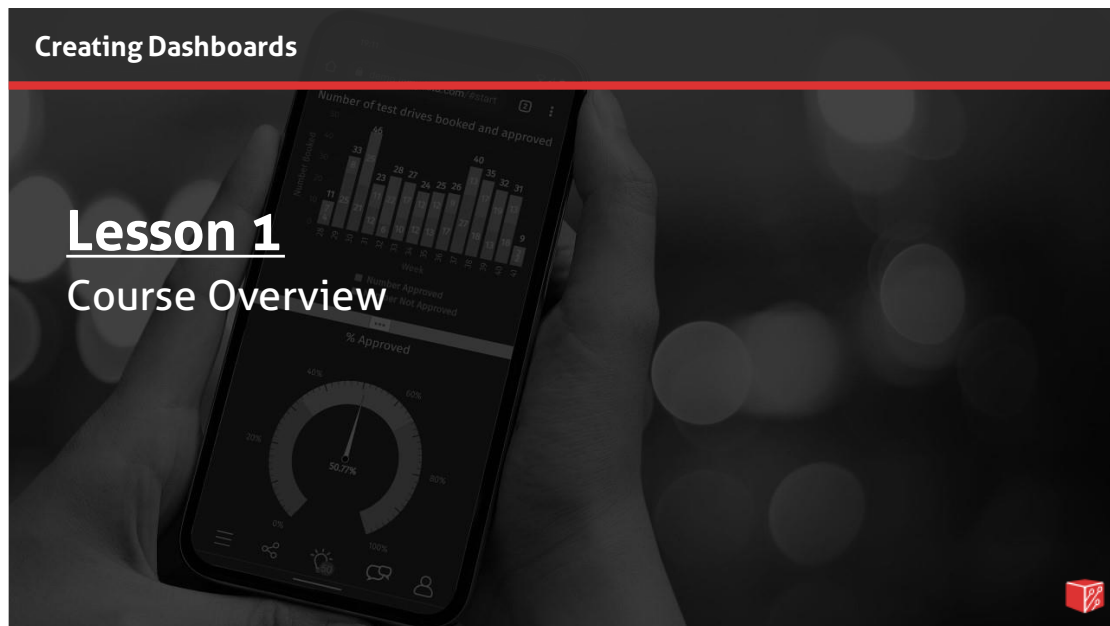


Building Dashboards



Lesson 1

Course Overview

Lesson 1 – Course Overview

Introduction

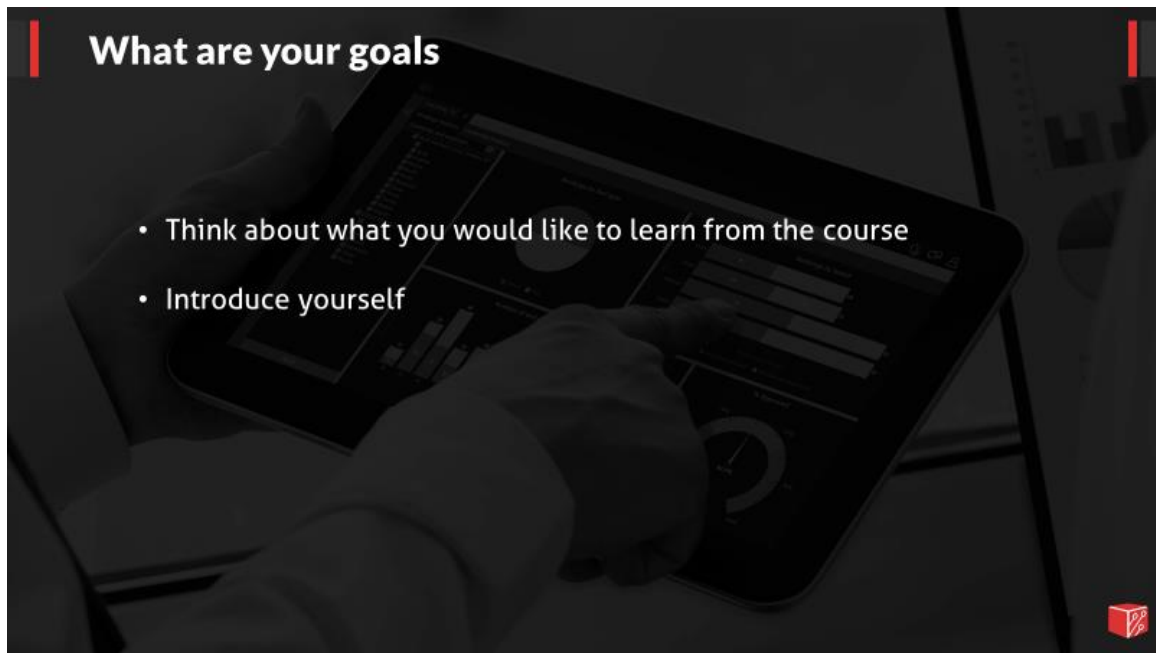
This course covers the skills required to use the inmydata dashboard designer to create and publish dashboards

Audience

The course is intended for end users who will create and publish dashboards to the inmydata platform

Prerequisites

Users should be familiar with the concepts of dashboard design and data visualisation.



Student Goals

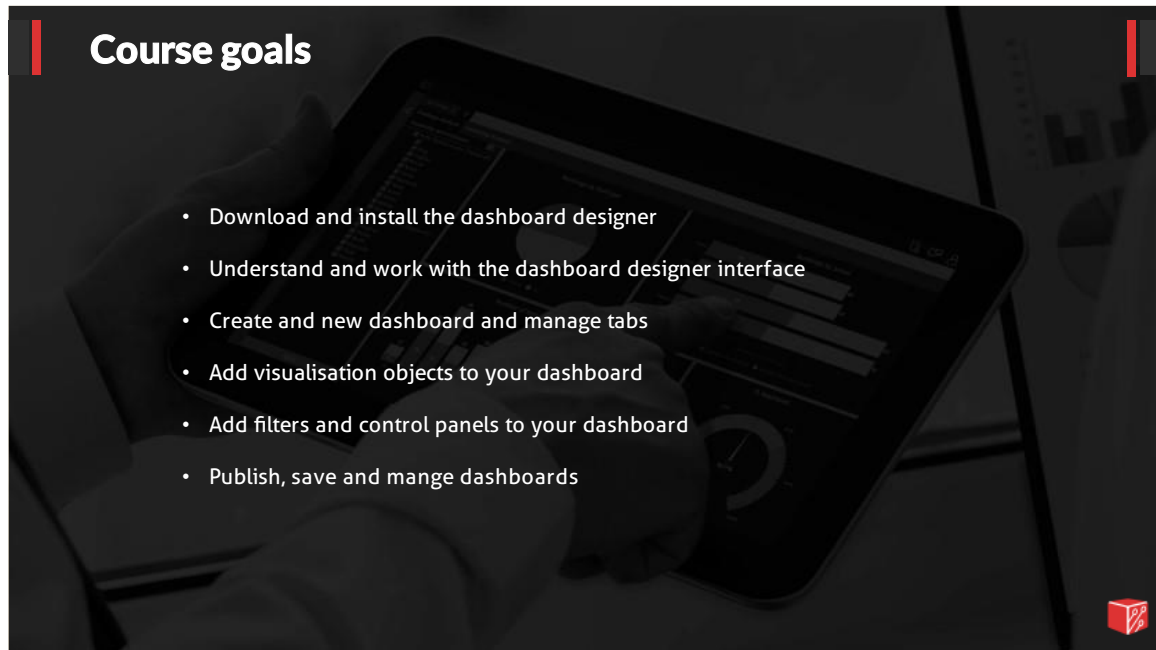
Please take a few moments to document your own goals for this course.
What will you need to know and/or produce when you return to work?

What are the three things you most want to know about building dashboards with inmydata?

-
-
-

Please introduce yourself by answering the following questions

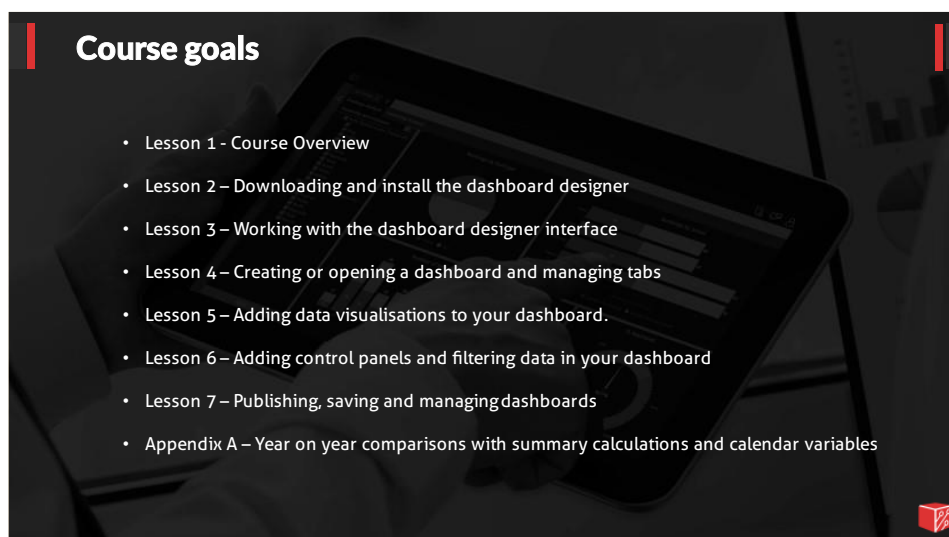
1. Your Name and Job
2. Your experience with inmydata or any other analytics tool
3. What you would like to learn from this course



Course Goals

When you complete this course you should be able to:

Download and install the dashboard designer
Understand and work with the dashboard designer interface
Create and new dashboard and manage tabs
Add visualisation objects to your dashboard
Add filters and control panels to your dashboard
Publish, save and mange dashboards



Course goals

- Lesson 1 - Course Overview
- Lesson 2 – Downloading and install the dashboard designer
- Lesson 3 – Working with the dashboard designer interface
- Lesson 4 – Creating or opening a dashboard and managing tabs
- Lesson 5 – Adding data visualisations to your dashboard.
- Lesson 6 – Adding control panels and filtering data in your dashboard
- Lesson 7 – Publishing, saving and managing dashboards
- Appendix A – Year on year comparisons with summary calculations and calendar variables

Lesson Overview

Lesson	What is covers
Lesson 1 - Course Overview	Introductory material about this course
Lesson 2 – Downloading and installing the dashboard designer	Covers how to download the dashboard designer installation package from your inmydata tenant, and how to install it on your local machine.
Lesson 3 – Working with the dashboard designer interface	A detailed look at the different elements in the dashboard designer interface.
Lesson 4 – Creating or opening a dashboard and managing tabs	A detailed look at how to open or create a dashboard and manage tabs that will contain the content in that dashboard.
Lesson 5 – Adding data visualisations to your dashboard.	A detailed look at what visualisation objects are available in inmydata dashboards, and how to add them to your dashboard.
Lesson 6 – Adding control panels and filtering data in your dashboard	A detailed look at adding control panels and filtering data in your dashboards.
Lesson 7 – Publishing, saving and managing dashboards	A detailed look at publishing a dashboard to the inmydata platform, saving locally and managing existing dashboards.
Appendix A – Year on year comparisons with summary calculations and calendar variables	A detailed look at using summary calculations and calendar variables to produce dashboards for year on year comparisons



Lesson 2 – Downloading and installing the dashboard designer

Introduction

The inmydata dashboard designer is a Microsoft Windows desktop application. You must download and install the application on your PC to create and publish dashboards. In this lesson, we'll cover what you need to download and install the application, how to install it, and steps to open the dashboard designer for the first time.

Learning Objectives

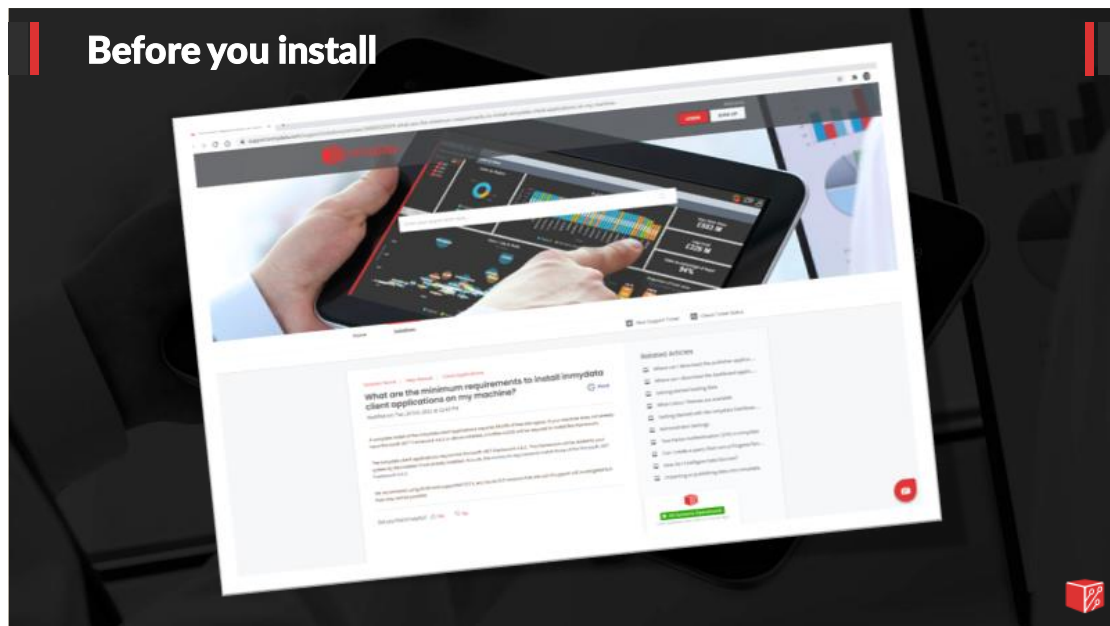
When you complete this lesson you should be able to:

- Check your PC is compatible with the dashboard designer
- Download the dashboard designer
- Install the dashboard designer
- Open and run the dashboard designer

Prerequisites

Before you begin this lesson you should be able to:

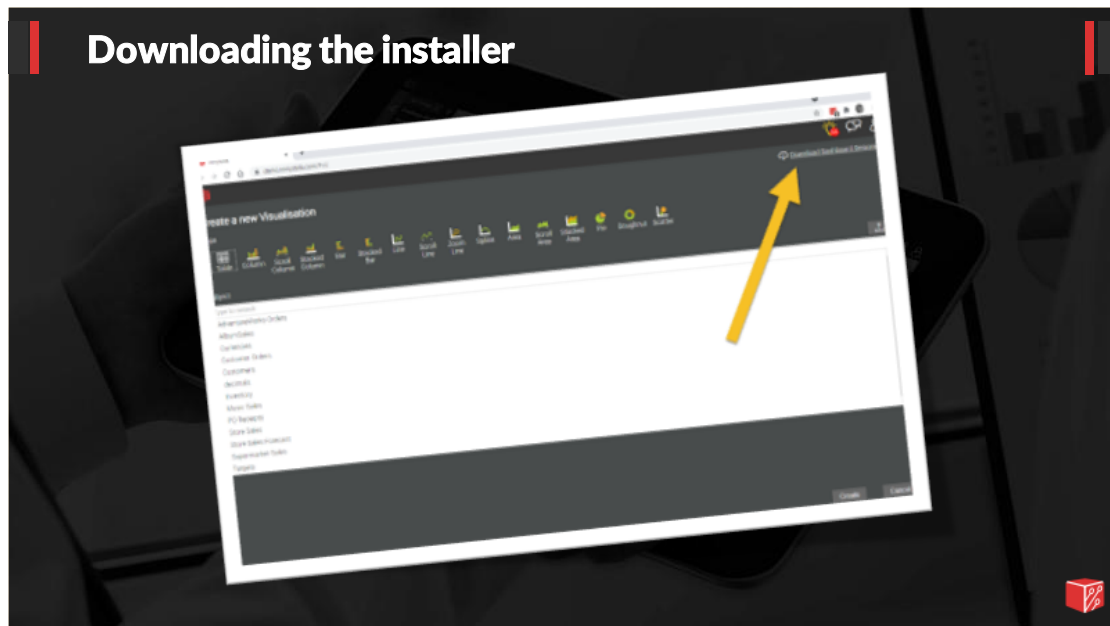
- Understand how to use a Microsoft Windows desktop PC



Before you install

The inmydata client applications must be downloaded and installed on PC. Before you do so, check that the PC you intend to use matches the [minimum requirements available here](#).

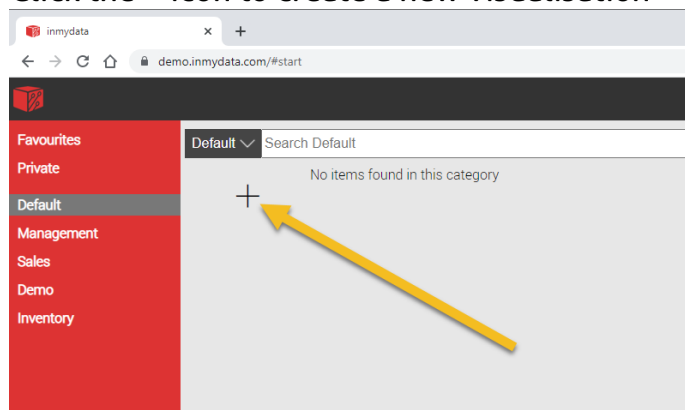
Downloading the installer



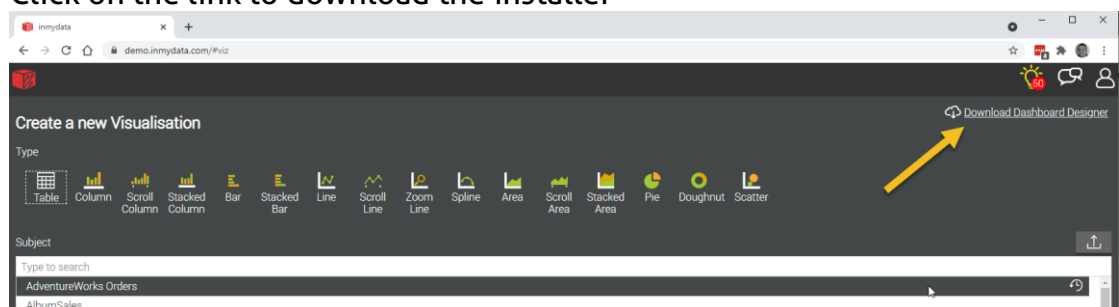
Downloading the installer

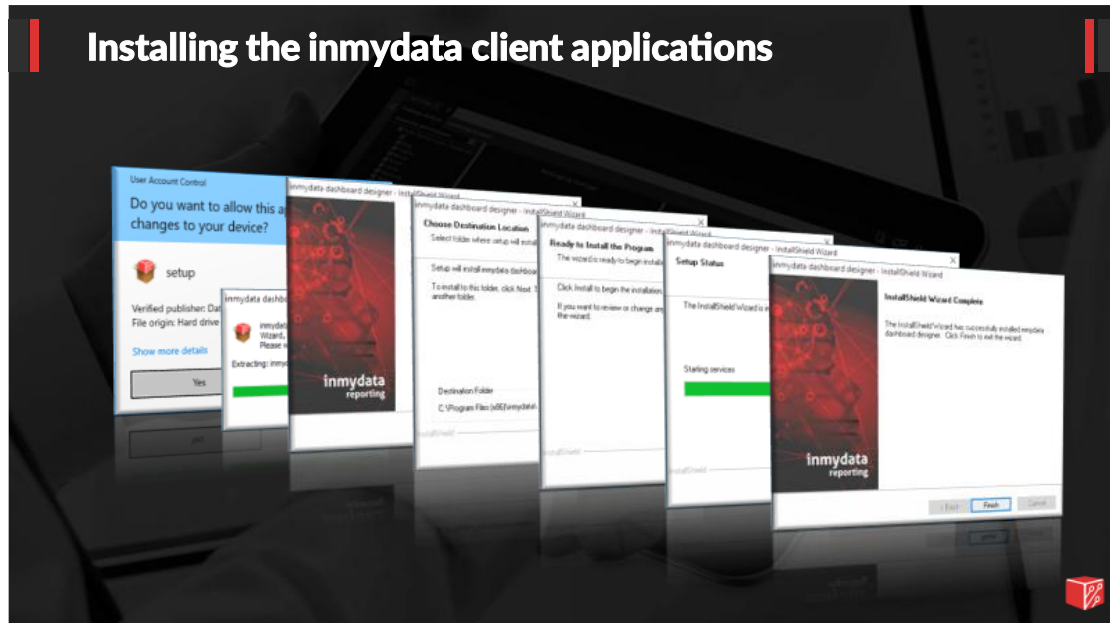
The inmydata client applications installation package can be downloaded as follows.

1. Log in to your inmydata tenant
2. Click the + icon to create a new visualisation



3. Click on the link to download the installer





Installing the inmydata client applications

To install the inmydata client applications, do the following.

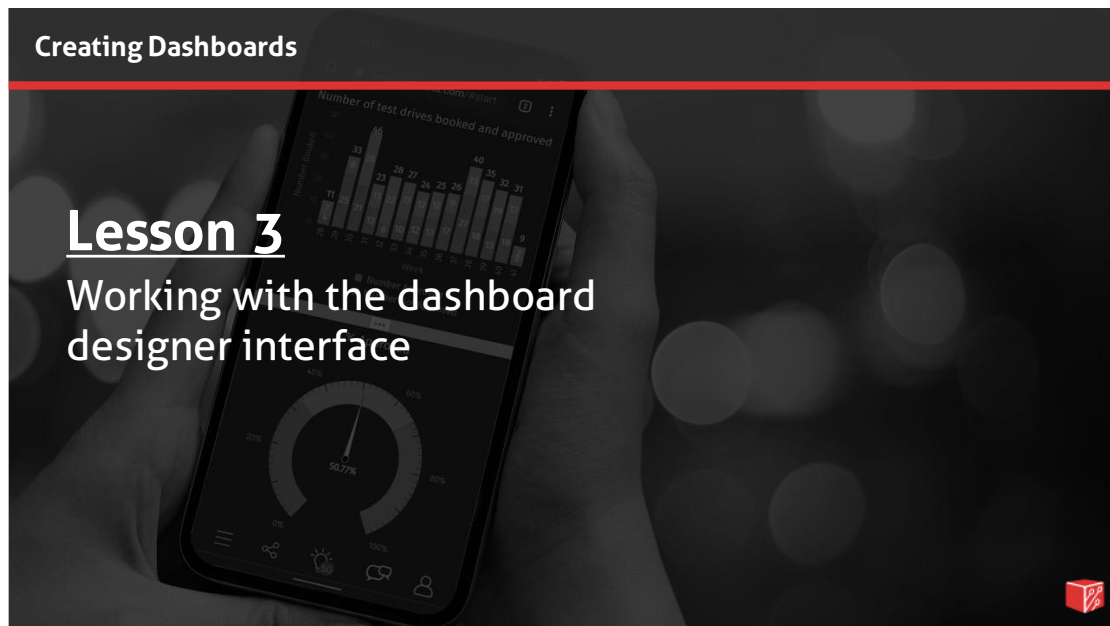
1. Double click on the installation package that was downloaded, or select *Open* from the browser you downloaded it with.
2. Answer *Yes* to the security question when prompted if you want to allow this application to make changes to your device.
3. Select *Next* on each step of the wizard, until you are offered the *Install* button.
4. Press *Install* and complete the wizard.



Starting the dashboard designer

To start the dashboard designer, follow these steps.

1. Double click on the *inmydata dashboard designer* shortcut on the desktop or the start menu.
2. If this is the first time you have used the dashboard designer on this machine, enter the name of the tenant you wish to connect to when prompted, and press OK.
3. Login when prompted.



Lesson 3 – Working with the dashboard designer interface

Introduction

In this lesson you will learn about the inmydata dashboard designer interface, and be familiarised with the various components that you will use when building dashboards.

