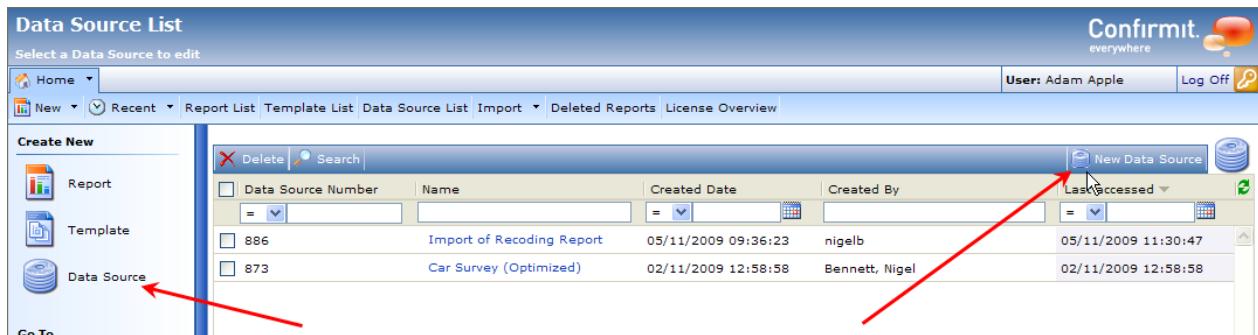
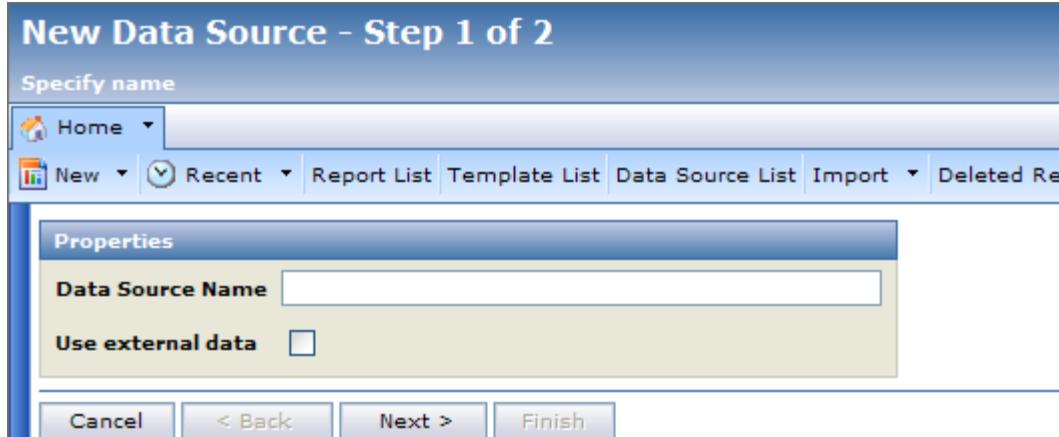


Figure 802 Creating a new data source

The New Data Source window opens at step 1 .



*Figure 803 The New Data Source - Step 1 window*

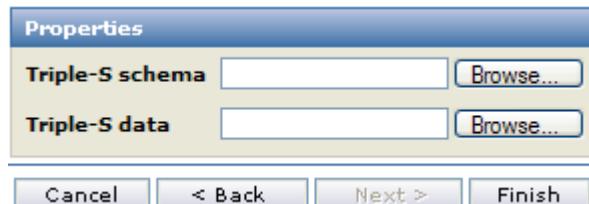
2. Type a name for the data source into the Data Source Name field.

**Note:** The Data Source name can be a maximum of 100 characters long.

If you wish to take the data from an external source, check the **Use external data** box.

3. Click **Next**.

The Step 2 page opens. If you have selected the **Use External Data** box, then a file browser dialog opens.



*Figure 804 The file upload properties dialog*

4. Browse to and select the data files you wish to upload.

**Important**

The Triple-S Schema file must be either xml or zip, while the Triple-S Data file must be asc or zip.

5. Click **Finish**.

If the Use External Data box is not checked, then step 2 opens with list of the available projects.

The screenshot shows a search interface titled 'New Data Source - Step 2 of 2'. At the top, there's a header bar with 'Home', 'User: Adam Apple', and 'Log Off'. Below the header is a navigation menu with 'New', 'Recent', 'Report List', 'Template List', 'Data Source List', 'Import', 'Deleted Reports', and 'License Overview'. A search bar labeled 'Search' is followed by dropdown menus for 'Projects / Panels' and 'Projects only'. The main area is a grid table with columns: ID, Name, Created Date, Created By, and Keywords. The grid contains five rows of project data:

ID	Name	Created Date	Created By	Keywords
p2795220	Another Car Survey	05/11/2009	Apple, Adam	
p2661497	Car Survey (Optimized)	02/11/2009	Apple, Adam	
p2660848	Newspaper Survey for CAPI - Optimized	02/11/2009	Apple, Adam	
p1892737	Getting Started Reportal - Optimized	02/09/2009	Admin, Nigel	
p1117589	Hierarchy	31/07/2009	Apple, Adam	

**Figure 805 Step 2 in the procedure - searching for projects and panels**

In the event the list is extensive, you can use the search criteria fields across the top of the list to narrow the search. The search list functionality is explained in Search Lists. You can search for projects in your "Favorites" list or in the list of all projects to which you have access. You can also search for panel projects.

6. Select the required project(s) and click **Finish**.

In both cases, the Edit Data Source page opens. This contains an overview of the projects in the data source. Note that you also access this page when you choose to edit an existing data source. You can therefore modify your data source at any time, add new projects, remove projects, and set up new relations.

The screenshot shows the 'Edit Data Source' page. At the top, there's a header bar with 'Home', 'Data Source', 'User: Adam Apple', and 'Log Off'. Below the header is a navigation menu with 'Edit Data Source', 'Properties', 'Duplicate', 'Delete', 'Related Reports', and 'User Permissions'. On the left, there's a sidebar with a tree view showing 'New Data Source 1' and 'Newspaper Survey for CAPI - Optimized'. The main area is a search interface with a grid table similar to Figure 805. The grid contains the same five rows of project data. Below the grid, it says '0 of 5 selected.' and shows a letter selection dropdown from 'All' to 'z'. At the bottom are buttons for '<< Add' and '<< Replace'.

**Figure 806 Example of the Edit Data Source page**

7. To add more projects, select the project in the list and click the **Add** button (see How to Add Another Data Source to a Report on page 653 for more information).

To remove projects from the Data Source, right-click the project in the Data Source tree and select **Delete**.

If you delete a project from the Data Source, everything that has been set up in the report for that data source (for example banners, recordings, text changes etc.) will be lost. Any new project that you may add to the Data Source will be given a different Data Source ID. In addition, tables that use variables from the deleted project will not function for the new project unless you manually set the Data Source ID on the new project to be the same as the id of the deleted project.

If a replacement project is almost identical to the one that has been deleted, you may wish to keep the content. In this case use **Replace** to replace a project in the data source. A dialog then appears giving you the option of keeping or discarding any changes that may have been made to banners, recordings, text etc (see Duplicating a Report on page 40 for more information). The new project will be given the Data Source ID of the old one.

### 30.3. How to Add Another Data Source to a Report

A report can use more than one data source.

**Note:** When creating or editing a datasource based on a professional panel, only one professional panel can be in the datasource, and the panel must have one or more BitStream variants (see The Report Properties > General Tab on page 110 for more information).

To add a data source to a report:

1. Open the report in Reportal.
2. Go to the **Report > Edit > Edit Data Source** menu command.  
The Edit Data Source page opens.
3. In the list of available data sources, select the source you wish to add to the report, then click **Add**.  
The selected source is added to the Data Source Tree.
4. Return to the **Home** menu command to open the Welcome page and Recent Reports list, then re-open the report you wish to work with.

In the Data Source toolbox, the first row is now **Select Root**. While building your tables, click the down-arrow beside the field and select the source you wish to use. Remember to check the Override Other Projects boxes in the variables' Properties pages (see Override Other Projects on page 212 for more information).

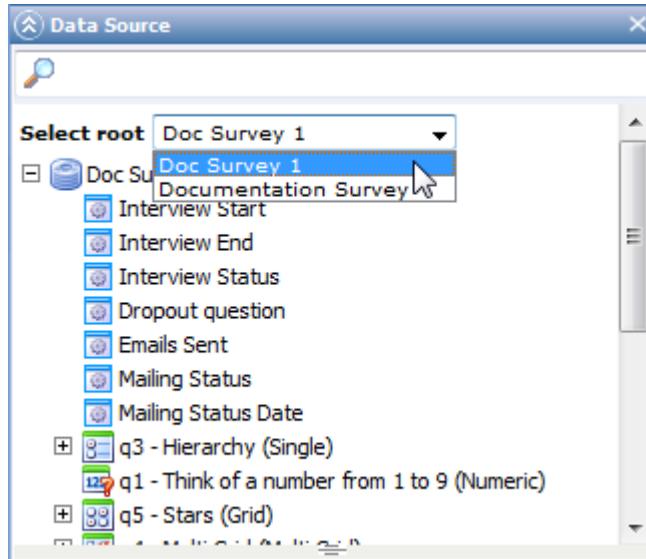


Figure 807 Selecting the data source to be used

To remove a data source, repeat steps 1 and 2, then right-click on the data source you wish to remove, select **Delete**, and confirm the deletion.

## 30.4. How to Replace a Data Source

To replace a report's data source:

1. Open the report in Reportal.
  2. Go to the **Report > Edit > Edit Data Source** menu command.
- The Edit Data Source page opens.
3. In the Selected Data Source column (left column), click on the data source that is to be replaced to select it.
  4. In the Data Source List, select the replacement data source.
  5. Click **Replace**.

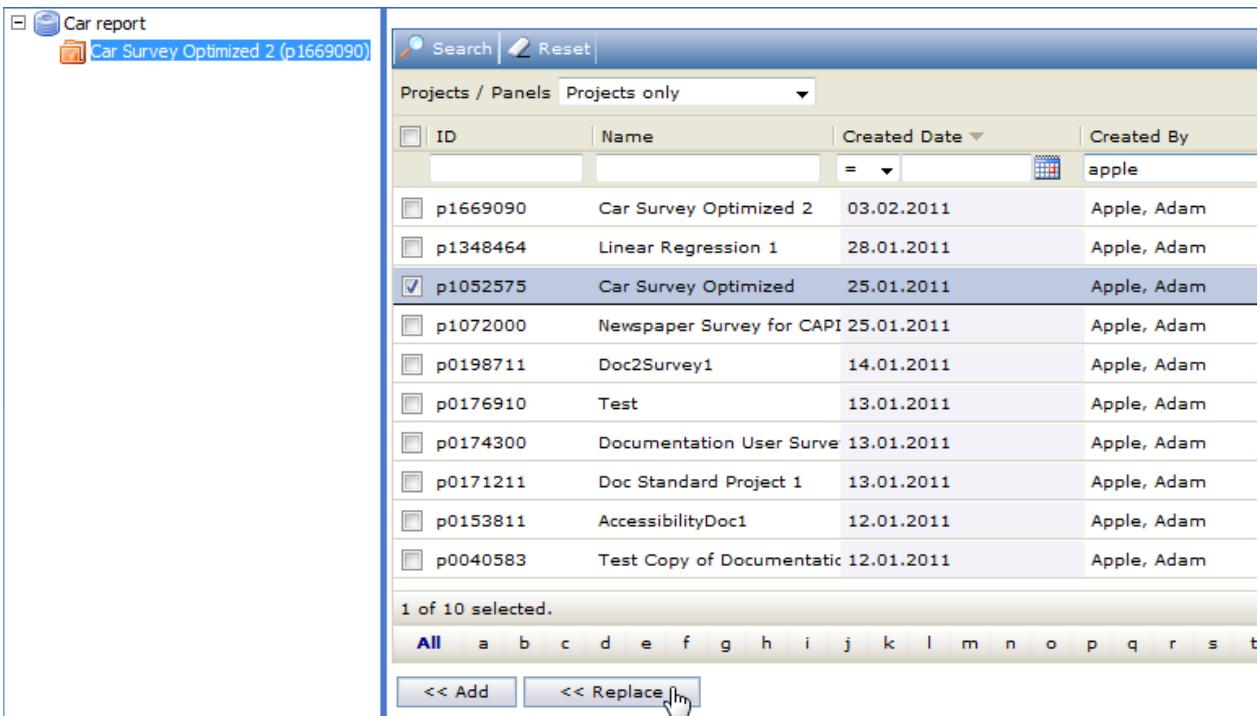


Figure 808 Replacing the data source for a report

The Keep Existing Project Settings overlay opens.

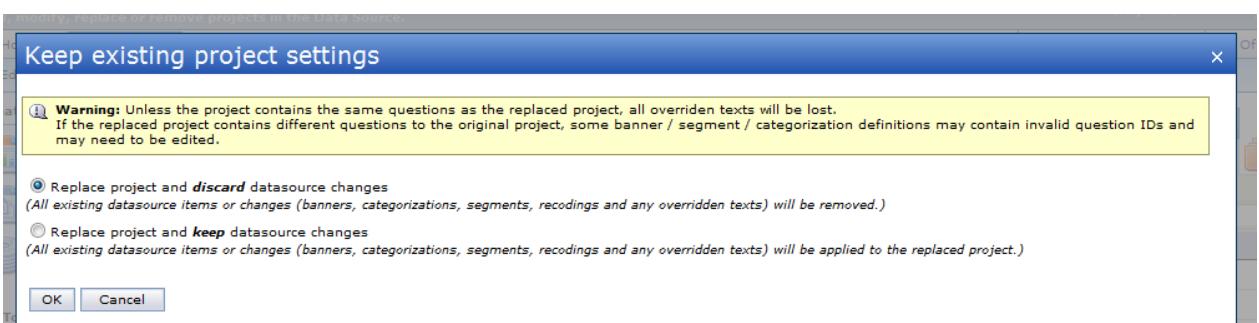


Figure 809 The Keep Existing Project Settings overlay

Here you can select whether you wish to keep any changes you may have made to the project.

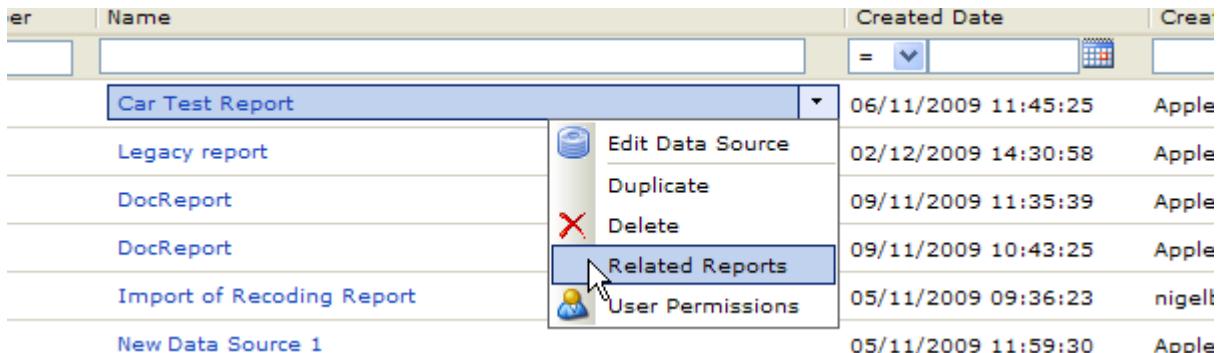
- Select the appropriate button and click **OK**.

The replacement is completed and you are returned to the Edit Data Source page.

## 30.5. Related Reports

To display an overview of all reports that use a data source:

- In the **Home** menu, go to the Data Source List.
- Find the desired data source, right-click on it and select the **Related Reports** menu command.



A screenshot of the Confirmit Data Source List interface. The table shows various data sources with columns for Name, Created Date, and Created By. A context menu is open over the row for 'Car Test Report'. The menu options are: Edit Data Source, Duplicate, Delete, Related Reports (which is highlighted with a blue background), and User Permissions. The 'Related Reports' option is being clicked by a cursor.

er	Name	Created Date	Created By
		=	
	Car Test Report	06/11/2009 11:45:25	Apple
	Legacy report	02/12/2009 14:30:58	Apple
	DocReport	09/11/2009 11:35:39	Apple
	DocReport	09/11/2009 10:43:25	Apple
	Import of Recoding Report	05/11/2009 09:36:23	nigel
	New Data Source 1	05/11/2009 11:59:30	Apple

Figure 810 Displaying the Related reports

A list of the reports that use the selected data source is be displayed. Here you cannot delete a data source that is used by a report.

## 30.6. The Project ID

If you have built report pages that include tables where variables from a project in the Data Source are used, and that project is removed from the data source, the tables will fail because the variables required to generate them will be missing. An error message will be displayed, stating that a project in the data source with a specific internal ID is missing. If you want to reintroduce the project, you can add it in the data source. To recreate the links between the variables and projects, you must right click the project in the Data Source, and specify the ID.

## 30.7. Multi-project Data Source

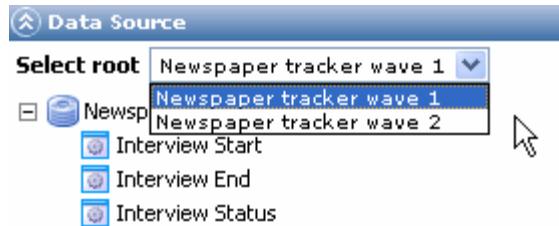
**Note:** Multi Project Reporting is designed to allow reporting across a limited number of projects that are closely related, for example trackers, repetitive surveys and projects using the same sample. Reporting on non-related projects or reporting on a large number of projects (more than 6), might cause errors in the reporting, or tasks to abort. Such use is not permitted, and Confirmit will not be liable to the Client in respect of any problems caused by such unauthorized use.

If you include more than one project in the data source list, you can set them up in three different ways. See the following sub-sections:

### 30.7.1. As Independent Projects without any Relations

If you add projects to the data source without placing them in any UNION or JOIN folders, you will be able to build report pages with items from different projects into the same report, but you will not be able to run cross-tabs using questions from different projects.

The example in the figure below shows a Data Source with two unrelated projects. In the Data Source toolbox this will be displayed as a drop-down, where you choose which of the surveys' questionnaire trees is to be displayed:



**Figure 811 The Data Source Toolbox**

You can switch between the different projects while building your report.

### 30.7.2. Joining Projects

If you are reporting on questions in several different projects and all the projects have the same respondents, you should **join** your projects. Typical scenarios could be if you had different waves of an internal survey going to the same employees, or if you had a panel survey and wanted to report on several of the projects in which the panelists have participated.

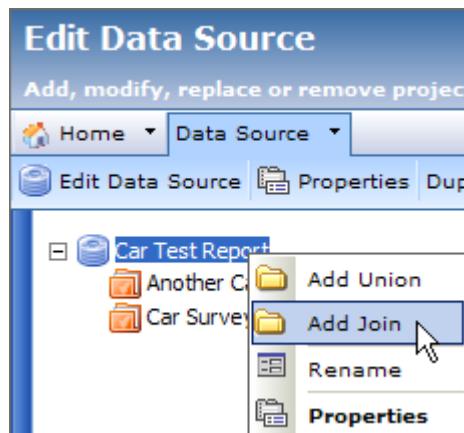
**Note: If one or more of the projects is using BitStream Files as the data source, the projects cannot be joined.**

For each of these scenarios, you need a master survey and a unique field that identifies the respondents in all of the surveys, for example, a panelist ID or an employee/customer number or email address.

To set up a join between projects in the Data Source Designer:

1. Right-click the top node in the Data Source and select **Add Join**.

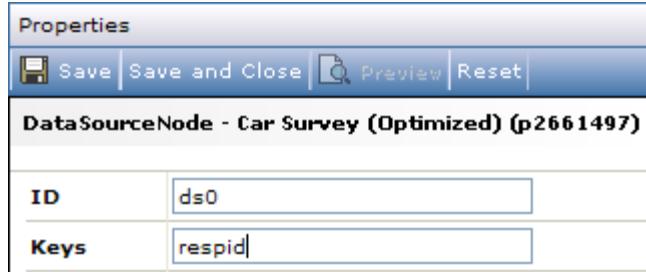
A new Join is inserted.



**Figure 812 Adding a JOIN to the Data Source**

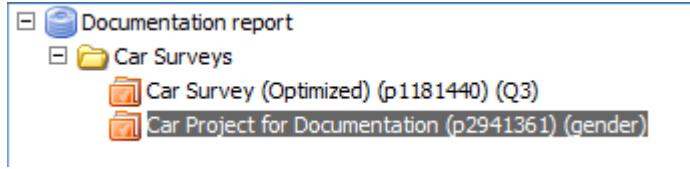
2. Right-click on the Join and choose **Rename**, or select it and press the **F2** key on your keyboard, and give the Join a logical name.

You can now move projects into the folder. For each project added, you must specify the key – the unique field used to identify the respondents. To do this, right-click on the project and select **Properties**:



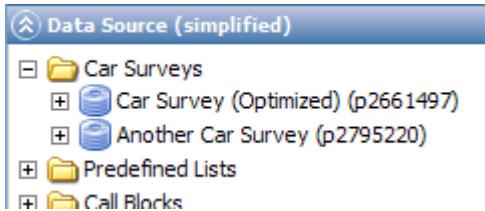
*Figure 813 Specifying the Join key*

On completion, the Data Source tree will look something like the example below:



*Figure 814 Example of a Join between projects*

In the Data Source toolbox, the Data Source will be displayed as in the example below:



*Figure 815 The Data Source Toolbox for the example*

By expanding each project, you gain access to all of the questions within their questionnaires. All of these questions can now be used to create cross-tabs across projects. The unique key field will be used to identify the respondents within the different surveys.

### 30.7.3. Union between Projects

A **Union** is used if you have different respondents responding to several waves of a survey that has been set up as separate projects. An example of this would be tracker surveys. When using UNION, the projects must be identical. You will not be able to report on questions that differ (in question IDs or answer lists) between the different surveys, only on the questions that are the same.

1. Add a Union in the same way as a Join (see Joining Projects on page 656 for more information); right-click the Data Source and select **Add Union**.

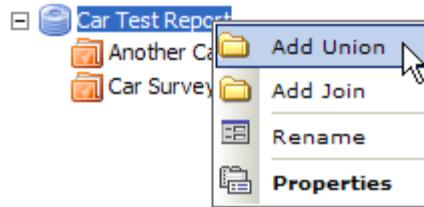


Figure 816 Adding a Union

2. Rename the union by right-clicking on it and choosing **Rename** or by selecting the union and pressing the **F2** key.
3. Add projects to the union as required.

There are no properties to set on the projects in a union.

In the Data Source Toolbox, the union will look as in the figure below:

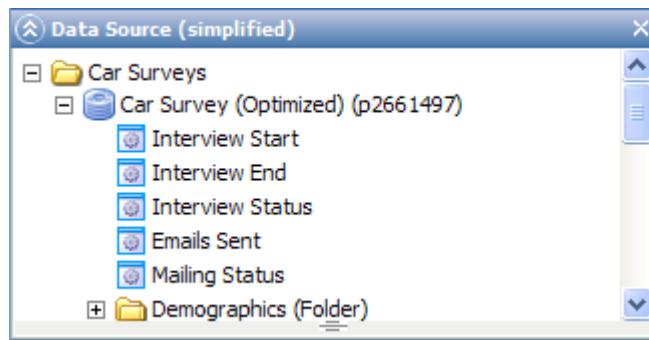


Figure 817 The Data Source toolbox

Only one of the projects will be visible in the Data Source tree because the data in the other projects is automatically included in the queries.

#### 30.7.4. Combining Independent Projects, Unions and Joins in the same Data Source

You can combine independent projects, unions and joins in the same database, such as in the example below:

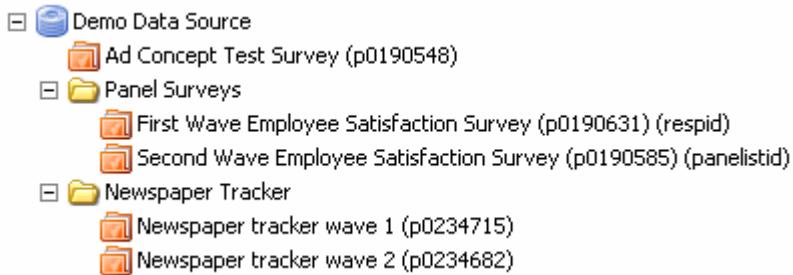


Figure 818 A Data Source with union, join and independent project

In the Data Source toolbox you can use the Select root drop-down menu to switch between the different projects. Note that your tables will fail if you try to cross-tab elements from the different parts. Only the questions inside the projects in the Join, and identical questions inside the Union can be set up in cross-tabs.

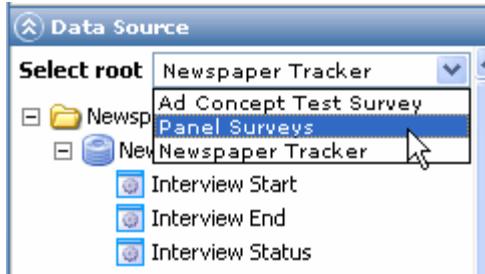


Figure 819 The corresponding Data Source toolbox

## 30.8. Editing Question and Answer Texts in the Data Source Toolbox

You can change the answer text on any item in the Data Source in the Data Source toolbox. This is a great advantage when you wish to display shorter or different labels in the report, or if you want to remove script code that you inserted for response piping or HTML codes which you used for formatting in your questionnaire. To change the texts:

1. Double-click the question in the Data Source or right-click on it and choose **Edit**.

Editable text boxes for text, answer and scale tabs for the question are displayed.

Answers - English			
Precode	Value	Other	Color
(Predefined List)	Car brands		
98	<code>^f('q5_98_other')^</code>		
99	I have no favorite.		

Answers - Norwegian			
Precode	Value	Other	Color
(Predefined List)	Car brands		
98			
99			

Figure 820 Modifying the answer list for a question

2. Modify the text as required in the text boxes.
3. Save the changes.

When the changes are saved, the changed field is colored yellow to indicate that it has been changed.

These changes will not affect the project. You can even go to "Report Properties" and add new languages, and then enter text for those languages in the Data Source. This means that you can create reports in languages other than those in which the survey was originally conducted.

As an example, the figure above shows the answer list for a single question where the answer to an "Other specify" text box is piped in. In reporting, you may wish to replace that code with the text **Other**. Simply enter the text you wish to use in your report, into the field, and click **Save**. The modified field will now be displayed in yellow.

Click the **Undo** arrow to the right of the field to revert the label to its original text.

The screenshot shows the 'Answers' tab selected in the top navigation bar. Below it, a table titled 'Answers - English' lists three items:

Precode	Value	Other	Color
(Predefined List)	Car brands		
98	Other	<input type="button" value="↶"/>	<input type="text"/> <input type="checkbox"/>
99	I have no favorite.		<input type="text"/> <input type="checkbox"/>

Figure 821 Example of a modified answer list item

Note: To be able to edit scale/list elements, codes must be defined for these scales/lists in the questionnaire.

## 30.9. Using Colors for Reporting

You may wish to specify a set of colors for your answer list so that whenever you report on that answer list, these colors will be used instead of the palette specified by the selected style.

For example, the figure below shows a scale where "standard colors" are used to specify the range of colors to be used for the various answer options:

The screenshot shows the 'Scales' tab selected in the top navigation bar. Below it, a table titled 'Scales - English' lists six items:

Precode	Value	Other	Color
1	1		red <input type="color" value="red"/> <input type="checkbox"/>
2	2		pink <input type="color" value="pink"/> <input type="checkbox"/>
3	3		yellow <input type="color" value="yellow"/> <input type="checkbox"/>
4	4		palegreen <input type="color" value="palegreen"/> <input type="checkbox"/>
5	5		green <input type="color" value="green"/> <input type="checkbox"/>
6	Don't know		tan <input type="color" value="tan"/> <input type="checkbox"/>

Figure 822 Specifying colors for reporting

Colors can also be applied to predefined lists and scales, but only if specific codes are assigned in the questionnaire. This is because the predefined list and scale options may be used in different positions in the answer lists in different questions. In this case, if codes are not specifically defined, the list and scale options will have different codes in the different questions, so it will not be possible to use the codes as the identifiers for color allocation.

## 30.10. How to Set up Categorizations

The use of categorizations is described in the Categorizations section. This section describes how to set them up.

To add a categorization to the Data Source:

1. Right-click on the categorization folder located towards the bottom of the Data Source toolbox, and select **Add Categorization**.

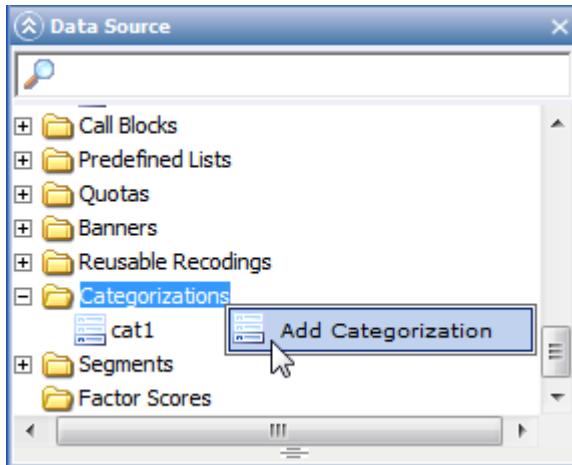


Figure 823 Adding a Categorization

The Categorization designer page opens.

2. To edit the name of the new categorization, right-click on the item and selecting **Rename** or select it and press the **F2** key on your keyboard.

**Important**

**Do not change the name of a categorization once it has been used in a table.**

3. Add elements to the categorization by dragging the elements onto the categorization icon in the designer page.

A categorization can have the following question types:

- o Grid questions with scores defined in the scale.
- o Single questions with scores defined in the answer list.
- o Multi numeric questions.
- o Open numeric questions.

Ensure that you edit items with similar answer lists in the categorization. In the figure below an open numeric question is dragged onto the categorization.

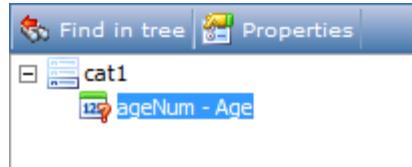


Figure 824 Editing a Categorization

Once the categorization has been set up, it can be added to a table in the same way as a "standard" question (see Categorizations on page 220 for more information).

In the event you need to set up a new categorization that is similar to an existing one, you can duplicate the existing one and edit the copy. To duplicate a categorization, right-click on it in the Data Source toolbox > **Categorizations** folder, then select **Duplicate** from the drop-down menu.

## 30.11. Recoding Variables

In some cases you may need to combine or break down the answer options within a question to achieve the result "groups" you require for your report. You can do this using Recoding. There are two methods of recoding a question:

- In Authoring, the questionnaire designer can recode the answer options before sending the data to Reportal for inclusion in the report. This requires that the Confirmit designer adds a special question to the questionnaire. This question is hidden from the respondent, and it takes the replies from the original question and collects the answers into the required groups. The Reportal designer then uses the recoded question as any other question when creating the report. This is a rather inflexible option because the Reportal designer does not have access to the original data, so can only use the recoded data. Refer to the Authoring User Guide for more information.
- In Reportal, you can recode the data from the original question. This is the more flexible option because you have full access to the original data and can recode it as required for your report. This procedure is described in the following sections.

Recoding in Reportal is performed on the questions in the Data Source toolbox.

**Note:** When using the Extended Tabulation Engine (see APPENDIX C: The Tabulation Engine Versions on page 749 for more information) recoded variables may cause ambiguities, as category codes of the original and the new variable may be the same. Therefore, when using the extended engine, if masking and filtering by mask is applied to a recoded variable (either via the "mask" option in the variable header or via the "ignore" or "masking" options of the Categories header and similar), then Reportal always assumes that category codes specified in the mask refer to the new (recoded) categories of the variable. This may cause changes in tables in some cases when compared to the legacy engine.

### 30.11.1. How to Recode a Variable

For example, you may have the following codes in your Age question:

- under 18 (code 1)
- 18 to 30 (code 2)
- 31 to 40 (code 3)
- 41 to 50 (code 4)
- 51 to 60 (code 5)
- Over 60 (code 6)

and would like to create a summary for the age groups 'Up to 40' (codes 1, 2 and 3) and '41 and over' (codes 4, 5 and 6). In this case you must recode the Age question. Proceed as follows:

1. In the Data Source Toolbox, right-click on the Age question and choose **Recode Variable** from the drop-down menu.

The Single Recoded page opens.

The screenshot shows the 'Single Recoded' configuration page in the Confirmit software. The top menu bar includes Save, New, Delete, Report Recoded Age, and Save As Reusable Recoding. A yellow instruction box states: 'INSTRUCTIONS: Select answers on the left side and link them to a category on the right side by clicking its [>>]-button'. The General tab is selected. The configuration fields are as follows:

- Name:** Recoded Age
- Active languages:** English, Norwegian
- Recoding Identifier:** (New Recoded Variable)
- Recoded Variable Base:** age
- Variable Text:** Please select your age group

The 'Answers' section contains a list of age ranges with checkboxes:

- Under 18
- 18 - 30
- 31 - 40
- 41 - 50
- 51- 60
- Over 60

A 'Clear selected' button is at the bottom of this list.

The 'Categories' section shows two categories defined:

Category ID	English	Norwegian
1	Add	Remove
2	Add	Remove

Figure 825 Example of the Single Recoded page

2. Type a logical name for the recoded question into the Name field towards the top of the page.
3. In the Categories area, in the text field to the right of the first category row, specify the text that is to be used for the first new category (in this case, "Up to 40")

**INSTRUCTIONS:**  
Select answers on the left side and link them to a category on the right side by clicking its [>>]-button

Name	Recoded Age
Active languages	English Norwegian
Recoding Identifier	(New Recoded Variable)
Recoded Variable Base	age
Variable Text	Please select your age group

Answers		Categories			
Answer Text	Category ID	Category ID	English	Norwegian	
Under 18		>> 1	Add	Remove	Up to 40
18 - 30		>> 2	Add	Remove	Opp til 40
31 - 40					
41 - 50					
51- 60					
Over 60					

**Answers**

**Categories**

**Clear selected**

Figure 826 Selecting the answers to be allocated to the new category

4. In the Answers area, select the answer options that are to be included in the first category, then click the >> button to allocate them to the category.  
 Notice that in the Categories area, each category has a Category ID (in the figure above, 1 and 2). When you allocate an answer option to a category, the Category ID is displayed beside the answer option in the Category ID column.
5. Type into the text field the desired text for the second category. In this case call it for example "**41 and older**".
6. In the Answers area select the remaining answer options, then click the >> button beside Category 2 to allocate them to this category.

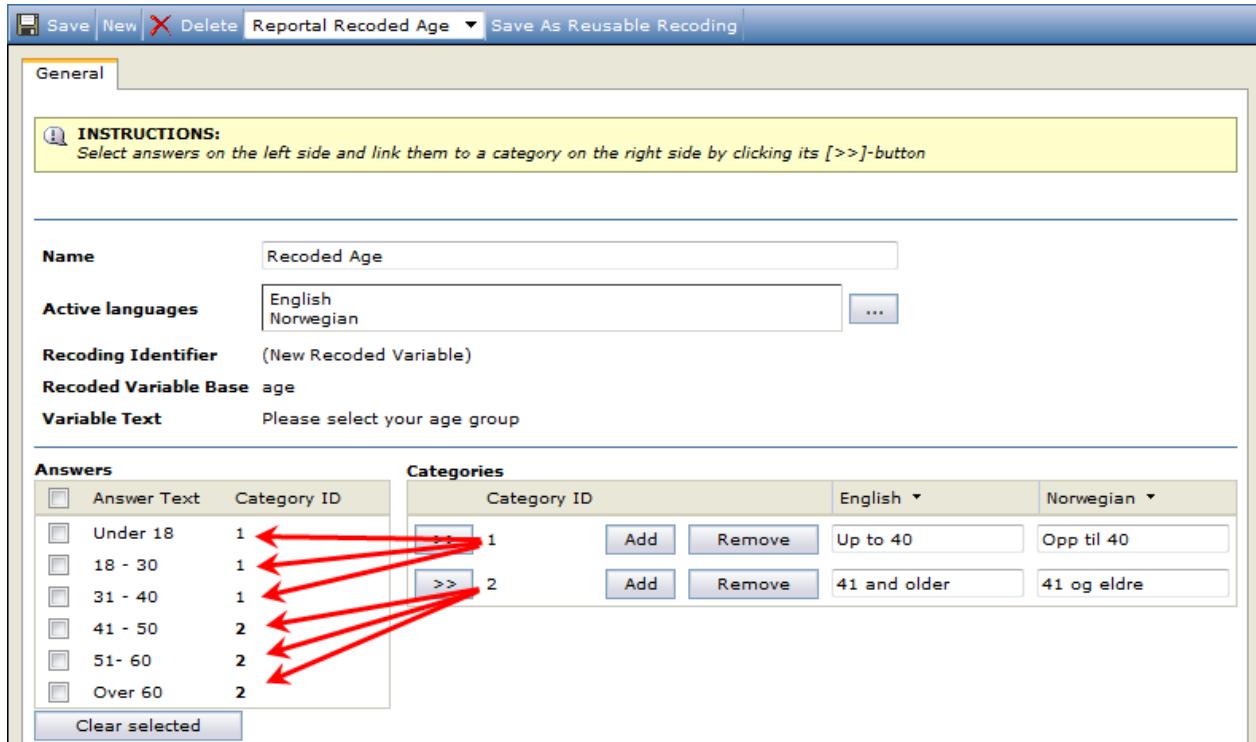


Figure 827 The Category IDs

- If you should require more categories in addition to the two provided by default, click the **Add** button for the category below which you wish to create the new category. Name the new categories and add the answer options as required.

