Working with Apps

Qlik® Sense

1.1

Contents

1 About this document

The topics in the first part will introduce you to the steps needed to build an app with sheets and visualizations, before you move on to how to prepare an app for others in the second part.

Make sure to see the Concepts in Qlik Sense guide to learn more about apps.

This document is derived from the online help for Qlik Sense. It is intended for those who want to read parts of the help offline or print pages easily, and does not include any additional information compared with the online help.

Please use the online help or the other documents to learn more.

The following documents are available:

- Concepts in Qlik Sense
- Creating Visualizations
- Discovering and Analyzing
- Loading and Modeling Data
- Data Storytelling
- Publishing Apps, Sheets and Stories
- Script Syntax and Chart Functions Guide
- Qlik Sense Desktop

You find these documents and much more at help.qlik.com.

2 Getting started with building apps

The app is at the core of Qlik Sense. An app is loaded with your data, and the visualizations the app contains allow you and your colleagues to explore the data.

First, you have to create and build your app. This section describes how to build a basic app using some sample data.

2.1 Creating a basic app

Building an app from scratch requires some basic steps, as described here.

All apps need data. We have supplied some sample data for you to use when following the steps in this section. You can, of course use your own.

If you want to use the sample data, copy the entire table, including the column headings, into an empty Excel file on your computer.

Sample data

Cost	Customer Number	Date	Item Description	Sales	Sales Quantity	Sales Person Number
-147,42	10025049	12/31/2012	Landslide Salt	-124,58	-1	113
-71,78	10025049	12/31/2012	Big Time Home Style French Fries	-98,77	-1	113
-6,95	10017828	12/31/2013	Even Better String Cheese	-8,75	-1	109
0	10005006	12/31/2013	Blue Label Canned Peas	0	1250	167
0	10009633	12/31/2013	Frozen Mushroom Pizza	0	1	127
0	10009633	12/31/2013	Great Pumpernickel Bread	0	2	127
0	10013238	12/31/2013	Blue Label Canned Peas	0	12500	117
0	10021223	12/31/2013	Imagine Ice Cream	0	221	183
0	10022168	01/15/2014	Blue Label Canned Peas	0	2500	154
0	10023447	01/15/2014	Golden Lime Popsicles	0	120	115
0	10025249	01/15/2014	Blue Label Canned Peas	0	1250	162
0,09	10024006	01/15/2014	Blue Label Canned Peas	0	10	157
0,13	10024006	01/15/2014	Blue Label Beef Soup	0	10	157
0,29	10024006	01/15/2014	Club Sour Cream	0	22	157
0,37	10024006	01/15/2014	Tell Tale Red Pepper	0	4	157

2,15	10024006	01/15/2014	Nationeel Apple Fruit Roll	0	10	157
5,14	10023783	02/23/2014	Nationeel Cheese Crackers	0	1	175
5,14	10023783	02/23/2014	Nationeel Graham Crackers	0	1	175
17,5	10021911	02/23/2014	Just Right Canned String Beans	0	10	175
18,69	10009633	03/05/2014	Tell Tale Broccoli	0	1	127
30,34	10009633	03/05/2014	Cutting Edge Turkey Hot Dogs	0	1	127
52,59	10009633	03/05/2014	Ebony Fresh Lima Beans	0	1	127
52,59	10009633	03/05/2014	Ebony Fresh Lima Beans	0	1	127
95,35	10009633	03/05/2014	Tell Tale Limes	0	1	127
112,73	10009633	03/05/2014	Just Right Regular Ramen Soup	0	2	127
206,89	10009633	03/05/2014	Golden Frozen Cheese Pizza	0	1	127
0,22	10011734	03/05/2014	Best Choice Sesame Crackers	0,7	2	155
0,22	10021472	03/05/2014	Best Choice Sesame Crackers	0,71	2	114
0,33	10011734	08/05/2014	Great Pumpernickel Bread	1,48	2	155
0,4	10009606	08/05/2014	Best Oatmeal	1,54	4	118
0,55	10016548	08/05/2014	Best Choice Sesame Crackers	1,75	5	153
0,93	10009606	08/05/2014	Carlson Mild Cheddar Cheese	2,05	1	118
0,4	10023447	08/05/2014	Big Time Fajita French Fries	2,39	2	115
0,84	10016548	08/05/2014	Best Choice Beef Jerky	2,73	2	153
0,99	10009606	08/05/2014	Ebony Plums	2,93	5	118
0,64	10009606	08/05/2014	Club String Cheese	2,99	8	118
1,01	10009606	08/05/2014	Shady Lake Ravioli	3,17	2	118
2,2	10025919	08/05/2014	Golden Chicken TV Dinner	3,21	1	108
1,09	10016548	09/24/2014	Landslide Grape Jam	3,47	1	153

- Begin by starting Qlik Sense.