Learning Objectives

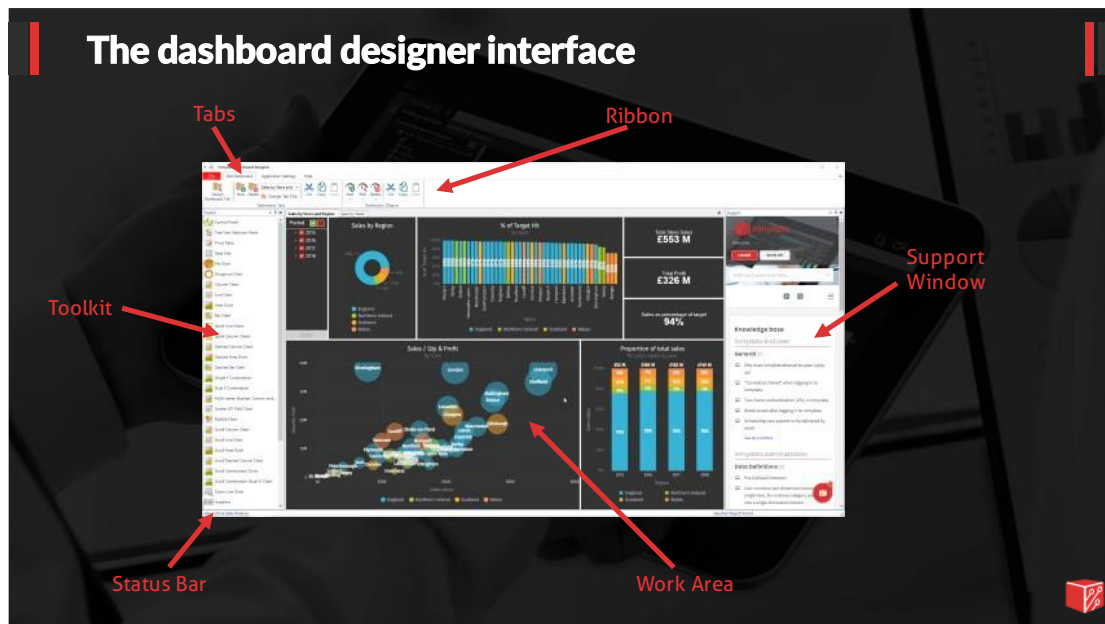
When you complete this lesson you should be able to:

- Understand and work with the different components of the inmydata dashboard designer interface

Prerequisites

Before you begin this lesson you should be able to:

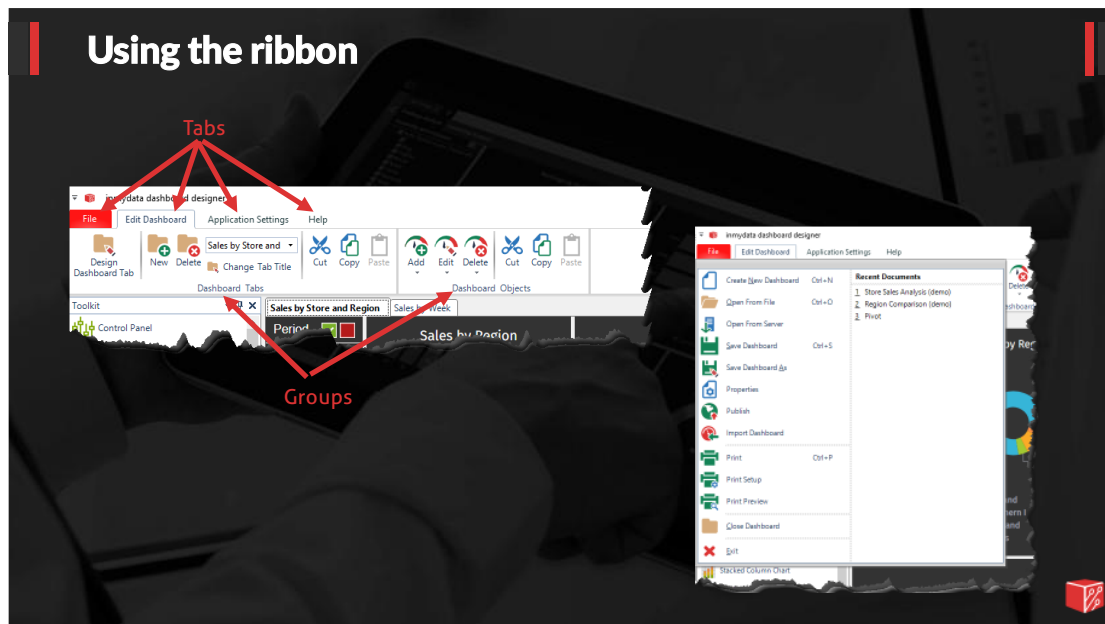
- Install the inmydata client applications.
- Open the dashboard designer.



The dashboard designer Interface

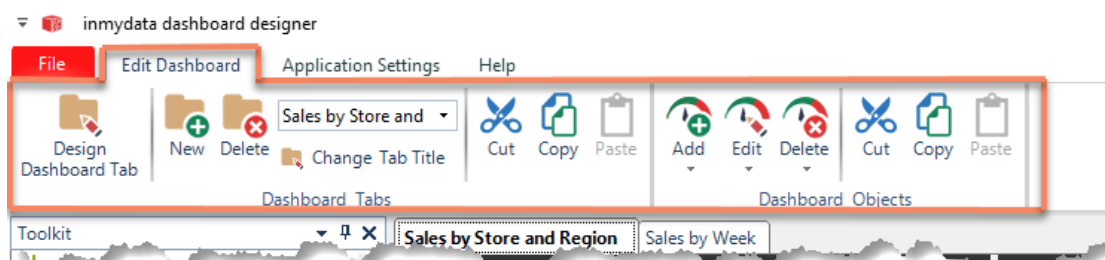
The inmydata dashboard designer interface comprises a number of key elements that allow you to view and modify dashboards. The interface includes docking functionality that allows the size and position of each of these elements to be modified depending on the type of the element. The different elements are listed below, along with their type, and the docking functionality is explained thereafter.

Element	Type	Description
Ribbon	Fixed Object	The ribbon is the primary interface to access functionality in the inmydata dashboard designer. It can be hidden, but its position cannot be changed from the top edge of the window.
Work Area	Fixed Object	The Work Area is used to render the currently open dashboard. It cannot be explicitly moved or resized, but it will take all the remaining space below the ribbon once the docking windows and status bar have been rendered.
Tabs	Fixed Object	The tabs represent the different tabs in the open dashboard. The size and position of the tabs are fixed by the work area, however you can re-order the tabs by dragging them.
Support Window	Docking Window	The support window is a docking window. This means its size and position can be modified using the docking interface described below. The window gives you easy access to the inmydata support website.
Toolkit	Docking Window	The toolkit window is a docking window. This means its size and position can be modified using the docking interface described below.
Status Bar	Fixed Object	The status bar is a fixed information panel at the bottom of the inmydata dashboard designer window. It can be shown or hidden by selecting the <i>Hide the status bar</i> button on the <i>Application Settings</i> tab of the ribbon.





Using the Ribbon

The Ribbon is designed to help you quickly find the commands that you need to complete a task. Commands are organized in logical groups, which are collected together under tabs. Each tab relates to a type of activity, such as editing a dashboard or managing application settings.




Minimizing the ribbon

1. Click *Customize Quick Access Toolbar* .
 2. In the list, click *Minimize the Ribbon*.
 3. To use the Ribbon while it is minimized, click the tab you want to use, and then click the option or command you want to use.
- For example, with the Ribbon minimized, you can select an object in your dashboard, click the *Edit Dashboard* tab, and then in the *DashboardObjects* group, click the edit button. When the *Dashboard Object Definition* dialog opens, the ribbon is once again minimized.

As an alternative, you can double click on a tab in the ribbon, check the *Minimize the Ribbon* button in the *Appearance Group* of the *Application Settings* tab or press the minimize button  on the right hand side of the ribbon to minimize it.

Restoring the ribbon

1. Click *Customize Quick Access Toolbar* .
2. In the list, click *Minimize the Ribbon*.


As an alternative, you can double click on a tab in the ribbon, uncheck the *Minimize the Ribbon* button in the *Appearance Group* of the *Application Settings* tab or press the maximize button  on the right hand side of the ribbon to restore it.

The Quick Access Toolbar

The Quick Access Toolbar is a customizable toolbar that contains a set of commands that are independent of the tab currently displayed. You can move the Quick Access Toolbar from one of the two possible locations, and you can add buttons that represent commands to the Quick Access Toolbar.

Configuring the commands on the Quick Access Toolbar

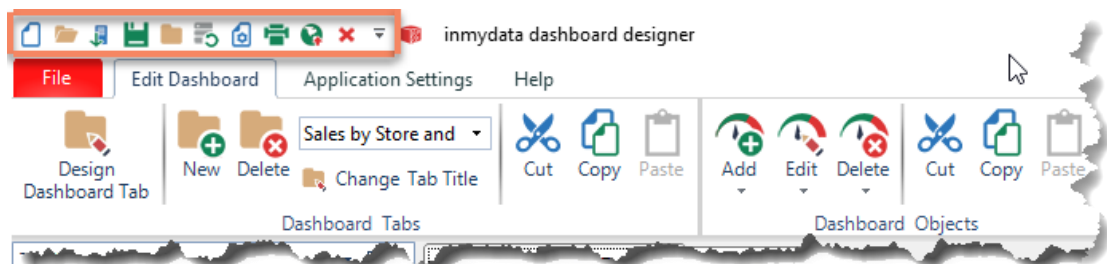
To add or remove commands from the Quick Access Toolbar, follow these steps:

1. Click *Customize Quick Access Toolbar*  at the far top right of the Window.
2. In the list, click the item that represents the command you wish to add or remove from the Quick Access Toolbar.

Moving the Quick Access Toolbar

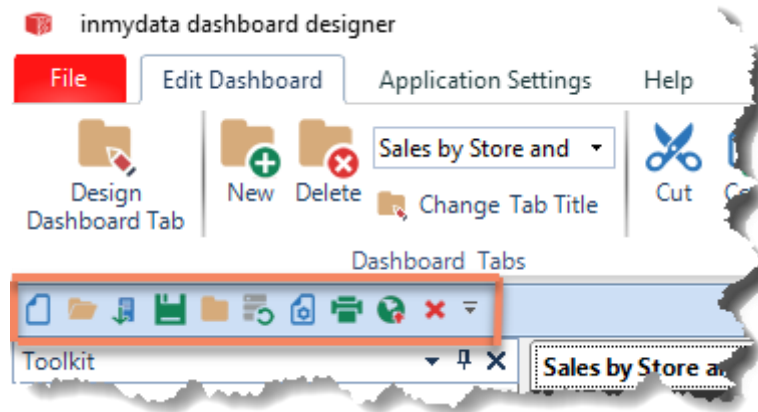
The Quick Access Toolbar can be located in one of two places:

Upper left corner, above the Ribbon (default location)




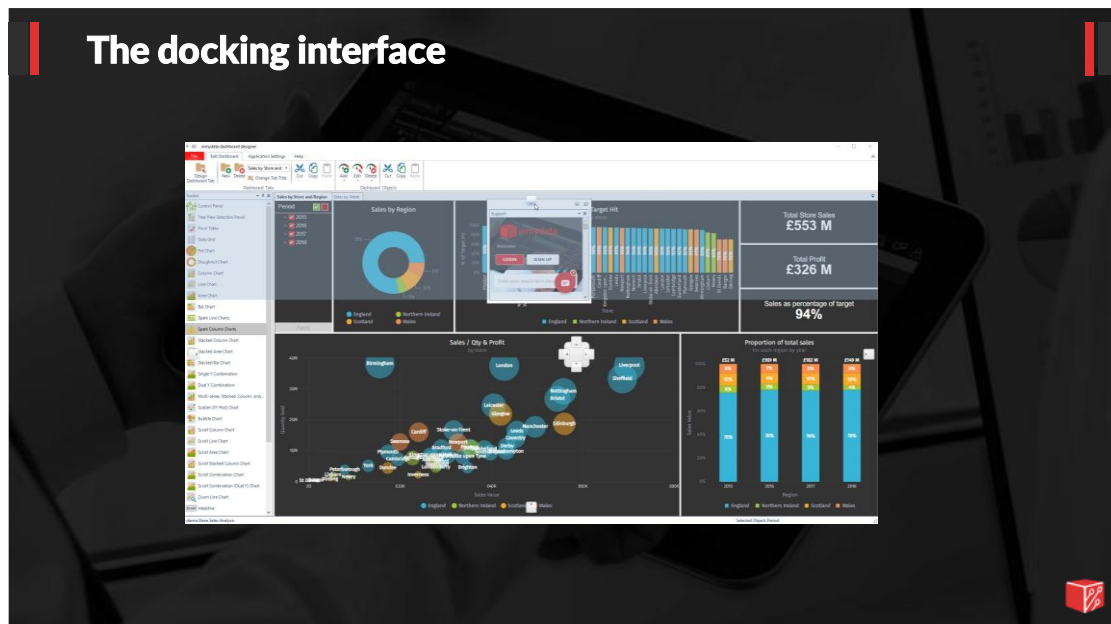
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Below the Ribbon



Follow these steps to move the Quick Access Toolbar to the other of the two places:

1. Click *Customize Quick Access Toolbar* .
2. In the list, click on *Show Below the Ribbon* or *Show Above the Ribbon*.



The Docking Interface

The inmydata dashboard designer interface contains two types of objects, fixed objects and docking windows. You can adjust the viewing and editing space for the dashboard depending on how you arrange the windows in the Interface. The following options are just some of the ways windows can be arranged:

1. Dock docking windows to the edge of a frame in the Interface
2. Float docking windows over or outside the Interface.
3. Minimize docking windows along the edge of the Interface.
4. Hide docking windows altogether.
5. Reset docking window placement to the default layout.

Docking windows can be arranged by dragging, using commands on the ribbon and by right clicking the title bar of the window to be arranged.

Floating Windows

Any docking window can be undocked from the Interface and moved anywhere on the desktop. You can undock a docking window from the Interface in two different ways:

Method 1

1. Press and hold the left mouse button over the title bar of the docked window.
2. Drag the window to a free area of the desktop.
3. Release the left mouse button

Method 2

1. Double click the left mouse button over the title bar of a docked window.

Auto Hiding Windows

Docking windows support a feature called Auto Hide. Auto Hide causes a window to slide out of the way when you use a different window. When a window is Auto Hidden, its name is displayed on a tab at the edge of the Interface. To use the window, move the mouse over the tab so that it slides into view. By default, any data viewer windows will be auto-hidden at the bottom of the Interface.

To turn Auto Hide on

1. Press the right mouse button on the title bar of the window you want to hide to open the context menu.
2. Select Auto Hide.

As an alternative, you can click the pushpin icon on the title bar of the window.

To turn Auto Hide off

1. Press the right mouse button on the title bar of the window you want to hide to open the context menu.
2. Select Dock.

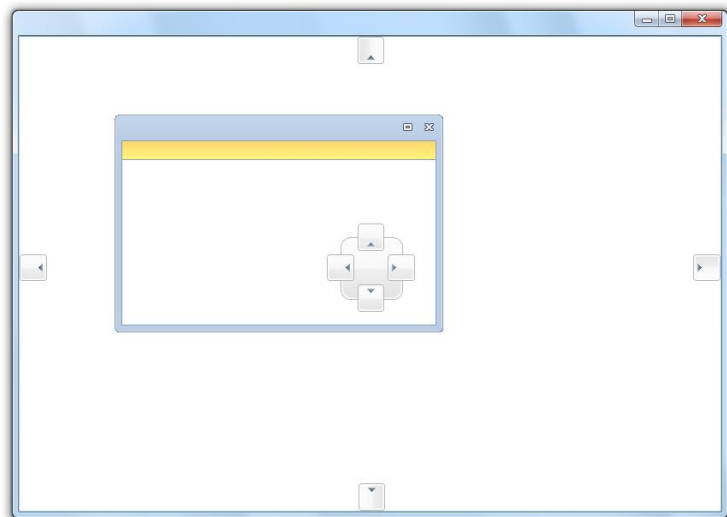
As an alternative, you can click the pushpin icon on the title bar of the window.

Docking Windows

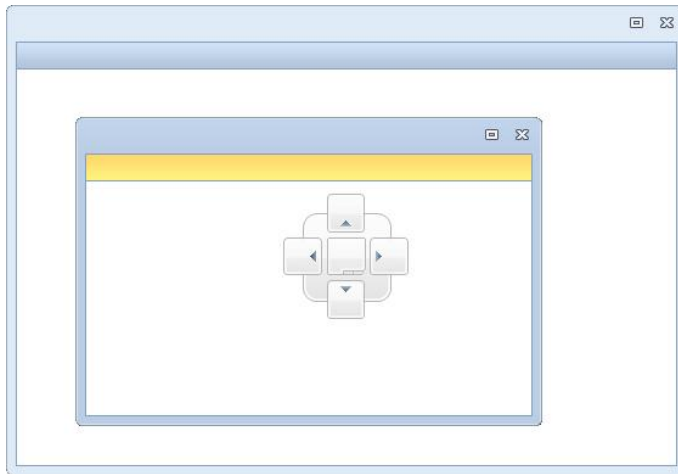
You can dock any docking window relative to the Interface, Work Area or another window. The Interface displays guide icons that appear when you start dragging a docking window.

The guide icon in the centre of the image on the right allows you to dock a window above, to the left, to the right and below the work area.

The guide icons around the edges of the image on the right allow you to dock a window on each edge of the Interface.



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When you drag a docking window over another docking window, the guide icon in the centre of the image on the right appears.

This guide icon allows you to dock the window above or below, or to the left or right of the window. It also gives the option to stack the

docking windows, giving a single tabbed docking window.

To dock windows in the Interface, follow these steps:

1. Click and hold the left mouse button over the title bar of a non Auto Hidden docking window.
2. Drag the window until an appropriate guide icon appears, then continue dragging until the mouse is over the appropriate guide icon.
3. Release the mouse button.

Hiding Docking Windows

If you are short of space on your desktop, you can hide docking windows altogether and re-establish them when required.

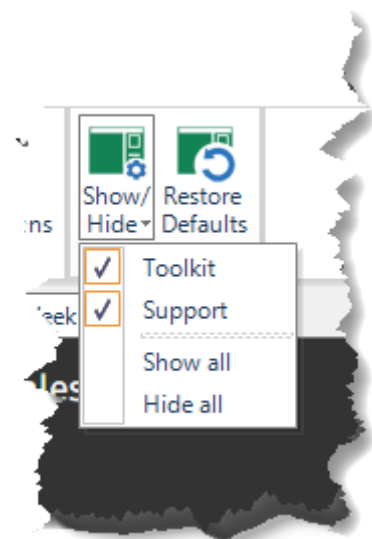
Follow these steps to hide docking windows:

1. Select the *Show/Hide* button from the *Application Settings* tab on the ribbon.
2. Uncheck the menu item that relates to the window you wish to hide, or press *Hide All* to hide all docking windows.

As an alternative, you can press the close icon in the top right corner of the docking window.

To re-establish a window that has previously been hidden, follow these steps:

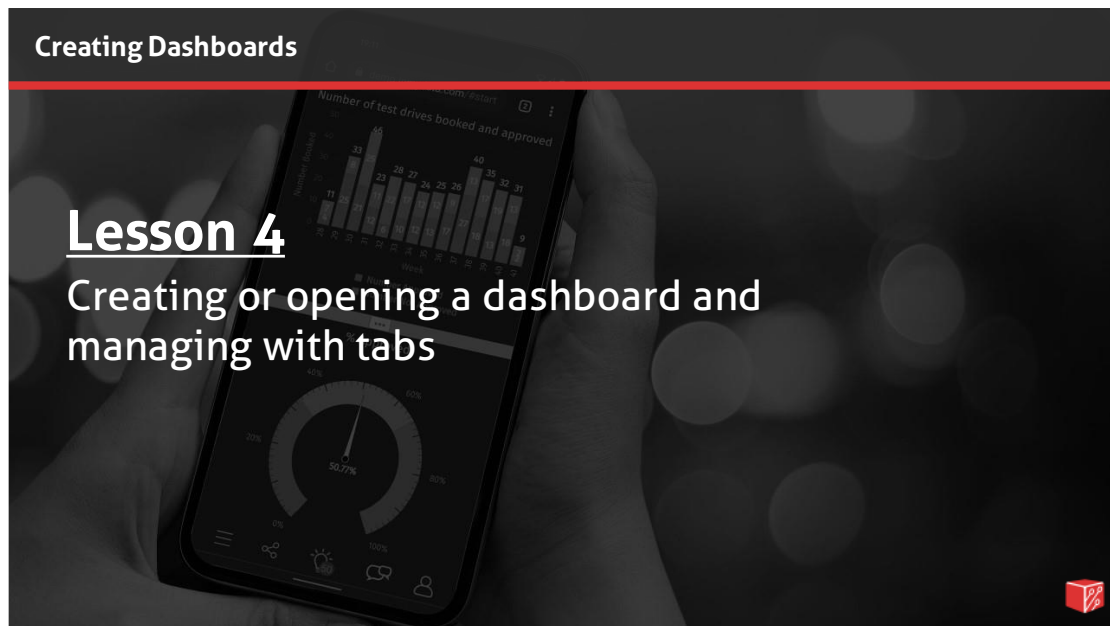
1. Select the *Show/Hide* button from the *Application Settings* tab on the ribbon.
2. Check the menu item that relates to the window you wish to hide, or press *Show All* to show all docking windows.



Resetting the default docking layout

To reset the default docking layout, follow these steps:

1. Press the *Restore Defaults* button from the *Application Settings* tab on the ribbon.



Lesson 4 – Creating or opening a dashboard and managing tabs

Introduction

In this lesson you will learn how to open an existing dashboard, or create a new one. You will also learn how to manage tabs in a dashboard.

Learning Objectives

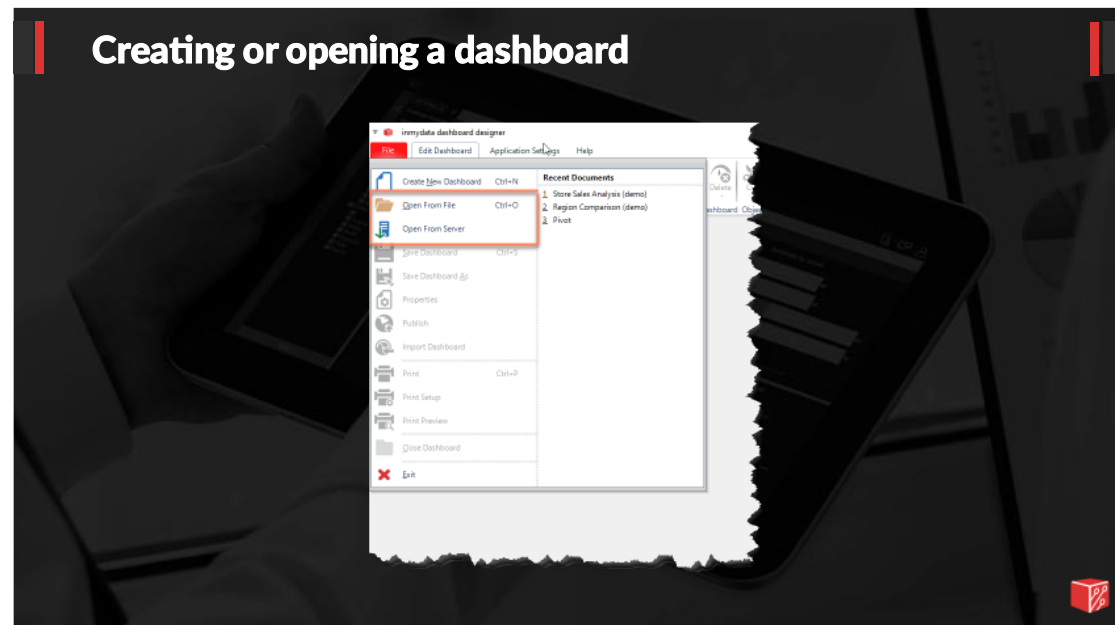
When you complete this lesson you should be able to:

- Open an existing dashboard from disk.
- Open an existing dashboard from the server.
- Create a new dashboard.
- Add tabs to a dashboard.
- Delete tabs from a dashboard.
- Rename tabs.
- Delete tabs.

Prerequisites

Before you begin this lesson you should be able to:

- Install the inmydata client applications.
- Open the dashboard designer.
- Understand the dashboard designer interface.



Opening a Dashboard

Dashboards opened from two different places.

