Qlik® Sense Technical Workshop

For new Qlik Cloud Admins: an introduction to Qlik Cloud Tenant Admin management

Last update: 4/10/2024

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Workshop Objectives

This workshop is designed to introduce you to Qlik Sense HUB and provide an overall description of what a tenant admin can realize in terms of navigation, space management and basic configuration. During the workshop we will also load up a couple of apps to have a grasp of the app creation mechanism (usually handled by developers). One of the two apps has been specifically designed to help tenant admins understand tenant workload so that corrective actions can be taken to optimize the environment.
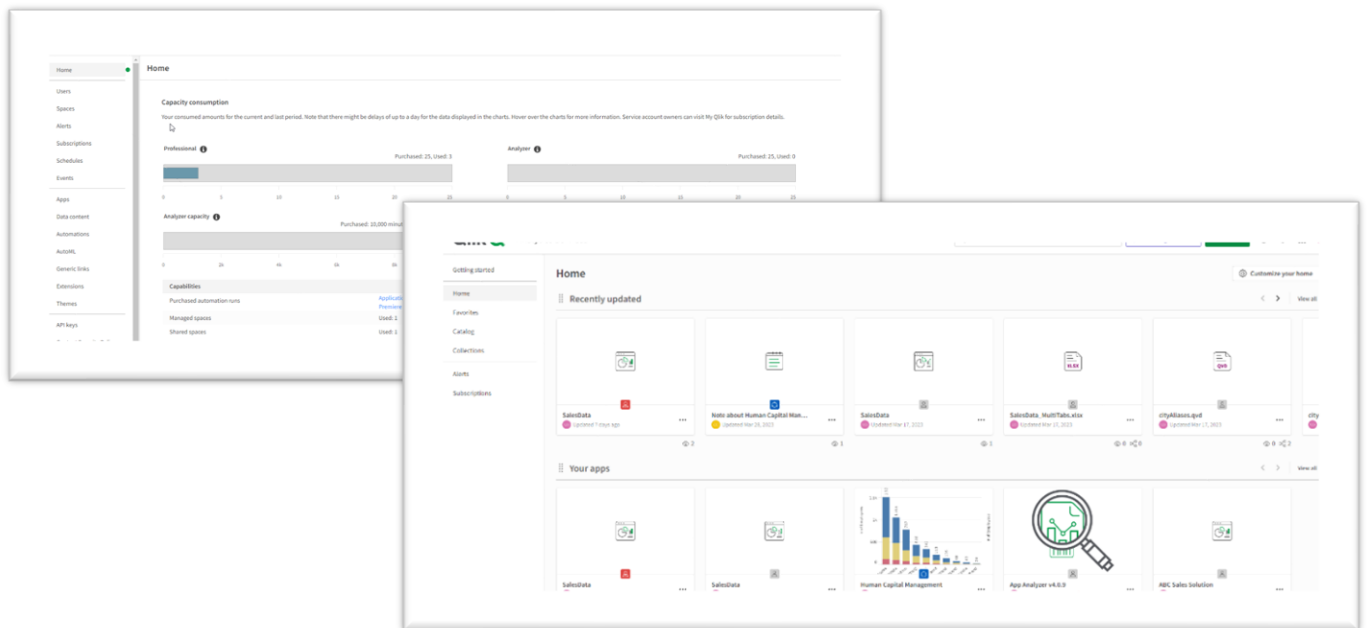
Qlik® Sense – The Next Generation of Visual Analytics

Qlik Analytics Engine
Modernize and Strengthen Analytics

What happens under the visualization layer really matters

Qlik Sense is a next-generation self-service data visualization application that empowers people to easily create a range of flexible, interactive visualizations that drive exploration and discovery using one's intuition. With the proven Qlik Associative Experience along with the cutting-edge Cognitive Rules Engine, Qlik Sense delivers the following capabilities:

- Easily combine multiple data sources and automatically index all the data
- Interactively explore and search all data whilst receiving real-time calculations
- All analytics kept in context together, relative to your selections
- Spot hidden insights by automatically understanding related and unrelated data; other query tools miss this unrelated data
- Experience the fastest calculation performance for instant analysis across a large number of users and large, complex data sets.

Data and Apps provided for the workshop

To successfully perform all activities, present in this workshop, we have prepared an article which includes the workbook and the data file needed.

The Hub

In this activity we will explore the HUB in Qlik Cloud and its different work contexts, each of those have different functions:

- Analytics Services
- Data Integration
- My Automations
- Management Console
- My Qlik
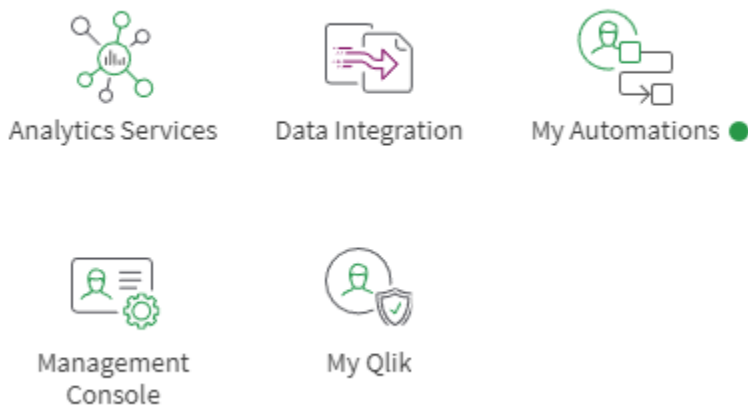
Purpose of our workshop is to explore the HUB and part of the Management Console, usually accessed to administer the tenant.

Customizing HOME
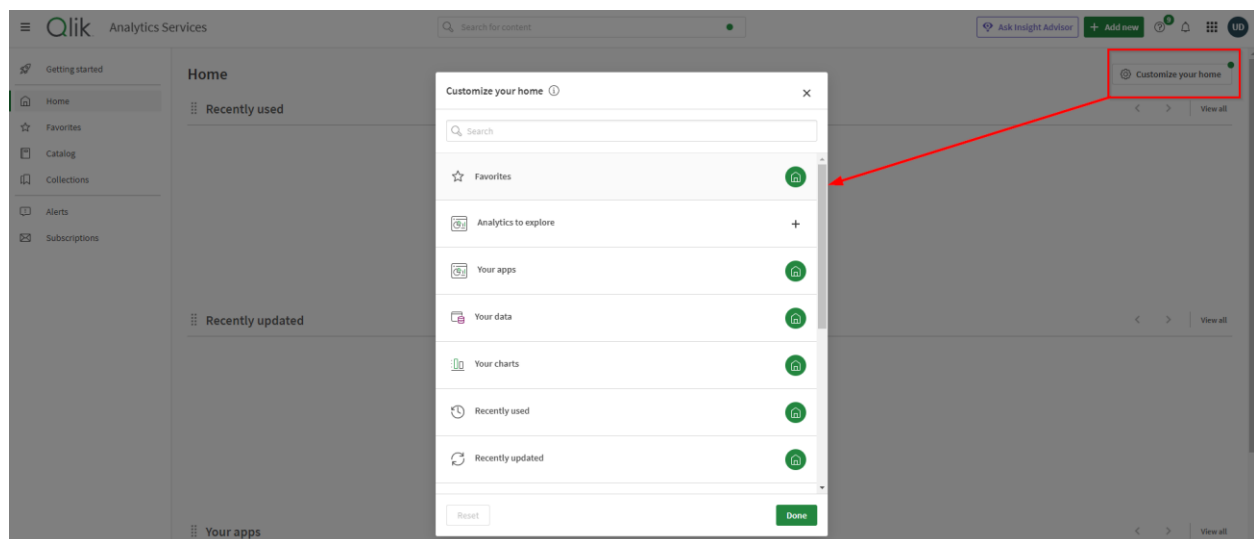
Adding a new homepage:

Definition of Alias Tenant

Customers can define an alias for a tenant, giving users a more meaningful URL to navigate to the tenant.

This is what we call a *Tenant ALIAS hostname,* which is different from the original tenant hostname. The original tenant hostname is assigned when the service account owner (SAO) sets up his/her account. The alias that might better represent the customer, can be configured, or changed at any time. Whereas the tenant hostname never changes. The hostname is used for recovery and as a secure way to access your tenant.

For instance, a Tenant ALIAS hostname can be **demoworkshop.eu.qlikcloud.com**

And its Tenant hostname might be: **btetivko5etlw08.eu.qlikcloud.com**

Where to set up your ALIAS hostname?

To do so, let's do our first visit to the management console and choose settings in the left-hand side frame. Alias hostname is the very second input box available in the central frame.


Another important point to mention, is where we can find important information about our tenant and which could be useful when reaching out support (Hostname, tenant ID, recovery URL).

Just go to your account profile settings icon in the top right corner and choose about.

Creation of an app

In this activity we will create an app, load up some data from a flat file via data manager and create a simple dashboard inside.

Please note: For the more knowledgeable admins an extra activity based on similar topics is proposed below in the section *Advanced Topics Ideas.*

Data will come from the excel file provided SalesData_MultiTabs.xlsx

To create a new analytic app point to the green button in the top right corner of the HUB:

Search

Ask Insight Advisor

+ Add new

Create new content

New analytics app
Add and explore your data

Create a new app ⓘ   ✕

Name

SalesData

Space

👤 Personal   ⊗ ⌄

Description

Tags ⓘ

🔍 Search   ⌄

☑ Open app   Cancel   Create

Get started adding data to your app.

Data catalog
Access data that's available to you

Files and other sources
Drag and drop files or click to browse files and connections

</> Data load editor
Load data and perform transformations.

Drag and drop the file and select all tables/sheets available:

Apply all to define associations available:
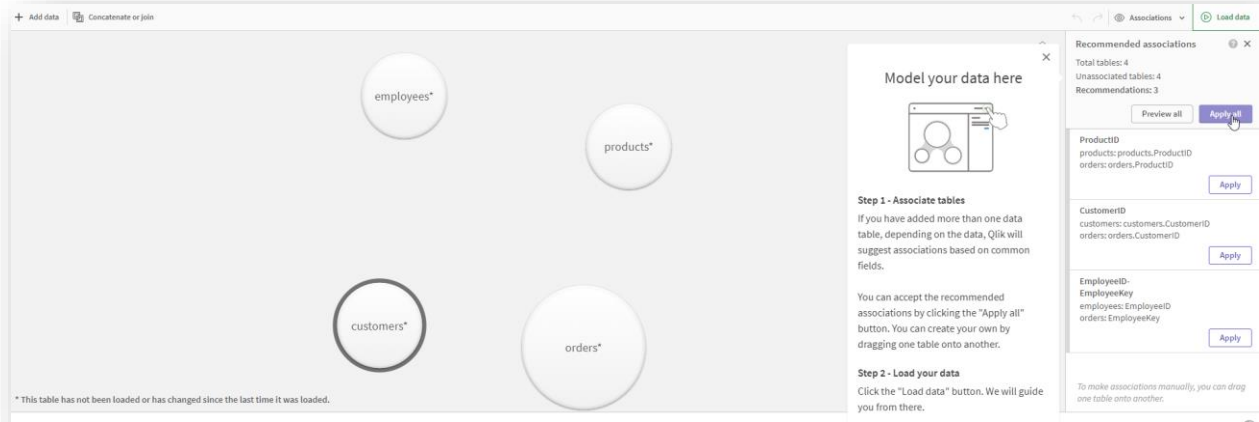
And finally load associated data by using the dedicated button on the top right corner of the window:

Advanced Topics Ideas: Install monitoring Apps for user-based subscriptions

As an administrator of your tenant, it is extremely important to gain an holistic view of your environment, as far as app memory footprint, syntetic keys user entitlements, data governance etc.

Qlik has prepared a complete automation which will allow you to import, install, configure, and reload all apps currently available for admin purposes.

They are:

- The Entitlement Analyzer is a Qlik Sense application built for Qlik Cloud, which provides Entitlement usage overview for your Qlik Cloud tenant.

  The app provides:

  o Which users are accessing which apps
  o Consumption of Professional, Analyzer and Analyzer Capacity entitlements
  o Whether you have the correct entitlements assigned to each of your users
  o Where your Analyzer Capacity entitlements are being consumed, and forecasted usage

- The App Analyzer is a Qlik Sense application built for Qlik Cloud, which helps you to analyze and monitor Qlik Sense applications in your tenant.

  The app provides:

  o App, Table and Field memory footprints
  o Synthetic keys and island tables to help improve app development
  o Threshold analysis for fields, tables, rows and more
  o Reload times and peak RAM utilization by app

- The Reload Analyzer is a Qlik Sense application built for Qlik Cloud, which provides an overview of data refreshes for your Qlik Cloud tenant.

  The app provides:

  o The number of reloads by type (Scheduled, Hub, In App, API) and by user
  o Data connections and used files of each app's most recent reload
  o Reload concurrency and peak reload RAM
  o Reload tasks and their respective statuses

Broadly speaking we can summarize few key points of the automation:

1. Create an API Key
2. Configuring a REST API connection with the APY Key at point 1, to GET metadata from Qlik Cloud DB and use it to build up the Apps data model.

Detailed instructions of the step we will go through via automation, are available at the following link:

https://community.qlik.com/t5/Official-Support-Articles/Qlik-Cloud-Monitoring-Apps-Workflow-Guide/ta-p/2134140

Advanced Topics Ideas: Qlik Cloud subscriptions options, guardrails, and large apps model

Qlik offers to type of [subscription models](#):

- Qlik Cloud capacity-based subscriptions
- Qlik Cloud user-based subscriptions

For both models large-apps are applicable, if an organization needs to handle very large apps. As an administrator of your Tenant, it is important to be aware and understand hard limits capacities. Hard limitations are in place for a specific reason, such us avoiding too many parallel reloads, overwhelming CPU consumption due to poorly designed data models and dashboards etc. Guardrails are published in their up-to-date format, in the [online help](#). Broadly speaking, we have three types of different subscriptions: Standard, Premium and Enterprise. Also, keep in mind that we are going through a transactional period, moving from User based subscriptions model to a Capacity based subscriptions model:

Subscription models

User based subscriptions

Business	Enterprise
1.25 GB	5 GB

Capacity based subscriptions

Standard	Premium	Enterprise
5 GB		10 GB
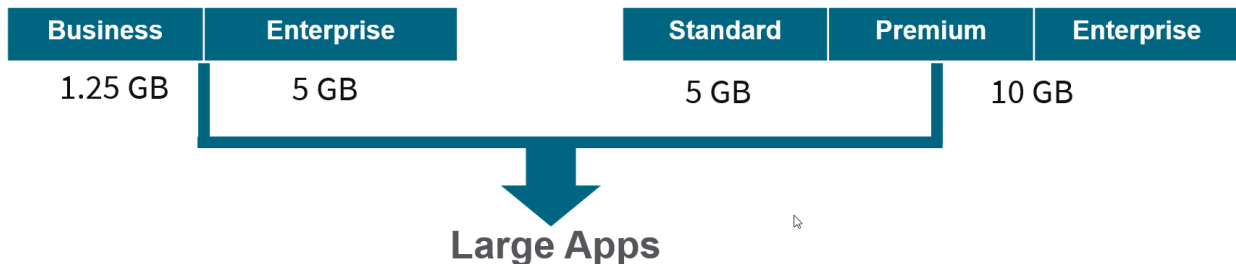
Large Apps

Assigned large app capacity	Supported app size (in-memory)
1 pack of 20 GB	20 GB
2 packs of 20 GB	40 GB
Packs of 100GB	50 GB

We invite you to explore the online help, full of details and useful information.

In summary. Capacity packages can be of 20GB, 100GB.

We only want to remind you a couple of important details, sometimes overlooked or not known:

1) When loading an app its dimension is unknown. So, app reload will take longer. In the new capacity model, Qlik takes care of this, giving away an upper limit of 3x Large App Capacity during Reloads.

   Examples:

If the app is 25GB size, it will be possible for the app during peek reloads to reach the size of 25*3=75GB

2) Different capacities come with different CPU power. We roughly say that the engine size range = app size in memory * 4

Examples:

- A 10 GB app will end up on a 40 GB engine.
- A 12 GB app will end up on a 60 GB engine (12*4 = 48GB, rounded up to the next available package which is 60GB)

Last not least, let's consider the situation when we have **more than one large app, at the same time.**

Let's say that you have five apps that are larger than the standard app size. The average size of the apps is 15 GB. You want to use all five apps at the same time, which means that you need 5 x 15 GB = 75 GB of capacity.

To achieve this, you could assign four packs of 20 GB to your tenant. Or you might want to purchase one pack of 100 GB to have a buffer if more large apps are added in the future.

Finally, as an Admin person, please do check our guardrails, hard limits on capacities, used to ensure Qlik Cloud performance and stability, for example, by limiting parallel reloads to avoid extensive load.

A Cloud environment in the end is a shared environment which requires high rate of uptimes, performances and security.

Explore the data by using Insight Advisor

In this activity we shall take advantage of Qlik Sense Insight Advisor feature. Insight Advisor creates visualizations using the Qlik cognitive engine and a logical model of your data. For more information on the Insight Advisor consult the online help

Please note: For the more knowledgeable admins an extra activity based on similar topics is proposed below in the section *Advanced Topics Ideas.*

After loading data, the sheet tab will visualize the three following options. In this exercise we shall use *Explore the data*:

Choose an option below to get started adding to this sheet...

