SharePoint Chart Web Part

1 — Last update: 2018/04/10

Lightning Tools

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Installing the SharePoint Chart Web Part

This section contains information on how to install the SharePoint Chart Web Part for Microsoft® SharePoint®. It is essential to read and complete the installation steps before you can add the Chart Web Part to a SharePoint page. Information on using and configuring the Chart can be found later in the documentation.

> As the SharePoint Chart Web Part is a SharePoint® farm solution, you may need to raise a change request to install the SharePoint farm solution in your organisation's production or system integration SharePoint farms. As this is a farm solution it cannot be install in Office 365™.

Uploading the SharePoint Chart Solutions

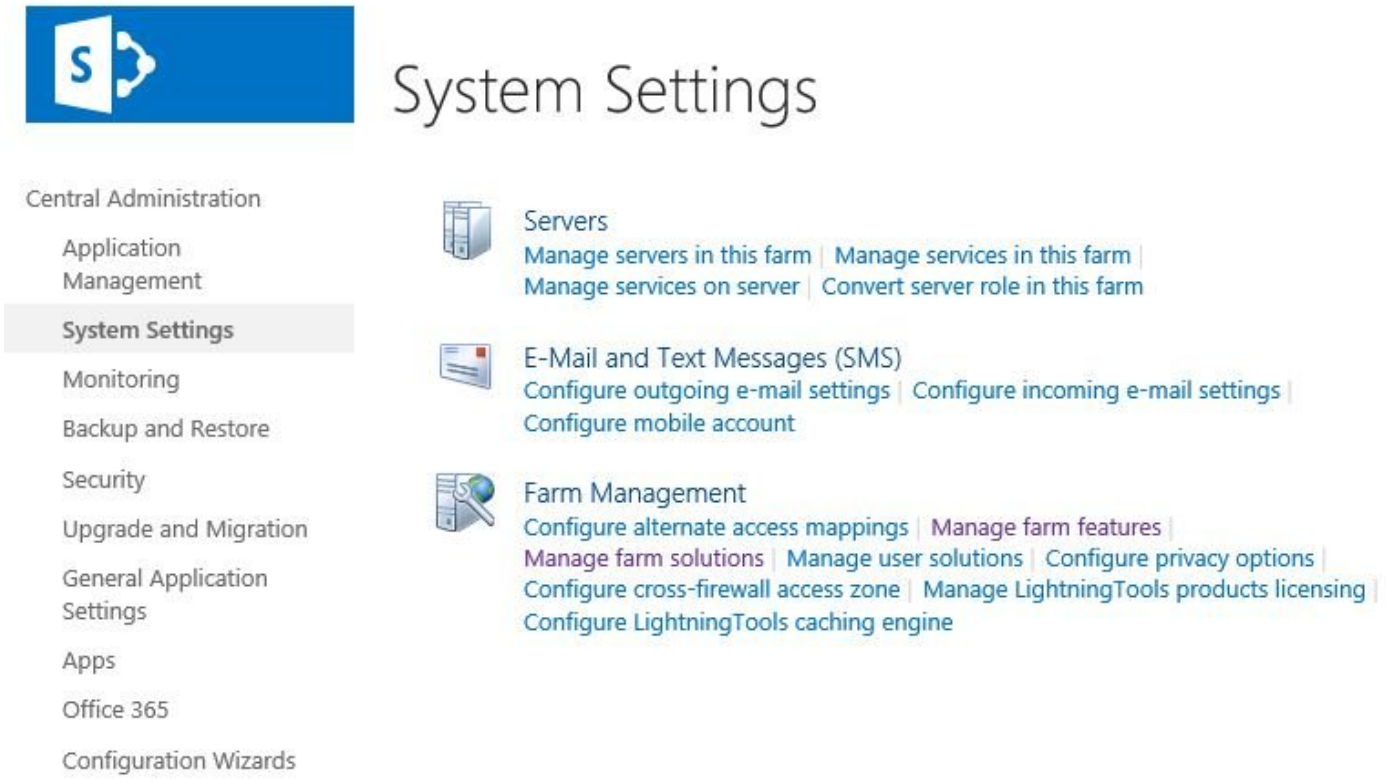
To add the SharePoint Chart web part to your environment, please complete the following steps.

1. First extract the SharePoint-Chart.zip package and select the file relevant to your environment, e.g. SharePointChart2016.wsp.
2. Copy the relevant file onto your SharePoint server.
3. Once the file is on your server open the SharePoint Management Shell and use the following command to upload it into your SharePoint environment: `Add-SPSolution C:\"filepath"\SharePointChart2016.wsp` replacing "filepath" with the correct path in your environment to the file.

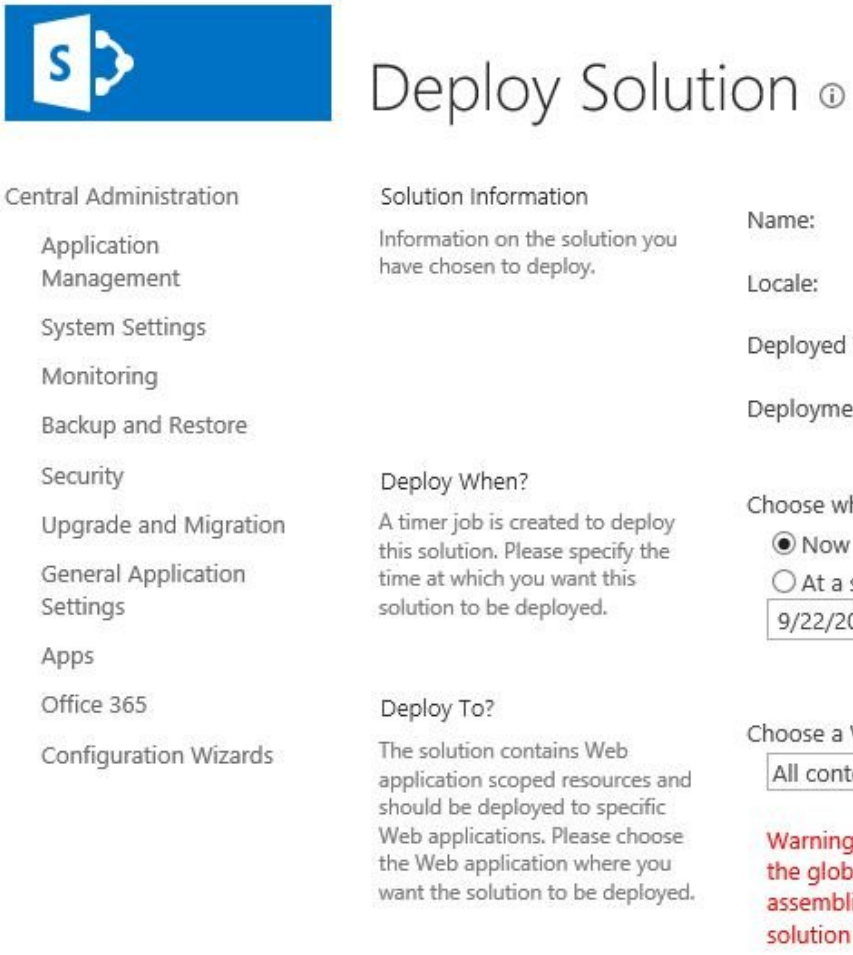
Note: Do not copy and paste this command from this page, as hidden characters may be included which will cause the PowerShell command to fail in your environment.

Deploying the SharePoint Chart Solution

Next, when you have finished uploading the WSP, you will need to deploy it to SharePoint.
1. First go to System Settings within Central Administration. From there choose Manage farm solutions and select the Chart WSP that you have uploaded.



2. On the Solution Properties page that now loads select Deploy Solution.
3. On the Deploy Solution page select when you want the WSP to be deployed and to which web applications.
Note: You must always deploy the solution to the Central Administration web application.
This allows you to manage the licensing of Lightning Tools' products.



4. Finally, click OK.

Licensing the SharePoint Chart Web Part

When you first deploy the SharePoint Chart web part in your environment it will be available to you as a **14 day free trial**. During this trial period you are able to use the Chart web part's full functionality and see the number of days remaining in your trial period displayed above the web part. When your trial period has ended the web part will cease to function until a license is applied to the Licensing Manager in your environment.

When purchasing a license for the Chart web part you will need to inform our Sales team of the number of Web Front Ends (WFEs) you have in your environment and the number of SharePoint farms that you wish to license (this includes **Production, Non-Production and Dev environments**). We will then provide a valid license key for each SharePoint farm in which you wish to deploy the Chart web part.

> For licensing purposes, a SharePoint Web Front End (WFE) is a server that has the **Microsoft SharePoint Foundation Web Application** service running.

Once you have purchased and received a license key, you need to enter it into the **Lightning Tools Licensing Manager** which can be found in **Central Administration** under the **System Settings** category.

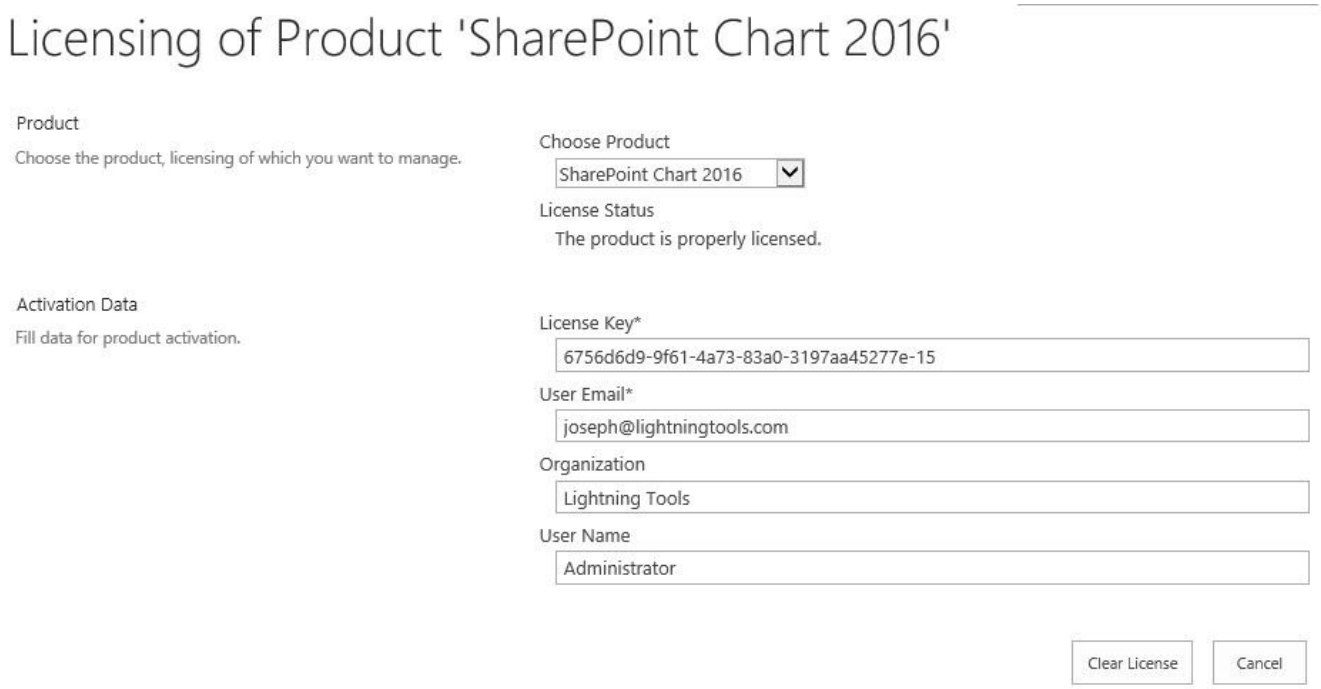
The Chart web part can be activated over the internet or, if your farm is not connected to the internet, it can be done manually. Once a license key has been activated it is permanently associated with that SharePoint farm and cannot be applied to any other farm. The keys are also specific to the individual Lightning Tools products, so a matching key is needed for each product.

Activate with Internet Access
Activate without Internet Access

Activate with Internet Access

To activate a license for the Chart webpart on a server that has internet access, first go to System Settings within Central Administration and select Manage LightningTools products licensing.

1. Ensure that **SharePoint Chart** is selected from the Choose Product dropdown menu.
2. Enter the License Key sent to you when purchasing the webpart into the License Key text box.
3. In the User Email text box, type your email address.
4. In the Organization text box, type your organization or company name.
5. In the User Name text box, type your first name and last name.
6. Lastly, click **Activate**.



The License Status underneath the product dropdown menu should now read “The product is properly licensed”.

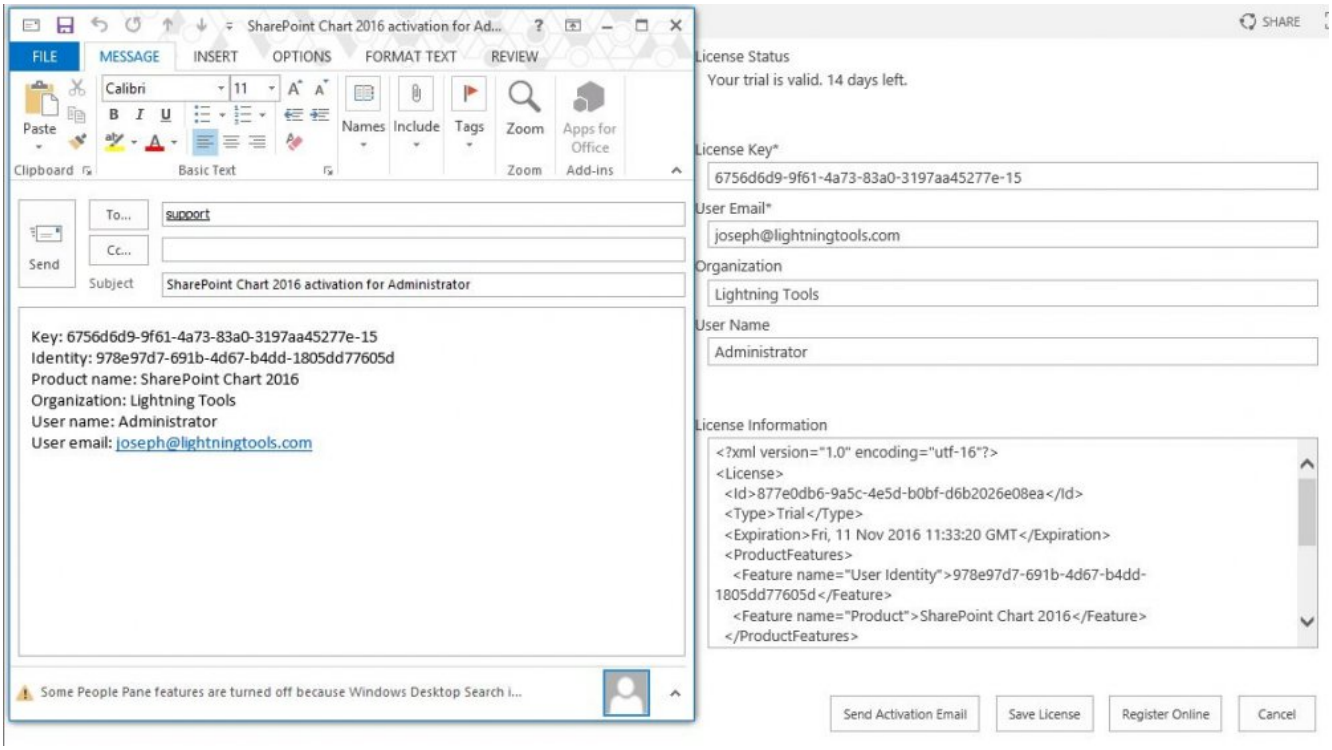
The SharePoint Chart webpart license is now activated and registered. You can check the license information within each instance of the Chart webpart by selecting **Edit Web Part** on the Web Part menu.