To delete a category, click the **Remove** button next to the category you wish to delete.

If you wish to move an answer from one category to another, select that answer in the Answers column and click **Clear selected**. This will remove the category ID assigned to this answer option, and you will be able to add this answer to any other category.

- Save the changes.

Once you have saved the recoded question, (1R) will be displayed next to the question in the Data Source Toolbox (see the figure below). This indicates that this question has been recoded, and that one recoded variable exists for the question. Also, the Recoding Identifier label will be updated. This value is useful for Reportal script writers as it is used in scripts when referring to recodings. The identifier is autogenerated when creating a new Recoding and follows the pattern; rec0, rec1, rec2, etc.

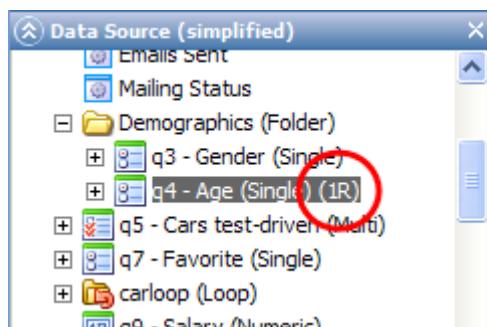


Figure 828 A Recoding specified in the Data Source

Note that you can recode a question more than once. To create an additional recoding, click the **New** button in the Single Recoded page toolbar and repeat the procedure above. All the recodings created for a question will after saving be listed in the drop-down list in the toolbar. The number of recodings against the question in the Data Source will be incremented as appropriate (for example (2R) or (3R)) so you can easily identify how many times a specific question has been recoded.

If you need to delete a recoding for a question, select in the drop-down list the recoding to be deleted, then click the **Delete** button in the Single Recoded page toolbar. The recoding will be deleted and the recoding indicator (for example 1R) will be decremented as appropriate.

### 30.11.2. Using a Recoded Variable

To use a recoded variable in a table:

1. In the Report toolbox, open the table you wish to recode - for example:

The screenshot shows a report table titled "q3 - Gender". The table has three columns: "Male", "Female", and "Total". The data rows are: Under 18 (Male: 32, Female: 26, Total: 58), 18 to 30 (Male: 17, Female: 24, Total: 41), 31 to 50 (Male: 28, Female: 22, Total: 50), 51 to 67 (Male: 18, Female: 24, Total: 42), 68 or older (Male: 23, Female: 36, Total: 59), and Total (Male: 118, Female: 132, Total: 250). Below the table, there is a sidebar with the title "q4 - Age" and a list of categories: Under 18, 18 to 30, 31 to 50, 51 to 67, 68 or older, and Total. The sidebar also displays generated time (10/12/2009 10:51:32), weight model (None), fixed filters (Drop filters or answers here), and significance testing (None). At the bottom of the sidebar, there is a link "Drop filters or answers here".

	q3 - Gender		
q4 - Age	Male	Female	Total
Under 18	32	26	58
18 to 30	17	24	41
31 to 50	28	22	50
51 to 67	18	24	42
68 or older	23	36	59
<b>Total</b>	<b>118</b>	<b>132</b>	<b>250</b>

Generated: 10/12/2009 10:51:32  
Weight model: None  
Fixed filters: [Drop filters or answers here](#)  
Significance testing: None

[Drop filters or answers here](#)

Figure 829 Example of a table that is to be recoded

2. Open the properties page for the variable you wish to recode; in this case the Age variable.
3. Click the down-arrow beside the Recoding field to open a drop-down list of the recodings available, and select from the list the recoding you wish to use.

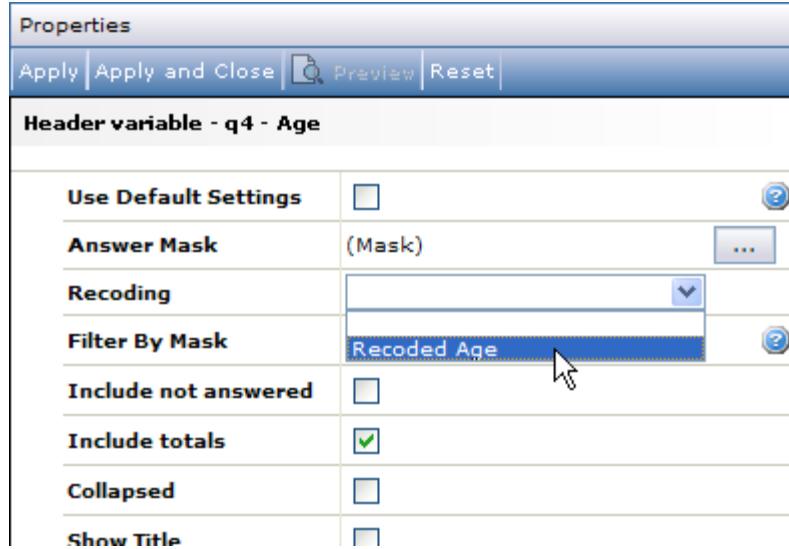


Figure 830 Selecting the recoding to be used

4. Click **Apply** (or **Apply and Close**).

The recoding is applied to the Table and the table is updated. Note how the row headers and the responses in each cell have changed, while the totals in the bottom row remain the same.

q3 - Gender				
q4 - Age		Male	Female	Total
	Up to 30	49	50	99
	31 and over	69	82	151
	Total	118	132	250

Generated: 10/12/2009 11:04:34  
 Weight model: None  
 Fixed filters: [Drop filters or answers here](#)  
 Significance testing: None

[Drop fil](#)

Figure 831 The recoded table

5. Save the changes.

### 30.11.3. Recoding Numeric and Numeric List Questions

**Note:** As "Normal" multi questions are checkboxes that are either selected (Yes) or not selected (No), these cannot be recoded.

When you recode Numeric or Numeric List questions, you will be asked to specify 'From' and 'To' values and to assign labels to the created categories:

The screenshot shows the 'General' tab of the 'Recode' dialog box. At the top, there are buttons for Save, New, Delete, and a dropdown menu '(New Recoded Variable)'. To the right of the dropdown is a 'Save As Reusable Recoding' button. Below the buttons, a yellow box contains instructions: 'INSTRUCTIONS: Build a recoded numeric variable by setting a FROM and TO-value for each category Change the operators by clicking them'.

Name	(New Recoded Variable)		
Active languages	English		
Recoded Variable Base	salary		
Variable Text	Please type in your salary		
Precision	7	Scale	0
Lower Limit	10000	Upper Limit	1500000
Effective Form Lower Limit	10000	Effective Form Upper Limit	1500000

Below the table is a grid for defining categories:

Text	From	To	Mask	English
> 9999	>= 10000		<input type="checkbox"/>	Add Remove
< 1500001		<= 1500000	<input type="checkbox"/>	Add Remove

At the bottom of the dialog box, there is a message: 'Add new recoded variable with 5 equally large categories between 10000 and 1500000 Go'.

Figure 832 Recoding an open text question

Click the **Add** button to add new categories and the **Remove** button to remove any unwanted categories.

If you wish to create a range of equally large categories, specify the number of categories, the range, and click the **Go** button as shown below.

Text	From	To	Mask	Add	Remove	English
<b>10000 - 307999</b>	$\geq 10000$	$< 308000$	<input type="checkbox"/>	Add	Remove	
<b>308000 - 605999</b>	$\geq 308000$	$< 606000$	<input type="checkbox"/>	Add	Remove	
<b>606000 - 903999</b>	$\geq 606000$	$< 904000$	<input type="checkbox"/>	Add	Remove	
<b>904000 - 1201999</b>	$\geq 904000$	$< 1202000$	<input type="checkbox"/>	Add	Remove	
<b>1202000 - 1499999</b>	$\geq 1202000$	$< 1500000$	<input type="checkbox"/>	Add	Remove	

Add new recoded variable with  equally large categories between  and   

**Figure 833 Specifying a range of equal categories**

The categories are then created with the appropriate To and From values.

If you need to change an operator for a category, click on it:

Text	From	To	Mask	Add	Remove	English
<b>10000 - 308000</b>	$\geq 10000$	$<= 308000$	<input type="checkbox"/>	Add	Remove	
<b>308001 - 605999</b>	$> 308000$	$< 606000$	<input type="checkbox"/>	Add	Remove	
<b>606000 - 903999</b>	$\geq 606000$	$< 904000$	<input type="checkbox"/>	Add	Remove	

**Figure 834 Changing the operators**

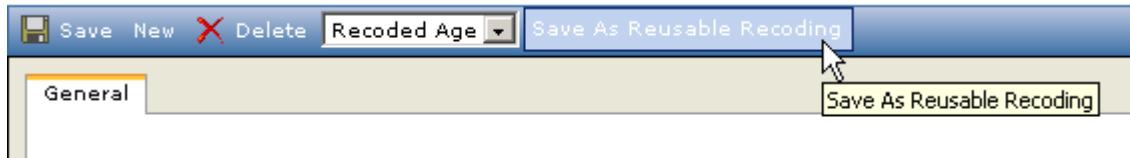
The Categories Builder does not allow you to skip a category. For example, you cannot define a category '0 to 20' and then '40 to 60 - the system will require a '20 to 40' category to be created in between. If however you do not wish to display the results for a particular category, you can mask it by checking the Mask box next to the category.

Text	From	To	Mask	Add	Remove	English
<b>0 - 19</b>	$\geq 0$	$< 20$	<input type="checkbox"/>	Add	Remove	1c
<b>20 - 39</b>	$\geq 20$	$< 40$	<input type="checkbox"/>	Add	Remove	2c
<b>40 - 59</b>	$\geq 40$	$< 60$	<input checked="" type="checkbox"/>	Add	Remove	3c
<b>60 - 79</b>	$\geq 60$	$< 80$	<input type="checkbox"/>	Add	Remove	4c
<b>80 - 99</b>	$\geq 80$	$< 100$	<input type="checkbox"/>	Add	Remove	5c

**Figure 835 Masking a category**

### 30.11.4. Reusing the Recoded Variables

You can save a recoding as a template. To do this, click the **Save as Reusable Recoding** button.



**Figure 836 Saving a recoding as a reusable template**

You can now apply this recoding to different questions. To do this:

1. Go to the Reusable Recoding folder in the Data Source toolbox.
2. Right-click on the saved recoding and choose **Apply Reusable Recoding to Variables** from the menu.

Go to the following section for an example.

### 30.11.5. Reusing the Recoded Variables - Example

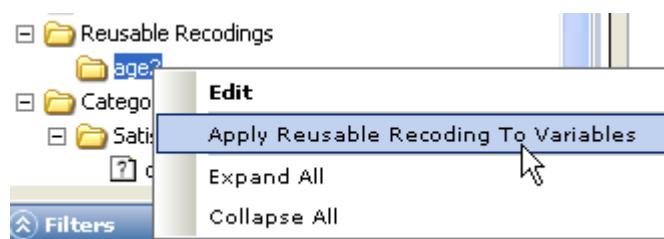
Assume you must recode the question shown below, save the recode as a template, then apply it to another scale.

The screenshot shows the 'Recoding a scale' dialog box. It has sections for 'Name' (Disagree/Neutral/Agree), 'Active languages' (English), and 'Recoded form' (dimension1). The 'Answers' section lists five options: Answer Text, Category ID, Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). The 'Categories' section shows three categories: Category ID 1 (Disagree), Category ID 2 (Neutral), and Category ID 3 (Agree). Buttons for 'Add' and 'Remove' are available for each category.

Category ID	English
1	Disagree
2	Neutral
3	Agree

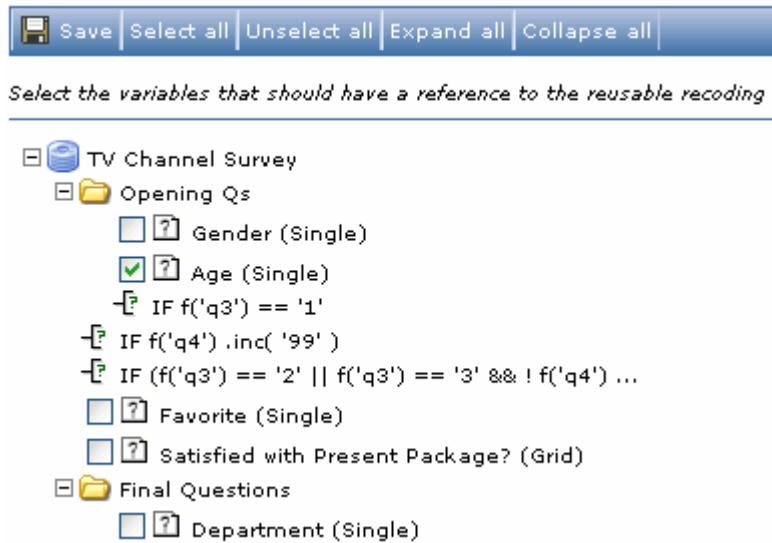
**Figure 837 Recoding a scale**

1. Create the recoding as required (see How to Recode a Variable on page 662 for more information).
2. Click the **Save as Reusable Recoding** button to save the recoding as a template.
3. Go to the Reusable Recoding folder in the Data Source toolbox.
4. Right-click on the saved recoding and choose **Apply Reusable Recoding to Variables** from the menu.



**Figure 838 Applying recoding to other questions**

The page shown below appears asking you to select the variables (questions) that are to refer to the reusable recoding.



**Figure 839 Choosing questions that are to refer to the reusable recoding**

5. Select the questions you wish to apply the reusable template to.
6. Click the **Save** button to save the changes.

You can also choose **Select all** to apply the recoding to the entire questionnaire. **Unselect** allows you to unselect all previously selected questions. You can also expand or collapse your questionnaire tree by clicking **Expand all** or **Collapse all**.

## 30.12. Segments

There may be times when you need more complex definitions in table rows and/or columns, or in a banner, than you are able to define by nesting questions. For example, you may need a column header for a sub group of respondents defined by their combined responses to several questions. An example of this could be: males between 31 and 67 years who test-drove a Ford, Volvo or Chrysler, and who think safety is important or very important.

You can create two types of segment definitions: "standard" segments and expressions, and you can use two types of expressions; "standard" and TGL.

**Note:** The code used in standard segments and TGL segments is not interchangeable; you cannot use the TGL language in a standard segment expression or standard segment code in a TGL segment. However, you can use either type of segment to do the same job, and you can use both types of segment in the same report.

### 30.12.1. How to Use the Segment Designer

Segments can be defined using the segment designer (as shown below) or by using TGL expressions (see TGL Filters on page 531 for more information).

**Note:** You can also select the required answers from the questions in the Data Source by holding down the Ctrl key on your keyboard whilst clicking on the required answers. Then right-click in one of the selected answers and select New Segment Expression from the drop-down menu.

1. In the Data Source toolbox, right-click on the **Segment** folder and select **Insert Segment Expression Inside**.

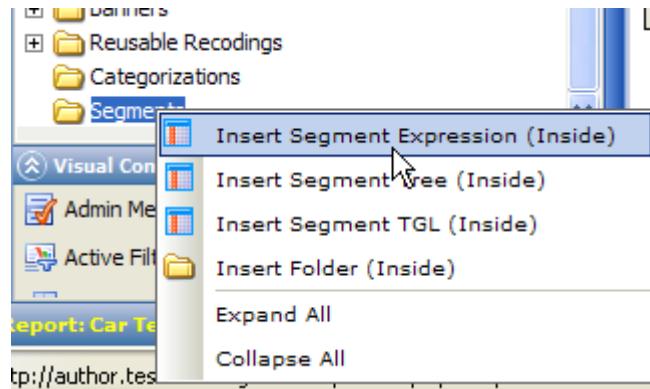


Figure 840 Adding a Segment

2. Double-click the new segment, or right-click on it and select **Edit**.

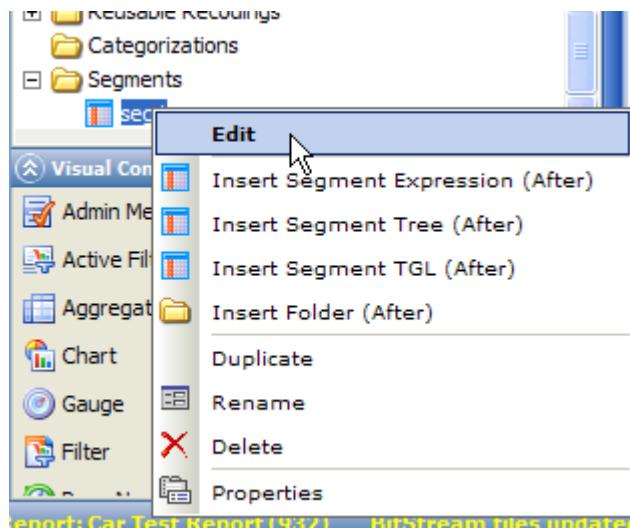


Figure 841 Opening the Segment Designer

The Segment Expression Designer opens. Note that this is similar to the filter designer (see Filter Designer on page 513 for more information).

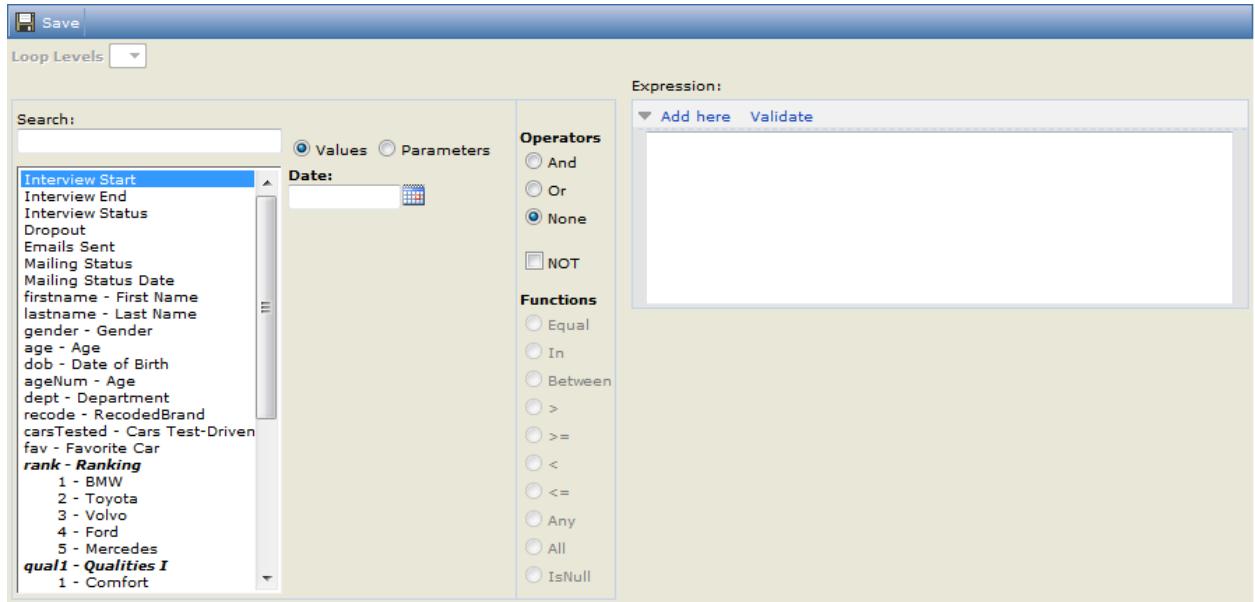


Figure 842 The Segment Expression Designer page

The example of "males between 31 and 60 years who rate Safety as important or very important and who have specified Volvo as their favorite car" can be defined as shown in the figure below.

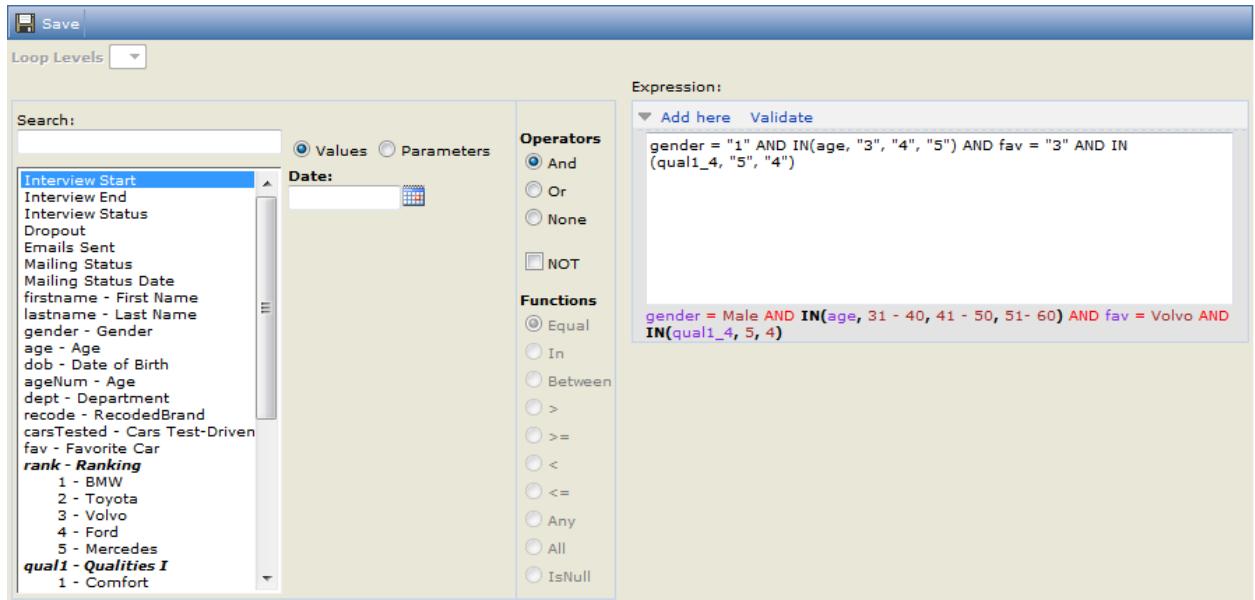


Figure 843 Defining a Segment

The definition shown gives those being Male (code 1 on gender) AND being in age groups 31-50 or 51-60 (code 3, 4 and 5 on single age), AND who selected Volvo as their favorite (code 3 on the single fav) AND who have rated safety as a 4 or 5 in importance (codes 4 or 5 on the grid qual1\_4).

Note that you can select multiple answers from multi questions by using standard Windows selection techniques (using the Ctrl and Shift buttons on your keyboard).

You can give the segment a title for each of the report languages. This title will be used in the header in aggregated tables. Titles are set in the Segment Properties page. To open this page, right-click the header in the report tree and select **Properties**.

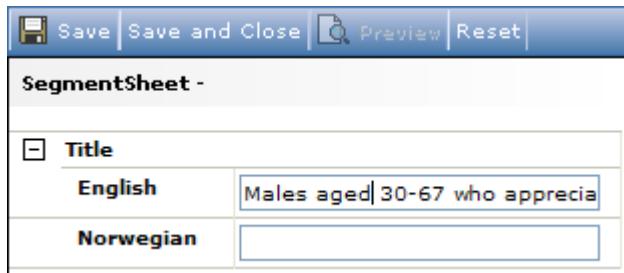


Figure 844 Giving the Segment a title

In an aggregated table a segment may be used like any other variable. It can be nested and/or stacked with questions or other segments, in rows and/or columns. You can also include segments in banners (see Segments on page 671 for more information).

	seg1		
q12 - Cars Tested		Males aged 30-67 who appreciate safety and chose Volvo	
	Ford	0	0.0%
	Chrysler	0	0.0%
	Volvo	2	100.0%
	BMW	1	50.0%
	Honda	1	50.0%
	Toyota	1	50.0%
	Total	2	100.0%

Generated: 01/12/2009 12:40:11

Figure 845 Including the Segment in an Aggregated Table

### 30.12.2. How to Create a Standard Segment Tree

1. In the Data Source toolbox, right-click on the **Segment** folder and select **Add Segment Tree (Inside)**.

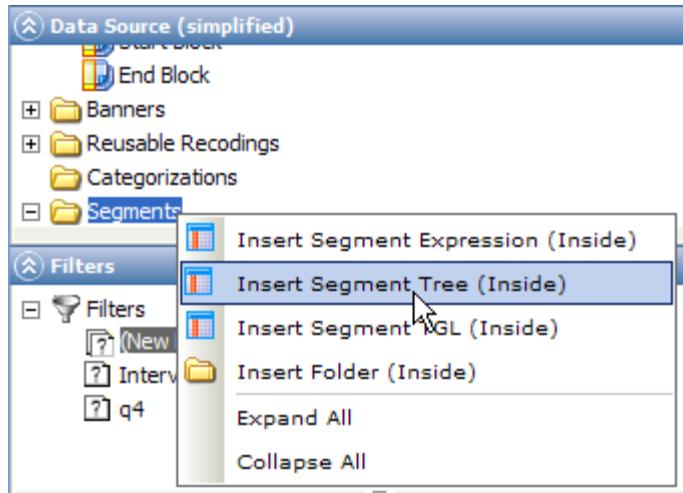


Figure 846 Adding a Segment

2. Double-click the new segment or right-click on it and select **Edit**.

The segment tree designer that opens is similar to the filter tree designer (see Creating a Filter Tree - Example on page 523 for more information).

The example of "males between 31 and 60 years who test-drove a Ford, Volvo or BMW, and who think safety is important or very important" can be defined as shown in the figure below.

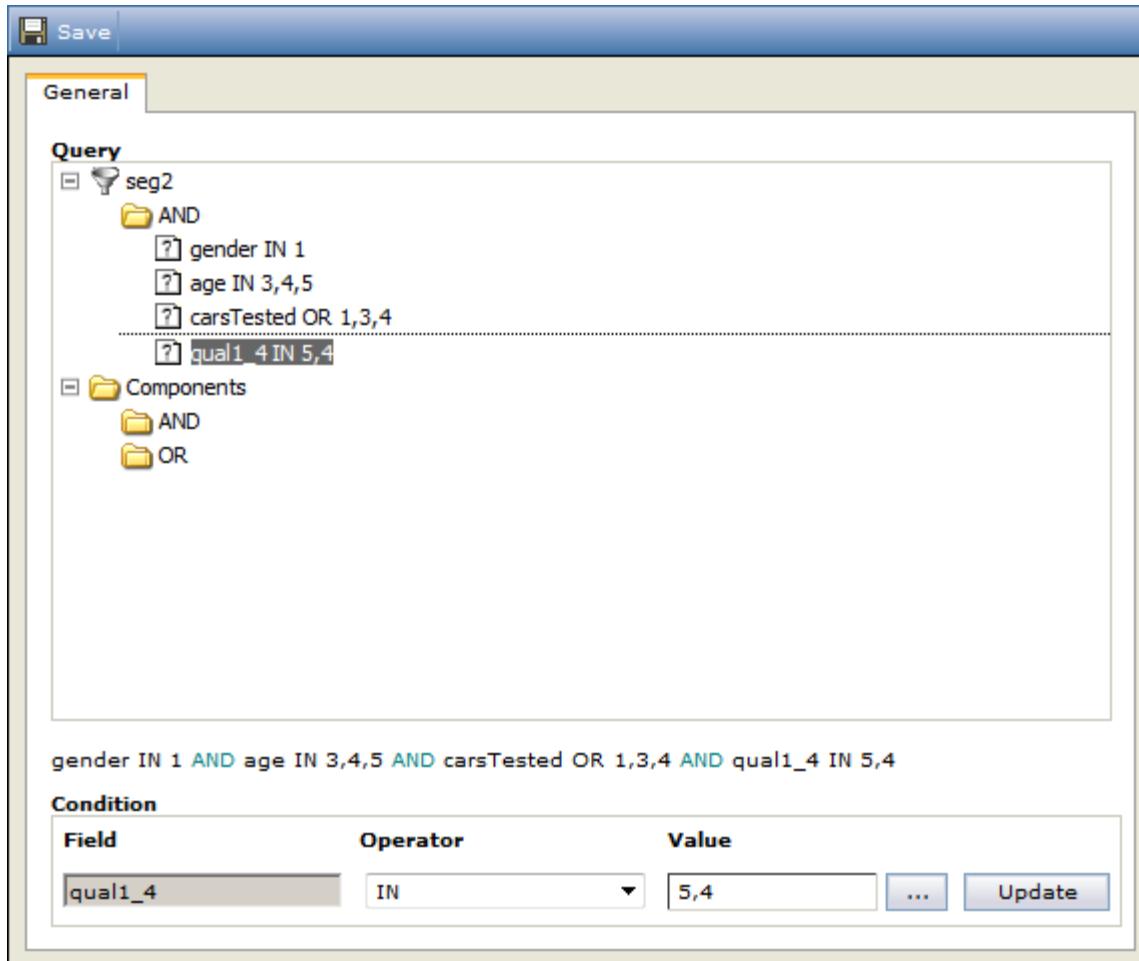


Figure 847 Defining a Segment

The definition shown gives those answering code 1 (Male) to question q3 (gender) AND code 3, 4 or 5 ("31 to 40" or "41 to 50" or "51 to 60") to question q4 (age), AND who test drove either a Ford (code 2) a BMW (code 3) or a Volvo (code 5), AND who selected codes 4 or 5 on the Safety part of grid question qual1\_4.

You can give the segment a title for each of the report languages. This title will be used in the header in aggregated tables. Titles are set in the Segment Properties page. To open this page, right-click the header in the report tree and select **Properties**.



Figure 848 Giving the Segment a title

In an aggregated table, a segment may be used like any other variable. It can be nested and/or stacked with questions or other segments, in rows and/or columns. You can also include segments in banners.

	<b>seg1</b>		
<b>q7 - Favorite</b>	<b>Males 31-67 Safety</b>		
	<b>Ford</b>	2	15.4%
	<b>Chrysler</b>	3	23.1%
	<b>Volvo</b>	3	23.1%
	<b>BMW</b>	0	0.0%
	<b>Honda</b>	0	0.0%
	<b>Toyota</b>	1	7.7%
	<b>I have no favorite.</b>	1	7.7%
	<b>Total</b>	<b>13</b>	<b>100.0%</b>

Figure 849 Including the Segment in an Aggregated Table

### 30.12.3. How to Create a Segment Expression

1. In the Data Source toolbox, right-click on the **Segment** folder and select **Insert Segment Expression (Inside)**.

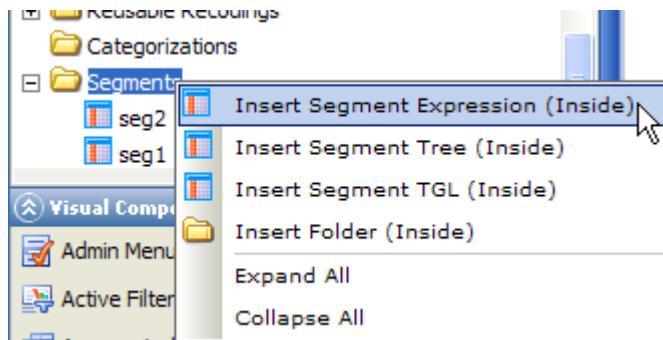
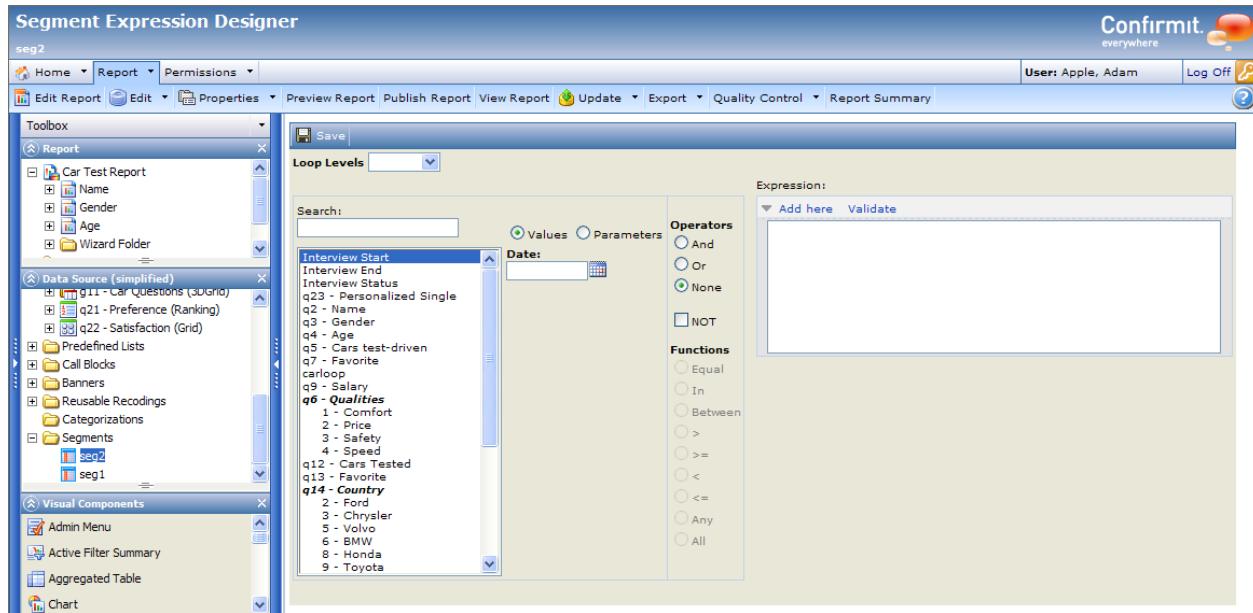


Figure 850 Adding a Segment Expression

A new segment object is created in the **Segments** folder.

2. Double-click the new segment or right-click on it and select **Edit**.

The Segment Expression Designer that opens is similar to the Filter Expression Designer (see Creating the Filter Expression on page 519 for more information).



**Figure 851 Example of the Segment Expression Designer page**

This page is where you create the segment expression. You can select criteria from the list and assemble them using the operators and functions, or if you have the required knowledge you can write the expression directly into the data field (see Reportal-Specific Functions in Filter and Segment Expressions on page 530 for more information).

**Note:** You can also select the required answers from the questions in the Data Source by holding down the **Ctrl** key on your keyboard whilst clicking on the required answers. Then right-click in one of the selected answers and select **New Segment Expression** from the drop-down menu.

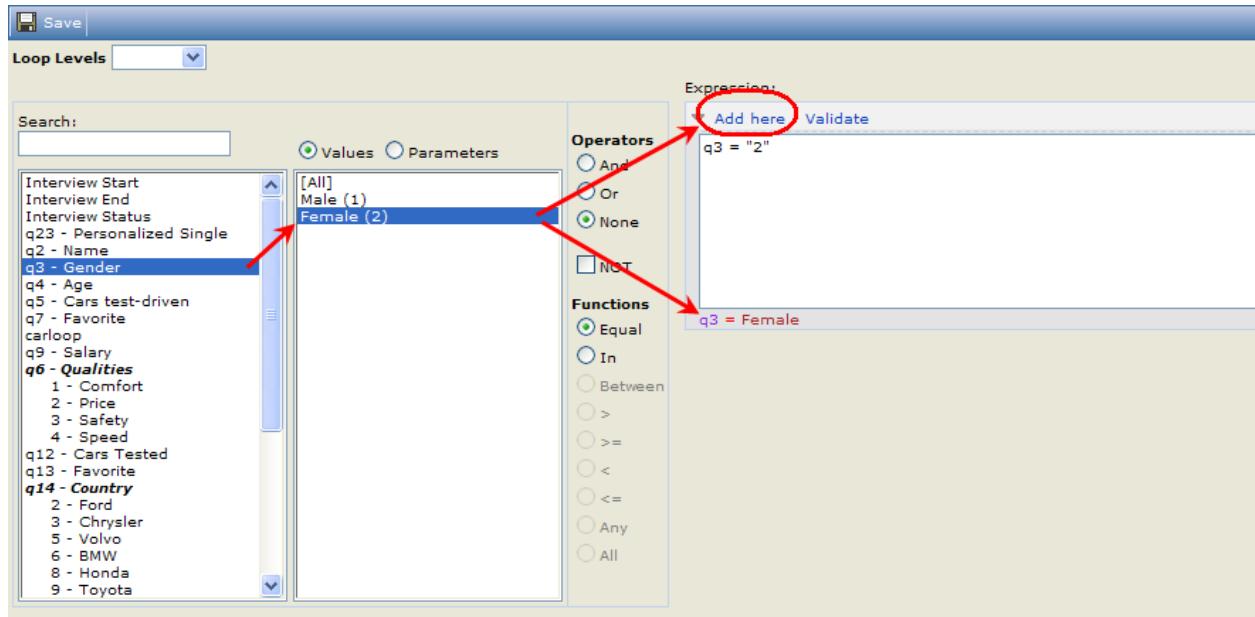
To change the name of the new segment object:

1. In the Data Source toolbox, right-click on the segment object and select **Rename** from the menu.  
The object name becomes a text editing field.
2. Type into the field a logical name for the object.
3. Click out of the field to close the text editor.

