Collaborate in Qlik Sense

Qlik Sense®
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1   About this document

This guide will introduce you to working with data storytelling, publishing, and exporting and printing, to make content available to other users.

Qlik Sense is developed with collaboration in mind and provides tools to help create a common understanding to support decisions and influence others.

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.

You find the online help, additional guides and much more at help.qlik.com/sense.

2   Sharing insights with data storytelling

Data storytelling provides a way to share your data insights, whether they belong to a larger discussion or the main topic.

The purpose of data storytelling is to turn data discoveries into a story. Emphasizing important elements helps create convincing stories and supports stakeholders in decision-making.

Data storytelling lets you combine reporting, presentation, and exploratory analysis techniques to create and collaborate. You take snapshots of your discovered data to use in stories composed of slides. Snapshots can be enhanced with effects. This lets you emphasize the data insights you want your audience to focus on.

As you tell the story, you can answer questions by switching to a snapshots source and accessing live data. This guides your story to new directions, triggering new conversations and deeper insights.

Storytelling becomes interactive by inserting live data sheets in slides, and making selections while presenting.

For a visual demo about storytelling, see Sharing insights with data storytelling.

2.1   The story

In data storytelling, you use a story to collect and present insights and ideas to your audience. A story is presented as a timeline of slides. It can be based on traditional data storytelling structures, such as a three-act play or a hero's journey.

Stories are contained within an app. A story is connected to its app, so you can return to the live data anytime, to discover new and hidden stories.

To build a story you use time-based snapshots of your data visualizations and live data sheets and place them on the story's timeline.

You can, for instance add text and shapes, put emphasis on certain insights with visual effects, apply styling, and so on, to make the story compelling and engaging, and its purpose very clear.

> *You can download the story if you want to present it outside of Qlik Sense.*

2.2   Snapshots

A snapshot is a graphical representation of the state (type and data) of a data object at a certain point in time that you can use when you build stories. The snapshot you take is a copy of the state. This means that the state of the snapshot does not change when the state of the corresponding data object gets updated.

Snapshots capture individual objects on a sheet during the analysis process. They store the visualization and data as you see it at that time enabling you to use them at a later point in time to tell a story. Each snapshot contains a bookmark back to the original context so that you quickly get access to the live data.

When you take a snapshot you can make an annotation for your snapshot. The annotation helps you distinguish between the different snapshots in the snapshot library when you build your story. The annotation is not visible when you play the story.

> ⚠️ *A snapshot's state and selections will not be updated at a data reload. It will always reflect the data that existed at the point in time the snapshot was taken.*

2.3   Live data sheets

Using live data sheets in stories you can make sheet selections while playing the story. This way, you can show your insights without going to the app itself.

Playing a story, you can make and reset selections in the live data sheets. It works the same way as in any sheet, in sheet view.

> ℹ️ *The reset gives you the possibility to always return to the same selections as when you inserted the live data sheet on the slide.*

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2.4   Collecting insights for stories using snapshots

To get your app's full picture, you need a way to collect the insights you encounter. To do this, you take static snapshots of your visualizations.

A snapshot is a graphical representation of the state (type and data) of a data object at a certain point in time that you can use when you build stories. The snapshot you take is a copy of the state. This means that the state of the snapshot does not change when the state of the corresponding data object gets updated.

When you take a snapshot you can make an annotation for your snapshot. The annotation helps you distinguish between the different snapshots in the snapshot library when you build your story. The annotation is not visible when you play the story.

After taking snapshots of a specific visualization, you can open the **Snapshot library** from the visualization's shortcut menu. From there you can decide which snapshots to keep and use in your stories. You can also edit the annotation and delete the snapshots.

> *When the snapshot library is opened from storytelling view, all the snapshots from all the visualizations in the app are displayed.*

If the visualization you want to take a snapshot of is an extension, make sure to enable the snapshot functionality in its main script. To do that, set the snapshot property to true.

Taking a snapshot

When you are in sheet view, you can take snapshots of the visualizations and use them to build a story in data storytelling.

You can take snapshots of all the different visualization types but not the filter panes.

Do the following:

1. In sheet view, go to the visualization.
2. Right-click on the visualization or click the hover menu •••.
3. Click **Storytelling snapshots** > **Take Snapshot** .
4. The snapshot is taken and saved to the snapshot library. It will have the same title as the visualization.

Viewing snapshots

When you are working on a story you can view all your snapshots from the snapshot library.

Do the following:

1. In storytelling view, click in the story tools panel.

   The snapshot library is opened with your snapshots sorted by date with the most recent snapshot on top.

2. Click to close the snapshot library.

Editing annotations

When taking a snapshot you can choose to add an annotation. From the snapshot library, you can change the annotations or add annotations to snapshots without annotations.

Do the following:

1. In storytelling view, click 📷 in the story tools panel.

   The snapshot library is opened with a list of all your snapshots.

   > 💡 *In sheet view, right-click the visualization you want to view snapshots for, click* •••
   > *and select **Snapshot library** in the shortcut menu.*

2. Click ✏.

3. Click the annotation text area, to the right of the snapshot name.

   > ℹ *You cannot edit annotations for snapshots that belong to a published version of an app.*

4. Edit the annotation.

5. Click ✏ or outside the text area.
   The annotation is saved.

6. Click outside the library to close it.

Deleting snapshots

You can delete a snapshot from the snapshot library, which contains all snapshots you have taken in the app. You cannot delete snapshots that belong to a published version of an app.

Do the following:

1. In storytelling view, click 📷 in the story tools panel.

   The snapshot library is opened with a list of all your snapshots.

   > 💡 *In sheet view, right-click the visualization you want to view snapshots for, click* •••
   > *and select **Snapshot library** in the shortcut menu.*

2. Click ✏.
   Editing is enabled.

3. Select the snapshots you want to delete.

   > ℹ *You cannot delete snapshots that belong to a published version of an app.*

4. Click 🗑.

   The selected snapshots are deleted.

5. Click ✏ to stop editing.

6. Click outside the library to close it.

2.5   Building stories

The purpose of a story is to gather insight and build narratives from your data. You structure the story to convince your audience, by taking snapshots of your visualizations and put them in slides. To make your slides stand out you can apply visual effects, add text and shapes, and can embed sheets to make your story interactive. A story is connected to its app, so you can return to the live data anytime, to discover new and hidden stories.

Working with stories

The first step, if you have not done yet, is to create snapshots to populate your story.

Then you will create and configure a story, that you can then populate with your data.

Building your story

Working with slides

Slides create the structure of your story, and can contain data snapshots or other information such as images, titles, and live data sheets.

Working with stories

In this section you will find how to work with stories. For instance, you can understand how to create, duplicate and change settings for a story.

Creating new stories

Do the following:

1. From the app overview, click ⧉ to view the stories
   From the storytelling view, in **Assets**, click ▷ **Stories**.
2. Click **Create new story**.
   A new story is created, with the title **My new story**.
3. Give your story a meaningful title and add a description, if you want.
4. Click outside the text area to save the title and description.

The new story is saved.

Editing stories

When you load data into an app you analyze the data to get new insights. You can present your new insights in a new story or in a edited version of an existing story. .

A snapshot's state and selections will not be updated at a data reload. It will always reflect the data that existed at the point in time the snapshot was taken. However, live data sheets are not static and will be affected by a data reload.

You can replace a snapshot of a visualization on a slide by going to its source, in the app. The visualization will now have updated data. You can take a new snapshot to use in your story.

When you take a snapshot you can make an annotation for your snapshot. The annotation helps you distinguish between the different snapshots in the snapshot library when you build your story. The annotation is not visible when you play the story.

> 💡 *If you want to keep the original story, make a duplicate of it before you start editing.*

> 💡 *You can download the story if you want to present it outside of Qlik Sense.*

Changing the titles and descriptions of stories

You can change the title and description of your stories.

Note the following:

- To change the name or description of a story, the app must be in your personal cloud or group workspace.

Changing titles and descriptions from the app overview

Do the following:

1. In the app overview, click ⊞ **Stories**.
2. Click ••• on the story and select **Details**.
3. Click **Edit details**.
4. Edit **Title** and **Description**.
5. Click **Done**.

Changing titles and descriptions from the storytelling view

Do the following:

1. In the storytelling view, click **Assets**.
2. Click ⊙**Stories**.
3. Click ••• on the story and select **Details**.
4. Click **Edit details**.
5. Edit **Title** and **Description**.
6. Click **Done**.

Changing the thumbnails of stories

You can replace the default thumbnail of a story with another thumbnail, to make it easier to distinguish between stories in the app overview and in the story navigator. You can use one of the default images, or an image of your own.

Changing thumbnails in the app overview

Do the following:

1. In the app overview, click ⊞ **Stories**.
2. Click ••• on the story and select **Details**.
3. Click **Edit details**.
4. Click 🖾 on the thumbnail.
   The **Media library** opens.
5. Click on a folder in the media library, for example **In app** or **Default**.
6. Select the image you want to use as a thumbnail for the story and click **Insert**.
7. Click **Done**.

Changing the thumbnails in the storytelling view

Do the following:

1. In the storytelling view, click **Assets**.
2. Click ⊙**Stories**.
3. Click ••• on the story and select **Details**.
4. Click **Edit details**.
5. Click ⊠ on the thumbnail.
   The **Media library** opens.
6. Click on a folder in the media library, for example **In app** or **Default**.
7. Select the image you want to use as a thumbnail for the story and click **Insert**.
8. Click **Done**.

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

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

For Qlik Sense: You can upload images to the **In app** folder in the media library. You need to use the Qlik Management Console to upload images to the default folder.

For Qlik Sense Desktop: You can place images in the following folder on your computer: *C:\Users\<user>\Documents\Qlik\Sense\Content\Default*. Images will be available in the **default** folder in the media library. When moving an app between installations, the images that you use in the app are saved in the qvf file together with the app. When you open the app in a new location, the images will be in the **In app** folder in the media library for the app.

> ⓘ *You can only add or change the thumbnail of an unpublished story.*

Duplicating stories

You can duplicate any story, regardless of whether it belongs to the app or if you created it yourself. The purpose of duplicating stories is to save time by reusing content, and to modify the duplicate to fit your needs.

A duplicated story contains the same content as the original story, and is linked to the same snapshots. The duplicated story will not be updated if the original story is updated. Duplicated stories appear under **My stories** in app overview and in the story navigator.

Duplicating a story from app overview

Do the following:

1. Click 🖵 on the left-hand side to show the stories of the app.
2. Right-click a story.

The shortcut menu opens.

3. Click **Duplicate**.

The new story is created. It is located under **My stories**.

Duplicating a story from the storytelling view

Do the following:

1. In the storytelling view, click **Assets**.
2. Click ⊙**Stories**.
3. Click ••• on the story and select **Details**.
4. Right-click a story and select **Duplicate**.

The new story is created. It is located under **My own**.