To create a dashboard, follow these steps:

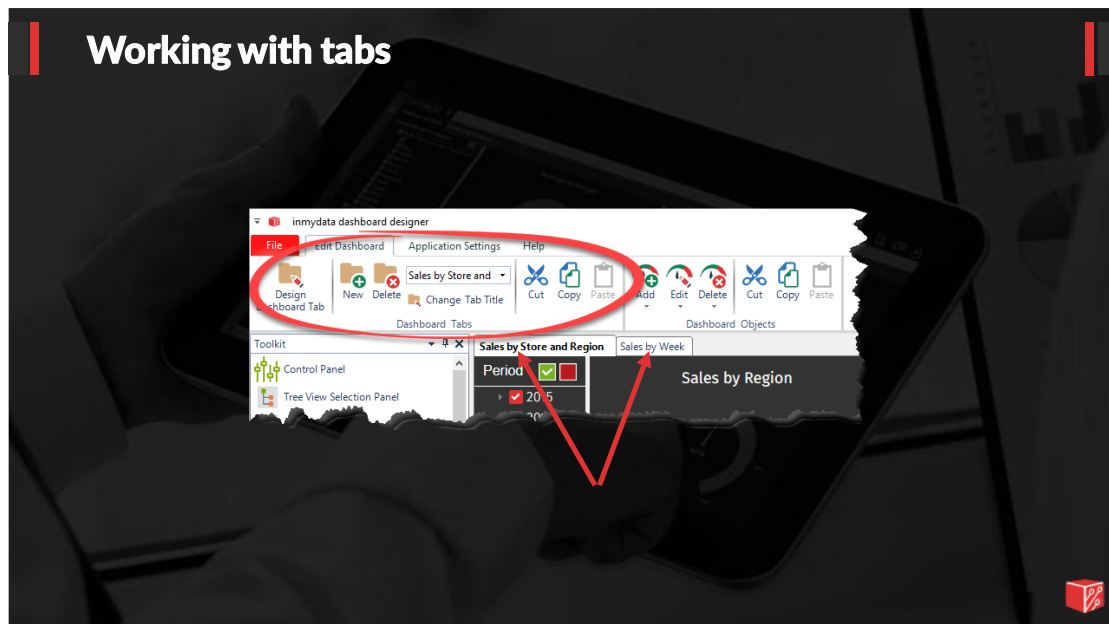
- Select *Create New Dashboard* from the *File* menu of inmydata dashboard designer.

To open a dashboard that has been saved locally to disk, follow these steps:

- Select *Open From File* from the *File* menu of inmydata dashboard designer.
- Select the dashboard file you wish to open and press ok.

To open a dashboard that has been published, follow these steps:

- Select *Open From Server* from the *File* menu of inmydata dashboard designer.
- Select the dashboard file you wish to open and press ok.



Working with Tabs

A dashboard is a visual display of the most important information that a user needs. The information is consolidated and arranged on a single screen so that it can be monitored at a glance.

However, it is not unusual to want a single dashboard to convey a number of different types of information. As such, a single dashboard can contain several screens, allowing the user navigating between these screens using tabs.

When you first create a new dashboard, inmydata creates a single tab. The Dashboard Tabs group in the Edit Dashboard tab on the Ribbon allows you to add, remove and change the name tabs in the dashboard. You can re-order tabs by dragging them.

Adding a new tab to the Dashboard

To add a new tab to your dashboard, follow these steps:

1. Press the *New* command in the *Dashboard Tabs* group in the *Edit Dashboard* tab of the Ribbon.

Deleting a tab from the dashboard

To delete a tab from the dashboard, follow these steps:

2. Select the tab.
3. Press the *Delete* command in the *Dashboard Tabs* group in the *Edit Dashboard* tab of the Ribbon.
4. Press *Yes* in the message box.

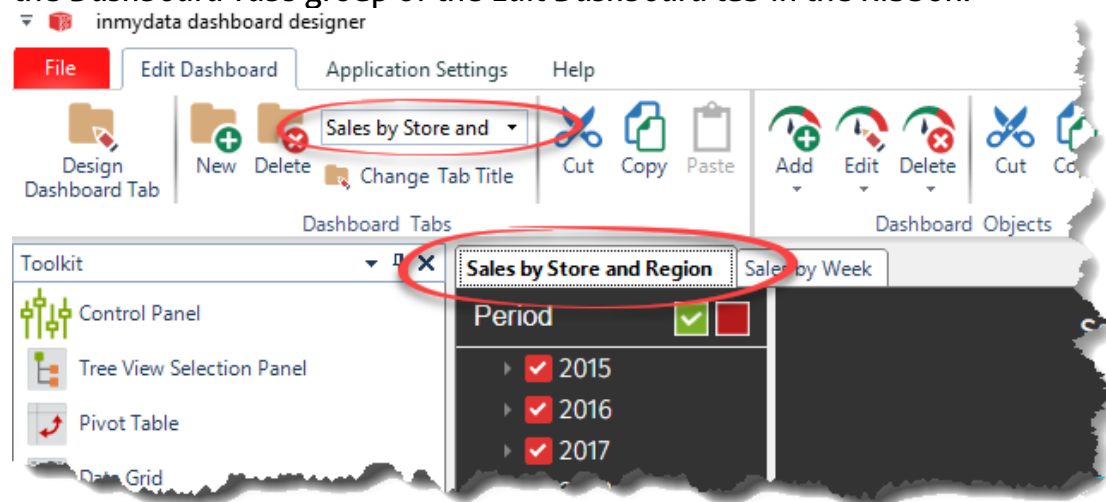
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Changing the tab title

To change the title of a tab, follow these steps:

1. Select the tab.
2. Press the *Change Tab Title* command in the *Dashboard Tabs* group in the *Edit Dashboard* tab of the Ribbon.
3. Enter the new title for the tab
4. Press *OK*.

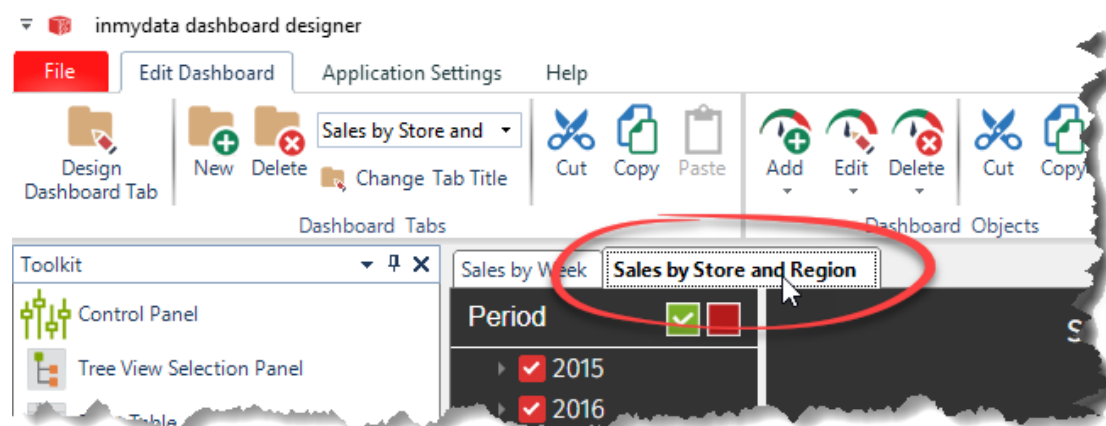
As an alternative, you can edit the tab title directly in the tab selection list in the *Dashboard Tabs* group of the *Edit Dashboard* tab in the Ribbon.

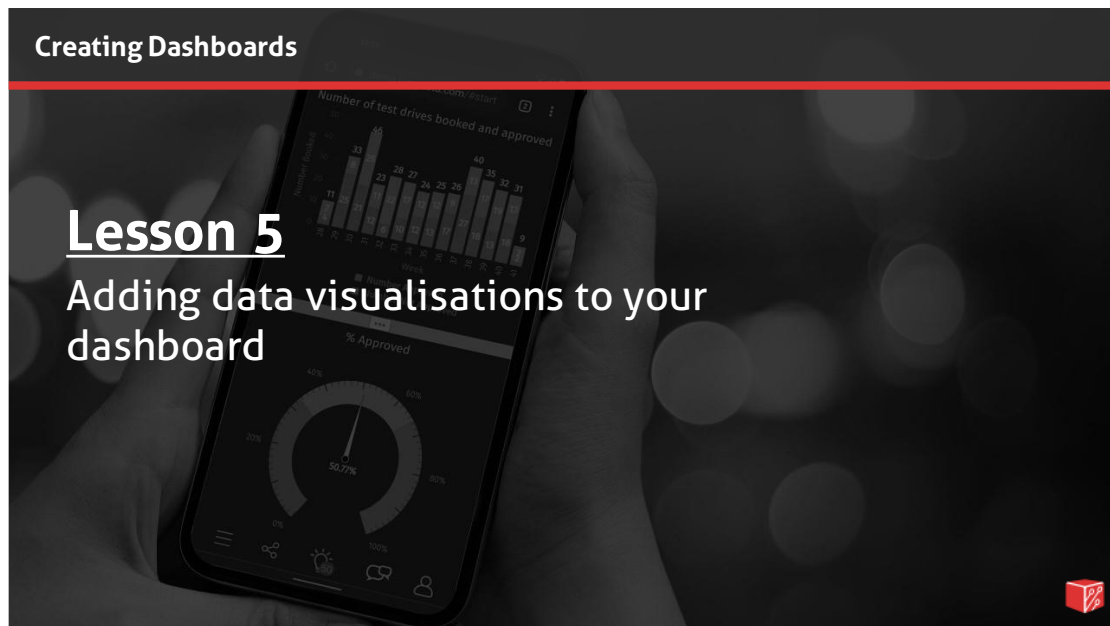


Changing the tab order

To change the tab order, follow these steps:

1. Press and hold the left mouse button over the header of the tab you wish to move.
2. Drag the tab into the position you require.
3. Release the left mouse button.





Lesson 5 – Adding data visualisations to your dashboard

Introduction

In this lesson you will learn what data visualisation objects are available in inmydata dashboards, and how to add and edit them.

Learning Objectives

When you complete this lesson you should be able to:

- Understand the different visualisation types available in a dashboard.
- Add different visualisations to a dashboard.
- Edit visualisations on a dashboard.

Prerequisites

Before you begin this lesson you should be able to:

- Install the inmydata client applications.
- Open the dashboard designer.
- Understand the dashboard designer interface.
- Create and open dashboards.



Managing dashboard objects

Dashboard objects are the objects that provide the visual display and control elements of the dashboard. The objects can be grouped into five broad categories, each of which is described in the following sections.

Data and Control Objects

The Data and Control objects contain data listing and control objects which allow you to filter the data on the dashboard.

The **control panel** is a container object for labels, query parameters, filter parameters, images and refresh buttons. The control panel will be described in detail later in this lesson.

The **tree view selection panel** allows the user to apply complex filtering to a dashboard using a simple tree view interface. The tree view selection panel will be described in detail later in this lesson.

The **pivot table** is a tabular representation of data that can automatically sort, count, total or give the average of data quickly creating unweighted cross tabulations. The pivot table will be described in detail later in this lesson.

The **data grid** allows you to display a simple listing of data in a dashboard. It also gives the user the ability to group, summarise and sort the data. The data grid will be described in more detail later in this lesson.

Single Series Charts

Single series charts are charts that display data visually by mapping a single set of textual values (series) against a single numeric value.

This is in the form of a circular area chart (pie and doughnut charts).

Use this type of chart when you are interested in the value of a single variable across a single group. Two examples might be plotting the value of sales by sales representative, or the value of sales each month this year.

Multi Series Charts

Multi series charts are charts that display data visually by mapping one or more sets of textual values (series) against one or more numeric values. This is in the form of a two dimensional chart where the numeric values are plotted on a y axis against the textual values on the x axis.

Use this type of chart when you are interested in the value of one or more variables across one or more groups. One example might be plotting the values of sales and the value discounted by sales representative. Another might be plotting the value of orders shipped, and the value of orders delivered in each month this year.

Stacked Charts

Stacked charts are a variation on multi-series charts that display data visually by mapping one or more sets of textual values (series) against one or more numeric values. This is in the form of a two dimensional chart where the numeric values are plotted on a y axis against the stacked textual values on the x axis, giving not only an indication of the individual values for each series, but also an indication of the summed values across all series.

Use this type of chart when you are interested in the value of one or more variables across one or more groups, but also wish to see the summed total of the different values. One example might be plotting the total order value for each month, but seeing the total order value broken down by the order status.

Combination Charts

Combination charts are a variation of multi-series charts and stacked charts that allow different types of values to be displayed on a single chart. The different types of values can be differentiated by giving them a different visual appearance, for instance displaying them as a column, line or area. In addition, different values that have a significantly different scale can be plotted on a second Y axis, allowing them to be scaled independently to fit neatly on to the chart.

A good example of a combination chart might be to plot the value of orders and quantity ordered each month.

Scroll Charts

Scroll charts are a variation on single series, multi-series, stacked and combination charts that cater for a large number of series values by scrolling or allowing zooming.

Spark Charts

Spark charts allow you to plot a single value against one dimension, for a range of group values. The charts are designed to give a quick and visual indication of how a value is trending for each group value. For instance, you may use a spark chart to give a quick visual representation of how sales are trending in several stores.

Gauges

Gauges are objects that show a single value. Gauges are useful when you have a single value that you want to be measured quickly against a particular range. Some gauges will allow you to show the value against a number of coloured ranges (such as a traffic light or dial), and others will allow you to show the value only against a total range (such as a cylinder or thermometer).

A good example of when a gauge may be useful is to show the total ordered value against the target, for a specific month or year.


Adding dashboard objects to your Dashboard

You can add dashboard objects to your dashboard in one of two ways, by dragging the required object from the Toolkit docking window or by selecting the required object from the *Add* button of the *Dashboard Objects* group of the *Edit Dashboard* tab on the ribbon. Both these methods are described in more details below.

Adding dashboard objects from the toolkit

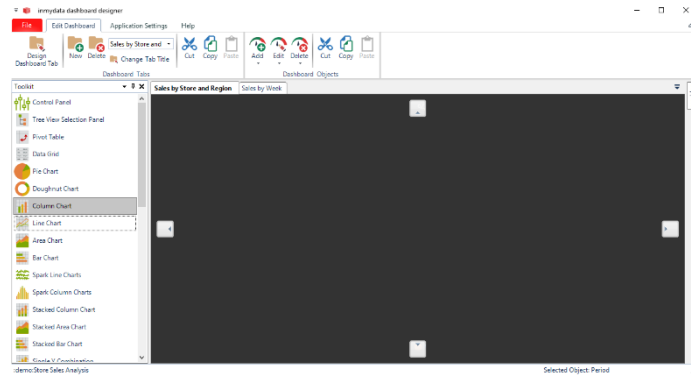
Using the toolkit to drag a new object on to the dashboard has the advantage of allowing you to decide where the new object is placed in the tab, relative to the other objects already present. To add an object by dragging it from the toolkit, follow these steps:

1. Press and hold the left mouse button over the appropriate object in the Toolkit docking window.
2. Move the mouse until it is over the guide icon that represents the location you want to place the new object (the guide icons are explained in more detail below).
3. Release the left mouse button.
4. Define the details of the dashboard object in the *Dashboard Object Definition* dialog box (explained in more details below).

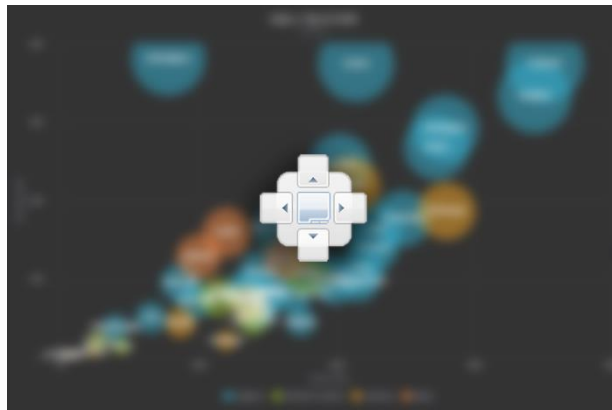
When you are dragging a new dashboard object on to the chart, the mouse cursor will change to the chart dragging cursor (). As you drag the mouse over the tab, two types of guide icon will appear.

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Guide icons around the edge of the tab allow you to place the new dashboard object against the left, top, right or bottom edge of the tab.



When you drag the mouse over an existing object in the dashboard, guide icons appear that allow you to drop the new object to the left, top, right, bottom of the existing object, or stacked on top of the existing object. If objects are stacked, tabs will appear to allow the user to display each object.



Adding dashboard objects from the ribbon

Using the *Add* button of the *Dashboard Objects* group of the *Edit Dashboard* tab on the ribbon to add objects to the dashboard has the advantage of allowing you to select the object type from an ordered list of objects. To use the ribbon to add a dashboard object to the dashboard, follow these steps:

1. Press the *Add* button in the *Dashboard Objects* group in the *Edit Dashboard* tab in the ribbon.
2. Select the type of object you wish to add to your dashboard from the list.
3. Define the details of the dashboard object in the *Dashboard Object Definition* dialog box (explained in more details below).

Defining the details of objects in the dashboard

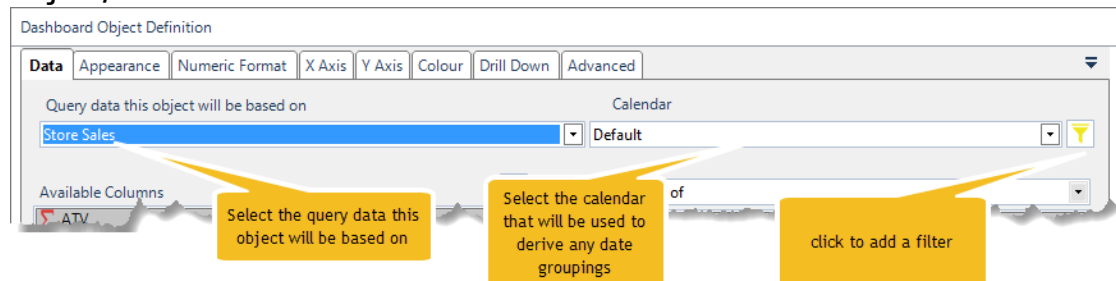
The Dashboard Object Definition window allows you to specify the appearance and behaviour of dashboard objects that have been added to your dashboard tabs. The window is opened when you add a new dashboard object to your dashboard, or select the *Edit* button in the *Dashboard Objects* group in the *Edit Dashboard* tab in the ribbon. The table below gives an overview of the different tabs in the window, which will be described in more detail below:

Tab	Description
Data	Allows you to define the data that will populate the dashboard object.
Appearance	Allows you to specify settings that will govern the appearance of the dashboard object.
Numeric Format	Allows you to specify the numeric format used to display numbers in the dashboard object.
X Axis	Allows you to specify settings that govern the appearance of the X axis on the dashboard object.
Y Axis	Allows you to specify settings that govern the appearance of the Y axis on the dashboard object.
Drill Down	Allows you to add and define a drill down to the dashboard object
Advanced	Allows you to add advanced XML definitions to your dashboard object.

Defining data for a dashboard object

Follow the steps below to specify the data;

1. First select the Query data set that you wish to base your dashboard object;



2. Select the calendar you wish to be used to derive any date groupings (such as year, period, week etc).
3. If you wish to, press the filter button to apply a filter to your data set (applying filters will be described in more detail below).
4. Next, decide how you want to group your data, and select the appropriate option;

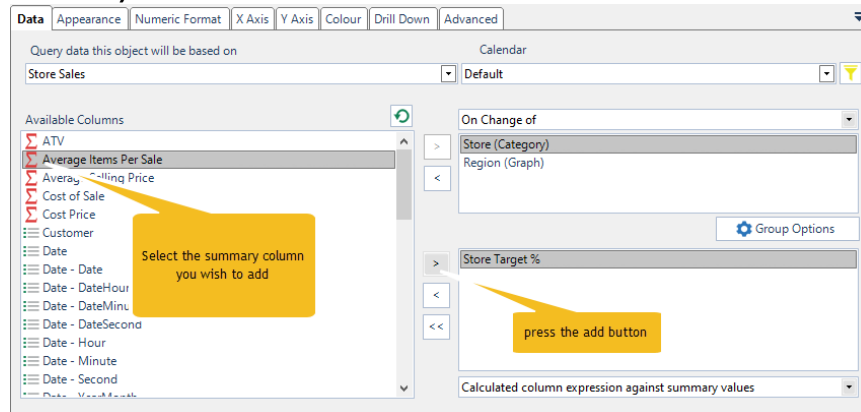


The three options are

- a. **On Change of:**
Create a record for each distinct combination of the group values selected.
 - b. **For All Records:**
Creates a single record regardless of the group values selected.
5. Add the group columns (☰) you require (some object types, such as single series charts, will only allow a single group column).
 6. Next, select which summary columns (Σ) you require (some object types, such as single series charts, will only allow a single summary

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column).

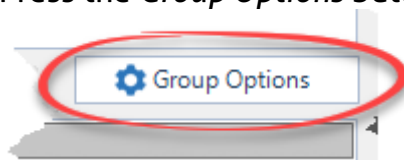


7. For each summary column, select the summary operation you wish to be applied. Distinct count is the number of distinct values in the column for the group selected. Some summary columns will be calculations, rather than values that exist in the dataset. For these columns, the only summary operation

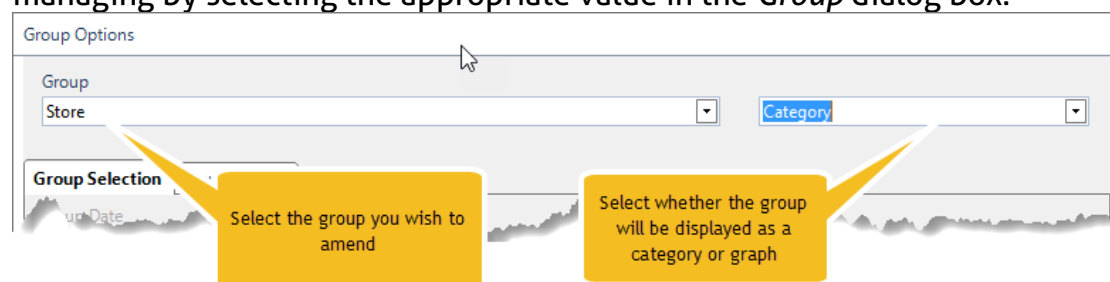
Managing group options

The group options dialog allows you to manage how groups are collated and sorted. To open the Group Options dialog box, follow these steps:

1. Select the group you want to manage in the *Data* tab of the object definition dialog.
2. Press the *Group Options* button.



Once the *Group Options* dialog is open, you can change the group you are managing by selecting the appropriate value in the *Group* dialog box.



Managing how groups displayed

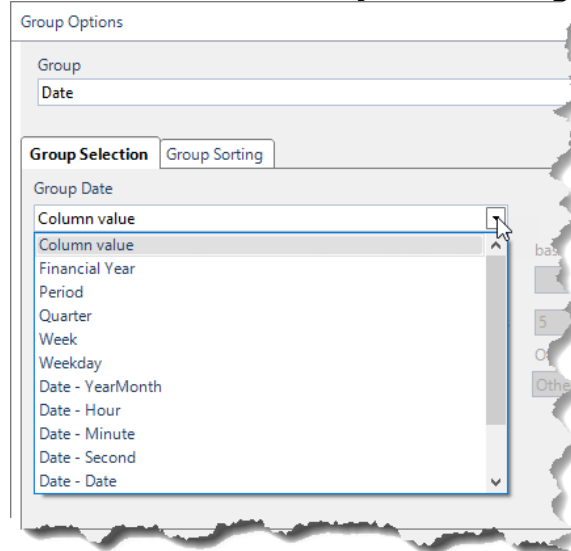
For multi-series charts, such as line charts or column charts, you can select whether a group is a category or a graph. A category is used to build the groups that are plotted along the main axis (usually the x axis). A graph is display as a separate element in the chart, for instance a separate line or column.

Managing how groups are collated

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The Group Selection tab in the Group Options window allows you control how group values are collated. This can change the number and value of the groups created. If your group value is a date, or date-time value, you can choose which time interval is used to create your group. Follow these steps to define data and date-time groups:

Select the time interval you want the group to be created from.



Often, there may be too many group values to fit comfortably on the chart, and you may only be interested in the groups that have either the largest or smallest values. To resolve this, you can limit the number of group value using one of the group limiting options. The table below describes each of these group limiting options:

Group limiting option	Description
All	Shows all groups
Top N	Shows a specified number of groups with the highest summary value.
Bottom N	Shows a specified number of groups with the lowest summary value.
Top Percentage	Shows groups where a specified summary value is in the top percentage specified.
Bottom Percentage	Shows groups where a specified summary value is in the bottom percentage specified.

To apply one of the group filtering options, follow these steps:

1. Select one of the group limiting option (top n, bottom n, top percentage, bottom percentage)
2. Select the summary column that will be used as the value to determine the top or bottom values.
3. Enter a value for the number of groups (N) or percentage.