Explore the data

Explore your data directly or let Qlik generate insights for you with [◉ Insight Advisor]. Save any insights you discover to this sheet.

Have a question?

Find new insights in the data using [🔍 Ask Insight Advisor]. Any found insights can be saved to this sheet.
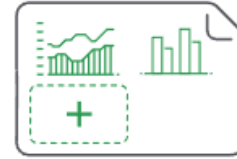
Create new analytics

Use [✎ Edit sheet] to start creating visualizations and build your new sheet.

From Ranking, choose measures Sales and dimension CategoryName:

Ranking

Show dimensions in order of contribution.

Add to sheet Sales by CategoryName:
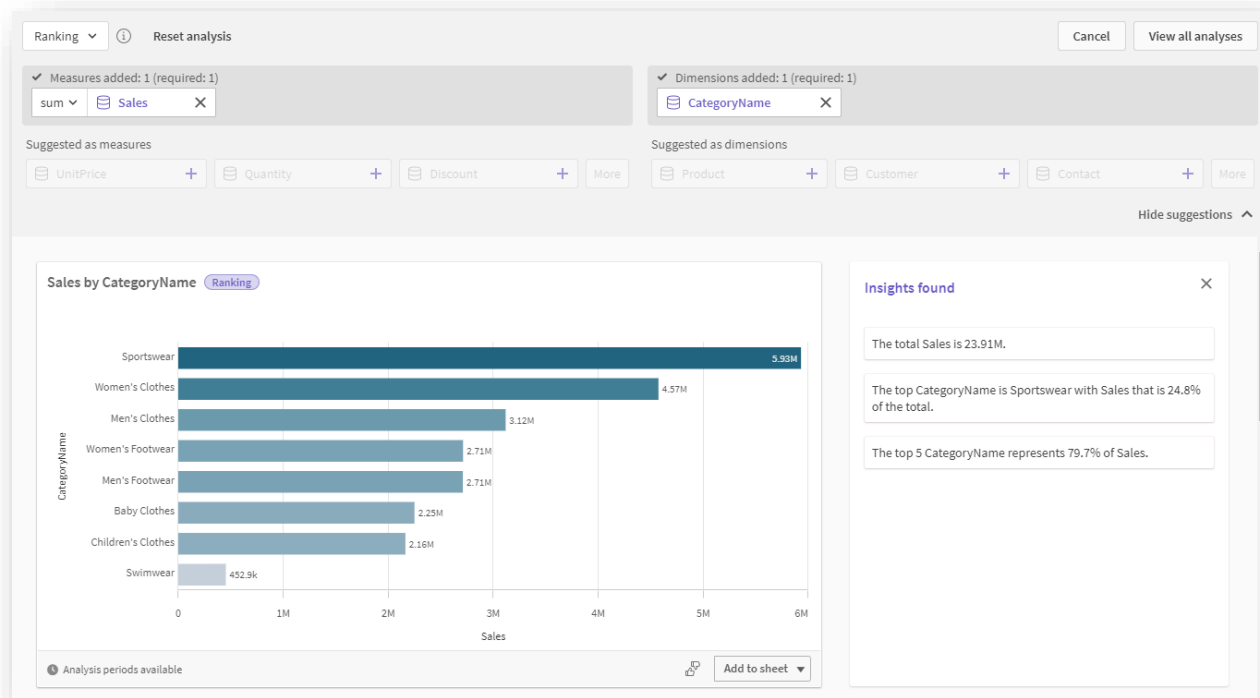
Finally choose Overview and pick up Sales as measure and Division and Country as dimensions.
Add to Sheet:
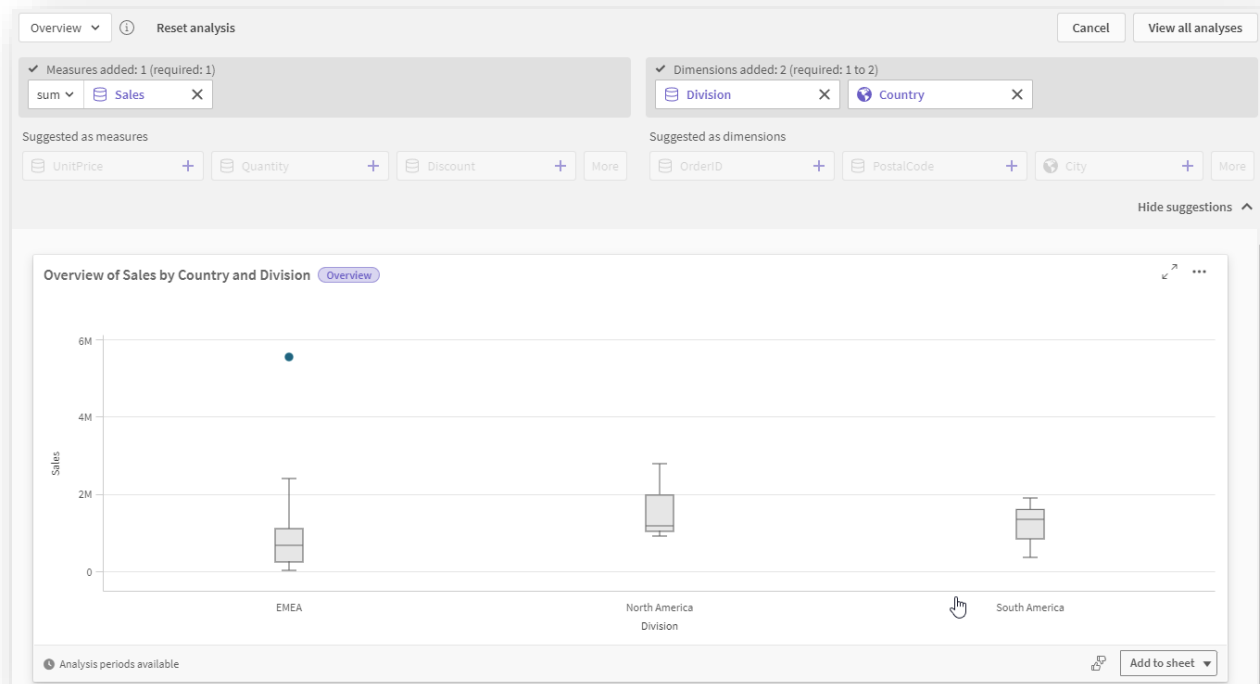
Explore final sheet:
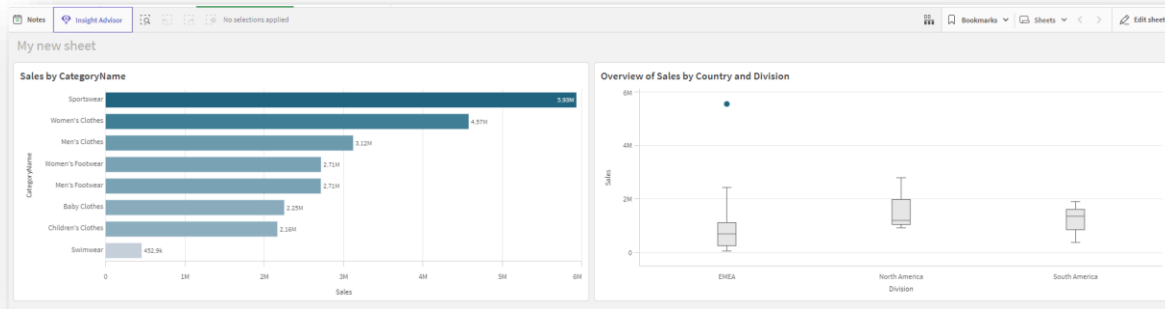
Advanced Topics Ideas: Building a logical model for Insight Advisor

Insight Advisor uses a logical model based on learned precedents to generate analyses based on your queries. You can define your own logical model for your apps with Business logic.

We propose to create your logical model in any chosen app you have (or in the one we have just created together) by following the video provided at in [this link](#).

The logical model of an app is the conceptual model Insight Advisor uses when generating visualizations. It is built from the underlying data model of an app. Each app has a single logical model. Fields and master items are the core components of the logical model. They are organized into groups. Groups indicate a conceptual association or relationship between fields or master items. The logical model also contains information about possible relationships between groups.

For instance in our SalesData app, in the previous activity we have used the default logical model created by Qlik Sense cognitive engine. An overview of the same is accessible by selecting logical model in the *Prepare* menu, select *logical model* and then continue:
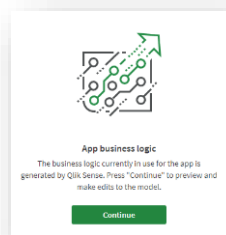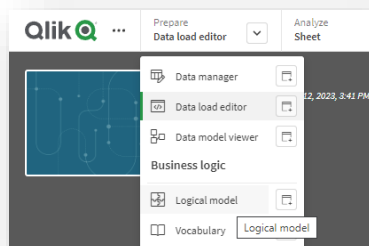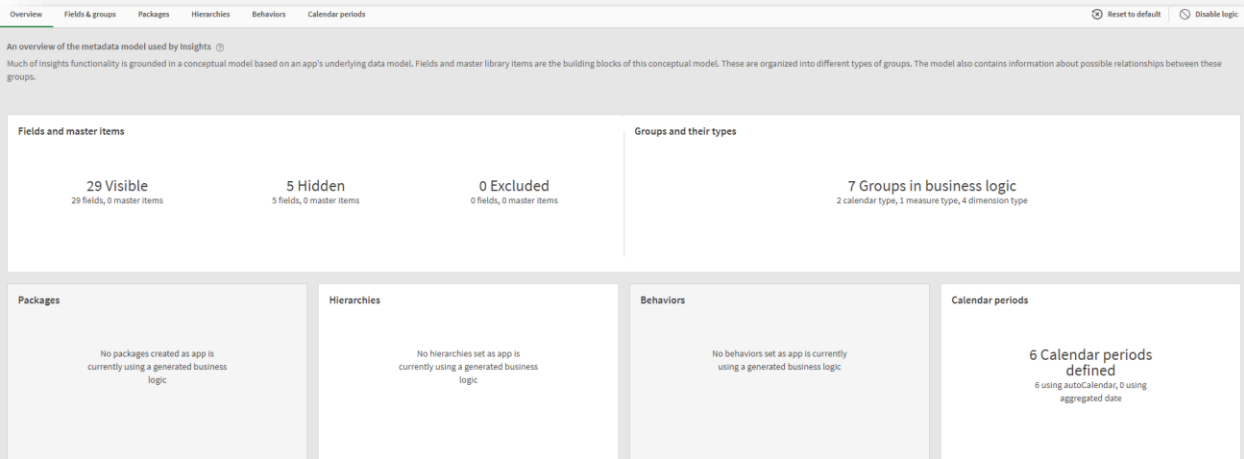
As you can see, Logical model is divided into the following sections for customizing the logical model of an app:

Overview: Overview provides a summary of your business logic. Clicking the cards for Fields & groups, Packages, Hierarchies, or Behaviors opens the corresponding section.
Fields & groups: Fields & groups enables you to define the groups to which your fields and master items belong in the logical model.
Packages: Packages enables you to create collections of related groups. This prevents groups from being used together that are not in the same package.
Hierarchies: Hierarchies enables you to define drill-down relationships between groups.
Behaviors: Behaviors enables you to specify prefer or deny relationships between fields. Behaviors can also enforce required selections.
Calendar periods: Calendar periods enables you to create default periods of analysis for Insight Advisor.

Schedule a reload

In this activity we will schedule a reload of the App Analyzer app, to ensure metadata is always up-to-date and reflect our apps activity.
Please note: For the more knowledgeable admins an extra activity based on similar topics is proposed below in the section *Advanced Topics Ideas.*

Scheduling an app is just matter of right clicking on the app and selecting *reload schedule*:
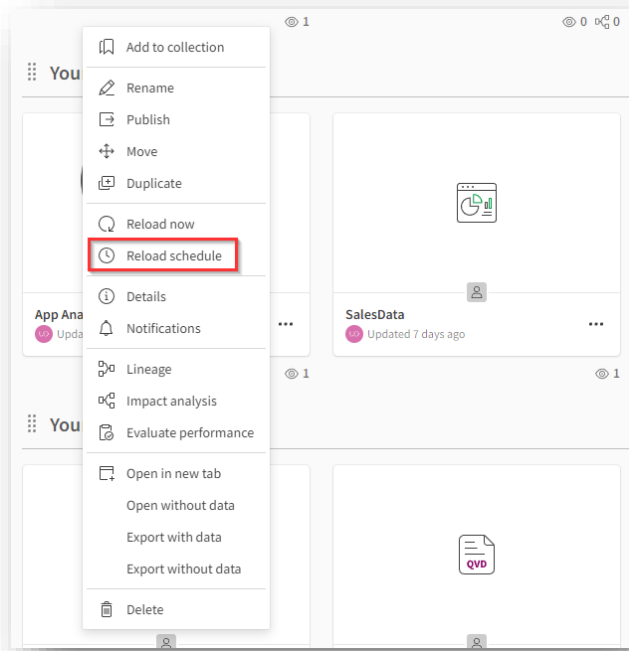
This will bring up a new window to add a schedule:
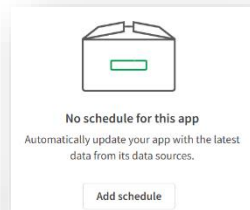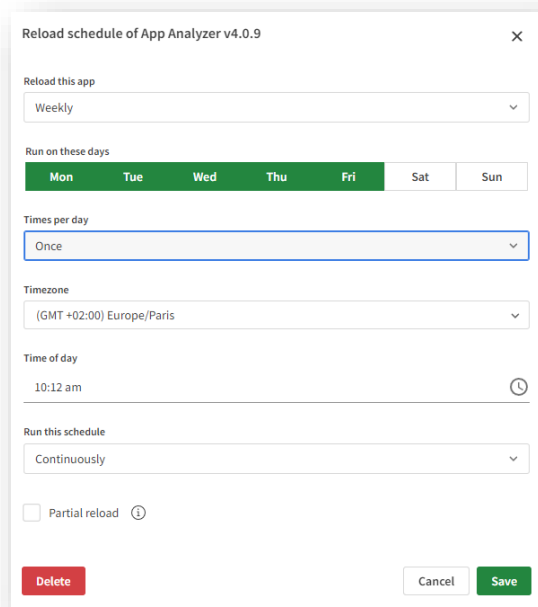
Should you wish to explore all scheduled reloads, you can do so in the management console, under Governance section, schedules:
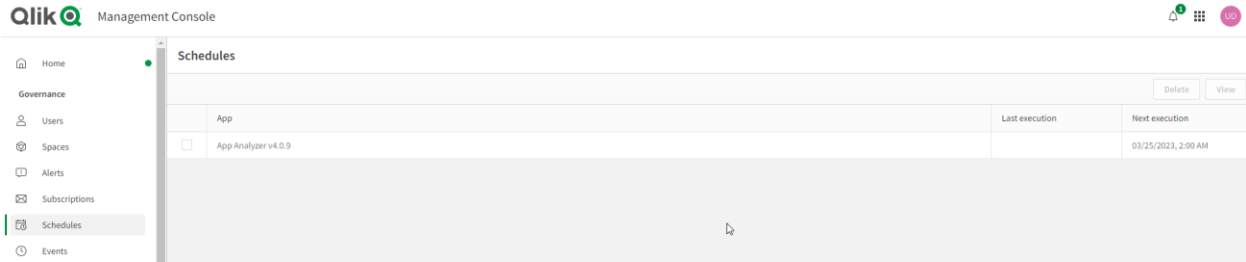
Advanced Topics Ideas: schedule a reload by using an automation

Scheduling a reload can also be performed by using Qlik Application Automation. Qlik Application Automation provides a no-code visual interface that helps you easily build automated analytics and data workflows. An automation is a sequence of actions and triggers that runs like a program.

More details can be found [here](#).

A quick overwiew of the potential of Qlik Application automations is to schedule app reload of our SalesData App.

We will reach the Automation context by going to the HUB:
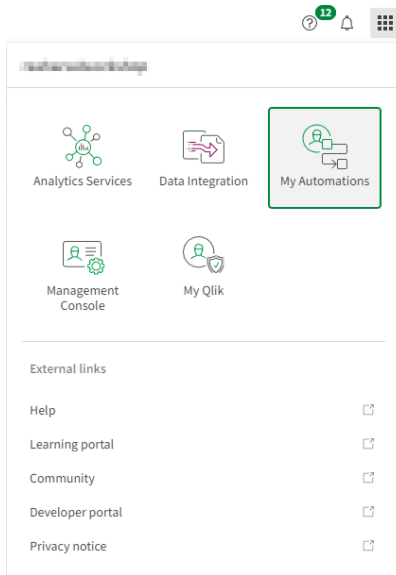
In the new window we will select the green button on the right top corner

The new window shows us a rich set of possible automations already prepared (*templates*). The search template input can be used to identify a suitable template. Using the key word *reload*, for instance, provide gives us the following results:

The first template is good for us, *Reload apps in parallel*.
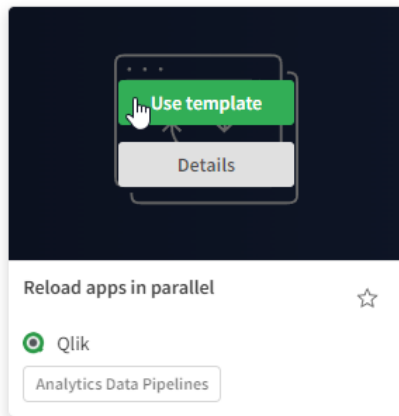
The following window will show us the automation in terms of blocks. This template allows to schedule three app reloads in parallel. Since our goal is to set up a single app reload, all we need to do is to disable those blocks which are not relevant: the *Do Reload 2* and *Do Reload 3* block.