> *You can also duplicate a story when you are in storytelling view, using the story navigator* ▣ *.*

Deleting stories

Do the following:

1. In the app overview, click ▣ to view the stories.
    Alternatively, from the storytelling view, click ⊙**Stories**.
2. Click ••• on the story and select **Delete**.
3. Click **Delete**, to confirm that you want to delete the story.

Working with slides

The purpose of slides in a story is to create a structure to your story.

In this section you will find how to work with slides, for instance by adding, reordering and deleting slides. You will find how to add snapshots and live data sheets to slides and how to reorder, resize and copy items on slides.

Learn about the following:

- Creating a slide
- Editing slides
- Organizing slides

Creating a slide

In this section you will find how to add slides to a story, and add data to your slides from multiple sources.

Adding a slide to a story

You can extend your story by adding one or more slides to it.

Do the following:

1. From the storytelling view, click ▷**Stories**.
2. Click on the story you want to add the slide to and click **View all slides**.
3. Click **Add new slide**.

A new slide is added. You can now add contents to the slide, such as snapshots.

Adding a snapshot to a slide

You can add snapshots to a slide from your **Snapshot library**.

Do the following:

1. In storytelling view, click ▣ in the story tools panel.
   The **Snapshot library** is opened. The date stamp and any annotations helps you to distinguish between your snapshots.
2. Locate the snapshot you want to add and drag it onto the slide.
   The snapshot snaps to the grid. You can use the keyboard arrows to move it freely.

The snapshot is placed on the slide.

Adding a live data sheet to a slide

You can add live data sheets to a story slide. When you insert a live data sheet to a story, the current selections of the app are saved with the selected sheet. Every time a live data sheet is viewed in a story, these selections will be applied.

Do the following:

1. In storytelling view, click ▭ in the story tools panel.
   A dialog opens.
2. Click the sheet you want to use in the story.

The live data sheet is added to a new slide.

Editing slides

In this section you will find how to edit and customize slides, by replacing, configuring and reordering slide elements.

Replacing a snapshot on a slide

You can replace a snapshot of a visualization on a slide. This is useful when you want to use another snapshot of the visualization, for example when new data is loaded into the app, if the visualization is changed or if new selections are made.

Do the following:

1. In storytelling view, select a snapshot on a slide, and then click ⬚ in the hover menu. The **Replace snapshot** dialog opens.

    > *You can navigate to the sheet and visualization which the snapshot originated from, by clicking* **Go to source***. By doing this you get access to the live data of the snapshot, where you can make new selections and take new snapshots.*

2. Select the snapshot you want to use.
    The snapshot is updated and adapts to the size of the previous snapshot, using free resize which causes the visualization to use progressive disclosure.

> *Progressive disclosure means the following: If the size of a visualization (or a unlocked snapshot) is increased, its information is disclosed progressively. If the size of a visualization (or a unlocked snapshot) is decreased, its information is reduced, which allows you to focus on the essential information and avoid cluttering the visualization with too much information in too little space.*

The snapshot is replaced on the slide.

Replacing a live data sheet on a slide

You can replace a live data sheet on a story slide.

Do the following:

1. In storytelling view, select a slide with a live data sheet in the story timeline.
    A dialog opens.
2. Click the active sheet.
    A new dialog opens.
3. Select a new sheet to insert.

The selected sheet is added as a live data sheet on the slide.

Copying and moving items on story slides

You can copy and move items on the same story slide or between story slides. You can do this in different ways:

- Using the toolbar on the slide (⧉, ✂ and ⬚).
- With the keyboard shortcuts Ctrl+C, Ctrl+X and Ctrl+V.

> ℹ *You can copy items between stories in the same app, but not between stories in different apps. Switch between stories using ▣ in the toolbar.*

Copying items

Do the following:

1. In storytelling view, click on the item you want to copy.
   The item is highlighted.
2. Click ⧉.
3. To insert the item on another slide, switch to that slide.
4. Click ⬚.

The copied item is placed in front of any other items.

Moving an item to another slide

To move an item between two story slides you first cut it out from one slide and then paste it onto another slide.

Do the following:

1. In storytelling view, click on the item you want to move.
   The item is highlighted.
2. Click ✂.
3. Switch to the slide you want to move the item to.
4. Click ⬚.

The moved item is placed in front of any other items on the slide.

Reordering items on a slide

When you are editing a story slide you can arrange and stack items on top of each other and decide the order in which the stacked items appear. This is useful when items overlap.

Reordering by one level

Do the following:

1. Right-click the item you want to reorder.
   The item's shortcut menu is opened.
2. Select **Bring forward** or **Send backward**.

The selected item is brought one level forward or sent one level backward.

Reordering to the front or the back

Do the following:

1. Right-click the item you want to reorder.
   The item's shortcut menu is opened.
2. Select **Bring to front** or **Send to back**.

The selected item is sent behind or brought in front of all the other items on the slide.

Resizing items on a slide

You can resize an item on a slide by using its resizing handles. When you resize items such as images and text titles, they keep their aspect ratio. Paragraph texts and certain shapes can be resized more freely, both horizontally and vertically.

Snapshots can be resized in two different ways:

- Locked: keeping the aspect ratio.
- Unlocked: allowing free resizing and progressive disclosure.

> *Progressive disclosure means the following: If the size of a visualization (or a unlocked snapshot) is increased, its information is disclosed progressively. If the size of a visualization (or a unlocked snapshot) is decreased, its information is reduced, which allows you to focus on the essential information and avoid cluttering the visualization with too much information in too little space.*

Resizing in general

Do the following:

1. In storytelling view, click on the item you want to resize.
2. Drag one of the resizing handles to resize the item.
   The item snaps to the grid.
3. Release the resizing handle.

The item is resized.

Deleting items from a slide

Do the following:

1. In storytelling view, click on the item you want to delete.
   The item is highlighted.
2. Click 🗑.

The item is deleted from the slide.

> *You can also delete an item by selecting **Delete** from the item's shortcut menu.*

Organizing slides

In this section you will find how to reorganize and delete slides, to structure your story as needed.

Duplicating a slide in a story

You can duplicate a slide in a story.

Do the following:

1. Click the story you want edit and click **View all slides**.
   The story opens with slide thumbnails to the left.
2. Right-click the slide that you want to duplicate.
3. Select **Duplicate**.

The duplicate slide is placed below the original slide.

Reordering slides on the timeline

When you are editing a story you can move slides around on the timeline.

Do the following:

1. Long-touch/click and hold the slide you want to move on the timeline.
2. Drag the slide to a new location.

A gap will open up between the slides at the new location and the slide will be placed there.

Deleting slides from stories

Do the following:

1. Right-click the slide you want to delete on the timeline, while in storytelling view.
   The slide's shortcut menu is opened.
2. Click **Delete slide**.

The slide is deleted from the story and the timeline.

2.6   Making stories compelling

To make your story convincing, you can add emphasis to your insights.

Make sure that you add text, images, and shapes to your story slides. You can even apply effects to your snapshots to get your data to stand out.

Learn about the following:

Adding emphasis

You can add emphasis to your insights to make them clear and engaging for your audience.

You do this by adding effects to your snapshots to highlight certain data points, and at the same time suppressing information that might be irrelevant. In this way, the effects help you reduce information overload for your audience so that they can focus on the key insights you want to present to them.

In this section you find topics that will help you emphasize your insights, for instance how to apply various effects to a snapshot and how to highlight data points in a snapshot.

Another way to emphasize an insight and to reduce information overflow is to hide information. For example you could change a snapshot's appearance so that elements such as titles, axes, data point lines, footnotes, legends, and so on, are hidden.

Applying an effect to a snapshot

You can add different visual effects to your snapshots to make certain values stand out.

> *You can only use effects on bar charts, line charts, and pie charts.*

Do the following:

1. In storytelling view, click �.
   The effects library is opened.
2. Locate the effect you want to use and drag it onto the snapshot.

The snapshot is shown with the visual effect.

Snapshot of a bar chart without effects.
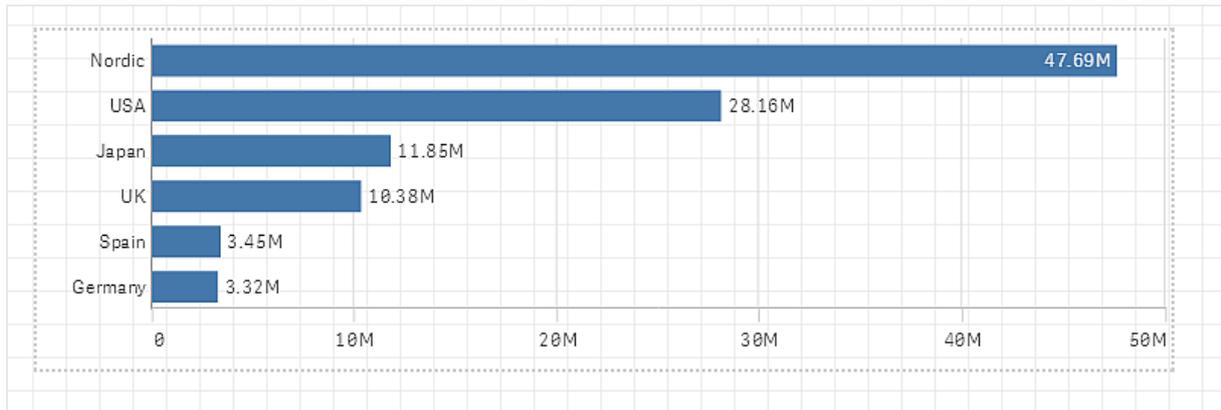
*Snapshot of a bar chart with the effect **Highest value** applied to it.*
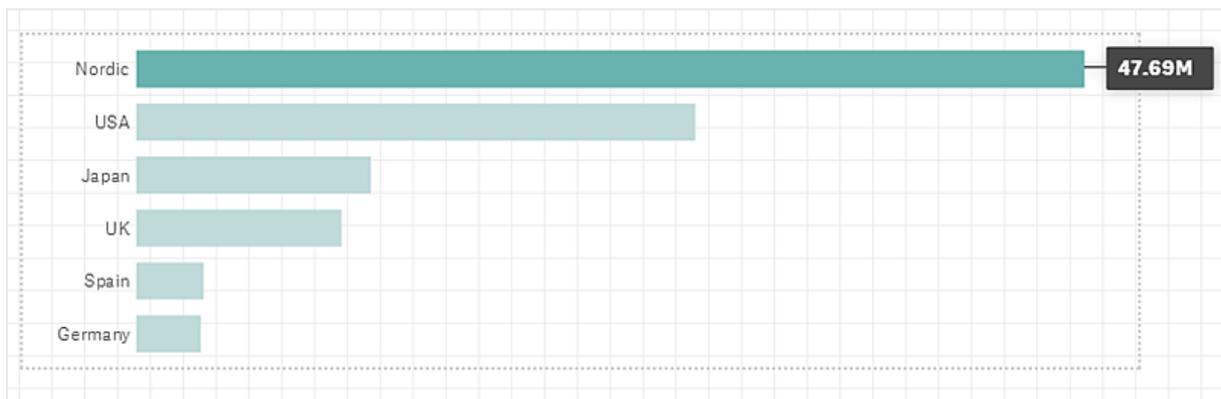
Highlighting data points in a snapshot

For a snapshot with the effect **Any value** applied to it, it is possible to select a certain data point to highlight.