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4. If you want to include all other groups summarised into a single group on the chart, select Include Others and enter a label for the extra group.
5. If you want to include ties, select the include ties option. For instance, if you select top N, where N is 5, and the values of group 5 and 6 are identical, the chart will include 6 groups.

The screenshot shows the 'Create group for' dialog box with the following fields and annotations:

- Create group for:** A dropdown menu with 'Top N' selected. Annotation: 'select which values you want to group'.
- based on:** A dropdown menu with 'Profit' selected. Annotation: 'Select which summary value the group selection is based on'.
- Where N is:** A text input field with '5' entered. Annotation: 'select how many values to return'.
- Include others:** A checked checkbox. Annotation: 'select whether to include others'.
- Include ties:** A checked checkbox. Annotation: 'select whether to include ties'.
- Others label:** A text input field with 'Others' entered. Annotation: 'Set the label that will be used to represent others in the chart'.

Managing the sort order of Groups

The *Group Sorting* tab in the *Group Options* window allows you to define the order in which the groups are shown in the dashboard object. You can sort each group based on the group value, or one of the summary values. Follow these steps to define the sort order:

1. First, select which column the group sorting is going to be based on. This may be the same column that the group itself is based on, or a summary column.
2. Select how you want the sort column value to be applied to sort the group. The options are described in the table below:

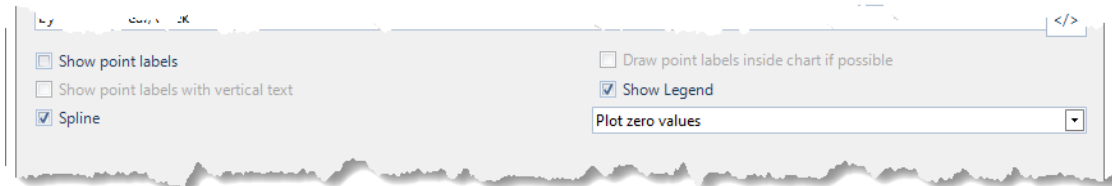
Option	Description
Ascending	Groups will be sorted in ascending order using the value of the column selected.
Descending	Groups will be sorted in descending order using the value of the column selected.
Original Order	Groups will be sorted in the original order the data is returned by the query.

Once you have defined a specified order, you can change the order by dragging the columns up or down in the list.

Defining the appearance of your dashboard object

The Dashboard Object Definition window Appearance tab allows you to specify settings that will govern the appearance of the dashboard object. To define the appearance of objects on your dashboard, follow these steps:

1. Select the type of chart or legend you wish to display.
2. Enter a title and second title (the second title will appear on a second line).
3. Select if you want point labels on the chart, whether those labels should (if possible) be drawn inside the chart, whether they should be shown with vertical text, whether to show a legend on the chart.

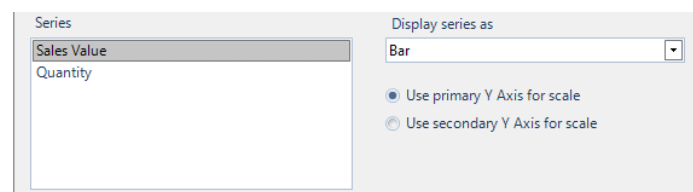


4. For line and area charts, you can select whether the chart should use spline calculations to smooth the line between the points, or if not selected, simply draw a straight line between the points.
5. Line and area charts will also let you define how to handle zero values. The options are described below:

Option	Description
Plot Zero Values	All data points will be plotted.
Do not plot leading zero values	Any zero values not preceded by a non-zero value will be ignored. This prevents datasets with leading zero values being plotted with lines that start anchored to the X Axis.
Do not plot any zero values	Any zero values will not be plotted.
Hide groups with zero values	Any groups that contain one or more zero values will not be plotted.

6. For certain chart types, you can also select whether to display a series as a line, bar or area, and if the object type has a dual Y axis, which Y axis to display the series on.

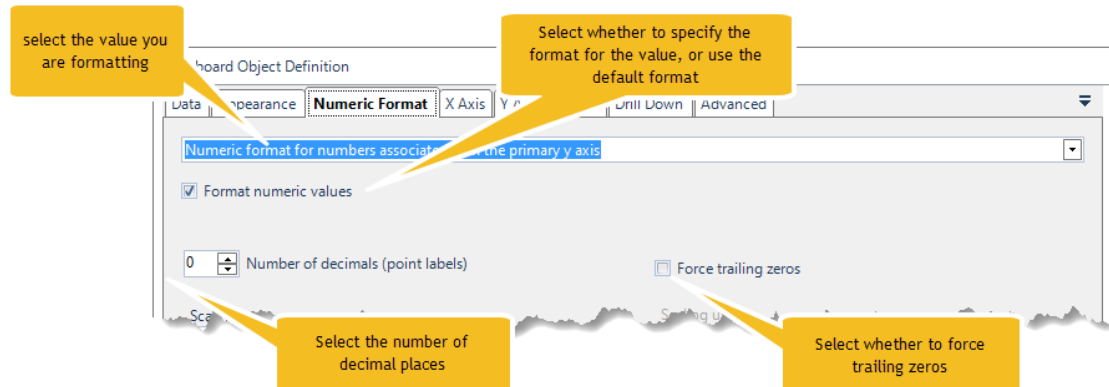
Dual Y Axis charts allow you to display multiple values with very different scales on a single chart.



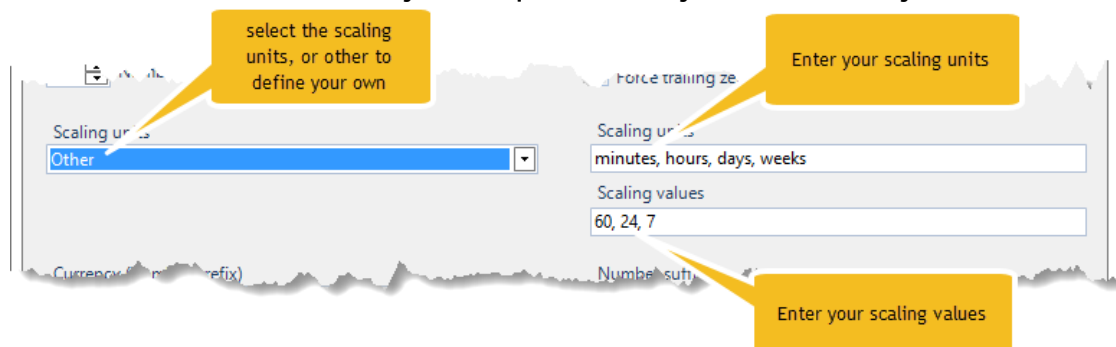
Defining the numeric format for dashboard objects

The numeric format tab of the dashboard object definition screen allows you to specify the numeric format of numeric values in a data grid, and the point labels and (if they have not been defined separately) the labels on the Y axis of your charts. Follow these steps to define the numeric format for the dashboard object:

1. If you are configuring a dashboard object with a dual Y axis, you can specify a different numeric format for each Y axis. As such, you need to select which Y axis you are specifying the details for.



2. If you want to format the numeric values, select the format option.
3. Select the maximum number of decimal places you want to show.
4. Select whether you want to force trailing zero (for instance, the values are currency and you always want two values after the decimal point).
5. Decide what scaling units to apply to your numeric values in a dashboard object. Scaling provides notation for large values, so for instance 1340 can be displayed as 1.34K, and 2345263 can be displayed as 2.35M. There are a number of scaling units pre-defined for you, however if these do not fit your requirements you can define your own.



To define your own scaling units, select other from the scaling units list. Next supply a comma separated list for the scaling units and the scaling values. Each entry in the scaling units list will be displayed as a suffix to your values. Each entry in the scaling values represents the amount the value will be divided by from the previous scaling unit to achieve the display value.

For instance, you could set your scaling units to "Thousands,Millions,Billions" and your scaling units to "1000,1000,1000". In this example, 1340 will be displayed as

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1.34Thousands, and 2345263 will be displayed as 2.35Millions.

If the scaling units list has one more entry than the scaling values, units will be given the first entry in the list as a suffix. For instance, for time scaling units, you could set your scaling units to

"minutes, hours, days, weeks, years" and your scaling values to

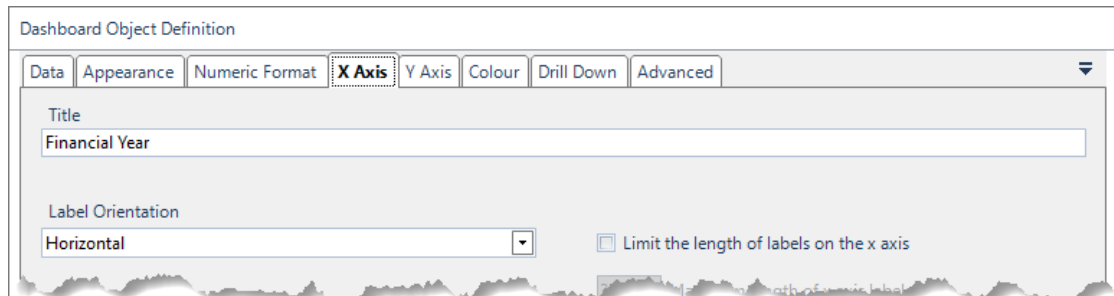
"60, 24, 7, 52".

6. If required, select a currency symbol (value that will be displayed before your numeric values). If the value you want is not in the list, select *other* and enter your desired value. You can also enter a number suffix, a string that will be displayed after numeric values.

Managing the X Axis for dashboard objects

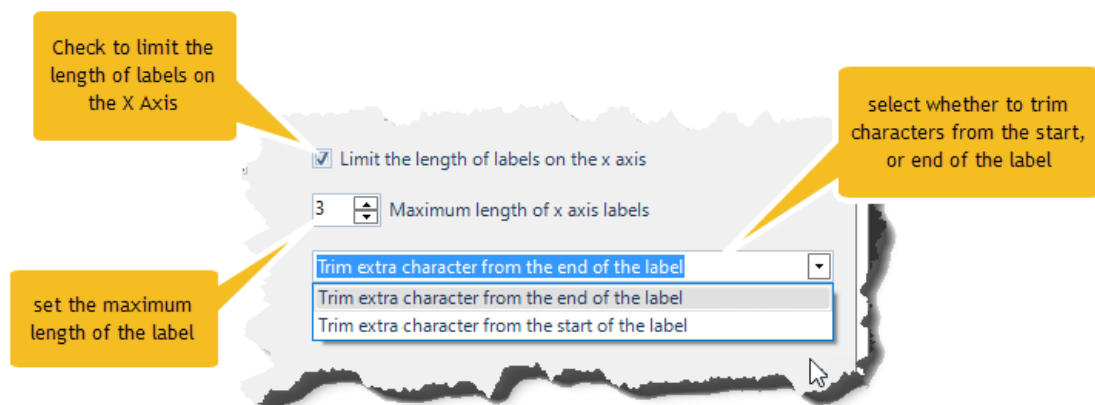
The Dashboard Object Definition window X Axis tab allows you to specify settings that govern the appearance of the X axis on the dashboard object. Follow the steps below to specify the X Axis details on your dashboard object;

1. Enter a title for the X Axis.
2. Select the orientation of the labels on the X Axis.



The screenshot shows the 'Dashboard Object Definition' window with the 'X Axis' tab selected. The 'Title' field contains 'Financial Year'. The 'Label Orientation' dropdown is set to 'Horizontal'. There is a checkbox labeled 'Limit the length of labels on the x axis' which is currently unchecked.

3. If you wish to trim the length of the labels on the x axis, follow these steps;
 - a. Check the checkbox labelled *Limit the length of labels on the x axis*
 - b. Enter the maximum length of the label
 - c. Select whether to trim extra characters from the start, or end of the label.



This annotated screenshot shows the settings for limiting label length. A yellow callout points to the 'Limit the length of labels on the x axis' checkbox, which is now checked. Another callout points to the 'Maximum length of x axis labels' spinner, which is set to 3. A third callout points to the dropdown menu for trimming, which is open and shows three options: 'Trim extra character from the end of the label' (selected), 'Trim extra character from the end of the label', and 'Trim extra character from the start of the label'.

Managing the Y Axis for dashboard objects.

The Dashboard Object Definition window Y Axis tab allows you to specify settings that govern the appearance of the Y axis on the dashboard object. Follow the steps below to specify the Y Axis details on your dashboard object;

1. If you are configuring a dashboard object with a dual Y axis, you can specify a configuration for each Y axis. As such, you need to select which

Y axis you are specifying the details for.

Dashboard Object Definition

Data Appearance Numeric Format X Axis **Y Axis**

Settings for the primary Y Axis

Title
Sales Value

Enter a title for the Y Axis

select the Y Axis you are configuring

2. Enter a title for your y axis. If you want, you can specify an alternative number of decimal places for this Y axis, that will override the value specified in the *Numeric Format* tab.
3. If all the values to be plotted on a Y Axis are either positive, or all negative, by default the Y Axis will always have a minimum value (or maximum if all your values are negative) or zero. If all your values are well above (or well below) zero it might be sensible to uncheck the "fix minimum value as zero" option so it is easier to differentiate values plotted against your Y Axis.

Alternatively, you can override that automatic calculation of the Y Axis range, by selecting that Y Axis values should be fixed, and specifying the minimum and maximum values. (NB. If the values in your chart cannot be plotted on the range you have given, the range will be extended to compensate).

Select to specify the minimum and maximum values for the Y Axis

☒ Fix minimum value as 0 (unless negative)

☒ Enter fixed values for minimum and maximum

Minimum
1000000

Maximum
20000000

Enter a minimum for the Y Axis

Enter a maximum for the Y Axis

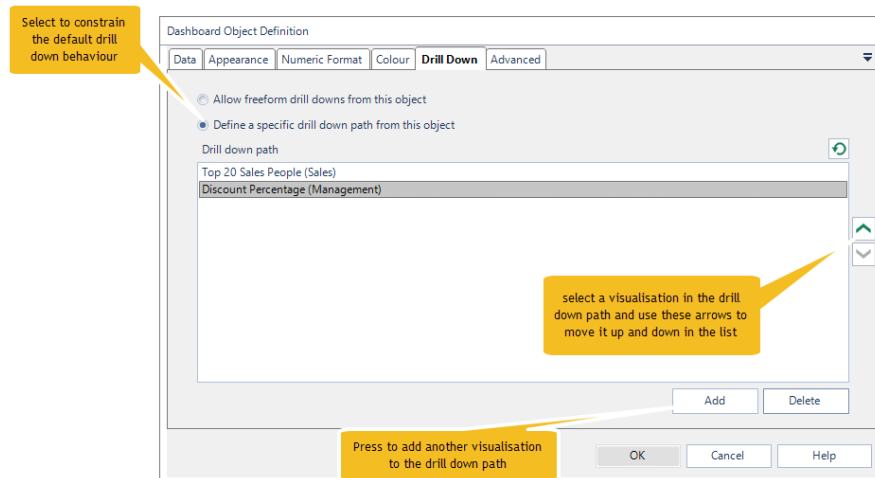


Managing drill downs for your dashboard object

A drill down allows the user to click on an area of a dashboard object, to open another display that shows more detail. Unless you specify otherwise, when the user clicks on an area of a dashboard object, they will be asked to select a dimension in the dataset the object uses (or a linked dataset). The platform will then generate a drill down based on the parent object, showing detail broken down by the dimension selected.

You constrain the drill down functionality by defining a drill down path. Follow these steps to define a drill down path:

1. Select the *define a specific drill down path*. If you select this option, and do not add any visualisations to the drill down path, the user will not be offered any drill down from this object.
2. Press add to select an existing visualisation to add to the list.
3. Repeat step 2 to complete the drill down path.



Drill downs are only available once the dashboard has been published.

Adding treeview selection panels



Adding tree view selection panels

Tree View Selector Panels allow users to quickly apply complex hierarchical filtering to objects on a dashboard. Follow these steps to add a tree view filter panel to your dashboard:

1. Drag a tree view panel from the toolkit on to your dashboard, or select *Tree View Selection Panel* from the list that appears when you press the *Add* button in the *Dashboard Objects* group of the *Edit Dashboard* tab.
2. Define the tree view selection panel settings in the *Tree View Selection Panel* window (described in more detail below).

Defining data for a tree view selection panel

The *Tree View Selection Panel* window *Data* tab allows you to specify the data that will be used to display and build the filters for your tree view selection panel. Follow these steps to specify the values that will appear in the tree view:

Follow the steps below to specify the data;

1. First select the Query data set that you wish to base your treeview;

2. Select the calendar you wish to be used to derive any date groupings (such as year, period, week etc).

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3. If you wish to, press the filter button to apply a filter to your data set (applying filters will be described in more detail below).
4. Select a column in the *Available Columns* list, and press the *Add Column* button to add the column as the root group item.
5. Select a different column as the child filter column in the *Available Columns* list, and press the add child column button (👤).
6. Repeat the steps above to add all the columns you require.
7. If you wish to, you can change the way group values are grouped, sorted and displayed by selecting the group options button to open the group options window.

Defining the appearance of a tree view selection panel

The *Tree View Selection Panel* window *Appearance* tab allows you to specify settings that will govern the appearance of the tree view selection panel. Follow the steps below to specify the appearance of your dashboard object;

1. Enter a title for your tree view selection panel.
2. By default, nodes will remember their checked state when you publish a dashboard. However, if the underlying data changes, you can select whether new nodes are checked when added to the treeview.

Defining which objects a tree view selection panel applies to

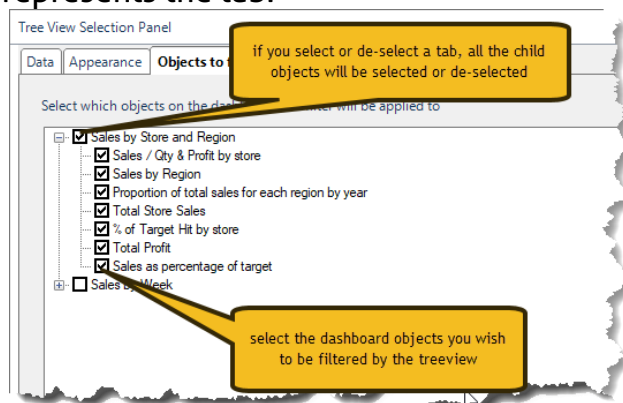
The *Tree View Selection Panel* window *Objects to filter* tab allows you to specify which objects on your dashboard the panels filter will be applied to.

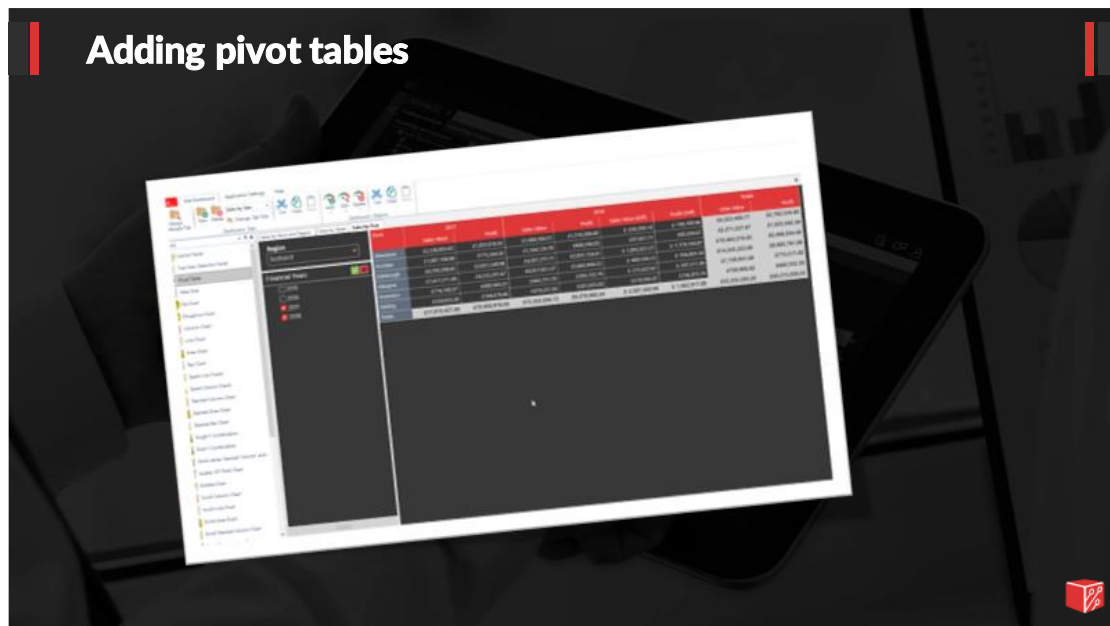
The *Objects to filter* tab contains a root node for all tabs in your dashboard that contain at least one object that has the same columns as the tree view filter panel. Each root node contains a child node for each dashboard object in that tab that has the same columns as the tree view filter panel.

Follow the steps below to apply the filter to objects on the dashboard;

1. Select the node that represents the object.

Alternatively, to select all the objects on a single tab, select node that represents the tab.





Adding a Pivot Table

The Pivot Table editor window allows you to specify the appearance and behaviour of pivot tables on your dashboard tabs. A pivot table is a tabular representation of data that can automatically sort, count, total or give the average of data quickly creating un-weighted cross tabulations.

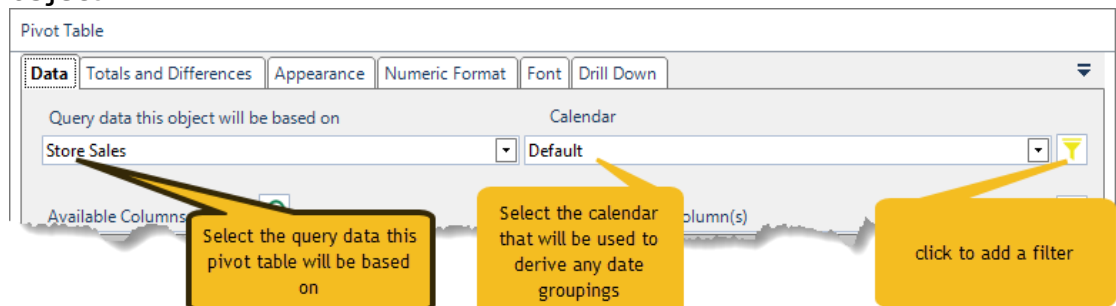
The Pivot Table editor window consists of the following tabs;

Option	Description
Data	Allows you to define the data that will populate the pivot table.
Total and Differences	Allows you to define the appearance and behaviour of total and difference rows and columns for the pivot table.
Appearance	Allows you to specify settings that will govern the appearance of the pivot table.
Numeric Format	Allows you to specify the numeric format used to display numbers in the dashboard object
Drill Down	Allows you to add and define a drill down for the pivot table

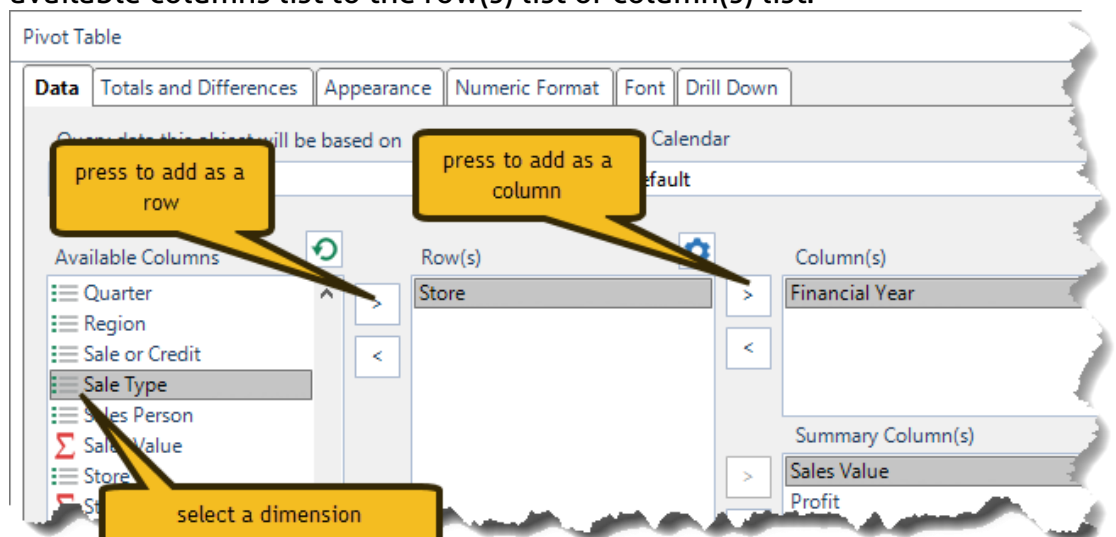
Defining the data for a Pivot Table

Follow the steps below to specify the data;

1. First select the Query data set that you wish to base your dashboard object

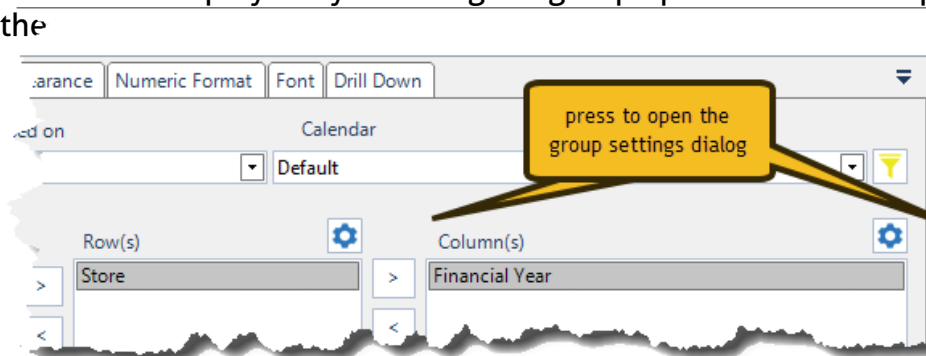


2. Select the calendar you wish to be used to derive any date groupings (such as year, period, week etc).
3. If you wish to, press the filter button to *apply a filter* to your data set. Next, decide how you want to group your data, and select the appropriate option;
4. Next, add dimensions () to the row and column groupings you require. You can do this by selecting the appropriate available column and pressing the add button to the left of the row(s) list or the add button to the left of the column(s) list, or simply dragging columns from the available columns list to the row(s) list or column(s) list.