If you have purchased a license of the product already and believe that the information in the Web Part tool pane is incorrect, please contact Lightning Tools by clicking Submit Support Ticket on Lightning Tools web site. We will then gladly provide you with a license key.

Activate without Internet Access

To activate a license for the Chart webpart on a server that does not have internet access, first go to **System Settings** within **Central Administration** and select **Manage LightningTools products licensing**.

1. Ensure that **SharePoint Chart** is selected from the Choose Product dropdown menu.
2. Enter the License Key sent to you when purchasing the webpart into the License Key text box.
3. In the User Email text box, type your email address.
4. In the Organization text box, type your organization or company name.
5. In the User Name text box, type your first name and last name.
6. Now complete one of the following steps.
   -If the server that you are using has mail access, click **Send Activation Email** to send an email to Lightning Tools with your identity key and license key, which is used to generate the license.
   Or
   -Copy the contents from **License Information** text box, and save it in a manner so you have access to that information from another computer.
   -On a computer where you can send emails, paste the *License Information* into the body of the email, and send to support@lightningtools.com with a Subject line of: **SharePoint Chart Web Part activation request**.



7. Activation information will be sent in an email to the email address you provided in step 3. The email contains an XML license which can be pasted in the License Information text box replacing the existing contents.
8. Click **Save License**.

The License Status underneath the product dropdown menu should now read “The product is properly licensed”.

The SharePoint Chart Web Part license is now activated and registered. You can check the license information within each instance of the SharePoint Chart Web Part by selecting **Edit Web Part** on the Web Part drop down menu.

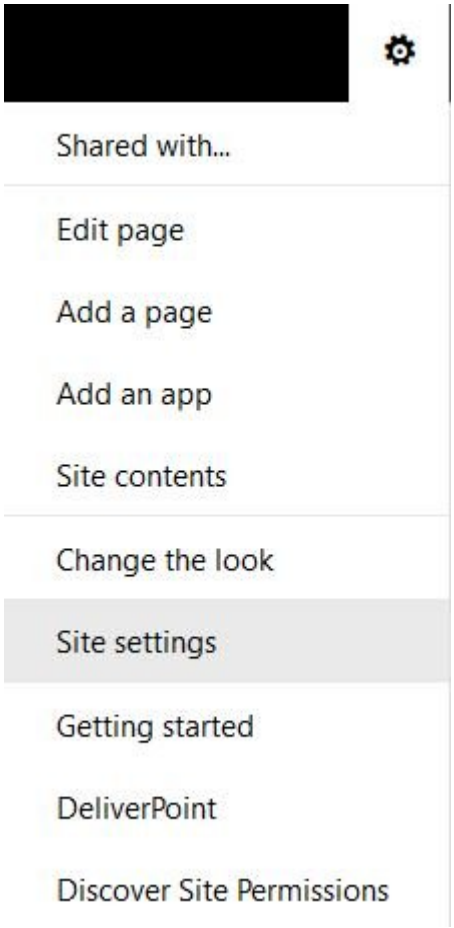
If you have purchased a license of the product already and believe that the information in the Web Part tool pane is incorrect, please contact Lightning Tools by clicking Submit Support Ticket on Lightning Tools web site. We will then gladly provide you with a license key.

Activating the Chart Web Part Feature

Before you can add the SharePoint Chart web part to a SharePoint page you need to first ensure that the Chart site collection feature is activated. How to do so is described in the following steps:

> ! You must be a **site collection administrator** to complete these steps.

1. Navigate your browser to the top level site of the site collection in question.
2. Click the **Settings** icon and then choose **Site settings**.



3. Once you are on the **Site Settings** page, choose **Site Collection Features**.
4. Now scroll down to where **SharePoint Chart Web Part** is listed and select **Activate**. Afterwards the feature entry should look like this:

You are now able to add the Chart web part to SharePoint pages.

> If you do not see the Site collection features link under Site Collection Administration, you are probably at a child site within the site collection. Under Site Collection Administration, click Go to top level site settings to navigate to the top of the site collections, and then repeat step 3.

If you navigate back to **Site Settings** and choose **Web Parts** from under **Web Designer Galleries**, you should now see the following three web parts listed:

Upgrading the SharePoint Chart Web Part

When a new version of the SharePoint Chart web part is released please follow these steps in order to upgrade your installation.

> ! You must be a SharePoint farm administrator in order to carry out this process.
> Do not copy and paste PowerShell commands as hidden characters may be included.

1. Download the latest version of the web part. Our downloads page can be found here: https://lightningtools.com/trial-download/
2. Unzip the downloaded archive and select the version relevant to your environment.
3. Copy the chosen file to your SharePoint environment.
4. Use the SharePoint Management Shell to upgrade the web part with the following command:
   `Update-SPSolution -Identity "SharePointChart2016.wsp" -LiteralPath "C:\"filepath"\SharePointChart2016.wsp" -GacDeployment`
   Please ensure you replace “filepath” and SharePointChart2016.wsp with the filepath and filename relevant to your environment.
5. You should now deactivate and reactivate the Chart site collection feature on all site collections that use the web part via the options accessible through a browser.
6. If you now set a page in a site collection which has the feature reactivated to Edit the SharePoint Chart web part should be available in the web part pane.

Using the SharePoint Chart Web Part

The SharePoint Chart web part can be used to graphically display information from a wide variety of sources including; **SharePoint lists**, **Excel files** and **SQL databases**. The manner in which information is displayed and the exact data that is used is widely customisable.

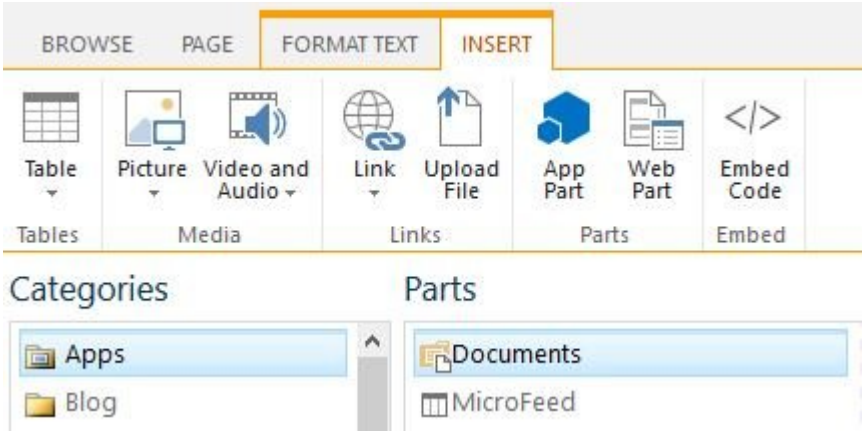
> ! The SharePoint Chart web part must be installed and the site collection feature activated before you can add a SharePoint Chart web part to a page.

Adding the SharePoint Chart Web Part to the Page

To add the SharePoint Chart web part to a page in SharePoint please use the following steps:

1. Put the page into **EDIT** mode.

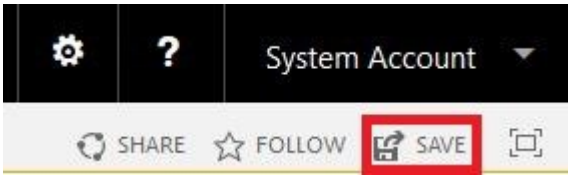
2. Click in the location on the page where you wish to place the web part and then select the ribbon tab labelled **INSERT**.
3. Click on the **Web Part** icon in the ribbon to display the web parts that are available to you.



4. Scroll down to where it says **Lightning Tools Web Parts** in the **Categories** pane and select it. Next in the **Parts** pane click on **SharePoint Chart Web Part** to highlight it and then click on **Add**.

5. You can now configure the Chart web part.

6. When you are finished modifying the page, make sure to click **SAVE** before leaving the page.



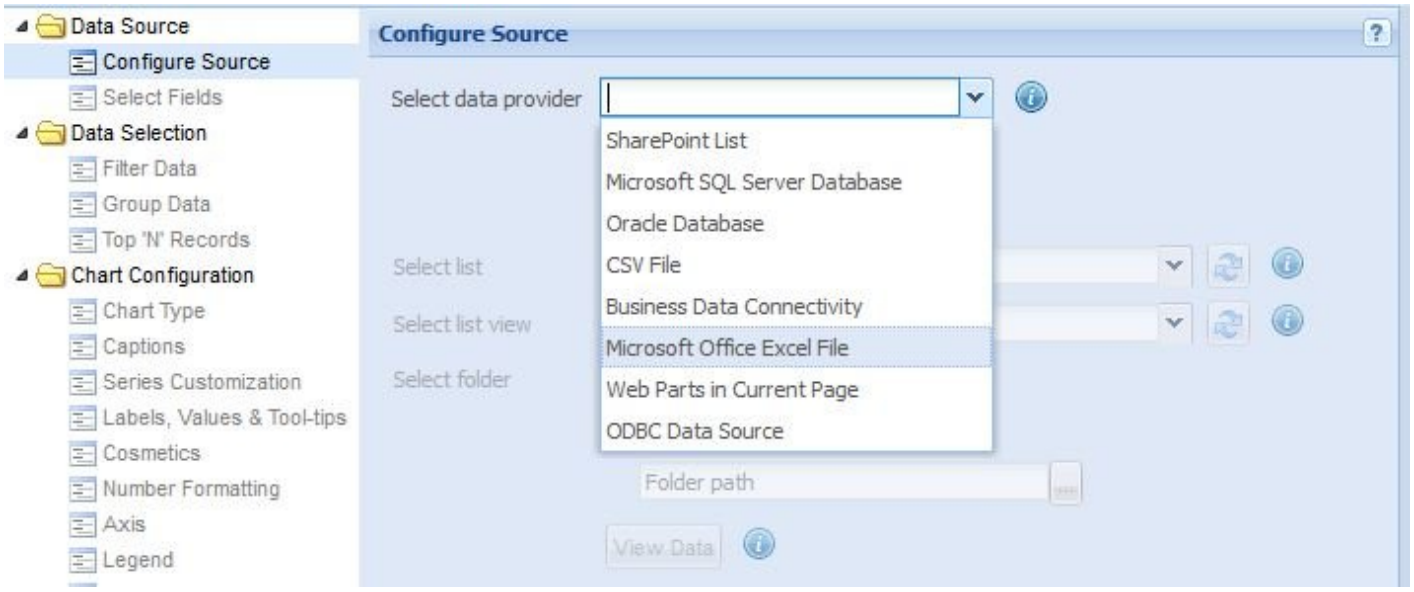
Configuring the Chart Web Part

Once you have added a Chart web part to a page a blank web part will appear with a simple text message offering you the option to import a chart exported from elsewhere or to launch the configuration wizard.

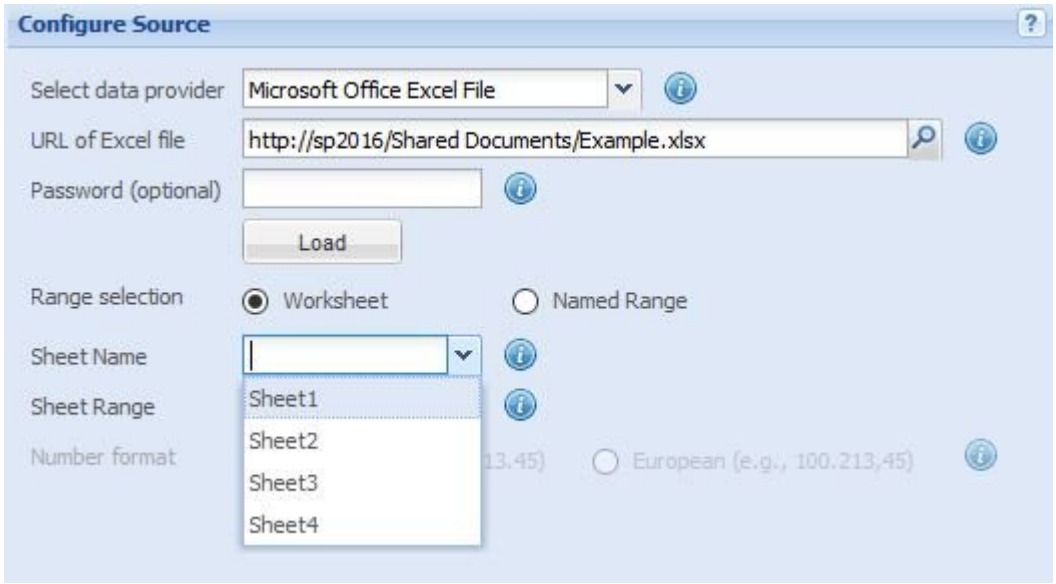
If you want to use the wizard to alter a chart that has been configured previously select the **Edit Chart** option from the dropdown menu in the top right corner of the web part. This will bring you to a graphical wizard that provides all of the possible configuration options for the chart. These options are divided into four categories; **Data Source**, **Data Selection**, **Chart Configuration** and **User Interaction**. Which options are available to you may vary slightly depending on the data source that you provide and the type of chart that you select.