### 30.12.3.1. Creating the Segment Expression

Say for example that we wish to show females between the ages of 31 and 50 who have selected the BMW as their favorite car and who earn \$75000 or more.

1. In the left column, search for or browse to the question you wish to start your expression with, and click on it to select it - in this case the Gender question.  
The Values or Parameters (depending on the question selected) that apply to the question will be listed in the second column.
2. Click on the required Value/Parameter to select it - here Female.
3. Select the radio button for the **None** operator (you cannot start an expression with the operators **And** or **Or**), and check the **NOT** box if required.
4. Select the appropriate function and type any text or values into the Text or Number fields as required.
5. Click **Add Here** (see the following figure) to add the criteria to the field.

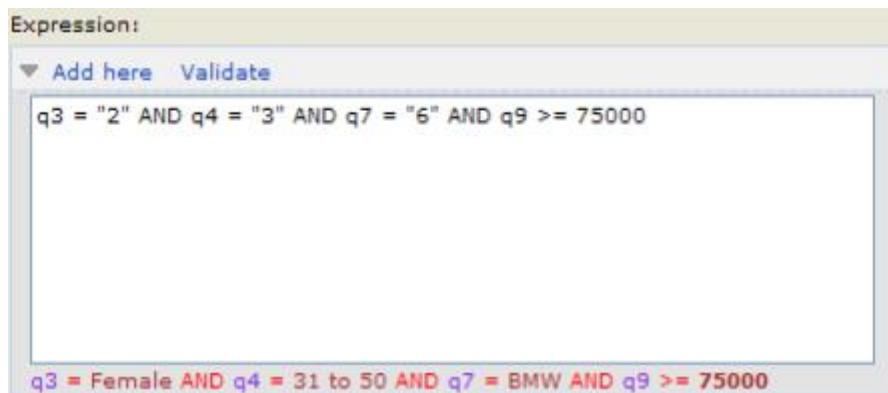


**Figure 852 Adding criteria to the data field**

Note that the coding is displayed in the white data field while the logical expression is “written” below the field in full.

- For this example you will now need to add code 3 (31-50) of the q4 Age question using the AND operator, code 6 (BMW) of the q7 Favorite question also using AND, and finally we have asked for q9 Salary to be “greater than or equal to 75000”.

The resulting expression is shown in the example below .



**Figure 853 Example of a complete expression**

If you type in your expression “manually”, click **Validate** to run an automatic validation check for the expression (see Reportal-Specific Functions in Filter and Segment Expressions on page 530 for more information).

- Click **Save** to save the changes.

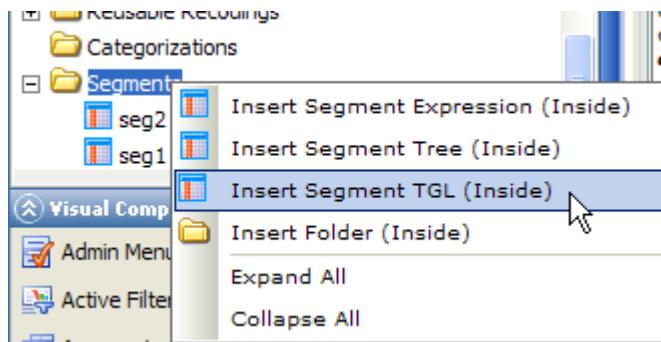
### 30.12.3.2. The Segment Expression Designer Data Fields

- **Loop Levels** – if the project includes loops, these are listed here. Click the down-arrow and select from the list the loop you wish to use.
- **Search** – type a character or string of characters into the Search field. As you type, Confirmit reduces the question list to show only those questions that include that character or series somewhere in the question name.
- **Values** – if the answers to the selected question have specific values that you wish to use in the filter (for example, Male or Female), select the Values radio button to list the value options of the selected question.
- **Parameters** – if the filter is to vary depending on selections made by the user, then the filter will need to use parameters. Select this radio button to list the parameters that have been created for the report.
- **Date** – when the selected question contains date data, this field will be accessible.
- The Operators:
  - **And** – a conjunction operator to be used when more than one criteria must be satisfied. For example, the panelist must be male and must be married.
  - **Or** – a conjunction operator to be used when one or more criteria must be satisfied. For example, the panelist must have network access from home or from work.
  - **None** – this is not a conjunction operator. Use when adding the first criteria in the expression.
  - **Not** – the negative operator. Use for example when you want panelists who are not in banking though any other profession is acceptable.
- The Functions (these will be active depending on the criteria selected):
  - **Equal** – use when you want the selected criteria to be equal to a specific value, for example when you want panelists of a specific age or you want the criteria to be Yes or No.
  - **In** – use when the criteria value is to be one of a range or set of values.
  - **Between** – use when you want the criteria to be between two values, for example between two dates.
  - **>** (Greater than) - use when the criteria is to be greater than a specified value.
  - **>=** (Greater than or equal to) - use when the criteria is to be greater than or equal to a specified value.
  - **<** (Less than) – use when the criteria is to be less than a specified value.
  - **<=** (Less than or equal to) – use when the criteria is to be less than or equal to a specified value.
  - **Contains** – you can write an expression that looks, for example, for a certain combination of four characters anywhere in a line of text.
  - **Left** – you can write an expression that looks, for example, for the first three characters in a line of text. In this case select Left as the desired string is to be on the left end of the line.
  - **Right** – you can write an expression that looks, for example, for the last three characters in a line of text. In this case select Right as the desired string is to be on the right end of the line.
  - **Any** – use if the filter is to return TRUE if any (one or more) of the selected values is found.
  - **All** – use if the filter is to return TRUE only if all the selected values are found.
- Other data fields:
  - **Text area** – type text as required into this field. The field is only accessible for certain pre-defined criteria.
  - **Paste area** – here you can paste in, for example, a list of values copied from a document.
  - **Number** – here you can type in numerical characters only. Use in conjunction with a Function (see above) when, for example, you want a criteria to have a specific numerical value. The field is only accessible for certain pre-defined criteria.

- o **End Number** – when the Number field is open, if you also select the Between function, a second numerical data field appears. This enables you to input a second number such that you can specify the criteria must have a value between the two given numbers.

### 30.12.4. How to Create a Segment TGL Expression

1. In the Data Source toolbox, right-click on the **Segment** folder and select **Insert Segment TGL (Inside)**.



*Figure 854 Inserting a Segment TGL Expression into the Segments folder*

The TGL Expression Builder page opens. This is the same as the TGL Filter Designer page, and the procedures used to create the Segment are identical to those used to create a TGL filter (see TGL Filters on page 531 for more information).

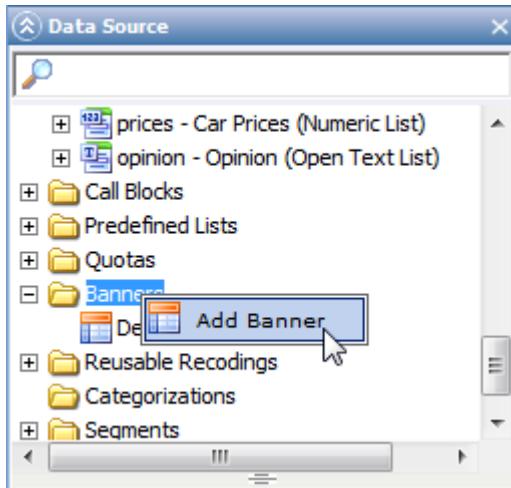
## 30.13. Banners

A Banner is a pre-defined table column header. When you have created a useful column definition for an aggregated table, you can save this column definition as a banner so you can use it later in other tables in the report. In market research for example, a common method of creating tables is to define a banner that includes several stacked/nested variables, then cross all questions against this banner.

### 30.13.1. How to Create a Banner Directly in the Data Source

You can also add a new banner directly to the Data Source. To do this:

1. Right-click on the Banners folder in the Data Source toolbox and choose **Add Banner**.



*Figure 855 Adding a new banner in the Data Source*

A component called New Banner is inserted into the Banners folder.

2. Right-click on the new banner and choose **Edit** from the menu.

An empty aggregated table is opened in the page editor frame. You are only allowed to drop items into the Columns field.

3. Click **Save** to save the column definition as a banner.

### 30.13.2. How to Duplicate a Banner

If you find you need to create a new banner that is similar to one that already exists, then you can duplicate the existing banner and edit it.

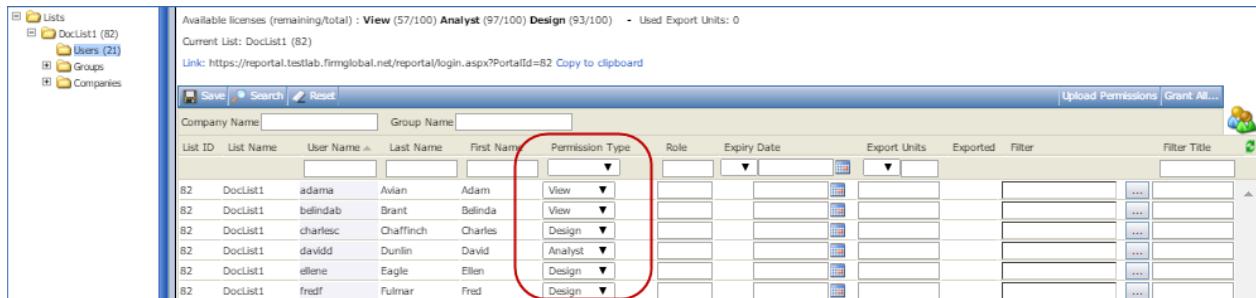
1. In the Data Source toolbox, go to the Banners folder.
  2. Right-click on the banner you wish to duplicate and select **Duplicate** from the menu.
- A copy of the selected banner is created and placed into the Banners folder.
3. Right-click on the new banner, select **Rename**, then give the banner a logical name.
  4. Double-click on the new banner to open it for editing.
- You can now edit the banner by adding and removing items to/from the columns area.
5. On completion, click **Save** to save the changes.

## 30.14. Giving End Users and Panelists Permissions for Data Sources

End users and panelists who have the "Analyst" or "Design" permissions for a report can be given permission to modify the relevant data source. End users and panelists with this permission can then create banners, categorizations, etc. in the data source. To give an end user or panelist permission to edit a data source:

1. When in the report, go to the **Permissions > End User Permissions** menu command or the **Permissions > Panelist Permissions** command as appropriate and expand the List.
2. Double-click on the **Users** folder, or right-click on it and select **Search Users**.

The End User Permissions list opens.

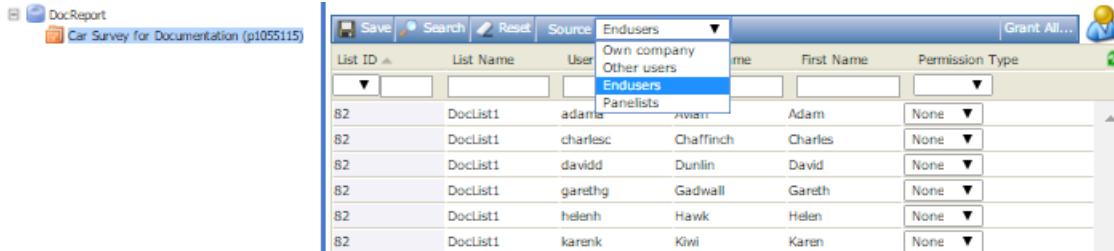


List ID	List Name	User Name	Last Name	First Name	Permission Type	Role	Expiry Date	Export Units	Exported	Filter	Filter Title
82	DocList1	adama	Avian	Adam	View						
82	DocList1	belindab	Brant	Belinda	View						
82	DocList1	charlesc	Chaffinch	Charles	Design						
82	DocList1	davidd	Dunlin	David	Analyst						
82	DocList1	ellene	Eagle	Ellen	Design						
82	DocList1	fredf	Fulmar	Fred	Design						

Figure 856 Example of an End User Permissions list

3. In the Permission Type column, give the end users the appropriate permissions; None, View, Design or Analyst.
4. Save the changes.
5. Go to the **Home > Data Source List** menu command to open the Data Source List page, and select the data source you wish to work with.
6. In the toolbar, click **User Permissions** to open the Confirmit User Permissions page for the data source.
7. In the Source drop-down, select **End Users**.

This displays the list of end users to whom you have given either the Design or Analyst permissions in step 3 of this procedure.



The screenshot shows a software window titled "DocReport" with a sub-tab "Car Survey for Documentation (p1055115)". The main area is a grid table with columns: List ID, List Name, User, First Name, Permission Type, and Type. The "Source" dropdown menu is open, showing options: "Own company", "Other users", "Endusers" (which is selected and highlighted in blue), and "Panelists". The table contains six rows of data:

List ID	List Name	User	First Name	Permission Type	Type
82	DocList1	adamr	Adam	None	
82	DocList1	charlesc	Charles	None	
82	DocList1	davidr	David	None	
82	DocList1	garethg	Gareth	None	
82	DocList1	helenh	Helen	None	
82	DocList1	karenk	Karen	None	

**Figure 857 Example of the list of end users with the Design or Analyst permissions**

In this list, you can now give the end users the appropriate permissions (in the Permission Type column) to edit the data source; None, Read or Write.

To give the same permission to all users, click the **Grant All** button in the page's toolbar. This opens the Grant all... overlay. Select the permission you wish to grant and click **Grant All**. Note that the selected permission will be granted to all the users who are currently listed on the Permissions page. If you wish to grant a particular permission to a sub-set of users, conduct a search such that only those users are listed before you open the Grant all... overlay.

8. On completion, save the changes.

End users given the Write permission here can create banners and categorizations in the data source.

### 30.15. The Dropout Question Variable

The "Dropout Question" system variable is an open-text variable. If the interview is not completed, this variable will contain the name of the first question on the last page that the respondent viewed.

For example, if a survey includes questions q1, q2, q3, q4 and q5, and a respondent answers q1 and q2 but closes the browser after getting to but before answering q3, the dropout question will be q3. Note however that if a respondent answers q1, q2 and q3, and then when he/she reaches q4 uses the survey **Back** button to get back to q2, and then closes the browser or navigates away without changing anything, the dropout question will be q2.

This variable can be used in tables in the same way as any other open text variables. An additional option for this variable is "Display mode", which allows you to choose whether variable names are to be displayed "as is", or whether question titles are to be used instead for better readability. This variable can be used in Segment Expression designer and in Filter Expression designer in the same way as any other open text variables.

## 31. Templates

Templates allow you to store all of your different customized layouts. Each template holds a Report Master (see The Report Master on page 687 for more information), one or more Page Masters (see Page Masters on page 704 for more information), one or more layouts (see Layout Masters on page 705 for more information), and one or more Styles (see Styles on page 706 for more information).

When you create a new report, you must select a template. A template can be applied to any number of reports. Templates do not need to be created from the bottom up; Confirmit Reportal offers a number of default templates that can be used "as is," or you can copy one and edit it to meet your requirements. You can import templates from other Confirmit servers as XML files (see Template Export and Import on page 732 for more information), and you can also save a report as a template if you have modified the report, page master, layout master and/or styles and wish to save it for future use (see Saving a Report as a Template on page 86 for more information).

**Note:** Every time you make a change to a page master, a table or chart layout etc. the template will change. If you wish to create several reports that look the same; i.e. use the same template, the easiest method is to create the first report and set it up as you wish, then duplicate that report (see Duplicating a Report on page 40 for more information) and change the data source (see How to Replace a Data Source on page 654 for more information).

An example of the Reportal Home page, including the "Recent Templates" section, is shown below.

The screenshot shows the Confirmit Reportal Home page with a blue header bar. On the left, there's a sidebar with 'Create New' buttons for Report, Template, and Data Source, and 'Go To' buttons for Report List, Template List, and Data Source List. Below that is a 'Quick Find' section with Report Number and Report Name search fields. The main content area has three sections: 'Recent Reports' (listing Car Test Report, DocReport, Car Survey (Optimized), Legacy report, and Import of Recoding Report), 'Recent Templates' (listing Report Template 1 and Report Template), and 'Recent Data Sources' (listing Car Test Report, Legacy report, DocReport, DocReport, and Import of Recoding Report). The top right shows the user 'User: Apple, Adam' and a 'Log Off' button. The bottom right corner has a copyright notice: '© 2009 Confirmit. All rights reserved.'

Number	Report Name	Created Date	Created By
932	Car Test Report	06/11/2009 11:45:30	Apple, Adam
939	DocReport	09/11/2009 11:35:43	Apple, Adam
903	Car Survey (Optimized)	02/11/2009 12:59:01	Bennett, Nigel
1061	Legacy report	02/12/2009 14:31:01	Apple, Adam
916	Import of Recoding Report	05/11/2009 09:36:23	Apple, Adam

Number	Report Name	Created Date	Created By
1114	Report Template 1	09/12/2009 13:47:30	Apple, Adam
951	Report Template	12/11/2009 13:11:51	Apple, Adam

Number	Report Name	Created Date	Created By
902	Car Test Report	06/11/2009 11:45:25	Apple, Adam
1023	Legacy report	02/12/2009 14:30:58	Apple, Adam
909	DocReport	09/11/2009 11:35:39	Apple, Adam
907	DocReport	09/11/2009 10:43:25	Apple, Adam
886	Import of Recoding Report	05/11/2009 09:36:23	nigelb

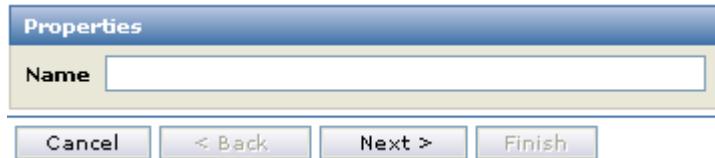
Figure 858 Example of the Reportal Home page

To access a template for editing, click on it in the Recent Templates list.

### 31.1. How to Create a New Report Template

1. Click on the **Create New > Template** icon.

The Properties dialog opens.



**Figure 859 Naming the template**

2. Type a name for the new template into the Name field then click **Next**.

**Note: The Template name can be a maximum of 64 characters long.**

The Template List opens.

Template Number	Template Name	Created Date	Created By
951	Report Template	12/11/2009 13:11:51	Apple, Adam
838	Import of Default template	19/10/2009 11:26:34	Hammarström, Robert
435	Default template	28/07/2009 11:36:20	System, Admin
6	New Template - Example Template	22/04/2009 11:20:47	Strelakovskaya, Svetlana
5	Import of Default template # 2a	22/04/2009 11:19:50	Strelakovskaya, Svetlana
4	Import of Default template # 2b	22/04/2009 11:16:23	Strelakovskaya, Svetlana

**Figure 860 Selecting the default template**

3. Find an existing template on which to base the new template, and click in the radio button beside that template to select it.

You can preview the source template before applying it.

4. Click **Finish**.

The Page Editor opens, where you can design and edit the new template.

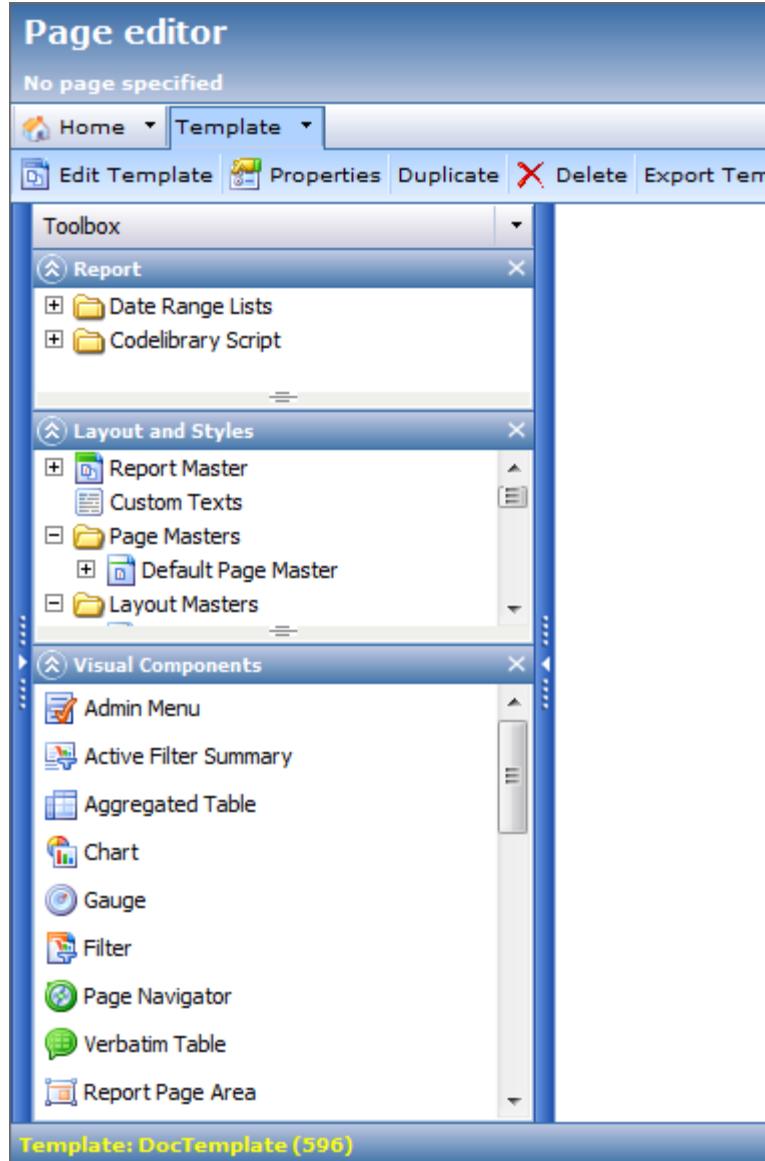


Figure 861 The Template Page Editor

Note: The Report template can contain date range lists and code libraries. The report toolbox therefore contains the Codelibrary Script and Date Range Lists root nodes, where you can add, delete and edit scripts and dataranges in template designer.

## 31.2. The Template Properties

The template has a Properties page. To open this page, while the template Page Editor is open, go to the **Template > Properties** menu command.

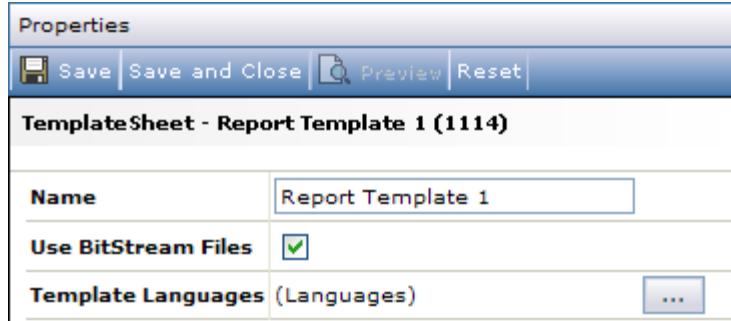


Figure 862 The template Properties page

- **Name** – the name of the template. Here you can edit the template name as required.
- **Use BitStream Files** – check this box if you want reports based on this template to use BitStream Files as default.
- **Template Languages** – click the ... button to open the Report Languages window. Here you set the languages for the template. Reports based on this template will then use the selected languages as default. Note that you can change the languages for the individual reports, in the reports.

When you have made changes to the properties, click **Save** to save them.

### 31.3. The Report Master

The Report Master is the main frame of the report, and includes the Page Master and the Report Page. These are stacked within each other with the Report Master at the back, the Page Master in the middle, and finally the Report Page on the top. Together, these layers form the HTML structure that defines how each page of your report will look.

The first figure below shows the Page Editor for the report's Report Master. Compare this figure with the figure under it and note the different report elements used to create this page.

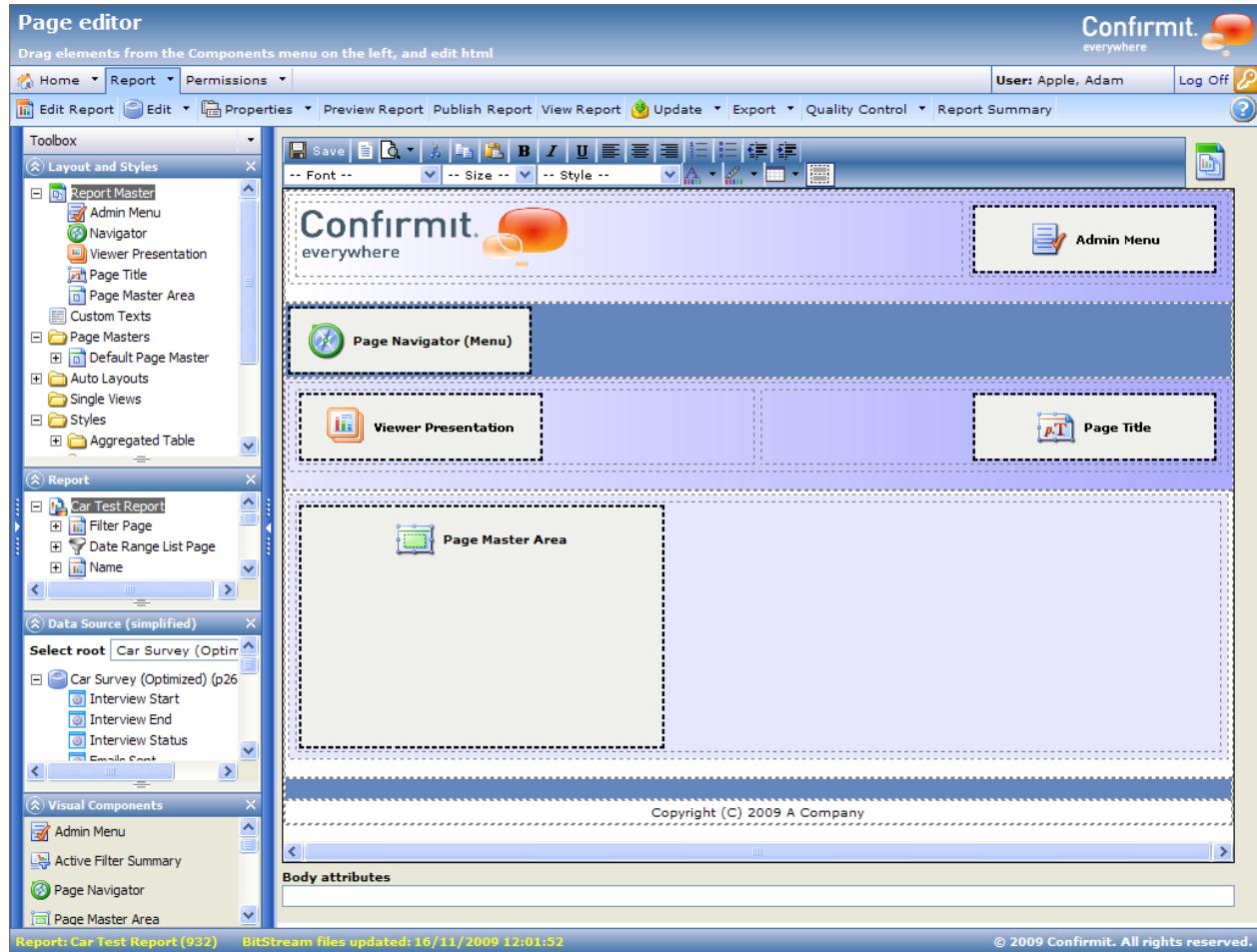


Figure 863 Preview of a Report Master

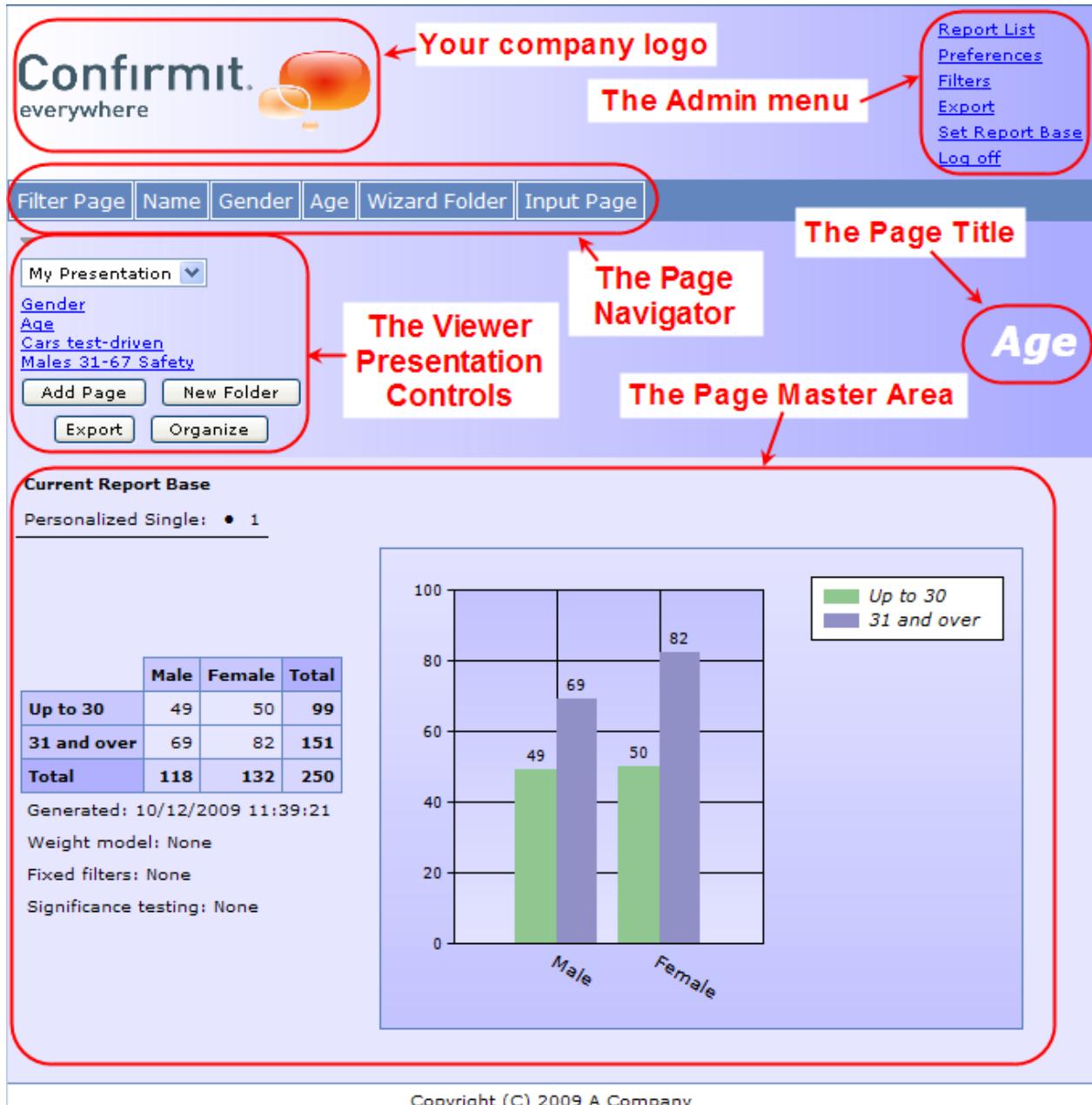


Figure 864 A report page based on the Report Master in the previous figure

You can drag-and-drop Visual Components from the menu on the left into the Page Editor.

You can also add scripting to Text elements in the Report Master. This will allow you to enter scripts which will run on all the pages in the report, in the same location on each page, thereby avoiding the necessity of having to repeat scripts on each page (see Scripting in Text Elements on page 130 for more information).

The Report Master has a property sheet. To open this, in the Layout and Styles toolbox, right-click on the Report Master and select **Properties** (see The Report Master Property Sheet on page 702 for more information).

### 31.3.1. Admin Menu

The **Admin Menu** component enables the report viewer to see his/her report list, edit preferences (language settings), choose filters (see Filter Designer on page 513 for more information), and log off. The report Designer may set up the Admin menu with a specific style (see Styles on page 706 for more information) and hide specific items in the menu if required. You can also select the way the menu is rendered. In most cases, when a report viewer clicks an item in the Admin menu, an overlay opens containing the appropriate drop-downs, links, etc. This overlay is moveable (click and drag the button bar across the bottom of the overlay) but not resizable. To set up the Admin menu:

1. In the Page Editor for the Report master, double-click on the **Admin Menu** component or right-click on it and select **Properties**.

The Properties page for the Admin menu opens.

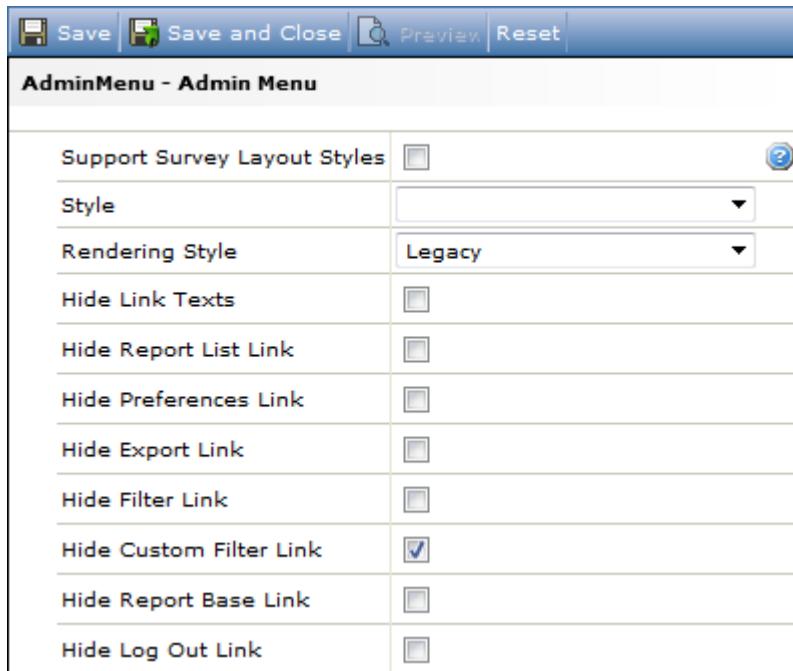


Figure 865 The Admin menu properties

- **Support Survey Layout Styles** - check this box to be able to use HTML styles from a survey layout.
  - **Style** - select the style you wish to use for the Admin menu layout.
  - **Rendering Style** - changes the way the Admin menu is rendered.
    - **Legacy** - the Admin menu is rendered using tables represents current rendering of the admin menu.
    - **Modern** - renders the Admin menu without using HTML tables. When Modern is selected, two additional properties are displayed:
      - **Horizontal layout** - (default off) When this is checked, this adds a CSS class "reportal-admin-horizontal" to the UL element containing the admin menu.
      - **Show Header Text** - (default off) When this is checked, it adds an H3 element containing text from the Custom Texts > Admin Menu > Root Title. The H3 element will appear before the UL element, but only if there is content to be displayed.
  - **Hide xxxx** - check the appropriate boxes to hide the specified menu items from the viewer.
2. On completion, click **Apply** or **Apply and Close**.

### 31.3.1.1. Custom Filters

The **Admin** menu can contain a Custom Filters link (see Admin Menu on page 690 for more information). This link allows end users to apply existing custom filters to the report, and to create, modify and delete complex filters while viewing the report.

To apply existing custom filters to the report:

1. Click the link to open the Custom Filters overlay.
2. Check the box(es) beside the required filter(s).
3. Click the **Apply and Close** button.

The filter list overlay closes, the report page is refreshed with the selected filters, and the filters are listed in the filter summary.

An end user can create custom filters as follows:

1. Click the Custom Filters link in the **Admin** menu.



*Figure 866 Example of the Custom Filters link in the Admin menu*

The Custom Filters overlay opens. Any filters that have already been created for this report will be listed in the overlay.

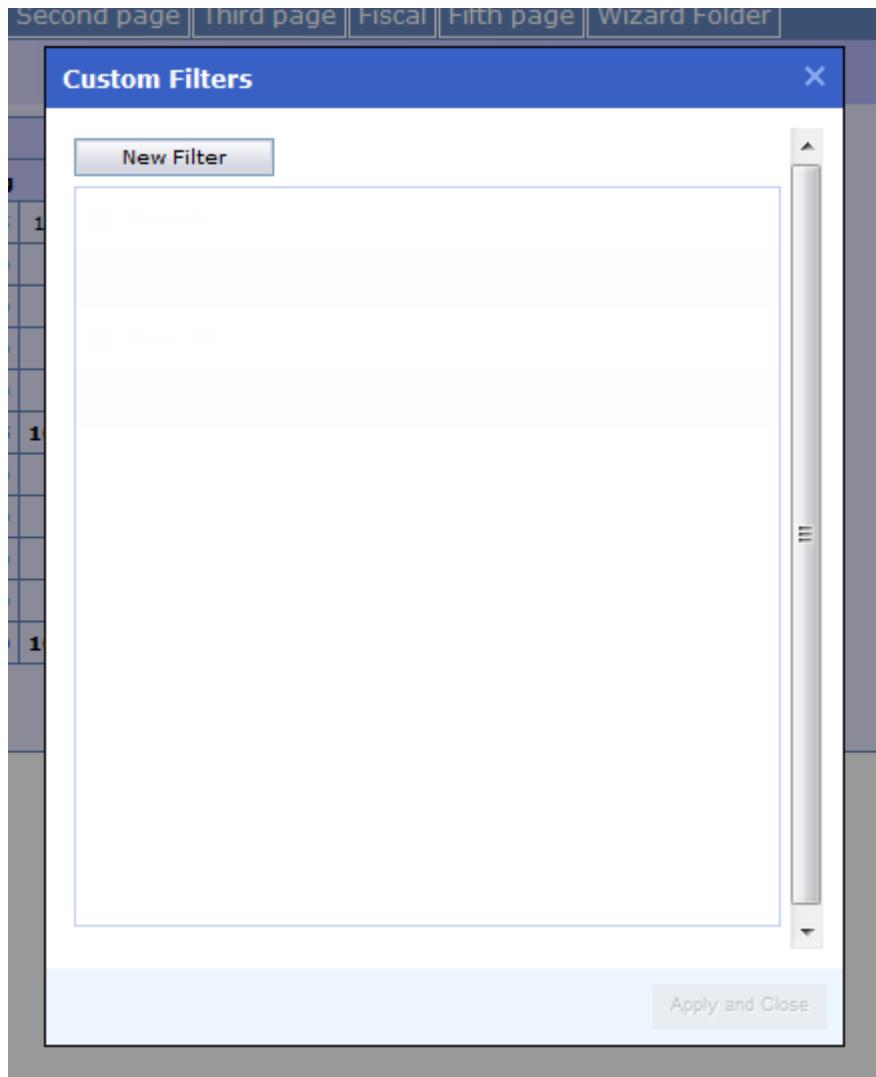


Figure 867 The Custom Filters overlay

2. Click **New Filter**.

The overlay changes to the Edit New Filter overlay.