Do the following:

1. In storytelling view, on a slide, select a snapshot with the applied effect **Any value**.
2. Click ✦ in the snapshot.
   A dialog with a list of data points appears.
3. Click one of the data points in the list.

   > ℹ️ *You can also click directly on the data points in the snapshot.*

4. Click outside the snapshot.

The selected data point is now highlighted in the snapshot.

Removing an effect from a snapshot

Do the following:

1. In storytelling view, right-click on the snapshot with the effect you want to remove.
   A shortcut menu appears.
2. In the shortcut menu, click **Remove effect**.

The effect is removed from the snapshot.

Styling with text and shapes

To make your stories compelling you can add stylistic elements. Text, hyper links and shapes are good examples.

In this section you fill find topics that help you style your insights. You can add and format elements by size, color, font style and more.

Adding text to slides

You can add different styles of text to a story slide.

Do the following:

1. In storytelling view, click **Aa**.
   The **Text objects** dialog is opened.
2. Locate the text style you want to add and drag it onto the slide.
   The text object is placed on the slide and snaps to the grid. You can use the keyboard arrows to move it freely.
3. Double-click on the text object or click ✏.
4. Type your text.
5. Click outside the text object or click ✏.

The text is saved.

Formatting text on slides

On a story slide you can change the format of your texts with the text formatting toolbar. You can change color, size, font style, and text alignment. Additionally, you have options for adding links and bookmarks.

Text formatting toolbar for paragraph text object.

> ℹ️ *To enable a text object for formatting, you double-click on it.*

Changing font styles

Do the following:

1. Double-click on the text object you want to format, while in storytelling view. Or, click on the text object and click ✐.
   The text formatting toolbar appears.
2. Select the text you want to style.
3. Click one or more of **B**, **I** and **U**.
4. Click outside the text object or click ✐.

The font style of the text is changed.

Changing font size of paragraphs

Do the following:

1. Double-click the **Paragraph** text object you want to format, while in storytelling view. Or, click on the text object and click ✐.
   The text formatting toolbar appears.
2. Select the text you want to resize.
3. Click ▼ next to the font size indicator and select a size: XS, S, M, L or XL.
4. Click outside the text object or click ✐.

The font size of the text is changed.

Changing font size of titles

Do the following:

1. Click the **Title** text object you want to format, while in storytelling view.
2. Drag one of the corners to change the font size.
3. Click outside the text object or click ✐.

The font size of the text is changed.

Changing text alignment of paragraphs

Do the following:

1. Double-click the **Paragraph** text object you want to format, while in storytelling view. Or, click on the text object and click ✐.
   The text formatting toolbar appears.
2. Click in the text paragraph you want to align.
3. Click ≡, ≡ or ≡.
4. Click outside the text object or click ✐.

The text alignment is changed.

> ⓘ   *By default, the text is left-aligned.*

Changing text color

Do the following:

1. Double-click the text object you want to format, while in storytelling view. Or, click on the text object and click ✎.
    The text formatting toolbar appears.
2. Select the text you want to change color on.
3. Click ▼ next to the color indicator in the toolbar.
    A color palette appears.
4. Click on a color in the palette.
5. Click outside the text object or click ✎.

The color is applied to the text.

Adding a shape to a slide

You can add different types of shapes on a slide.

Do the following:

1. In storytelling view, click ⬚◯.
    The shapes library is opened.
2. Locate the shape you want to use and drag it onto the slide.
    The shape is placed on the slide and snaps to the grid. You can use the keyboard arrows to move it freely.

The shape is placed on the slide.

Formatting shapes on a slide

Using the shapes formatting toolbar you have the following options to format your shapes:

- Color

Changing the color of a shape

Do the following:

1. In storytelling view, click the shape you want to format.
    A toolbar with color options appears.
2. Click the color square in the toolbar.
    A color palette appears.
3. Click a color.
4. Click outside the shape.

The color is applied to the shape.

Adding bookmarks to a slide

Via the text formatting toolbar, there is a link option where you can add bookmarks inside a text object.

Adding bookmarks

You can mark a text paragraph and use it as a bookmark.

Do the following:

1. In storytelling view, double-click the text object in which you want to add the bookmark. The text formatting toolbar appears.
2. Select the text paragraph that you want to use as a bookmark.
3. Click $\mathscr{O}$.
    A dialog opens.
4. Click **Bookmarks** on the right and select a bookmark from the list.
5. Click outside the text.

The bookmark is added.

Adding images to a slide

You can add an image to a story slide. You can use one of the default images, or an image of your own.

Do the following:

1. In storytelling view, click ⊡.
    The **Media library** opens.
    The following formats are supported: .png, .jpg, .jpeg, and .gif.
    For Qlik Sense: You can upload images to the **In app** folder in the media library. You need to use the Qlik Management Console to upload images to the default folder.
    For Qlik Sense Desktop: You can place images in the following folder on your computer: *C:\Users\<user>\Documents\Qlik\Sense\Content\Default*. Images will be available in the **default** folder in the media library. When moving an app between installations, the images that you use in the app are saved in the qvf file together with the app. When you open the app in a new location, the images will be in the **In app** folder in the media library for the app.
2. Click on a folder in the media library, for example **In app** or **Default**.
3. Select the image that you want to add to the slide.
    A preview of the image is shown.
4. Click **Insert**.

    > ⓘ *Alternatively, right-click the image file you want to add and select **Insert***.

The image is added and snaps to the grid. You can use the keyboard arrows to move it freely.

> **ℹ** *If the image is larger than the width or height of a slide, it will be re-sized to fit on the slide.*

Adding links to a slide

Via the text formatting toolbar, there is an option for adding a link inside a text object.

Adding links

You can mark a text paragraph and use it for a link.

Do the following:

1. In storytelling view, double-click the text object in which you want to add the link.
   The text formatting toolbar appears.
2. Select the text paragraph that you want to use for the link.
3. Click 🔗.
   A link dialog opens.
4. Type the web address that you want to link to, in the **Link to** field.

   > **ℹ** *If you do not add a prefix, http:// is added automatically, assuming that you are adding a web address.*

5. Click 🔗 or press Enter, to apply the new link.
6. Click outside the text.

The link is added.

Removing links

You can remove a link from a text paragraph.

Do the following:

1. Double-click the text object you want to remove the link from, while in storytelling view.
   The text formatting toolbar appears.
2. Click the link so that the cursor is somewhere inside it.
3. Click 🔗.
   A link dialog opens.
4. Click 🗑
5. Click outside the text.

The link is removed, but the text paragraph is kept.

Changing a snapshot's appearance

One way to make insights stand out and help you getting your message through in a clear way is the possibility to hide, or show, certain parts of a snapshot.

Changing snapshot properties

The following list summarizes the editable properties:

- Titles (main title, subtitle and footnote)
- Grid line spacing
- Labels (data point labels, leaf labels, dimension labels)
- Legend
- X-axis with title and labels
- Y-axis with title and labels

Do the following:

1. In storytelling view, click the snapshot you want to edit.
2. Click ✏.
   A dialog where you can change the snapshot's appearance is opened.
3. For **Show titles** click either **On** or **Off** to show or hide main title, subtitle and footnote.
4. For **Grid line spacing** you can set the spacing of the grid lines to **Auto** or **Custom** and select one of the options **No lines**, **Wide**, **Medium** or **Narrow** from the drop-down list.
5. For **Value labels** click either **Auto** or **Off**.
6. For **Show legend** click either **Auto** or **Off**.
7. For **x-axis** and **y-axis Labels and title**, select one of the options **Labels and title**, **Labels only**, **Title only** or **None** from the drop-down list.
8. Click **Done**.

The snapshot's appearance has changed.

> 💡 *If you select auto and the property is not shown, you need to increase the size of the snapshot.*

A snapshot dialog with grid lines and only the x-axis and the data labels visible.
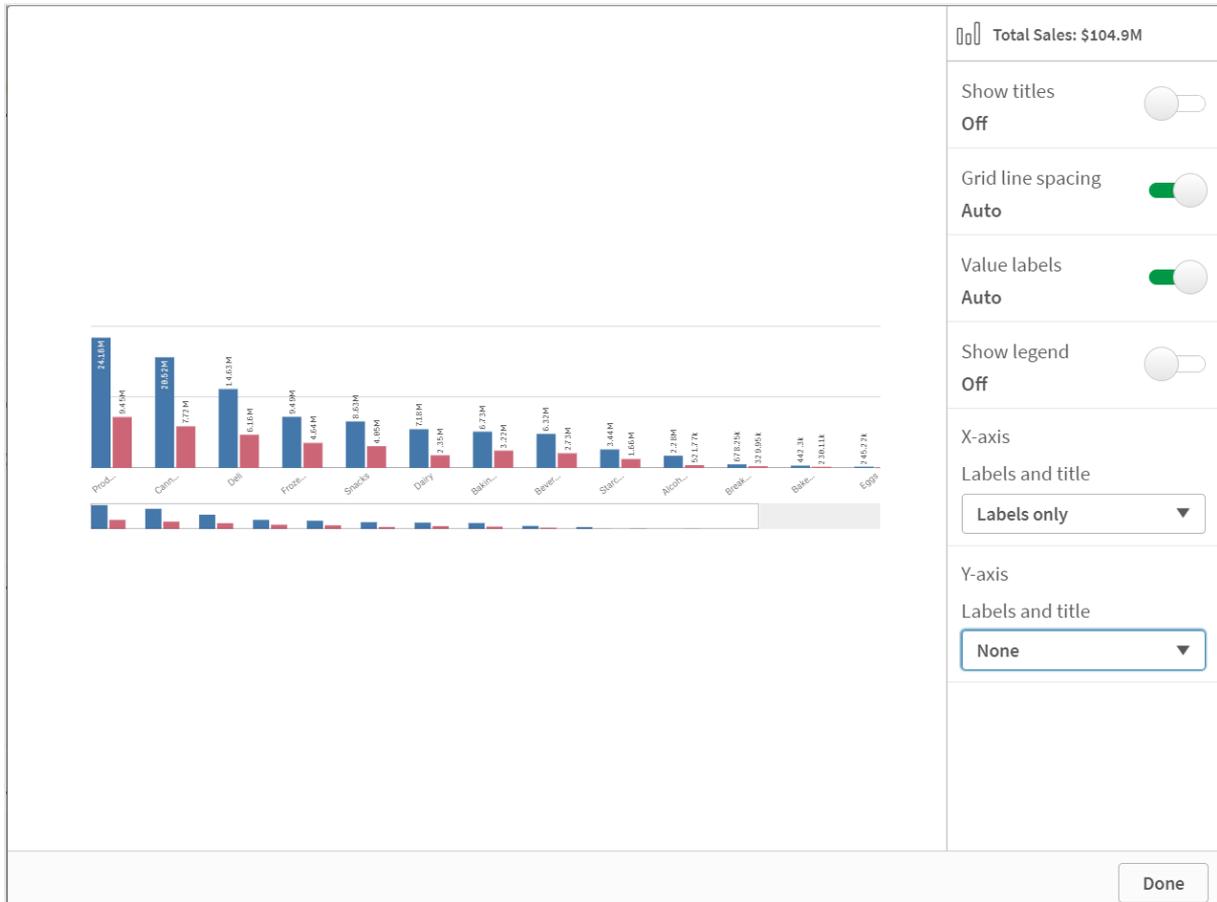
Changing the aspect ratio when resizing a snapshot

When you resize a snapshot you can choose to unlock the aspect ratio to enable free resize. Then the resize causes the visualization to use progressive disclosure.