Select each of those two blocks, one at a time and right click to open up the options available for the specific block, and select *disable*:
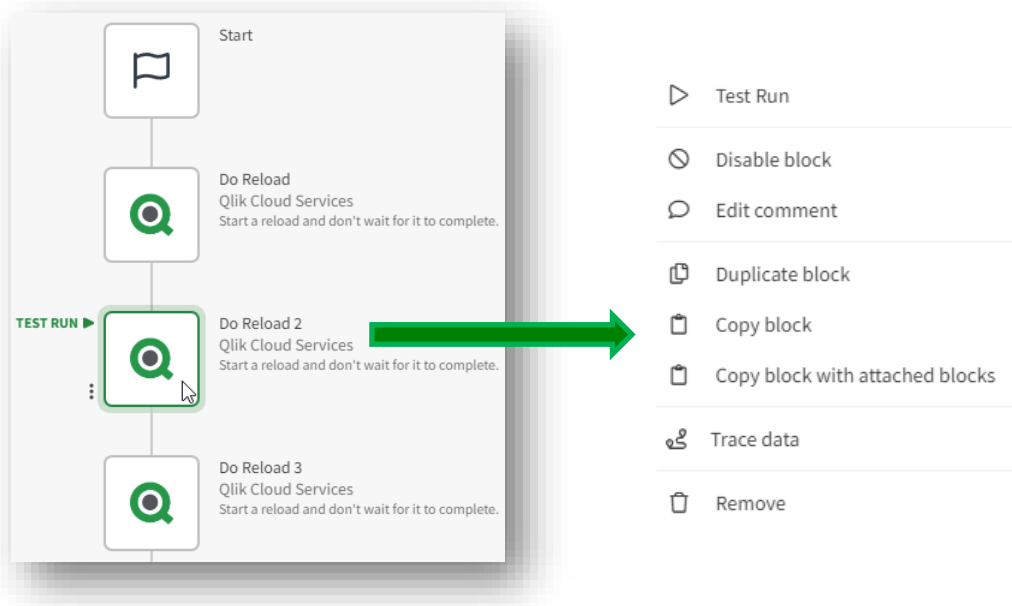
Once that is done for the two blocks Do Reload 2 and Do Reload 3, we can then move to the first Do Reload block and in the block settings select the our App, by activating the *do lookup* option
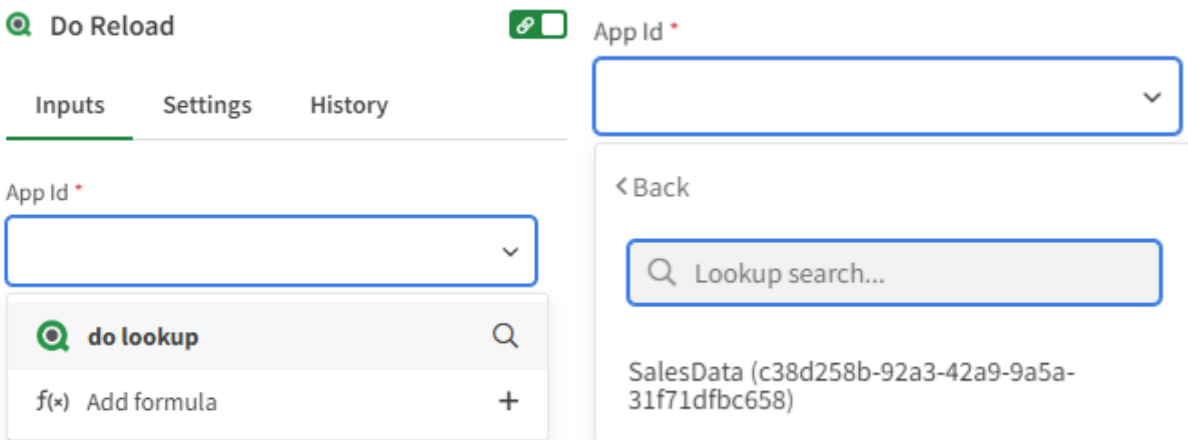
Nothing else is needed, other than running the template to verify the reload is successful.
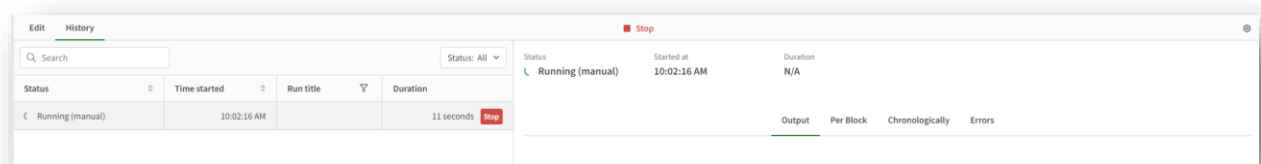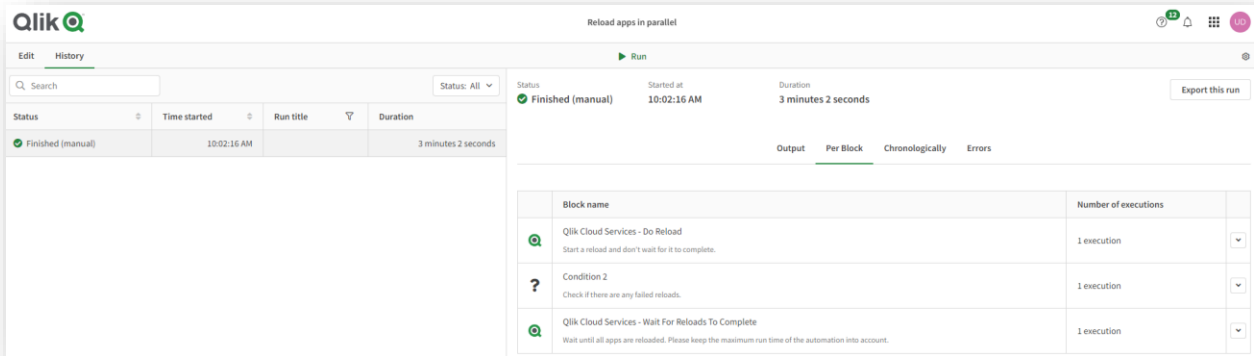
Once we are sure the automation successfully reload the app we can proceed in scheduling the reload by going to the Start block and modify the Run Mode from manual to *scheduled* and complete the configuration as desired.
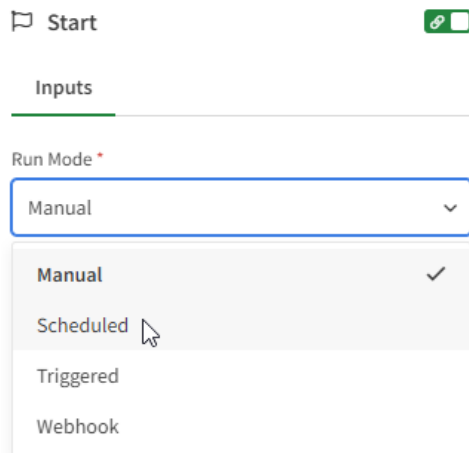
qlikdemoworkshop@gmail.com
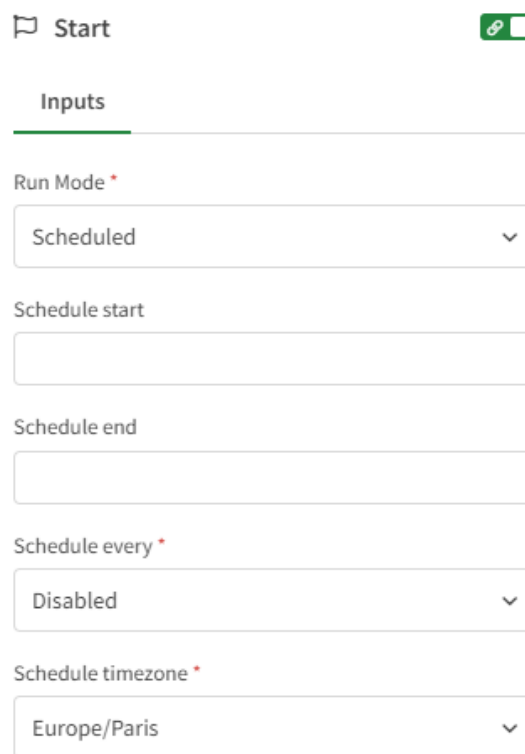
For more complex and long running reload task chains, check the following article:

https://community.qlik.com/t5/Official-Support-Articles/How-to-build-long-running-task-chains-in-Qlik-Application/ta-p/1877373

User invitation

In this activity we will invite a second user to our tenant.

Please note: For the more knowledgeable admins an extra activity based on similar topics is proposed below in the section *Advanced Topics Ideas.*

This will allow, later, to set up permissions and explore space roles.

To invite users, we shall reach the Governance Section in the Management Console and select users. The invite button will allow us to add the email address of the person we want to invite (you can invite multiple people by separating each email with the space bar):
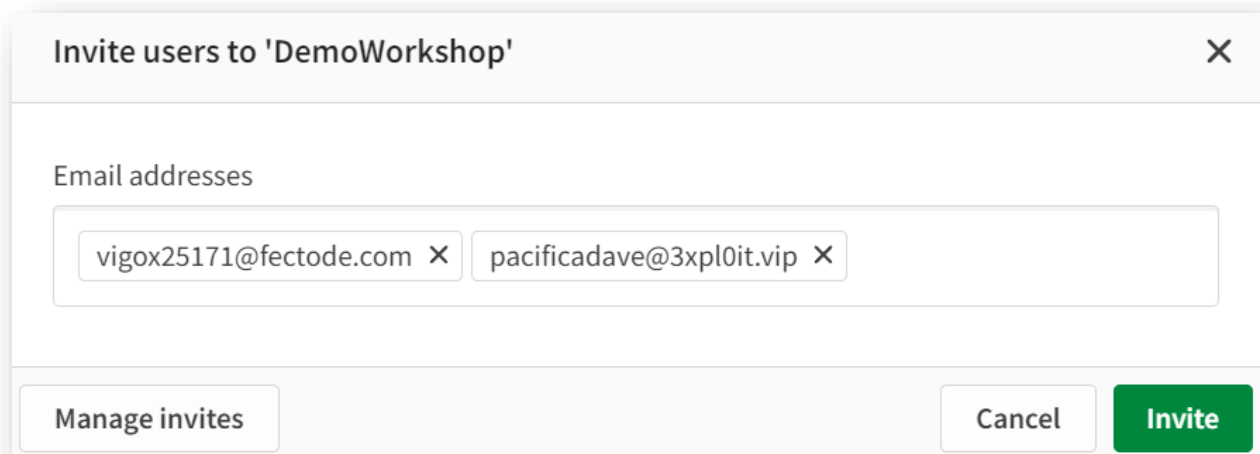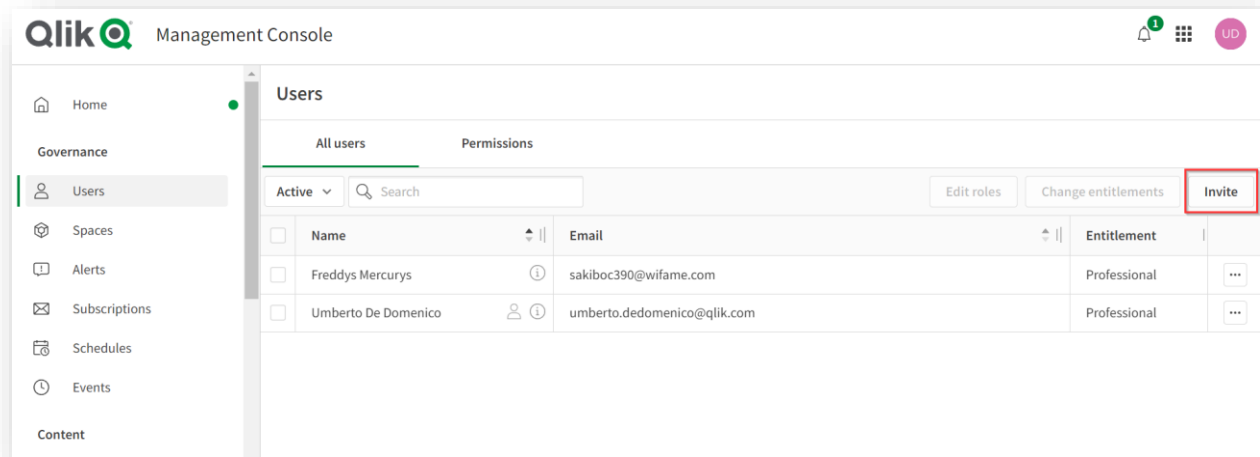
The user invited must have a valid email address and she/he will receive an email invitation.

The email invitation will guide the user through registration in Qlik Community and finally, it will let the user in our Tenant.

![Qlik logo]

Q Qlik	Date:
no.reply@qlik.com	27-03-2023 14:36:28

Subject: Welcome to Qlik Cloud | Let's get started

Qlik

You're invited!
We are thrilled to have you on board.

Umberto De Domenico has invited you to use Qlik Sense at
https://demoworkshop.eu.qlikcloud.com. Click the button below to get started.

Get Started

Get the Qlik Sense Mobile experience.

App Store   Google Play

Have questions or feedback, contact Qlik Support.
Your data will be processed in accordance with Qlik's Privacy Notice.

For the purpose of our practice, if you do not have available a second user's email, you can also use a disposable email service, creating a temporary email which will be later on automatically destroyed. Google will list many of such email services, few of those are the following ones:

- https://temp-mail.org/
- https://generator.email/
- https://emailfake.com/

Let's complete our registration as secondo user:

What is your name and location?

We need more information about you to get started.

First name

Charlie

Last name

Chaplin

Country

Switzerland ⌄

Next

What is your occupation?

Almost Done. Tell us more about your work.

Job title (optional)

Company name

TheClown

Telephone (optional)

Back   Next

When the user logs into our Tenant, his HUB will be empty, since no permissions have been granted yet to the user:
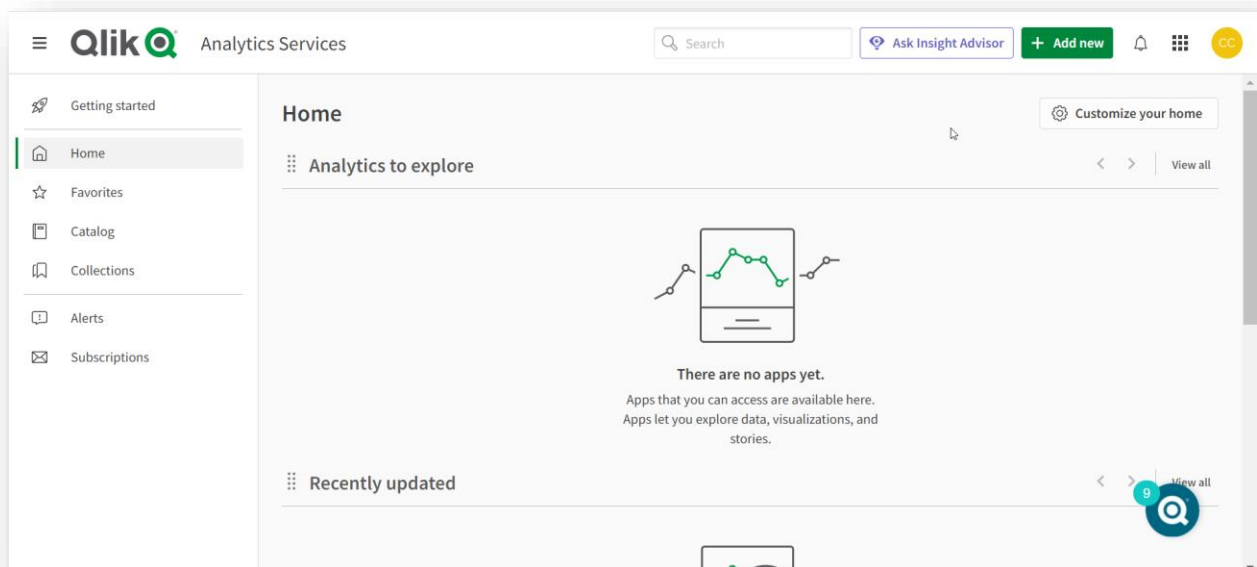
On the other hand, from the Tenant Admin perspective in the Management Console the newly invited users will appear as listed:

Observe the new user has a professional entitlement assigned.