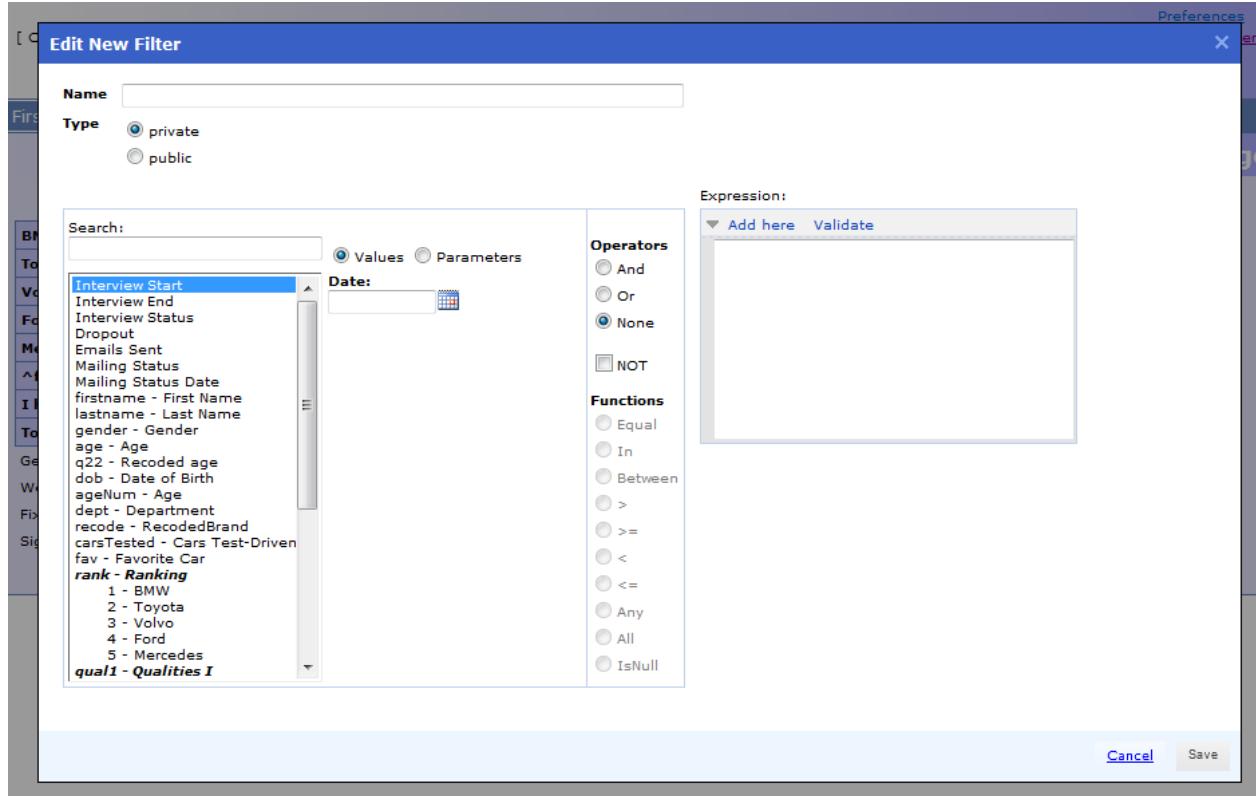


Figure 868 The Edit New Filter overlay

3. Create and save the filters as required (see How to Create a Filter Expression on page 519 for more information).

The filters the end user creates will be listed in the Custom Filters overlay.

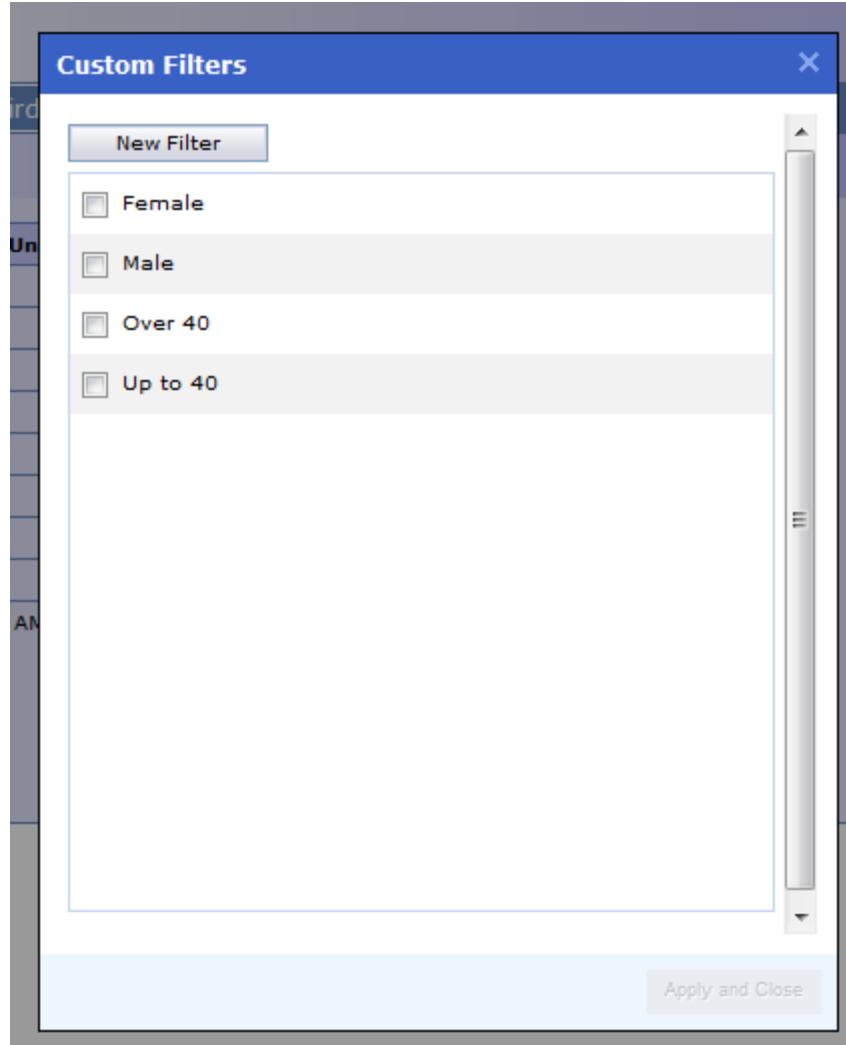


Figure 869 Some filters listed in the overlay

To edit or delete a filter, hover the mouse cursor over the filter in the overlay and click the **Edit** or **Delete** button appropriate which appears to the right end of the filter row.

### 31.3.2. Page Navigator Object

The **Page Navigator** component enables the report viewer to move from one report page to another. The "default" type is Tree (see The Tree Navigator Type on page 695 for more information). You can choose between four different types of navigators. Double-click on the Navigator object to open its Properties page, then select the desired Navigator Type.

- **Tree** - displays links to the report pages in a tree structure.
- **PrevNext** - the viewer moves from page to page by clicking on the **Previous** and **Next** buttons.
- **DropDown** - displays links to the report pages in a drop-down menu.
- **Menu** - displays links to the report pages in a horizontal or vertical drop-down menu, where the top level report menu is displayed and the sub-items are accessed by clicking on the top level report items.
- **CSS Menu** - (default for Reportal v17.5) renders a more semantically correct UL/LI html structure instead of tables, making it easier to apply styles to the items in the menu.

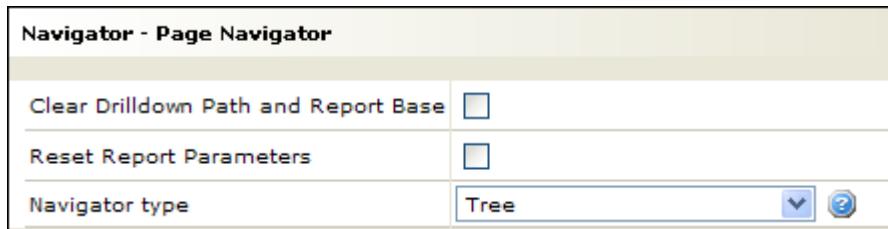
### 31.3.2.1. The Tree Navigator Type

The **Tree** component displays links to the report pages in a tree structure. The report viewer simply clicks the page they wish to view, and the Page Master Area (Page Target) updates automatically.



*Figure 870 Example of a Tree component*

Double-click on the Navigator object to open its Properties page.



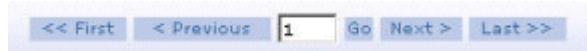
*Figure 871 The Tree navigator's properties*

The properties are as follows:

- **Clear Drilldown Path and Report Base** - check this box if you want the drill-down path to be reset each time the viewer clicks on the navigator.
- **Reset Report Parameters** - check this box to reset all report parameters each time the viewer clicks on the navigator.
- **Navigator Type** - the layout for the navigation control the viewers use to move from page to page.

### 31.3.2.2. The Previous Next Navigator Type

This navigator contains buttons that enable the report viewer go to the previous page, the next page, the very first or very last page of the report, from the current page. The viewer can also type a page number into the field and go to any page in the report.



*Figure 872 The Previous/Next navigation component*

Double-click on the Navigator object to open its Properties page.



Figure 873 The Previous/Next navigator type's properties

The properties are as follows:

- **Clear Drilldown Path and Report Base** - check this box if you want the drill-down path to be reset each time the viewer clicks on the navigator.
- **Reset Report Parameters** - check this box to reset all report parameters each time the viewer clicks on the navigator.
- **Navigator Type** - the layout for the navigation control the viewers use to move from page to page.
- **Style** - select the desired button style from the drop-down list. The styles available are defined in the Layout and Styles toolbox (see The HTML Styles on page 708 for more information).

### 31.3.2.3. The DropDown Navigator Type

This navigator component provides the report viewer with a drop-down menu, from which he/she can choose the page that is to be displayed.



Figure 874 Example of the Dropdown component in use

Double-click on the Navigator object to open its Properties page.



Figure 875 The Dropdown navigator type's properties

The properties are as follows:

- **Clear Drilldown Path and Report Base** - check this box if you want the drill-down path to be reset each time the viewer clicks on the navigator.

- **Reset Report Parameters** - check this box to reset all report parameters each time the viewer clicks on the navigator.
- **Navigator Type** - the layout for the navigation control the viewers use to move from page to page.
- **Style** - select the desired menu style from the drop-down list. The styles available are defined in the Layout and Styles toolbox (see The HTML Styles on page 708 for more information).

### 31.3.2.4. The Menu Navigator Type

This navigator component provides the report viewer with a drop-menu from which he/she can choose the page that is to be displayed.

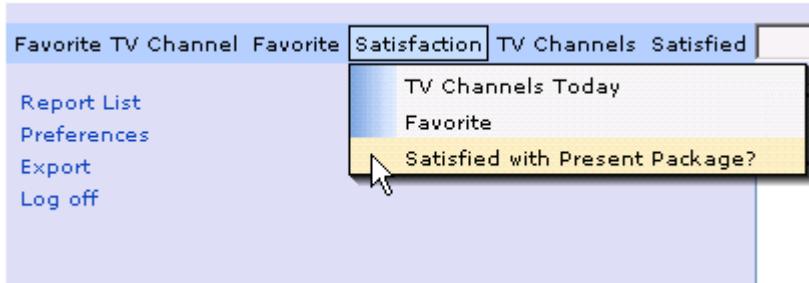


Figure 876 Example of a Drop menu navigation component in use

When you create a Menu navigation component, a property sheet with various layout settings is available. To access this page, right-click on the navigation component and select **Properties**.

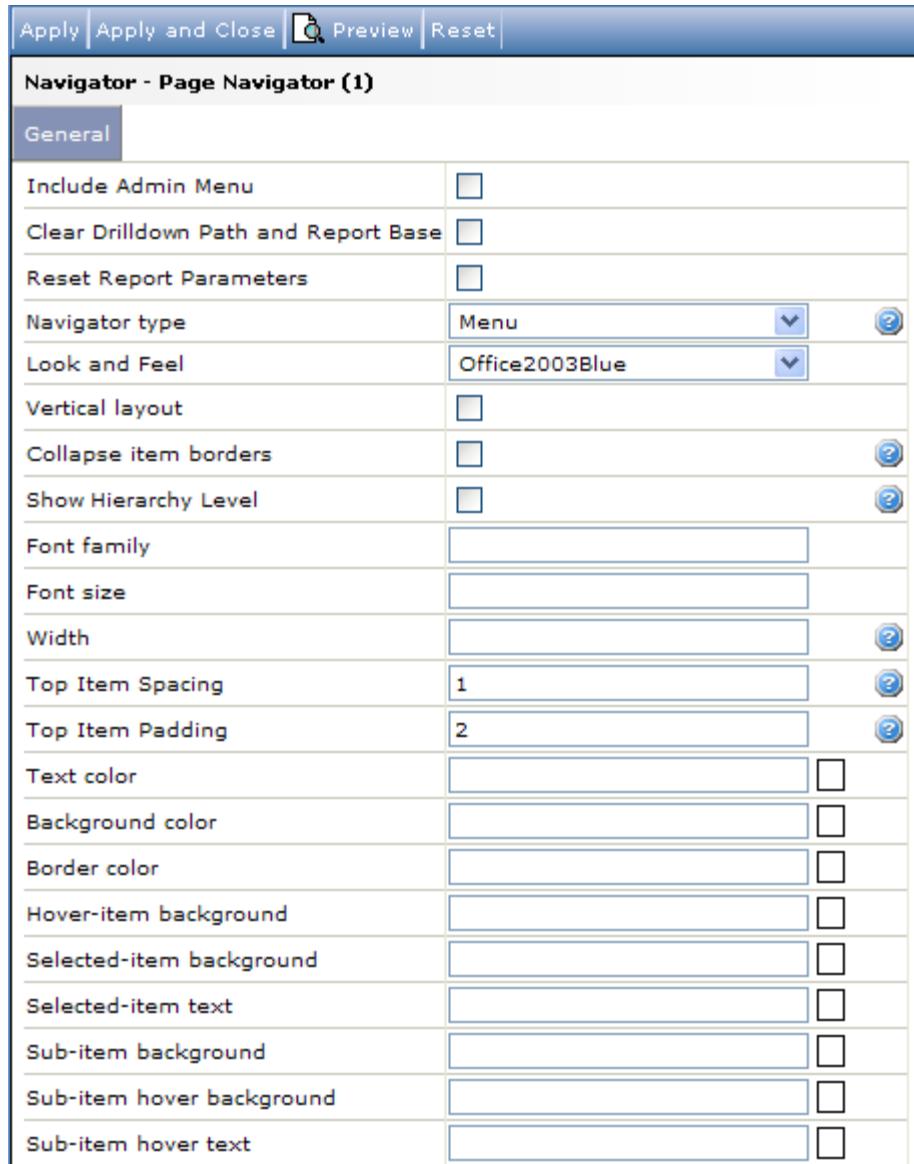


Figure 877 Example of the Menu component's Properties page

The properties are as follows:

- **Include Admin Menu** - check this box if you want the page navigator to include the Admin menu commands.
- **Clear Drilldown Path and Report Base** - check this box if you want the drill-down path to be reset each time the viewer clicks on the navigator.
- **Reset Report Parameters** - check this box to reset all report parameters each time the viewer clicks on the navigator.
- **Navigator Type** - the layout for the navigation control the viewers use to move from page to page.
- **Look and Feel** - choose among predefined styles of drop menus.
- **Vertical Layout** - the menu items/report pages are listed vertically.
- **Collapse item borders** - an HTML style that does not display all the borders. It is recommended to choose this option if Border Color has been specified, in order to avoid double borders.

- **Show hierarchy level** - check this box so that when a Personalized filter question property is chosen in Report properties, the hierarchy will be listed as an item in the menu. All levels in the hierarchy will be listed as sub-levels.
- **Font family** - specifies the font type that is to be used to display the menu items.
- **Font size** - defines the size of the characters in the menu items.
- **Width** - specifies the width of the container where the top elements are stored. The width can be specified in both pixels and percent. When you want to use percent, add the % symbol after the number. The top level menu items will be placed next to each other (depending on specifications in Top Item Spacing) when no width is specified.
- **Top item spacing** - specifies the spacing between the top-level items.
- **Top item padding** - specifies the padding around the top-menu items, that is, the space between the menu item text and the border.
- **Text color** - specifies the color of the text to be used in the menu items.
- **Background color** - defines the background color for the menu items.
- **Hover-item background** - defines the background color of the top-level menu items when the user holds the mouse pointer over the item.
- **Selected-item background** - defines the background color of the top-level menu items when the sub-items are displayed, that is, when the top-level item is selected.
- **Selected-item text** - defines the color of the top-level menu item text when the sub-items are displayed.
- **Sub-item background** - defines the background color of the sub-items.
- **Sub-item hover background** - defines the background color of the sub-items when the user holds the mouse pointer over the item.
- **Sub-item hover text** - defines the text color of the sub-items when the user holds the mouse pointer over the item.

### **31.3.2.5. The CSS Menu Navigator Type**

The CSS Menu Navigator type will render a more semantically correct UL/LI html structure instead of tables, making it easier to apply styles to the items in the menu. This navigator type will be set by default for new menus created.

The menu uses a YUI 3 component to control the menu behavior, and gives you several classes to control the layout; including a style to be applied to the selected item in the menu.

If you use this menu type, then it is recommended that you set your report to use the HTML 5 doctype (see The Report Master Property Sheet on page 702 for more information).

**Navigator - Navigator**

General	
Include Admin Menu	<input type="checkbox"/>
Clear Drilldown Path and Report Base	<input type="checkbox"/>
Reset Report Parameters	<input type="checkbox"/>
<b>Navigator type</b>	<b>CSS Menu</b> 
Look and Feel	Light-blue
Container Style Name	
Top-Item Style Name	
Sub-Item Style Name	
Hover Top-Item Style Name	
Hover Sub-Item Style Name	
Selected Top-Item Style Name	
Selected Sub-Item Style Name	
Responsive layout	<input type="checkbox"/>
Disable JavaScript	<input type="checkbox"/>

*Figure 878 The CSS Menu navigator type's properties*

The properties are as follows:

- **Include Admin Menu** - check this box if you want the page navigator to include the Admin menu commands.
- **Clear Drilldown Path and Report Base** - check this box if you want the drill-down path to be reset each time the viewer clicks on the navigator.
- **Reset Report Parameters** - check this box to reset all report parameters each time the viewer clicks on the navigator.
- **Navigator Type** - the layout for the navigation control the viewers use to move from page to page.
- **Look and Feel** - choose among a number of predefined styles of drop menus.
- **Container Style Name** - the style setting for the overall placeholder of the menu navigator component.
- **Top-Item Style Name** - the style setting for menu items at the top level (i.e. report pages not placed in folders).
- **Sub-Item Style Name** - the style setting for menu sub-items (i.e. report pages contained in folders or sub-folders).
- **Hover Top-Item Style Name** - the style setting for when the mouse cursor hovers over a top-level menu item.
- **Hover Sub-Item Style Name** - the style setting for when the mouse cursor hovers over a sub-level menu item.
- **Selected Top-Item Style Name** - the style setting for the selected (i.e. the active page) top-level menu item.
- **Selected Sub-Item Style Name** - the style setting for the selected (i.e. the active page) top-level menu item.
- **Responsive layout** - turns the menu into a drop-down list for screens smaller than 500px wide.
- **Disable JavaScript** - select to disable the YUI menu component, making the menu more or less static and allowing the designer to either apply a different JavaScript behavior, or control the menu completely by CSS.

### 31.3.3. The Viewer Presentation Component

In the Viewer Presentation component, the viewers can create "bookmark folders" in which they can store bookmarks to report pages that they have created. The bookmarked pages will retain all the dynamic settings such as filters and parameter selections that were applied to that page when the bookmark was created. The viewer can then go directly to those pages without having to remember which settings must be applied to recreate the pages (see My Bookmarks on page 588 for more information).

**Note:** The Viewer Presentation component can only be added to the Report Master.

To add a Viewer Presentation component to the Report Master:

1. In the Layouts and Styles toolbox, double-click on the Report Master or right-click and select **Edit**.  
The page editor for the Report Master opens.
2. In the Visual Components toolbox, click on the **Viewer Presentation** component and drag it to the required place in the Report Master.
3. Double-click on the new component or right-click on it and select **Properties**.  
The properties page for the component opens in the lower part of the window.

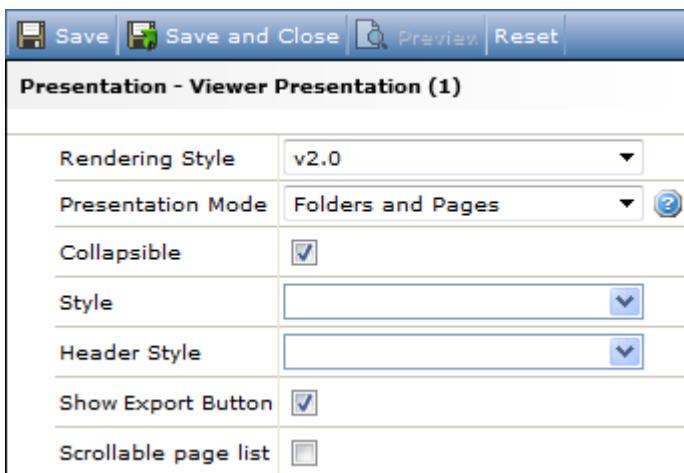


Figure 879 The Properties page for the Viewer Presentation component

Here you set up the properties for the component such that it looks and functions as you wish. The properties are as follows:

- **Rendering style** - this property sets the appearance and customization possible for the visual component. In Confirmit version 17.5, several components have received additional capabilities to the out-of-the-box appearances and ability to style elements using custom CSS styles. The Rendering Style version number reflects the following:
  - v1.0 - the component rendering style prior to Confirmit version 17.5.
  - v2.0 - the component rendering style after Confirmit version 17.5. Version 2.0 is the default rendering style for all new reports.
- **Presentation Mode** - you can allow the viewer to add both folders and pages to his presentation, or just pages.
- **Collapsible** - check this box if you wish the viewer to be able to collapse and hide the Viewer Presentation area. An arrow button will then be displayed.
- **Style** - the style for the component area.
- **Header Style** -the style for the component header.

- **Show Export Button** - uncheck this box if you wish to hide the **Export** button (see How to Export a Bookmark Folder on page 591 for more information), thereby preventing the viewer from exporting his/her presentation.
- **Scollable Page List** - in the event the viewer has a long list of pages in the presentation folder, if the entire page list is permanently presented it will push the other components on the page down. Check this box to specify a fixed size for the area in which the list is presented. Then if the list exceeds this area, scroll buttons will be displayed allowing the viewer to access other pages in the list. If this box is checked, then two additional properties appear; the list width and height.

**Note:** All styles available in the drop-down lists on this Properties page are located in the Layout and Styles toolbox > Styles > HTML folder (see The HTML Styles on page 708 for more information).

### 31.3.4. Page Master Area (Page Target)

The Page Master Area (Page Target) indicates where Reportal will insert the active Page Master.

### 31.3.5. The Report Master Property Sheet

The Report Master has a property sheet. To open this, in the Layout and Styles toolbox, right-click on the Report Master and select **Properties**.

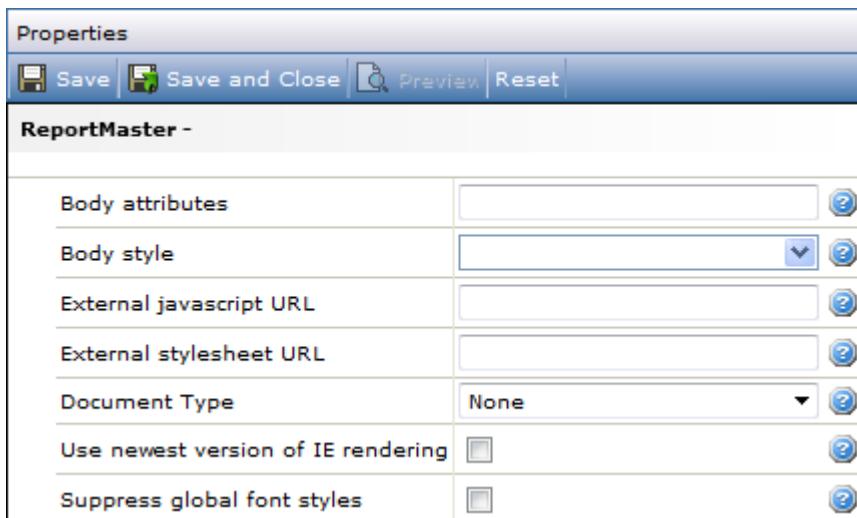


Figure 880 The Report Master Property Sheet

The data fields are as follows:

- **Body attributes** - here you can add non-style attributes that are to be set for the BODY tag. Body attributes include link, vlink, alink, leftmargin, topmargin, marginwidth, and marginheight.
- **Body style** - this is the name of the Style that is to be set for the BODY tag. Select an existing HTML style class. For compatibility reasons you can also enter CSS styles manually so that existing reports that have already used the property will not be broken.
- **External javascript URL** - you can refer to an external Javascript file inside your survey. Enter the URL of the .js file you wish to use, here. Note that if you wish to add multiple URLs to the field, use a comma (,) as the separator.
- **External stylesheet URL** - if you already have style sheets set up outside of Reportal, you do not have to re-define your styles inside. You can enter the URL of the .css file that holds the definitions, and refer to the style names directly in your report. You can add multiple URLs to the field; use a comma (,) as the separator.
- **Document Type** - here you can set the document type. A document type declaration tells the browser which HTML markup is used on the page, so that it can render the page correctly. Confrimt supports the following document type definitions: The options are:

- o None
- o XHTML 1.1 Strict - HTML that follows XML syntax. Does not allow presentational or deprecated elements.
- o XHTML 1.0 Transitional - HTML that follows XML syntax. Allows presentational or deprecated elements.
- o HTML 4.0 - allows presentational and deprecated elements (such as font).
- o HTML5 - the most recent version of HTML, still a working draft. Does not allow presentational or deprecated elements.
- **Use newest version of IE rendering** - to ensure the majority of viewers get the best rendering, under normal circumstances layouts will be rendered as Internet Explorer 7 compatible HTML. However in this mode some advanced functionality is not available; to present some types of data, a minimum of Internet Explorer 9, Firefox 3 or any WebKit-based browser is needed. To ensure access to the advanced functionality, check the "Use newest version of IE rendering" box. But be aware that viewers with older versions of IE may experience a degraded rendering.
- **Suppress global font styles** - Reportal uses by default a set of global font styles to define the layout of a report. If you wish to use other styles, check this box to remove the standard set (for example the anchor tag). You can then control all elements of the report's appearance through custom CSS. This property is by default not set.

### 31.4. Custom Texts

All standard texts used on elements in aggregated tables in Reportal are customizable globally on the report level. To edit the custom texts:

1. Go to the Layout and Styles toolbox, then right-click on **Custom Texts** and select **Properties**, or double-click on **Custom Texts**.

The Properties sheet for Custom Texts opens. Several of these texts can also be overridden locally in the property sheets for the components (for example the texts for Statistics components).

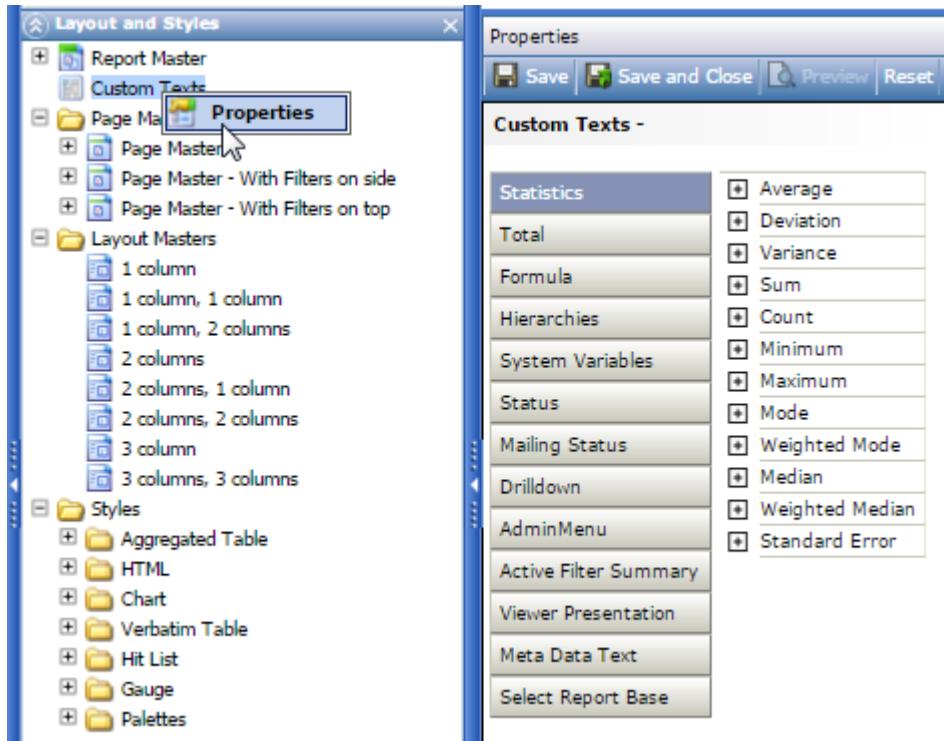


Figure 881 The Custom Texts Properties sheet

**Note:** The Custom texts under Layout and Styles can only be edited when working in a report edit mode. The following fields can be edited:

- **Statistics** - Average, Deviation, Variance, Sum, Count, Minimum, Maximum, Mode, Median, Standard Error.
- **Total** - Total, Not Answered, Unweighted Total, Base.
- **Formula** - Addition, Subtraction, Division, Multiplication.
- **Hierarchies** - Min, Max.
- **System Variables** - Status, Interview Start, Interview End.
- **Status** - Status, Incomplete, Quota Full, Error, Screened.
- **Mailing Status** - Bad mail, Queued, Sent, Delivery failed.
- **Drilldown** - Drilldown Menu: Go to page, Drilldown path: Home.
- **AdminMenu** - Root Title, Report List, Preferences, Filters, Export, Iterator, Logoff.
- **Active Filter Summary** - Filter Summary, Current Report Base, Selected Elements, Drilldown Filters, Benchmark.
- **Meta Data Text** - text used in table meta data.
- **Select Report Base** - texts used for the Select Report Base menu's text and button caption (see Assigning Multiple Report Bases to an End User on page 487 for more information).

The custom texts can be edited for all report languages. Text boxes for each language specified for the report are displayed under each field.

## 31.5. Page Masters

You can build as many Page Masters as you need, and you can have more than one Page Master in a report. Each Page Master contains its own defined page layout. The figure below shows a report for which two Page Masters are defined (see in the Layout and Styles toolbox...).

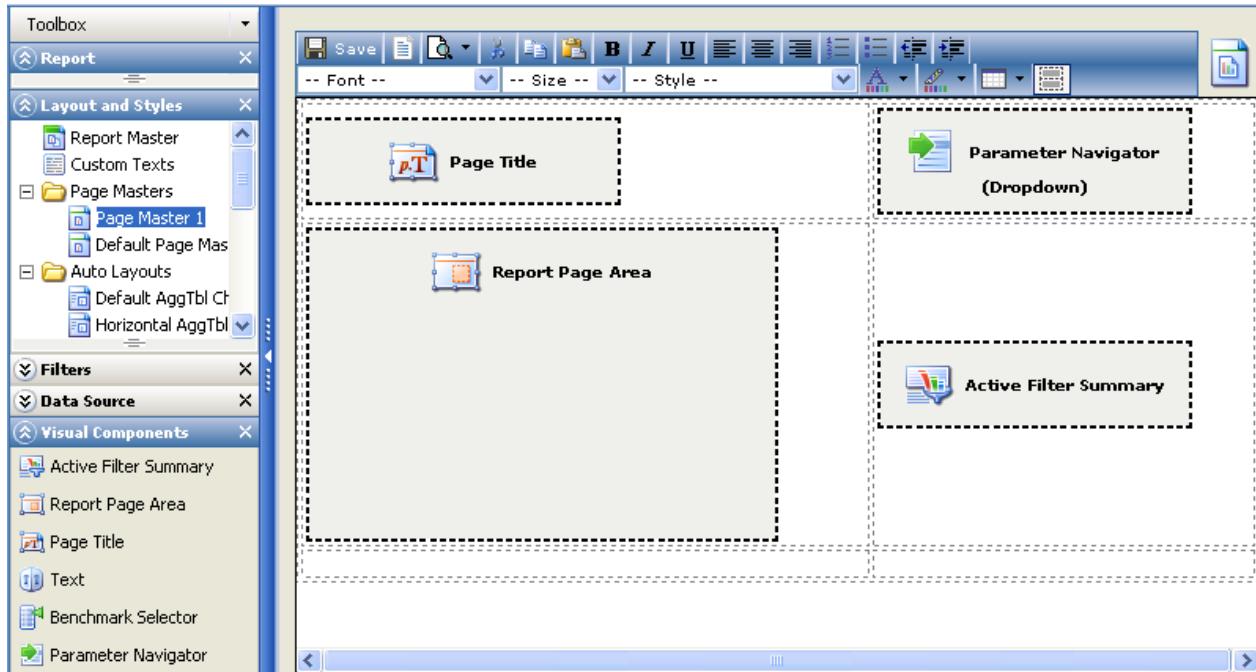


Figure 882 Example of a Page Master

The Page Master called "Page Master 1" (currently selected in the figure above) will for example always show the page title in the upper left corner, and then below that, whatever is specified in the current Report Page.

To create a new Page Master:

1. In the Layout and Styles toolbox, right-click on the **Page Masters** element and select **Insert Page Master (Inside)**.

A new page master is created.

2. Right-click on the new **Page Master** element and select **Rename**.
3. Type a logical name for the new Page master into the field.
4. Double-click on the new **Page Master** or right-click on it and select **Edit**.

The Page Editor opens. Here you can add the required components from the Visual Components toolbox to create the desired layout.

5. On completion, click **Save** to save the changes.

Note that you can add scripting to Text elements in a Page Master. This will allow you to enter scripts which will run on all pages controlled by that Page Master, in the same location on each page. This will avoid the necessity of having to repeat scripts on each page (see Scripting in Text Elements on page 130 for more information).

When a viewer is reading the report, the active report page will be inserted into the "Report Page Area" area, so the page title will be above the report page, and the active filter summary will be presented towards the right side of the page.

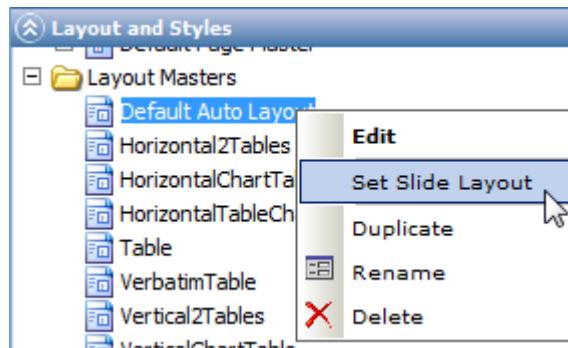
## 31.6. Layout Masters

You do not have to build a layout for every page of your report. Instead, you can apply one of Reportal's predefined layout masters to each page. In addition to the default layouts supplied, you can also create your own. There are two ways to do this:

You can create a layout master in the Layout and Styles toolbox:

1. In the Layout and Styles toolbox, right-click on the **Layout Masters** folder and choose **Insert Layout Master (inside)**.
- A new layout master component is created.
2. Right-click on the component and choose **Edit** to customize it.

Note that you can also choose the PPT slide layouts for the layout masters. To do this, right-click on the layout master and choose **Set Slide Layout** from the menu, then choose the desired layout from the pop-up window that opens (see MS PowerPoint Slide Layout Settings on page 596 for more information).