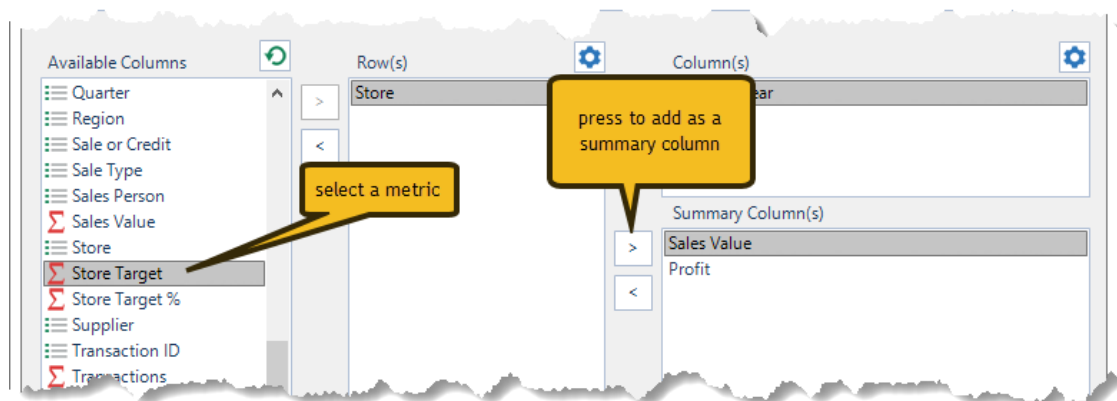


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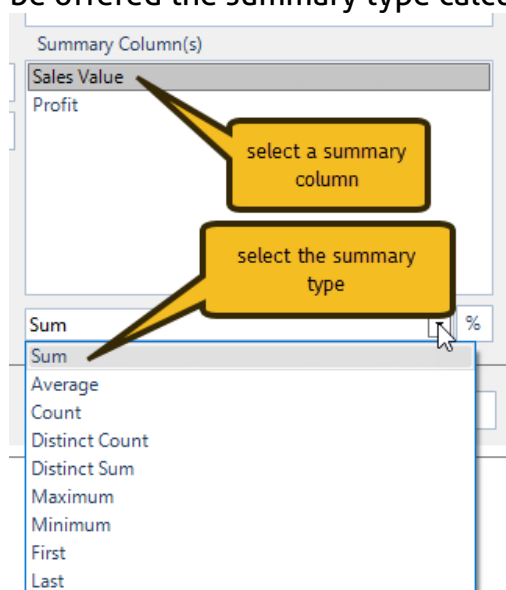
5. If you wish to, you can change the way group values are grouped, sorted and displayed by selecting the group options button to open the



6. Next, select which metrics you require as summary columns.



7. For each summary column, select the summary operation you wish to be applied. Distinct count is the number of distinct values in the column for the group selected. If you select distinct sum, you will need to select a dimension to define the distinct values. Finally, if the column is calculated, rather than existing in the dataset, you will only be offered the summary type calculated.

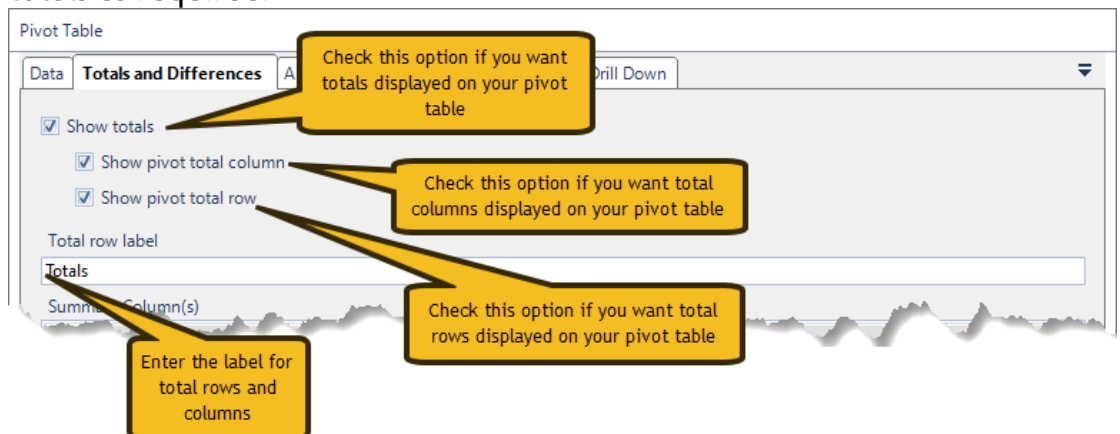


Defining totals and differences for a pivot table

The totals and differences tab of the pivot table dialog allows you to define the appearance and behaviour of total and difference rows and columns for the pivot table.

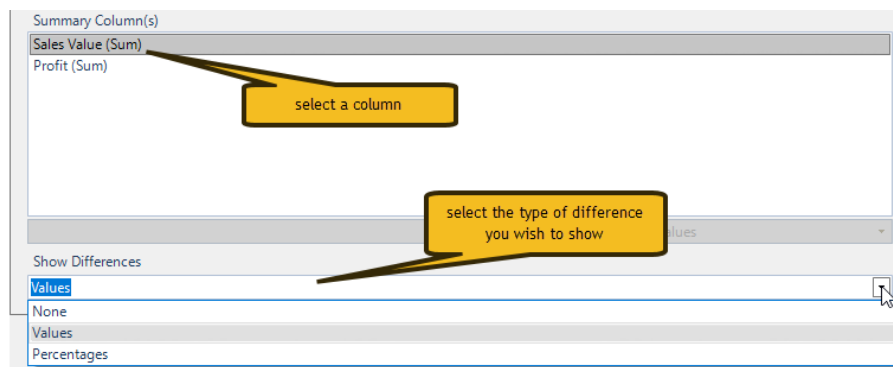
Follow these steps to define the appearance totals for the pivot table:

1. Check the appropriate checkboxes to display row and/or column totals as required.



2. If required, change the label of the total row and columns.

Difference columns display the difference between a column and the preceding column. Follow these steps to show difference columns:



1. Select a column
2. Select the type of difference you want to show. The options are;

Option	Description
None	No differences are shown
Values	The actual difference value is shown.
Percentage	The percentage difference is shown.

Defining the appearance for a Pivot Table

The Pivot Table editor window Appearance tab allows you to specify settings that will govern the appearance of the pivot table.

The available options are:

- Enter a title for the pivot table.

Defining the Numeric Format for a Pivot Table

The Pivot Table editor window Numeric Format tab allows you to specify settings that will govern the formatting of numeric information of the pivot table.

You can specify a different numeric format for each summary value in the pivot table. As such, you need to select which summary you are specifying the details for.

The screenshot shows the 'Pivot Table' editor window with the 'Numeric Format' tab selected. The 'Summary Column' dropdown is set to 'Sales Value'. The 'Number of decimals (point labels)' is set to 2. The 'Force trailing zeros' checkbox is checked. The 'Number suffix' field is empty. Annotations with yellow boxes and arrows point to the 'Summary Column' dropdown (labeled 'select a column'), the 'Number of decimals' spinner (labeled 'select the number of decimal places'), the 'Force trailing zeros' checkbox (labeled 'select to force trailing zeros'), and the 'Number suffix' field (labeled 'select to force trailing zeros').

Next, select the maximum number of decimal places you want to show. If your values are currency values, select force trailing zeros.

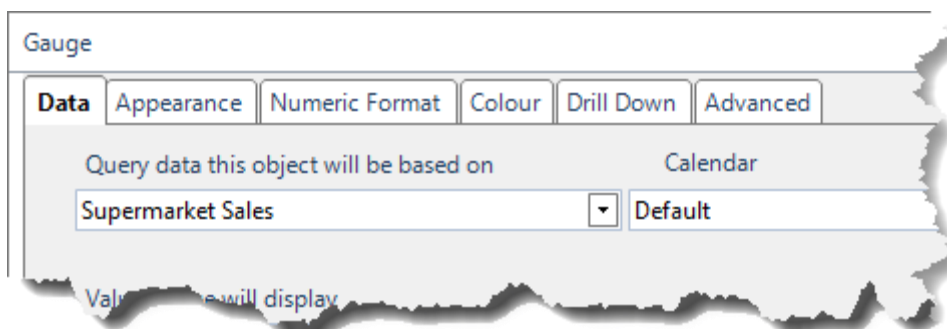
The screenshot shows the 'Pivot Table' editor window with the 'Numeric Format' tab selected. The 'Currency (number prefix)' dropdown is set to 'Other'. The 'Number suffix' field is empty. Annotations with yellow boxes and arrows point to the 'Currency (number prefix)' dropdown (labeled 'Select the currency symbol you require, or Other if it is not listed'), the 'Number suffix' field (labeled 'if you require a suffix after the number, enter it here'), and the 'Other' text input (labeled 'if you select Other, enter the numeric prefix you require').

Finally, if you require it, select a currency symbol (value that will be displayed before your numeric values). If the value you want is not in the list, select *other* and enter your desired value. You can also enter a number suffix, a string that will be displayed after numeric values.



Adding a Gauge

The Gauge Editor window allows you to specify the appearance and behaviour of gauges that have been added to your dashboard tabs.



The editor window consists of the following windows;

Tab	Description
Data	Allows you to define the data that will populate the gauge.
Appearance	Allows you to specify settings that will govern the appearance of the gauge.
Numeric Format	Allows you to specify the numeric format used to display numbers on the gauge.
Colour	Allows you to specify colours for the gauge
Drill Down	Allows you to add and define a drill down to the gauge
Advanced	Allows you to add advanced XML definitions to your gauge.

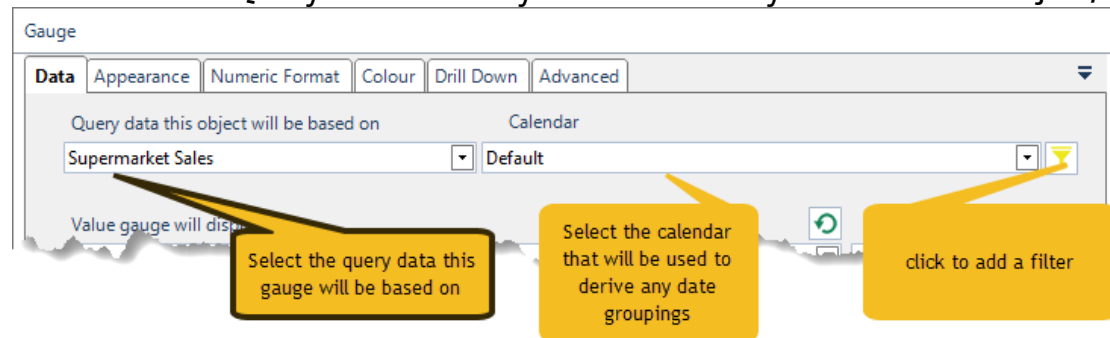
Specifying Data for your Gauge

The Gauge Definition window Data tab allows you to specify the data that will be used to render your gauge.

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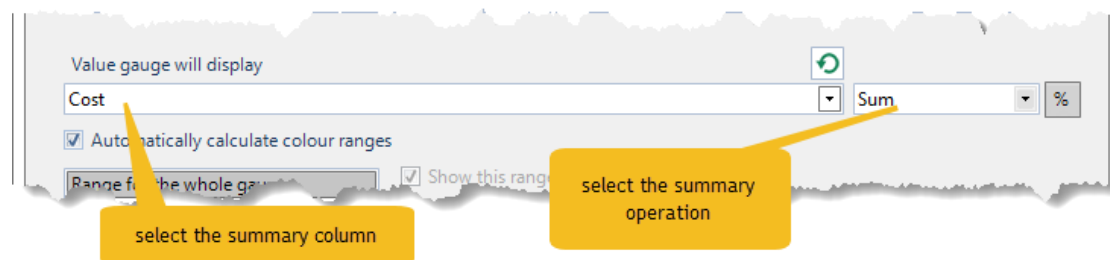
Follow the steps below to specify the data;

First select the Query data set that you wish to base your dashboard object;

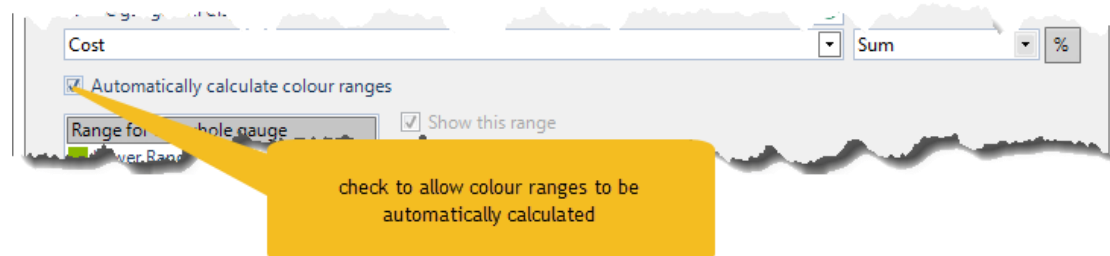


If you wish to, press the filter button to apply a filter to your data set.

Next, you need to define the value that the gauge will display. First, select the column that represents the value that will be displayed. Next select the summary operation that will be used to calculate the value for the gauge. Finally, if you want the values on the gauge to be displayed as a percentage, select the percentage button. (%)

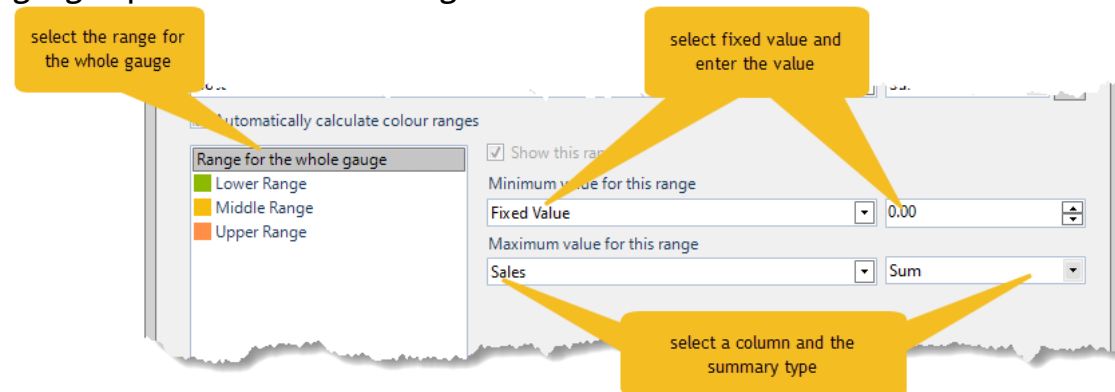


If the gauge object you are defining supports colour ranges, you can choose to allow the minimum and maximum values for each colour range to be calculated automatically, or set manually. If you opt to allow the colour ranges to be automatically calculated, each colour range will represent exactly a third of the range for the whole gauge.



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To define the range for the whole gauge (the minimum and maximum values that will be displayed on the range), first select the Range for the whole gauge option in the list of ranges.



Next we need to define a value for the minimum and maximum values. The value can be a fixed value, or a dynamic value derived from one of the columns in the data set.

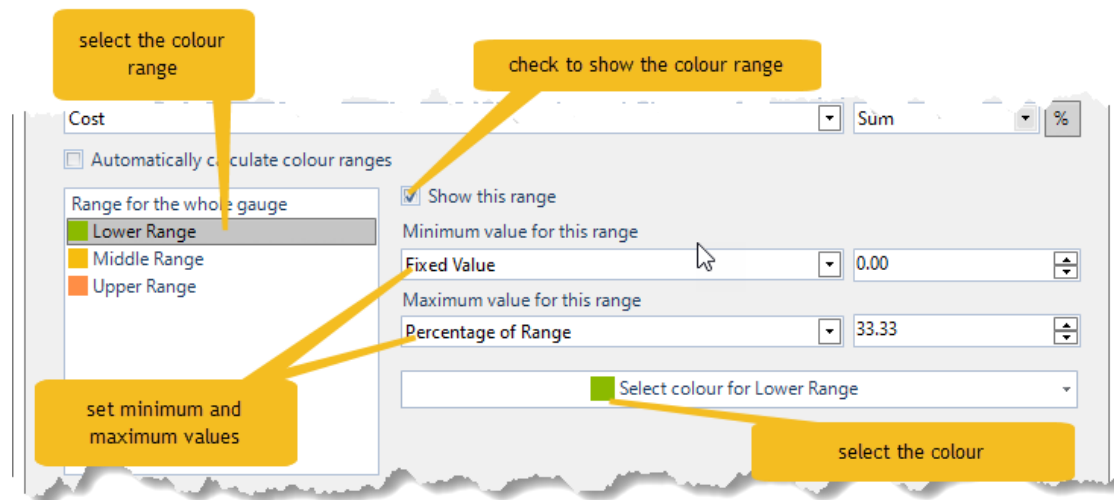
To set a range value to a fixed value, select Fixed Value, then enter the value.

To set a range value to be dynamic, select the column, then the summary type that will be used to calculate the range value.

Just be aware, if the value the gauge displays is smaller than the minimum value you have defined, or larger than the maximum value you have defined the range will be automatically extended to allow the value to be represented on the gauge.

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Next, if the gauge object we are defining supports colour ranges, we can choose whether to show each colour range and define how it will appear.



To show or hide a particular colour range, select the colour range in the list of ranges and check or uncheck the *Show this range* option.

The minimum and maximum values for a colour range can be a fixed value, or a dynamic value based on a percentage of the whole gauge range, or a summary calculation on a column in the [data set](#).

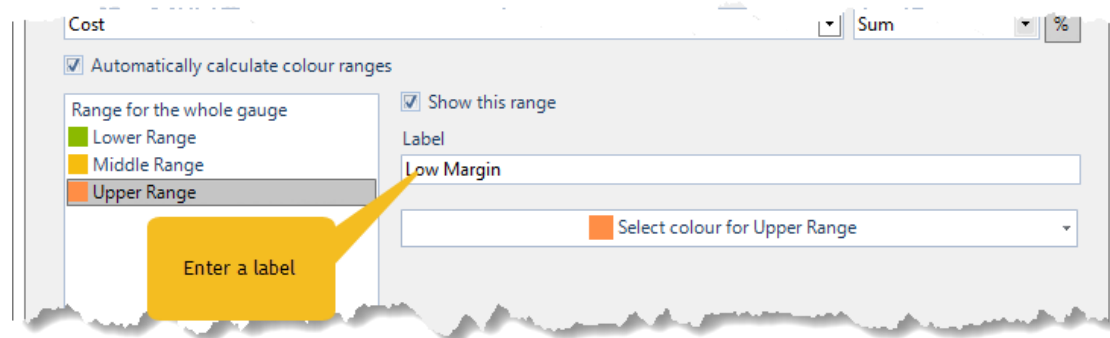
To set a colour range value to a fixed value, select *Fixed Value*, then enter the value.

To set a range value to be dynamic based on a percentage of the whole gauge range, select *Percentage of Range*, then enter the percentage value.

To set a range value to be dynamic based on a column, select the column, then the summary type that will be used to calculate the range value.

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Finally, select a colour for the colour range.

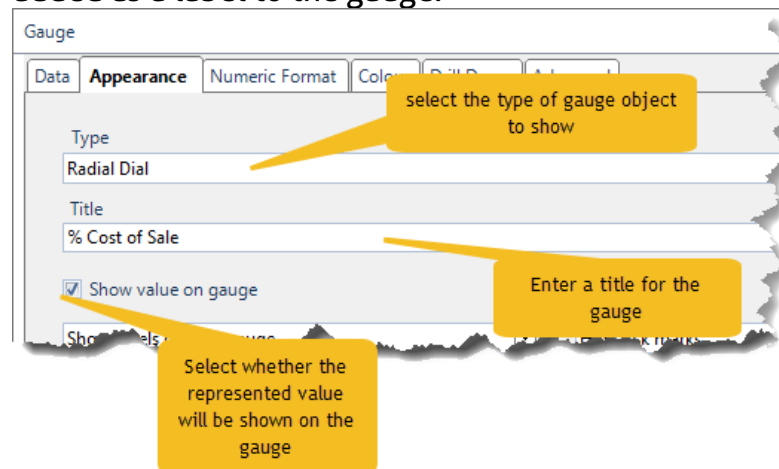


If you are defining a Traffic Light gauge object, you can enter a label for each of the colour ranges. You can choose the display these labels rather than the value on the gauge.

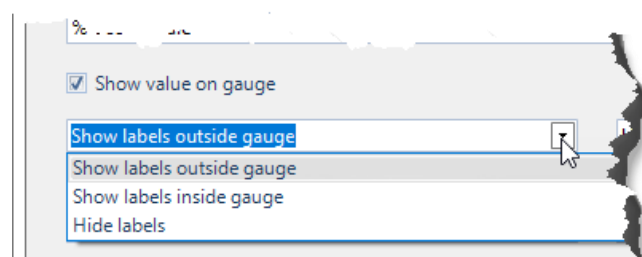
Defining the Appearance of the Gauge

The Gauge Editor window Appearance tab allows you to specify the appearance of the gauge. Follow the steps below to specify the appearance of your gauge;

First, select the type of gauge object you wish to display, enter a title and select whether or not you wish the value represented by the gauge to be added as a label to the gauge.



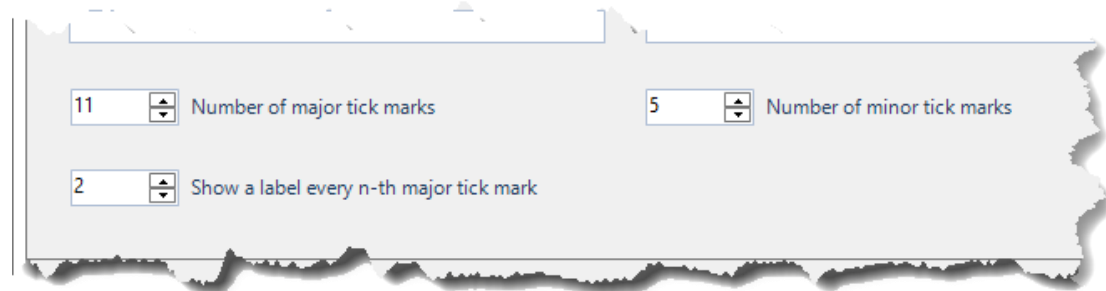
Next, if your gauge object supports labels, choose whether you want the labels for the gauge shown inside the gauge, outside the gauge or not shown at all.



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If your gauge object supports tick marks choose whether tick marks should be shown inside the gauge, outside the gauge or not at all.

If your gauge object supports tick marks choose whether tick marks should be shown inside the gauge, outside the gauge or not at all. Next enter the number of major and minor tick marks, and the frequency of labels on the gauge.