> *Progressive disclosure means the following: If the size of a visualization (or a unlocked snapshot) is increased, its information is disclosed progressively. If the size of a visualization (or a unlocked snapshot) is decreased, its information is reduced, which allows you to focus on the essential information and avoid cluttering the visualization with too much information in too little space.*

Do the following:

1. In storytelling view, click the snapshot you want to resize.
2. Click 🔒 to unlock the aspect ratio for free resize.
   🔓 is displayed.
3. Use the handles on the edges to resize the visualization.
   The resize causes the visualization to use progressive disclosure.
4. Click 🔓 to lock the aspect ratio.

You now have changed the aspect ratio in the snapshot and resized the visualization.

> *If f you resize the visualization when 🔒 is displayed, the image is resized without progressive disclosure.*

2.7   Presenting stories

While building your story you can see how looks and behaves for an audience, by playing it. It will occupy the whole browser view. You can see what your snapshots, live data sheets, texts, shapes, and visual effects look like.

If your audience asks questions, you can access the live data of your snapshots and your live data sheets. This way, you can find hidden stories to present, steering your story to new directions.

You can play a story as it would be presented to an audience. There are controls for you to navigate back and forth through the slides. On a slide with a live data sheet inserted, you must first click the sheet before you can start making selections in it.

Entering play

Do the following:

- In storytelling view, click ▶ **Play story**.

The story is opened in is ready to play starting with the current slide.

> *You can also start playing a story by right-clicking it in the app overview or the story navigator, and selecting **Play** from the shortcut menu.*

> *On a touch device you can zoom in and out on the slide by using the pinch touch gesture. When you zoom in, you cannot make selections in live data sheets.*

Showing data point information

Do the following:

- Hover over a data point to display a tool tip with data point information.

Interacting with a live data sheet

To interact and make selections in a live data sheet you need to click somewhere on the sheet first.

Do the following:

- Click on the live data sheet.

You can now make selection in the sheet.

> ℹ️ *You disable the possibility to make selections by clicking outside the live data sheet, or by navigating to another slide.*

Downloading stories

Do the following:

1. Click ••• at the bottom of the slide.
2. Click ↗ and select your format.

For more information, see *Downloading a story (page 61)*.

Closing play

Do the following:

- To close play either click ✖ or press Esc.

Accessing the live data of a snapshot

From a snapshot (on a story slide) you can navigate to the sheet and visualization it originated from. By doing this you get access to the live data of the snapshot where you can make new selections to take your story in new directions.

Do the following:

1. In storytelling view, navigate to a story slide with a snapshot.
2. Right-click the snapshot.
   The snapshot's shortcut menu is opened.
3. Select **Go to source**.

You are directed to the sheet where the snapshot originated from. And the visualization which the snapshot was taken of, is initially highlighted.

> ⚠️ *A snapshot shows data according to the access rights of the user who takes the snapshot, and the snapshot can then be shared in a story. However, when users return to a visualization from a story to see the live data in the app, they are restricted by their own access rights.*

> ℹ️ *If the that the snapshot came from is no longer available, you are still directed to the originating sheet. If the whole sheet where the visualization was placed on is no longer available, you stay in storytelling view and get an error message stating **Sheet is missing**.*

> You can also access a snapshot's live data while playing the story.

Accessing a sheet from a slide

When you play a story, you can navigate from a live data sheet to the sheet in sheet view. By doing this you get access to the original sheet with your selections applied to it. You can then make new selections to take your story in new directions.

Do the following:

1. While playing the story, navigate to a story slide with a live data sheet.
2. Click **Go to sheet**.

You are directed to the sheet in sheet view carrying with you the selections you have made on the live data sheet.

Selecting in a live data sheet

When you play a story you can make selections in live data sheet just as you can in a sheet in sheet view.

Enable selections

Do the following:

1. In storytelling view, click ▶ above the timeline.
2. Navigate to a slide with a live data sheet.
3. Click on the sheet to enable it for selections.
   The sheet is possible to interact with.
4. Start making selections in the visualizations.

The visualizations respond to selections and filter out subsets of the data.

> You disable the possibility to make selections by clicking outside the sheet, or by navigating to another story slide.

When you are playing a story on a small screen you must go to sheet view to view the sheet and make selections.

Reset selections

You can reset the selections you have made on the live data sheet.

Do the following:

- While playing the story and with some selections made on a live data sheet, click **Reset selections**.

The sheet's selections will be reset to the same selections it had at the time you inserted the live data sheet on the slide.

> The reset gives you the possibility to always return to the same selections as when you inserted the live data sheet on the slide.

2.8   Troubleshooting - Using data storytelling

This section describes problems that can occur when using data storytelling in Qlik Sense.

I cannot edit a story

I want to make changes to a story but I cannot edit it.

Possible cause

The story is published.

Proposed action

If you created the story, unpublish the story to enable editing.

For more information, see *Unpublishing a story (page 45)*.

Proposed action

If you did not create the story, make a duplicate of the story to enable editing. The duplicated story will not be updated if the original story is updated.

For more information, see *Working with stories (page 10)*.

A sheet is missing

When I play a story a sheet is missing.

Possible cause

The sheet has been deleted.

The sheet is private (located in another user's **My sheets**).

Proposed action

If the sheet is private, ask the owner of the sheet to publish it.

For more information, see *Publishing (page 35)* and *Publishing a sheet (page 43)*.

I cannot change a snapshot's appearance

I want to use auto for a snapshot property but the snapshot's appearance is not affected.

2 Sharing insights with data storytelling

Possible cause

The snapshot is too small.

Proposed action

In storytelling view, increase the size of the snapshot.

For more information, see *Editing slides (page 16)*.

I cannot take a snapshot

I want to take a snapshot but it is not possible.

Possible cause

The visualization you are trying to take a snapshot of is incomplete.

The visualization you are trying to take a snapshot of is an extension. Extensions do not have enabled snapshot functionality by default.

The visualization you are trying to take a snapshot of is a filter pane. Snapshots of filter panes are not supported.

Proposed action

Complete the visualization.

Enable snapshot functionality in the main script of the visualization extension. To do this you have to set the snapshot property to true. You need permission to edit the script or need to get help from a developer.

I cannot re-order slides in a story

I want to move a slide in the story timeline but it is not possible.

Possible cause

You are using the mouse on a hybrid device.

Proposed action

Do one of the following:

- Turn touch device support off by tapping the navigation button (•••) and toggling off **Touch screen mode**.
- Hold the mouse button pressed for a while before moving the slide.
- Alternatively, use the touch screen instead and move the item by long-touch and drag.

The data in my snapshot does not exist in the visualization

When I go to the snapshot source, I cannot see the same data in the visualization as in the snapshot.

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Possible cause

The user taking the snapshot has access to data you do not. This is because of section access rights defined in the data load script.

Proposed action

Request the same section access rights for you in the script.

3 Publishing

3 Publishing

Publishing is a way to share the content of an app. You publish an app to a stream.

Those who have access rights to a stream can analyze data by interacting with the visualizations in the app.

You can also publish an app to a collection, making it available to users outside of your Qlik Sense Enterprise deployment.

Typically, you publish an app when you have stopped working on the design. Designing an app includes creating the visualizations, and organizing the presentation of the app. You can republish a published app to update it with new content.

When you publish an app, it is locked. Others cannot edit your published sheets and stories, but they can use them to interact with and analyze the data. New sheets and stories can be approved for inclusion in the public sheets and stories of a published app. This enables the collaborative design content in a published app.

In Qlik Sense Enterprise, your administrator can publish apps from the Qlik Management Console. The owners of an app can also publish their apps from the hub and move their published apps between streams. All published apps are evaluated by distribution policies set up by your Qlik Sense administrator. These policies determine whether or not the app will be distributed for consumption in a Qlik Sense Enterprise cloud hub.

Additionally, in Qlik Sense Enterprise, reports can be distributed from Qlik NPrinting to the Qlik Sense Enterprise hub. A link to a QlikView document can also be published in the Qlik Sense Enterprise hub.

3.1 Distribute your insights

Depending on your Qlik Sense Enterprise deployment, there are different ways to develop and publish apps.

You can develop an app by yourself and then publish it to a stream to make it available to consumers. If you are developing apps collaboratively, you can publish an app to a stream where reviewers and collaborators can add sheets and stories. You can then include these sheets and stories in the public content of your app before publishing it to a stream for consumers.

The following is a sample workflow for developing and publishing apps.

> Publish your app to a Qlik Sense Enterprise review stream.
>> When you have created a data-model and created visualizations in your app, you can publish to a stream dedicated for reviews so that other Qlik Sense Enterprise hub users can access, collaborate, and provide feedback.

Manage the collaborative development of the published app.
Once the app is in the review stream, other developers can add sheets and stories to the app. Sheets and stories are private by default. However, developers can publish them as community sheets and stories to make them available to other users.
As the app owner, you can add community sheets and stories to the public sheets and stories of your app. This enables the sheets and stories to be included when the app is duplicated or exported.

Manage your app properties.
Qlik Sense administrators can create custom properties that are used for tasks such as limiting access to the app to certain users or groups. You can add these custom properties to your app in the hub.

Move your published app to a consumption stream.
When you have completed the review and collaborative development of the app, you can move your published app to a consumption stream, where the target consumers can access the app.

Republish the app.
Optionally, republish the app to make any necessary updates to the published app, such as new public sheets or updates to the data model.

Retire the app to an archive stream.
When the app is no longer required, you can remove it from the consumption stream to an archive stream.

3.2   Publishing to Qlik Sense Enterprise streams

The Qlik Sense Enterprise administrator publishes apps to a stream from the Qlik Management Console. The sheets and stories in the app are then available to the users that have access to the stream. You can publish your own apps from the hub, to a stream which you have publish access to. You can also move your published apps between streams from the hub.