*Figure 883 Setting the slide layout for a layout master*

You can take an existing page that is laid out as required, and save it as a layout master (see Saving a Page as a Layout Master on page 73 for more information).

**Note:** Hit Lists and Single Views cannot be used in a layout master.

## 31.7. Styles

You can create your own Styles, or use the default styles that are included in Reportal. Click the **Preview** button to view the style.

### 31.7.1. The Aggregated Table Styles

Here you specify the styles to be used for aggregated tables. To create a new style:

1. Right-click on the Aggregated Table object and select **Insert Style (Inside)**.  
A new style is created.
2. Right-click on the new style, select **Rename**, and give the new style a logical name.
3. Right-click on the style and choose **Properties**.

The Properties sheet opens. Here you can specify the various characteristics that are to be used for aggregated tables when this style is selected.

Any settings you make on an aggregated table style will apply to all tables using that style (see The Table Designer on page 143 for more information).

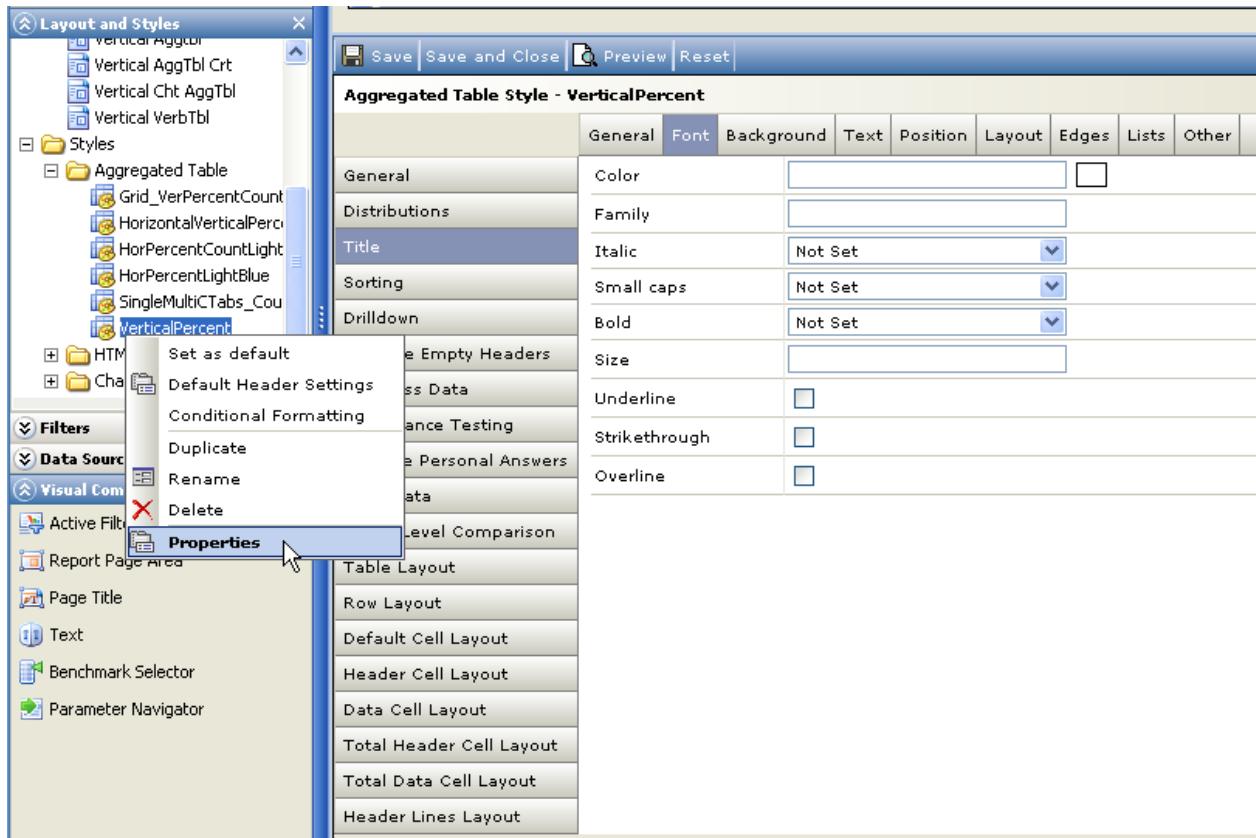


Figure 884 Aggregated Table style properties

For further details on the properties, go to The Table Property Sheet section.

### 31.7.1.1. Default Header Settings

You can define default settings for header variables used in aggregated tables. This allows you to apply global settings for each table style, that are automatically set for variables used in the aggregated tables. This is particularly useful when using parameters in tables or when creating several pages using the report page wizard, but it also saves you time in any table setup provided that good default values are specified for the different question and variable types.

To access the default header settings, right-click on the appropriate style in the Layout and Styles toolbox and select **Default Header Settings** from the menu.

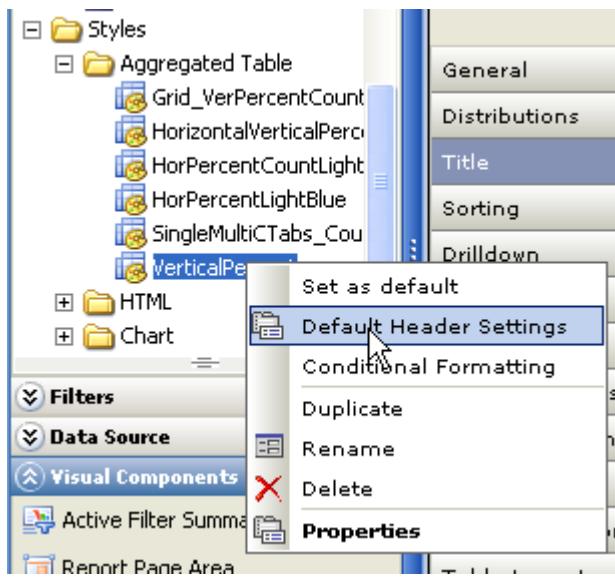
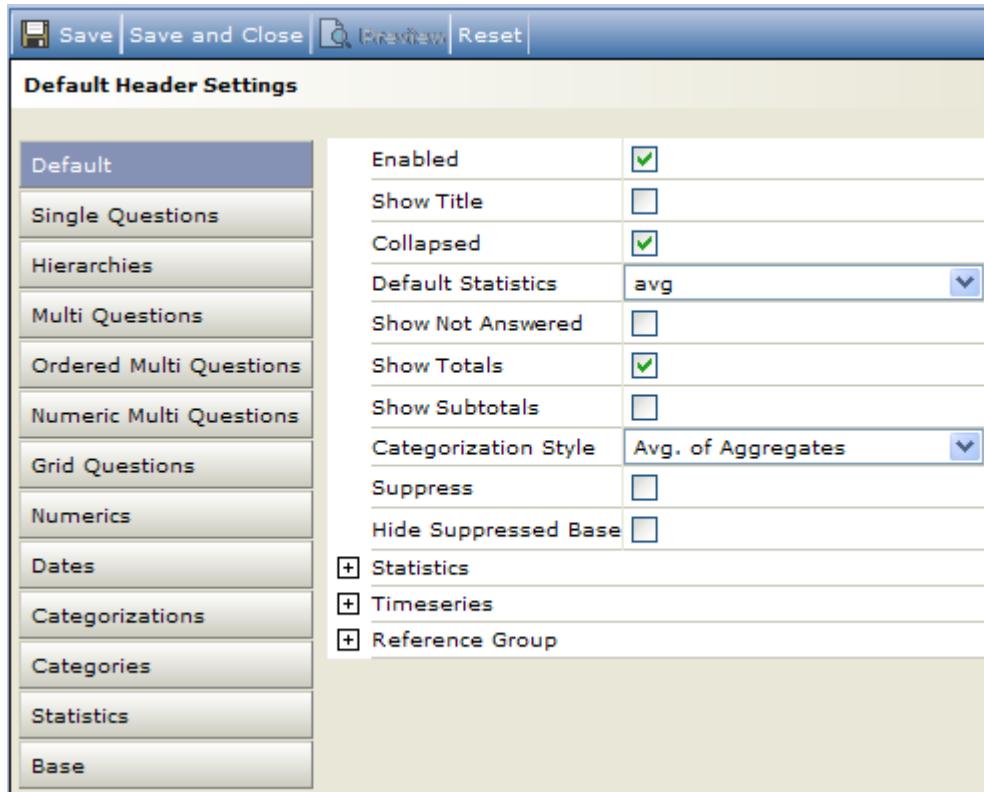


Figure 885 Accessing the Default Header Settings

The Default Header Settings page opens. Check the Enabled box to access the various properties.



**Figure 886 The Default Header Settings properties page**

The tabs in the left column contain the properties applicable to the type of questions; the actual properties are described elsewhere in the documentation. The default tab contains settings irrespective of the variable type. These settings can be overruled by those set on specific header variable types in the tabs.

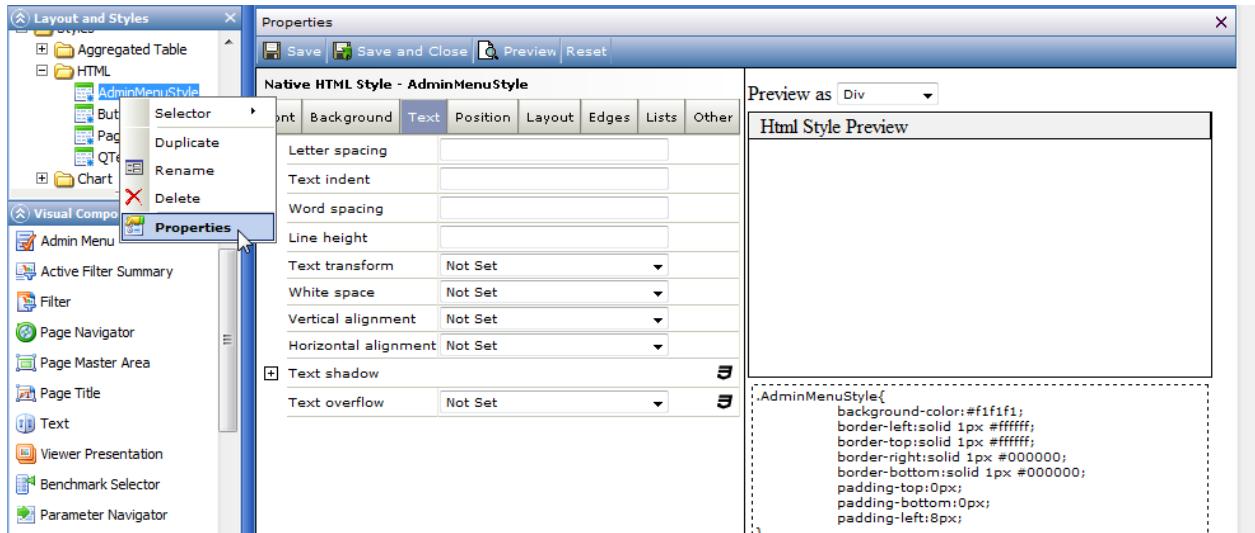
To overrule the default header settings locally, deselect the **Use default settings** option on the specific header variables (see Use Default Settings on page 198 for more information).

### 31.7.2. The HTML Styles

Here you can define styles for the text components. To create a new style:

1. Right-click on the HTML object and select **Insert Style (Inside)**.  
A new style is created.
2. Right-click on the new style, select **Rename**, and give the new style a logical name.
3. Right-click on the style and choose **Properties**.

The Properties sheet opens. Here you can specify the various characteristics that are to be used for the text when this style is selected. A full description of all the HTML style properties is available in the Authoring User Guide.



**Figure 887 HTML stylesheet properties**

A style Preview area beside the property sheet shows how the text will look as you make the changes. Use the Preview As field to select a type of element. The Preview area then shows how that element type will look with the current settings.

**Note:** You can also link a Report report to a Survey Layout in Confirmit Authoring, and use the HTML styles from the Survey Layout (see How to Select a Survey Layout on page 70 for more information).

### 31.7.2.1. Custom CSS

Reports have a "Custom CSS" field, which allows you to enter any CSS code that you wish to include. This code will then be rendered in the report styles. This feature is also present in Authoring and Panel Portals.

To use this feature:

1. Open the report to which you wish to add the custom CSS.
2. In the Layout and Styles toolbox, expand the **Styles** folder.
3. Right-click on the **HTML** folder and select **Edit Custom CSS**.

The Edit Custom CSS overlay opens. Here you can enter any CSS you wish to include. The style(s) you add here will be visible in the report preview.

Note that custom CSS is preserved on duplication and export, and is also supported by templates.

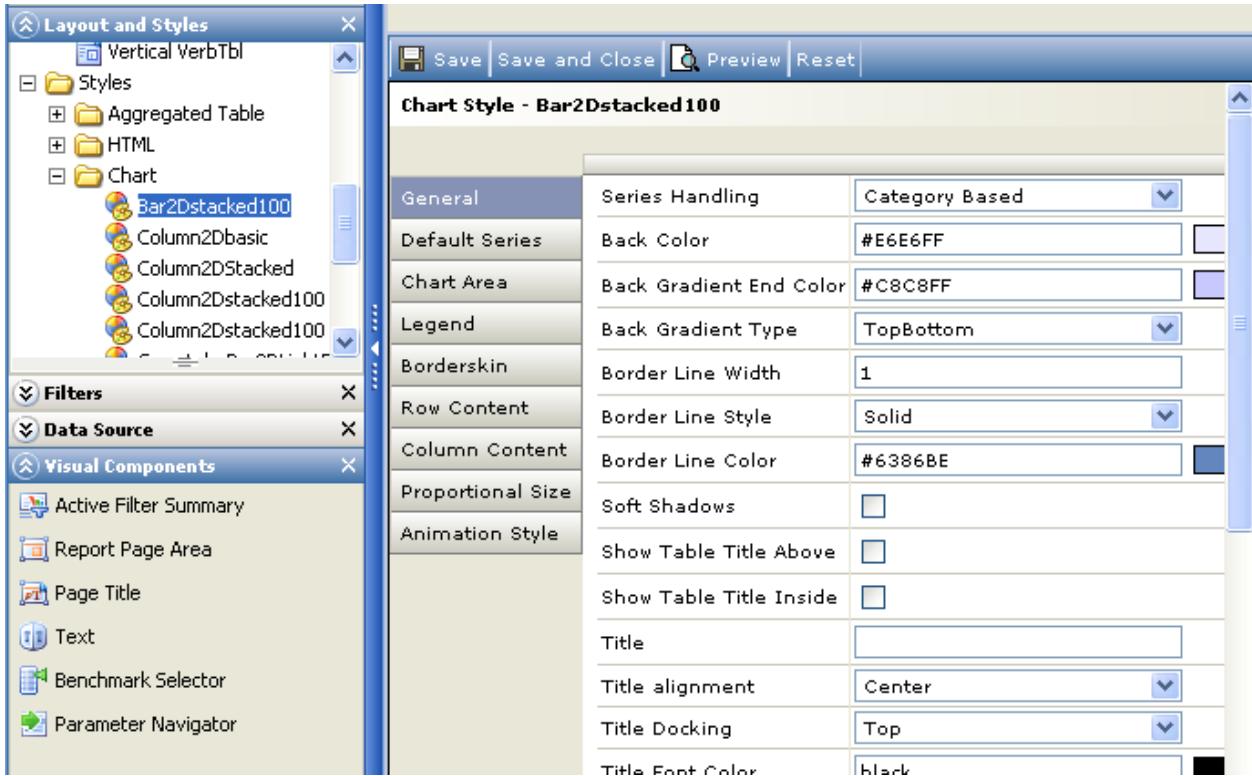
### 31.7.3. The Chart Style

Here you can define styles for the charts. To create a new style:

1. Right-click on the Chart object and select **Insert Style (Inside)**.  
A new style is created.
2. Right-click on the new style, select **Rename**, and give the new style a logical name.
3. Right-click on the style and choose **Properties**.

The Properties sheet opens. Here you can specify the various characteristics that are to be used for the chart when this style is selected.

See The Advanced Properties for more information on the various properties. All settings in the style will apply to all charts using the style.



*Figure 888 The Chart Style properties*

### 31.7.4. The Verbatim Table Styles

Here you specify the styles to be used when reporting on Open Text questions. To create a new style:

1. Right-click on the Verbatim Table object and select **Insert Style (Inside)**.  
A new style is created.
2. Right-click on the new style, select **Rename**, and give the new style a logical name.
3. Right-click on the style and choose **Properties**.

The Properties sheet opens. Here you can specify the various characteristics that are to be used for verbatim tables when this style is selected.

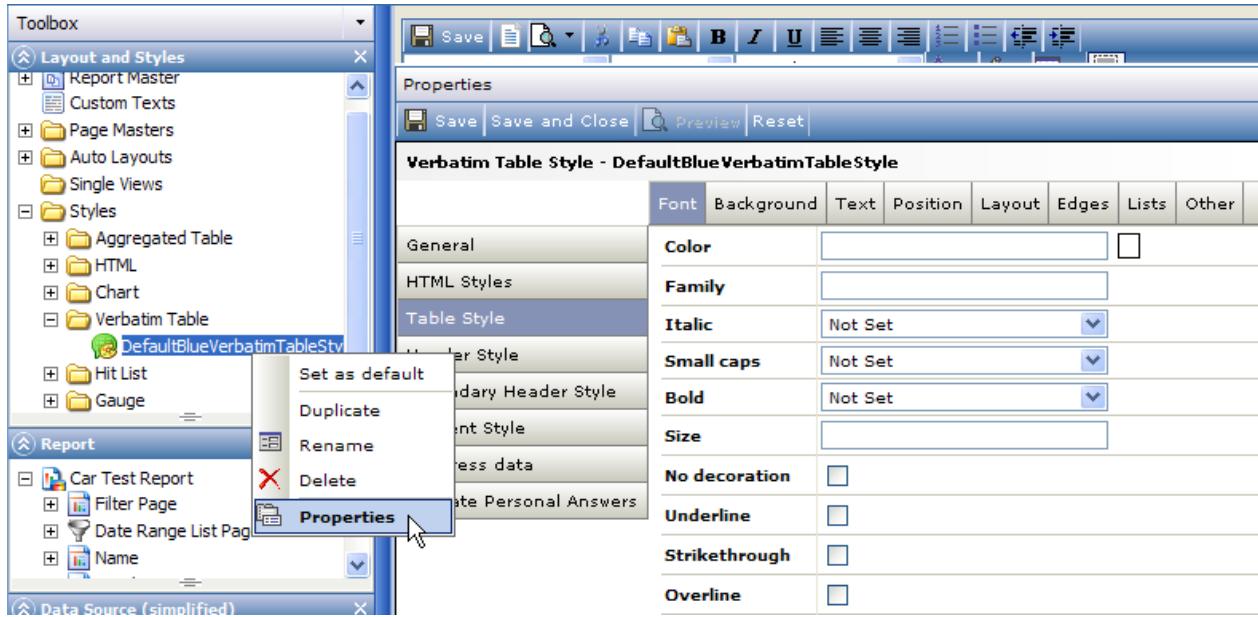


Figure 889 The Verbatim Table style properties

### 31.7.5. The Hit List Styles

Here you can define styles for Hit Lists. The Hit List folder contains a default style which will be applied automatically to any Hit List you create (see Hit Lists on page 441 for more information) unless you create and specify another style to be used.



Figure 890 The default Hit List style in the Layout and Styles toolbox

To create a Hit List style:

1. Right-click on the **Hit List** folder and select **Insert Style (Inside)**.



Figure 891 Creating a new Hit List style

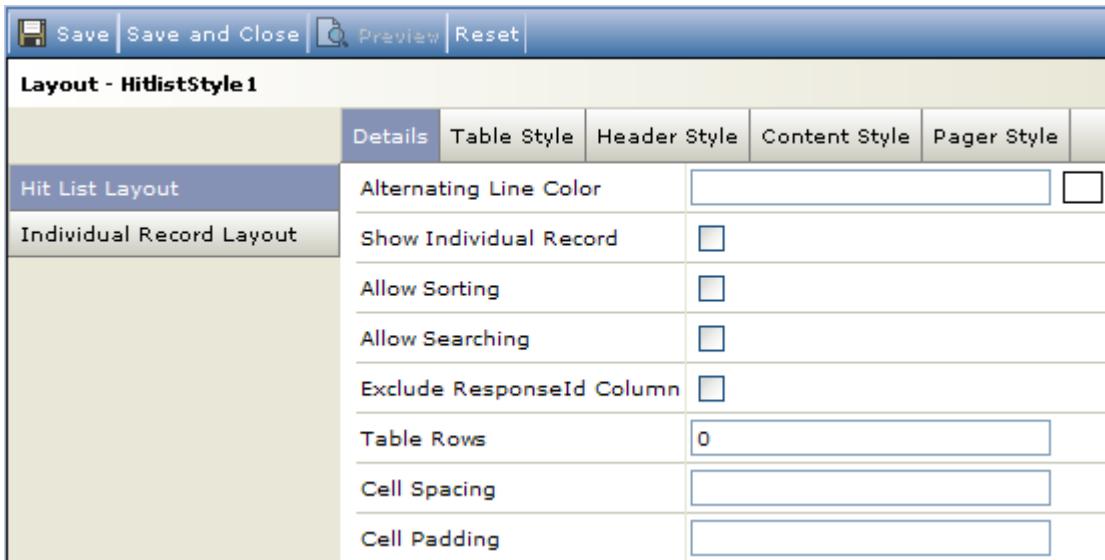
A new style is created in the **Hit List** folder.

2. To give the new style a name, right-click on the **NewStyle** element and select **Rename**, then type a logical name for the style into the field. Note that the style name cannot contain spaces.

3. To edit the style properties, double-click on the style element or right-click on it and select **Properties**(see The Hit List Layout > Details Properties on page 712 for more information).

### 31.7.5.1. The Hit List Layout > Details Properties

To edit the style properties, double-click on the style element or right-click on it and select **Properties**. The properties page opens as shown below. The properties in the Details sheet specify the general contents and layout for the Hit List while the various Style tabs contain the properties for the various parts of the Hit List table.



**Figure 892 The Hit List Style Layout properties**

The properties on this tab are as follows:

- **Alternating Line Color** - you can specify that alternate rows in the table are displayed with different background colors. The first color will be that defined in the selected style. Use this property to specify the second color.
- **Show Individual Record** - check this box to allow viewers to click on a respondent in the Hit List to display an overview of that record's responses to the questions in the survey. All the questions the respondent has answered will be displayed. The layout of the Individual Record table is defined in the Individual Record Layout tab.
- **Allow sorting** - check this box to allow the viewer to sort the Hit List by clicking on the column headers. Note that this property enables/disables sorting for the entire Hit List. You can specify individual columns in the Hit List to be sortable by selecting the Is Sortable property in the properties sheet for the individual field.
- **Allow Searching** - check this box to allow the viewer to search within the Hit List. Note that this property enables/disables searching on the Hit List level. You can specify individual columns in the Hit List to be searchable by selecting the Is Searchable property in the properties sheet for the individual field. A Geolocation column cannot be made searchable as the user will rarely if ever know the exact coordinates to search for.
- **Exclude ResponseID Column** - hides the response ID column from the viewer.
- **Table Rows** - type in a value to specify the number of records that are to be included per page.
- **Cell Spacing** - type in a value to specify the space, in pixels, around the cells.
- **Cell Padding** - type in a value to specify the space, in pixels, between the cell contents and the borders of the cell.

### 31.7.5.2. The Hit List Layout > Table Properties

The four ...Style tabs above the Properties page contain the properties for the various parts of the Hit List table. The properties listed in the four tabs are identical.

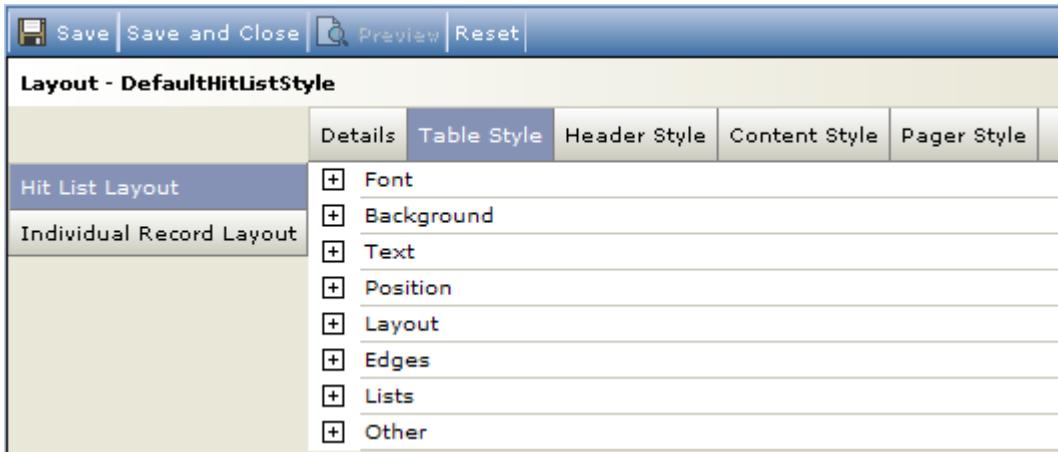


Figure 893 The Table Style properties

**Note:** Although the properties in this property sheet apply only to the selected Hit List style, the property names and descriptions are common to several other areas in Reportal. Refer to, for example, the Hit Lists section for further details.

### 31.7.5.3. The Hit List Individual Record > Details Properties

If the **Show Individual Record** property is selected in the Hit List Layout Properties page (see The Hit List Layout > Details Properties on page 712 for more information), then when the viewer clicks on a record in the Hit List, a new table opens displaying all the responses for that respondent. The properties on the Individual Record Layout tab define how the new table is to look. The properties in the Details sheet specify the general contents and layout for the table while the various Style tabs contain the properties for the different parts of the table.

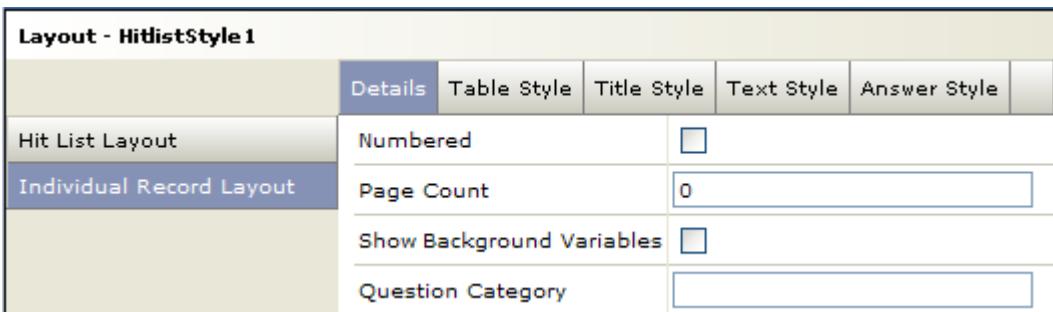


Figure 894 The Individual Record Details tab properties

The properties on this tab are as follows:

- **Numbered** - check this box if you want the questions displayed to be sequentially numbered, starting with 1 for the first question.
- **Page Count** - type in a value to specify the number of questions that are to be displayed per page.
- **Show Background Variables** – check this box to include the respondent's background variable details in the Hit List.

- **Question Category** - If you have set the question category for a set of questions, then you can specify which question categories are to be included in the Individual Records when a row is clicked in the Hit List. You can specify multiple categories. Separate the categories using a ; character.

### 31.7.5.4. The Hit List Style Individual Record > Table Properties

The ...Style tabs contain the properties for the various parts of the table.



Figure 895 The Hit List Style > Individual Record Layout > Table Style properties

**Note:** Although the properties in this property sheet apply only to the selected Hit List style, the property names and descriptions are common to several other areas in Reportal. Refer to, for example, the Hit Lists section for further details.

### 31.7.6. The Gauge Styles

Gauge Styles define the layout of gauges used in a report.

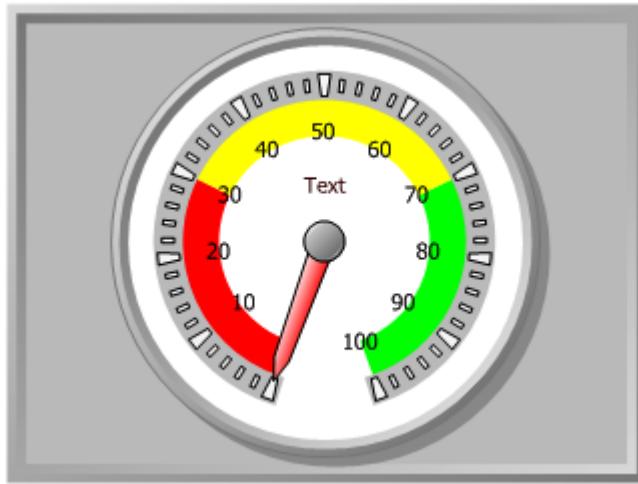


Figure 896 Example of a gauge

Although one would normally create one gauge style and use that style throughout a report, you can set up as many gauge styles as you wish. Each gauge style can have as many scales and pointers as required.

When you add a gauge to a report page, you must specify which cells in which table the gauge pointers are to represent. The table must therefore exist before you add the gauge to the page.

Note that the gauge styles must be created and set up before you can begin to use the gauges in the report.

### 31.7.6.1. How to Create a Gauge Style

You create and set up Gauge styles in the **Layout and Styles** toolbox, in the **Styles > Gauge** folder.

**Note:** At least one Gauge style must exist before you can use Gauges in your report.

To create a new Gauge style:

1. Right-click on the **Gauge** folder and select **Insert Style (inside)**, as shown below.

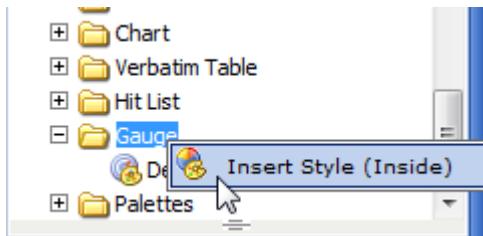


Figure 897 Creating a new Gauge style

A New Gauge Style element is added to the folder.

2. Right-click on the object and select **Rename**, then give the style a logical name. Note that the name cannot contain spaces.
3. Double-click on the new style or right-click and select **Properties** to open the Properties page for the style.
4. Set up the properties for the style as required (see Gauge Style Properties on page 715 for more information).
5. Save the changes.

Once you have created one style, you can use the Gauges functionality in Reportal (see Gauges on page 421 for more information).

### 31.7.6.2. Gauge Style Properties

You can set up a Gauge style virtually as you wish. To access the properties sheet, double-click on the style element in the **Gauge** folder, or right-click on the element and select **Edit**. The Properties sheet opens at the **Gauges** tab.



Figure 898 The Gauge Property tab bar

#### 31.7.6.2.1. The Gauges > Position/Type Tab Properties

The properties on this tab set the position and size of the gauge selected in the Gauge list.

If you have more than one gauge in the container, then use the Gauge List to select the gauge you wish to work with. If you wish to create another gauge style, click **Add**. The new style is then added to the Gauge List. Note that you can add a new gauge to the style from any of the property tabs.

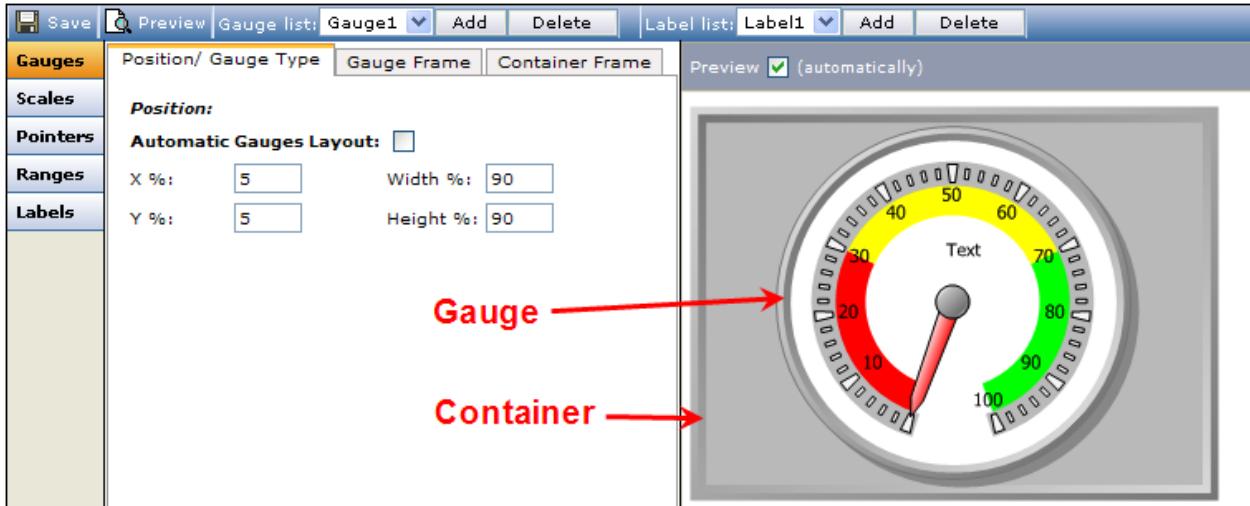


Figure 899 The Gauges > Position/Type Properties

**Save** and **Preview** are standard buttons that apply for all the properties tabs.

- **Save** - saves the changes.
- **Preview** - click to view the gauge with the current settings. If the **Preview (automatically)** box above the preview window is checked then the preview image will be updated automatically as you make changes to the properties.
- **Gauge list** - Any number of gauges can be included in the style (default is 1). Click the down-arrow beside the field and select the gauge you wish to work with. Any changes you make to any of the gauge properties will be applied only to the selected gauge.
- **Add** - click to add another gauge to the style. The gauges are numbered sequentially, and are listed in the Gauge list field.
- **Delete** - select a gauge in the **Gauge list** field and click **Delete** to delete the selected gauge.

The properties on this tab define the size and position in the container of the gauge selected in the Gauge list.

- **Automatic Gauges Layout** - uncheck this box if you wish to input the position and size of the gauge manually. While this box is checked (default) the remaining properties are not accessible.
- **X %** - specifies the X (horizontal) position of the selected gauge, as a percentage of the container width. The position is defined as being from the left edge of the container to the left edge of the gauge. For example, a value of 50% will place the left edge of the gauge half way across the container.
- **Y %** - specifies the Y (vertical) position of the selected gauge, as a percentage of the container height. The position is defined as being from the top edge of the container to the top edge of the gauge. For example, a value of 50% will place the top edge of the gauge half way down the container.
- **Width** - specifies the width of the selected gauge as a percentage of the container width.
- **Height** - specifies the height of the selected gauge as a percentage of the container height.

### 31.7.6.2.2. The Gauges > Gauge Frame Tab Properties

The properties on this tab enable you to specify the appearance and colors for the selected gauge's frame and background.

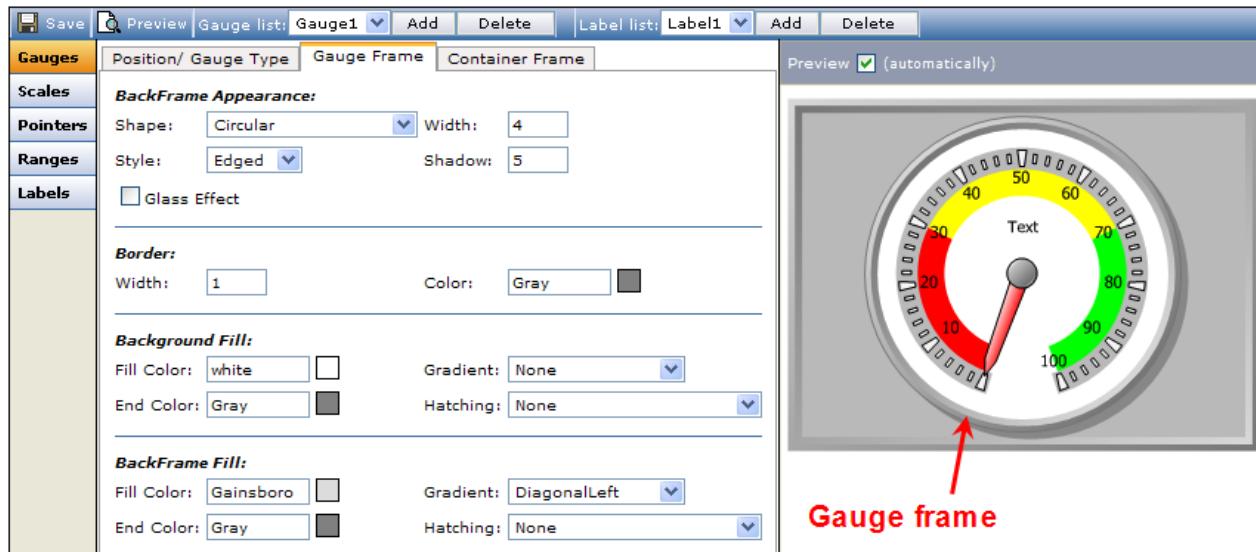


Figure 900 The Gauges > Gauge Frame properties

The properties are as follows:

- **Shape** - specifies the shape of the gauge frame (in this figure, circular).
- **Style** - specifies the style of the gauge frame.
- **Width** - specifies the width of the gauge frame in pixels.
- **Shadow** - adds a shadow effect to the gauge frame. To create a shadow effect, set a value other than zero (0). A positive value will result in a shadow positioned below and to the right of the object; a negative value will result in a shadow positioned above and to the left.
- **Glass Effect** - adds the visual effect of placing a pane of glass (with "reflection") in front of the gauge.