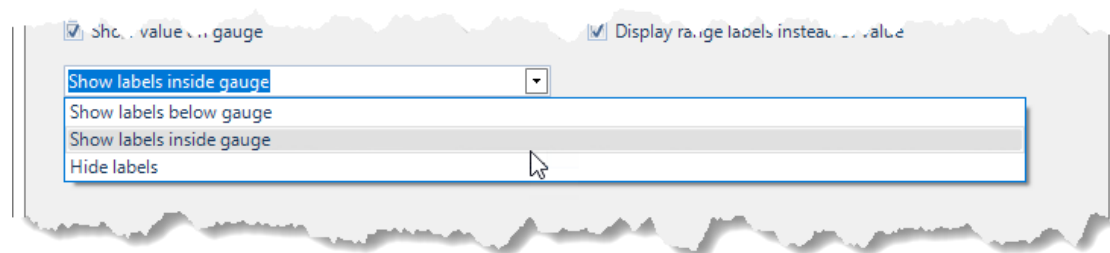


11 Number of major tick marks

5 Number of minor tick marks

2 Show a label every n-th major tick mark

If you are defining a Traffic Light gauge you can choose to display [range labels](#) rather than the value on the gauge. You can also select whether to show the label or value below the gauge, inside the gauge or not at all.



☒ Show value on gauge ☒ Display range labels instead of value

Show labels inside gauge

Show labels below gauge

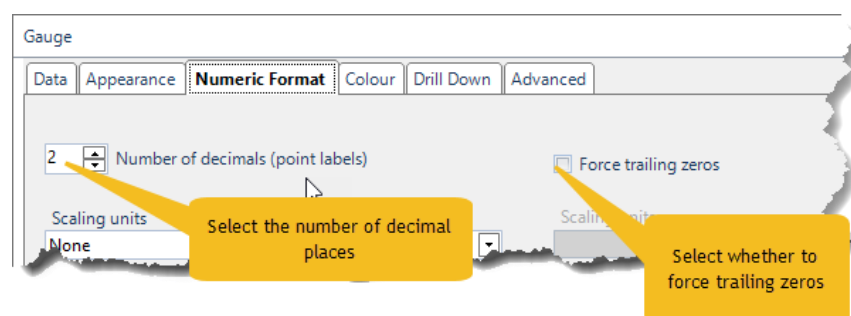
Show labels inside gauge

Hide labels

Defining Numeric Formats for a Gauge object

The Gauge Editor window Numeric Format tab allows you to specify the numeric format used to display numbers in on the gauge. Follow the steps below to specify the numeric format on your gauge;

First, select the maximum number of decimal places you want to show. If your values are currency values, select force trailing zeros.



Gauge

Data Appearance **Numeric Format** Colour Drill Down Advanced

2 Number of decimals (point labels)

Force trailing zeros

Scaling units

None

Select the number of decimal places

Select whether to force trailing zeros

You can apply scaling to your numeric values in a gauge. Scaling provides notation for large values, so for instance 1340 can be displayed as 1.34K,

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and 2345263 can be displayed as 2.35M. There are a number of scaling units pre-defined for you, however if these do not fit your requirements you can define your own.

The screenshot shows the 'Scaling units' configuration section. A dropdown menu for 'Scaling units' is set to 'Other'. A callout points to this dropdown with the text 'select the scaling units, or other to define your own'. To the right, there is a text input field for 'Scaling units' containing 'minutes, hours, days, weeks', with a callout 'Enter your scaling units'. Below this is a text input field for 'Scaling values' containing '60, 24, 7', with a callout 'Enter your scaling values'. A 'Force trailing zeros' checkbox is also visible.

To define your own scaling units, select *other* from the *scaling units* list. Next supply a comma separated list for the scaling units and the scaling values. Each entry in the scaling units list will be displayed as a suffix to your values. Each entry in the scaling values represents the amount the value will be divided by from the previous scaling unit to achieve the display value.

For instance, you could set your scaling units to "Thousands,Millions,Billions" and your scaling values to "1000,1000,1000". In this example, 1340 will be displayed as 1.34Thousands, and 2345263 will be displayed as 2.35Millions.

If the scaling units list has one more entry than the scaling values, units will be given the first entry in the list as a suffix. For instance, for time scaling units, you could set your scaling units to "minutes,hours,days,weeks,years" and your scaling values to "60,24,7,52".

If you require it select a currency symbol (value that will be displayed before your numeric values). If the value you want is not in the list, select *other* and enter your desired value. You can also enter a number suffix, a string that will be displayed after numeric values.

The screenshot shows the 'Currency (number prefix)' and 'Number suffix' configuration sections. The 'Currency (number prefix)' dropdown is set to 'Other', with a callout 'Select the currency symbol you require, or Other if it is not listed'. Next to it is a text input field containing 'Krf', with a callout 'if you select Other, enter the numeric prefix you require'. To the right, there is a 'Force trailing zeros' checkbox which is checked, and a 'Number suffix' text input field, with a callout 'if you require a suffix after the number, enter it here'.

Finally, if you wish to suppress the thousand separator for numbers, select the *Suppress thousand separator* check box.

Selecting Colours for your Gauge

If your gauge supports colour ranges the screen allows you to change the colour for each colour range.

To define colours for the colour ranges, select the colour range then press the button to choose the colour for this range.

If your gauge does not support colour ranges, simply select the colour to be used when rendering your gauge.



Editing dashboard objects

To edit a dashboard object in your dashboard, follow these steps:

1. Select the dashboard object you want to edit in the tab.
2. Press the *Edit* button in the *Dashboard Objects* group in the *Edit Dashboard* tab.
3. Complete the required changes in the *Dashboard Object Definition* window.

Moving dashboard objects

You can move dashboard objects either within the tab they are currently displayed, or between the tabs in a dashboard.

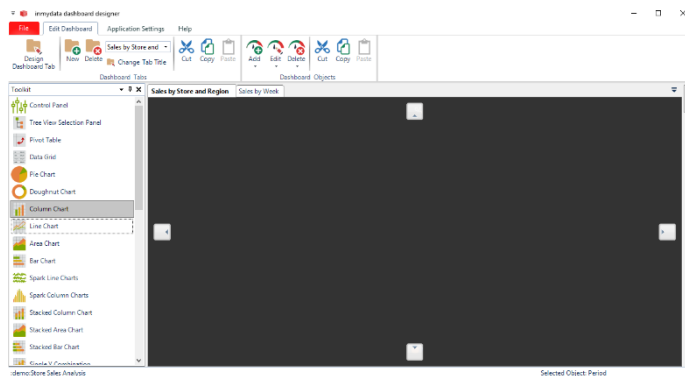
To move dashboard objects within a tab, follow these steps:

1. Select that tab that contains the object you want to move.
2. Press the *Design Dashboard Tab* button in the *Dashboard Tab* in the *Edit Dashboard* tab.
3. Press and hold the tab header of the dashboard object you want to move.
4. Drag the object over the appropriate drag icon (described in detail below).
5. Release the left mouse button.
6. Press the *Preview Dashboard Tab* button in the *Dashboard Tab* in the *Edit Dashboard* tab.

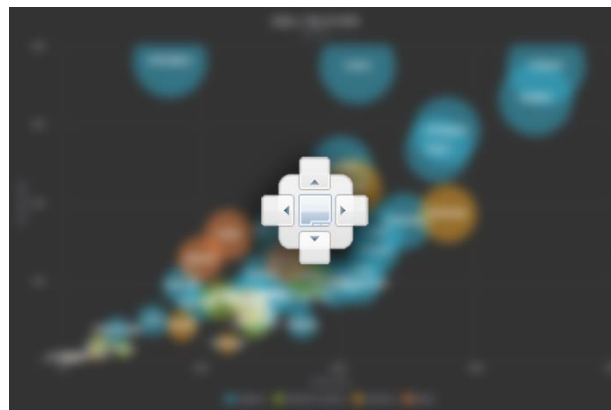
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As you drag the object over the tab, two types of guide icon will appear.

Guide icons around the edge of the tab allow you to place the new dashboard object against the left, top, right or bottom edge of the tab.

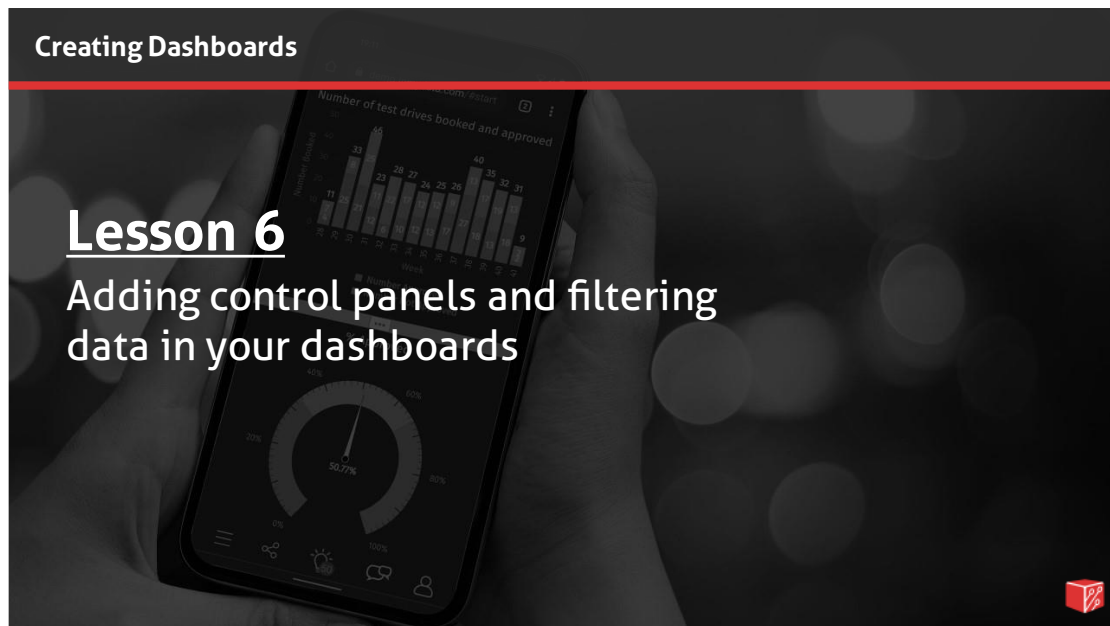


When you drag the mouse over an existing object in the dashboard, guide icons appear that allow you to drop the new object to the left, top, right, bottom of the existing object, or stacked on top of the existing object. If objects are stacked, tabs will appear to allow the user to display each object.



To move a dashboard object from one tab to another, follow these steps:

1. Select the dashboard object in the tab.
2. Press the *Cut* button in the *Dashboard Objects* group in the *Edit Dashboard* tab.
3. Select the tab you want to move the dashboard object to.
4. Press the *Paste* button in the *Dashboard Objects* group in the *Edit Dashboard* tab.



Lesson 6 – Adding control panels and filtering data in your dashboard

Introduction

In this lesson you will learn what control panels are, and how to add them to your dashboards. You will also learn how to filter data in your dashboard.

Learning Objectives

When you complete this lesson you will be able to:

- Add control panels to your dashboard.
- Understand what control panel objects are available, and how to add them to your control panels.
- Add filters to objects on your dashboards.
- Add and edit filter conditions to filters.
- Apply treeview filters to existing filters.

Prerequisites

Before you begin this lesson you should be able to:

- Install the inmydata client applications.
- Open the dashboard designer.
- Understand the dashboard designer interface.
- Create and open dashboards.
- Add visualisations to your dashboard.



Managing control panels

Control panels allow you to add titles, images, filter parameters, and web elements to a dashboard.

Adding a control panel to a dashboard

Follow these steps to add a control panel to your dashboard:

1. Drag a control panel from the toolkit on to your dashboard, or select *Control panel* from the list that appears when you press the *Add* button in the *Dashboard Objects* group of the *Edit Dashboard* tab.
2. Define the control panel selection panel settings in the *Control Panel* window (described in more detail below).

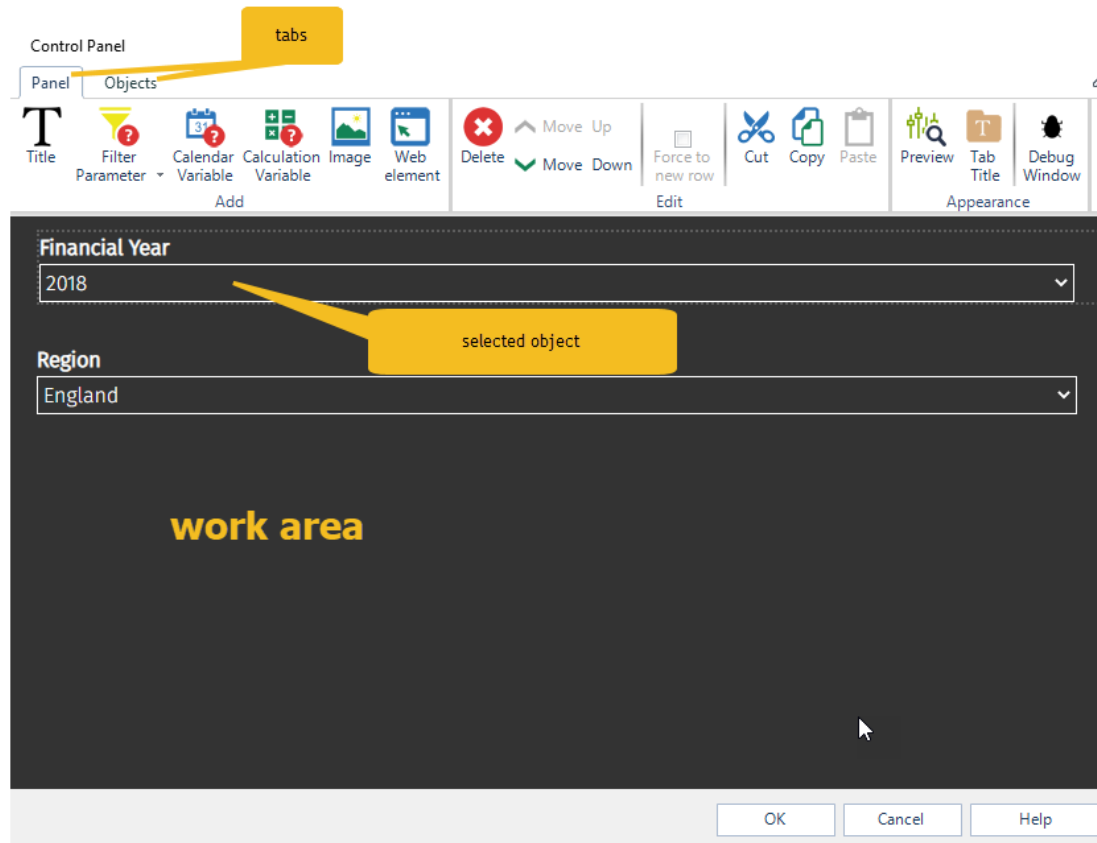
Deleting a control panel from a dashboard

To delete the control panel from a dashboard, follow these steps:

1. Click on the control panel in the dashboard.
2. Press the *Delete* button in the *Dashboard Objects* group of the *Edit Dashboard* tab.

Managing control panel objects

Each control panel contains one or many control panel objects. The *Control Panel* window allows you to manage these objects on a particular control panel.



The *Control Panel* window has a ribbon at the top of the window, and a work area at the bottom of the window.

The ribbon has two tabs, the *Panel* tab that contains buttons to add, delete and move control panel objects in the control panel. The *Objects* tab allows you to edit properties of a single control panel object in the control panel.

The work area displays the control panel you are currently working on, and allows you to select a single control panel object on the control panel. To select a control panel object on the control panel, simply press the left mouse button over the control panel object. The selected control panel object is highlighted in the work area.

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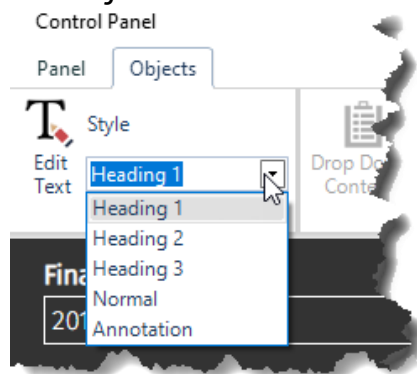
The different control panel objects that you can add to a control panel are described in the table below:

Object Type	Description
Title	Allows you to add a text title to your control panel object.
Filter Parameter	Provides an object to input a filter value that can be used to filter objects on the dashboard.
Calendar Variables	Calendar variables are date-time period values that are defined against a specific dataset and can be used in filters and calculations
Calculation Variables	Calculation variables are values defined against a specific dataset that can be used in calculated columns in that dataset. For instance, you might define a calculation variable for a currency exchange rate, which is used to convert values between currencies.
Image	Allows you to add an image to the control panel.
Web Element	Allows you to add web elements to a dashboard

Adding a title to a control panel object

Titles allow you to add a text title to your control panel object. To add a title to your control panel object follow these steps:

1. Press the *Title* button in the *Add* group of the *Panel* tab.
2. Enter the text you want to appear as your title in the *Label* dialog box and press *OK*.
3. Select the style of the title using the style option in the *Label* group of the *Objects* tab.



Adding filter parameters to the control panel

Filter parameters provide an object to input a filter value that can be used to filter objects on the dashboard. Applying the filter to objects on a dashboard is described in detail in the *Applying Filters to Objects* section below. The different types of filter objects you can add to a control panel are described in the table below:

Type	Description
Drop down list	Allows the user to select a value from a pre-defined list of values.
Date Picker	Allows the user to select a date value.
Slider	A slider control allows the user to select a numeric value between a predefined minimum and maximum.
Check Box	Allows a user to select a true or false value.
Text	Allows the user to enter freeform text

Follow these steps to add a filter parameter to the control panel:

1. Press the *Filter Parameter* button in the *Add* group from the *Panel* tab.
2. Select the type of object from the drop down list.
3. Define the details of the object using the *Object* tab (described in more detail below).

Defining the details of a drop down list

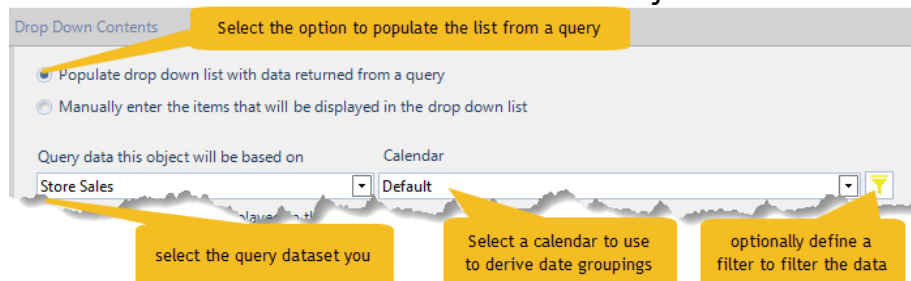
To define the details of a drop down list filter parameter, follow these steps:

1. Press the *Edit Text* button of the *Label* group in the *Objects* tab, enter the text for the drop down list label and press *OK*.
2. Modify the font and font appearance using the *Label* group of the *Objects* tab.
3. Press the *Drop Down Contents* button in the *Behaviour* group of the *Objects* tab.
4. Define the drop down list contents (described in more detail below) and press *OK*.

You can define the contents of the drop down list using data returned from a query, or manually. Both methods are described below.

To define the contents of the drop down list using data returned from a query, follow these steps:

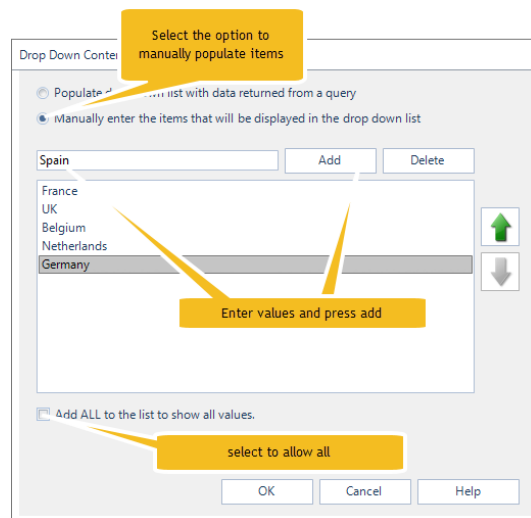
1. Select the option to populate the drop down list from a query, then select the query data set you want the values to be drawn from.
2. Select a calendar to use to derive date groupings.
3. If you want to filter the query data set (perhaps to filter the contents based on another filter parameter), select the filter button to open the Define Filter Condition window to allow you to define the filter.



4. Select the column you want to use to build a list of values to be displayed in the drop down list.
5. If the column is a date field, select which time interval you want to be used to build the display values.
6. You may wish to use a value from column other than the display column in your filter condition. To define a different column as the filter parameter value, select the use a different column check box and select the column you want to use.
7. Finally, select whether you want the values sorted (by the display value, rather than shown in the original order), whether you want to ignore duplicate items, and whether you want to include an option for all (if all is selected any filter condition based on this filter parameter will be ignored).(NB. if you have opted to use different columns for the display and value columns, two items are only considered duplicate if both columns have the same value).

To define the contents of a drop down list manually, follow these steps:

1. Select the manual option, then repeatedly enter an item and press *Add* to add it to the list.
2. To change the order of values in the list, select the value, then press the green up or down arrows to move its position in the list.
3. To delete an item from the list, select it in the list then press the *Delete* key.
4. When all items are in the list, press *OK*.



Defining the details of a date picker

Follow these steps to define the details of a date picker:

1. Press the *Edit Text* button of the *Label* group in the *Objects* tab, enter the text for the date picker label and press *OK*.
2. Modify the font and font appearance using the *Label* group of the *Objects* tab.

Defining the details of a slider

Follow these steps to define the details of a slider:

1. Press the *Edit Text* button of the *Label* group in the *Objects* tab, enter the text for the slider label and press *OK*.
2. Modify the font and font appearance using the *Label* group of the *Objects* tab.
3. Press the *Slider Scale* button in the *Behaviour* group of the *Objects* tab.
4. Define the slider scale (described in more detail below).
5. Define the numeric format (described in more details below) and press *OK*.

There are two ways you can define the slider scale, using data returned from a query or manually entering the values. Both of these methods are described in details below.

To define the scale of the slider using data returned from a query, follow these steps:

1. Select the *set range of the slider from the minimum and maximum values of a column returned by a query* check box.

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2. Select the query data set, and the column you wish to use to calculate the range.

Finally, select whether the slider should show labels and major and minor tick marks.

To define the scale of the slider manually, follow these steps:

1. Select the *set range of the slider manually* check box.
2. Enter a minimum and maximum value for the scale.
3. Finally, select whether the slider should show labels and major and minor tick marks.

To define the numeric format for a slider, follow these steps:

1. Select the *Numeric Format* tab of the *Slider Properties* window.
2. Select the maximum number of decimal places you want to show.
3. Select whether you want to force trailing zero (for instance, the values are currency and you always want two values after the decimal point).
4. Decide what scaling units to apply to your numeric values on the slider. Scaling provides notation for large values, so for instance 1340 can be displayed as 1.34K, and 2345263 can be displayed as 2.35M. There are a number of scaling units pre-defined for you, however if these do not fit your requirements you can define your own.
5. To define your own scaling units, select *other* from the scaling units list. Next supply a comma separated list for the scaling units and the scaling values.
6. If required, select a currency symbol (value that will be displayed before your numeric values). If the value you want is not in the list, select *other* and enter your desired value. You can also enter a number suffix, a string that will be displayed after numeric values.

Defining the details of a check box

Follow these steps to define the details of a check box:

1. Press the *Edit Text* button of the *Label* group in the *Objects* tab, enter the text for the check box label and press *OK*.
2. Modify the font and font appearance using the *Label* group of the *Objects* tab.

Adding calendar variables to your control panel

Follow these steps to add a calendar variable to your control panel:

1. Press the *Calendar Variable* button on the control panel editor *Panel* tab to open the calendar variable dialog.
2. Select the dataset the calendar variable belongs to
3. Select the calendar to be used when deriving date values from calendar periods
4. Select the calendar variable, and press OK

The screenshot shows the 'Calendar Variable' dialog box. It has a title bar 'Select columns that define the location'. Inside, there are three dropdown menus: 'Subject' (selected: Test Drives), 'Calendar' (selected: Default1), and 'Calendar Variable' (selected: Current Year). At the bottom are 'OK', 'Cancel', and 'Help' buttons. Three yellow callout boxes point to the dropdowns: 'Select the dataset the calendar variable belongs to' points to 'Subject'; 'Select the calendar you want use to derive dates' points to 'Calendar'; and 'Select the calendar variable' points to 'Calendar Variable'.