An app that has been published to a stream is locked, although the owner of a published app can edit the thumbnail, app name, and the description of their published app. Others can interact with the visualizations and analyze the data. However, no one can edit the public sheets and public stories that were published with the app. If you have the correct access rights, you can add your private sheets and stories to a published app.

If you own a published app, you can add your private sheets and stories to a published app, and approve your own and community sheets for inclusion in the public sheets of an app. You cannot edit the public sheets and public stories of the app, but you can make them private sheets and stories if you want to edit them.

If a published app needs to be changed, it can be republished, updating the published app with content from a duplicate.

Streams

The content in the hub is organized in streams. A stream is a collection of apps that a group of users has specific access to. The users of the stream can have different access rights. Some users might only be able to read the content in the stream, while others might have the rights to publish their content to the stream.

By default, Qlik Sense includes a stream called Everyone, which all users have both read and publish rights to.

All users have their own spaces, **Work** and **Published**, for the content they own. **Work** contains personal unpublished apps. **Published** contains links to your published apps. These links enable you to keep track of your published work and perform tasks such as moving or duplicating a published app more easily. You can also mark your favorite apps for easy access. The **Favorites** space appears after you tag at least one app as a favorite, and then refresh the page.

The read and publish rights on the streams are defined in the Qlik Management Console.

You can use a duplicate of a published app to use as a template for a new one.

You can move your own apps from the hub between streams to which you have publish access.

Sheets and stories

You can create private sheets and stories as a part of a published app. These sheets and stories can be published as part of the app. Published sheets and stories can be added to public sheets of an app by the app owner. You can also remove public sheets and stories from your app and make them published sheets and stories.

When working with a published app, sheets and stories are organized in sections in the app overview depending on their status.

Sample app with overview showing four sections: **Public** *,* **Community** *,* **Published by me** *, and* **My own** *.*

Sheet view sections

Section	Description
Public	Sheets and stories that were included in the app when it was published or republished, or added to the public sheets and stories of the app after it was published. All users of the app have access to these.
Community	Sheets, bookmarks, and stories that someone else has created and published to the app that you have access to. Sheets and stories in this section can be added to public sheets and stories.
Published by me	Sheets, bookmarks, and stories that you have created and then published so that all the users of the app can access them. The other users will find these in their **Community** section. Sheets in this section can be approved for inclusion in public sheets.
My own	Sheets and stories that you have created but not published. No one else can see these.

Bookmarks

Bookmarks created in an app before it is published will become public bookmarks in the published app. After the app is published, new bookmarks can be created and published as community bookmarks.

Interacting with apps

The tasks that you can perform in an app depend on whether or not that app has been published.

Unpublished app

You can:

- Edit the load script and reload the data.
- View the data structure and details about the data from the data model viewer.
- Create, edit, and delete sheets, visualizations, and bookmarks.
- Create master items (dimensions, measures, and visualizations) for reuse.
- Navigate between sheets, stories, and bookmarks.
- Make and clear selections.
- Apply/recall bookmarks.

Published app

You can:

- Navigate between sheets.
- Explore sheets and visualizations that were included in the app from the beginning.
- View stories that were included in the app from the beginning.

- Create and edit your own private sheets, visualizations and stories based on the data in the app.
- Publish sheets, stories, and bookmarks that you have created so that others can use them.
- Unpublish sheets, stories, and bookmarks that you have published so that they become private again.
- Update your private sheets.
- Add published sheets and stories to the public sheets and stories.
- Remove sheets and stories from the public sheets and stories.
- Copy and paste visualizations between sheets.
- Use master items (dimensions, measures and visualizations) that were included in the app from the beginning.
- Create and edit your own private bookmarks.
- Make and clear selections.
- Apply/recall bookmarks.
- Access the data model viewer, if you are the owner of the app with the default permissions.

You cannot:

- Edit the load script or reload the data.
- Access the data model viewer if you do not own the app.
- Edit visualizations, sheets, stories and bookmarks that were included in the app from the beginning.
- Edit sheets and stories that have been published.

Publishing an app from the hub

You can publish an app that you have created to any stream to which you have publish access. If you have published an app to a stream, you can move your app between streams to which you have publish access.

When you publish an app to a stream, the app is added to that stream. A link to that app is also added to **Published** and marked with ≋ to indicate the app is in a stream. This enables you to keep track of your published work and perform tasks such as moving or duplicating a published app more easily. When publishing an app, you can also add or remove app properties created by your Qlik Sense administrator to your app. For information on app properties, see *Managing app properties (page 42)*.

When you publish an app or move a published app between streams, the sheets and stories of the app will become available to the other users that have access to the stream that your published app belongs to.

It is recommended that only the developer publishes their own app to ensure it is not published while still under development. If an app is published by accident, it may start to comply with the

load balancing rules designated for published apps. As a result, the developer loses access to the app. To regain access, the developer needs to log out and log back in, as this action will reset the load balancing rules and potentially restore access based on the new session evaluation.

> The **Variables** overview is not available in published apps. If you need to add or change variables in an published app, use the variable input control available with the Dashboard bundle.

A published app can only be deleted from the QMC.

> To avoid exposing restricted data, remove all attached files with section access settings before publishing the app. Attached files are included when the app is published. If the published app is copied, the attached files are included in the copy. However, if section access restrictions have been applied to the attached data files, the section access settings are not retained when the files are copied, so users of the copied app will be able to see all the data in the attached files.

Do the following:

1. In **Work** in the hub, right-click the app and do one of the following:
    - Select **Publish**.
    - Select **Move**.
2. Select the stream you want to publish the app to, in the **Stream name** drop-down list.

    > There is no drop-down if you only have access to one stream.

3. Type a name in the **App name** field (optional). The field displays the name of the app you selected from the hub.

    > It is possible to publish many apps with identical names in a stream. Qlik Sense will indicate when there are published apps with the same name in a stream.

4. If you want to add app properties, click **Manage**, select app properties, select the values, and click **Apply**.
5. Click **Publish** or **Move**.

The published app is now in the selected stream. An entry for the published app is added to **Published** that links to the published app in its new stream.

If you publish or move an app into a stream they are currently viewing, they will be notified and can update the app list for their stream.

Republishing an app from the hub

After you publish an app to a stream, you may need to make changes to the base content of the app without removing the app from the stream.

For example, you might want to continue working on and improving an already published app without losing the community and private content in the published app. To republish an app, you need to duplicate your published app. The duplicate app contains a link to the original app. You then make your changes to the duplicate app and republish it back to the same stream as the published app.

All content in the base section is overwritten with the content from the duplicate when republishing. Content in the original app, such as private and community sheets and stories, are kept when you republish an app.

You can also republish an app from QMC.

Do the following:

1. In **Work**, right-click the duplicated app and select **Publish**.
2. Select **Replace the existing app**.
3. Click **Republish**.

Managing app properties

Your Qlik Sense administrator can create custom properties in QMC for apps.

These properties can be used for tasks such as creating a distribution policy limiting access to apps. An administrator might create a custom property for users or groups and then add the names of the users or groups as values to that property. You can apply these custom properties and specific values from these properties to apps in **Work** and in streams, as well as when you are publishing or moving apps.

> You can add app properties to an unpublished app, but they may not be applied depending on the custom properties settings, which are controlled by your Qlik Sense administrator.

You can view the app properties in the **Manage properties** dialog and from the app details.

Do the following:

1. In the hub, right-click on an app and select **Manage properties**.
   You can also access **Manage properties** from the app details. Click on an app and then click **Manage**.
2. Do one of the following:

- To add properties to your app, select an app property and then select values from that property.
  You can search for values
- To remove app properties, clicking ⊗ on the property value.

3. Click **Apply**.

Publishing a sheet

You can publish sheets that you have created, so that other users can view them.

> ⓘ   *You can only publish sheets as a part of an app that is already published.*

Do the following:

1. From the app overview, click ⊟ to view the sheets.
2. Right-click the sheet you want to publish and select **Publish**.
   The **Publish sheet** dialog appears.
3. Click **Publish**.

The sheet is published and moved from **My sheets** to **Published by me**.

Other users, with access to the same app, will find the published sheet in their **Community** section.

> 💡   *You can also add a sheet in the sheet view by clicking ••• in the navigation bar and*
>
> *selecting **Publish sheet**, or by right-clicking a sheet in the assets panel.*

Unpublishing a sheet

You can revert a sheet that you have published to being unavailable to others by unpublishing it.

Do the following:

1. From the app overview, click ⊟ to view the sheets.
2. Find the published sheet under **Published by me**.
3. Right-click the sheet and select **Unpublish**.
   The **Unpublish sheet** dialog appears.
4. Click **Unpublish**.
   The sheet is unpublished and moved from **Published by me** to **My own**.

The sheet is no longer available to other users of the app.

> You can also add a sheet in the sheet view by clicking ••• in the navigation bar and selecting **Unpublish sheet**, or by right-clicking a sheet in the assets panel.

Adding sheets to the public sheets of an app

You can approve published sheets, both published sheets owned by you or community sheets, to add them to the public sheets of the app.

Sheets added to the public sheets, unlike published sheets, are included when an app is duplicated or exported. Adding sheets to your public sheets enables you to collaboratively develop the public sheets of your app.

Do the following:

- In your app, right-click on a community sheet or one of your published sheets and select **Approve**.

The sheet is now included in the public sheets of the app.

> You can also add a sheet in the sheet view by clicking ••• in the navigation bar and selecting **Approve sheet**, or by right-clicking a sheet in the assets panel.

Removing sheets from the public sheets of an app

You can remove public sheets from your app, both those originally in the app and those approved for inclusion in the public sheets.

When you remove a public sheet, it is moved to the **Published by me** section of the app if the sheet was published by you or the **Community** section if it was published by another user. If the sheet belonged to another user, they will become the owner again. A sheet removed from the public sheets is not included if the app is duplicated or exported.

Do the following:

- In your app, right-click a base sheet and select **Unapprove**.

The sheet is moved to the **Published by me** section or the **Community** section.

> You can also remove a sheet in the sheet view by clicking ••• and selecting **Unapprove**, or by right-clicking a sheet in the sheet navigator.

Publishing a story

You can publish stories that you have created, so that other users can view them.

> ℹ️ *You can only publish stories as a part of an app that is already published.*

Do the following:

1. From the app overview, click 📺 to view the stories.
2. Right-click the story you want to publish and select **Publish**.
   The **Publish story** dialog appears.
3. Click **Publish**.

The story is published and moved from **My stories** to **Published by me**.

Other users, with access to the same app, will find the published story in their **Community** section.

> 💡 *You can also publish a story in the storytelling view by clicking* ≔ *and selecting **Publish** **story**, or by right-clicking a story in the story navigator.*

Unpublishing a story

You can revert a story that you have published to being unavailable to others by unpublishing it.