#### Border:

- **Width** - specifies the thickness in pixels of the gauge's border line. If the line width is greater than 0, then it will be given the color specified in the Color property.
- **Color** - defines the color of the gauge's border line.

#### Background Fill:

- **Fill Color** - specifies the color to be used for the background area inside the gauge's border line. This will be the first color used if a gradient is chosen for the background.
- **End Color** - if a Gradient type is selected the background will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

#### Backframe Fill:

- **Fill Color** - specifies the color to be used for the background area of the gauge's frame. This will be the first color used if a gradient is chosen for the background.
- **End Color** - if a Gradient type is selected for the gauge frame, the frame will be given a graded color, changing from the Fill Color to the End Color.

- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

### 31.7.6.2.3. The Gauges > Container Frame Properties

The properties on this tab control the look and layout of the gauge container - the frame around the gauges. In the figure below this is the gray rectangle.

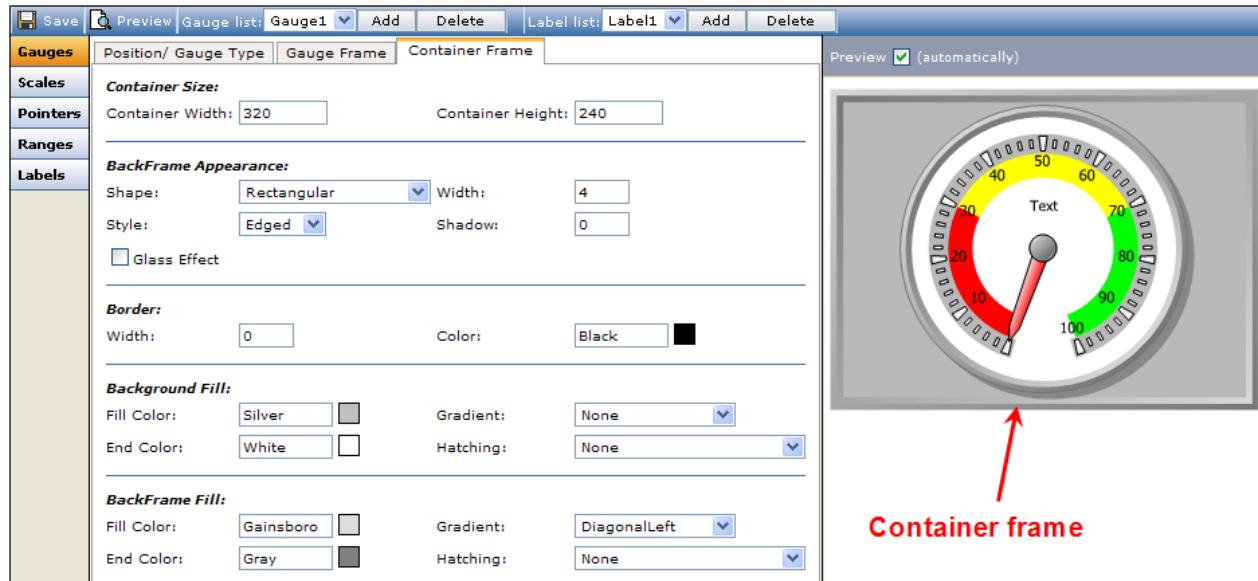


Figure 901 The Gauges > Container Frame properties

The properties are as follows:

- **Container Width** - specifies the width of the container, in pixels.
- **Container Height** - specifies the height of the container, in pixels.

#### BackFrame Appearance:

- **Shape** - specifies the shape of the container frame (in this figure, rectangular).
- **Style** - specifies the style of the container frame.
- **Width** - specifies the width of the frame in pixels.
- **Shadow** - adds a shadow effect to the frame. The frame is reduced in size and is moved up and towards the left to create a shadow below and to the right of the frame. The value specified in the property is the distance in pixels that the frame is moved, thereby also being the width of the shadow.
- **Glass Effect** - adds the effect of placing a pane of glass (with "reflection") in front of the frame.

#### Border:

- **Width** - specifies the thickness in pixels of the container frame's border line. If the line width is greater than 0, then it will be given the color specified in the Color property.
- **Color** - defines the color of the border line if the width is set to a value greater than 0.

#### Background Fill:

- **Fill Color** - specifies the color to be used for the background area inside the frame's border line. This will be the first color used if a gradient is chosen for the background.
- **End Color** - if a Gradient type is selected the background will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

#### Backframe Fill:

- **Fill Color** - specifies the color to be used for the background area of the frame. This will be the first color used if a gradient is chosen for the background.
- **End Color** - if a Gradient type is selected for the frame, the frame will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

#### 31.7.6.2.4. The Scales > Scale Tab Properties

The properties on this tab specify the look and position of the scale(s) on the selected gauge. Note that you can have more than one scale on a gauge - useful if you wish to present several information sets using separate pointers for each.

If you have more than one gauge in the container, then use the **Gauge List** to select the gauge you wish to work with (in the figure, Gauge1 is selected). If the gauge you wish to work with has more than one scale, select the scale you wish to set up/change using the **Scale List** (in the figure, Scale1 is selected).

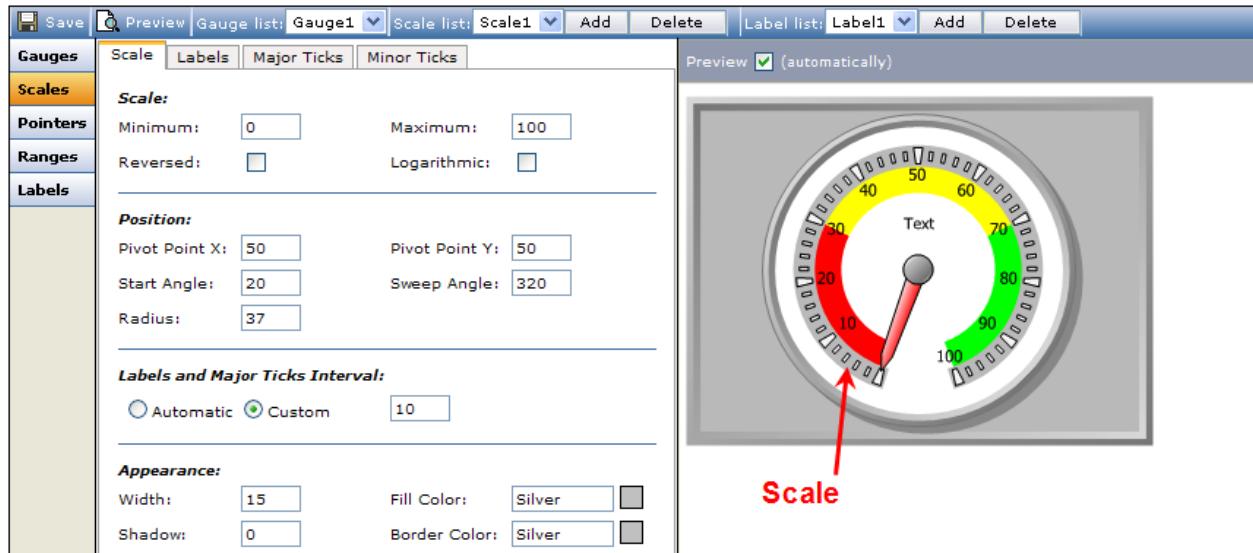


Figure 902 The Scales > Scale properties

The properties on this tab are as follows:

- **Scale List** - a gauge can have several scales. As you create scales they are added to this list. Click the down-arrow beside the field and select the scale you wish to work with. Any changes you make to any of the scale properties will be applied only to the selected scale.
- **Add** - click to add another scale to the gauge style. The scales are numbered sequentially, and are listed in the **Scale List** field.
- **Delete** - select a scale in the **Scale list** field and click **Delete** to delete the selected scale.

**Scale:**

- **Minimum** - specifies the minimum value of the scale.
- **Maximum** - specifies the maximum value of the scale.
- **Reversed** - the scale will run as default in the clock-wise direction. check this box to have the scale run anti-clockwise.
- **Logarithmic** - check this box to use a logarithmic scale.

**Position:**

- **Pivot Point X** - specifies the X (horizontal) position of the center of rotation of the pointer. The value is specified as a percent of the gauge's width, from the left edge.
- **Pivot Point Y** - specifies the Y (vertical) position of the center of rotation of the pointer. The value is specified as a percent of the gauge's height, from the upper edge.
- **Start Angle** - the angle, in degrees, in the clock-wise direction from the lowest point of the gauge, at which the scale is to start.
- **Sweep Angle** - the total angle, in degrees, around which the scale is to extend.
- **Radius** - the radius of the scale from the pivot point (of the needle) to the center-line of the scale. The value is specified as a percentage of the diameter of the gauge measured to the outside edge of the gauge frame. If the gauge frame is rectangular, then the value is specified as a percentage of the shortest (width or height) dimension.

**Label and Major Ticks Interval:**

- **Automatic** - select to create the labels and the major tick marks automatically at every tenth position.
- **Custom** - select to activate the manual input for the labels and the major tick marks positions. Type a value N into the field to place the labels and major tick marks at every Nth position.

**Appearance:**

- **Width** - the total thickness, including the borders, of the scale bar.
- **Fill color** - the color of the "internal" area of the scale bar.
- **Shadow** - adds a shadow effect to the scale, of the specified width. The shadow is created below and to the right of the scale.
- **Border Color** - the color of the scale's border line.

### 31.7.6.2.5. The Scales > Labels Tab Properties

The properties on this tab specify the position, look and feel of the scale labels (the numbers indicating the data values).

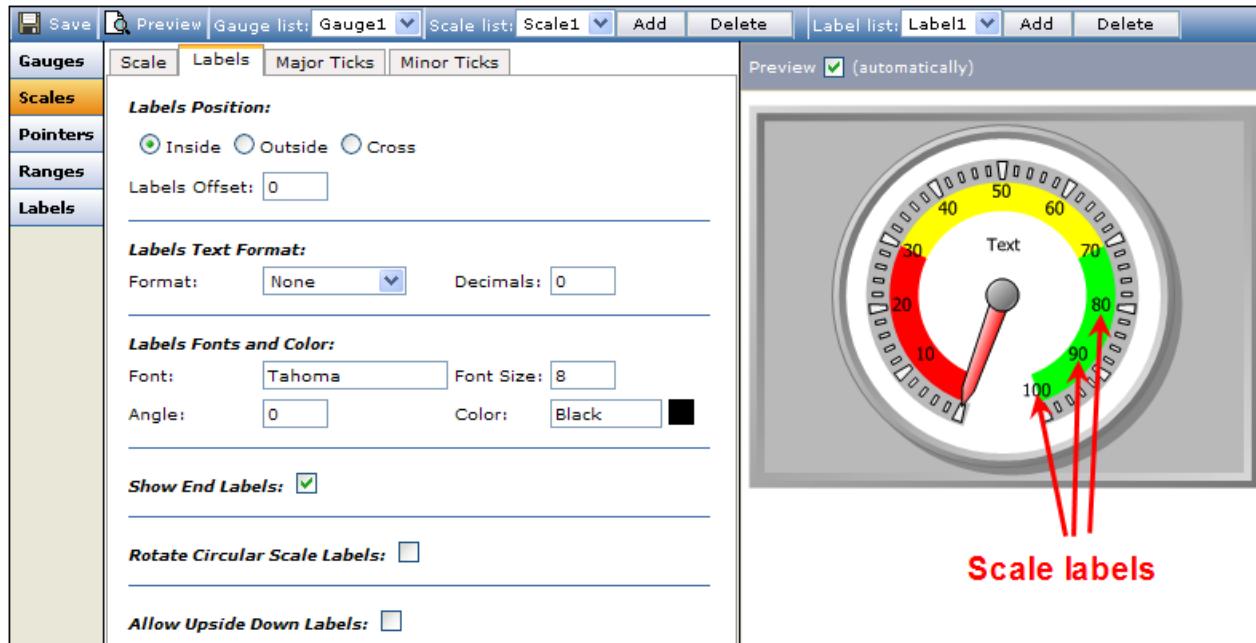


Figure 903 The Scales &gt; Labels properties

The Properties are as follows:

#### Labels Position:

- **Inside** - select this option if you want the labels to be displayed inside the scale.
- **Outside** - select this option if you want the labels to be displayed outside the scale.
- **Cross** - select this option if you want the labels to be displayed within the area of the scale line.
- **Labels Offset** - once you have selected the label placement, you can apply an offset to fine-tune the position. Specify a value in pixels.

#### Labels Text Format:

- **Format** - specifies the number format to be used for the labels.
- **Decimals** - specify the number of decimal places you wish to have after the label integer.

#### Label Fonts and Color:

- **Font** - this is the font type to be used for the applicable text item, for example Arial, Courier, Times etc. Type the desired font type into the field and apply/save the changes.
- **Font Size** - this property defines the size of the characters to be used.
- **Angle** - if you want the labels to be presented at a specific angle, type the angle in here.
- **Color** - the Color property specifies the color to be used for the text.
- **Show End Labels** - if you do not wish to display the first and last labels on the scale, uncheck this box.
- **Rotate Circular Scale Labels** - check this box if you wish the labels to rotate to follow the curvature of the scale.
- **Allow Upside Down Labels** - check this box if you wish to allow the labels to be displayed inverted if "required" to follow the curvature of the scale.

### 31.7.6.2.6. The Scales > Major/Minor Ticks Tab Properties

The properties on these tabs enable you to specify the look and feel of the major and minor tick marks. Note that the properties for the two tick mark types are identical, so they are described only once.

If you have more than one gauge in the container, then use the **Gauge List** to select the gauge you wish to work with. If the gauge you wish to work with has more than one scale, select the scale you wish to set up/change using the **Scale List**.

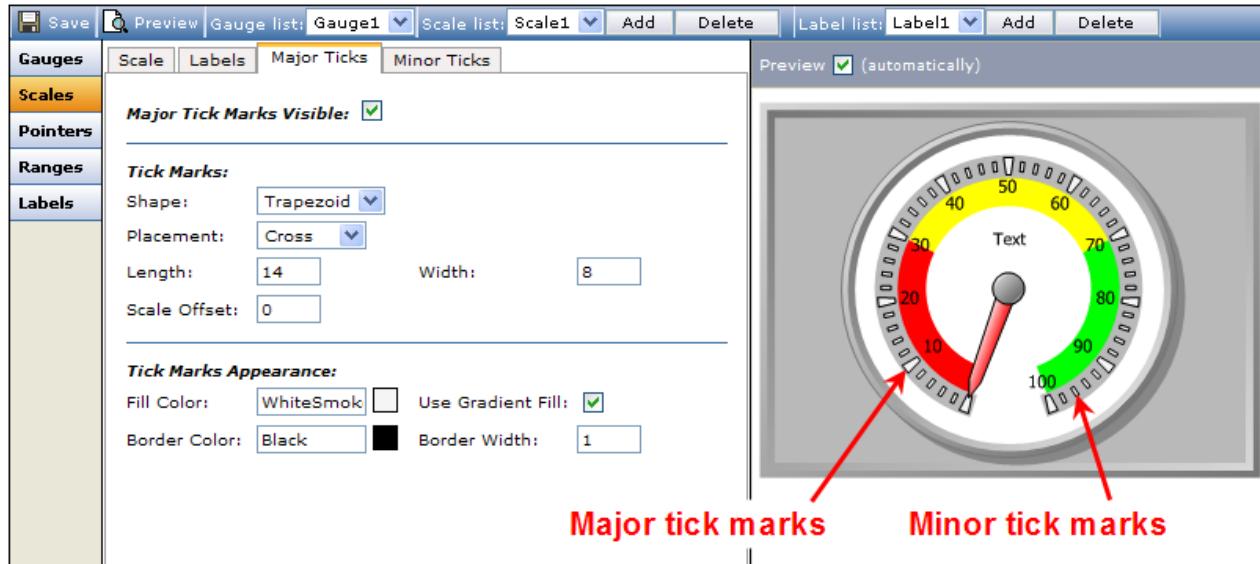


Figure 904 The Scales > Tick Marks properties

The properties are as follows:

- **Tick Marks Visible** - this box is checked by default. Uncheck the box if you do not wish to see the tick marks.

#### **Tick Marks:**

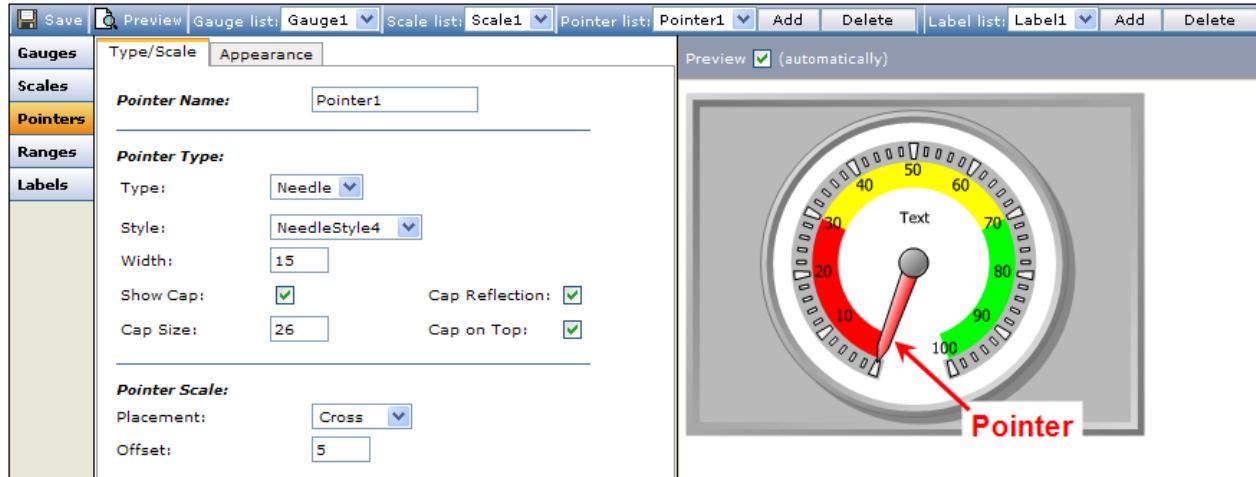
- **Shape** - select the shape of the tick marks.
- **Placement** - select where relative to the scale the tick marks are to be positioned.
- **Length** - specifies the length of the tick marks, in pixels.
- **Width** - specifies the width of the tick marks, in pixels.
- **Scale Offset** - if you wish to offset the tick marks in the scale (move them around the scale by a specified amount) type the distance in here.

#### **Tick Marks Appearance:**

- **Fill Color** - specifies the color used to present the tick marks.
- **Use Gradient Fill** - check this box if you wish to use a gradient fill for the tick marks.
- **Border Color** - specifies the color used to present the tick mark's border line.
- **Border Width** - if this is set to a value greater than 1 then the border line will be displayed, using the color specified in Border Color.

### 31.7.6.2.7. The Pointers > Type/Scale Tab Properties

Use the properties on this tab to define and specify the types of pointers that you wish to use in your gauges.



**Figure 905 The Pointers > Type/Scale properties**

**Save** and **Preview** are standard buttons that are available in all the property tabs.

If you have more than one gauge in the container, then use the Gauge List to select the gauge you wish to work with. If the gauge you wish to work with has more than one scale, select the scale you wish to set up/change using the Scale List. If the scale you have selected has more than one pointer, then use the Pointer List to select the pointer that you wish to work with.

- **Save** - saves the changes.
- **Preview** - click to view the gauge with the current settings. If the **Preview (automatically)** box above the preview window is checked then the preview image will be updated automatically as you make changes to the properties.
- **Gauge list** - Any number of gauges can be included in the style (default is 1). Click the down-arrow beside the field and select the gauge you wish to work with. Any changes you make to any of the gauge properties will be applied only to the selected gauge.
- **Scale List** - Any number of scales can be included in the style (default is 1). Click the down-arrow beside the field and select the scale you wish to work with. Any changes you make to any of the scale properties will be applied only to the selected scale.
- **Pointer List** - Any number of pointers can be included in the style (default is 1). Click the down-arrow beside the field and select the pointer you wish to work with. Any changes you make to any of the pointer properties will be applied only to the selected pointer.
- **Add** - click to add another pointer to the style. The pointers are initially named and numbered sequentially, though you can edit the names as necessary. The pointers are listed in the **Pointer list** field.
- **Delete** - select a pointer in the **Pointer list** field and click **Delete** to delete the selected pointer.
- **Pointer Name** - here you can change the name of the selected pointer. Type the desired name into the field.

#### Pointer Type:

- **Type** - specifies the type of pointer that is to be used; a needle, a marker or a bar. Various style options are then available in the Style drop-down depending on the selection made here. Note that the remaining properties in this area will change depending on the Type selected.
- **Style** - specifies the style of the pointer. Note that the options available depend on the Type selected.
- **Width** - the width of the pointer/bar/marker, in pixels.
- **Marker Length** - if the Marker type is selected, use this property to specify the marker's length in pixels.
- **Bar Start** - if the Bar type is selected, this property specifies where the bar is to start.

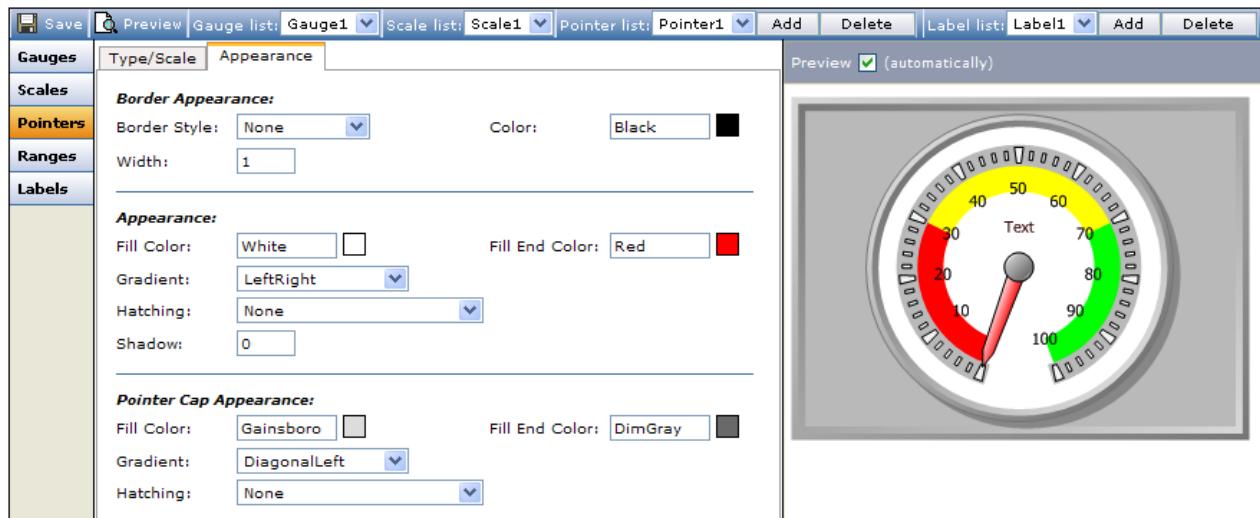
- **Show Cap** - if the Needle pointer type is selected, check this box if you want the pointer to be displayed with a cap.
- **Cap Size** - if the Needle pointer type is selected and if the Show Cap box is checked, specify the diameter, in pixels, for the cap.
- **Cap Reflection** - if the Needle pointer type is selected and the Show Cap box is checked, check this box to show a reflection effect on the cap.
- **Cap on Top** - if the Needle pointer type is selected and the Show Cap box is checked, the pointer cap can be placed over or under the pointer needle. Check the box (default) to have the cap on top of the needle.

#### Pointer Scale:

- **Placement** - the length of the pointer can be adjusted such that the tip lies inside the scale, extends beyond the scale or is somewhere in between. Select the desired position.
- **Offset** - once you have selected the pointer placement, you can apply an offset to fine-tune the position of the pointer tip. Specify a value in pixels.

#### 31.7.6.2.8. The Pointers > Appearance Tab Properties

Use the properties on this tab to define the styles and colors of the gauge pointer and cap.



**Figure 906 The Pointers > Appearance properties**

**Save** and **Preview** are standard buttons that are available in all the property tabs.

If you have more than one gauge in the container, then use the Gauge List to select the gauge you wish to work with. If the gauge you wish to work with has more than one scale, select the scale you wish to set up/change using the Scale List. If the scale you have selected has more than one pointer, then use the Pointer List to select the pointer that you wish to work with.

The properties are as follows:

#### Border Appearance:

- **Border Style** - specifies the style of the pointer border line.
- **Width** - specifies the thickness in pixels of the pointer's border line. If the line width is greater than 0, then it will be given the color specified in the Color property.
- **Color** - defines the color of the pointer's border line.

#### Appearance:

- **Fill Color** - specifies the color to be used for the area inside the pointer's border line. This will be the first color used if a gradient is chosen for the fill.
- **Fill End Color** - if a Gradient type is selected, the fill will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.
- **Shadow** - adds a shadow effect to the pointer. To create a shadow effect, set a value other than zero (0). A positive value will result in a shadow positioned below and to the right of the object; a negative value will result in a shadow positioned above and to the left.

#### Pointer Cap Appearance:

- **Fill Color** - specifies the color to be used for the cap. This will be the first color used if a gradient is chosen for the fill.
- **Fill End Color** - if a Gradient type is selected for the cap, it will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

#### 31.7.6.2.9. The Ranges > Scale/Position Tab Properties

The properties on this tab control the position and size of the ranges; the colored arcs that can be used for example to indicate acceptable or not-acceptable results.

If you have more than one gauge in the container, then use the Gauge List to select the gauge you wish to work with. If the gauge you wish to work with has more than one Range arc, select the arc you wish to set up/change using the Range List.

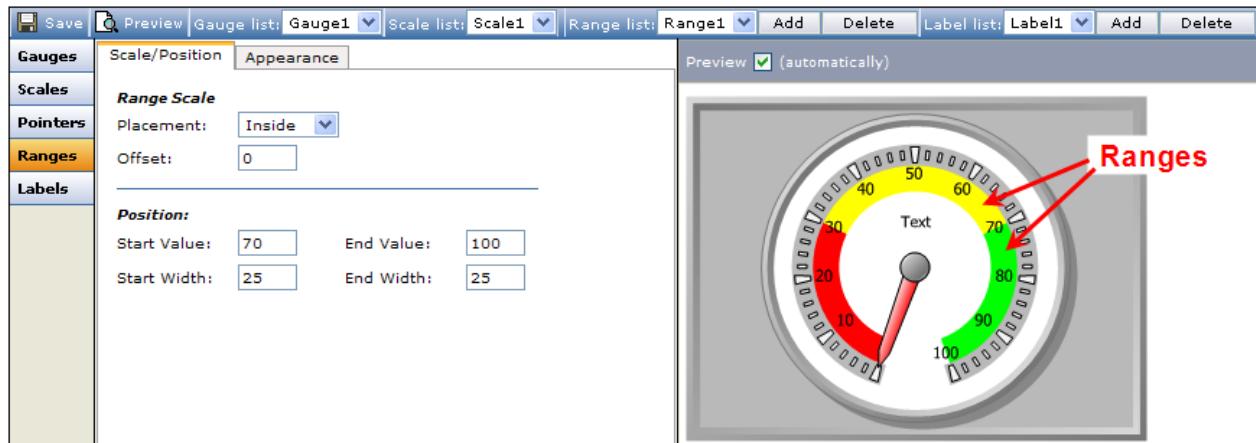


Figure 907 The Ranges > Scale/Position properties

The properties are as follows:

#### Range Scale:

- **Placement** - specifies where the range arc is to be located relative to the scale.

- **Offset** - once you have selected the placement, you can apply an offset to fine-tune the position. Specify a value in pixels.

#### Position:

- **Start Value** - specify the start point for the arc.
- **End Value** - specify the end point for the arc.
- **Start Width** - specify the width of the range arc at its start point.
- **End Width** - specify the width of the range arc at its end point.

#### 31.7.6.2.10. The Ranges > Appearance Tab Properties

The properties on this tab control the appearance and colors of the range arcs.

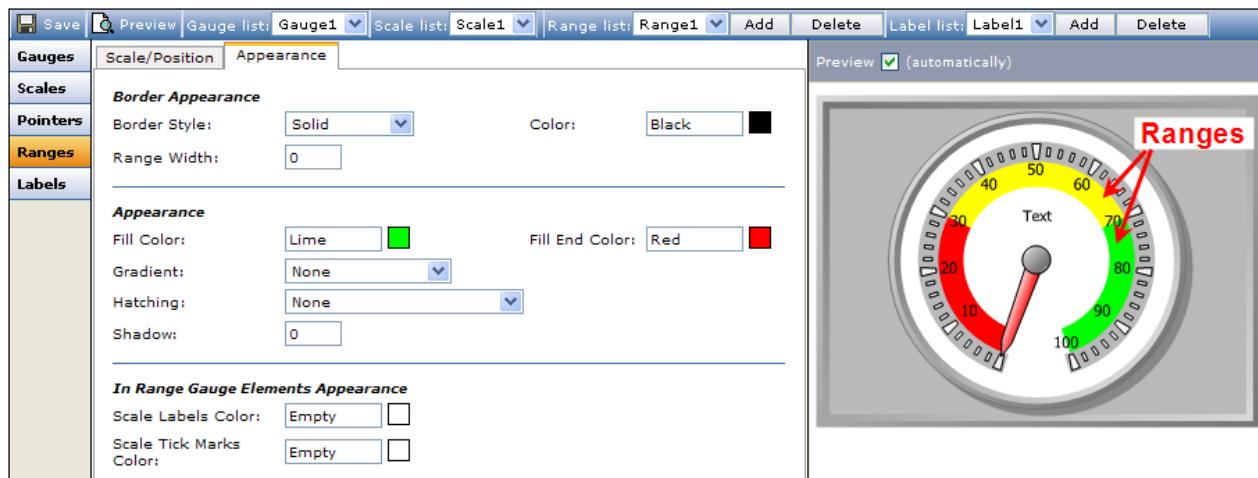


Figure 908 The Ranges > Appearance properties

The properties are as follows:

#### Border Appearance:

- **Border Style** - specifies the style of the range arc border line.
- **Width** - specifies the thickness in pixels of the range arc's border line. If the line width is greater than 0, then it will be given the color specified in the Color property.
- **Color** - if the Width property is set to a value greater than 0, then the resulting border line will be presented in the color specified here.

#### Appearance:

- **Fill Color** - specifies the color to be used for the area inside the range arc's border line. This will be the first color used if a gradient is chosen for the fill.
- **Fill End Color** - if a Gradient type is selected, the fill will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored.
- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.

- **Shadow** - adds a shadow effect to the range arc. To create a shadow effect, set a value other than zero (0). A positive value will result in a shadow positioned below and to the right of the object; a negative value will result in a shadow positioned above and to the left.

#### In Range Gauge Elements Appearance:

- **Scale Labels Color** - you can allocate a specific color to the part of the scale label that is covered by the range arc. If you wish to do this, select the desired color here.
- **Scale Tick Marks Color** - you can allocate a specific color to the scale tick marks that are covered by the range arc. If you wish to do this, select the desired color here.

#### 31.7.6.2.11. The Labels > Text Tab Properties

You can place text labels within the gauge container to provide information to the viewer. Note that these labels are positioned relative to the container and are therefore independent of the actual gauges.

You can create as many labels as you require. To add a label, click the **Add** button beside the Label List field. A new label will be added to the container and will be included in the Label List. Whilst editing the style, use the Label List to select the label you wish to work with.

Use this tab to specify the text that is to be displayed in the selected label. You can specify text for each of the report languages.

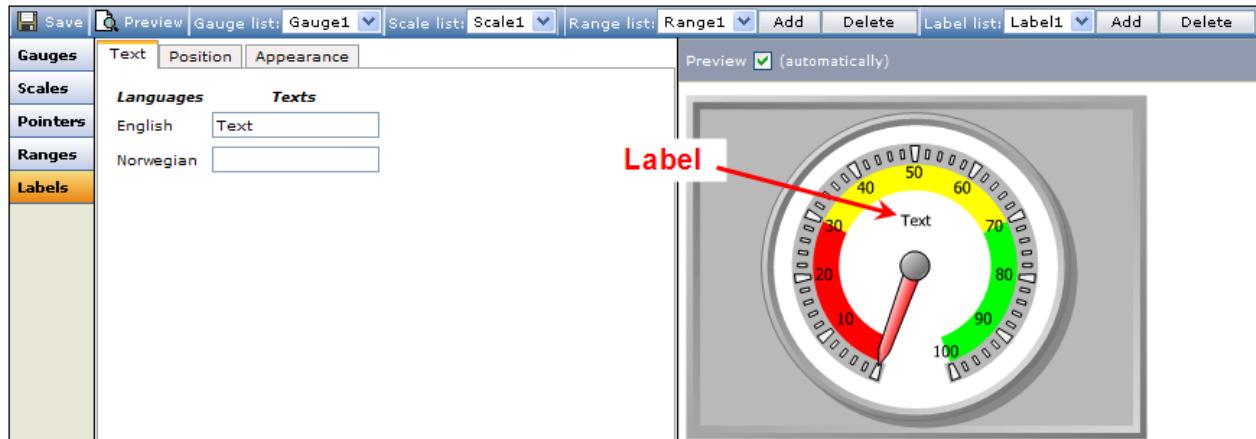


Figure 909 The Labels > Text properties

#### 31.7.6.2.12. The Labels > Position Tab Properties

Use the properties on this tab to position the selected label text in the container.

The text is written within a text box, and the properties specify the position and alignment off the text box relative to the parent object (the container or gauge) to which the text box is attached.

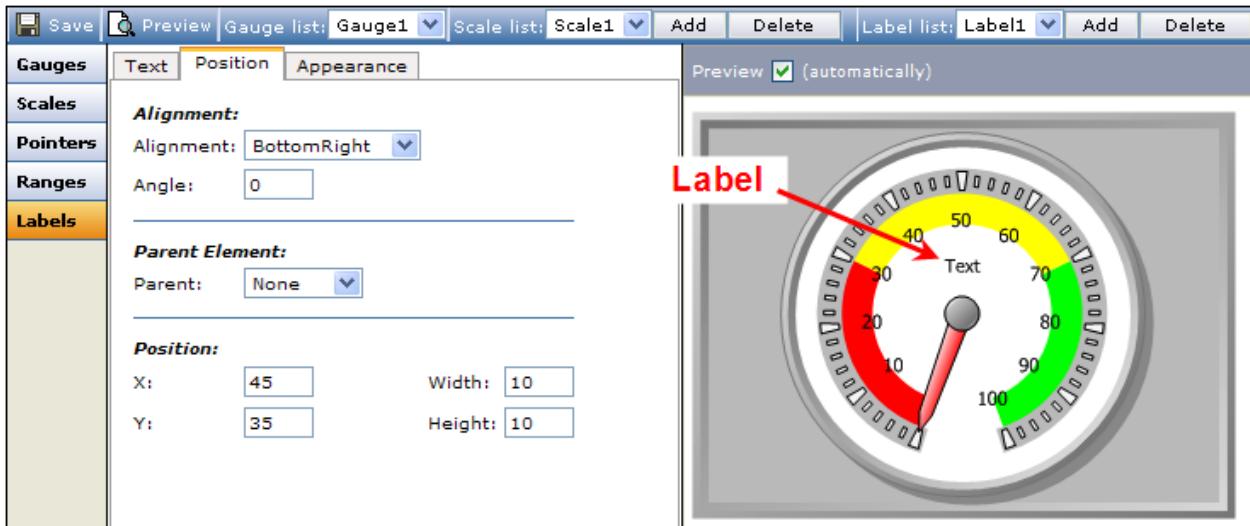


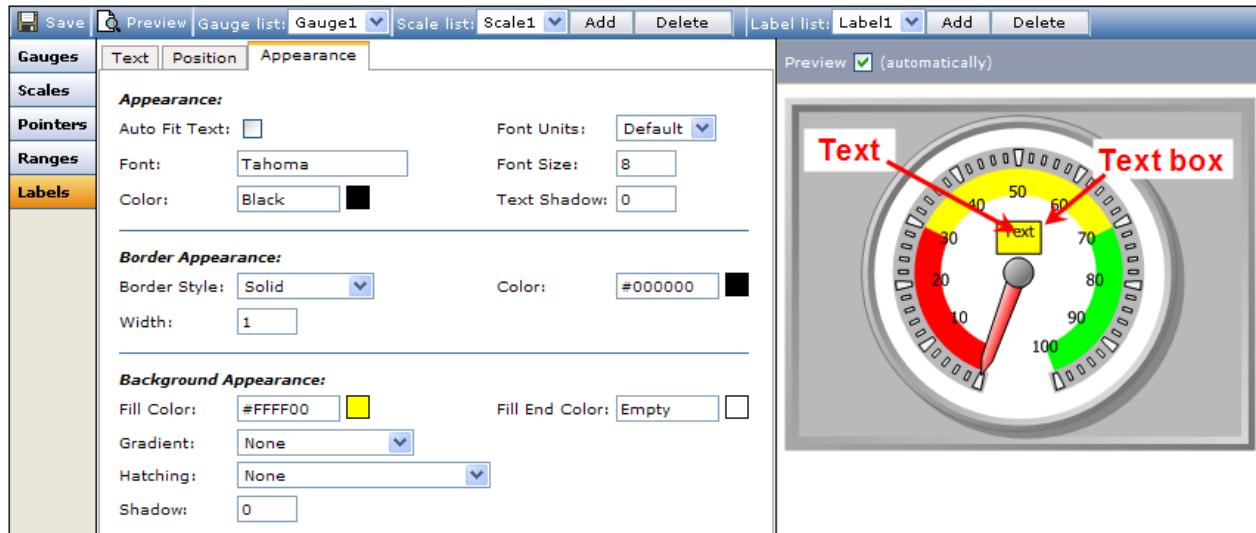
Figure 910 The Labels > Position properties

The properties are as follows:

- **Alignment** - the position of the text within the text box.
- **Angle** - specifies the angle of rotation of the text box.
- **Parent** - the object (container or gauge) to which the position of the text box is related.
  - **None** - the text box is positioned relative to the upper-left corner of the container.
  - **GaugeX** - all the gauges within this container are listed. The text box is positioned relative to the upper-left corner of the selected gauge.
- **X** - specifies the horizontal position of the left edge of the text box relative to the left edge of the selected "Parent" object, as a percentage of the total width of that object. For example, if a value of 50 is specified here, the left edge of the text box will be positioned 50% of the distance across the parent object.
- **Y** - specifies the vertical position of the top edge of the text box relative to the top edge of the selected "Parent" object, as a percentage of the total height of that object. For example, if a value of 50 is specified here, the top edge of the text box will be positioned 50% of the distance down the parent object.
- **Width** - specifies the width of the text box. Note that this is relative to the angle specified, so if you add a rotation angle of 90 deg. the "width" of the text box becomes the "height" on your screen.
- **Height** - specifies the height of the text box. Note that this is relative to the angle specified, so if you add a rotation angle of 90 deg. the "height" of the text box becomes the "width" on your screen.