Adding calculation variables to your control panel

Follow these steps to add a calendar variable to your control panel:

1. Press the *Calculation Variable* button on the control panel editor *Panel* tab to open the calculation variable dialog.
2. Select the dataset the calculation variable belongs to
3. Select the calculation variable, and press OK

The screenshot shows the 'Calculation Variable' dialog box. It has a title bar 'Select columns that define the location'. Inside, there are two dropdown menus: 'Subject' (selected: Test Drives) and 'Calculation Variable' (selected: Sales Tax). At the bottom are 'OK', 'Cancel', and 'Help' buttons. Two yellow callout boxes point to the dropdowns: 'Select the dataset the calculation variable belongs to' points to 'Subject'; and 'select the calculation variable' points to 'Calculation Variable'.

Moving control panel objects on a control panel

To move a control panel item up or down in the control panel, follow these steps:

1. Select the control panel object in the work area of the *Control Panel* window.
2. Press the *Move Up* or *Move Down* button in the *Edit* group of the *Panel* tab in the ribbon.

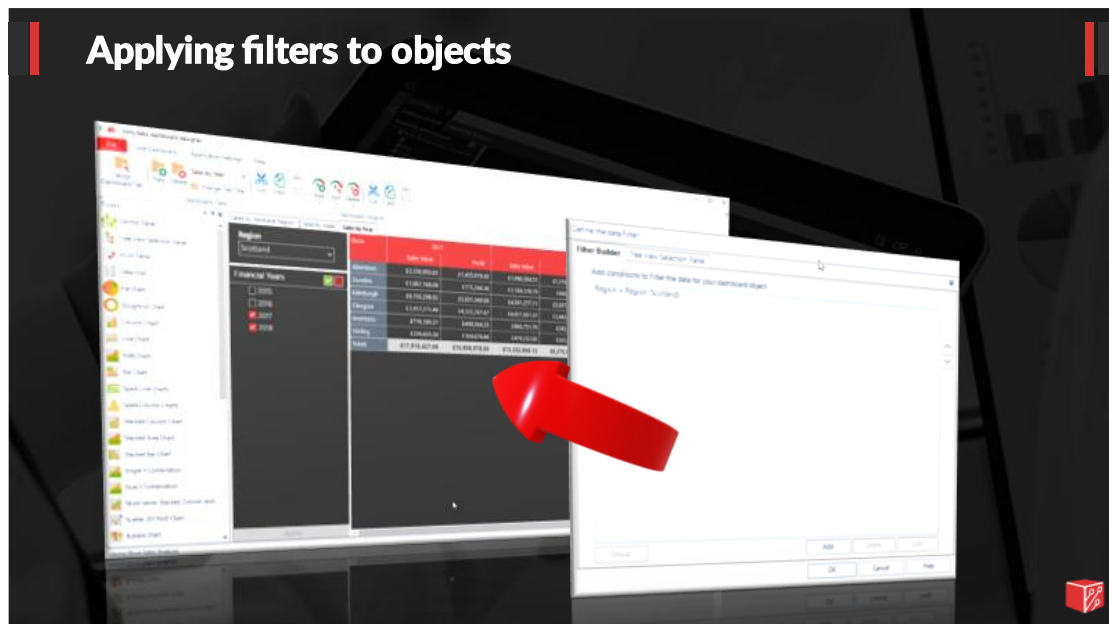
Deleting control panel objects

To remove a control panel object from a control panel, follow these steps:

1. Select the control panel object in the work area of the *Control Panel* window.
2. Press the *Delete* button in the *Edit* group of the *Panel* tab in the ribbon.

Previewing a control panel

The *Preview* button in the *Appearance* group of the *Panel* tab removes the selection highlight from the selected control panel object in the work area. This means the control panel in the work area appears exactly as it will in the dashboard.



Applying filters to objects

Wherever you can select a query data set to apply to an object on the dashboard, you can also apply a filter by pressing the data filter button (🔍). Filters can be static, for instance if you want to create a chart that shows orders for a specific country, or linked to a filter parameter or tree view panel, in which case the user can change the filter dynamically by changing the selection in objects on the dashboard.

There are two ways you can define a filter for an object on the dashboard, by using the filter builder or by assigning a tree view selection panel. Each of the three methods is described in detail below.

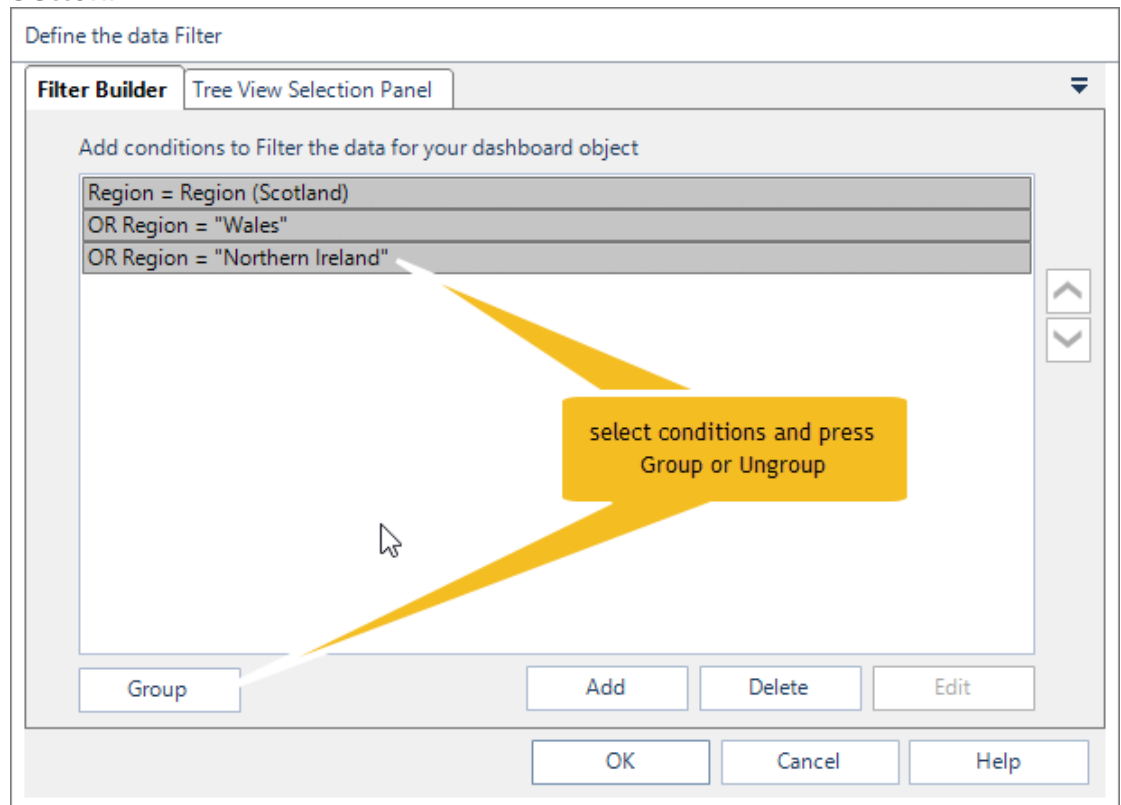
Using the filter builder

To define a filter using the filter builder, follow these steps:

1. Select the *Filter Builder* tab.
2. Press Add to open the define filter condition window and create a new condition (described in more detail below).
3. Repeatedly add conditions until your filter is complete

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4. To group conditions, select multiple conditions and press the *Group* button.

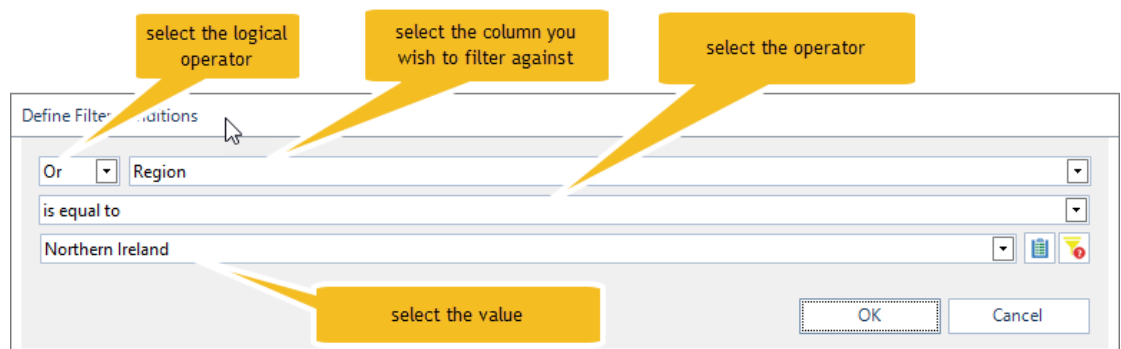


5. Press OK to finish.

The *Define Filter Condition* window allows you to define three types of condition, a simple fixed value condition, a list of fixed values condition or a filter parameter condition. Each is described in more detail below.

To define a simple fixed value condition, follow these steps:

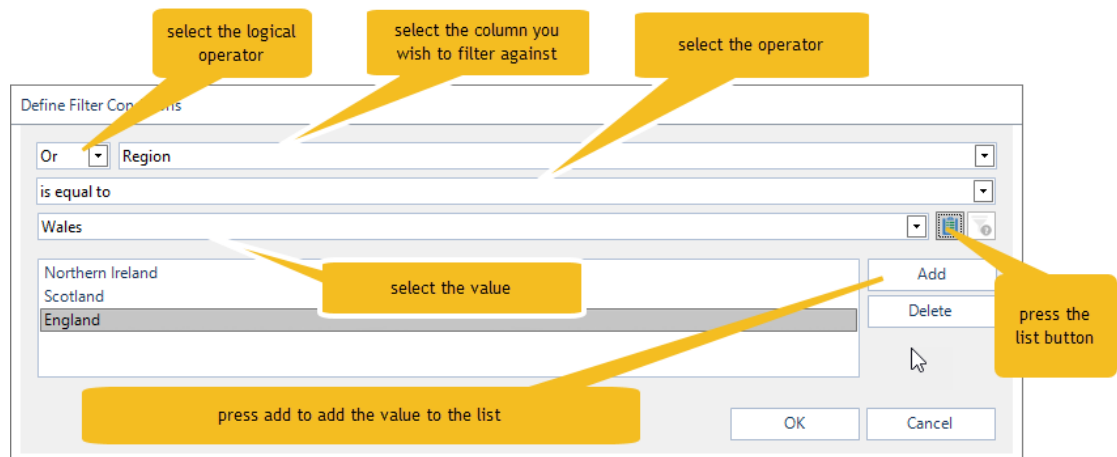
1. Select the logical operator (and/or)
2. Select the column you want to apply the condition to.
3. Select the operator to use to compare the column.
4. Select or enter the value to compare the column to.



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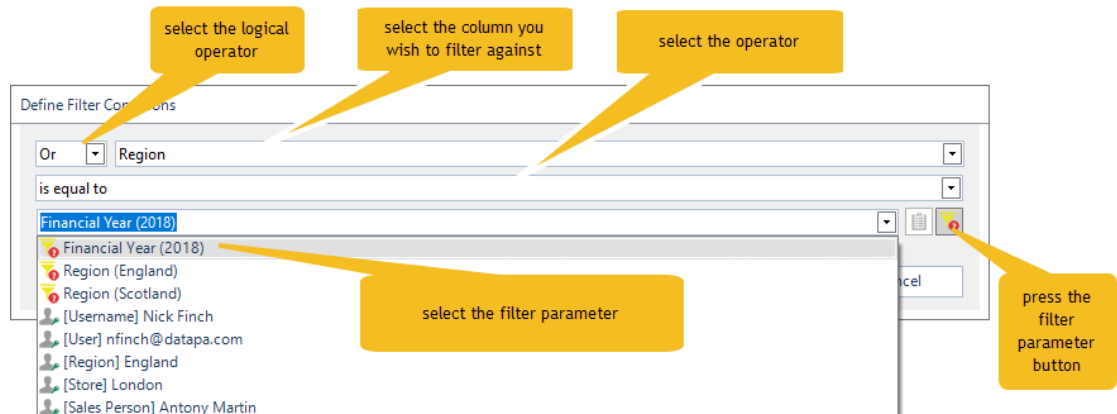
To define a list of fixed values condition, follow these steps:

1. Select the logical operator (and/or)
2. Select the column you want to apply the condition to.
3. Select the operator to use to compare the column.
4. Press the list button
5. Repeatedly select or enter a value and press *Add* to add it to the list.



To define a filter parameter condition, follow these steps:

1. Select the logical operator (and/or)
2. Select the column you want to apply the condition to.
3. Select the operator to use to compare the column
4. Press the filter parameter button (🔍).
5. Select the filter parameter you want to use.

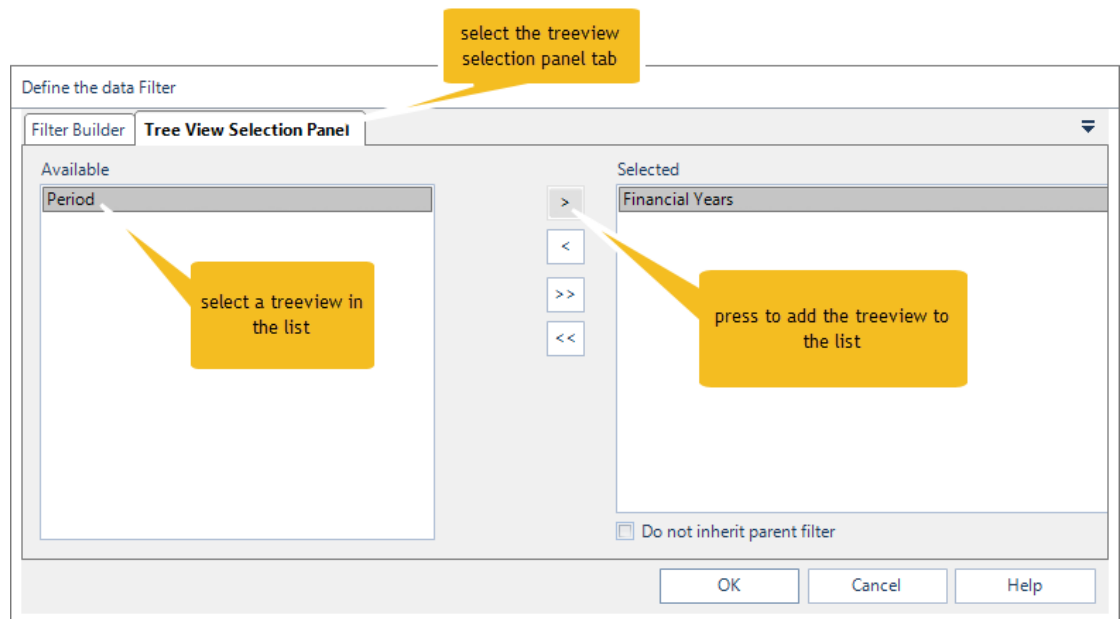


The filter parameter list may also contain values linked to the user. For more details, contact your administrator. If you create a condition that is linked to a filter parameter, and the filter parameter object is deleted from the dashboard, the condition is changed to be a fixed value condition with the fixed value being the last known value of the filter parameter.

Applying a tree view filter panel filter

As we described earlier in this lesson, tree view filters can be applied to objects from the *Tree View Filter Panel Editor* window. We can also apply tree view filters to objects from the *Define the data Filter* window. If an appropriate tree view filter panel (one for which all the columns in the tree view are represented in the objects data set) exists, the *Tree View Selection Panel* tab will be offered in the *Define the data Filter* window. Follow these steps to apply a tree view filter to an object:

1. Selection Panel tab.
2. Select the treeview in the available list you wish to apply
3. Press the add button to move the treeview to the selected list





Lesson 6 – Publishing, saving and managing dashboards

Introduction

In this lesson you will learn how to save a dashboard locally to disk and publish it to the server. You will also learn how to manage dashboards published to the server.

Learning Objectives

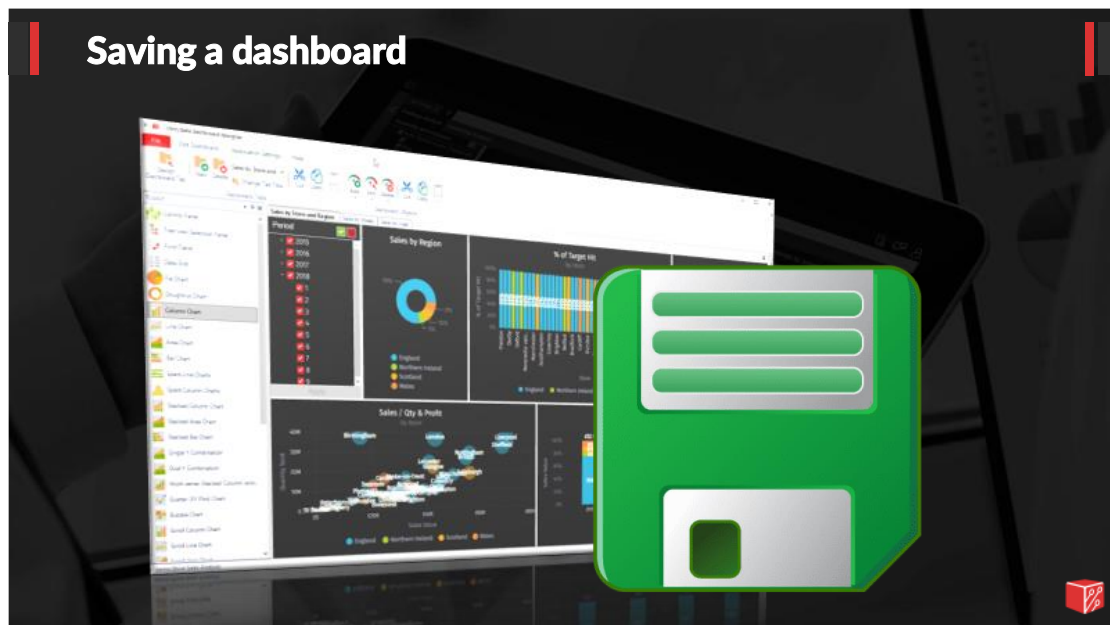
When you complete this lesson you will understand:

- How to save a dashboard locally to disk.
- How to publish a dashboard to the server.
- How to modify a dashboard published to the server.
- How to delete a dashboard published to the server.

Prerequisites

Before you begin this lesson you should be able to:

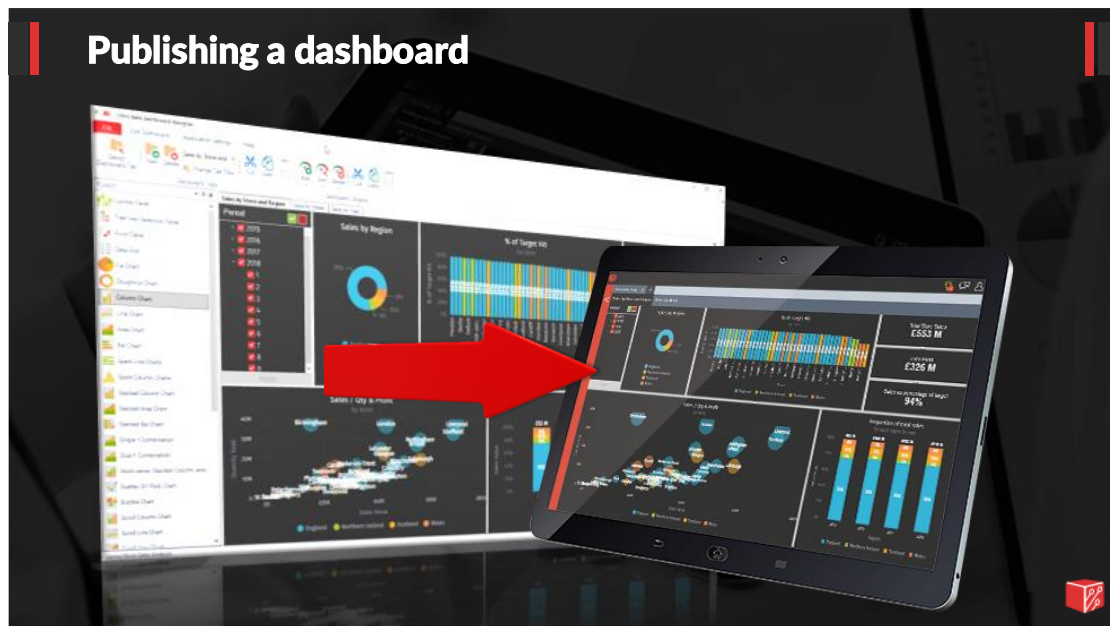
- Install the inmydata client applications.
- Open the dashboard designer.
- Understand the dashboard designer interface.
- Create and open dashboards.



Saving a dashboard

Saving a dashboard saves the definitions of the tabs and dashboard objects in a dashboard. There is no data saved with the dashboard. Follow these steps to save a dashboard:

1. Select *Save* or *Save As* from the *File* menu on the ribbon.
2. If prompted, enter the name of the file you wish to save the dashboard as.



Publishing a Dashboard

To publish a dashboard, follow these steps:

1. Select *Properties* from the *File* menu on the ribbon.
2. Enter a name, description and select a category to publish your dashboard to, then press *OK*.
3. Select *Publish* from the *File* menu on the ribbon.

Editing a published dashboard

To edit a published dashboard, follow these steps:

1. Open the dashboard from the server
2. Make your required changes
3. Publish your dashboard.

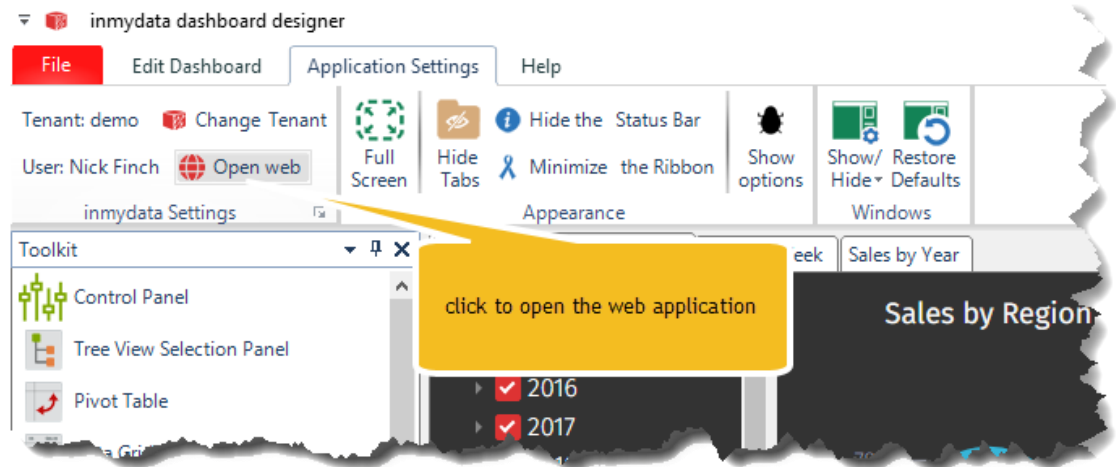
NB: Publishing a dashboard that already exists on the server will overwrite the existing version, applying any changes you have made. If you want to publish a second copy of the dashboard, save a copy first by selecting *Save As* from the *File* menu of the ribbon. This gives the dashboard a new identity.