When Qlik Sense has started, follow these steps to create a basic app. Details are given in the link at each step.

1. Create an empty app.
2. Load data into your new app.
3. Add visualizations to show the data.

2.2 Building a more advanced app

If you want to build a more advanced app, there are a number of things you can do.

- You can create structure to your app by adding sheets, where each sheet has a specific purpose.
- You can create reusable items to make it easy for you and others developing the app to reuse in their own visualizations.
- You can bookmark important findings, and add text descriptions to apps and sheets to help the people who use your app understand its purpose and how best to use it.

Please refer to the Qlik Sense online help for further details about structuring sheets.

2.3 Sharing an app with others

If you want others to use and explore with your app, you must first publish the app.

If you use Qlik Sense Desktop, you can share your app with other people by uploading it to the cloud.

2.4 Creating a new app

The first thing you need to do when building an app is to create an empty placeholder for it. You create the app placeholder from the hub.

Do the following:

1. Click **Create new app** in the hub.
2. Give your app a name.
3. Click **Create**.
   The app is created.
4. Click **Open app**.
   The app opens in the app overview.

The next step is to load data into the new app.

Creating an app from a QlikView document

If you have a QlikView document, you can use its load script and data model when creating an app in Qlik Sense. Visualizations, dimensions and measures, however, have to be created using Qlik Sense.

You need to have Qlik Sense Desktop installed to be able to migrate a QlikView document into a Qlik Sense app.

> *A QlikView document (qvw format) corresponds in Qlik Sense to an app (qvf format).*

Converting document to app

Do the following:

1. Copy the QlikView document (qvw format) to the directory where your apps are located. Example path: *<user>\Documents\Qlik\Sense\Apps*. The location of the *Apps* directory depends on where you installed Qlik Sense Desktop.
2. Start Qlik Sense Desktop.
   You now see the QlikView document as an app in the hub along with other apps you may have created in Qlik Sense.

   > *You can drag and drop a qvw file from a folder into the Qlik Sense Desktop hub. This results in an app in the hub.*

3. Click on the app to open it.
4. Create a new sheet.
5. Save the app.

The app is automatically saved into the Qlik Sense format, qvf, and you can start adding visualizations, dimensions and measures. Also, the QlikView document (qvw format) is automatically converted into a backup file (qvw.backup format) in case you need the original file again.

You now have migrated a QlikView document into a Qlik Sense app. You can continue work with it, copy it or import it into your server environment via the Qlik Management Console (QMC).

Limitations

Some limitations apply when importing apps to Qlik Sense:

- The memory of your computer must be sufficient -- 32 GB when importing a large QlikView document.
- When a QlikView document with hidden script is imported, the hidden script will be disregarded.
- A QlikView document with section access cannot be imported to Qlik Sense.
- When a Qlik Sense app with section access is imported, the section access will be disregarded and the app opens without restrictions.

Deleting an app

You can delete an app from the Qlik Management Console.

In Qlik Sense Desktop, you can delete an app by long-touching/right-clicking the app in the hub and selecting **Delete**.

2.5 Loading data from a file

After you have created your app, you need to load data into it. You can import data from data connections, such as databases, web files, Microsoft Excel spreadsheets, or delimited text files.

Do the following:

1. In the app overview, click **Data load editor**.
2. Click on a data connection.
   Data connections are displayed in the right-hand side of the data load editor.

   > *You can only see data connections that you own, or have been given access rights to read or update. Please contact your Qlik Sense system administrator to acquire access if required.*

3. Select which data file or database to load.
   After selecting a data source, the **Select data from** dialog is opened.
4. Select tables and fields to load.
5. When you have finished selecting fields, click **Load data**.
   The **Select data from** dialog is closed, and the data is imported. The **Data load progress** dialog shows the results of the data load.
6. When the data load is complete, click **Close**.

You have now loaded data into the app, and you can start creating sheets and visualizations in the app overview. Click and select **App overview**.

If you want to verify that your data is loaded, click and select **Data model viewer**.

Troubleshooting

If you load several files, it is possible that a warning message will be displayed after loading the data. Qlik Sense automatically creates links between fields that have the same name, which, in cases where the two fields contain unrelated data, can lead to unintended links. The two most common warnings are:

Synthetic keys	If two tables contain more than one common field, Qlik Sense creates a synthetic key, a composite of the common fields, to resolve the linking. In many cases, you do not need to do anything about this if the linking is meaningful, but it is a good idea to review the data structure in the data model viewer.
Circular references	If you have loaded more than two tables, any fields common to more than two tables may cause a loop in the data structure. It is recommended that you review the links in the data model viewer, and resolve the issue in the data load editor.