Do the following:

1. From the app overview, click 📺 to view the stories.
2. Find the published story under **Published by me**.
3. Right-click/long-touch the story and select **Unpublish**.
   The **Unpublish story** dialog appears.
4. Click **Unpublish**.
   The story is unpublished and moved from **Published by me** to **My own**.

The story is no longer available to other users of the app.

> 💡 *You can also unpublish a story in the storytelling view by clicking* ••• *and selecting **Unpublish story**, or by right-clicking a story in the story navigator.*

Adding stories to the public stories of an app

You can approve published stories, both published stories owned by you or community stories, to add them to the public stories of the app.

Stories added to the public stories , unlike published stories, are included when an app is duplicated or exported. Adding stories to your public stories enables you to collaboratively develop the public stories of your app.

Do the following:

- In your app, right-click on a community story or one of your published story and select **Approve**.

The story is now included in the public stories of the app.

> You can also add a story in the storytelling view by clicking••• and selecting **Approve**, or by right-clicking a story in the story navigator.

Removing stories from the public stories of an app

You can remove public stories from your app, both those originally in the app and those approved for inclusion in the public stories.

When you remove a public story, it is moved to the **Published by me** section of the app if the stories was published by you or the **Community** section if it was published by another user. If the story belonged to another user, they will become the owner again. A story removed from the public stories is not included if the app is duplicated or exported.

Do the following:

- In your app, right-click a public story and select **Unapprove**.

The story is moved to the **Published by me** section or the **Community** section.

> You can also also remove a story in the story view by clicking••• and selecting **Unapprove**, or by right-clicking a story in the story navigator.

Publishing bookmarks

You can publish bookmarks that you have created to **Community** in the app overview. Everyone with access to this app can apply these bookmarks.

> You can only publish bookmarks as a part of an app that is already published.

Do the following:

1. From the app overview, click ⬜ to view the bookmarks.
2. Right-click the bookmark you want to publish and select **Publish**.
   The **Publish bookmark** dialog appears.
3. Click **Publish**.

The bookmark is published and moved from **My own** to **Published by me**.

Other users, with access to the same app, will find the published bookmark in their **Community** section.

> You can also publish a bookmark in the sheet view by right-clicking a bookmark in the assets panel in **Bookmarks**.

Unpublishing bookmarks

You can revert a bookmark that you have published to being unavailable to others by unpublishing it.

Do the following:

1. From the app overview, click ⛉ to view the bookmarks.
2. Find the published bookmark under **Published by me**.
3. Right-click the bookmark and select **Unpublish**.
   The **Unpublish bookmark** dialog appears.
4. Click **Unpublish**.
   The bookmark is unpublished and moved from **Published by me** to **My bookmarks**.

The bookmark is no longer available to other users of the app.

> You can also unpublish a bookmark in the sheet view by right-clicking a bookmark in the assets panel.

Copying links to bookmarks in published apps

You can create and share links to bookmarks in **Public** or **Community**. To copy a link to a bookmark, right-click a bookmark and select **Copy link**. Using the link takes users to the app with the bookmark applied. The link only works for users with permission to access the app.

3.3 Publishing to Qlik Sense Enterprise streams for Qlik Sense Client-Managed Mobile

Qlik Sense apps and mashups that are published to a stream in Qlik Sense Enterprise are available for viewing in the Qlik Sense Client-Managed Mobile app.

Users that have installed the Qlik Sense Client-Managed Mobile app can interact with the Qlik Sense app in the stream, provided they have the appropriate access privileges.

Typically, Qlik Sense apps are developed in a web browser connected to a Qlik Sense Enterprise server. When your Qlik Sense administrator publishes an app or a mashup, it will also be available in the Qlik Sense Client-Managed Mobile app. Qlik Sense November 2018 is required to access mashups from the Qlik Sense Client-Managed Mobile app.

Your administrator configures access privileges in the QMC. Additionally, your administrator can configure whether or not a Qlik Sense app can be downloaded from a stream in the Qlik Sense Client-Managed Mobile app. When you download Qlik Sense, it is also available for viewing when you are offline.

You do not need to install the Qlik Sense Client-Managed Mobile app to be able to publish for the mobile app. However, we recommend testing all Qlik Sense apps in the mobile app, if that is where the app will be used.

3.4 Publishing from Qlik Sense Enterprise on Windows to other hubs

If you want to make your apps available to users who do not have access to the Qlik Sense Enterprise on Windows hub, you can publish them to a cloud hub.

In a multi-cloud enabled Qlik Sense Enterprise deployment, your Qlik Sense administrator creates distribution policies in QMC. The Qlik Sense administrator then creates streams for your apps. When you publish or move an app to a stream with distribution policy app properties applied, Qlik Sense copies the app to the cloud hub. In the cloud hub, the app is staged. The tenant or analytics administrator then makes the staged app available in a managed space in the cloud hub.

Staged apps

In Qlik Sense SaaS, apps without owners that are not in spaces are called staged apps. When an app is published to a cloud hub from Qlik Sense Enterprise on Windows, it will not have an owner or space. A tenant or analytics administrator can assign it to a managed space from the Administration activity center.

For more information on managing staged apps in Administration, see Managing apps.

Tags

If you want to use tags in apps that are distributed from Client-Managed Qlik Sense to Qlik Cloud, you need to create a custom property called *Tags* and then add appropriate values that can be used when distributing the app. If a distributed app has a tag value *Sales*, that value is synced with the cloud app and visible in the app details. If a distributed app doesn't have any tag value, the displayed value in the app details is empty.

Streams and tags

The Qlik Sense administrator can have a distribution policy that distributes published apps with added app properties with one or more tags to a cloud hub.

When an app is published to a stream in Qlik Sense Enterprise on Windows, distribution policies determine the target cloud hubs that will receive the app with the tags. You can set app properties that control the destination cloud hub and tags when publishing in the Qlik Sense Enterprise on

Windows hub. Qlik Sense Enterprise on Windows copies the app from the stream to the cloud hub with the tags whenever you publish. The destination for each distribution is controlled by distribution policies managed by your Qlik Sense administrator.

Apps can be published to only one stream, but they can be published with multiple tags to multiple cloud hubs.

> *Your administrator can see the time of the last sync in the stream properties.*
>
> *Depending on your organization you may prefer to move apps to an archive stream with no distribution policy instead of just removing the app.*

Tagged apps can be modified in Qlik Sense Enterprise on Windows hub, like an app in any other Qlik Sense Enterprise on Windows stream. In Qlik Sense Enterprise on Windows hub. You can:

- Duplicate apps in the stream.
- Republish the app in the stream.
- Manage app custom properties.
- Open the app in **Published**.

In an open app in Qlik Sense Enterprise on Windows, you can:

- Publish and unpublish personal sheets and stories.
- Add public sheets and stories to the app or remove them from the app.

Publishing apps to cloud hubs with tags

You can publish apps to cloud hubs with tags to which you have write access. You do this at the same time as publishing to a stream. Apps that are already in a stream can also be published to cloud hubs with tags.

When an app is published to a stream in Qlik Sense Enterprise on Windows, distribution policies created by your Qlik Sense administrator determine the target cloud hubs that will receive the app with tags using custom app properties. When publishing an app to a stream, you can set app properties that control the destination cloud hub and tags. You can also apply the app properties to a published app already in a stream. When you set these properties, Qlik Sense copies the app in the stream to the selected cloud hubs with the selected tags.

Once an app is published to a cloud hub, a tenant or analytics administrator can make the staged app available in a space in the cloud hub.

If your deployment has multiple cloud hubs, you will need to choose one.

> ⚠️ *To avoid exposing restricted data, remove all attached files with section access settings before publishing the app. Attached files are included when the app is published. If the published app is copied, the attached files are included in the copy. However, if section access restrictions have been applied to the attached data files, the section access settings are not retained when the files are copied, so users of the copied app will be able to see all the data in the attached files.*

Publishing an app to cloud hubs with tags

> ℹ️ *The tags and destination cloud hub custom properties are determined by your Qlik Sense administrator. The names may vary from the names used in this procedure.*

Do the following:

1. In **Work** in the Qlik Sense Enterprise on Windows hub, right-click the app and then select **Publish**.
2. In the **Stream name** drop-down list, select a stream.

   > ℹ️ *There is no drop-down list if you only have access to one stream.*

3.
   > ℹ️ *It is possible to publish many apps with identical names to a stream. Qlik Sense will indicate when there are published apps with the same name in a stream.*

4. Optionally, you can rename the app in the **App name** field. This field displays the name of the app that you selected from the hub.
5. Click **Manage**.
6. For **Tags**, select one or more tags from the list of values.
7. Click **Apply**.
8. Click **Publish**.

The published app is now staged in the cloud hub with the tags selected in the **Manage properties** dialog. The tenant administrator can add the staged app to a managed space.

Distributing a published app in a stream to cloud hubs with tags

Do the following:

1. In a stream, right-click the app and select **Manage properties**.
2. For **Tags**, select one or more tags from the list of values.
3. Click **Apply**.

The published app is now staged in the cloud hub with the tags selected in the **Manage properties** dialog. The tenant administrator can add the staged app to a managed space.

Editing the tags of a published app

Do the following:

1. In the stream, right-click the app and select **Manage properties**.
2. Edit the tags as needed.
3. Click **Apply**.

If a new tag was selected, the app will be distributed to the corresponding tenant.

3.5   Publishing between Qlik Sense platforms

You cannot publish apps directly between some Qlik Sense platforms.

For example, you cannot publish an app from Qlik Sense Desktop to Qlik Sense Enterprise. Instead, you have to download a copy of the app from one platform, and then upload the copy to the other platform. You can then publish the app in the platform to which it is copied.

For information about how Qlik manages privacy in its products, see Qlik Product Privacy Notice.

> *You cannot publish apps in Qlik Sense Desktop.*

When copying an app to another platform, consider the following:

- You will have to recreate data connections on the destination platform.
- Some functionality may not be supported on the destination platform.
- You need the appropriate privileges to perform certain actions. For example, only the Qlik Sense Enterprise administrator can import or export apps from the Qlik Management Console.

In Qlik Sense Enterprise, apps can be imported and exported in the QMC.

In Qlik Sense SaaS, apps can be imported and exported in the hub. To export, click ••• on an app. To import, click **Add new** and then click **Upload app**.

In Qlik Sense Desktop, apps can be copied to or from this location: *C:\Users\username\Documents\Qlik\Sense\Apps*

3.6   Qlik NPrinting reports in Qlik Sense

Reports can be distributed from Qlik NPrinting to the Qlik Sense hub.

Recipients must be named users who are part of the Active Directory user group in both Qlik Sense and Qlik NPrinting. The reports are private and can only be viewed by the user to whom they are distributed.

Reports can be viewed from the hub by clicking **Reports**. Report formats include PDF, Excel, Word, PowerPoint, PixelPerfect, and HTML.

Limitations

- You cannot delete Qlik NPrinting reports from the Qlik Sense hub.
- Reports cannot be found with Qlik Sense search.