Configuring the Data Source

The first screen that you will see when selecting the chart's configuration wizard will ask you to select your data source and then which parts of that source you wish to draw information from.



From here you can select from one of the data source types in question and direct the Chart web part to the location of the data source. Once the data source is selected, you can choose from which section of the source you wish to draw information.

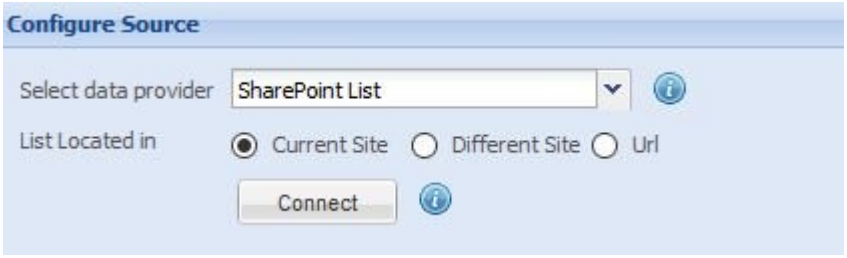


Selecting from a SharePoint List

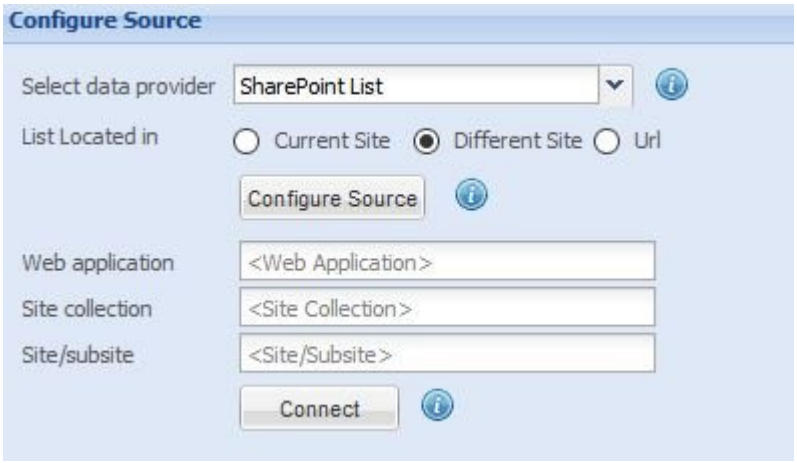
To connect a **SharePoint List** to the chart in order to provide data you should use the following steps:

- Select the **SharePoint List** option from the **Select data provider** dropdown menu.
- Now, use the radio buttons to inform the configuration wizard whether the list is located in the **Current Site** or a **Different Site**. Alternatively you can give the wizard a direct **Url** link.

1. **Current Site**: to be used when the required list is located on the same site as the Chart web part is located.

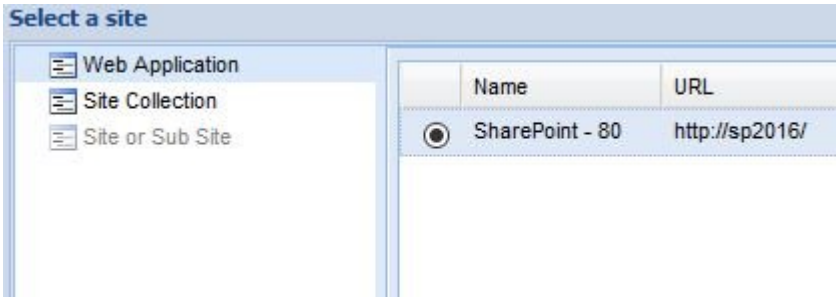


2. **Different Site**: to be used when the list is located on a separate site from the Chart web part.

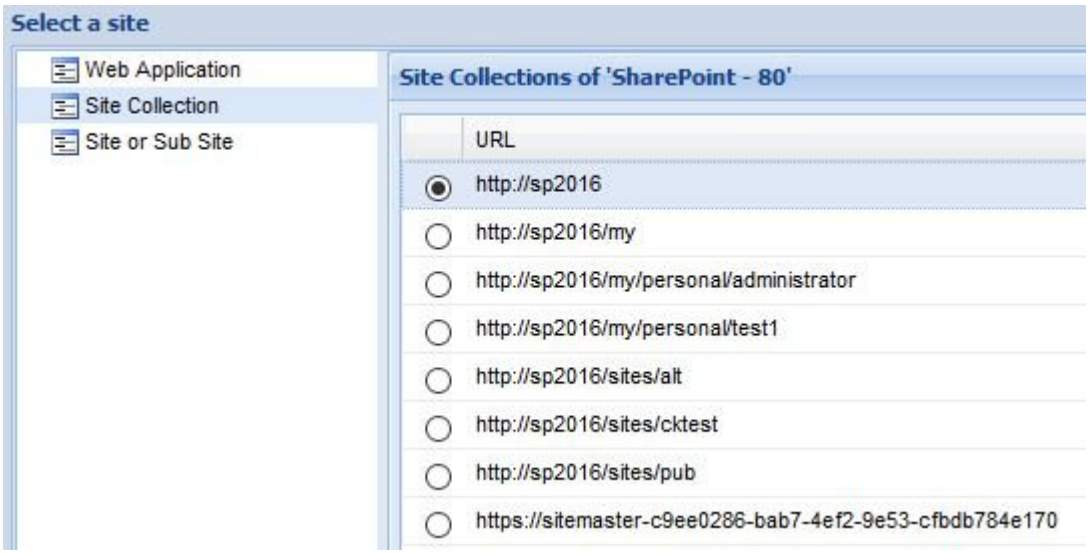


When this option is selected you will need to provide the **Web Application**, **Site collection** and **Site/subsite** of where the list is located. To do this:

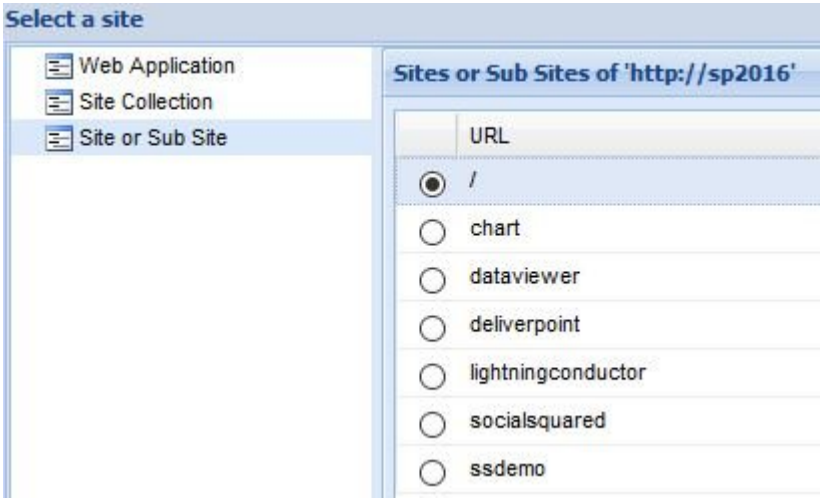
- First, click on **Configure Source**, this will cause the **Select a site** window to appear. Select the **Web Application** in question and then click **Next**.



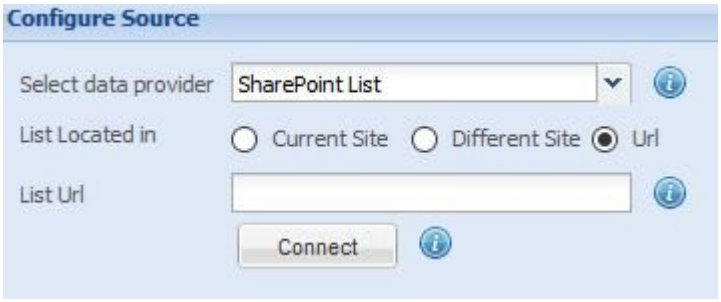
- Next, select your **site collection**.



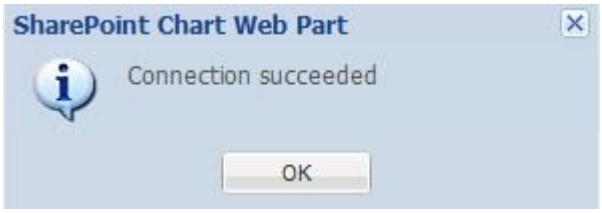
- Finally choose the **site** or **sub-site** within the site collection and then click **Finish**.



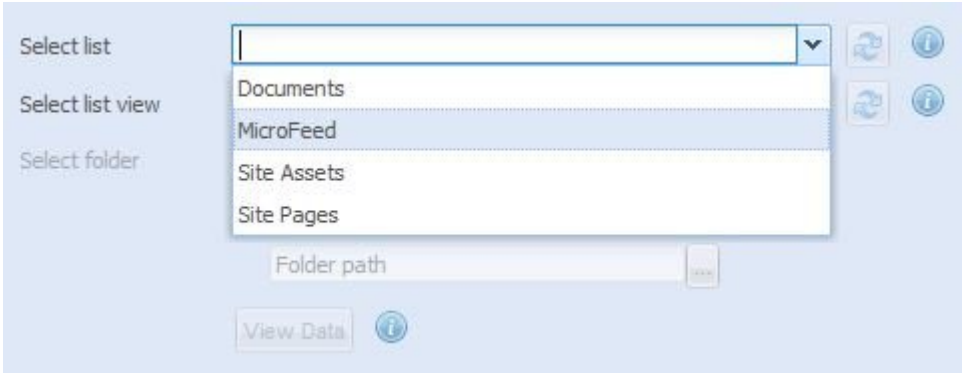
- **URL**: used to connect directly to a specific **SharePoint List URL**.



- Once you have configured the list location that you want to use click **Connect**. If the connection is successful a message box like the one below will appear.

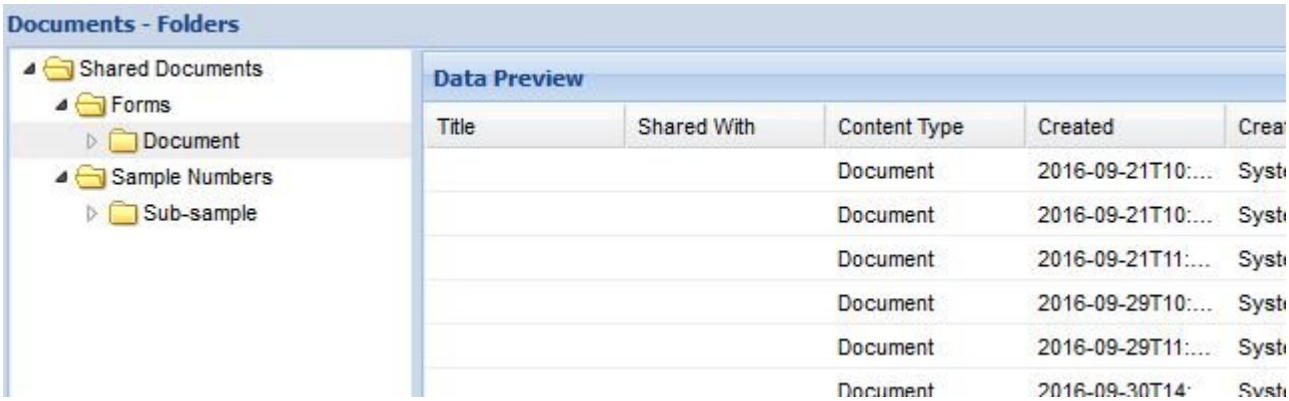


- You can now select the specific list that you want from the **Select list** dropdown menu.

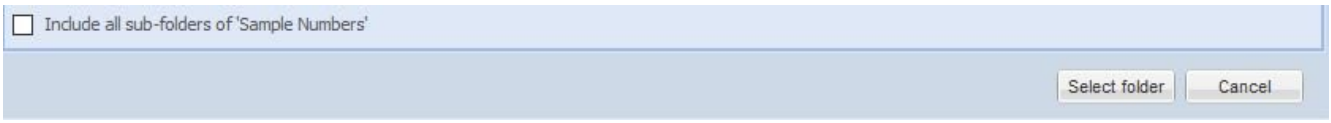


- Optionally you can select a particular view for the list that you want to use from the **Select list view** menu.
- If the selected list contains folders the **Select folder** option will be activated. By default **Root** is chosen and draws data from the top level of the list.

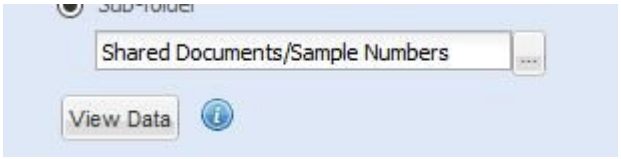
- If **Sub-folder** is selected you are then able to choose from any of the List's folders and sub-folders. A pop-up window will allow you to navigate the available folders and select the one you wish to use.



- Once you have decided on the folder you wish to use you can opt to include data from all of it's sub-folders and then confirm your decision by clicking **Select folder**.



- Once you have finished configuring your data source click **View Data** to review the data that will be used.



Selecting from a Microsoft SQL Database

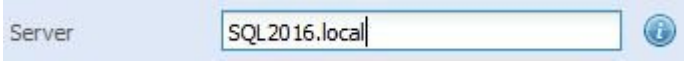
You can connect a chart to a Microsoft SQL database using either **SQL Server Authentication** or **Windows Authentication**.

Connecting with SQL Server Authentication

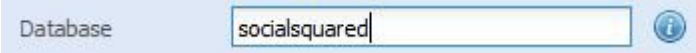
SQL Server Authentication is the default authentication method and requires you to provide your credentials every time that you connect to the database.

Use the following steps to configure a SQL connection:

- Enter the address of the SQL server that you want to use.