### 31.7.6.2.13. The Labels > Appearance Tab Properties

The properties on this tab define the appearance of the text and the text box.



**Figure 911 The Labels > Appearance properties**

The properties are as follows:

#### Appearance:

- **Auto Fit Text** - when this box is checked, the text font size is changed automatically such that the text is fitted to the dimensions of the text box.
- **Font Units** - specifies the units to be used for the font size. Select whether you wish to use the Default (points) or Percent (of the height of the Parent element).
- **Font** - This is the font type to be used for the applicable text item, for example Arial, Courier, Times etc. Type the desired font type into the field.
- **Font Size** - defines the size of the characters to be used in the text.
- **Color** - specifies the color to be used for the text.
- **Text Shadow** - specifies the size of the shadow (the offset), in pixels, for the text. To create a shadow effect, set a value other than zero (0). A positive value will result in a shadow positioned below and to the right of the text; a negative value will result in a shadow positioned above and to the left.

#### Border Appearance:

- **Border Style** - determines the style used for the element's border line. The line can be solid, dotted, etc. To disable the border, set the style to "Not Set".
- **Color** - if the Border Width property is set to a value greater than 0, then the resulting border line will have the color specified here.
- **Width** - sets the thickness of the border line, in pixels. If you do not want the border line to be displayed, set the width to 0.

#### Background Appearance:

- **Fill Color** - specifies the color to be used for the background area inside the text box border line. This will be the first color used if a gradient is chosen for the background. For no color (clear), write None.
- **Fill End Color** - if a Gradient type is selected the text box background will be given a graded color, changing from the Fill Color to the End Color.
- **Gradient** - determines the orientation of the element's color gradient fill. Click the down-arrow to open a drop-down list of the available types and select the desired type from the list. If None is selected, only the first color will be used; the second color will be ignored.

- **Hatching** - sets the hatching style for the element. Note that Hatching and Gradient can not be combined. If both are set, Hatching will take precedence.
- **Shadow** - specifies the size of the shadow (the offset), in pixels, for the text box. To create a shadow effect, set a value other than zero (0). A positive value will result in a shadow positioned below and to the right of the box; a negative value will result in a shadow positioned above and to the left.

### 31.7.7. The Palettes

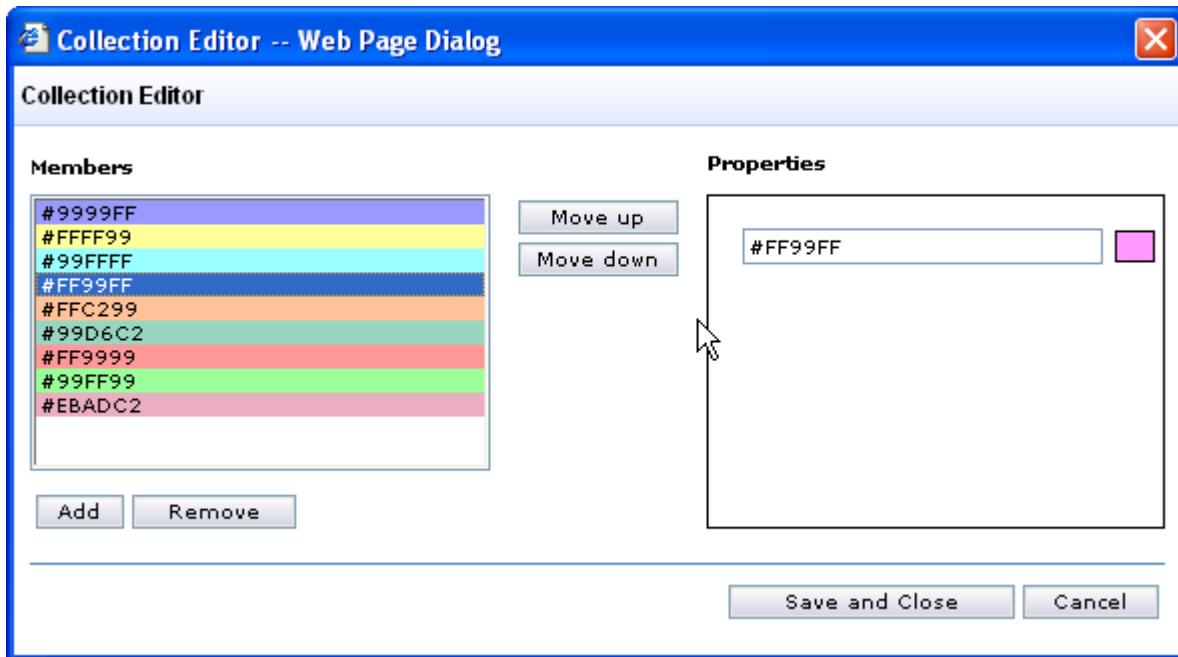
Here you can create your own color palettes to apply to the series in the charts.

The colors specified in the palette are applied to the chart series in the order in which they are listed in the palette. I.e. The first color in the list will be used for the first series in the chart, the second color will be used for the second series etc. You can change the order of the colors by selecting a color in the Collection Editor window (see the figure below) and clicking the **Move up** and/or **Move down** buttons.

To create a new palette:

1. Right-click on the Palette object and select **Insert Palette (Inside)**.  
A new palette is created.
2. Right-click on the new palette, select **Rename**, and give the palette a logical name.
3. Right-click on the palette and choose **Properties**.

The Collection Editor window opens. The figure below shows an example of the window with the colors specified for an existing palette. In this window you can specify the various colors that are to be used when this palette is selected.



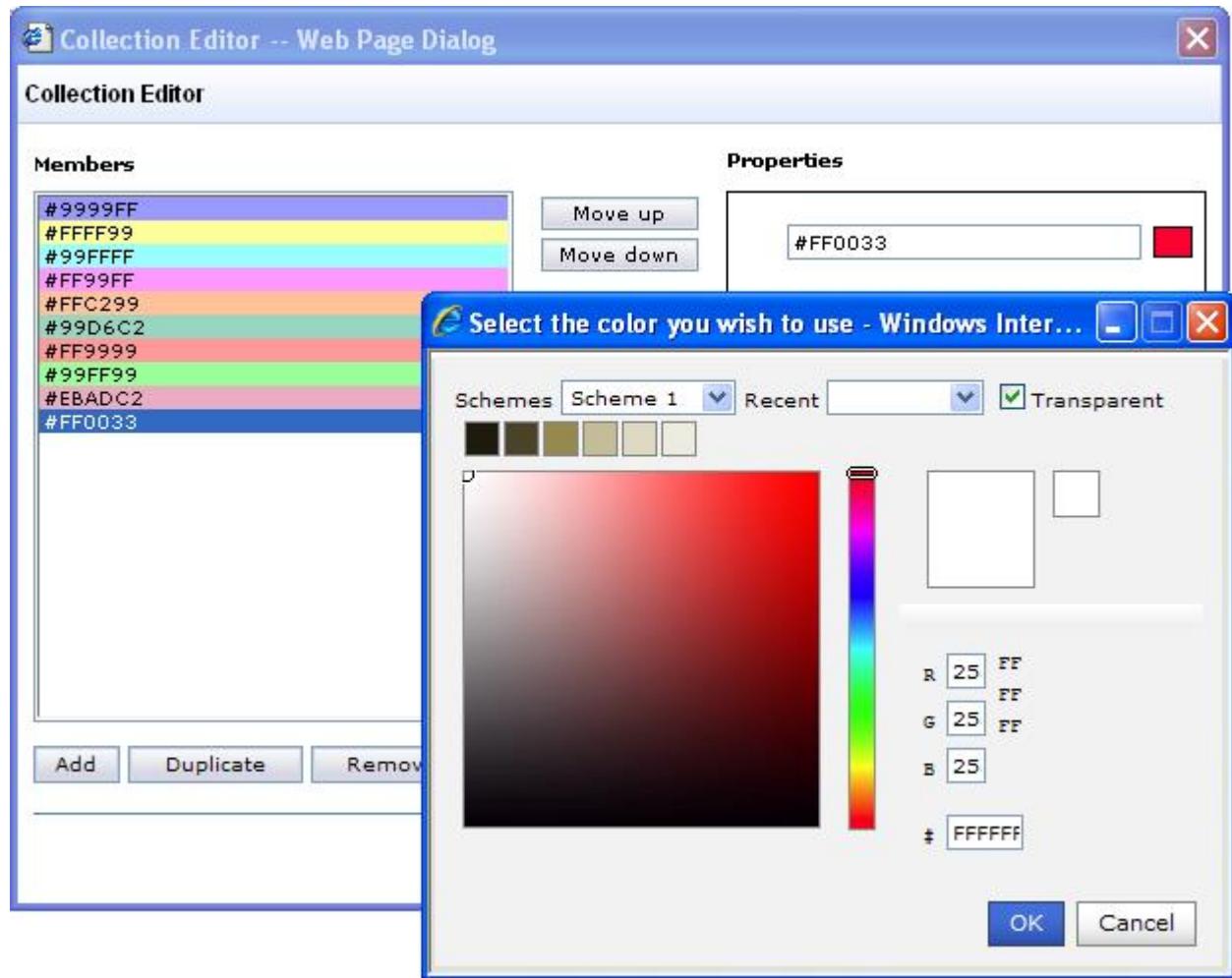
*Figure 912 A palette with colors specified*

To add a color to the palette:

1. Click **Add**.

A new "blank" row is added to the list and a blank field appears in the Properties area.

2. Define the color by typing in a standard HTML color name (such as "White", "Red", "Steelblue", etc.), or by typing in any valid ARGB (Alpha, Red, Green, Blue) value (for example #FFFFFF), into the Properties field, or by using the Color Picker (double-click in the small square in the Properties field to open it - see the figure below).



**Figure 913 Defining the color**

In the Color Picker, a number of color schemes have been set up with suggestions for sets of colors that may be useful to you. If you wish to base your colors on a scheme, click the down-arrow beside the Schemes field to open a list and select the desired scheme. Click on a colored sample square to choose that color, and drag the sliders to adjust the color as required.

You can also just use the sliders to find the required color, or type a color code into the RGB or # fields.

Once you have found the desired color, click **OK** to use it for the property.

Once you have used a color, it will be listed in the Recent Colors drop-down. This same drop-down list is available in all the color pickers within Reportal, in all your reports. So you can easily use the same color scheme for different reports, and for areas and elements in the report.

Click **Cancel** to close the Color Picker without selecting a color.

3. Click **Save and Close** to save the changes and close the window.

**Note:** You can override the colors in the palette such that specific series in the charts will always be given the same color. This will be useful if you are for example reporting on a set of products and you wish to highlight a particular product, or if you wish that the series in the charts always have the same colors even if some series are masked out. To do this, go to the Data Source toolbox and double-click on the question that provides the answers you wish to specify the color(s) for. In the Answers tab, you can specify colors for the various answers. These colors will then always be used for these answers, overriding the colors specified in the selected Palette.

## 31.8. Template Export and Import

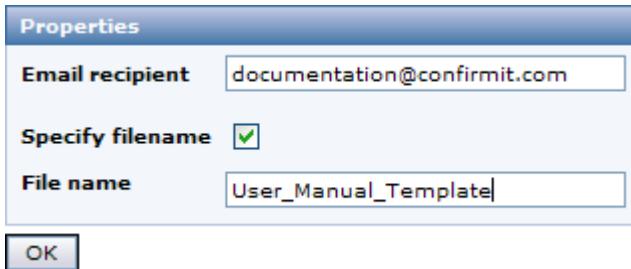
Reportal Templates can be exported from and imported to Reportal in XML format.

### 31.8.1. How to Export a Template

To export a template:

1. Go to the **Template List** or the **Home > Recent Templates** list.
2. Either click on the template you wish to export to open it, then go to the **Export Template Definition** menu command, or right-click on the template in the list and select **Export Template Definition** from the drop-down menu.

The Export Properties page opens as shown below. If you check the Specify Filename box then the File Name field appears.



*Figure 914 Specify the email address, and file name as necessary*

3. By default the Email Recipient is your email address. Edit the address as necessary.
4. If you wish to give the export file a specific name, check the Specify filename box to access the File name field, then type the required name into the field.
5. Click **OK**.

The task will be added to Confirmit batch tasks. If the file does not arrive at the specified email address, you can go to Confirmit Tasks and search for the batch job using the specified Task ID to see the status of the job.

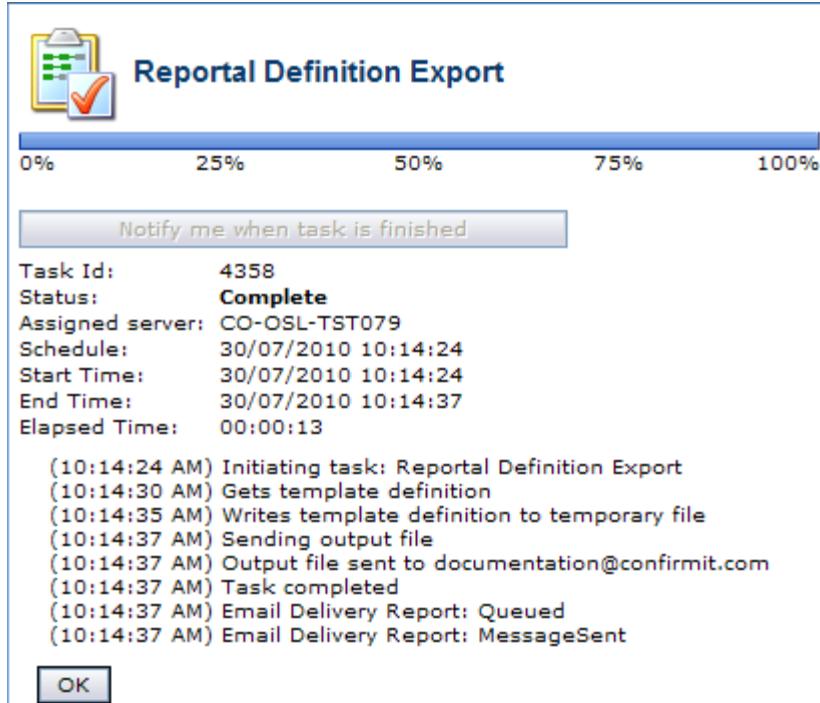


Figure 915 Example of a Task ID specification

### 31.8.2. How to Import a Template Definition

To import a template:

1. Go to the **Home > Import > Template Definition** menu command as shown below.

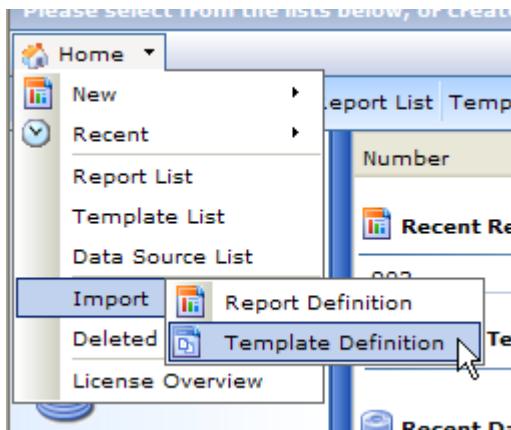


Figure 916 Selecting the Import Template Definition option

The Template Import Properties page opens as shown below.

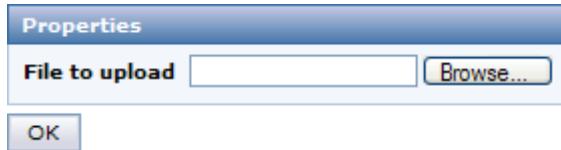


Figure 917 The Template Import Properties page

2. Browse to and select the template file you wish to import, then click **OK**.

The task is added to Confirmit batch tasks. You can go to Confirmit Tasks and search for the batch job by the specified Task ID in order to see the status of the job.

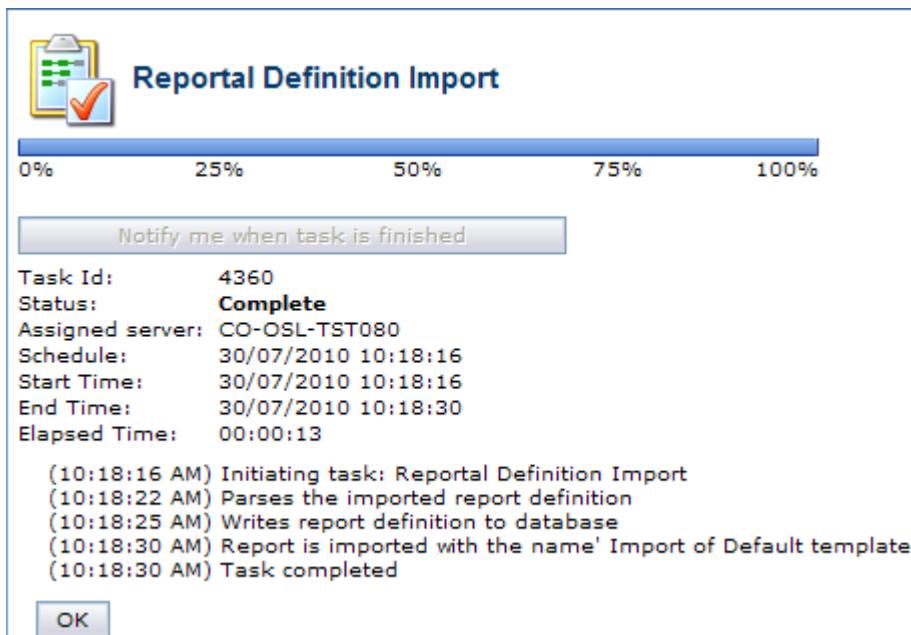


Figure 918 Example of a Task ID specification

Once the file has been uploaded it will appear in the Template List. The title will be "Import of..." and the original title of the template - see the figure below.

Template List				
Select a Template				
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Template Number	Template Name	Created Date	Created By	
1122	Import of Report Template 1	10/12/2009 14:07:43	Apple, Adam	<a href="#">Preview</a>
1114	Report Template 1	09/12/2009 13:47:30	Apple, Adam	<a href="#">Preview</a>
951	Report Template	12/11/2009 13:11:51	Apple, Adam	<a href="#">Preview</a>
838	Import of Default template	19/10/2009 11:26:34	Hammarström, Robert	<a href="#">Preview</a>
435	Default template	28/07/2009 11:36:20	System, Admin	<a href="#">Preview</a>

Figure 919 Example of a newly imported template in the Template List

## 32. APPENDIX A: Formula Definitions in Reportal

A brief presentation of the formulae used in Reportal, and the constraints regarding T-Testing and Chi Square significance testing.

### 32.1. The T-Test Significance Statistic

#### 32.1.1. Constraints

Testing is done on column proportions and means, depending on the type of distribution the actual row being tested represents. A T-Test is applied on all base sizes from 1 – 100 degrees of freedom, using a standard lookup table with a range of 80, 90, 95, 98, 99 or 99,8% confidence. All base sizes over 100 are treated as normal distributions.

Base sizes lower than 30 are tested, but results are displayed in lowercase to signify that the result is calculated on a weak base.

#### 32.1.2. Formulae

##### Statistical significance test for two unweighted proportions

$$T = \frac{p_1 - p_2}{\sqrt{\frac{p_1(1-p_1)}{n_1} + \frac{p_2(1-p_2)}{n_2}}}$$

Where:

- $p_1$  = unweighted proportion for group 1
- $p_2$  = unweighted proportion for group 2
- $n_1$  = unweighted base size for group 1
- $n_2$  = unweighted base size for group 2

##### Statistical significance test for two weighted proportions

$$T = \frac{p_{1w} - p_{2w}}{\sqrt{\frac{p_{1w}(1-p_{1w})}{f_1} + \frac{p_{2w}(1-p_{2w})}{f_2}}}$$

Where:

- $p_{1w}$  = weighted proportion for group 1
- $p_{2w}$  = weighted proportion for group 2
- effective base size for group 1 =

$$f_1 = \frac{\left( \sum_{i=1}^{n_1} W_{1i} \right)^2}{\sum_{i=1}^{n_1} W_{1i}^2}$$

effective base size for group 2 =

$$f_2 = \frac{\left( \sum_{i=1}^{n_2} W_{2i} \right)^2}{\sum_{i=1}^{n_2} W_{2i}^2}$$

### Statistical significance test for two unweighted means

$$T = \frac{\bar{y}_1 - \bar{y}_2}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}} \times \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

with degrees of freedom =  $n_1 + n_2 - 2$

**Where:**

$\bar{y}_1$  = unweighted mean for group 1

$\bar{y}_2$  = unweighted mean for group 2

$s_1^2$  = unweighted variance for group 1

$s_2^2$  = unweighted variance for group 2

$n_1$  = unweighted base size for group 1

$n_2$  = unweighted base size for group 2

### Statistical significance test for two weighted means

$$T = \frac{\bar{y}_{1w} - \bar{y}_{2w}}{\sqrt{\frac{s_1^2}{f_1} + \frac{s_2^2}{f_2}}}$$

with degrees of freedom =  $f_1 + f_2 - 2$

**Where**

weighted mean for group 1 =

$$\bar{y}_{1w} = \frac{\sum_{i=1}^{n_1} W_{1i} y_{1i}}{\sum_{i=1}^{n_1} W_{1i}}$$

weighted mean for group 2 =

$$\bar{y}_{2w} = \frac{\sum_{i=1}^{n_2} W_{2i} y_{2i}}{\sum_{i=1}^{n_2} W_{2i}}$$

$s_1^2$  = unweighted variance for group 1

$s_2^2$  = unweighted variance for group 2

effective base size for group 1 =

$$f_1 = \frac{\left( \sum_{i=1}^{n_1} W_{1i} \right)^2}{\sum_{i=1}^{n_1} W_{1i}^2}$$

effective base size for group 2 =

$$f_2 = \frac{\left( \sum_{i=1}^{n_2} W_{2i} \right)^2}{\sum_{i=1}^{n_2} W_{2i}^2}$$

### Statistical significance test for two unweighted proportions with overlapping samples

$$T = \frac{p_1 - p_2}{\sqrt{p(1-p) \left( \frac{1}{n_1} + \frac{1}{n_2} \right) - 2D}}$$

with degrees of freedom =  $f_1 + f_2 - f_{12} - 2$

Where:

$p_1$  = unweighted proportion for group 1

$p_2$  = unweighted proportion for group 2

$n_1$  = unweighted base size for group 1

$n_2$  = unweighted base size for group 2

$$p = \frac{p_1 n_1 + p_2 n_2}{n_1 + n_2} \quad \text{is pooled estimator of } p_1 \text{ and } p_2$$

$$D = \frac{n_{12}(p_{12} - p^2)}{n_1 n_2},$$

**Where**

- $n_{12}$  = unweighted base size of common part of groups 1 and 2
- $p_{12}$  = unweighted proportion for common part of groups 1 and 2

**Note.** If the expression under the square root is less than or equal 0, then we set  $T=\infty$ .

## Statistical significance test for two weighted proportions with overlapping samples

$$T = \frac{p_{1w} - p_{2w}}{\sqrt{p_w (1 - p_w) \left( \frac{1}{f_1} + \frac{1}{f_2} \right) - 2D_w}}$$

with degrees of freedom =  $f_1 + f_2 - f_{12} - 2$

**Where:**

$p_{1w}$  = weighted proportion for group 1

$p_{2w}$  = weighted proportion for group 2

$$n_{1w} = \sum_{i \in I_1} W_i \quad \text{weighted base size for group 1 (here respondents indexes is denoted as } I_1)$$

$$n_{2w} = \sum_{i \in I_2} W_i \quad \text{weighted base size for group 2 (here respondents indexes is denoted as } I_2)$$

$$f_1 = \frac{n_{1w}^2}{\sum_{i \in I_1} W_i^2} \quad \text{effective base size for group 1}$$

$$f_2 = \frac{n_{2w}^2}{\sum_{i \in I_2} W_i^2} \quad \text{effective base size for group 2}$$

$$p_w = \frac{p_{1w} n_{1w} + p_{2w} n_{2w}}{n_{1w} + n_{2w}} \quad \text{is pooled estimator of } p_{1w} \text{ and } p_{2w}$$

$$D_w = \frac{f_{12}(p_{12w} - p_w^2)}{f_1 f_2},$$

**Where**

$$n_{12w} = \sum_{i \in I_1 \cap I_2} W_i \quad \text{weighted base size of common part of groups 1 and 2}$$

$$f_{12} = \frac{n_{12w}^2}{\sum_{i \in I_1 \cap I_2} W_i^2} \quad \text{effective base size of common part of groups 1 and 2}$$

$p_{12w}$  = weighted proportion for common part of groups 1 and 2

**Note.** If the expression under the square root is less than or equal 0, we set  $T=\infty$ .

The significance tests for proportions of two overlapping samples are based on the article of S. C. Choi and D. M. Stablein "Practical Tests for Comparing Two Proportions with Incomplete Data", *Journal of the Royal Statistical Society. Series C (Applied Statistics)* 31 (3), 1982: 256-262.

### Statistical significance test for unweighted means of two overlapping samples

$$T = \frac{\bar{y}_1 - \bar{y}_2}{\sqrt{S^2 \left( \frac{1}{n_1} + \frac{1}{n_2} - \frac{2n_{12}}{n_1 n_2} \right)}}$$

with degrees of freedom =  $n_1+n_2-n_{12}-4$

Where:

$\bar{y}_1$  = unweighted mean for group 1

$\bar{y}_2$  = unweighted mean for group 2

$n_1$  = unweighted base size for group 1

$n_2$  = unweighted base size for group 2

$n_{12}$  = unweighted base size of common part of groups 1 and 2

$s_{12}$  = unweighted variance for group 1

$s_{11}^2$  = unweighted variance for group 1 excluding the common part with group 2

$s_{22}$  = unweighted variance for group 2

$s_{22}^2$  = unweighted variance for group 2 excluding the common part with group 1

$$S^2 = \min \left\{ \frac{(n_1-1)s_{11}^2 + (n_2-n_{12}-1)s_{22}^2}{n_1+n_2-n_{12}-2}, \frac{(n_1-n_{12}-1)s_{11}^2 + (n_2-1)s_{22}^2}{n_1+n_2-n_{12}-2} \right\}$$

**Note.** If both samples are the same, that is  $n_1=n_2=n_{12}$ , we set  $T=0$ . If  $S^2=0$ , then the data are essentially constant and the test is not applicable.

### Statistical significance test for weighted means of two overlapping samples

$$T = \frac{\bar{y}_{1w} - \bar{y}_{2w}}{\sqrt{S_w^2 \left( \frac{1}{f_1} + \frac{1}{f_2} - \frac{2f_{12}}{f_1 f_2} \right)}}$$

with degrees of freedom =  $f_1 + f_2 - f_{12} - 4$

Where:

$\bar{y}_{1w}$  = weighted mean for group 1

$\bar{y}_{2w}$  = weighted mean for group 2

$$n_{1w} = \sum_{i \in I_1} W_i \quad \text{weighted base size for group 1 (here respondents indexes is denoted as } I_1)$$

$$n_{2w} = \sum_{i \in I_2} W_i \quad \text{weighted base size for group 2 (here respondents indexes is denoted as } I_2)$$

$$n_{12w} = \frac{n_{1w}^2}{\sum_{i \in I_1} W_i^2} \quad \text{weighted base size of common part of groups 1 and 2}$$

$$f_1 = \frac{n_{1w}^2}{\sum_{i \in I_1} W_i^2} \quad \text{effective base size for group 1}$$

$$f_2 = \frac{n_{2w}^2}{\sum_{i \in I_2} W_i^2} \quad \text{effective base size for group 2}$$

$$f_{12} = \frac{n_{12w}^2}{\sum_{i \in I_1 \cap I_2} W_i^2} \quad \text{effective base size of common part of groups 1 and 2}$$

$s_{1w}^2$  = unweighted variance for group 1

$s_{11w}^2$  = unweighted variance for group 1 excluding the common part with group 2 (that is respondents from the set  $I_1 \setminus I_2$ )

$f_{1 \setminus 2}$  = effective base size of group 1 excluding the common part with group 2

$s_{22w}^2$  = unweighted variance for group 2

$s_{22w}^2$  = unweighted variance for group 2 excluding the common part with group 1 (that is respondents from the set  $I_2 \setminus (I_1 \cap I_2)$ )

$f_{2 \setminus 1}$  = effective base size of group 2 excluding the common part with group 1

$$S_w^2 = \min \left\{ \frac{(f_1 - 1)s_{1w}^2 + (f_{2 \setminus 1} - 1)s_{22w}^2}{f_1 + f_{2 \setminus 1} - 2}, \frac{(f_{1 \setminus 2} - 1)s_{11w}^2 + (f_2 - 1)s_{2w}^2}{f_{1 \setminus 2} + f_2 - 2} \right\} \quad \text{is conservative estimate of pooled variance}$$

**Note.** To compare weighted means for overlapping samples the pooled variance is used, the Welch–Satterthwaite equation is not used.

If  $f_1 + f_2 - 2f_{12} \leq 0$ , we set  $T=0$ .

If  $S_w^2 = 0$ , then the data are essentially constant and the test is not applicable.

The significance tests for means of two overlapping samples are based on the article of P.-E. Lin and L. E. Stivers "On Difference of Means with Incomplete Data". *Biometrika* 61 (2), 1974: 325-334.

## 32.2. The Chi-Square Significance Statistic

The **Chi-Square Significance** statistic is applicable only to two-dimensional tables, and where both edges have categorical variables. The significance calculation is strongly associated with the calculation of the Chi-Square Value. The value of significance is obtained from the Chi-Square Value and the number of degrees of freedom using the special mathematical function.

The value of significance falls in the range from -1 to 1. The absolute value of the significance is the probability that the given cell is different from the neighboring cells due to a specific reason, and not merely due to a statistical fluctuation. To be considered significant enough, the value of this probability should exceed 0.92 - 0.99 depending on the problem area.

The sign of this value shows whether the actual value is less than expected (negative sign) or greater than expected (positive sign).

The **Chi-Square Value** statistic is applicable only to two-dimensional tables where both edges have categorical variables. Assume the following notation:

- The table has r rows and c columns.
- $T(r,c)$  is the total value for the cell with the co-ordinates (r,c).
- $RT(r)$  is the row total for the row r.
- $CT(c)$  is the column total for the column c.
- $GT$  is the grand total for the table.
- e means the expected value in the cell, which is calculated as:

$$e = RT(r) * CT(c) / GT$$

**Note: Only local totals are used for Chi-Square.**

There are four types of Chi-Square test; Reportal applies the one relevant to the cell's co-ordinates:

1. **Table Chi-Square** - calculated once per table. This test has  $(R-1)*(C-1)$  degrees of freedom. The Chi-Square value is defined as:

$$XVAL = \left( \sum \frac{(T(r, c) - e(r, c))^2}{e(r, c)} \right)$$

where

$$e(r, c) = \frac{RT(r) \times CT(c)}{GT} (\text{expected value})$$

Values are summed across all table cells.

2. **Row Chi-Square** - calculated for each row of the table. This test has  $(C-1)$  degrees of freedom. The Chi-Square value is defined as:

$$XVAL = c = 1, C \sum \left( \frac{(T(r, c) - e(r, c))^2}{e(r, c)} + \frac{(T(r, c) - e(r, c))^2}{RT(r) - e(r, c)} \right)$$

3. **Column Chi-Square** - calculated for each column of the table. This test has  $(R-1)$  degrees of freedom. The Chi-Square value is calculated in a similar way to the row test, but with the roles of columns and rows reversed.
4. **Cell Chi-Square** - calculated for each cell of the table. This test has 1 degree of freedom. The Chi-Square value is defined as:

$$XVAL = \frac{(T(r, c) - e(r, c))^2}{e(r, c)} + \frac{(T(r, c) - e(r, c))^2}{RT(r) - e(r, c)} + \frac{(T(r, c) - e(r, c))^2}{CT(c) - e(r, c)} + \frac{(T(r, c) - e(r, c))^2}{(GT - RT(r)) - CT(c) - e(r, c)}$$

**Note: In each case, the test does not apply when the expected values involved are less than five.**

The computed Chi-Square value is used to calculate probability using the Chi-Square distribution with the appropriate number of degrees of freedom. This probability can then be converted to significance levels using an arbitrary scale of probabilities (for example, all probabilities greater than 0.9 will yield significance level of 1, those greater than 0.5 significance level of 2 and so on). In cases where the test does not apply, it yields a significance level of 0.

## 32.3. The Z-Test Significance Statistic

### 32.3.1. Constraints

Testing is done on column proportions and means, depending on the type of distribution the actual row being tested represents. A Z-Test is applied on all base sizes from 1 – 100 degrees of freedom, using a standard lookup table with a range of 80, 90, 95, 98, 99 or 99,8% confidence. All base sizes over 100 are treated as normal distributions.

Base sizes lower than 30 are tested, but results are displayed in lowercase to signify that the result is calculated on a weak base.

### 32.3.2. Formulae

#### Means, unweighted:

$$Z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

Where:

Where  $\bar{x}_1$  and  $\bar{x}_2$  are means of group 1 and 2

And  $\sigma_1^2$  and  $\sigma_2^2$  are variance of group 1 and 2

#### Means, weighted:

$$Z = \frac{\bar{x}_{1w} - \bar{x}_{w2}}{\sqrt{\frac{\sigma_1^2}{f_1} + \frac{\sigma_2^2}{f_2}}}$$

Where:

$\bar{x}_{1w}$  and  $\bar{x}_{w2}$  are weighted means for group 1 and 2,

And  $f_1$  and  $f_2$  are the effective base sizes for group 1 and 2.

(Both calculated as described in the T-Test document)

### Proportions, unweighted:

$$Z = \frac{p_1 - p_2}{\sqrt{p(1-p)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where:

$p$  is the pooled proportion, calculated as

$$p = \frac{p_1 n_1 + p_2 n_2}{n_1 + n_2}$$

### Proportions, weighted:

$$Z = \frac{p_{1w} - p_{2w}}{\sqrt{p_w(1-p_w)\left(\frac{1}{f_1} + \frac{1}{f_2}\right)}}$$

Where

$p_{1w}$  and  $p_{2w}$  are weighted proportions for group 1 and 2,

$f_1$  and  $f_2$  are the effective base sizes for group 1 and 2.

And  $p_w$  is the weighted pooled proportion

## 32.4. Correlation Coefficient Formulae

The equation for the Pearson correlation coefficient is:

$$r_{xy} = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{(n-1)s_x s_y},$$

Where  $\bar{x}$  and  $\bar{y}$  are the sample means of X and Y,  $s_x$  and  $s_y$  are the sample standard deviations of X and Y respectively.

Refer to the Correlation Table Object section in the Table Designer chapter for further information on using correlation.

## 32.5. Multivariate Linear Regression

Multivariate Linear Regression is an approach to modeling the relationship between a specific question (the dependent variable) and a set of one or more other questions (the independent variables). The relationship is modeled as a linear function. The unknown coefficients in the linear function are estimated from a known set of data, and can be used to approximate new values for the dependent variable based on arbitrary values for the independent variables. The standardized coefficients may also be used in an analysis of which of the independent variables that may have the largest potential impact on the dependent variable.