Distributing Qlik NPrinting reports to Qlik Sense

You can schedule the distribution of Qlik NPrinting reports to Qlik Sense.

Requirements

To enable and configure the distribution of Qlik NPrinting reports to Qlik Sense, the following is required:

- Your Qlik NPrinting version is 17.1 or newer.
- Certificates (client.pfx, server.pfx, and root.cer) have been exported, by your Qlik Sense system administrator, from the Qlik Sense QMC. You have to include a secret key when exporting the certificates.
- The certificates have been installed, by the Qlik NPrinting administrator, on all computers where the Qlik NPrinting scheduler service is running.
- A firewall rule has been created allowing inbound connections on port 4243 of the Qlik Sense QRS.
- To configure report distribution in Qlik NPrinting, you need to be a Qlik NPrinting scheduler service user with **Publish** tasks authorization. The following information is also required:
  - the central node address for the Qlik Sense server. This is available from the Qlik Sense QMC under **Nodes**.

> ⓘ *See the Qlik NPrinting help for more detailed procedures about installing certificates, and configuring report distribution from Qlik NPrinting to Qlik Sense.*

Do the following:

1. Log into Qlik NPrinting as a user with **Publish** tasks authorization.
2. Select **Destinations** and then select **Hub**. Add the Qlik Sense hub as destination. You need the central node address for the Qlik Sense server.
3. Create a **Publish** task and then specify a Qlik NPrinting app, reports, users, schedule, and the hub as a destination.

Connecting to Qlik Sense apps in Qlik NPrinting

You can create connections from Qlik NPrinting to Qlik Sense apps. You can then use the data to create and design reports in Qlik NPrinting.

Requirements

To enable and create connections from Qlik NPrintingto Qlik Sense apps the following is required:

- The same certificate requirements apply as those for distributing reports to from Qlik NPrinting to Qlik Sense. However, the certificates have to be installed on all Qlik NPrinting Engine computers.
- A firewall rule has been created allowing inbound connections on port 4243 of the Qlik Sense QRS.
- To create a connection to a Qlik Sense app in Qlik NPrinting, you need to be an Qlik NPrinting user with **Connections** tasks authorization. The following information is also required:
  - the proxy address (full computer name) for the Qlik Sense server.
  - the Qlik Sense app id. This is available from the Qlik Sense QMC under **Apps**.
  - the Windows domain and user name of the Qlik Sense administrator. This is available from the Qlik Sense QMC under **Users**.

> *See the Qlik NPrinting help for more detailed procedures about installing certificates, and configuring connections from Qlik NPrinting to Qlik Sense apps.*

Do the following tasks in Qlik NPrinting to create a connection to a Qlik Sense report:

1. Log into Qlik NPrinting as a user with **Connections** tasks authorization.
2. Select the **Apps** drop-down list, and then select **Apps** from the list. Click **Create App** to create a new Qlik NPrinting app.
3. Select **Apps** and then select **Connections**. Click **Create Connection**, select the app that you just created, and then click Qlik Sense as your **Source**. You will require the following information to finish creating the connection:
   - the proxy address (full computer name) for the Qlik Sense server.
   - the Qlik Sense app id.
   - the Windows domain and user name of the Qlik Sense administrator.

3.7   QlikView documents in Qlik Sense

You can publish a link to a QlikView document in the Qlik Sense hub instead of distributing files by email or to a specific folder location.

You can use this method when you want to share a QlikView document with a named user that is part of the **Active Directory** user group in both QlikView and Qlik Sense. In QlikView, the administrator must set up distribution to Qlik Sense.

Requirements

QlikView and Qlik Sense requirements

To enable the publishing of QlikView documents links, the following is required:

- Your QlikView version is 12.00 SR3 or newer.
- Your QlikView installation has a Publisher license.

- A different set of certificates (*client.pfx*, *server.pfx*, and *root.cer*) has been exported, by your system administrator, from the Qlik Sense Management Console to each of the QlikView Distribution Service (QDS) machines.
- Qlik Sense has been configured to allow shared content.
- The server connection to the QlikView AccessPoint has been configured to use the machine name.

QlikView certificate requirements

When creating a set of certificate for QlikView, the following is required:

- The certificates must be created using the full name, including the domain of the QDS machine.
- The certificates must be password protected.
- A secret key pair must be created.

Configuration requirements

The following topics provide details about the configurations needed when publishing QlikView document links in the Qlik Sense hub:

- Configuring Qlik Sense to allow users to publish a link to shared content
- Configuring the QlikView Distribution Service with the Qlik Sense certificates
- Creating a task to publish a link to a QlikView document in the Qlik Sense hub

Publishing links to QlikView documents in the Qlik Sense hub

You share links to QlikView documents in the Qlik Sense hub by using the QlikView Management Console. To view QlikView documents, log in to the Qlik Sense hub using the same credentials as a the named user that has access to the documentwas shared with. Select a link to a document in **QlikView documents** to open the QlikView AccessPoint in a new window. When viewing QlikView documents in Qlik Sense, no changes can be saved.

> *QlikView documents cannot be displayed using the mobile view for small devices.*

Do the following:

1. Click the **Documents** tab.
   The **Source Document** page opens.

   > *Only source documents can be published.*

2. Expand a QDS machine instance and locate the document you want to share.
3. Click ⊕ to create a new task.
4. On the **Distribute** tab, click ⊕ to add a recipient.
5. Select the **Named User** user type.

6. Click to add a user.

> *The named user must be part of the **Active Directory** user group in both QlikView and Qlik Sense.*

7. On the **Document Information** tab click to add an attribute.

8. Type *ShowInSenseHub* in the **Name** field and *true* in the **Value** field.

9. Click **Apply**.
    The task may be run and will now add a link to the QlikView document in the Qlik Sense hub.

4   Downloading and printing

You can share insights with people outside the boundaries of a Qlik Sense system by downloading and printing sheets and visualizations. For example, you can coordinate with suppliers, making shipping decisions based on your data.

You can download sheets and visualizations as PDFs and images.

Qlik NPrinting can connect to Qlik Sense and generate reports in different output formats. For example, you can create a daily Excel report listing medical supplies that need to be re-ordered. For more information, see: About Qlik NPrinting.

4.1   Downloading data from a visualization

You can download data from a visualization and save it as an .xlsx file.

For the number of row and column limitations of an Excel export file, see ➦   ExportData method.

Do the following:

1. Right-click the visualization that you want to download data from.
2. Select ⤓ **Download as...** and **Data**.
3. Click the link to download the data file.
4. Open or save the file.

💡 *In filter panes with more than one dimension, you can either select all dimensions or a single dimension.*

⚠ *When exporting data, empty column names in a table will cause a corrupted data error. To avoid this error, always add a name to a column.*

Downloading data from a table

In the **Data export settings** dialog you can select to have enhanced table formatting applied to your export, including styling and row totals. Enhanced table formatting cannot be applied to pivot table exports.

This export is performed by the browser, and therefore may require more time to complete, especially for large data sets.

Styling is applied to the data with a few exceptions:

- Download to Excel with enhanced table formatting works for tables with maximum 2,097,152 cells.

- Download to Excel with enhanced table formatting is not supported via the API.
- Images in table cells are not included.
- Mini charts in table cells are not included.
- Indicators in table cells are not included.
- The following number formatting modes are not supported:
  - Auto
  - Duration
  - Custom
- Locale is not supported in some cases. For example, Excel uses delimiters defined on the local PC, and these cannot be overridden.
- If specific alignment is set for a column, the title will inherit this in the downloaded Excel export file.
- Dual fields that have both $qText$ and $qNum$ with no formatting are exported as number.
- Starting date in Qlik Sense and Excel differs.
- Right-to-left (RTL) text is not included in the download.
- Opacity for cell fill color is not included in the download.
- Color defined through CSS classes in custom themes is not included in the download.

4.2   Downloading a sheet

In Qlik Sense you can download an entire sheet as a PDF file.

Sheets downloaded as a PDF will never exceed the selected paper size and orientation. If a sheet cannot fit into a PDF page, it is resized. Extended sheets and custom-sized sheets may have a lower quality PDF output if the sheet is too large to clearly display on a single PDF page.

The download process will look different if you are using a touch screen device.

About aspect ratio

There are two aspect ratio options:

Keep current size

- The whole sheet is scaled to fit the chosen PDF page format and orientation.
- Chart proportions stay the same as seen in the browser window. This means visualizations may be cropped.
- Sheet will be right-aligned on the page.
- Resolution is affected by browser window size. A PDF printed from a browser window larger than the chosen page format may appear grainy, because the number of printed pixels is less than the original.

Fit to page

- The whole sheet is scaled to fit the chosen PDF page format and orientation.
- Chart proportions are changed to fill the page. Aspect ratio will change accordingly. There may be more space around charts in order to make the page appear full.
- Sheet will be right-aligned on the page.

Downloading sheets

Do the following:

1. Open the sheet you want to download.
2. Click the navigation button in the toolbar (●●●) and select **Download sheet as PDF**.
   The **PDF settings** dialog appears.
3. Use the **Paper size** drop down menu to select page dimensions.
4. Under **Resolution (dots per inch)** use **+** or **-** to increase or decrease the resolution accordingly.
   You can also type an exact value. The minimum value is 72 DPI, the maximum is 300 DPI.
5. Choose the **Orientation** by selecting **Portrait** or **Landscape**.
6. Under **Aspect ratio options** you can select:
   - **Keep current size**
   - **Fit to page**
7. Click **Export** to start image creation.

Limitations

- Pivot tables are downloaded as non-expanded. Partial expansions or full view are not kept.
- Third-party extensions, filter panes, and action buttons are downloaded as blank images.
- Visualization extensions (custom objects) cannot be downloaded as PDFs. They can be downloaded as images.
- Dynamic view objects are not supported
- There is no preview in the **Download** dialog if the browser does not have a PDF viewer plugin installed.
- When you download a sheet from an app with a custom theme applied, the theme is only applied to the visualizations. Styling for the sheet, such as background color, will not be applied in the downloaded PDF.
- Extended sheets and custom-sized sheets may have a lower quality PDF output if the sheet is too large to clearly display on a single PDF page.
- When using a custom font in your app, it is assumed you have the required license to use that font in output from Qlik Sense. To ensure your fonts are licensed, make use of the multiple open-source fonts available in Qlik Sense for styling app content.
  If you have the required licenses for a font that is not available in the default Qlik Sense themes, see Creating themes with custom fonts to learn about adding the font to a custom theme.

- When characters that are unsupported in the selected font are used in app content, these characters will be rendered in output with a font in which they are supported. Different behavior might be noticed if a custom font is used.
- If you use a custom theme in your app to define font use (for example, adding a font file directly to the theme), fonts rendered in exported app content might not be the same fonts you have used in your app.

4.3   Downloading a visualization

You can download visualizations as images or PDF files.