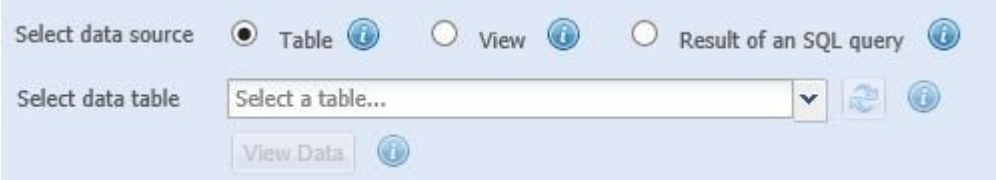


- Then the name of the database you want to access.



- Next enter the user credentials required to access the database.

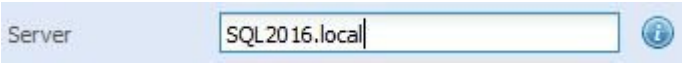
- When you click **Connect** a message box will inform you if you were successful.
- Once connected you can select a **Table** or **View** from the database to use by selecting the radio button for the type and then making your choice from the dropdown list or apply a **SQL query** to the database to refine the data you need.



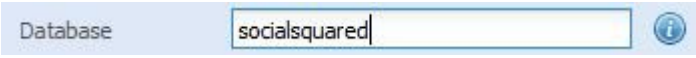
Connecting with Windows Authentication

Instead of using SQL authenticaion you can verify your identity with the Windows Authentication instead. In this case you will not need to supply a username or password.

- Enter the address of the SQL server that you want to use.



- Then the name of the database you want to access.



- When you click **Connect** a message box will inform you if you were successful.
- Once connected you can select a **Table** or **View** from the database to use by selecting the radio button for the type and then making your choice from the dropdown list or apply a **SQL query** to the database to refine the data you need.

Using the SQL query option

When you choose to use the **SQL query** to provide data from the database to the chart there will be two text boxes named **Query Variables** and **Query** that appear.

You now need to enter your SQL Query into the **Query** box to select the data. You also have the option to use the **Query Variables** box to set predefined values for declared variables. You can then use these variables as part of the SQL query.

So you could set the following the following in the **Query Variables** box to define an age limit.

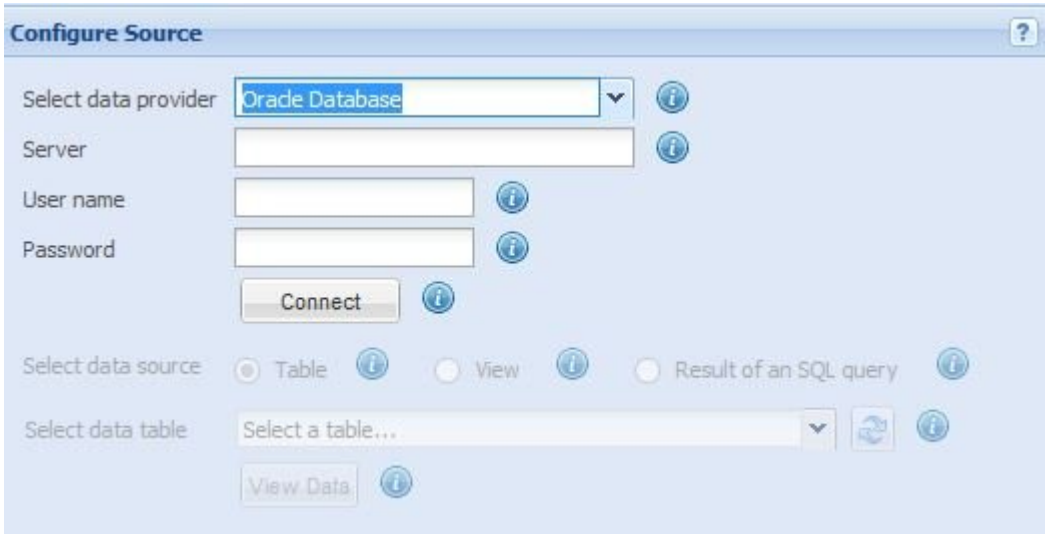
```
DECLARE @AGE_LIMIT int
SET @AGE_LIMIT = 18
```

Then in the **Query** box you use the following to select the entries which exceed the age limit value you have set.

```
SELECT NAME, ADDRESS, PHONE, RATING FROM VISITORS
WHERE AGE >=@AGE_LIMIT
```

When you have finished entering your choices click **View Data** to apply the SQL query and view the retrieved data.

Selecting from an Oracle Database



To set up a chart to retrieve information from an Oracle database use the following steps:

1. First select **Oracle Database** from the data provider dropdown menu.
2. Enter the name of the database server into the **Server** textbox.
3. Provide the appropriate information in the **User name** and **Password** textboxes.
4. Now, click **Connect** and a message box will appear to tell you if the connection was successful.
5. Once a connection is made you are able to choose from selecting a **Table** of data or using the **Result of an SQL Query** to provide the data for the chart.

Table: when you select to use a table of data the **Select data table** dropdown list becomes available.
Select the table you wish to use from this dropdown.
When you have chosen the table you wish to use click **View Data** to confirm and view the retrieved data.

Using the SQL query option

When you choose to use the **SQL query** to provide data from the database to the chart there will be two text boxes named **Query Variables** and **Query** that appear.

You now need to enter your SQL Query into the **Query** box to select the data. You also have the option to use the **Query Variables** box to set predefined values for declared variables. You can then use these variables as part of the SQL query.

So you could set the following the following in the **Query Variables** box to define an age limit.

```
DECLARE @AGE_LIMIT int
SET @AGE_LIMIT = 18
```

Then in the **Query** box you use the following to select the entries which exceed the age limit value you have set.

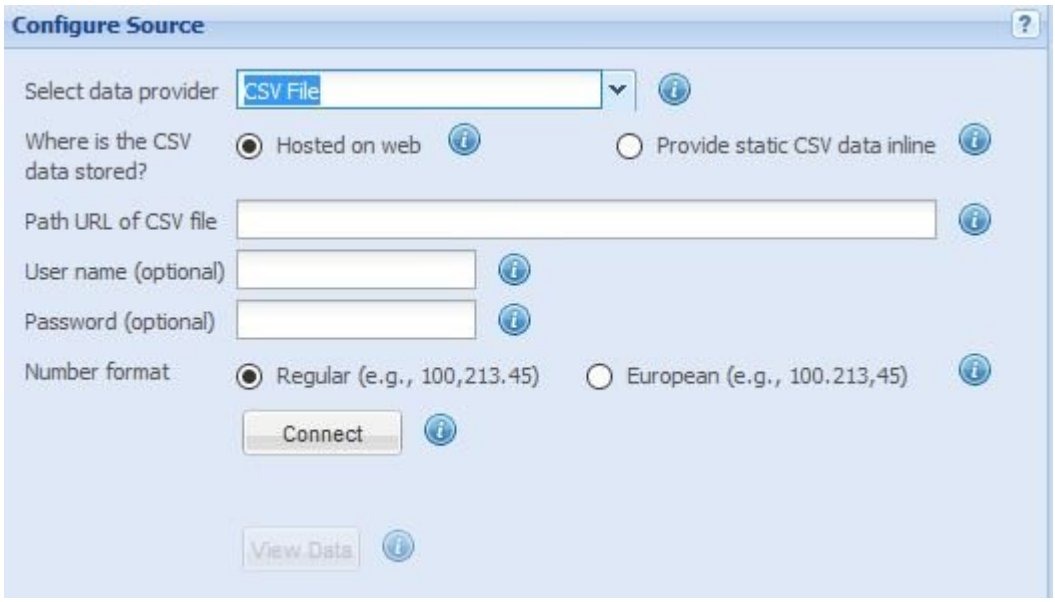
```
SELECT NAME, ADDRESS, PHONE, RATING FROM VISITORS
WHERE AGE >=@AGE_LIMIT
```

When you have finished entering your choices click **View Data** to apply the SQL query and view the retrieved data.

Selecting from a CSV File

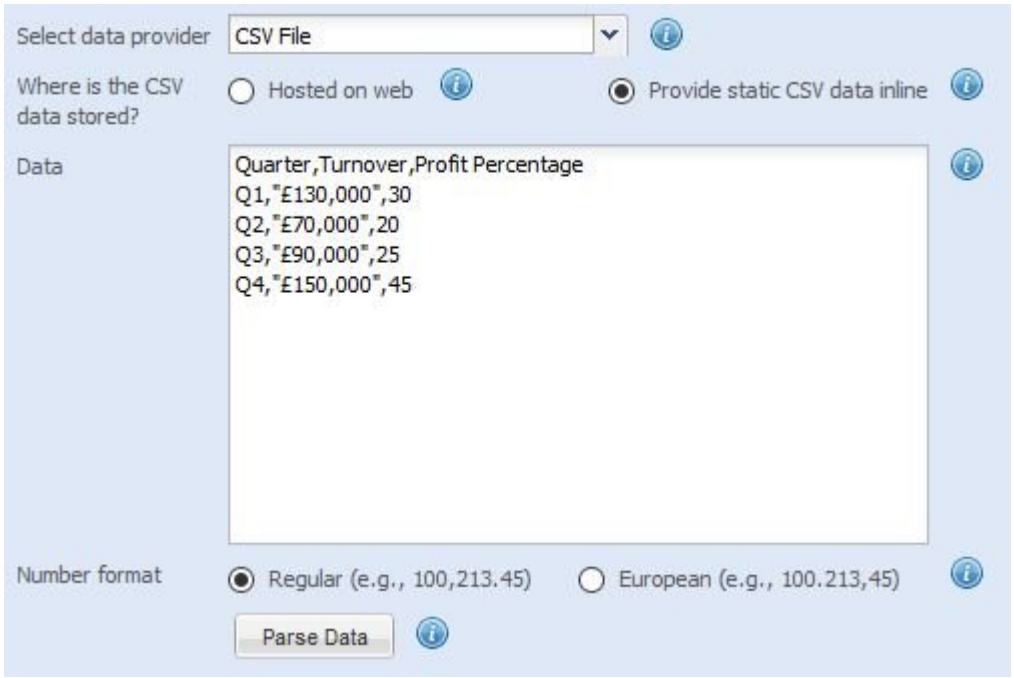
To pull data for the chart from a .csv file first select **CSV File** from the **Select data provider** dropdown menu. You will then be provided with the option of linking the webpart to an online .csv file or simply pasting the information of a file into the configuration wizard.

Hosted on web
For this method you will be presented with fields to fill for **Path URL of CSV file**, **User name** and **Password**, the last two of which are optional fields depending on whether the file requires it. Once you have entered the required information into the fields click **Connect** to confirm the settings, a message box will appear to tell you whether the connection was successful.



Provide static CSV data inline

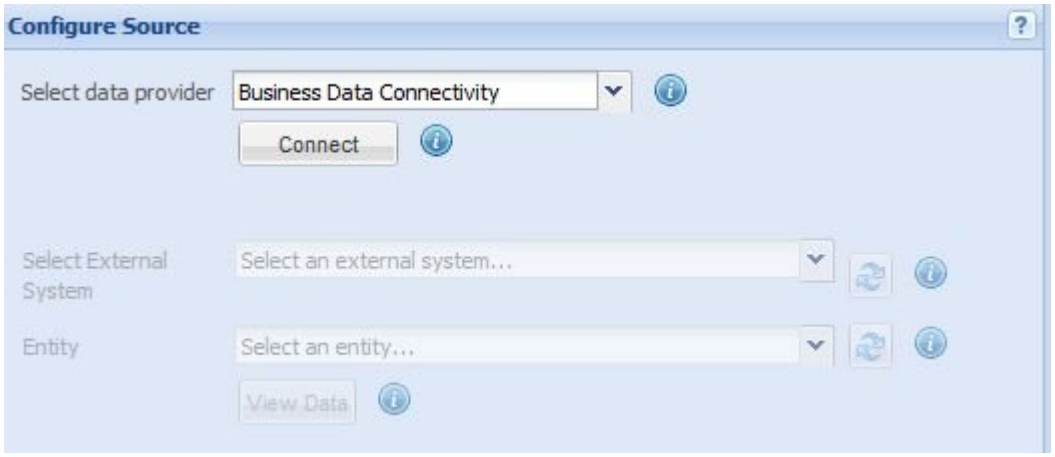
If you choose this option a large textbox will appear below the data provider dropdown list for you to past the contents of your .csv file into. Once you have done this click **Parse Data** and a process bar will appear while the wizard process the information.



Once this is done you can click **View Data** to see the processed data and confirm it has come out correctly or click on **Select Fields** to move onto the next step.

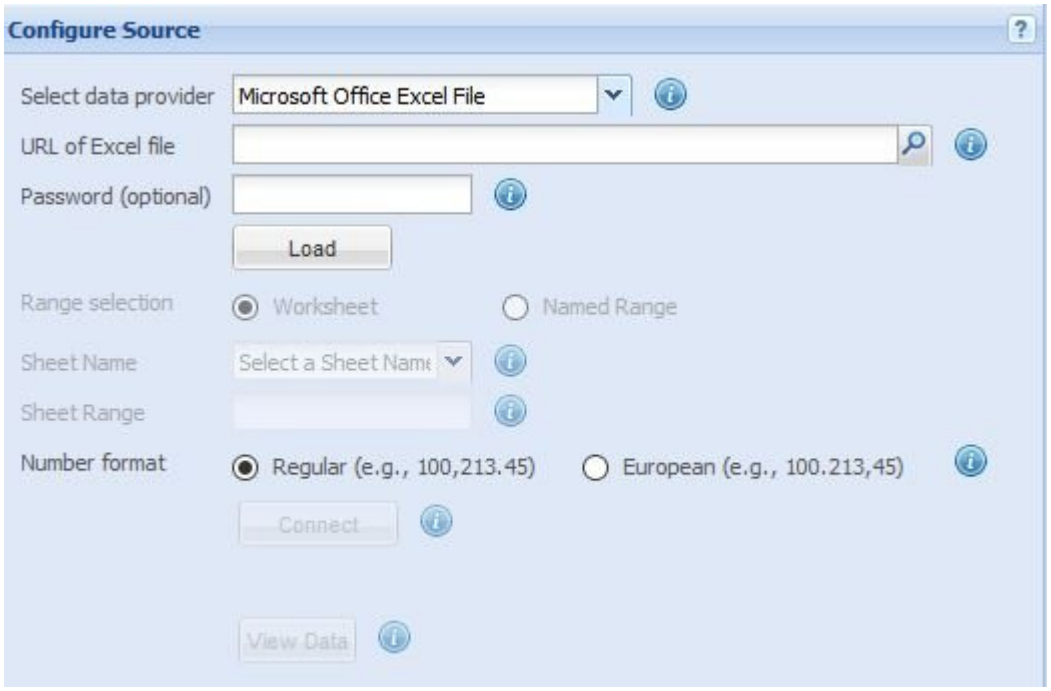
Selecting from a Business Data Connectivity source

To use data from a **Business Data Connectivity** source select **Business Data Connectivity** from the data provider dropdown menu and then click **Connect**. A message box will appear to let you know if the connection was successful.