Viewing the loaded data

When you have loaded data into an app, you can use the data model viewer to see how the data is organized and structured.

Do the following:

- From the data load editor, app overview, or sheet view, click in the toolbar and select **Data model viewer**.

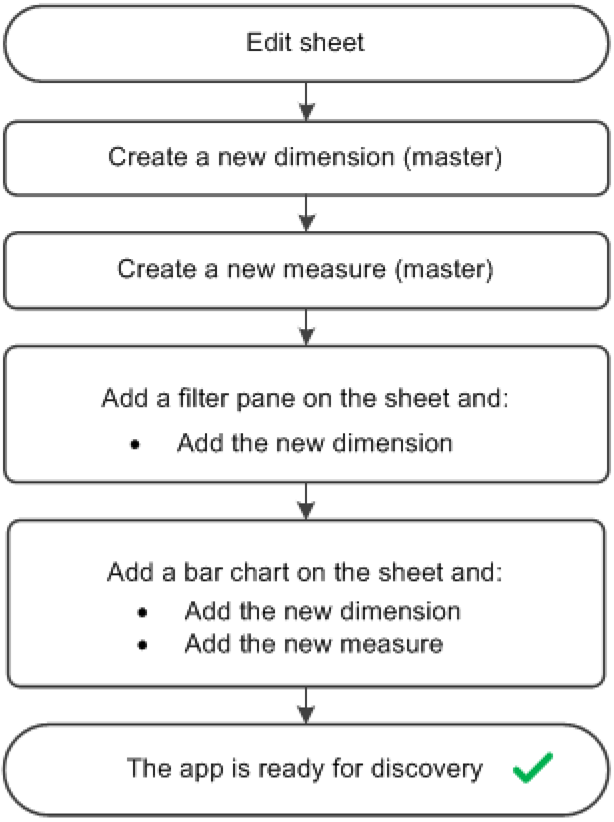
The data model viewer opens and you get an overview of all data tables and fields.

If you find any inconsistencies or problems, you need to resolve them in the **Data load editor** and reload the data until you are satisfied with how your data is organized and structured.

2.6 Adding visualizations

After you have loaded data into your app, you can start adding visualizations to it to expose the data in a way that is understandable to users.

The following steps will help you to add two different visualizations; a filter pane and a bar chart.



Edit sheet

If the sheet is already open and editable you can skip this step and start by creating a new dimension.

Do the following:

1. From the app overview, click to open the sheets area.
2. Click on a sheet to open it.
3. Click **Edit** in the toolbar.
   A panel with assets is opened on the left side.

Create a new dimension (master)

Do the following:

4. In the left panel, click to open **Fields**.
   Here you will find all the fields in all the tables that you have loaded from your Excel file.
5. Click the field **Date**.
6. In the popup, select **Add to master items** and **As dimension**.
   The **Create new dimension** dialog appears with the dimension name already filled in.
7. Click **Add dimension**.
8. Click **Done**.

The new dimension **Date** is saved as a master item ( ).

Create a new measure (master)

Do the following:

9. In the left panel, click to open **Master items**.
10. Click **Measures** and **Create new** to open the **Create new measure** dialog.
    Use the expression editor to enter an expression for the measure.
11. Click *fx* in the **Expression** field.
    The **Add expression** dialog is opened.
12. In the **Field** list, select **Sales**.
13. In the aggregation list below **Sales**, select **Sum**.
14. Click **Insert**.
    The expression is inserted into the expression editor.
15. Click **Apply**.
    You are back to the measure dialog.
16. Enter *Sales* as the measure name. Click **Create**.

The new measure **Sales** is saved as a master item ( ).

Add a filter pane

Do the following:

17. In the left panel, click to open the **Charts** section.
18. Drag the chart type **Filter pane** onto the sheet.

19. Click **Add dimension** and select **Date** from the **Dimensions** section of the list.

The filter pane is complete and shows all the values from the **Date** dimension.

Add a bar chart

Do the following:

20. Drag a second chart type, **Bar chart** onto the sheet.
21. Click **Add dimension** and select **Date** from the **Dimensions** section of the list.
22. Click **Add measure** and select **Sales** from the **Measures** section of the list.

The bar chart is complete and shows the data values from the new dimension and measure as the X-axis and Y-axis of the bar chart.

The app is ready for discoveries

You now have an app with one sheet containing two visualizations and can start using the app.

What are dimensions and measures?