To be mentioned that automatic entitlement is enabled in the settings section:

However, you can modify such settings if you wish so, or you can also modify later user's entitlement by going in the user section:
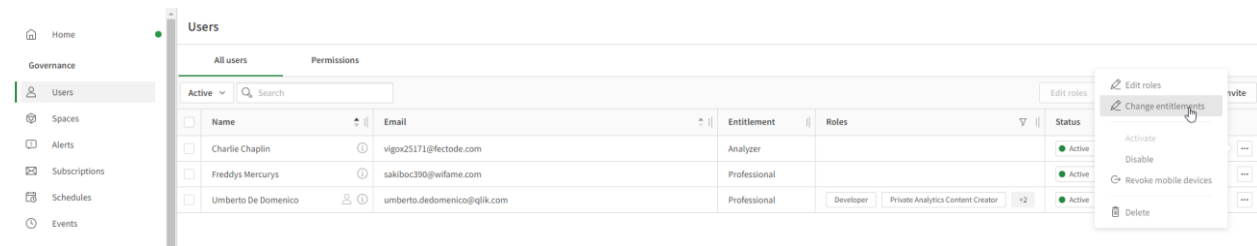
Finally observe initial security roles which have been assigned to the new invited user:
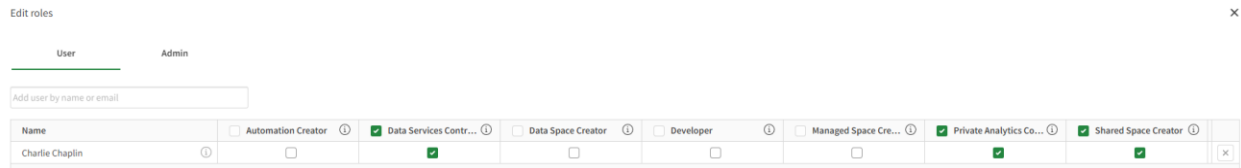
Users are automatically assigned:

- Data Services Contributor
- Private Analytics Content Creator
- Shared Space Creator

For a list of all possible security roles please refer to the on-line help (we will also explore more at the end of the workshop)

Advanced Topics Ideas: setting up an IdP provider to allow on boarding users

We have a rich set of detailed articles on the web which lead you through the needed steps to use your IdP for user's authentication; for instance, Okta, for Azure, for Auth0

In Qlik Cloud you will have to access to management console and, *in identity providers*, pick up your IdP:

Create identity provider configuration

Identity provider

Type

| - Select - | ⌄ |

Provider

| - Select - | ⌃ |

ADFS

Auth0

Azure AD

Generic

Keycloak

Okta

Salesforce

Please refer to cited articles to find out how to set up your IdP, alternatively consider involving Qlik Professional Service for the configuration.

Space Roles

In this activity we will explore part of the security enablement available in Qlik Cloud.

Overall, we have two types of roles to enable access control:

- Security roles
- Space roles

The first ones are used to refine access control in the management console, and it is the type of security level usually granted to system administrators and specific users. [We shall check them up later](#).

Space roles are used to define the type of actions allowed within apps in spaces, either managed, shared or personal.

To be noted that for Business Edition Tenants the only available spaces are the personal and shared ones; managed spaces are only available to Enterprise Edition Tenants.

A personal space is your own private work area in the cloud hub. Each user has her/his own private personal area.

What is the difference between shared and managed spaces?

A managed space is for consumption only. So, apps **are published** to a managed space and within the space are meant to be used to analyze data in sheets, share analysis between members live or by creating notes, set up alerts, monitor charts in hub, create storytelling, download data; in other words, to consume data. Traditionally, this applies to the typical business user profile.

A shared space, instead, is where you create apps, store, organize and secure apps and, more importantly, you co-develop (in the design layer) sheets planning and creation with other developers.

The other important big difference between managed and shared space is that in a managed space apps **are published** only whereas in a shared space apps **are moved**.

Apps in managed spaces are published from a personal or a shared space. The original app is kept in the hosted space and the managed space will host a duplicate of the app.

This allows a robust workflow where codevelopers improve, maintain, or amend an app in the shared or personal space and when it is ready the app can be re-published into the managed space.

During our workshop we will explore both shared and managed space roles, as previously mentioned, keeping in mind that for Business Edition Tenants, the only available space is the managed one.

Our two exercises will focus on the type of actions available within apps hosted in spaces (app context), however space role security embraces also the HUB context (type of actions available for each space in the HUB).

Examples of actions in the app context (see grid for a more exhaustive list):

- Open App
- Create private sheets
- Create stories
- Reload apps
- Export data in charts
- Etc..

Examples of actions in the HUB context for each given space (see grid for a more exhaustive list):

- Create or delete space
- Change name to space
- Change owner of app
- Create App
- Move app from or to this space
- Reload or schedule reload
- Etc.

Space roles exploration. Context: app in a shared space.

First exercise. Context: app in a shared space.
Purpose of the exercise: exploration of some of the space roles permissions available for shared spaces.
Please note: For the more knowledgeable admins an extra activity based on similar topics is proposed below in the section *Advanced Topics Ideas.*

Create a shared space.

This time we shall create a space directly from the Analytics Services (HUB), instead of going in the Management Console.

Ask Insight Advisor   **+ Add new**

Create new content

New analytics app
Add and explore your data

Upload app
Add an existing app to the hub

New ML experiment
Create machine learning models

New automation
Create a business workflow

Create note
Collaborate on analysis

Create link
Add a link to an external resource

Add new data

Dataset
Upload a data file or register external data

Data connection
Establish a new data connection

Collaborate with others

Create space
Share and control access to content

On the green button choose *Create space* and then choose Shared as Type and name the space as Space2

Create a new space ⓘ   ✕

Name

Space2

Description

Type

Shared	Managed
Develop collaboratively and share with users that you invite to this space.	Provide governed access with strict access control for both the app and its data.

Cancel   Create

Move app into a shared space

We still have our SalesData app in our personal space. Let's move it to the shared space Space1:
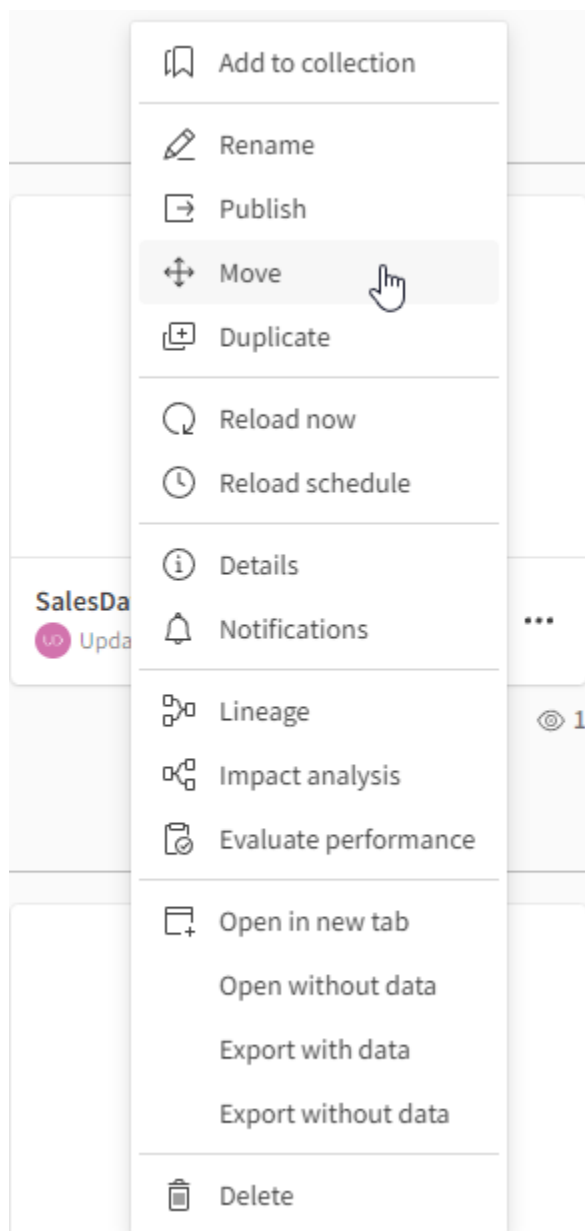
🔖	Add to collection
✏️	Rename
➡️	Publish
✛	Move
⊞	Duplicate
↻	Reload now
🕐	Reload schedule
ⓘ	Details
🔔	Notifications
⊱	Lineage
⊲	Impact analysis
📋	Evaluate performance
⊡	Open in new tab
	Open without data
	Export with data
	Export without data
🗑	Delete
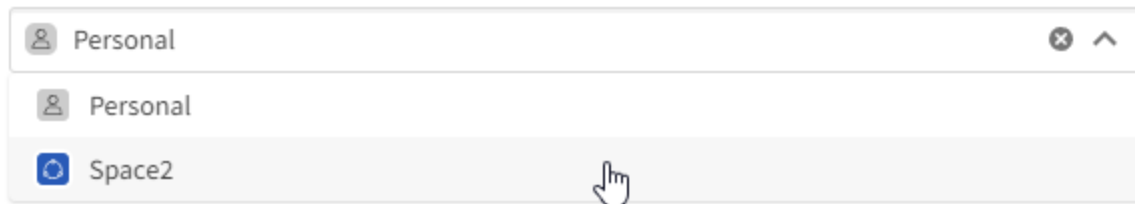
Assign User Charlie Chaplin to the space *Space2*

Now that SalesData is in Space2, let's give User Charlie Chaplin access to Space2.

This time, as opposite to the previous activity in the managed space, let's use another way to access member console, by going to *space details* on the right top corner. Clicking on *members* will take us right to the management console in the Sapce2 console where we can add our user Charlie Chaplin to this space
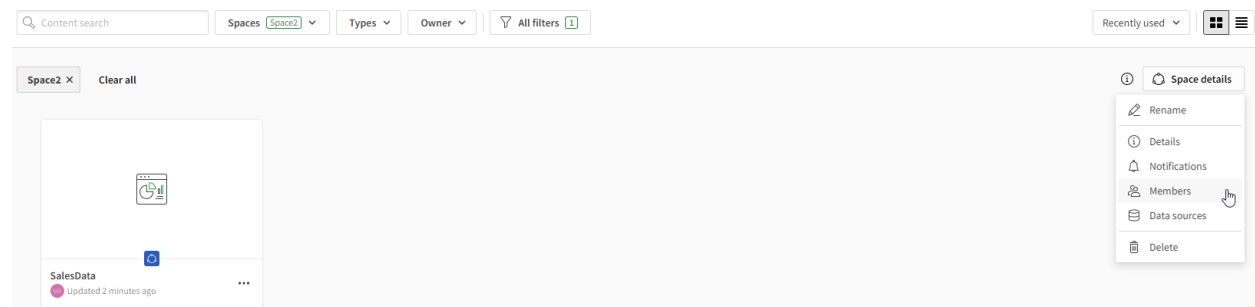
Observe the different types of space roles which can be assigned:

Click on the *add members* button opens a new window where permissions can be assigned:

Add members to Space2   ✕

Give access to the space and its content.

Users or groups

[Enter name or email]   [Can view ▼]

☑ **Can view**
Can see content and open apps, but cannot make changes

☐ **Can consume data**
Can consume data files and data connections created in this space

☐ **Can manage**
Can manage space details and members

☐ **Can edit**
Can see content in this space, open apps, and create and edit sheets

The following table represents a summary of permissions (space role) which can be granted, and the correspondent actions associated to each space role:

Shared Space - Sense Client Actions

	Shared Space										System Roles[3]	
		Space Roles										
Sense Client Actions	Is owner		Can manage		Can edit		Can edit data in apps		Can view	TenantAdmin	AnalyticsAdmin
	User is space owner		User is space facilitator		User is space producer		User is codeveloper		User is space consumer		
	Prof/Analyzer		Prof/Analyzer		Prof/Analyzer		Prof/Analyzer		all	All	All
01 Open App (via URL)	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	✓	✓
02 Edit App Attributes and Options	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ			
03 Create private bookmarks 🔖	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓		
04 Create snapshots and stories 🔖	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓		
05 Create and Edit Monitored Charts	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓		
06 Open Data Model Viewer	✓		✓		✓		✓				
07 Create Private Sheets	✓		✓		✓		✓				
08 Move sheets, stories & bookmarks private → public	✓		✓		✓		✓				
09 Move sheets private → published					Managed Spaces only						
10 Move stories private → published											
11 Move bookmarks private → published											
12 Open Data Manager & Data Load Editor	🔶		🔶		🔶		✓				
13 Reload App	✓		✓		✓		✓				
14 Binary Load	✓		✓		✓		✓				
15 Change User for Section Access IAC Indexing	🔶		🔶		🔶		🔶				
16 View Notes	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓		
17 Edit Notes	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓		
18 Export data in charts	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓	Ⓐ	✓		
19 Edit script if not owner							✓				
20 Business logic	✓	Ⓐ									

✓ = Permissions without any entitlement restrictions (Professional/Full User)
Ⓐ = Analyzer entitlements limited permissions
🔶 = Must also be *Resource Owner*

Activity: Let's focus on actions available if we assign *can view* role to Charlie Chaplin user.

The user will need to log out and wait two minutes before logging back again and appreciate permission change. This is because Qlik Sense cache sessions to allow users logging back in and not loose their selections. This mechanism may change in the future.

After two minutes the user can log back in and he is now able to see managed space2 in his catalog and his app:
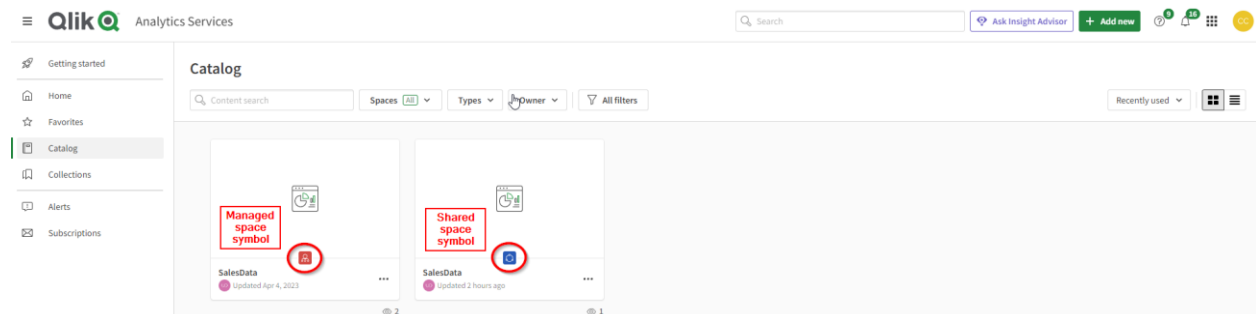
Now, let's focus on the actions the user can do. According to the permission grid, user Charlie Chaplin with view permissions should be able to:

01 Open App (via URL)
03 Create private bookmarks
04 Create snapshots and stories
05 Create and Edit Monitored Charts
16 View Notes
17 Edit Notes
18 Export data in charts

But he should not be able to do other actions such as:

06 Open Data Model Viewer
07 Create Private Sheets
08 Move sheets, stories & bookmarks *private ↔ public*
12 Open Data Manager & Data Load Editor
13 Reload App

14 Binary Load
15 Change User for Section Access IAC Indexing
20 Business logic

Given we do not have the time to go through each single action, let's focus on the first one, ability of opening the Data Model Viewer.
Observation: in shared space apps only *public* sheets are visible.

This means that if we now open up the published app, our sheet is not accessible because we have not published it before publishing the app.