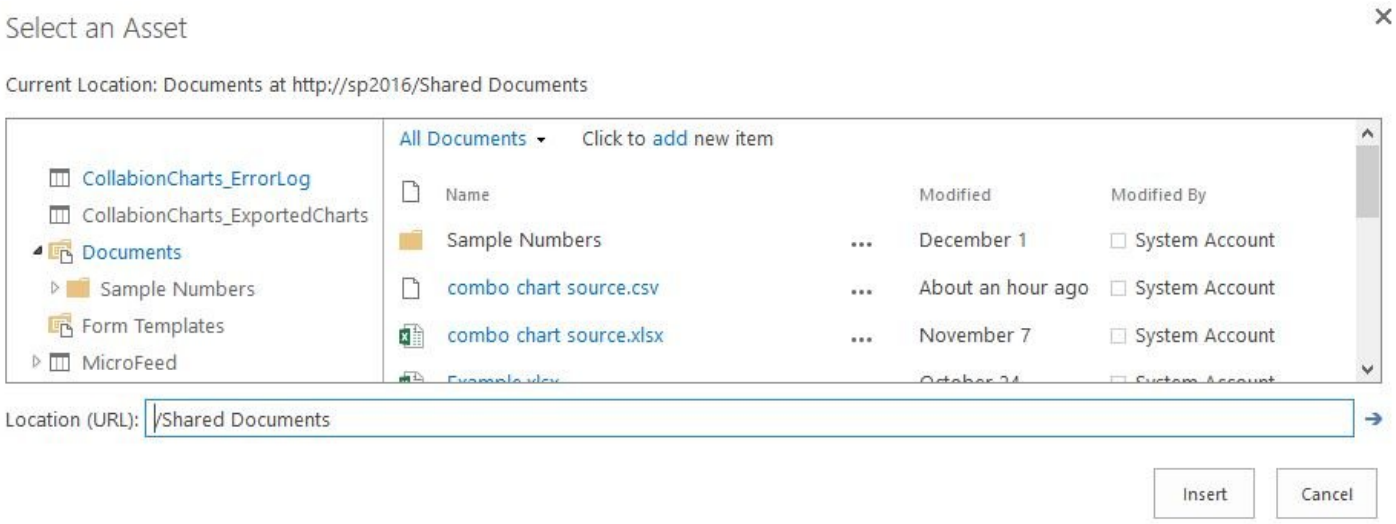


Once you have connected, specify your values for **Select External System** and **Entity**. When you have finished click **View Data** to see the imported information or **Select Fields** to move onto the next step.

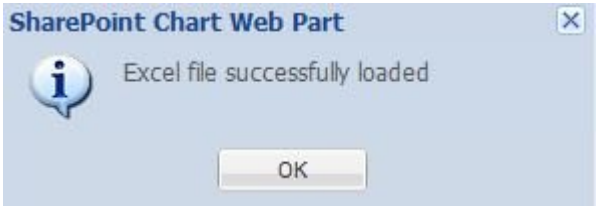
Selecting from a Microsoft Excel file



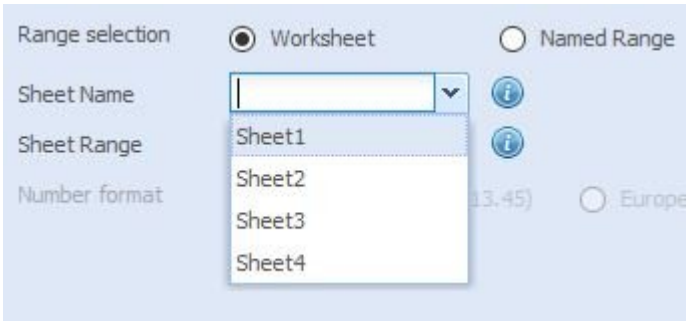
First select **Microsoft Office Excel File** from the data provider dropdown menu. You will have to provide the URL for the file in question, you can either enter the URL directly or use the search button to browse your SharePoint environment for the file. If browsing for the file click on the file and then click on **Insert** to add the URL to the file into the wizard.



Once you have the URL for the file entered, add the password if it is required and then click **Load**. If you have configured the settings correctly a message box should appear to tell you that the file has been loaded.

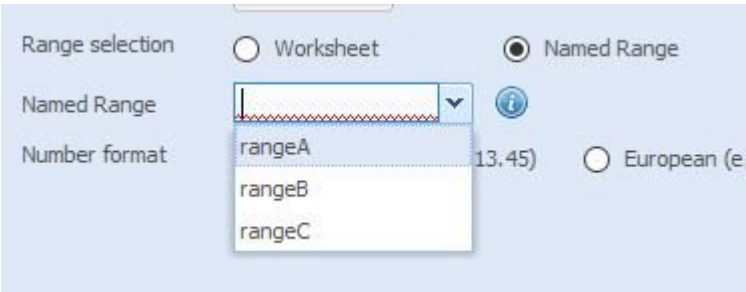


For **Range selection** you can choose from the radio buttons for **Worksheet** and **Named Range** If you select **Worksheet** you are able to choose from which sheet in the loaded Excel file the web part will draw data from using the **Sheet Name** dropdown menu.



Once you have selected the sheet you wish to draw data from you can then use the **Sheet Range** field to further refine which rows and columns from the selected sheet are used. You can use the wildcard character * as well clearly delimited values to indicate where in the sheet you wish to pull data from.

If you select the **Named Range** button you will be able to make use of the Excel Named Range feature and select pre-defined and -named ranges that are included in the excel file.

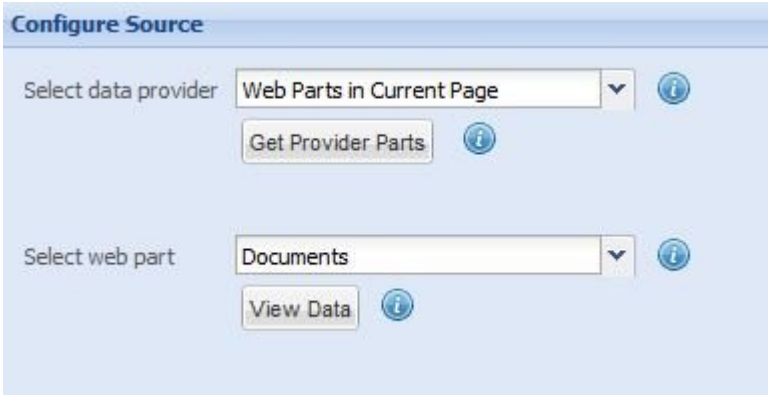


You can also use the **Number format** radio buttons to select whether the . is used as a decimal separator and , as a thousand separator, or the other way around.

When you are done click **Connect** and a pop-up box will tell you whether your connection was successful.

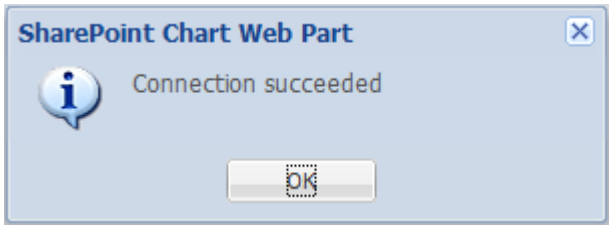
Selecting from Web Parts in the Current Page

First select **Web Parts in Current Page** from the data provider dropdown menu. Then click on **Get Provider Parts** and a pop-up box will tell you whether your connection was successful.



Next you can select which web part on the page you wish to draw data from using the **Select web part** dropdown menu. When you have selected the web part click **View Data** to see the collected data shown in a list.

For example, to connect to the Lightning Conductor you would first configure the Lightning Conductor to send data to the the Chart Web Part. Then, when you select **Get Provider Parts** you should see the following message.



Click **OK** and then select the Lightning Conductor from the **Select web part** dropdown menu.

Selecting from an ODBC Data Source

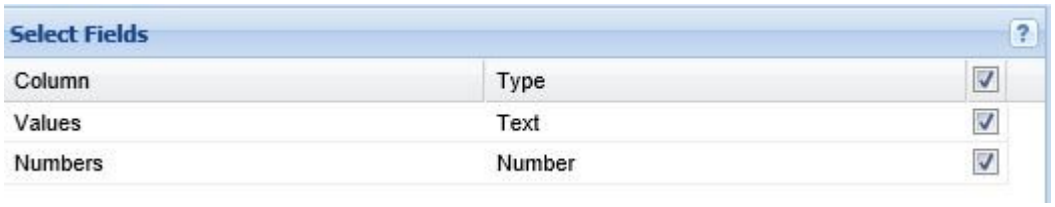
First select ODBC Data Source from the **Select data provider** dropdown menu. Next enter the **Connection String** required for the ODBC data source.

Now click **Connect** and a pop-up box will inform you whether your connection was successful. Once you have connected you can enter the query that you want to use for selecting data from the source into the **Query** text box.

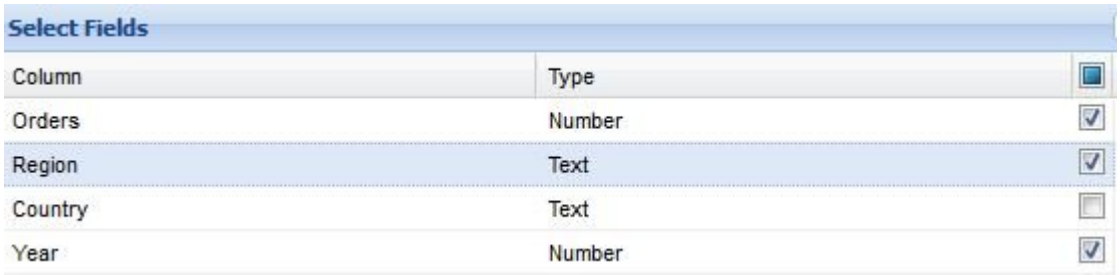
When you are finished you can view the selected data by pressing **View Data**.

Selecting Columns for your Chart

After connecting to the data source you can select which data fields the chart will fetch data from. Checking the top check box on the right hand side will select all of the fields to be included for use in the chart. This is shown below:



You also have the option here of selecting only certain data fields for inclusion by only ticking the boxes corresponding to the fields that you want to be available for use in the chart.

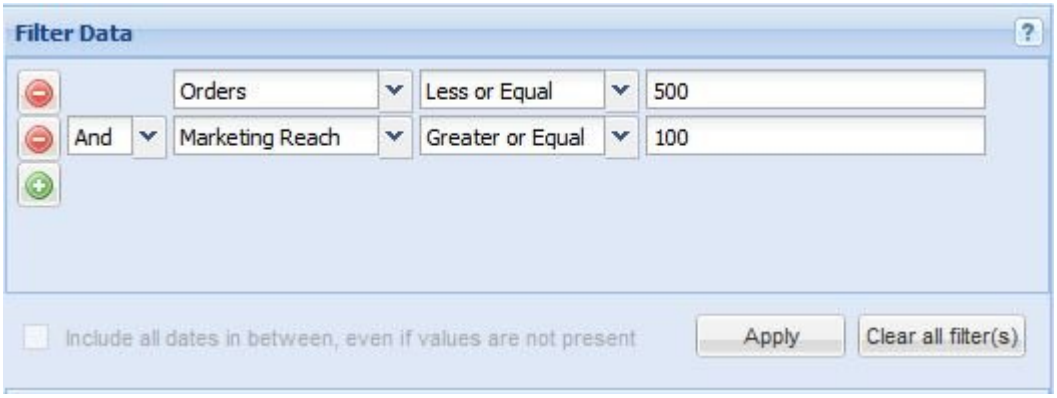


Once you have decided on which data sources you want to be available to the chart, click on **Apply** to confirm your settings.

Filtering Data

Depending on the age, source or generation method of your data source, it may contain outdated or unnecessary information. If that is the case you can use the **Filter Data** page to remove what is not required from the source prior to generation of the chart.

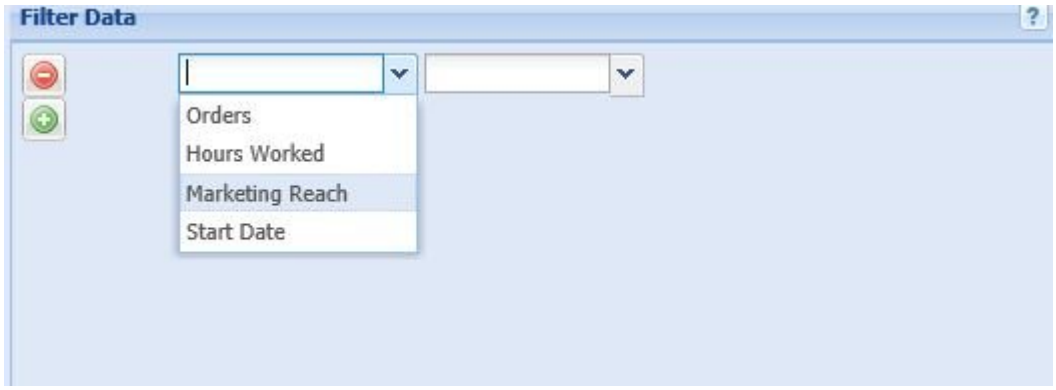
To do this you can create multiple filters based on the data fields that you have chosen to include from the source and set specific requirements for each one. An example of some of the types of filters that you could use is included below:



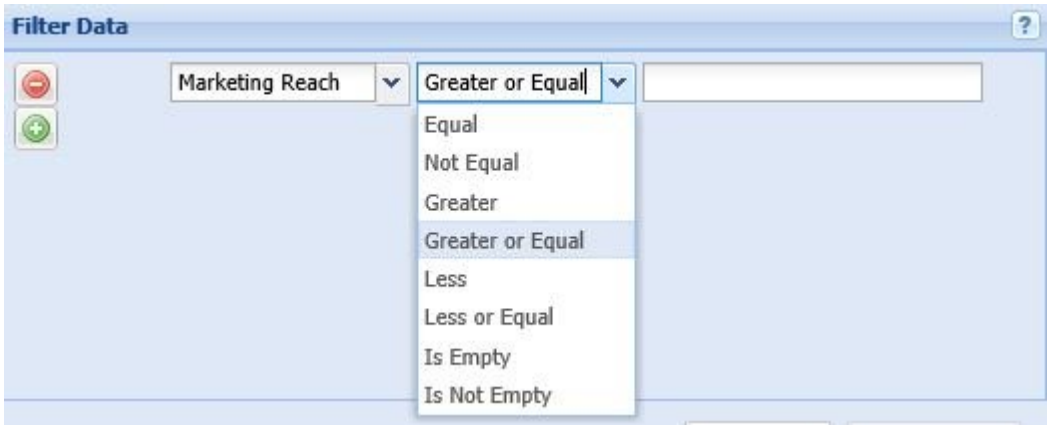
Create and apply a new filter

To create a new filter first click on the  icon and then select which data field you wish to filter on from the dropdown menu. For the first filter on a chart you will not need to use the add icon to create the new filter as dropdown menu will already be there. If you do not wish to filter your data simply leave this box blank and continue with configuring your chart.