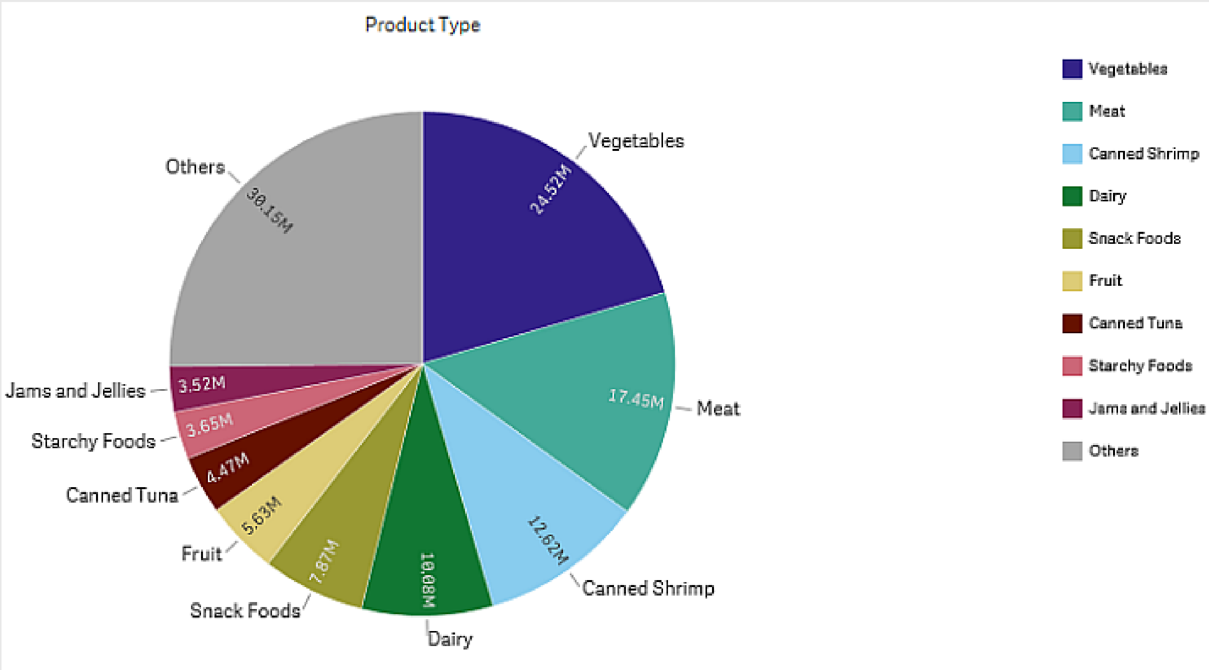
You use a combination of dimensions and measures to supply the visualizations with data. The visualizations are dynamic and change according to your selections when you are analyzing your data.

You use dimensions to determine how the data from the measure is to be grouped - for example total sales per country or number of products per supplier. You typically find a dimension representing the slices in a pie chart or on the x-axis of a bar chart with vertical bars.

You use a measure to decide what part of the data to show in the visualization. For example, the total sales or number of products. A measure is a calculation that uses one or several records in the loaded data together with aggregation functions such as **sum** or **max**. You typically find a measure on the y-axis of a bar chart with vertical bars.

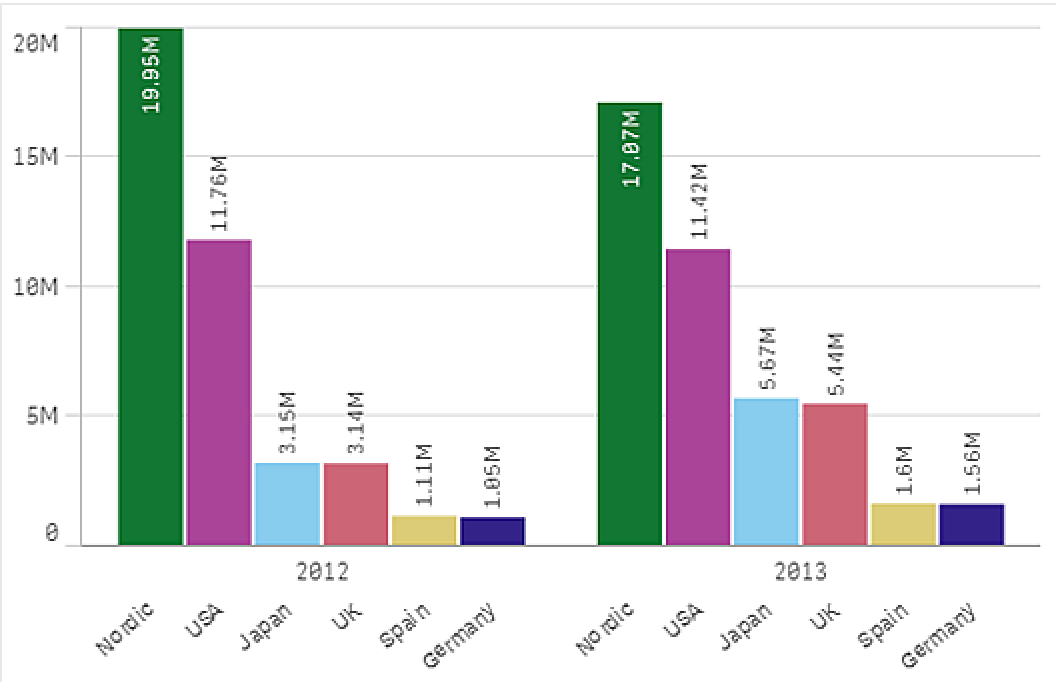
Example 1:

Your data source contains information about costs for different products that are grouped into categories. You use a dimension to determine what to calculate the cost for: *Product Type*. You use a measure to calculate the cost: **sum (Cost)**.



Example 2:

Your data source contains information about sales figures over time in different countries. You use dimensions to categorize the sales: *Year* and *Region*. You use a measure to calculate the sales amount: **sum (Sales)**.



3 Preparing an app for others

Once you have created and built your app with the sheets and data visualizations you want it to have, you need to fine-tune it for others to use in an easy and efficient manner.

This fine-tuning involves things such as creating reusable master items (visualizations, dimensions and measures), using bookmarks to keep track of important and interesting data selections and connections, and adding a title, description and a thumbnail for the app to make it easier to recognize from the hub.

3.1 Keeping track of important data

When you are analyzing data, you might find something interesting that you want to return to, or share with others. Using bookmarks is a way to easily keep track of a certain selection state on a certain sheet.

Creating a bookmark

Do the following:

1. Make the selections on the sheet that you want to save as a bookmark.
2. Click in the toolbar.
3. Click **Create new bookmark**.
   The name of the sheet and a summary of the selections are used as the title of the bookmark.
4. If you want another name for the bookmark, change it under **Title**.
5. Enter a description of the bookmark under **Description** if you want to.

The bookmark is automatically saved.

When you search in bookmarks, matches in the title and in the description will be found.

Changing the title and description of a bookmark

You can change the title and description of a bookmark.

Do the following:

1. In sheet view, click in the toolbar.
2. Click next to the bookmark you want to edit.
3. Click .
4. Make your changes to **Title** and **Description**.

The changes are automatically saved.

You can also edit bookmarks from the app overview using the same procedure.

Searching for bookmarks

Do the following:

1. In sheet view, click in the toolbar.
2. Type your search criteria in the search field.
   The list is filtered as you type.
3. Click the bookmark you want to use.

The selections of the bookmark are applied for all sheets and visualizations in the app.

The search function finds matches in the title and in the description.

Deleting bookmarks

Do the following:

1. In sheet view, click in the toolbar.
2. Click next to the bookmark you want to delete.
3. Click .
4. Click .

The bookmark is deleted.

You can also delete bookmarks from the app overview using the same procedure.

3.2 Changing the title and description of an app

You can change the title and description of your apps. When creating a new app, the name of the app is used as its title. When you change the title, the name of the app is not changed.

Do the following:

1. In the app overview, click in the app details area.
2. Edit **Title** and **Description**.
3. Click again.

The changes you made are saved.

You can only change the title and description of an unpublished app.

3.3 Changing the thumbnail of an app

You can replace the default thumbnail of an app with another thumbnail, to make it easier to distinguish between apps in the hub. You can use one of the default images, or an image of your own.

Do the following:

1. In the app overview, click ✎ in the app details area.
2. Click 🖼 on the default thumbnail.
   A folder with images opens.
3. Select the image you want to use as a thumbnail for the app and click **Apply**.
4. Click ✎ again.

The image you selected is now used as a thumbnail for the app.

The optimal aspect ratio of a thumbnail is 8:5 (width:height).

For Qlik Sense: If the folder is empty, or you want to add your own images, you need to use the Qlik Management Console to upload images to the folder.

For Qlik Sense Desktop: If the folder is empty, or you want to add your own images, you find the folder at: <user>\Documents\Qlik\Sense\Content\Default

The following formats are supported: .png, .jpg, .jpeg, and .gif.

If you want to revert to the default thumbnail, click ⊗ in the upper left corner of the thumbnail while editing the app details.

You can only change the thumbnail of an unpublished app.