Let's go back to the source app in the personal space and let's set our sheet to *make public* (right click).
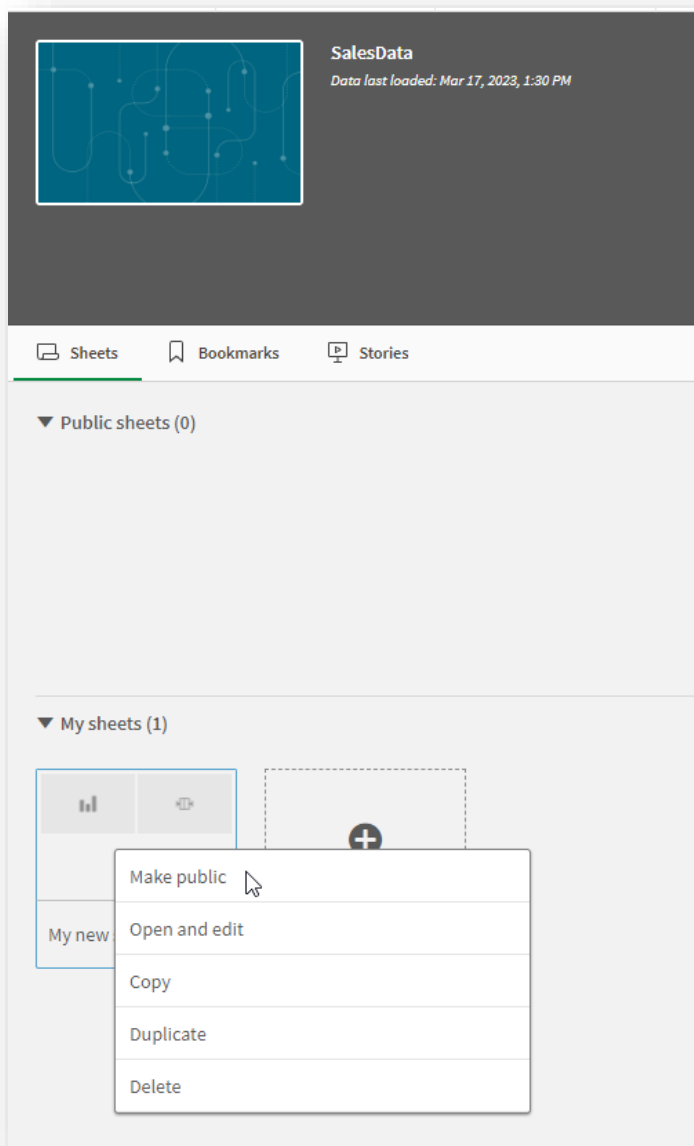
Now, if we open the app as Charlie Chaplin user, we should be able to see the sheet and we can also confirm he is unable to see the Data Model Viewer:
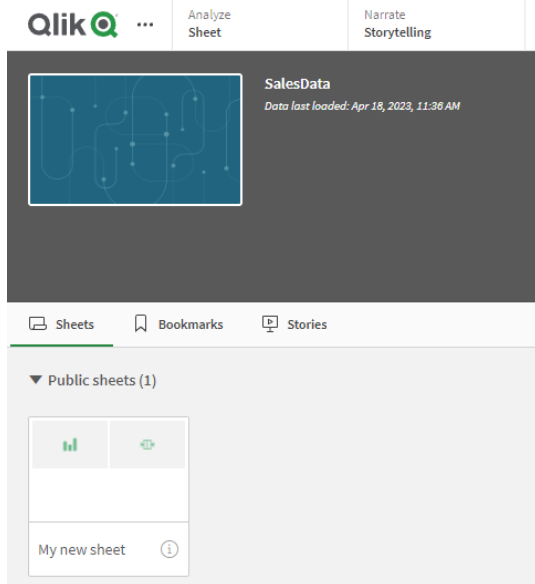
A role which grants such a permission is *can edit*:
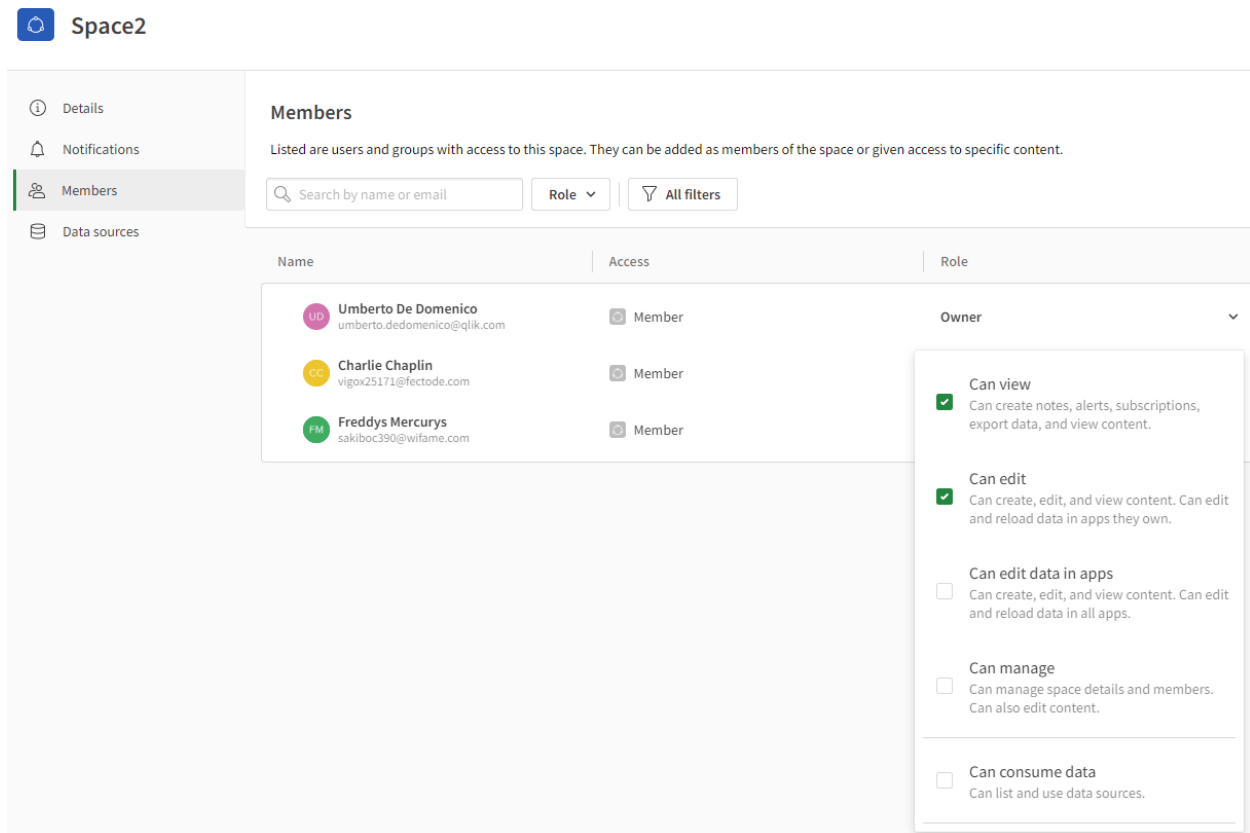
The result is as follows. Now Charlie Chaplin does have access to Data model viewer tab:
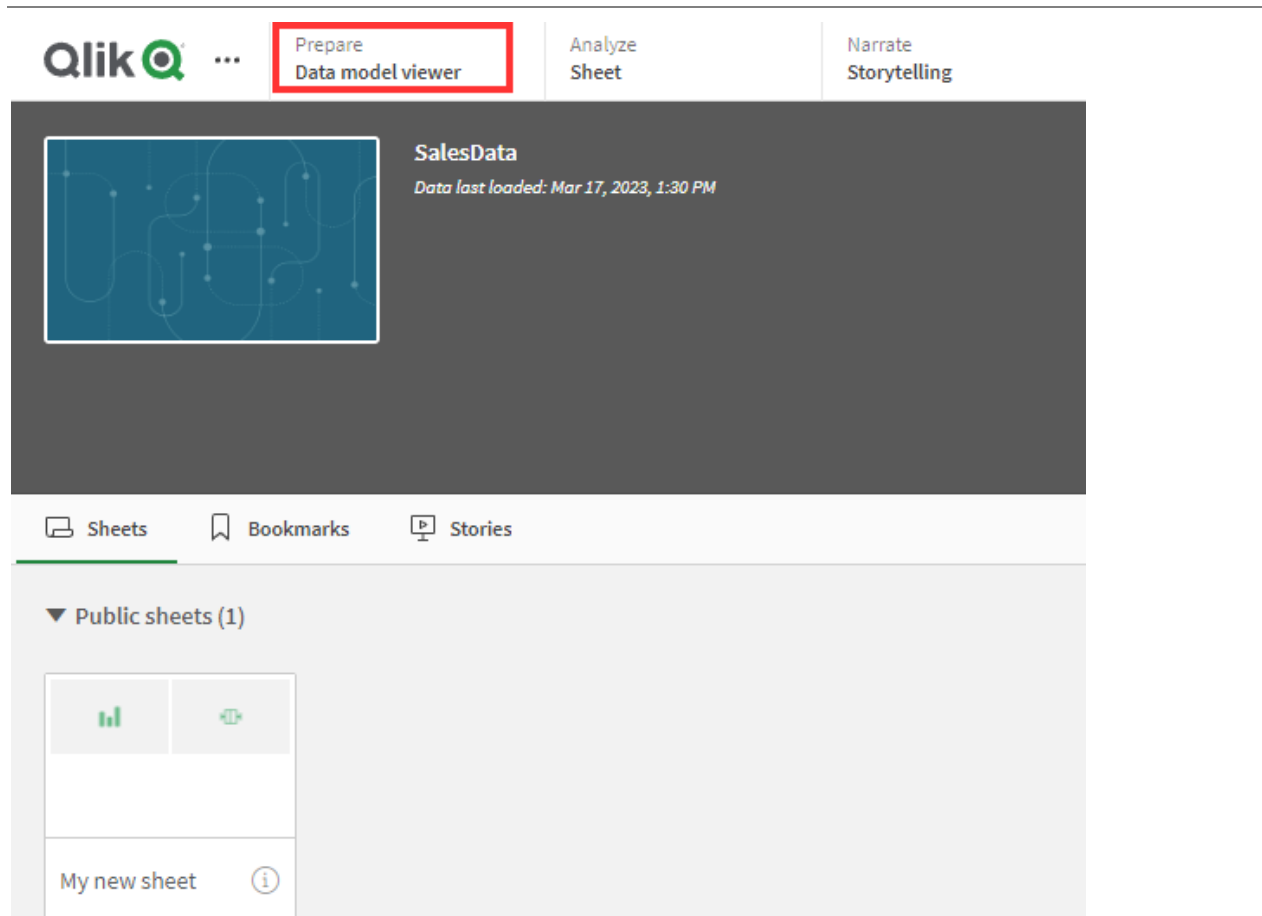
Space roles exploration. Context: app in a managed space

First exercise. Context: app in a managed space.

Purpose of the exercise: exploration of some of the space roles permissions available for managed spaces.

We remind managed spaces are only available for enterprise edition. Business edition tenants will only be able to work with shared spaces

Steps to follow:

Create a managed space.

Logged in as Tenant Admin, In the management console, on the left-hand side panel select Spaces and click on the green button to create a new space making sure the type of space selected is Managed:

Publish app into a managed space
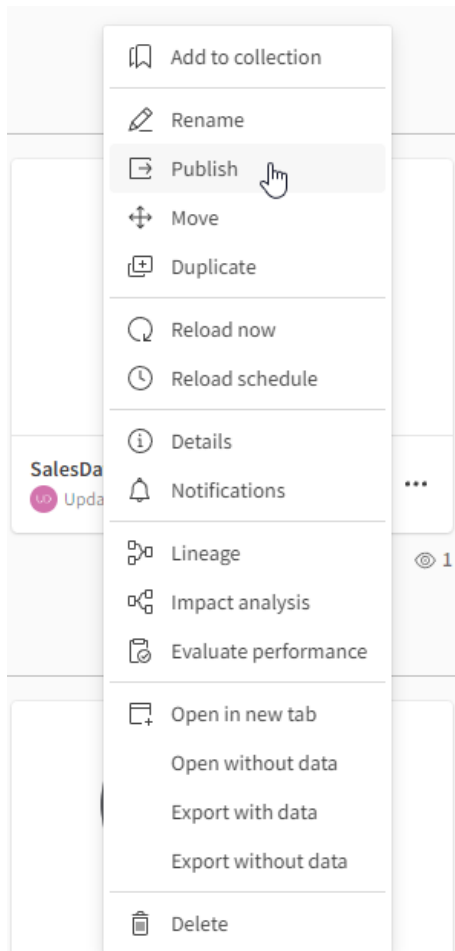
Publishing an app to a managed space implies having already an app hosted either in the personal space or in one of shared spaces currently created (not our case, yet).

We will, therefore, publish our SalesData App, from our personal space into the managed space.

Observation: in published app only *public* and *community* sheets are visible.

This means that if we now open up the published app, our sheet is not accessible because we have not published it before publishing the app.

Let's go back to the source app in the personal space and publish the sheet:
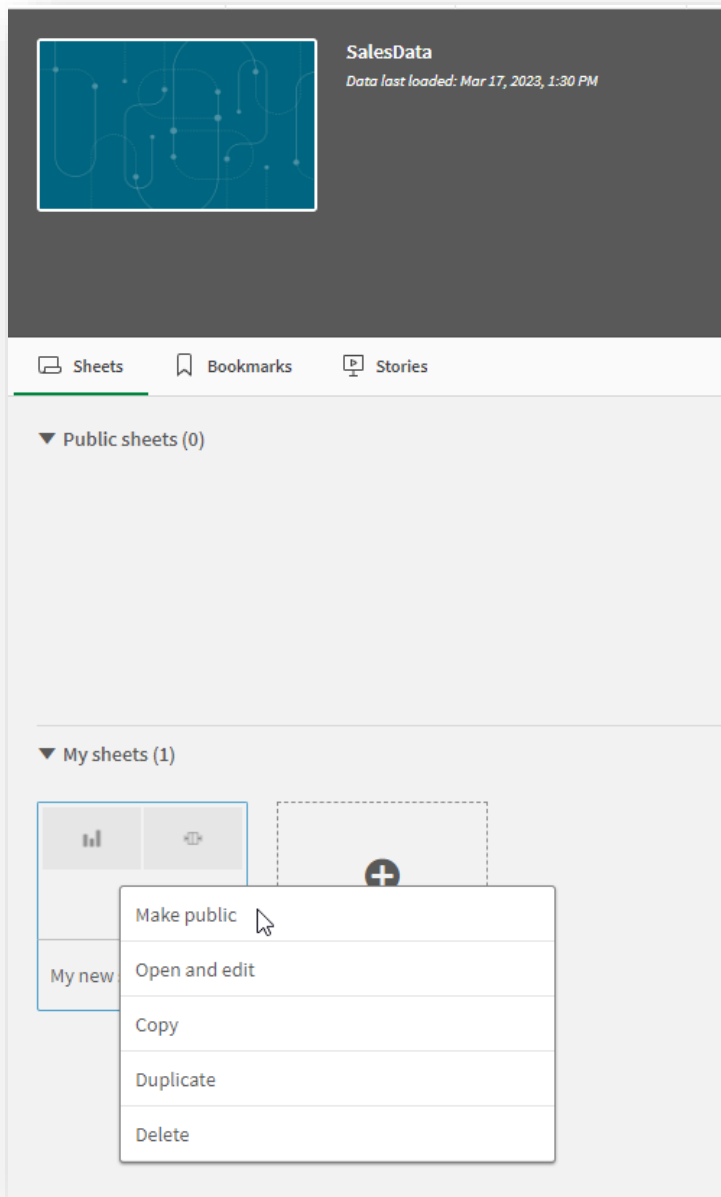
Then republish the app.
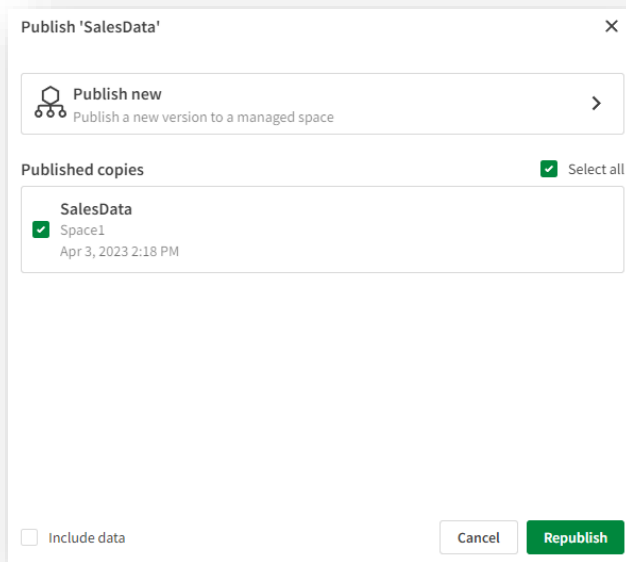
The sheet is now visible in the public sheets section:
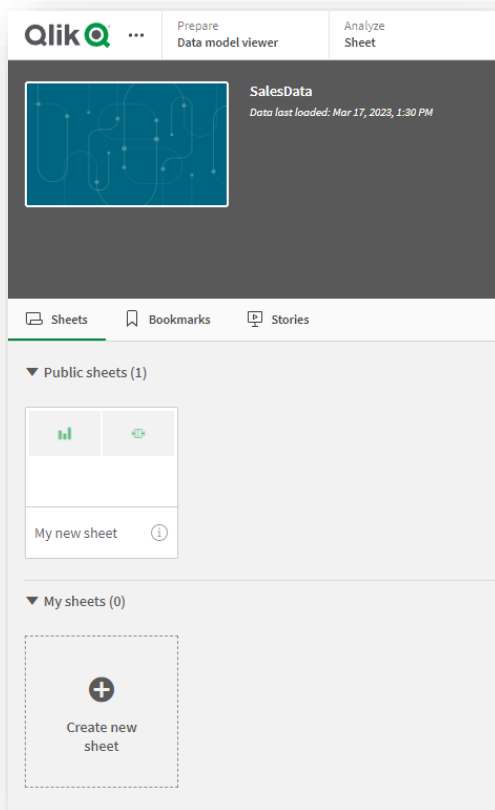
Assign User Charlie Chaplin to the space *Space1*