Downloading visualizations from desktop devices

Download as an image

Do the following:

1. Click ••• at the top right of the visualization or right-click on the visualization.
2. In the options menu, select **Download as...** > **Image**.
   The dialog **Image settings** appears.
3. Select to keep **Current** options or to change them by using **Custom** options.
   - Selecting **Current** shows the width and height of the original chart and the screen resolution in dpi. You can select the output format between .png and .jpeg by using the **Type of file** drop-down menu.
   - You can customize the dimensions and the resolution of the exported image by clicking **Custom:**
     To set a new image width or height, click **+** or **-** to increase or decrease the width or height accordingly. You can also type an exact value. The minimum value is 8 pixels, the maximum is 2,000 pixels.
     To set a new image resolution, click **+** or **-**on the sides of **Resolution (dots per inch)** to increase or decrease the resolution accordingly. You can also type an exact value. The minimum value is 72 dpi, the maximum is 300 dpi.
4. Click **Export** to start image creation.

Best practice

Here are a few tips to help you download a visualization as an image.

- The maximum size of an image that can be exported is 2,000 by 2,000 pixels. If the export would result in a larger image, you must reduce its size under **Custom**.
- If you want to keep the aspect ratio you have to change **Width (pixels)** and **Height (pixels)** accordingly.
- If you increase the resolution of the image, you need to increase the width and height by the same scale to maintain the size of the image.

Download as PDF

Do the following:

1. In the menu select **Download as...** and **PDF**.
    The dialog **PDF settings** appears.
2. Select the **Paper size** by scrolling the related drop down menu and clicking on the selected one.
3. You can increase or decrease the **Resolution (dots per inch)** by clicking on **+** or **-** . You can also type an exact value. The minimum value is 72 dpi, the maximum is 300 dpi.
4. Choose the **Orientation** by selecting the button **Portrait** or **Landscape**.
5. In the **Aspect ratio options** you can select:
    -   **Keep current size** to insert the visualization into the PDF without changing its size. If the resulting PDF is smaller than the visualization it will be cropped.
    -   **Fit to page, without keeping aspect ratio** will change height and width of the visualization to fill the entire page. Aspect ratio will change accordingly.
6. Click **Export** to start image creation.

> *To create a paper copy of the visualization you can print the PDF file.*

Downloading visualizations on mobile devices

You can also download visualizations from your mobile device.

> *On Android devices, the download of a visualization is started in a new tab. If the server does not have a trusted certificate, you will see a security warning instead of a download prompt. When exporting from mobile devices, exporting to PDF is the default option.*

Download as PDF

When downloading from mobile devices, PDF is the default option.

Do the following:

1. Tap on the visualization you want to download to zoom it.
2. Click ☰ and select **Export**.
    Keep the default option **PDF** on the **Select type of file** drop-down menu.
3. Select the **Paper size** by scrolling the related drop down menu and clicking on the selected type.
4. Choose the **Orientation** by selecting **Portrait** or **Landscape**.
5. Click **Export** to start the creation of the PDF.
6. To download the PDF, click on the link **Click here to download your PDF file**.

Download as an image

Do the following:

1. Tap on the visualization you want to download to zoom it.

2. Click ☰ and select **Export**.

3. Open the drop-down **Select type of file** and click **PNG** or **JPEG** to select the image format you want.

4. Click **Export** to start image creation.

5. To download the image, click on the link **Click here to download your image file**.

Limitations

- Only the visible part of the visualization will be downloaded. For example, if you download a table that has scroll bars, you will not get the entire table. You will get an image that shows the scroll bars and the window area that they specify.

- The following type of objects cannot be downloaded:
  - Filter panes
  - Sheet titles

- You can download a visualization extension (custom object), if the visualization extension and the security rules for your installation are set up to allow it.

- When using a custom font in your app, it is assumed you have the required license to use that font in output from Qlik Sense. To ensure your fonts are licensed, make use of the multiple open-source fonts available in Qlik Sense for styling app content.
  If you have the required licenses for a font that is not available in the default Qlik Sense themes, see Creating themes with custom fonts to learn about adding the font to a custom theme.

- If you use a custom theme in your app to define font use (for example, adding a font file directly to the theme), fonts rendered in exported app content might not be the same fonts you have used in your app.

- When characters that are unsupported in the selected font are used in app content, these characters will be rendered in output with a font in which they are supported. Different behavior might be noticed if a custom font is used.

4.4   Downloading a story

You can download a story as a PowerPoint presentation or a PDF file. The story will be exported with the selection states used to create the story. Any selections applied while playing the story are ignored.

> ℹ *This feature is not available on mobile devices.*

Downloading as a PowerPoint presentation

You can create a PowerPoint presentation from a story, using the data storytelling feature.

Do the following:

1. Open the story that you want to download.
2. Click ••• and select **Download story as PowerPoint**.
   The **PowerPoint settings** dialog appears.
3. If you want to change the default **Slide size** and **Resolution (dots per inch)**, make selections from the two drop-down lists.
4. The bottom line of the dialog shows the result of your settings.
5. Click **Export**.
   When the PowerPoint presentation is ready, a link will appear in the dialog.
6. Click the link.
   The presentation will be downloaded to the default download location for your browser.
7. Click **Cancel** to close the dialog.

Pre-configured PowerPoint slide sizes

By default, the exported presentation will have a slide size of 960 by 540 pixels with a widescreen aspect ratio of 16:9, and a resolution of 220 dpi (dots per inch).

You can choose from three pre-configured slide sizes and aspect ratios for your PowerPoint slides. A custom option is also available. These are the pre-configured slide sizes:

Pre-configured PowerPoint slide sizes

Pre-configured slide sizes	Aspect ratio	Width (pixels)	Height (pixels)
Standard (4:3)	4:3	960	720
Widescreen (16:9) (default)	16:9	960	540
Widescreen (16:10)	16:10	960	600

Three resolutions are available: 220, 150, and 96 dpi.

Setting custom slide height and width

You can set the dimensions of the exported slides to values other than the pre-configured values by selecting **Custom** from the **Slide size** drop-down list in the **PowerPoint settings** dialog. If you do this, the dialog changes to allow you to set slide width and height in pixels.

Do the following:

- Click **+** or **-** to increase or decrease the slide height or width. You can also type an exact value directly into the field.

> *To preserve the aspect ratio, make sure you adjust **Width (pixels)** and **Height (pixels)** accordingly.*

Downloading as a PDF

You can download a story as a PDF using the data storytelling feature.

Do the following:

1. Open the story that you want to download.

2. Click ••• and select **Download story as PDF**.
   The **PDF settings** dialog appears.

3. If you want to change the default **Paper size**, select it from the two drop-down lists.

4. To set a new image resolution, click **+** or **-** for **Resolution (dots per inch)** to increase or decrease the resolution accordingly. You can also type an exact value. The minimum value is 72 dpi, the maximum is 300 dpi.

5. Choose the **Orientation** by clicking **Portrait** or **Landscape**.

6. In the **Aspect ratio options**, you can select:

   - **Keep current size** to insert the visualization into the PDF without changing its size. If the resulting PDF is smaller than the visualization, it will be cropped.

   - **Fit to page** to change the height and width of the visualization to fill the entire page. Aspect ratio will change accordingly.

7. The bottom line of the dialog shows the result of your settings.

8. Click **Export**.
   When the PDF presentation is ready, a link will appear in the dialog.

9. To download the PDF, click **Click here to download your PDF file**.
   The presentation will be downloaded to the default download location for your browser.

10. Click **Cancel** to close the dialog.

Limitations

Several of the limitations for exporting stories are listed below:

- When using a custom font in your app, it is assumed you have the required license to use that font in output from Qlik Sense. To ensure your fonts are licensed, make use of the multiple open-source fonts available in Qlik Sense for styling app content.
  If you have the required licenses for a font that is not available in the default Qlik Sense themes, see Creating themes with custom fonts to learn about adding the font to a custom theme.

- When characters that are unsupported in the selected font are used in embedded app content (not the story text elements), these characters will be rendered in the PowerPoint or PDF file with a font in which they are supported. Different behavior might be noticed if a custom font is used.

- If you use a custom theme in your app to define font use (for example, adding a font file directly to the theme), fonts rendered in exported app content might not be the same fonts you have used in your app.

- The same limitations that apply to downloading sheet apply when downloading stories that include embedded sheets.
  For limitations for downloading sheets, see *Downloading a sheet (page 57)*.

4.5   Troubleshooting - Downloading

This section describes the problems that can occur when exporting data or stories in Qlik Sense.

Anonymous users cannot download app data

I want to let anonymous users download data, for example, download as image/pdf/data for visualizations.

Possible cause

There is no security rule granting anonymous users the right to download data.

Proposed action

You can enable download of data for anonymous users by creating a copy of the security rule ExportAppData and modifying the copy to only have `resource.HasPrivilege("read")` in **Conditions**. For more information, see Security rules installed in Qlik Sense.

I cannot download a visualization as an image

I tried to download a visualization as an image, but the download failed.

Possible cause

The visualization you want to download is too large. The maximum size a download image can be is 2,000 by 2,000 pixels.

Proposed action

In the **Image settings** dialog, as you download, choose the **Custom** button and set the image size to 2,000 by 2,000 pixels.

I have blank characters in PDF files

I have blank characters in PDF files that were created when downloading stories with labels in Japanese, Korean, Simplified Chinese, or Traditional Chinese.

Possible cause

Downloading a story with these languages requires the appropriate font, or else the default Times New Roman font will be used. Times New Roman does not support Japanese, Korean, Simplified Chinese, or Traditional Chinese.

This only applies to text in title or paragraph objects in the story. It does not apply to embedded visualizations.

If ja, ja-JP, ko, ko-KR, zh-CN, zh-TW is declared in the CollationLocale setting for the application in the Data Load Editor, the downloading feature will use the first available font from the following ordered lists to generate the PDF:

Available fonts

CollationLocale language	Font stack
Chinese Simplified	SimSun, SimHei, FangSong
Chinese Traditional	PMingLiU, MingLiU, Microsoft JhengHei, Microsoft JhengHei UI
Japanese	Meiryo, Meiryo UI, Yu Gothic, Yu Gothic UI, MS UI Gothic
Korean	Malgun Gothic, BatangChe

If a font from the above list is not found, characters in your story requiring a Chinese, Korean or Japanese font will not be printed. There will just be a blank space.

Proposed action

Install one of the fonts used to download PDF for the language that you are using. You cannot choose the font because the system will only use those in the table in the specified order.

Make sure that you use labels that are the same language that you set in the CollationLocale. If they differ, only common characters will be correctly rendered in the created report.

Right to left languages, like Arabic or Hebrew, are not currently supported on labels.

I downloaded a sheet but the data view tables changed back to visualizations

I downloaded an entire sheet, but all the visualizations I had changed to tables of data have changed back to the original visualizations.

Possible cause

The data view of a visualization cannot be downloaded..

Proposed action

Download the data for each visualization using the download as data option.