So for example if you had information showing the number of people reached by different marketing campaigns and only wanted to show entries for those that had reached 200 or more people, you would first create a filter on the relevant column.



Then set the filtering function to **Greater or Equal** from the next dropdown menu.



And then lastly, enter the value of concern to the textbox at the end, in this case **200**.

In a similar manner if you want to filter on a field containing text rather than numeric values, you would select the column, then the filter type and lastly the text that is to be filtered on. In the example below the column **Region** has been filtered so that only entries containing the text **Asia** somewhere in that column are shown.

Once you have chosen all of your options click **Apply** for them to be confirmed and applied to your data source. A table below the filters will show you what data remains after filtering.

Managing multiple filters

Additional filters can be applied on top of each other to the same data source so that only those entries meeting the requirements of all specified filters are shown. For example you may want to see the entries for orders over a certain volume within a specific region.

In this case you would create the first filter as before, and then after clicking the  symbol to add another filter, you would need to select **And** in the additional dropdown menu that now appears at the start of the filter options before filling in the rest of the menus as normal.

Alternatively, the first dropdown menu can be set to **Or**. In which case entries meeting the requirements of either of the specified filters will be used to generate the chart.

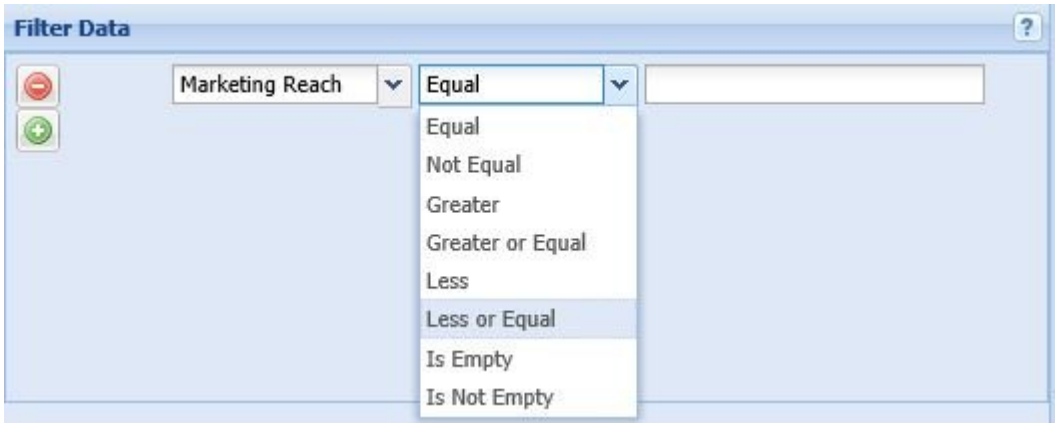
Deleting a filter

Filters can be removed at any time by clicking the  button on the left hand side of the filter options.

Apply filters to numbers

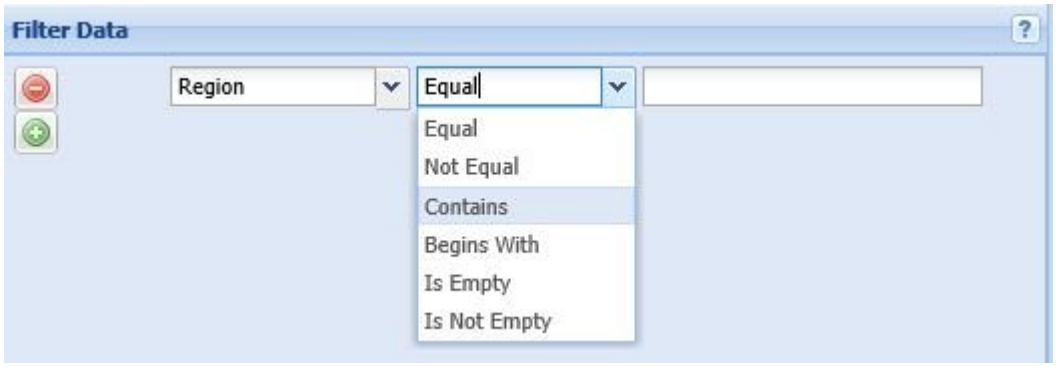
When filtering numbers you can use the following filters: **Equal**, **Not Equal**, **Greater**, **Greater or Equal**, **Less**, **Less or Equal**, **Is Empty** and **Is Not Empty**.

The steps for setting this type of filters is: select a field of the appropriate type, then choose a filtering condition and lastly provide the value to be used.



Apply filters to text values

When filtering text values the following filters are available: **Equal, *Not Equal**, **Contains**, **Begins With**, **Is Empty** and **Is Not Empty**.

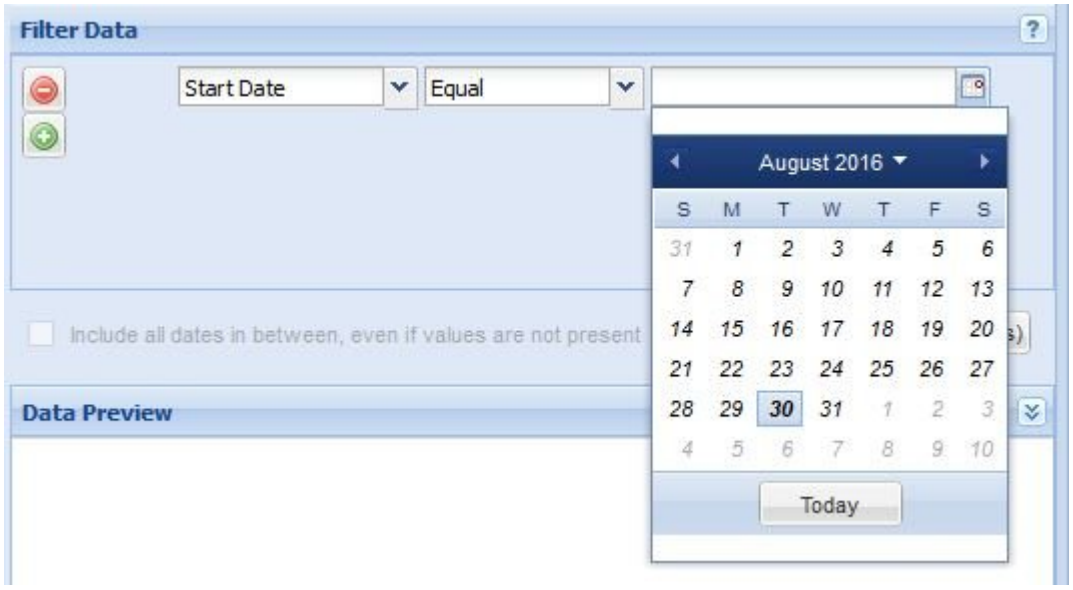


Apply filters to dates

When filtering dates you can use the following filters: **Equal**, **Not Equal**, **Greater**, **Greater or Equal**, **Less**, **Less or Equal**, **Is Empty**, **Is Not Empty**, **Is Between**, **Is**, **Is Previous** and **In Past (incl. today)**.

So in this example if I wanted to filter for all entries that began in the previous four weeks, I could select to filter on Start Date and then set the filter to “In Past (incl. today)”. Then two new boxes will appear allowing me to input a number and a calendar unit, in this case “4” and “Week(s) (Mon-Sun)”.

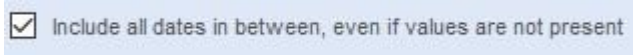
For other filters based upon dates you may choose to filter based on a specific date rather than a period of time relative to the present. In which case you may type the date into the selection box at the end or choose it from the dropdown calendar that appears.



Adding empty records for missing dates

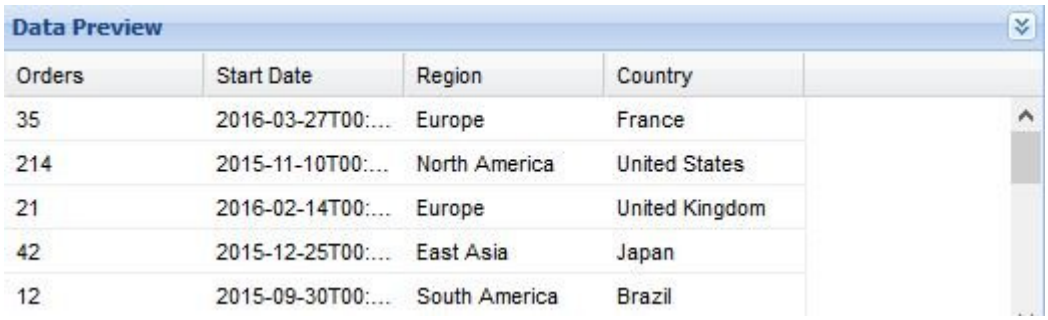
Date based filters can only detect records for those dates that are present in the data source. This can result in missing values due to them lacking a corresponding date.

To add empty records for the missing dates simply check the box for **Include all dates in between, even if values are not present**.



Data Preview

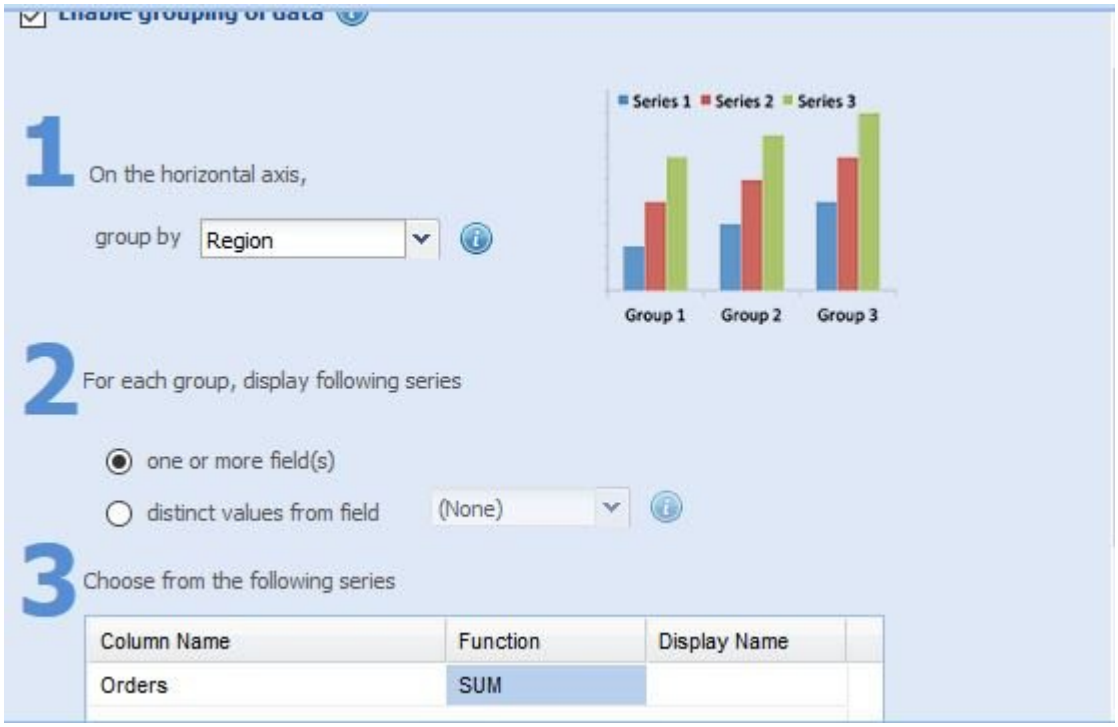
Once you have applied your filters to your data a preview box below the filter options will show you what data will be used to build your chart.


Data Preview
Orders
Start Date
Region
Country
35
2016-03-27T00:...
Europe
France
214
2015-11-10T00:...
North America
United States
21
2016-02-14T00:...
Europe
United Kingdom
42
2015-12-25T00:...
East Asia
Japan
12
2015-09-30T00:...
South America
Brazil

Grouping and Aggregate Functions

In the **Group Data** section you are able to certain entries together based upon values that they have in common. Situations in which this may be useful is if you have entries for certain regions or individual years that you want to be grouped together so that it is easier to compare relative results.

For example you may want the total orders for each region combined together to give an overview of how each area has fared rather than viewing each one individually.



In order to do this you need to the following:

- First, check the box for **Enable grouping of data**.
- Next, select the field that you wish to group by for the horizontal axis, in this case **Region**.
- Ensure that the radio button for **one or more field(s)** is selected, it should be by default.
- Select the **SUM** function for the **Orders** column.
- Lastly, click **Apply**.

You should see a summary of your grouped data in a table below the settings options.

Region	Orders (Sum)
Australasia	57
East Asia	130
Europe	84
North America	271
South America	64

In addition to **SUM** there are four other functions for grouping and aggregation. The names of the functions and their properties are as follows:

- **SUM**; the combined total of all the values in the group.

- **AVERAGE**; the average of all the values in a group.
- **COUNT**; the number of values listed in the group.
- **MIN**; the lowest value in the group.
- **MAX**; the highest value in the group.