Access to the spaces in the governance section under management console and select manage members in the three dots for Space1 (managed type space):
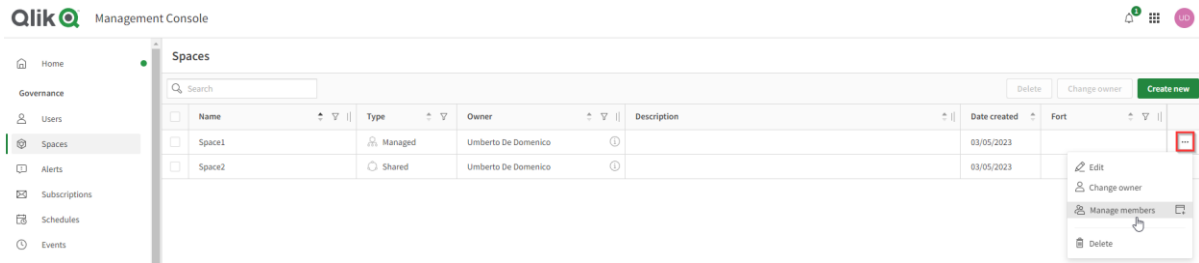
Observe the different types of space roles which can be assigned:
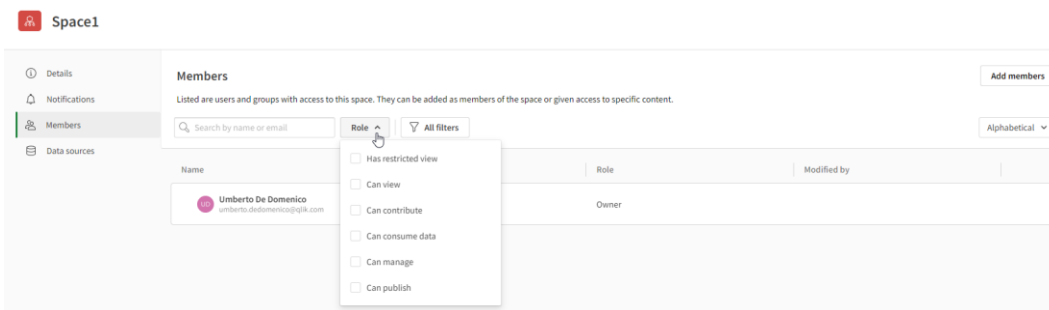
The tables at the following link represent a summary of permissions (space role) which can be granted, and the correspondent actions associated to each space role, depending on the type o f entitlement:

Analyzer Entitlement:

https://help.qlik.com/en-US/cloud-services/Subsystems/Hub/Content/Sense_Hub/Spaces/permissions-managed-space-analyzer.htm

Professional Entitlement:

https://help.qlik.com/en-US/cloud-services/Subsystems/Hub/Content/Sense_Hub/Spaces/permissions-managed-space-prof-full.htm

The following is an extract of the latter:

Managed Space - Sense Client Actions

Sense Client Actions	Managed Space										
	Space Roles										
	Is owner		Can manage		Can Operate	Can publish	Can contribute		Can view	Has restricted view	Can consume data
	User is space owner		User is space facilitator		User is Operator	User is space publisher	User is space contributor		User is space consumer	User is basic user	User is data consumer
	Prof/Analyzer		Prof/Analyzer		All	All	Prof/Analyzer		All	All	All
01 Open App (via URL)	✓	Ⓐ	✓	Ⓐ	✓		✓	Ⓐ	✓	✓	
02 Edit App Attributes and Options	✓		✓		✓						
03 Create private bookmarks	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ	✓	✓	
04 Create private snapshots and stories	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ	✓		
05 Create and Edit Monitored Charts	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ	✓		
06 Open Data Model Viewer	✓		✓								
07 Create Private Sheets	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ			
08 Move sheets, stories & bookmarks *private → public*	Personal and Shared Spaces only										
09 Move sheets *private → published*	✓		✓				✓				
10 Move stories *private → published*	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ			
11 Move bookmarks *private → published*	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ			
12 Open Data Manager & Data Load Editor											
13 Reload App	✓		✓								
14 Binary Load	✓		✓								✓
15 Change User for Section Access IAC Indexing											
16 View Notes	✓	Ⓐ	✓	Ⓐ	✓		✓	Ⓐ	✓	✓	
17 Edit Notes	✓	Ⓐ	✓	Ⓐ	✓		✓	Ⓐ	✓	✓	
18 Download data in charts (export in-app data)	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ	✓		
19 Download chart image (export in-app images)	✓	Ⓐ	✓	Ⓐ	✓		✓	Ⓐ	✓	✓	
20 Key Driver Analysis (KDA)	✓	Ⓐ	✓	Ⓐ			✓	Ⓐ	✓		

✓ = Permissions without any entitlement restrictions (Professional/Full User)
Ⓐ = Analyzer entitlements limited permissions
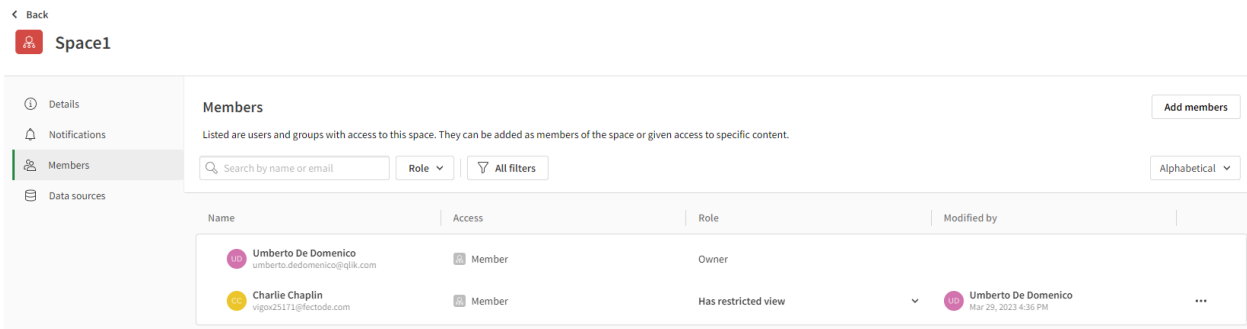Basic user = "Has restricted view" space role

As we already mentioned for the shared spaces that actions are also applicable to the spaces, so please check also what type of permissions can be given inside a space (which contains your apps).

The following is an extract:

Qlik logo

Actions	Is owner — User is space owner (Prof/Analyzer)		Can manage — User is space facilitator (Prof/Analyzer)		Can Operate — User is Operator (Professional)	Can publish — User is space publisher (All)	Can contribute — User is space contributor (All)	Can view — User is space consumer (All)	Has restricted view — User is basic consumer (Full/Basic)	Can consume data — User is data consumer (All)
01 Create App										
02 Duplicate App										
03 List Apps	✓	A	✓	A	✓		✓	✓	✓	
03 Open App	✓	A	✓	A	✓		✓	✓	✓	
05 Delete App	✓	A	✓	A	✓					
06 Edit App Properties	✓		✓			✓				
07 Export (download) App without data →	✓		✓							
08 Import (upload) App to this Space ←										
09 Publish and Republish from this Space →	*Personal and Shared Spaces only*									
10 Publish and Republish to this Space ←	✓	A				✓				
11 Move App from this Space →										
12 Move App to this Space ←										
13 Reload App	✓		✓		✓					
14 Schedule Reload App	✓		✓		✓					
15 Change Owner for App[2]										
16 View Notes	✓	A	✓	A	✓		✓	✓	✓	
17 Edit Notes	✓	A	✓	A	✓		✓	✓	✓	
18 Create this type of Space										
19 See this Space in Hub Selector	✓	A	✓	A		✓	✓	✓	✓	✓
20 Change Name and Roles for this Space	✓	A	✓	A						
21 Delete Space	✓	A	✓	A						
22 Change Owner for this Space	Supported in **Management Console**									
23 Create Data Resource	✓		✓							
24 List Data Files	✓	A	✓	A	✓					✓
25 List Data Resources	✓	A	✓	A	✓					✓
26 Open (Read) Data Connection for App Reload (Incl OAuth/Pwd)	✓		✓		✓					✓
27 Open (Read) Data File for App Reload	✓		✓		✓					✓
28 Edit Data Connection (Overwrite with same resourceId and name)[4]	✓		✓		✓					
29 Delete Data File	✓	A	✓	A	✓					
30 Delete Data Connection	✓	A	✓	A	✓					
31 Update Data File (Overwrite with same name)	✓		✓		✓					
32 Binary load from apps within space (Need professional to reload)	✓		✓		✓					✓
33 Move Data Connection (to any other space)										
34 Move Data File (to any other space)	✓		✓							
44 Create Deployment	✓					✓				
45 List Deployment	✓		✓		✓		✓	✓		
46 Delete Deployment	✓		✓							
47 Edit Deployment	✓		✓							
48 Move Deployment from this Space →	✓		✓							
49 Move Deployment to this Space ←	✓		✓							
50 Edit Deployment Schedule	✓		✓							
51 Run Deployment Schedule	✓		✓							
52 Run Deployment Prediction (via API or Hub)	✓	A	✓							A
53 Change Deployment Owner (Move to other user's Space)[1]										
54 Create generic links	✓	A	✓	A						
55 List generic links	✓	A	✓	A	✓		✓	✓	✓	
56 Create Business glossary	✓[5]	A[5]	✓[5]	A[5]			✓[5]			
57 List Business glossary	✓	A	✓	A	✓		✓	✓	✓	
58 Open Business glossary	✓	A	✓	A	✓		✓	✓	✓	
59 Delete Business glossary	✓[5]	A[5]	✓[5]	A[5]			✓[5]			
60 Move Business glossary from this space →	✓[5]	A[5]	✓[5]	A[5]			✓[5]			
61 Move Business glossary to this space ←	✓[5]	A[5]	✓[5]	A[5]			✓[5]			
62 View Business glossary details page	✓	A	✓	A	✓		✓	✓	✓	
63 Create Assistant	✓		✓							
64 List Assistant	✓		✓		✓		✓	✓	✓	
65 Read Assistant	✓		✓		✓		✓	✓	✓	
66 Update Assistant										

The user Charlie Chaplin will need to log out and wait two minutes before logging back again and appreciate permission change. This is because Qlik Sense cache sessions to allow users logging back in and not loose their selections. This mechanism may change in the future.
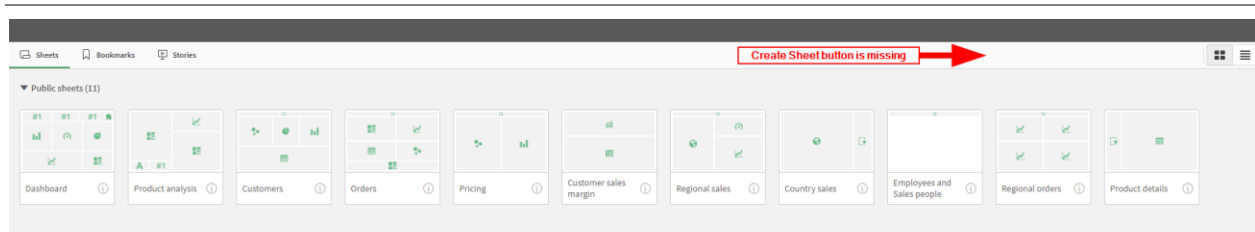
After two minutes the user can log back in and he is now able to see managed space1 in his catalog:
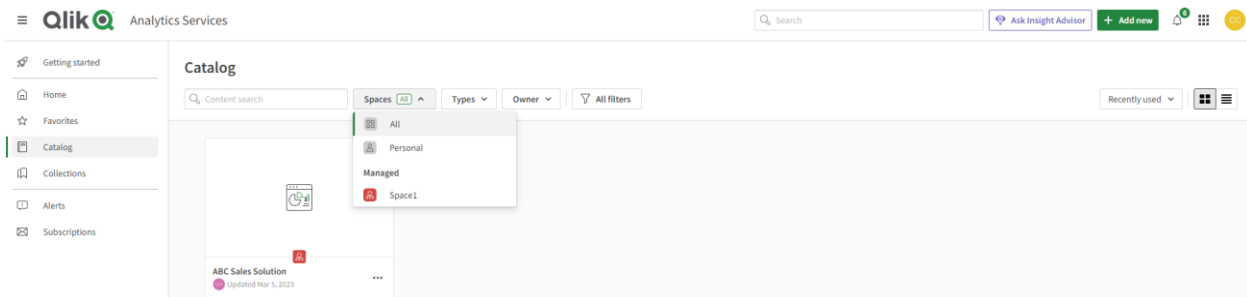
As said, let's focus on the actions the user can do. According to the permission grid user Charlie Chaplin should be able to create bookmark within the app but he should not be able to create stories, snapshots, sheets.
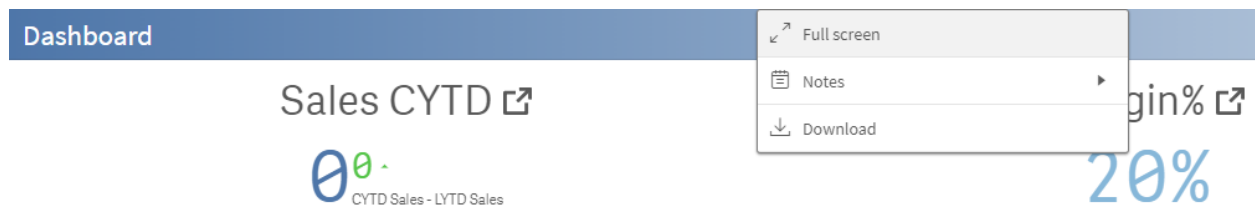
Let's verify so by opening app the SalesData app:

The create bookmark button is available:
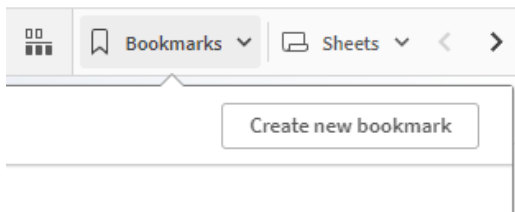
The create snapshot button, for each object in the sheet is missing

Activity 2: let's increase Charlie Chaplin's permissions. We would like him to be able to create private sheets.

Again, looking at the permissions grid we see that we need to modify his permissions to *can contribute* and assign him a professional entitlement:

| Sense Client Actions	Managed Space							System Roles[3]	
	Space Roles								
	Is owner	Can manage	Can publish	Can contribute	Can view	Has restricted view	Can consume data	TenantAdmin	AnalyticsAdmin
	User is space owner	User is space facilitator	User is space publisher	User is space contributor	User is space consumer	User is basic consumer	User is data consumer		
	Prof/Analyzer	Prof/Analyzer	All	Prof/Analyzer	All	All	All	All	All
01 Open App (via URL)	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓	✓		✓	✓
02 Edit App Attributes and Options	✓	✓							
03 Create private bookmarks	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓	✓			
04 Create private snapshots and stories	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓				
05 Create and Edit Monitored Charts	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓				
06 Open Data Model Viewer	✓	✓							
07 Create Private Sheets	✓	✓		✓					
08 Move sheets, stories & bookmarks private ↔ public	Personal and Shared Spaces only								
09 Move sheets private ↔ published [G]	✓	✓		✓					
10 Move stories private ↔ published [G]	✓Ⓐ	✓Ⓐ		✓Ⓐ					
11 Move bookmarks private ↔ published [G]	✓Ⓐ	✓Ⓐ		✓Ⓐ					
12 Open Data Manager & Data Load Editor									
13 Reload App	✓	✓							
14 Binary Load	✓	✓					✓		
15 Change User for Section Access IAC Indexing									
16 View Notes	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓	✓			
17 Edit Notes	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓	✓			
18 Export data in charts	✓Ⓐ	✓Ⓐ		✓Ⓐ	✓				

✓=Permissions without any entitlement limitations (Professional/Full User)
Ⓐ=Analyzer entitlements limited permissions

We proceed and change permissions and entitlement as previously done:
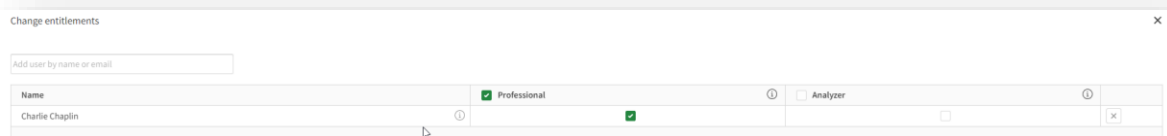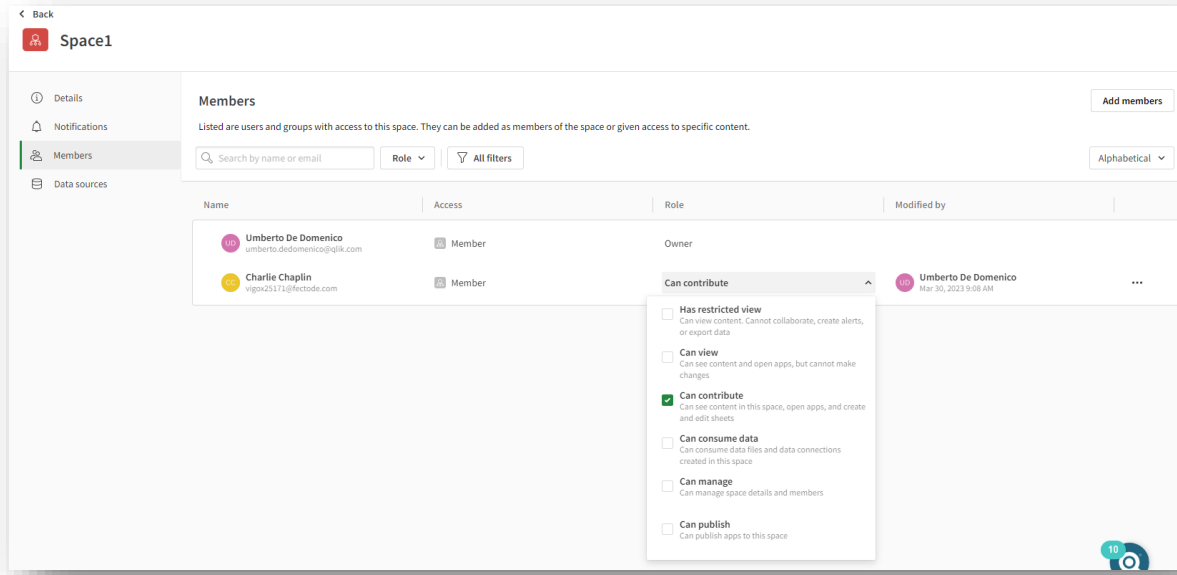
The result is as follows, the create sheet button is now visible:
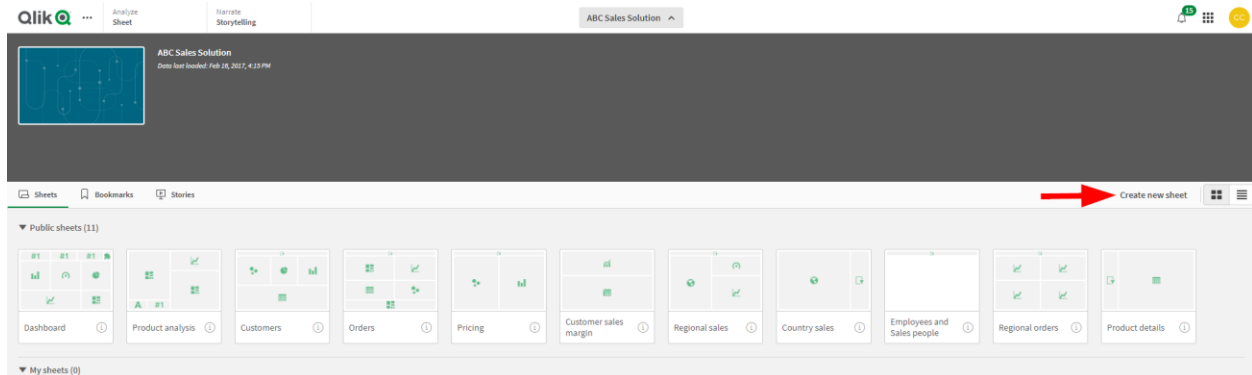
Advanced Topics Ideas: explore and understand the difference between *can edit* and *can manage*

In the permission grid above presented it seems the two space roles are identical. So, what's the reason for having two different space roles which permit the same type of actions inside an app?