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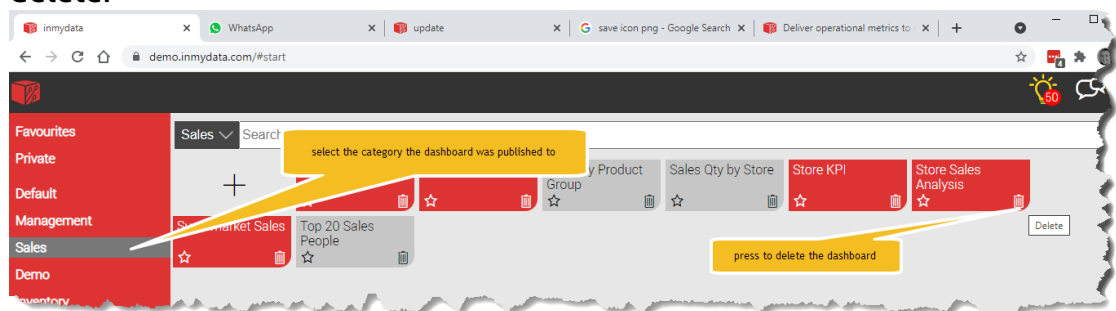
Deleting a published dashboard

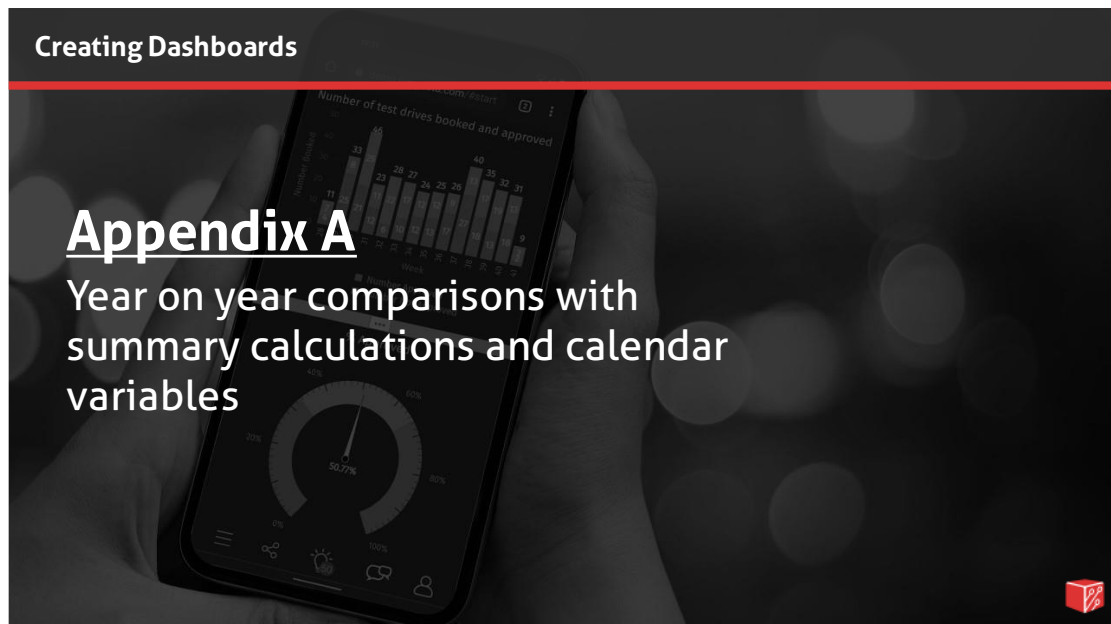
To delete a published dashboard, follow these steps:

1. Click on the *Open web* button on the *Application Settings* tab of the ribbon.



2. Log in
3. Select the category the dashboard was published to
4. Press the delete button on the tab for the dashboard you want to delete.





Appendix A – Year on year comparisons with summary calculations and calendar variables

Introduction

In this lesson you will learn how to use summary calculations to easily create year on year comparisons. You will also learn how to use calendar variables to allow users to easily compare different years.

Learning Objectives

When you complete this lesson, you will understand:

- The concept of summary calculations.
- How to create summary calculations.
- How to use summary calculations in a dashboard or visualisation.
- How to create calendar variables and apply them to filters and summary calculation.

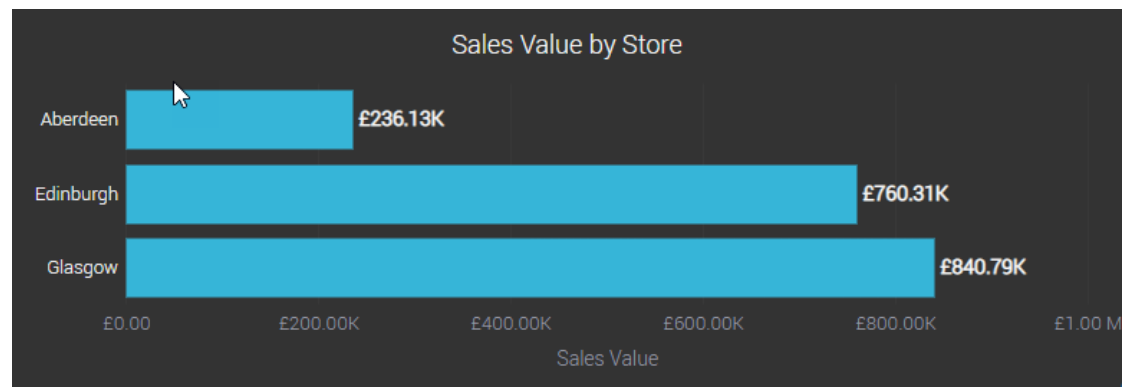
Prerequisites

Before you begin this lesson you should be able to:

- Access the data administration screens and edit subjects.
- Create visualisations.
- Create and open dashboards.
- Add and edit filters to dashboard objects
- Add control panels to a dashboard

Understanding summary calculations

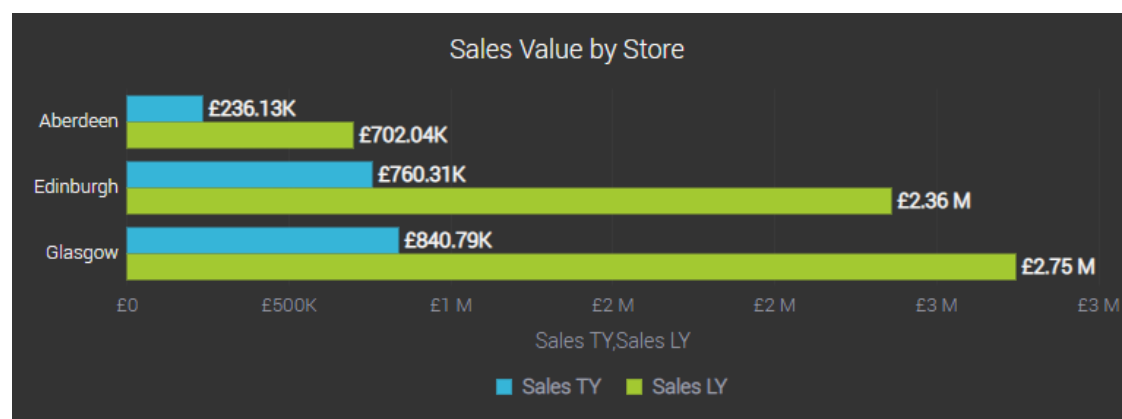
When we add a metric to a dashboard or visualisation, the value will be calculated by applying some summary operation to each row that matches the dimensions displayed. For instance, in the chart below, the *Sales Value* is calculated by summing the metric *Sales Value* in every row that matches a particular store. A filter is applied to the chart so we only see sales for the current year.

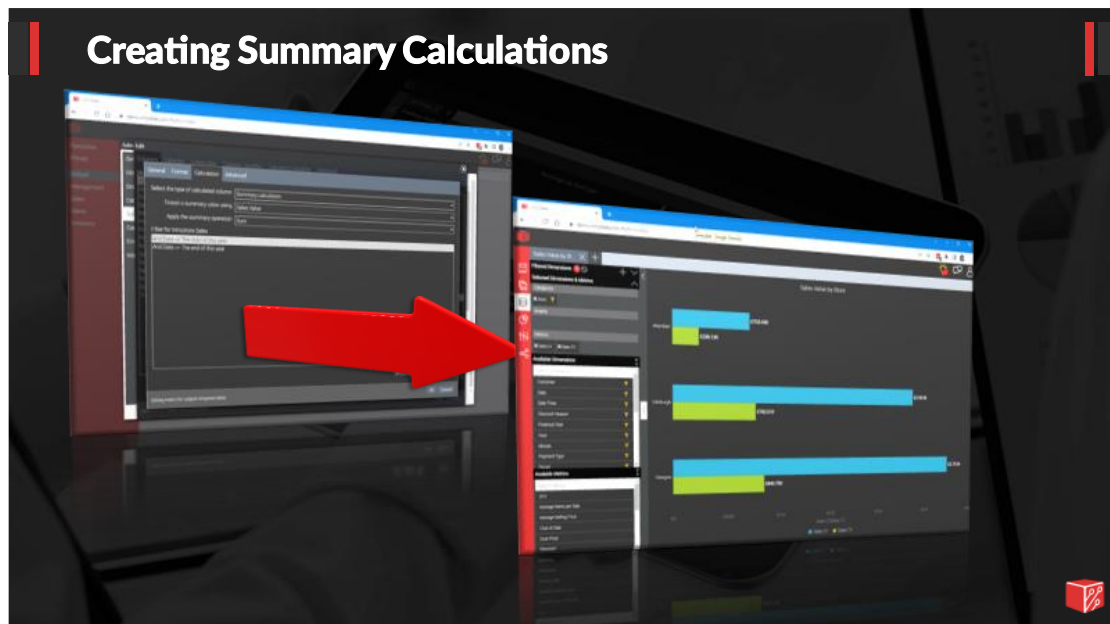


However, it's likely we might want to compare sales for each store in the current year with sales in the same stores last year. Summary calculations allow us to achieve this by creating metrics that have an implicit filter applied to them.

For instance, we could create two new metrics *Sales TY*, which would always only total sales in the current year, and *Sales LY* which would always only total sales in the previous year.

The chart below has no filters applied, however there are two implicit filters applied in the two metrics *Sales TY* and *Sales LY*

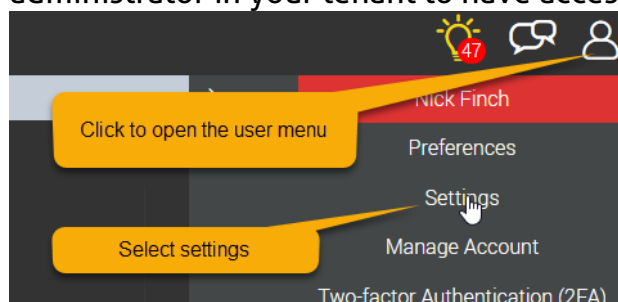




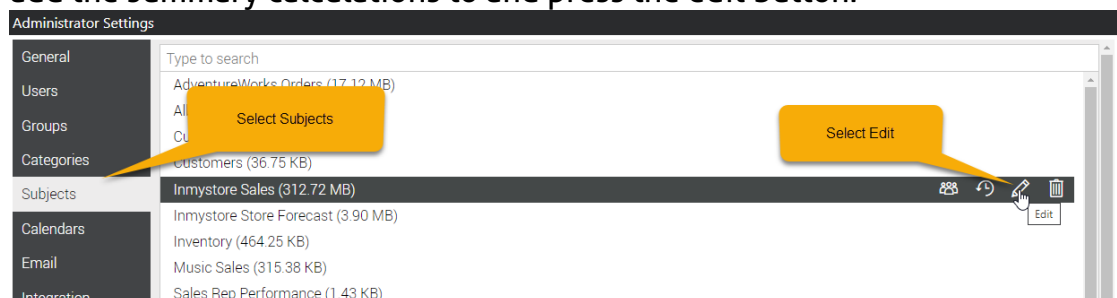
Creating summary calculations

To create a summary calculation for Sales TY, follow these steps:

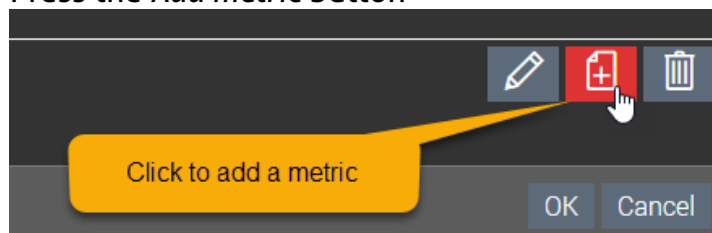
1. Open the settings screen from the user menu (you will need to be an administrator in your tenant to have access to this screen).



2. Select *Subjects* in the left-hand tab, then find the subject you want to add the summary calculations to and press the edit button.

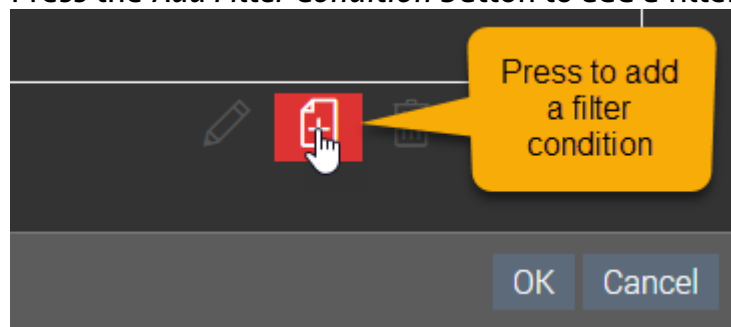


3. Press the *Add metric* button



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4. Select the option *Create a new metric in the subject from a new calculated column*
5. Enter a name the column (we'll use *Sales LY*)
6. Select *Summary Calculation* as the type of calculation
7. Select the column we want to sum (we'll select *Sales Value*)
8. Select the summary operation (we'll use *Sum*)
9. Define the filter to apply to this summary column. For our *Sales LY* example, we'll do the following...
 - a. Press the *Add Filter Condition* button to add a filter condition



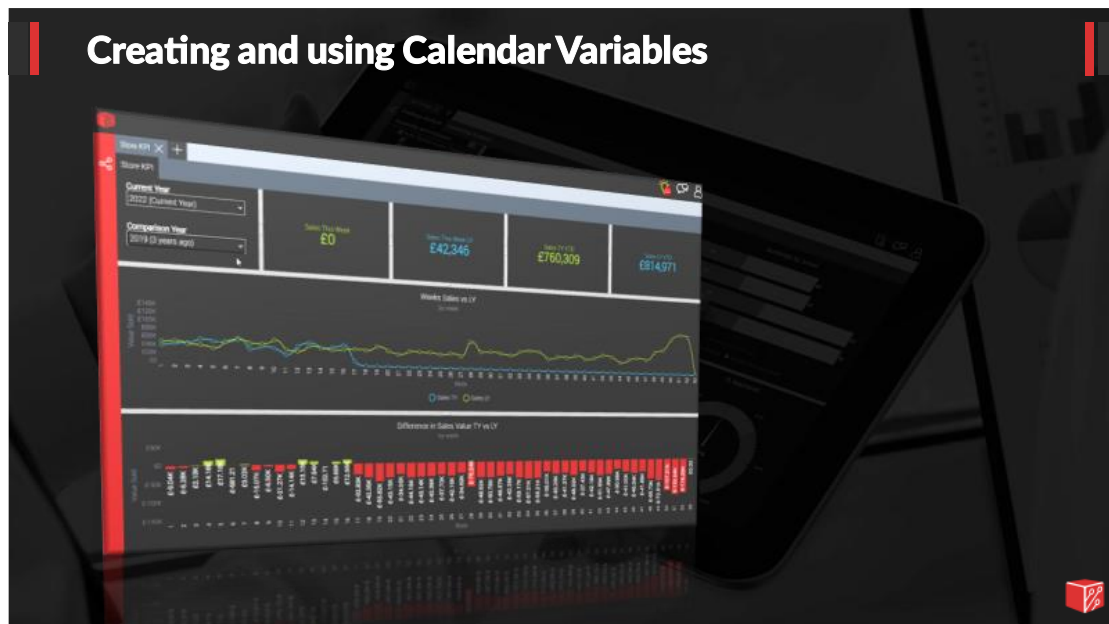
- b. Select *Date* as the column to filter on
 - c. Select *>=* as the operator
 - d. Under the *Value* heading, select *Calendar Value*
 - e. Select *Start of this year as of 1 year ago* for the calendar value options
 - f. Press *OK*

A screenshot of a filter configuration dialog box. It contains several dropdown menus: 'Logical Operator' set to 'And', 'Column to filter on' set to 'Date', 'Operator' set to '>=', and '[Fixed Value]' set to 'Calendar Value'. Under the 'Value' heading, there are two more dropdowns: 'The start of this year' and 'as of 1 year ago'.

- g. Repeat steps a and b above to add a second condition.
Select *<=* as the operator
 - h. Under the *Value* heading, select *Calendar Value*
 - i. Select *End of this year as of 1 year ago* for the calendar value options
 - j. Press *OK*

Using summary calculations

Once you have created a summary calculation, it's available in visualisations and dashboards as any other metric. The implicit filter is automatically applied to any figure where the summary calculation is used.



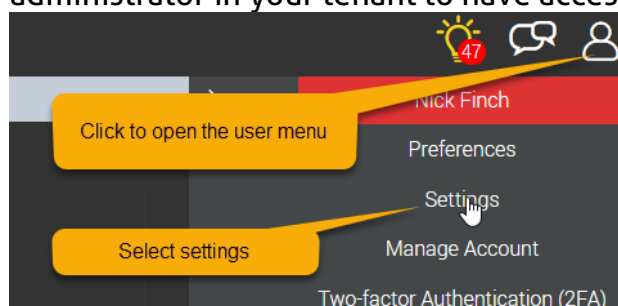
Understanding Calendar Variables

It is a common requirement to build dashboards that display year on year comparisons. Normally we will compare the current year to the previous year. However, when we have periods of unusual trading, perhaps because of a global pandemic or a structural change in the organisation, we may wish to allow the user to easily change the years that are being compared. Calendar variables allow us to display selection lists on dashboards that allow users to easily specify which calendar periods are used in filters.

Creating Calendar Variables

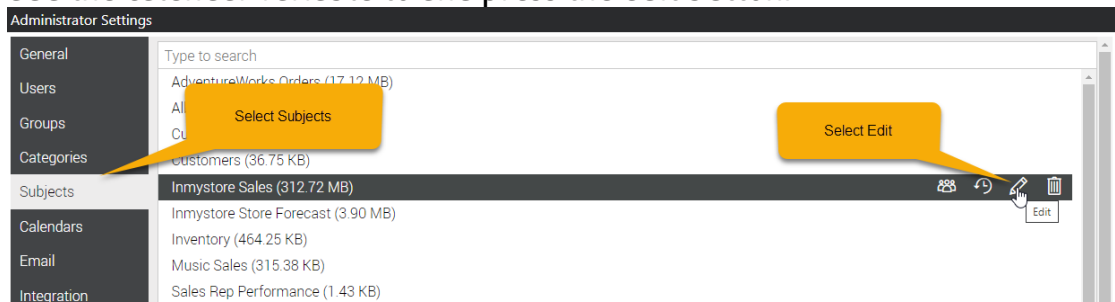
To create a calendar variable, follow these steps:

1. Open the settings screen from the user menu (you will need to be an administrator in your tenant to have access to this screen).

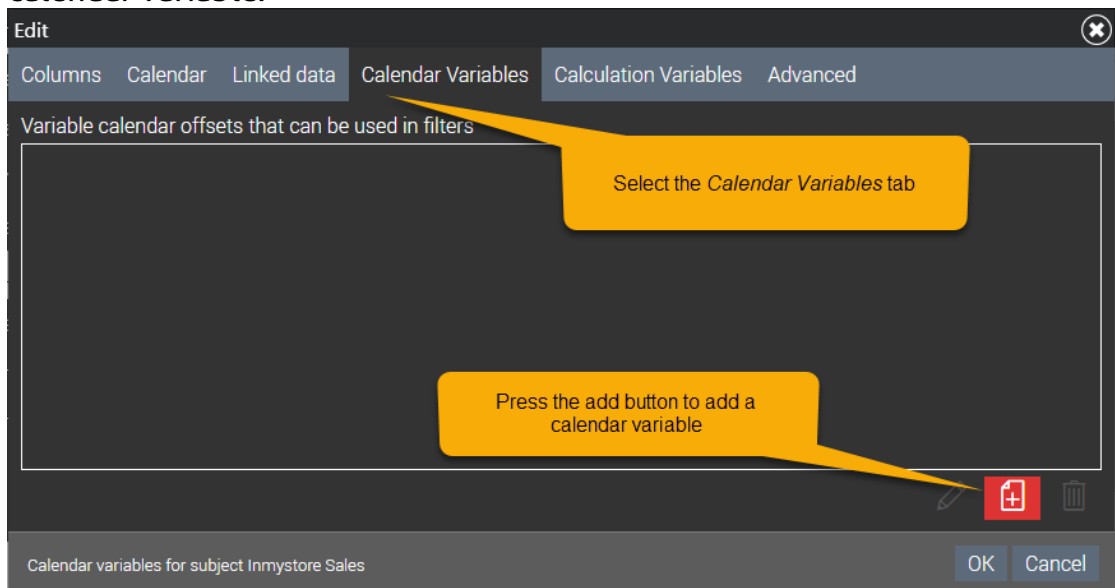


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2. Select *Subjects* in the left-hand tab, then find the subject you want to add the calendar variable to and press the edit button.



3. Select the *Calendar Variables* tab, then press the add button to add a calendar variable.



4. Enter the name of the calendar variable
5. Select which financial periods you wish the user to be able to check
6. Select the default value for the calendar variable

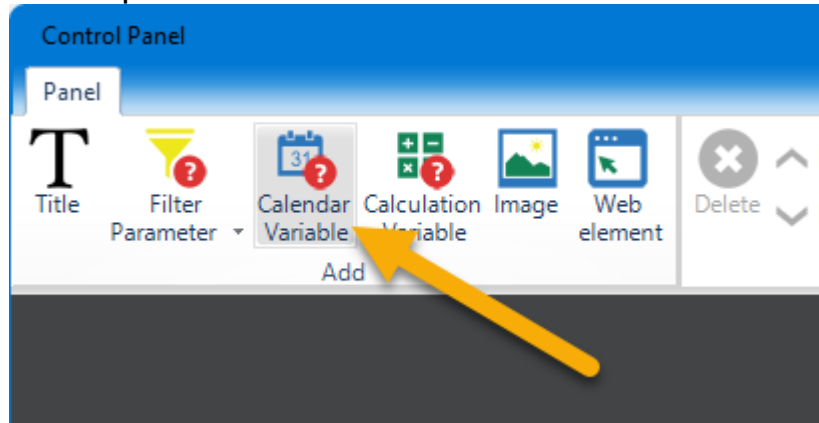
The screenshot shows the 'Editing calendar variable' dialog box for the 'Inmystore Sales' subject. It has a 'Name' field with the value 'Comparison Year'. Below this are four checkboxes: 'Allow year selection' (checked), 'Allow quarter selection' (unchecked), 'Allow period selection' (unchecked), and 'Allow week selection' (unchecked). There is also a 'Default value' dropdown menu set to '1 years ago'. At the bottom, there is a footer bar with the text 'Editing calendar variable for subject Inmystore Sales' and 'OK' and 'Cancel' buttons.

7. Press OK

Adding Calendar Variables to a Dashboard

To add a calendar variable to a dashboard, follow these steps.

1. Add or edit a control panel to on a dashboard.
2. Click the *Calendar Variable* button to add a calendar variable to the control panel.



3. Select the subject that contains the Calendar Variable you want to add.
4. Select the calendar that will be used to define the periods represented in the Calendar Variable
5. Select the Calendar Variable you wish to add to the dashboard.

Select columns that define the location

Subject	Inmystore Sales	▼
Calendar	Default	▼
Calendar Variable	Comparison Year	▼

OK Cancel Help

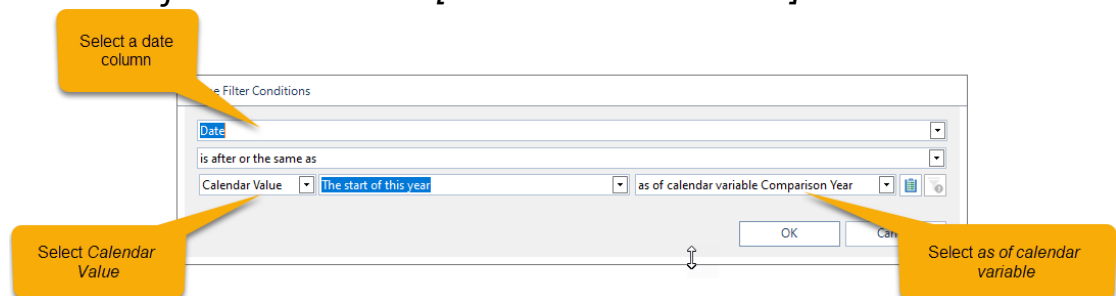
6. Press OK

Using Calendar Variables in a filter

Once a calendar variable has been added to a subject, it can be used in any filter that uses a date column in that subject. The calendar variable can then be used to change the applied filter according to the financial period selected in the calendar variable drop down.

To apply a calendar variable to a filter, do the following.

1. Edit the filter on a dashboard object.
2. Edit or add a filter condition on a date column.
3. Select *Calendar Variable* as the type of value
4. Select *as of calendar variable [Calendar Variable Name]*



Using Calendar Variables in a Summary Calculation

To apply a calendar variable to a summary calculation, do the following.

1. Edit the filter on a summary column.
2. Edit or add a filter condition on a date column.
3. Select *Calendar Variable* as the type of value
4. Select *as of calendar variable [Calendar Variable Name]*