Split data from a single column into multiple columns.

It is possible to create multiple data columns from the values included in a single data column. For example, all date values are entered into the same column rather than having separate columns for different months or years. Therefore if you want to view the data grouped by certain dates, you can split the date column into separate columns for each month or year.

In this example we want to view the amount of orders, per region, per year.

In order to split the data appropriately you need to do the following:

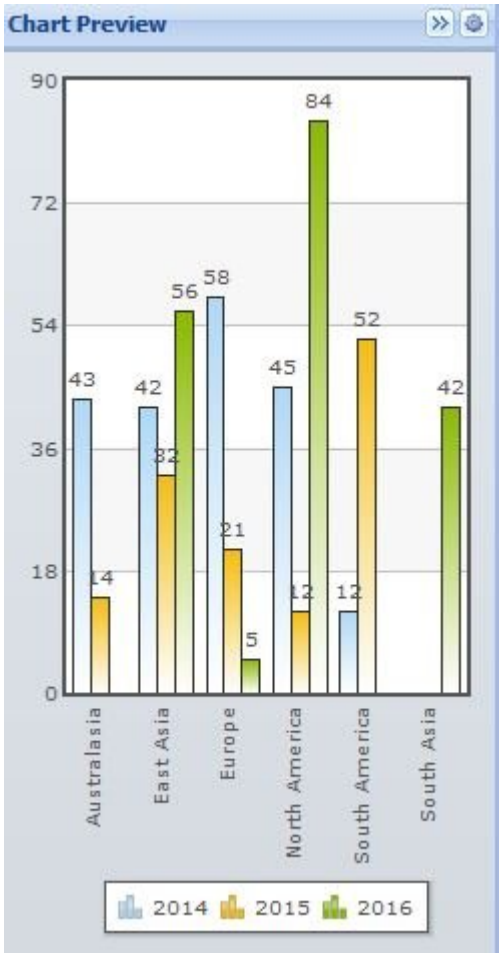
- As before select **Region** to be grouped on the horizontal axis.
- Then tick the **distinct values from field** radio button and select Year from the dropdown list presented to you.
- Next select **SUM** from the first dropdown list under **For each series, display**.
- Lastly, you select **Orders** for the second dropdown box under **For each series, display**.

This should produce a table that looks somewhat like the following:

Grouped data preview

Region	2014	2015	2016
East Asia	42	32	56
Europe	58	21	5
North America	45	12	214

Which should produce a chart such as this:



Please note that in the chart each individual year is considered a data series.

Grouping dates.

Use the following steps to summarise data using a specific part of a date, including: year, half year, quarter, month, day, hour, minute or second:

- Select a column with a **Date/Time** value for **On the horizontal axis, group by**.
- Next, select a value of date or time from the dropdown list for **where dates are grouped by the**.
- Finally, select a summarising function (**SUM**, **COUNT**, etc.) and apply to the columns provided in the table under **Choose from the following series**.

The table produced by this method should look something like the following:

Grouped data preview

Start Date	Orders (Sum)
Q3'2015	12
Q4'2015	270
Q1'2016	99
Q2'2016	134
Q3'2016	133

Selecting the Chart Type

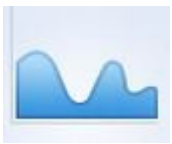
In total there are 56 chart types provided by the SharePoint Chart web part. These are split into the following six categories; **Singles Series**, **Multi Series**, **Stacked Charts**, **Combination Charts**, **X-Y Charts** and **Scroll Charts**. When selecting a chart type to use, you can select the category from a dropdown list in the top right corner and then choose the individual chart type from the main body of the configuration wizard.

After selecting a chart type, but before applying it to your web part, you can use the **Preview** button to display what the chart will look like on the right hand side of the wizard.

Single Series Charts
Multiple Series Charts
Combination Charts
Stacked Charts

Single Series Charts

There are 17 **Single Series** chart types available, as shown below. These are intended for datasets where only one series of data is being displayed.

Column 2D	
Column 3D	
Bar 2D	
Line 2D	
Spline	
Area 2D	
Spline Area	

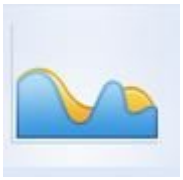
Pie 2D	
Pie 3D	
Doughnut 2D	
Doughnut 3D	
Funnel	
Pyramid	
Waterfall/Cascade	
Pareto 2D	

Pareto 3D	
Kagi	

Multiple Series Charts

There are 17 **Multi Series** chart types used for when you wish to plot multiple series of data at once. Plots of each series are coloured differently and a legend displaying the names of the series can be attached to the chart. Examples of these chart types are shown below.

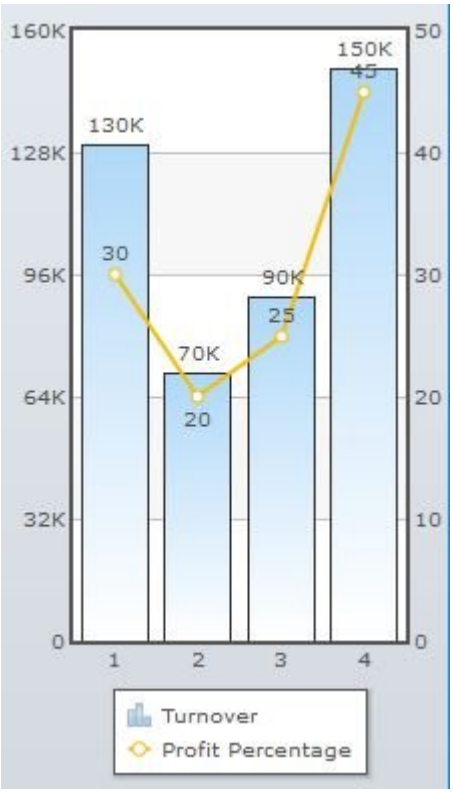
Multi Series Column 2D	
Multi Series Column 3D	
Multi Series Line 2D	
Multi Series Area 2D	
Multi Series Bar 2D	
Multi Series Bar 3D	
Multi Series Spline	

Multi Series Spline Area	
Logarithmic Line	
Logarithmic Column	
Radar	
Inverse Area	
Inverse 2D Column	
Inverse 2D Line	
Marimekko	

Zoom Line with scrolling and pinning support	
Step Line	

Combination Charts

Combination Charts are also intended for use with data sets containing multiple data series. However, unlike in **Multi Series** charts, different data series can be plotted in different manners. For example, combining Column and Line charts into a single display as shown in the example below. This can be useful when the data series being displayed are not of similar nature, e.g. integer and percentage, and also helps viewers distinguish between the series.



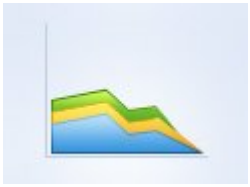
The nine types of **Combination Charts** available in the web part are shown below.

2D Single Y Combination	

3D Single Y Combination	
Column 3D + Line Single Y	
2D Dual Y Combination	
Column 3D + Line Dual Y	
Stacked Column 3D + Line Dual Y	
2D Stacked Column Line (Dual Y Axis)	
2D Stacked Column Line (Single Y Axis)	
3D Stacked Column Line (Single Y Axis)	

Stacked Charts

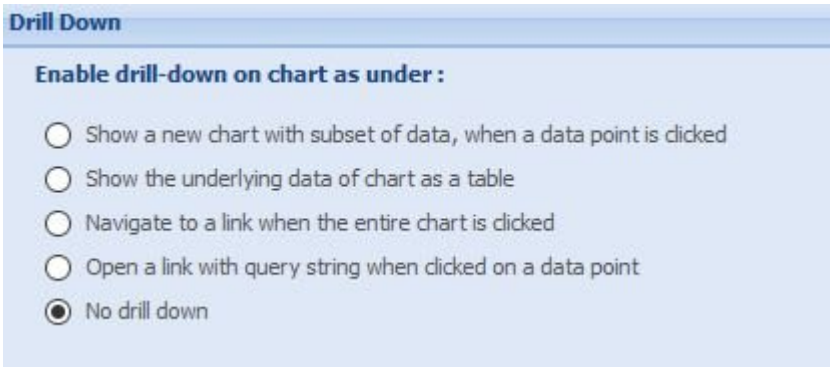
Stacked Charts are used to show the total of multiple data series within a set while still being able to identify how much of the total is coming from each series. An example of a use case for this would be displaying total profit and being able to identify how much of the total came from which revenue source. The five types of **Stacked Charts** available in the web part are shown below.

Stacked Column 2D	
Stacked Column 3D	
Stacked Area 2D	
Stacked Bar 2D	
Stacked Bar 3D	

Formatting and Refinements

Drilldown

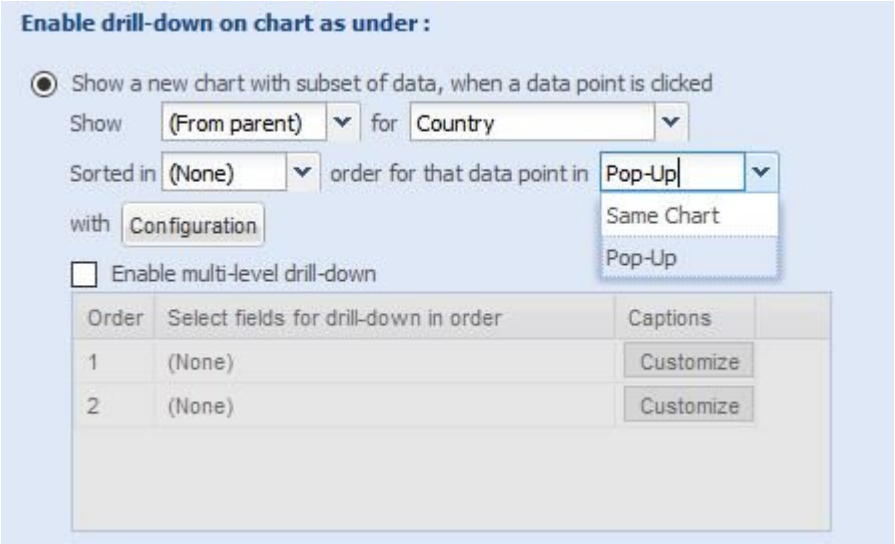
The drilldown option allows the main chart to serve as a summary of all of the data being presented and then for the users to view more detail about specific areas by clicking on dataplots. The drilldown function can be enabled in four different ways which shall be detailed below.



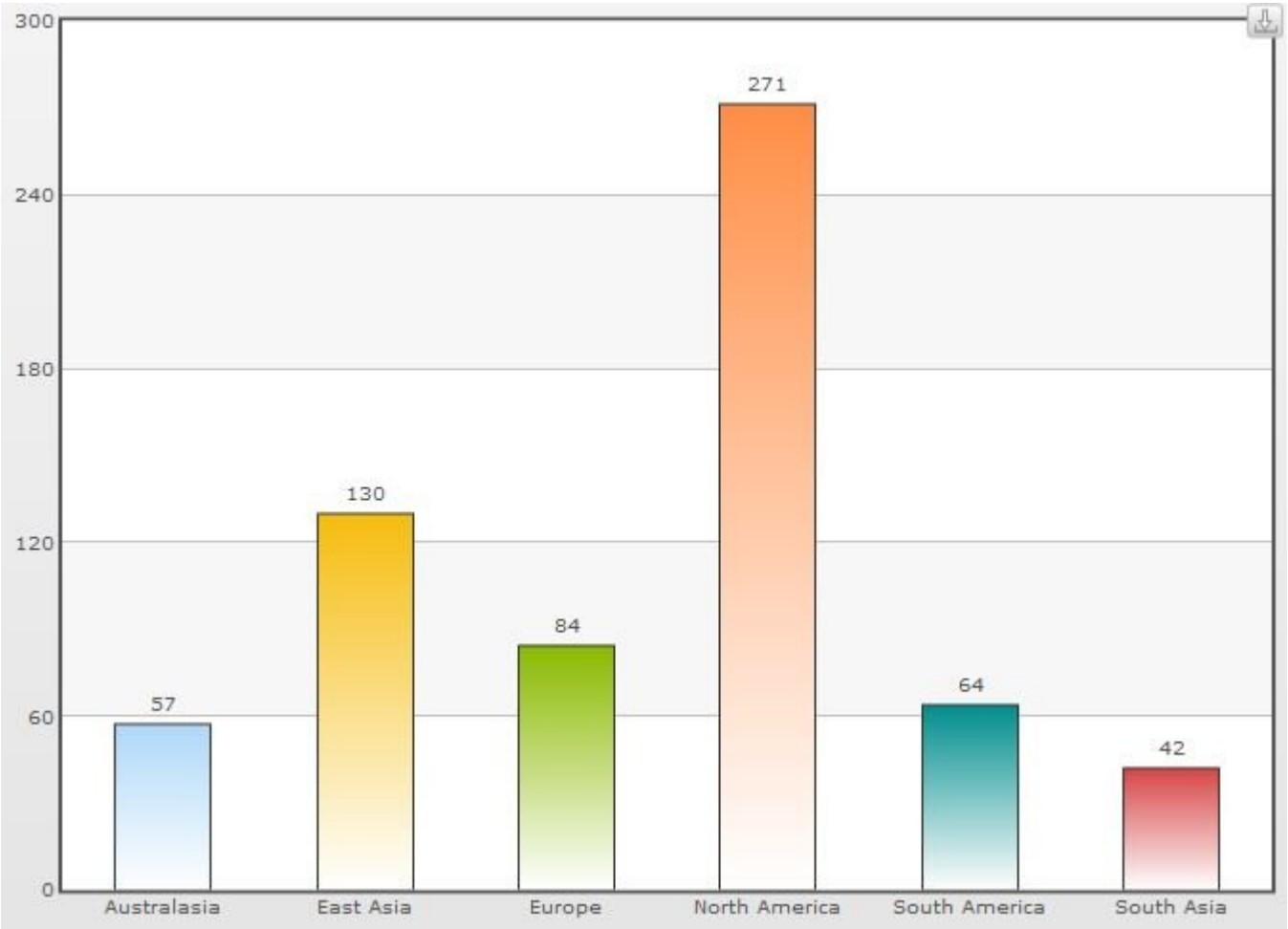
By default **No drill down** is selected.