The answer emergences naturally if we switch context. So far, we have explored the available actions inside apps. However, apps are hosted inside spaces and actions are also inherent to spaces.

Please consider the correspondent permission grid:

Actions	Is owner		Can manage		Can edit		Can edit data in apps		Can view	Can consume data	TenantAdmin	AnalyticsAdmin
	User is space owner		User is space facilitator		User is space producer		User is codeveloper		User is space consumer	User is data consumer		
	Prof/Analyzer		Prof/Analyzer		Prof/Analyzer		Prof/Analyzer		All	All	All	All
01 Create App	✓		✓		✓		✓					
02 Duplicate App	✓		✓		✓		✓					
03 List Apps	✓	(A)	✓	(A)	✓	(A)	✓	(A)	✓		✓	✓
04 Open App	✓	(A)	✓	(A)	✓	(A)	✓	(A)	✓		✓	✓
05 Delete App	✓	(A)	✓	(A)	✓	(A)	✓	(A)			✓	✓
06 Edit App Properties	✓	(A)	✓	(A)	✓	(A)	✓	(A)				
07 Export (download) App *from this Space* --	✓	(A)	✓	(A)	✓	(A)	✓	(A)				
08 Import (upload) *App to this Space* --	✓		✓		✓		✓					
09 Publish and Republish *from this Space* --	✓	(A)	✓		✓	(A)	✓	(A)				
10 Publish and Republish *to this Space* --	*Managed Spaces only*											
11 Move App *from this Space* --	✓		✓		✓		✓					
12 Move App *to this Space* --	✓		✓		✓		✓					
13 Reload App	✓		✓		✓		✓					
14 Schedule Reload App	✓		✓		(R)✓		✓					
15 Change Owner for App												
16 View Notes	✓	(A)	✓	(A)	✓	(A)	✓	(A)	✓			
17 Edit Notes	✓	(A)	✓	(A)	✓	(A)	✓	(A)				
18 See this Space in Hub Selector	✓	(A)	✓	(A)	✓	(A)	✓	(A)	✓	✓	✓	✓
19 Change Name and Roles for this Space	✓	(A)	✓	(A)							✓	✓
20 Delete this Space	✓	(A)	✓	(A)							✓	✓
21 Change Owner for this Space	*Supported in Management Console*											
22 Create Data Resource	✓		✓		✓		✓					
23 List Data Files	✓	(A)	✓	(A)	✓	(A)	✓	(A)		✓	✓	✓
24 List Data Connections	✓	(A)	✓	(A)	✓	(A)	✓	(A)		✓	✓	✓
25 Open (Read) Data Connection for App Reload (incl OAuth/Pwd)	✓		✓		✓		✓			✓		
26 Open (Read) Data File for App Reload	✓		✓		✓		✓			✓		
27 Edit Data Connection (Overwrite with same resourceid and name)[2]	(R)		(R)		(R)		(R)					
28 Delete Data File	✓	(A)	✓	(A)	✓	(A)	✓	(A)			✓	✓
29 Delete Data Connection	✓	(A)	✓	(A)	✓	(A)	✓	(A)			✓	✓
30 Update Data File (Overwrite with same name)	✓		✓		✓		✓				✓	✓
31 Binary load from apps within space (Need professional to reload)	✓		✓		✓		✓			✓	✓	✓
32 Move Data Connection (to any other space)											✓ MC	✓ MC
33 Move Data File (to any other space)	✓		✓									

✓ = Permissions without any entitlement restrictions (Professional/Full User)

(A) = Analyzer entitlements limited permissions

(R) = Must also be *Resource Owner*

It is clear manage space permissions in the HUB also allows *Change Name and Roles for this Space*, *Delete this Space* and *Mode Data File*, something a can edit user cannot do. so in the HUB context, a manage space role has more power than can edit role.

Advanced Topics Ideas: explore and understand *can edit data in apps*

In the permission grid above it is also listed a special space permission so called *can edit in apps.*

The only difference, in the context of an app, is the ability of editing the script of the app, if not owner.

This an important permission which also implies tricky aspects related to concurrency access to the script. Let's explore it together.

Let's assume we have already assigned this permission to Charlie Chaplin, with the same steps used in the previous activity.
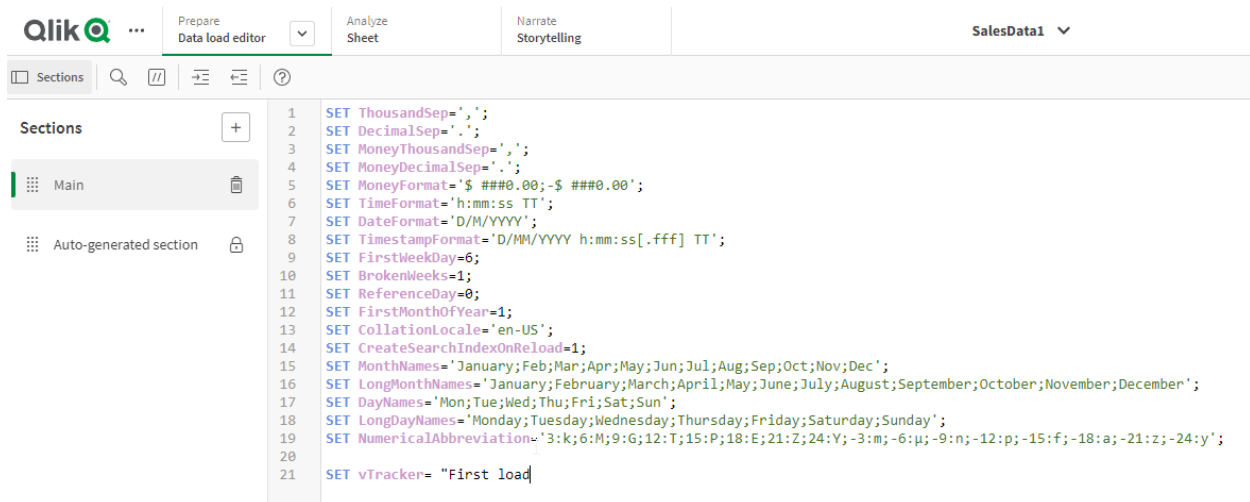
Charlie Chaplin will now be able to access the script editor
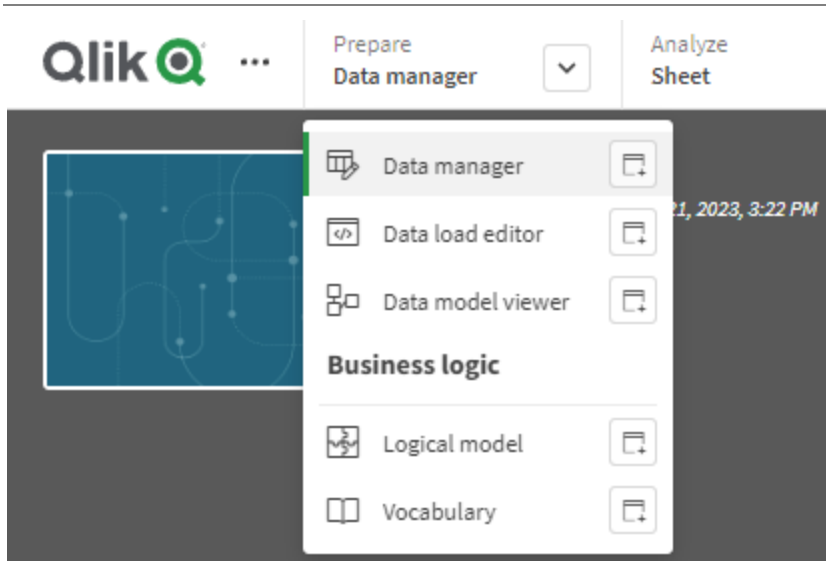
Accessing any section of script will automatically cause a locking of that section:

e.g. if Charlie Chaplin starts editing the first section:

A warning message will be displayed in the script editor of the first editor (should she/he, trying accessing the same script section:

Even more interesting is the ability of accessing the full history of changes back to last 50 versions.

In the right top corner of the same window:

This allows an easy and safe approach to develop scripts concurrently.

Public collections

Public collections are a way to organize content in a more governed way and make it easier for cloud user to find content. Key characteristics:

- Organize content across Spaces.
- Security defined within Spaces.
- Collections can become public when there is at least one item in it, which ca be seen by users.
- Spaces are becoming more of an Admin/Developer tool.
- Who can create Public Collections?
  - Tenant Admins
  - Analytic Admins
- Recommended best practice is to never mix up different type of spaces, always use the same type of spaces, either Managed or Shared. This is to avoid having the same app duplicated (The original in a shared space and the published one in a managed space) in the same public collection.
  In the below exercise we will mix different type of spaces, but this is for didactical purposes only.

   In our activity we will:

- Create a collection.
- Add an app (SalesData).
- Make the collection public.
- Create a new (managed) space.
- Upload a new app (Consumer Sales.qvf) into your personal (or any shared) space.
- Publish the app to the freshly created managed space
- Add the app to the public collection.
- Verify user Charlie Chaplin cannot see the second app despite being in the public collection.

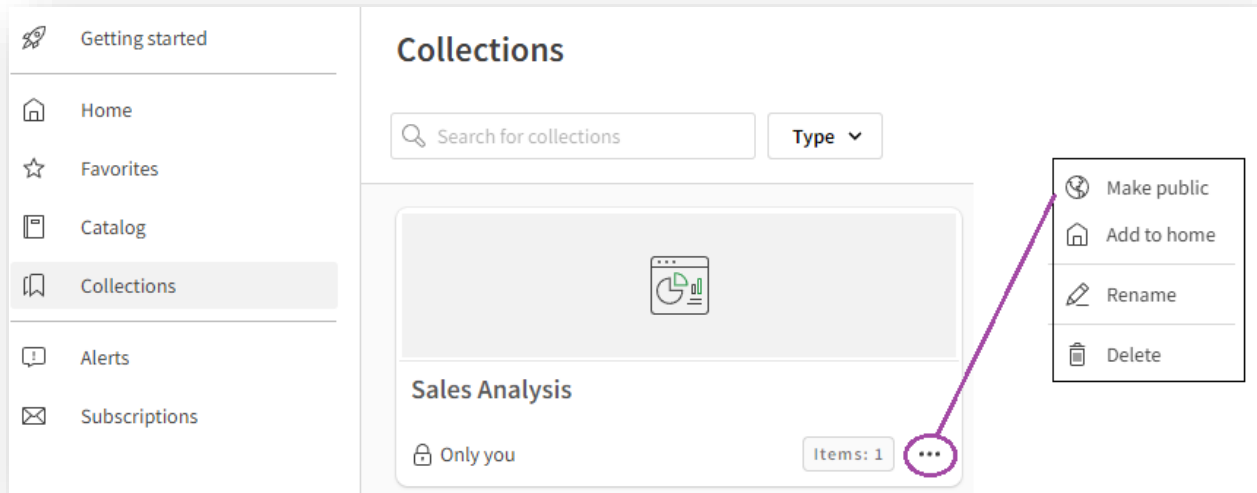Create a collection called *Sales Analysis*:

Move to the Home section and add an app to the collection (at the moment private, because no objects are in it):
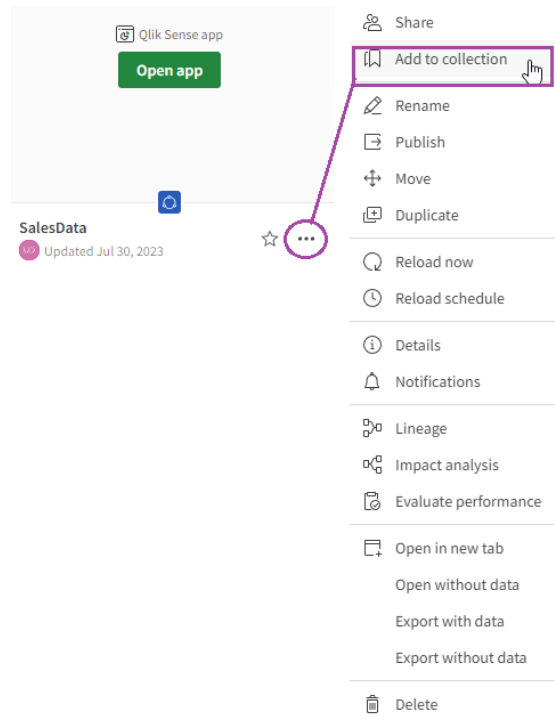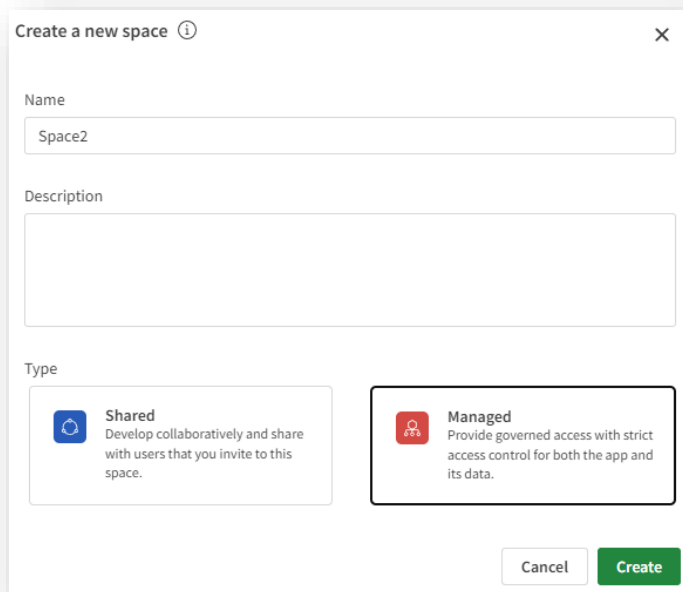

By clicking on the plus sign:
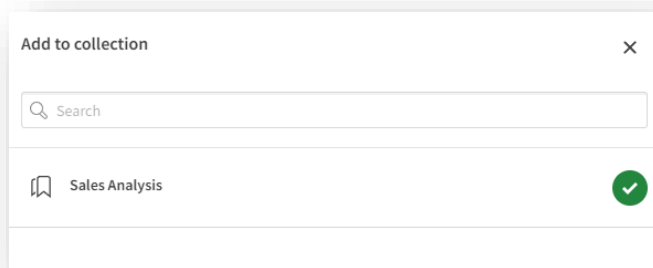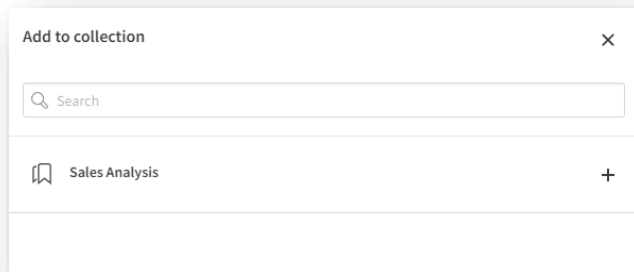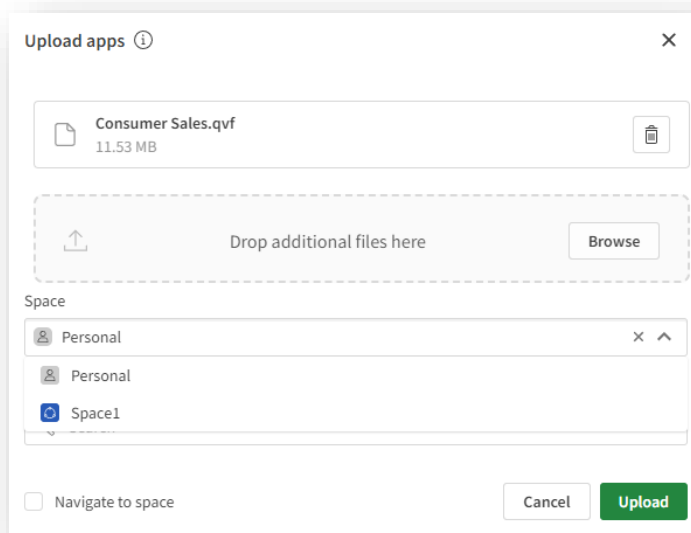
Make the collection public:


Create a new (managed) space called *Space2*:

Upload a new app (*Consumer Sales.qvf*, the app can be downloaded from the [article](#) which includes the workbook and the data file needed).