### 32.5.1. Formulae

The formulae use the following notation:

$n$  = the number of observations

$p$  = the number of independent variables

$y$  = the vector of  $n$  observations of the dependent variable

$X$  = the  $n \times p$  matrix containing the value for the same  $n$  observations for the  $p$  independent variables

$\beta$  = the coefficients of the independent variables in the linear regression model

$b$  = least square estimate of  $\beta$

$\epsilon$  = error term

Given the dataset  $\{y_i, x_{i1}, \dots, x_{ip}\}_{i=1}^n$  where  $y$  denotes the dependent variable and  $x_1, \dots, x_p$  denotes the independent variables, the Multivariate Linear Regression model can be expressed as:

$$y_i = \beta_1 x_{i1} + \dots + \beta_p x_{ip} + \epsilon_i = x_i' \beta + \epsilon_i, i = 1, \dots, n$$

Where  $\epsilon$  is an error term and  $'$  denotes the transpose, so that  $x_i' \beta$  is the inner product between vectors  $x_i$  and  $\beta$ . In vector form this is written as:

$$\mathbf{y} = \mathbf{X}\beta + \epsilon$$

The normal least squares estimate solution,  $b$ , of the unknown  $\beta$  of the vector equation is:

$$\mathbf{b} = (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{y}$$

Confirmit uses a least squares estimation based on a QR decomposition to solve the linear regression equations. It is assumed that the matrix  $X$  is of full rank. Then it can be written as  $X = QR$  where  $Q$  is an  $n \times p$  orthonormal matrix and  $R$  is a  $p \times p$  upper triangular matrix. The solution can then by substitution be written as:

$$\mathbf{b} = R^{-1}Q'\mathbf{y}$$

### 32.5.2. Constraints

Calculation of the regression coefficients can only be performed for numeric-capable variables. Thus only the following questions can be used in Multivariate Linear Regression: Numeric, numeric list answers, singles with all numerical codes/scale, and grid answers with all numerical codes/scale.

Only filters of type Filter Expression are supported in Multivariate Linear Regression.

**Note: From Reportal version 17.5, all regression calculations are dynamic and therefore will re-calculate based on changes to any filters or report bases. This includes any pages containing these regression components which were defined prior to the release of Version 17.5.**

The Performance Improvement Index will only be calculated for independent variables that have a set lower and upper limit. This is due to the index being based on the mean value of the independent variable as compared to the variable's maximum value and the standardized regression coefficient.

## 33. APPENDIX B: Considerations for Optimizing Reportal Performance

Confirmit Reportal is a server-based application that users access via their company's internal network and, if they have the SaaS licence, via the Internet. Network bandwidth and server availability place natural restrictions on the speed and the total amount of information that can be transmitted and processed at one time, and if one process takes a long time and uses a lot of resources then the system can run slowly for everyone. This means that some limits and restrictions must be placed on the amount of processing that each individual user can perform at one time.

Where limits and restrictions apply to particular resource-demanding processes, for example the export of large numbers of reports or the calculation of large and complex tables, then those limits and restrictions are stated in the documentation where the functionality and procedures are described.

**Note: These restrictions are covered in an Acceptable Usage Policy (AUP). The most current version for SaaS and On-Premise clients can be found at <http://www.confirmit.com/legal>**

If you are aware that you are approaching or exceeding any of the limits stated here or in the AUP, please contact Confirmit Support for further advice or assistance.

There are also many ways that a user can configure their reports and data sources to provide an optimized experience for report designers and viewers, which are also listed below.

### 33.1. Using BitStream Files

BitStream files are a way of storing survey data in compact files. These files are optimized for fast access, to allow aggregated tables to be generated for your Reportal report as quickly as possible.

Interrogating the data set to create aggregated tables will be considerably faster when working with BitStream files than when the default method of querying the SQL database is used. The performance improvement will be greater the larger the dataset is, but Confirmit recommends you use BitStream files with all surveys for the following reasons:

- It will reduce strain on the SQL server because reporting will then use a different calculation engine and different files. This means that reporting will not impact on the collection of data or other processes in the survey database.
- If the survey is live and reporting is conducted directly towards the SQL database, new respondents may be entering and completing the survey while the report is being generated. This will make the totals for different tables and charts inconsistent because they will be generated from a changing data set. When using BitStream files, you are generating reports based on a fixed data set, making all tables and charts consistent. When the BitStream files are updated, the Reportal cache is automatically cleared to ensure that all results displayed in the charts and tables are generated from an identical dataset.
- With BitStream files you can cross a question by itself (i.e. have the same question included in both rows and columns of a table). This is not possible when querying the SQL database.
- When querying the SQL database directly, system safeguards are in place to prevent heavy queries, and query timeouts will occur for large or complex tables (or pages of several tables). These timeouts will not occur when using BitStream files.

The use of BitStream files for Reportal reports is default for all new projects from Confirmit version 14. However if you create a new project using the Legacy database format, BitStream files can be deselected if required. If the data source project used the Optimized database format, then BitStream files must be used. If the report has been set to use "Table engine 2" in the report properties, only BitStream files are supported.

BitStream files may be created / updated:

- From "Create Reportal BitStream Files" under the Reporting menu in Confirmit Authoring.
- By ticking "Create BitStream Files" when creating a new Reportal Report.
- From "Update BitStream Files" in Report Designer.

BitStream files can be set to be updated regularly with a scheduled recurring task. End users and Confirmit users can also update the BitStream files manually on request with if an "Update Data" visual component is added to a report page. Note that this component is not available in public Reportal pages.

### 33.1.1. Limitations and Differences between BitStream Files

Whilst the use of BitStream files is encouraged as much as possible, there are certain restrictions that may prevent their use.

BitStream files cannot be used if you use JOIN in the report's data source, or if you have several projects in the report's data source and one of the projects does not have BitStream files generated.

For both of these restrictions, it may be possible to create a data processing workflow to allow for these types of scenarios (see section on Data Processing)

When you attempt to publish the report, Reportal will check that your report complies with these conditions.

For all calculations, The SQL and BitStream reporting engines produce identical results with one exception: Handling of NULL values (missing responses) when using the NOT operator.

- In SQL, if you filter with NOT(rating="1"), the results will include all responses other than "1" (all other codes, for example codes "2", "3", "4", "5" and "DK" for don't know) but not missing responses (NULL) (where the question has not been answered at all, due to for example masking or skipping).
- When reporting based on BitStream files, the missing responses (NULL) will be included when you filter with the NOT operator

Note: If you are considering converting a report from using SQL to using BitStream files, you are advised to make a copy of the report before enabling BitStream files. This will allow you to back-track in the event you run into problems with one of the above limitations.

## 33.2. The Report Cache Settings

The cache is a "temporary storage place" on the Confirmit servers. When report pages are generated, the pages are stored in the cache so that new visitors can view the cached pages without them having to be regenerated. Using this method, the servers do not have to re-calculate the results, thus saving waiting time for report pages to load.

To improve the performance of the report for the viewers, you can specify for how long the report pages are to be stored in the cache. When a cached report page is opened for a report viewer, the report engine will not query the database to build an updated table and chart, but use the results that are stored on the server. Consequently the report page will load much faster, giving your viewers a better user experience.

The cache can be set to expire after a certain number of units (hours / weeks / days) or set to never expire.

When a viewer accesses a page, Reportal will check if the expiry time has passed and if it has it will rebuild the report page. If not, the page will be retrieved from the cache. In Reportal the charts and tables are updated when a viewer or designer accesses the report. If no-one accesses the report for 24 hours then it will not be updated, even though the cache settings specify 1 hour.

If the project is closed and interviewing is finished then "Never Expire" should normally be selected as this will give your Report Viewers the best user experience.

The other options can be chosen when the survey is live to give your viewers updated results.

The update will be done regardless of whether any changes have been made in the database; the only thing it checks for is the cache expiry date/time.

If your report is based on BitStream files, the cache will automatically be cleared if the BitStream file set is updated.

**Note:** To force Reportal to manually clear the cache on a report as a report designer, go to the Update > Clear Cache menu command.

### 33.2.1. Cache Settings for Tables Using Reportal Scripting

Tables using Reportal scripting created after Confirmit v15 Service Pack will be cached by default. For tables created prior to this release, if you add a script to a table, caching is disabled for that table which will result in a degradation of performance for the report viewers.

Performance of affected tables can however be significantly improved by explicitly enable caching for scripted tables by adding the following code to the table script:

```
table.Caching.Enabled = true;  
table.Caching.CacheKey = "X"; //can use any string value
```

The table cache will then take into account any context that may affect the table, for example filters, report base, parameters and benchmark, and will cache different versions of the table for every variation of these. So even if the script modifies these properties, caching can still be enabled.

The table.Caching.CacheKey property can be used if you want to explicitly control the cache criteria for a table. This might be useful if the table is likely to vary by factors other than the properties mentioned above. Note that this property is not optional, so it must be set to a string value even when it is not used. The same value can be used for all tables.

**Note:** For tables with scripts created after Confirmit version 15 Service Pack, it is possible to disable caching by setting table.Caching.Enabled=false in the table script. However, caching should be used whenever possible as it will improve performance and take load off the system.

### 33.3. Indexing and BitStream Variables

When designing the survey in Confirmit Authoring, there are certain question properties that should be set depending on the use of the questions in a report.

#### 33.3.1. BitStream Variable Property

If you intend to use any open text questions in aggregated tables, then this property needs to be checked to include the responses in the BitStream file. Note that a field width should also be specified to allow use of the open text question in tables. Confirmit recommends that you select this setting only when you know that there will not be many different answers for the open question.

#### 33.3.2. The “Indexed” Question Property

If this property is selected on questions in the survey designer in Confirmit Authoring, an index will be created on this field in the database next time you generate the database (i.e. the survey is re-launched).

Indexes improve report performance in areas such as:

- Aggregated and verbatim reporting when filtering on fields with indexes
- Searching and sorting in hit lists (when search fields are indexed)

Note that indexes should be used only when needed since responses take longer to store the more indexes there are. This can lead to slightly poorer performance in interviewing. We recommend against setting of new indexes and regenerating the survey while respondents are answering the survey.

**Note:** Indexes are required for all questions that support them if they are to be added to a hit list and for any open text questions that are to be used in aggregated tables.

### 33.4. Improving Filter Performance

#### 33.4.1. BitStream Indexes

For questions used as filters in a large number of reports, or for surveys with a large number of records, it is worth considering enabling a BitStream index for the question. This will reduce search times and improve performance. You can index the BitStream file for Interview\_start, Interview\_end, status, single and multiple categorical questions.

#### 33.4.2. Questions on the Filter Page with a Large Number of Categories

The AUP states that these should be no more than 10,000 filter categories on the filter page (e.g. if the filter page has three filters with 5 elements each that would be a total of 15 filter categories on the filter page).

For better viewer performance when selecting a filter with a large number of categories, set the Rendering type to “autocomplete” which will reduce the size and load time of the filter page file substantially.

## 33.5. Report Export Considerations

### 33.5.1. Exporting Report Packages Iterated by Parameters

When creating report export packages, it is possible to dynamically generate pages for each value in a parameter. It is also possible to nest parameters, which can potentially lead to extremely large numbers of report pages being generated. For example, with a page iterating across two parameters, if the parameter p1 has 10 questions and p2 has 25 questions, then 250 unique versions of the page will be created!

This functionality will work with a large number of elements, and no physical limit is specifically implemented into the software, although the AUP states that reports of no more than 200 pages should be exported. In cases where the threshold has been breached and the export is taking a long time to process, Confirmit will request that the report is reduced in size so that its generation will not cause performance degradation issues on the server environment.

### 33.5.2. Exporting Personalized Reports for Large Hierarchies

When exporting personalized reports against a hierarchy with a large number of levels and members, then the potential number of reports that could be exported is high. The number of reports that can be exported in one batch is limited to a value configurable by Confirmit SaaS Operations. In the event you attempt to exceed this limit a message will be displayed inviting you to reduce the size of the batch e.g. by de-selecting specific nodes of the hierarchy, not selecting to generate a report for all child nodes of a specific hierarchy level, etc.

## 33.6. Verbatim Tables and Hit Lists

Verbatim tables and hit lists in the report will interrogate the SQL database even if the report is set up to use BitStream files, so a number of restrictions in usage are in place.

### 33.6.1. Verbatim Table Restrictions

A maximum of 1000 answers in a verbatim table can be displayed to viewers in online reports.

**Note:** this limitation does not apply to the exported verbatim table file.

### 33.6.2. Hit List Restrictions

From Confirmit version 15, it is required that fields that can be indexed in Authoring require this field to be ticked in order to be added to a hit list. Hit lists created prior to version 15 will display a recommendation that these fields be indexed. Warnings are also given if a page filter has been applied which is not indexed.

From Confirmit version 15, all new hit lists are set to be cached by default to optimize performance. It is possible to disable caching in the hit list properties, but a warning message is then displayed.

It is recommended that hit lists in reports with large data volumes created prior to version 15 have this setting applied for the reasons stated above.

**Note:** The AUP states that reports should not go beyond 5000 table cells per hit list page (e.g. adding 10 questions to the hit list, and setting the Table Rows-property to 500 rows per page will generate more than 5000 table cells on a hit list page).

## 33.7. Use of Data Processing Tasks

The Confirmit platform has powerful and comprehensive data processing capabilities allowing for the manipulation of data. This can provide many performance benefits when considering the nature of the data required for reporting purposes.

### 33.7.1. Reports Based on Several Projects in the Data Source

Multi project reporting is designed to allow reporting across a limited number of projects that are closely related, for example trackers, repetitive surveys and projects using the same sample. The AUP states that combinations of no more than six projects in a data source should be used in this manner. As data sources using JOINs also must use SQL queries, then the report does not benefit from using BitStream files to optimize data access.

In the event you need to report on several projects, you are recommended to use the Data Processing functionality to combine the data into a single project before producing the report. In this manner, BitStream files may also be used on the final combined dataset for performance gains.

Data processing may also be considered in some additional scenarios:

- For reports using data sources with a large number of unused variables in the final report, consider reducing the overall data in the data source by removing non-required variables in a data processing step.
- For reports that require extensive use of categorizations, category recordings performed on the data source, segments, or formulae, consider creating new variables in data processing so that these calculations need not be performed on the fly, but are card-coded into the data.

## 33.8. Additional Tips for Optimizing Report Performance

### 33.8.1. Reporting on Large Volumes of Responses

If encountering performance issues on reports that have a very large number of records, it may be worth considering creating several filtered copies of the report into more manageable volumes of data. For example, a multi-country report could be duplicated once completed, with a global level filter applied so each report only looks at a specific country's data. Note: this works best if the global filter question has BitStream indexes enabled as discussed in an earlier section.

### 33.8.2. Reducing the Number of Individual Tables in a Report

The AUP states a limitation of 200 individual tables within a single Report report. However, one method to display data for several questions is to use parameters within the header objects to create a single dynamic table. This will allow users to interactively display the information they are interested in (for example, through a drop-down list) rather than creating a table for each case.

### 33.8.3. Reducing the Number of Objects per Page

Large numbers of objects (tables, charts, etc.) on a single report page will increase the load time of that page for viewers. The AUP also states a limitation to restrict the number of data cells on a page to 1000 (e.g. If the page has two aggregated tables, both with a 10 x 20 dimension, that would be a total of 400 cells on the report page).

Where possible, the use of dynamic report elements such as parameters, drill-down to take users to another page, etc. should be used to minimize the information displayed on each report page.

For individual tables with a large number of cells, it should be considered whether it is possible to split up the table into smaller individual tables, which will also assist in the readability of the information.

When designing a report for a large number of viewers, a performance tip is to keep the first page of the report as lightweight as possible. Every user that accesses the report will have to go through the first page, although this might not be the page they are actually interested in viewing.

## 33.9. Optimizing Performance When Designing Reports

When designing the report, the following tips may help performance when working with large data sets:

- When working in the table designer, make sure that the user setting "Calculate tables in design mode" is not ticked (the default behavior in Confirmit Horizons version 24). This will mean that headers and property settings can be adjusted whilst creating tables without refreshing the data after every change.
- Consider switching to a smaller test database than the production database during the design phase of the report to reduce the load of the calculations.
- Edit page objects such as tables and charts by clicking on them in the report tree rather than opening them up from the visual component directly in the page editor. By using this method, designer only need to save the object once, rather than selecting ok after editing the object, and re-saving the page. There are also performance benefits by re-saving only the edited component rather than the entire page.

## APPENDIX C: The Tabulation Engine Versions

A new Table Engine code-base was introduced in Version 17. The engine has been completely re-designed, and in the longer term will become the default table engine. The benefits of this work include:

- It will make the code cleaner and simpler to maintain, reducing the time required to fix defects.
- It will optimize the code with the potential to improve performance.
- It will make the code more easily extensible so that new features / statistics may be added without large changes to other code.
- It will make the engine independent of actual data structures and formats and will provide support for future analysis of other data formats.
- It will separate the computations from the visualization, and provide the possibility to add other table representations without changing the engine. (for example JSON support, other visualization engines).

**Note: Version 1 was removed from Confirmit in version 18, so all new reports created in version 18 will automatically use Extended Tabulation Engine. The Tabulation Engine option and the Version 1 options are therefore only visible in old reports created before version 18 and in reports that are duplicates of old reports.**

The following table highlights the key differences between the two tabulation engines.

<b>Legacy Table Engine (Version 1)</b>	<b>Extended Table Engine</b>
<b>Percentages with Zero Base</b>	
If the percentage base is 0, percentage in the total cell is always shown as 100%.	If the percentage base is 0, percentage in the total cell is always shown as empty.
<b>Open Text Headers</b>	
When an open text question is crossed with another question (for sorting), the counts used to evaluate the frequency of answers depend on the values of the crossed question.	The frequency of answers do not depend on any other questions in the table.
<b>Single question with scores and numeric variable table intersections</b>	
If a single variable with a score is crossed with a numeric question and an average is set on the single question, a value is shown for the cell value intersection based on the average for the score question.	An error is displayed that is consistent with all similar cases of ambiguity when two numeric variables intersect in a table cell.
<b>Categories Headers</b>	
If two variables with different categories are placed on the rows, and a categories header on the column, no error is generated for any non-matching codes between the variables.	An error is generated if category lists are different.
<b>Categorizations</b>	
Scenario: The “average of individuals” property is set on a categorization and the categorization is crossed with a categories	With the new table engine in the same scenario, the table engine displays error messages in the cells indicating that values cannot

header.  Categorization total values are not available and the table shows empty cells.	be computed.
If the “average of aggregates” property is selected and a categorization is crossed with statistics header, the categorization total is shown as an integer only.	The categorization total in this case is shown as a floating-point value if applicable.
Scenario: A categorization containing a grid and the same grid placed on rows, with a categories header placed on the columns.  The vertical percentage is shown in the grid rows produced by the grid itself but are not displayed in the same rows within categorization.	The percent values shown are the same as expected in both headers.
<b>Chi-Square Tests</b>	
The Chi-square test is not evaluated for multiple categorical variables.	The test is evaluated for multi variables (on a cell level). on table margins the test is evaluated if the variable on the opposite side is single.
The Chi-square test is not evaluated in cells with zero sample.	The test is evaluated in zero-sample cells provided that all totals are positive.
<b>T-Tests</b>	
T-test is not evaluated if single variables are nested within a multiple variable.	If single variable is nested in a multiple variable then the t-test is evaluated for each group of single categories separately.
T-test is not evaluated in grids.	In grids t-test is evaluated for each field separately. (each field is in fact a single variable).
For recoded variables with original categories shown t-test is only evaluated for original categories, not the net categories.	For recoded variables t-test is evaluated separately for original and net categories (2 independent groups).
<b>Open texts and multi-project data sources</b>	
Scenario: an open text header from one project is used in the rows of a table, and several other variables are used in the columns from other projects in the data source, with the “override other projects” property set.  In this case, The list of open text answers is evaluated on one of the projects used in the table depending on which column variable is specified in sorting options.	In the same scenario, The list of answers is a union of the lists obtained from all projects referenced in the column headers.
<b>Time series and multi-project data sources</b>	
Scenario: a date header from one project is used in the rows of a table, and several other variables are used in the columns from other projects in the data source, with the “override other projects” property set.  In this case, the date range is evaluated on the project of the header in the rows, regardless of what projects are used in the	In the same scenario, The date range is evaluated from the union of all projects referenced in the column headers.

table.	
<b>Hide Headers Property</b>	
The current behavior is as follows:  Setting Hide Header on a header that is not the final nested header in the chain (the "leaf" header) will hide all parent headers.  Setting Hide Header on the final nested header in the chain will hide only if a single category is available. (e.g. a statistic header with only average selected, a single question masked so only one answer is visible).	The behavior has been modified so:  Setting Hide Header on a header that is not the final nested header in the chain will result in only this header being hidden. It will not effect on cells of other headers either before or after this header in the nesting chain.  Setting Hide Header on the final nested header in the chain) will hide only if a single category is available as before.  (The number of leaf cells in the headers must always equal the number of cells in the data rows/columns.)
<b>Table Bar Chart Color Allocation</b>	
Colors start from the deepest level for each branch i.e.:  "Color" is used for the lowest level in the hierarchy, "Hierarchy level color 1" is used for the next level up, etc.	The extended engine settings start from the hierarchy root level i.e.  "Color" is used for root level, "Hierarchy level color 1" is used for hierarchy level 1 etc.
<b>Variance, Standard Deviation and Standard Error calculation using weights</b>	
These statistics are affected by a different interpretation of the Weighted Square Volume expression used in these calculations.  The corresponding formulae for table engine 1 is as follows:  $\text{Quantity Total Squared} = \sum_{n=1}^N (W_n \times Q_n)^2$  An example of this used in the variance calculation (which is also used in the standard deviation and error statistics) is as follows:  $\text{Quantity Variance} = \frac{\text{Quantity Total Squared} - \frac{\text{Quantity Total}^2}{WT}}{WT - I}$  Where WT is the sum of the weights of the respondents within the target group that fit into the cell.	The difference in the Quantity Total squared calculation in the extended engine is as follows:  $\text{Quantity Total Squared} = \sum_{n=1}^N (W_n \times Q_n^2)$  (Note: This is the same as the formula in Table Engine 2, which the extended engine is replacing).  An example of this used in the variance calculation (which is also used in the standard deviation and error statistics) is as follows:  $\text{Quantity Variance} = \frac{\text{Quantity Total Squared} - \frac{\text{Quantity Total}^2}{WT}}{WT - I}$  Where WT is the sum of the weights of the respondents within the target group that fit into the cell.
<b>Hierarchy Header Settings</b>	
The "Top parent" option shows all parents in the chain, not only the top one. There are no differences between the "top parent" and "all parents" options.	Selecting "Top parent" select only the top-level parent and skip any intermediate nodes if any.
If one of the selected report base nodes is a descendant of another one then this node (and its sub-nodes) is duplicated in flat	Nested nodes are not duplicated provided that their ancestor is

layout (and skipped in nested layout).	also selected.
If more than one node on the same level is selected then the min/max reference groups are repeated after each node selected.	Min/max nodes are displayed only once for each level.
"Self-exclusive" items are shown only if a single node is selected in a report base. When multiple nodes are selected, self-exclusive items are not shown.	Self-exclusive items are displayed in all cases.
If the option "Direct level report" is set, header properties do not contain the property "Layout" so the hierarchy header will always have the "Flat" layout.	The "Layout" property is always visible, regardless of settings.
<b>Recoded variables and missing categories</b>	
In the case where a recoded variable does not contain all categories of the original variable, the total shown still reflects the original variable base independently of the "include not answered" option.	The total will reflect the correct base depending on the setting of the "include not answered" option.
<b>Frequency counts on weighted tables</b>	
Frequency counts on tables with a weight associated with them will always display as rounded integers	The extended engine allows the frequency to be displayed with decimal places to reflect any precision when using weighted values.
<b>Benchmarks</b>	
If the intersection of headers contains several measure variables from the benchmark, then the first of them is used to display data.	The extended table engine displays an error message and does not create the table.

## 34. APPENDIX D: Factor Analysis Formulae

This appendix provides and describes the formulae used in Reportal's Factor Analysis functionality.

### 34.1. Factor Analysis Model

The observable random vector  $X$ , with  $p$  components (variables), has mean  $\mu$  and covariance matrix  $\Sigma$ . The factor model postulates that  $X$  is linearly dependent upon a few unobservable random variables  $F_1, F_2, \dots, F_m$ , called common factors, and  $p$  additional sources of variation  $\varepsilon_1, \varepsilon_2, \dots, \varepsilon_p$ , called errors or, sometimes, specific factors. In particular, the factor analysis model is:

$$X_1 - \mu_1 = l_{11}F_1 + l_{12}F_2 + \dots + l_{1m}F_m + \varepsilon_1$$

$$X_2 - \mu_2 = l_{21}F_1 + l_{22}F_2 + \dots + l_{2m}F_m + \varepsilon_2$$

...

$$X_p - \mu_p = l_{p1}F_1 + l_{p2}F_2 + \dots + l_{pm}F_m + \varepsilon_p$$

Or, in matrix notation:

$$\begin{matrix} X - \mu & = & L & F & + & \varepsilon \\ (p \times 1) & & (p \times m) & (m \times 1) & & (p \times 1) \end{matrix}$$

The coefficient  $l_{ij}$  is called the loading of the  $i$ th variable on the  $j$ th factor, so the matrix  $L$  is the matrix of factor loadings.

Together with the assumptions that

$$\begin{matrix} E(F) = 0, Cov(F) = E[FF'] = I & \\ (m \times 1) & (m \times m) \\ E(\varepsilon) = 0, Cov(\varepsilon) = E[\varepsilon\varepsilon'] = \Psi, \text{ where } \Psi_{ij} = 0 \text{ for } i \neq j & \\ (p \times 1) & (p \times p) \end{matrix}$$

This constitutes the Orthogonal Factor Model with  $m$  Common Factors, where

$$Cov(X) = LL' + \Psi \text{ and } Cov(X, F) = L$$

### 34.2. Estimation of Factor Loadings

Confirmit utilizes the Principal Component Analysis method on the sample correlation (or covariance) matrix to estimate the factor loadings.

The solution is specified in terms of its eigenvalue-eigenvector pairs  $(\lambda_1, e_1), (\lambda_2, e_2), \dots, (\lambda_p, e_p)$  where  $\lambda_1 \geq \lambda_2 \geq \dots \geq \lambda_p$ . Let  $m < p$  be the number of common factors. The matrix of estimated factor loadings  $\{l_{ij}\}$  is given by:

$$L = [\sqrt{\lambda_1} e_1 | \sqrt{\lambda_2} e_2 | \dots | \sqrt{\lambda_m} e_m]$$

Communalities are estimated as:

$$h_i^2 = l_{i1}^2 + l_{i2}^2 + \dots + l_{im}^2$$

### 34.3. Factor Rotation

All factor loadings obtained from the initial loadings by an orthogonal transformation T, have the same ability to reproduce the correlation (or covariance) matrix.

$$L^* = LT \text{ where } TT' = T'T = I$$

Orthogonal transformation corresponds to a rigid rotation of the coordinate axes, and for this reason an orthogonal transformation of the factor loadings is called factor rotation. This is commonly used in order to make interpretation of the factors easier.

Confirmit uses the Varimax algorithm, which selects the orthogonal transformation T that maximizes the following value:

$$V = \frac{1}{p} \sum_{j=1}^m \left[ \sum_{i=1}^p \tilde{l}_{ij}^{*2} - \left( \sum_{i=1}^p \tilde{l}_{ij}^{*2} \right)^2 / p \right]$$

Where

$$\tilde{l}_{ij}^* = l_{ij}^*/h_i$$

is the final rotated coefficients scaled by the square root of the communalities.

### 34.4. Factor Scores

Factor scores are estimates of the common factors for each response included in the Factor Analysis. These are estimated based on a least squares procedure and are given by:

$$f_j = (L'L)^{-1} L' z_j$$

for standardized data.

These are equal to the first m scaled principal components evaluated at X<sub>j</sub>.

## 35. Appendix E: User Roles and Permissions

The Horizons platform includes a wide variety of features and functionalities for survey authoring, data management, and reporting. Optional modules and features can also be enabled to enhance the core platform, providing additional functionalities. Optional modules and features include but are not limited to: Action Management, Active Dashboards, CAPI, CATI, Discovery Analytics, Genius Text Analytics, Hierarchy Management, Instant Analytics, Model Builder, Panel Management, CRM Connect and Translation.

To ensure maximum data security and guarantee your staff has access to the functionality they need, Confrimt Horizons employs an array of user roles and permissions. Note that your users will only have access to modules and features that are enabled in accordance with your Confrimt contract, regardless of all other factors.

Within the terms of your contract, your users' access to Horizons, with all its licensed and optional modules, its system features and its data, is governed by each user's assigned User Role and the permissions allocated to each user. User Roles refer to a set or group of privileges that can be granted to one or multiple users who require common system accesses and permissions. A User Role must be assigned to every person who will be accessing Confrimt Horizons for any reason. Unless otherwise indicated, the system administrator is able to further tailor specific permissions within the constraints of the assigned User Role for each system user.

This appendix provides a high-level overview and indicates the maximum permissions that each User Role can have. Note that the individual users' actual permissions may vary based on your company's contract and/or the permissions granted by your designated system administrator.

### 35.1. Designated User Roles

Designated Users are system users who have a requirement to access system functionality to facilitate their day-to-day work. Designated Users are created by Confrimt according to the number of licensed users for each role specified in the contract.

- **Professional User** is the most common Designated User Role. The user can access and have permissions granted to the following modules and functionalities: Professional Survey Authoring, Survey Designer, Reportal, Instant Analytics, SmartHub, Hierarchy Management, Active Dashboards, Action Management, End User Management (see below), Panel, CAPI, CATI, Database Designer, Translation Module, CRM Connect and File Library. A Professional User may also be granted elevated permissions to serve as the System/Company Administrator. This User Role allows for the maximum number of permissions and flexibility available in Confrimt Horizons. It does not however have default permission to access Model Builder, Flex Extension development, or web services API.
- **Standard User** is intended for users who do not require the full set of features and functionalities available to Professional Users. This User Role can access Professional Survey Authoring, Survey Designer and Discovery Analytics with limited permissions. An example of how permissions are limited is that this user is only able to create and deploy a single-language survey. This user can also manually add respondents, send reminders and export survey data, and can also create, view, and manage reports in Discovery Analytics.
- **Analyst User** is intended for users who need access to review or analyze system data and perform functions in Active Dashboards, Action Management and Discovery Analytics. This User Role can access the following modules: SmartHub, End User Management (see below), Active Dashboards, Discovery Analytics and Action Management. In terms of permissions, this user is limited to only view permissions in SmartHub and the Contact Database. This user has full permissions to create, manage, and view Active Dashboards, Discovery Analytics, and Action Management. Analyst Users can also create End User lists and are able to modify only the End User lists they have created.
- **CATI Supervisor** is the Designated User Role for individuals responsible for directing day-to-day CATI operations. This user is able to create and manage interviewer accounts, manage sample and quotas, review CATI reports and dashboards, monitor interviews, edit verbatims, and play back recordings.
- **CATI Interviewer** is the Designated User Role for individuals responsible for conducting CATI interviews. This user is only able to view the surveys and respondents that are assigned to them.
- **CAPI Supervisor** is the Designated User Role for individuals responsible for directing the day-to-day CAPI operations. This user is able to create and manage field force interviewer accounts, and review CAPI reports and dashboards.

- **CAPI Interviewer** is the Designated User Role for individuals responsible for conducting CAPI interviews. This user is only able to view the surveys, respondents and quotas that are assigned to them.
- **Translator** is a User Role available for individuals responsible for translating surveys. Translators access Confirmit Horizons through a dedicated URL for security, and their permissions are strictly limited to viewing and translating assigned surveys. Any changes made by the Translators will be visible in the Confirmit Authoring interface. It is important to note that the permissions for this user role cannot be changed.
- **System/Company Administrator** is the person designated to administrate the software-related aspects of Confirmit (users, permissions, etc). The Administrator has access to all the company's projects, reports, forms and end-user lists, and can give other users read, write, delete, and administration permissions to these objects.

## 35.2. End User Access

End Users are user roles that are allocated by Designated Users to people who access Confirmit Horizons for end user functions such as accessing reports, dashboards and Action Management. Generally, these users are department leaders and executives who need access to the insights contained in reports and dashboards, but who are not directly involved in the detailed set up and day-to-day use of the software. With this user type, you contract your desired number of user licenses and then self-manage the assignment of access rights for those users.

- **Report Viewer Access (RVA)** is the most common End User type. This user type can access reports and dashboards that have been assigned to them in Reportal and Active Dashboards. An RVA user can also access all Action Management functions and edit hierarchies in Hierarchy Management if permissions are granted.
- **Report Analyst Access (RAA)** allows End Users to analyze existing report data and create tables. This is an intermediate user who has the ability to "play" with the data, analyze it on the fly, and create simple tables in Reportal. An RAA user can also access all Action Management functions and edit hierarchies in Hierarchy Management if permissions are granted.
- **Survey Dashboard & Instant Analytics Access** allows for access to Instant Analytics and Survey Dashboard.

## 35.3. Other User Types

In addition to the most common user types listed above, Confirmit also has Designated User roles for staff members responsible for managing the more technical aspects of your Confirmit Horizons platform, including secure FTP file transfers, APIs, and Flex Extension development. Contact your Confirmit sales representative or account manager for additional details.

## 35.4. User Roles and Permissions At-a-Glance

Designated User Roles									
Function	Professional	Standard	Analyst	Translator	CATI Supervisor	CATI Interviewer	CAPI Supervisor	CAPI Interviewer	
Professional Authoring & Survey Designer	✓	✓							
SmartHub	✓		✓						
Hierarchy Management	✓								
Admin & End User Management	✓		✓						
Reporting & Analysis	✓	✓	✓		✓		✓		
Action Management - Add-On	✓		✓						

Designated User Roles									
Function	Professional I	Standard	Analyst	Translator	CATI Supervisor	CATI Interviewer	CAPI Supervisor	CAPI Interviewer	
Genius Text Analytics - Add-On	✓								
CATI - Add-On	✓				✓	✓			
CAPI - Add-On	✓						✓	✓	
Panel - Add-On	✓								
Translator module - Add-On	✓			✓	✓		✓		

End User Roles				
Function	RVA License	RAA License	SD & IA License	
Professional Authoring & Survey Designer				
SmartHub				
Hierarchy Management	✓	✓		
End User Management				
Reporting & Analysis	✓	✓		
Instant Analytics				✓
Action Management - Add-On	✓	✓	✓	✓
Genius Text Analytics - Add-On				
CATI - Add-On				
CAPI - Add-On				
Panel - Add-On				
Translator module - Add-On				

✓ full permissions

✗ limited permissions

## 36. Appendix F: Reportal Export and Publishing Charges

Additional charges can occur for On Demand clients when publishing or exporting for Reportal reports dependent on the report type. The following gathers all information to a single location for convenience.

The following information speaks in terms of Reportal export charges. These are the equivalent to 3 Confirmit unit (transaction) charges. For details on your specific costs, please contact your Confirmit Account Manager.

### 36.1. Public Reports

If a Reportal report is published as a public report, this report can be accessed and viewed through a random generated unique link without a login or Viewer User ID. Public reports are static, so there will be constraints to the interactivity of such reports, with no possibility to filter or drill-down. As end user access cannot be assigned, there is no charge for accessing the report, and there is no limit on the number of people who can access this link.

### 36.2. Publishing and Updating Reports

There is a single Confirmit export charge each time the report is published or refreshed by a user accessing the report that triggers an update of the report cache. The cache update settings are controlled in the report properties.

**Note: If no one is accesses the report URL of a public report, no charge is incurred, regardless of how many times the Bitstream files are updated.**

### 36.3. Report Exports

It is also not possible to export a public report, therefore no charges are applicable.

### 36.4. Protected Reports (Accessible via End User Licenses)

If a report is not published as a public report, access is controlled by the assignment of Confirmit users, end users lists and panellists to the report. Each user can be granted a set of permissions (view, analyst or design) alongside other fields that can be used in the personalisation of the report.

There is a greater level of functionality available to the end users to customize and export their reports by using filters, drilldowns, adding pages to My Presentation, and exporting a variety of formats.

Note: For details of the cost of end users licenses, please speak to your Confirmit account manager.

### 36.5. Publishing

There are no charges for publishing a protected report.

### 36.6. Updating

There are no additional charges for when the report is updated, either by the updating of bitstream components, or by the refreshing of the cache. If the update data component is made available for report viewers, there are no changes for viewers triggering an update to the data with this component.

### 36.7. Report Exports

It is possible for both Confirmit users creating the report as well as end users to export report pages through several methods, including "Export all tables" from the analyst toolbox, "Report Export", "Export Packages", and "Export Viewer Presentation".

Exporting reports to Excel, PowerPoint or PDF from Reportal incur an additional export charge, incremental in steps of 100 pages (1-100 pages = 1 export charge, 101 - 200 pages = 2 export charges etc.). For analyst tables, the incremental steps are in the number of tables.

The export of a single page from a report (denoted "current page" in the export scope dialog) does not incur any export charges for Confirmit users or viewers.

For end users, it is possible to control whether end users should have access to the export functionality, and to also set thresholds on the maximum number of exports units allowed per end user. The default value is that no export units are granted for an end user.

It is also possible for the report creator or admin to schedule a recurring export task(s) to deliver an exported report at a given frequency. Note that this capability is not permitted for end user access.

**Note: Exports of hitlists and verbatim tables from the report incur no export charges.**

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