Show a new chart with subset of data, when a data point is clicked

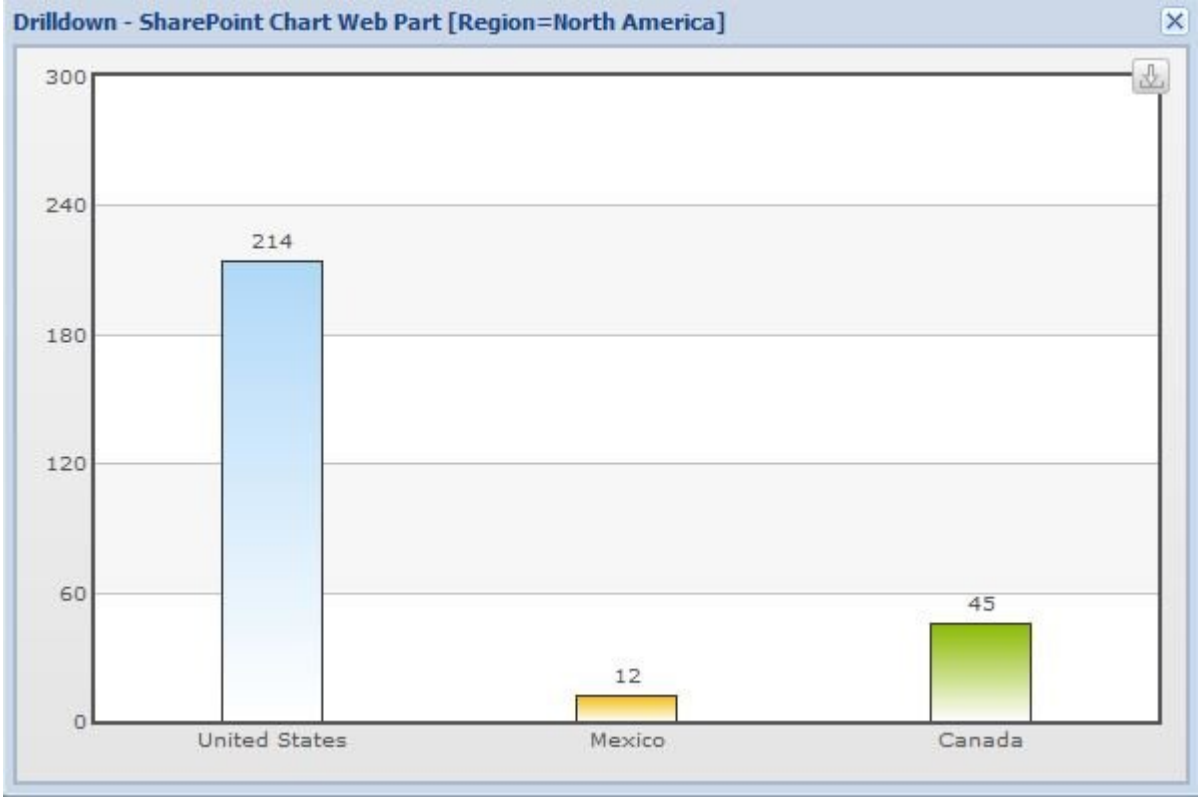
In order to use this drill down setting you must be using a chart which is using data grouping. This setting allows users to select a dataplot on in the chart to view more detail of the grouped data.



So for example we can have the initial dataset for the number of orders made, grouped by the region of the world that they were made in to produce a chart looking like the one below.



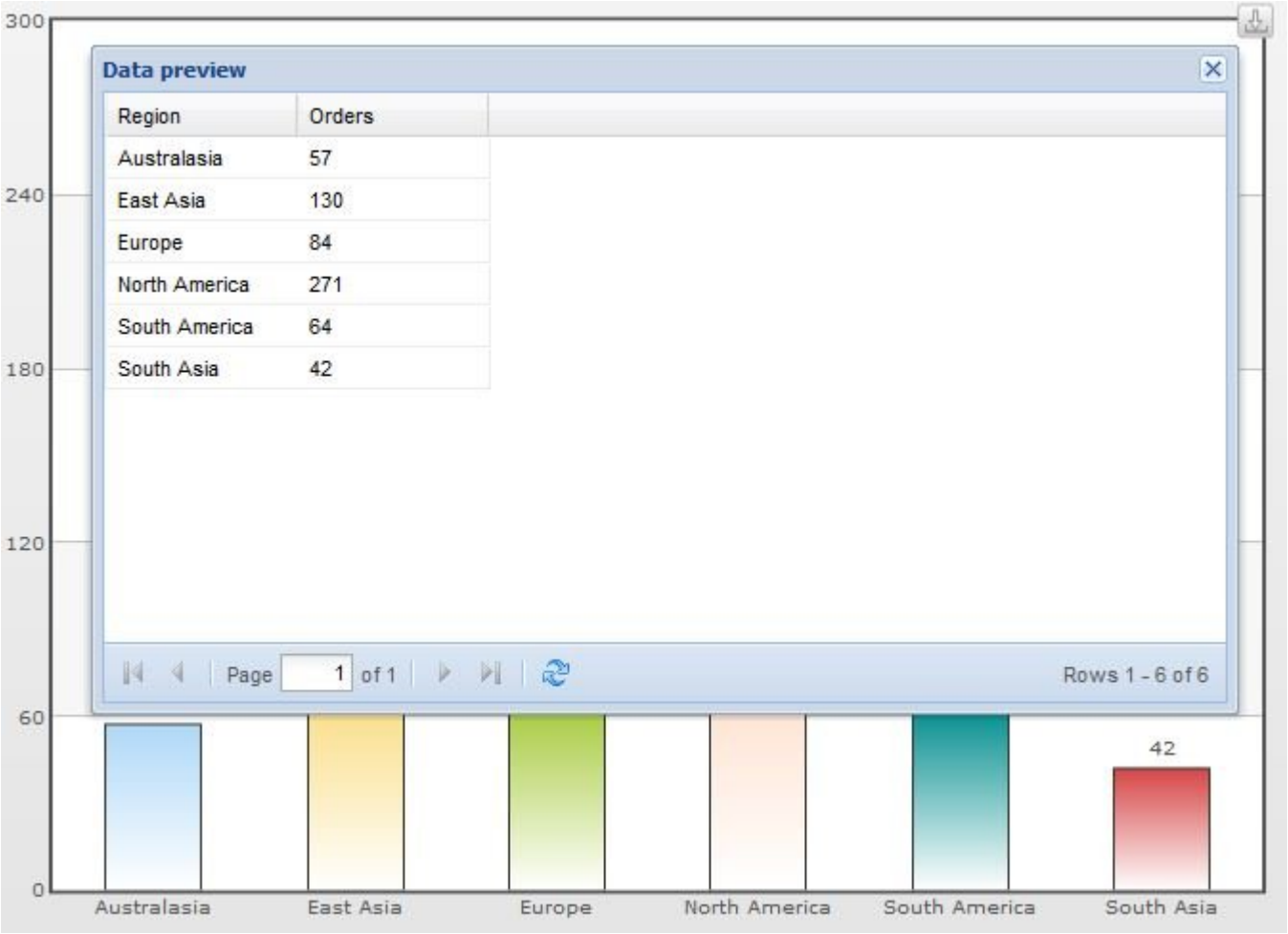
Then from there we can drill down into the regions to see the number of orders for individual countries, producing a secondary chart like that shown below.



This allows for the original chart to give a concise and quick to understand overview of the data, while still allowing the finer details to be viewed in the same place.

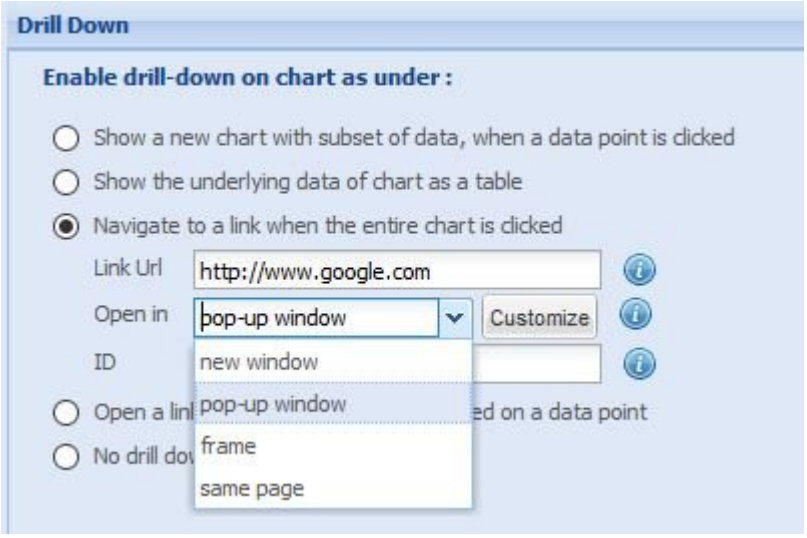
Show the underlying data of chart as a table

When this setting is selected and a user clicks on the chart, the underlying data that is used to build the chart is displayed in a table.

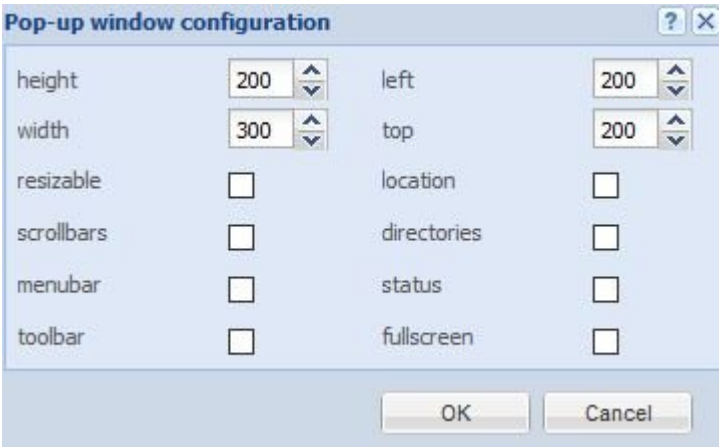


Navigate to a link when the entire chart is clicked

When this setting is selected and a user clicks on the chart they are linked to a web page. You can choose the type of page to link to and whether it shall be opened in a **new window**, **pop-up window**, **frame** or on the **same page**.



If you choose for the new link to be opened in a **pop-up window** then you can configure the settings for the pop-up.



The following settings can be configured for the **pop-up window**:

- **height** and **width** can have their value in pixels set either by typing in the values or using the up and down arrows provided.
- The **left** and **top** values are used to define how many pixels from the left and top edges of the screen the pop-up should appear.
- The **resizeable** check-box determines whether users are allowed to manually resize the pop-up.
- The **scrollbars** check-box determines whether scrollbars are shown if the web page loaded is larger than the pop-up's pixel constraints.
- The **menubar** check-box is used to decide whether a menu bar is displayed at the top of the pop-up when the 'Alt' key is pressed.

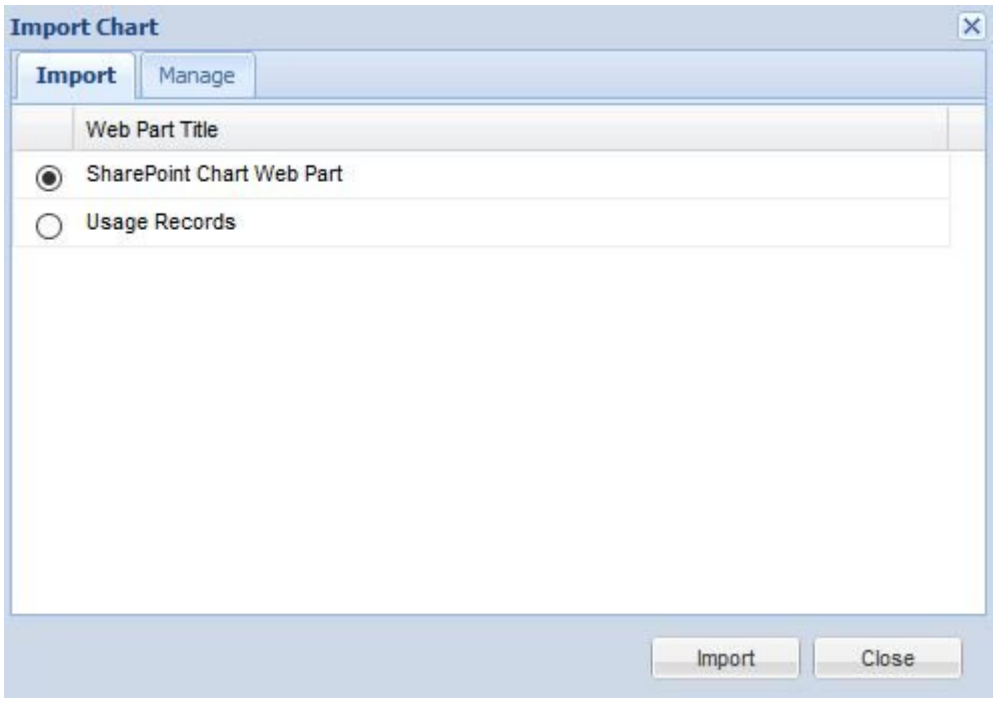
- The **toolbar** check-box determines whether the main toolbar containing the back, forward and stop buttons is included in the pop-up.
- The **location** check-box determines whether the pop-up window has an address bar.
- **directories** determines whether additional toolbars such as the links bar in Internet Explorer is displayed in the pop-up or not.
- The **status** check-box is used to determine whether a status bar is displayed at the bottom of the pop-up.
- The **fullscreen** check-box determines whether the pop-up opens in full-screen mode.

User Filters

Exporting the Chart

The dropdown menu in the top right hand corner of a Chart web part Includes the option “Export This Chart”. Upon selecting this option there will be a short delay while “Performing Actions” boxes are displayed over the chart before you receive a message confirming that the chart was successfully exported.

Once this is complete you can now import the configured and exported chart to a Chart web part on another page, saving you the time of going through the configuration process again if you want the same information displayed in multiple locations. When you want to import an exported chart select the “Import A Chart” option from the dropdown menu in the web part corner and you will be presented with a menu box containing the charts that have been exported in your environment.



From this menu you simply need to select the chart that you wish to import to the web part and the click “Import”. In addition, the Manage tab in this menu will allow you to remove previously exported charts from the list if they are no longer needed.

Consuming web part Connections