NOTE: the app must be first uploaded into a personal or shared space and only then can be published into a managed space. For our exercise let's use the personal space.
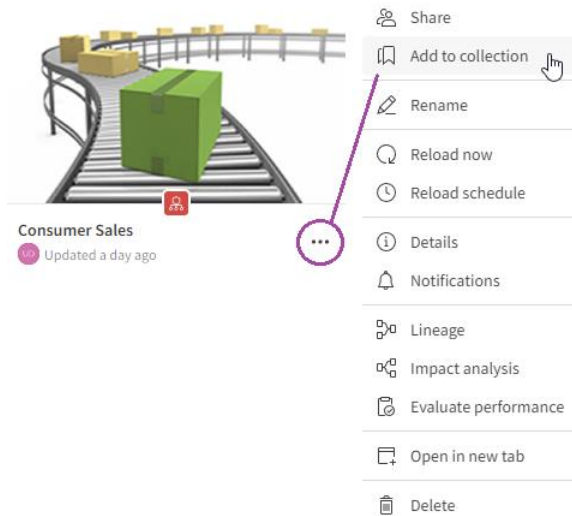
Now publish the app into the managed space *Space2*:
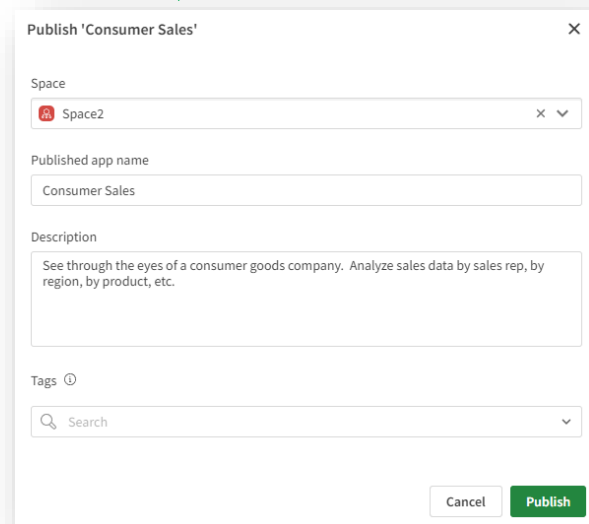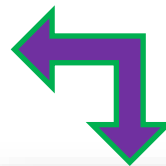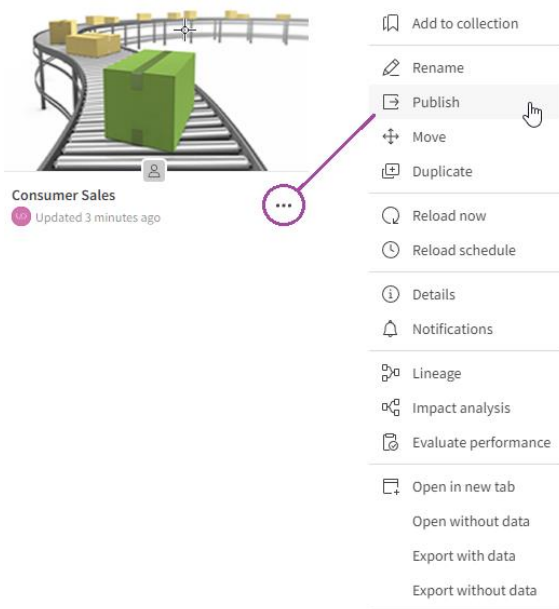
Once the app has been published into the managed space *Space2*, we can then add it to the collection:

At this point the public collection will contain two apps.

To confirm so, check with your tenant admin account, you will see two apps.

However, Charlie Chaplin should only be able to see one app in the public collection.

This is because accessibility permissions depend on rights given at space level; currently Charlie Chaplin has no permissions on the freshly create Space2.

Which permissions should we change for Charlie Chaplin to see the app in the public collection and be able to create private sheets? As described in a previous activity the *can contribute* will give him the appropriate right.

Introduction to subscriptions and alerts

In this activity we shall investigate subscriptions and alerts.
Please note: For the more knowledgeable admins an extra activity based on similar topics is proposed below in the section *Advanced Topics Ideas.*

Qlik Sense provides a powerful mechanism to "keep an eye" on our data fluctuations. We can ask Qlik Sense to regularly update us (subscriptions) or to inform us if specific KPIs go above or below an acceptable range of values.

For instance, if we open up our SalesData app and reach the sheet we have created together we can subscribe to a specific chart/object by click on the three dots in the right top corner of the object:

Sales by CategoryName
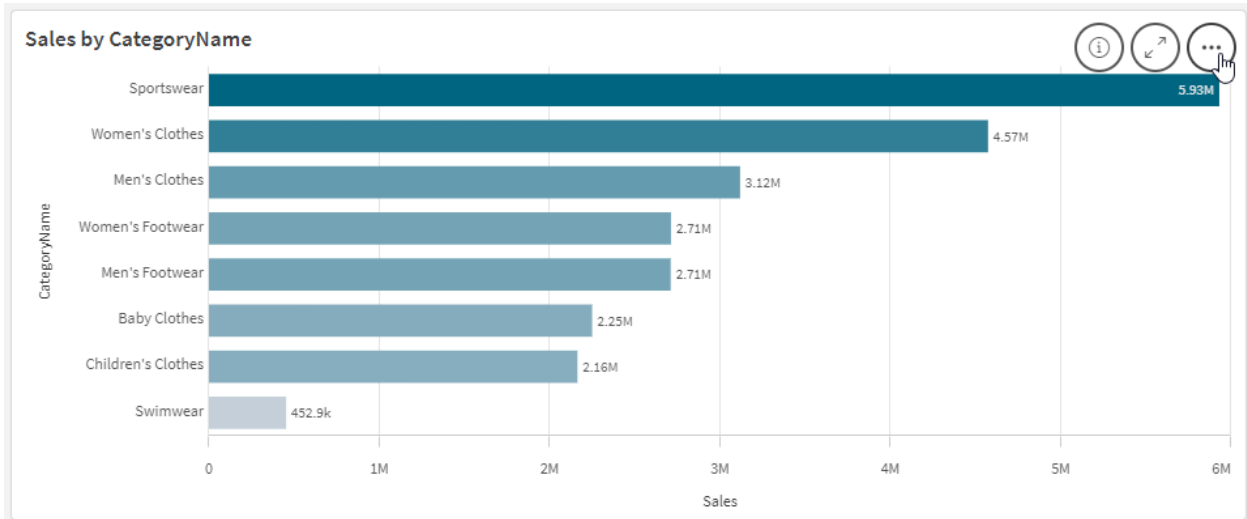
Then choose to subscribe in the popped-up menu:
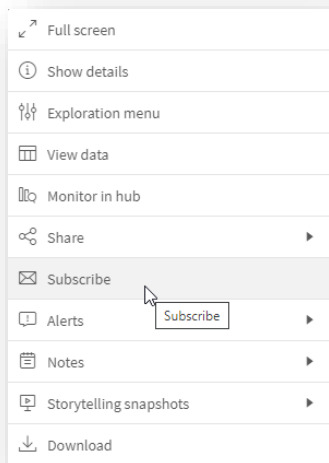
The subscription will not go through successfully because SMTP server settings must be fulfilled before subscriptions are in place:

To configure SMTP settings, we need to cancel and move to the management console

SMTP configuration for subscriptions and alerts

In this activity we shall configure SMTP settings so that we can allow users to set up their own alerts and subscriptions to charts.

In the management console, reach subsection settings and scroll down until you meet the SMTP configuration section:

As a SMTP server, Qlik recommends using a massive email tool among those currently available (Sendgrid, Mailchimp, Mailgun etc.)

In the following two articles you can read how to set up Sendgrid and Mailchimp, respectively.

In this activity we will use a previously created account with the following settings:

Server Address (SMTP): **smtp.sendgrid.net**   Port: **465**

Security: **SSL/TLS**

Sender email address: **udedomenico@hotmail.com**

Uncheck *Same as sender email address*

Username: **apikey**

Password: **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**

Click on the green button to verify an email test has been successfully sent.

Please note: emails sent by SMTP Providers are never immediately received so do not expect to receive emails right away, allow Sendgrid to pick up the right moment to deliver emails.

Subscriptions and alerts

Having set up email alerts we can now complete our subscription to charts (previously initiated but not completed) and we can also set up some alerts for specific values in the same object.

We can proceed as previously described with user Charlie Chaplin subscribing to the object name Sales by CategoryName.

Subscriptions can also be set up a sheet level by going to the pull-down menu in the three dots located in the top left corner:
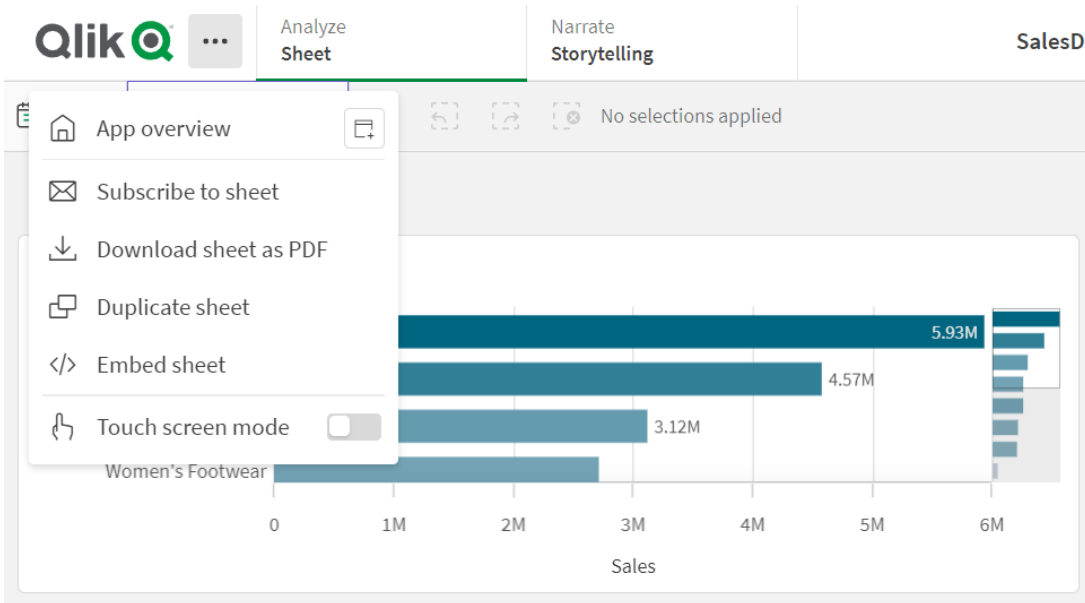
As already mentioned, the user can also set up an alert for the same object:
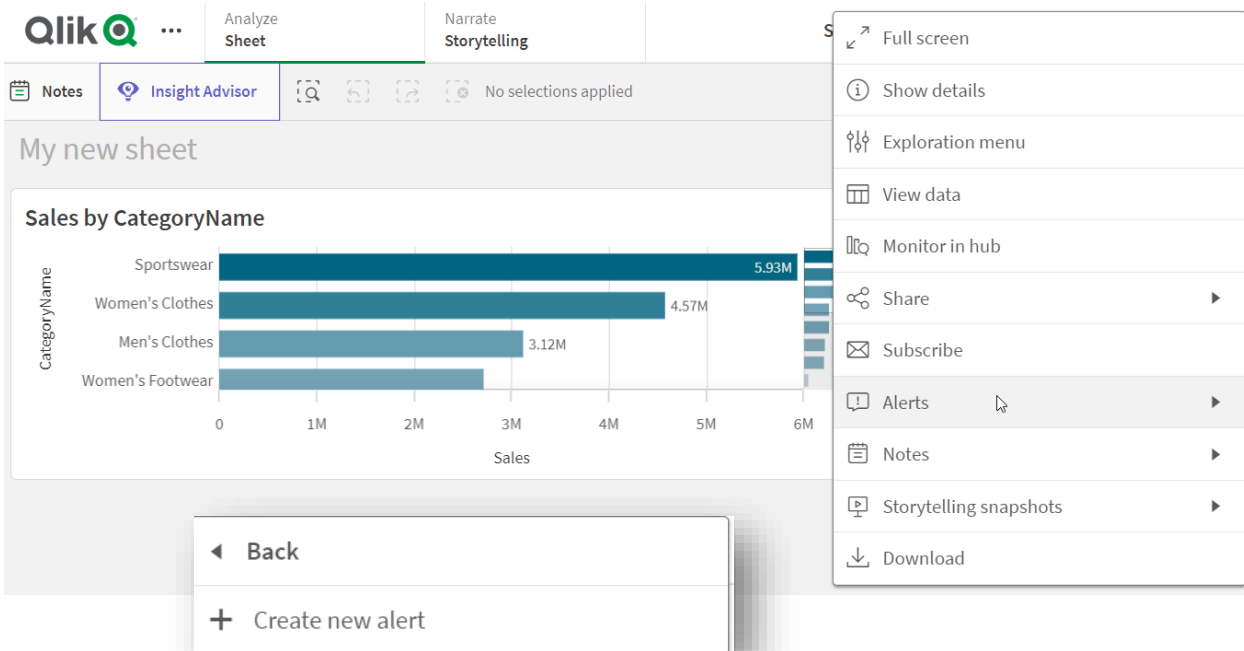
If we follow the process the following is what we will see:

In the following screen, for our exercise, we can simply set up an alert with Sales value less than 3000000

A Tenant Admin (but also an Analytics Admin) can supervise alerts and subscriptions in the Management Console:

Advanced Topics Ideas: set up email reports (subscriptions) via automation

Likewise reloads, report deliveries can also be automatized by using Qlik Application Automation.

It is, again, matter of reaching the automation context and creating a new automation.

For the template to use, assuming we just want to send emails for the SalesData App we have created, we can search by using the keyword *report* and then choose the very first one available:

Send a simple multi-page report by email
☉ Qlik
`Reporting`
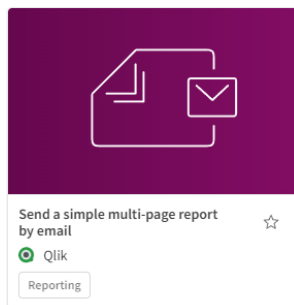
Start
This template will generate a report of an app and send it…

Variable - recipients
Add email addresses to create the list of recipients. Use th…

Create Report
SalesData2
Specify the app ID and report name. Set the sheets mode…

Generate Report
SalesData2
This block will generate the report. The output of this blo…

Send Mail
Mail
Send an email to all recipients. Feel free to replace this bl…

✉ **Send Mail**

‹   Settings   **Connection** ⚠   History

+ Connect your Mail

Qlik Privacy Policy

On the right hand side, we will have to set up each block, whenever needed, all the way down until the last block, the sendmail block which requires SMTP settings to be configured. As described above our recommendation is to use a massive email tool which will allow you to send many emails at once.

For limitation on how many reports and automations are available per tenant, please refer to the on-line help page.

It is then needed to run the template for validation and finally schedule the reporting delivery in the start block, exactly as we did for the previous automation above described.

As mentioned earlier not only Tenant Admins can supervise alerts and subscriptions in the Management Console. An Analytics Admin can also do so.

So, let's complete our workshop by assigning Analytics Admin to our Charlie Chaplin user.

Security Roles. Assign Analytics Admin role to user

In the Management Console, reach the user section and select the permission tab:

All users	Permissions			
Security role	Description	Auto assign		Type
Analytics Admin	Partial administrator who has access to the Management Console, but only to the areas of go…	Off	⌄	Admin
Data Admin	Partial administrator who has access to the Management Console, but only to manage data s…	Off	⌄	Admin
Tenant Admin	Full tenant administrator who has complete access to the Management Console to manage a…	Off	⌄	Admin
Audit Admin	Partial administrator who has access to the Management Console, but only to events	Off	⌄	Admin
Shared Space Creator	User who can create shared spaces	Off	⌄	User
Managed Space Creator	User who can create managed spaces	Off	⌄	User
Data Space Creator	User who can create data spaces	Off	⌄	User
Developer	User who can generate API keys	Off	⌄	User
Data Services Contributor	User who can access Data Integration services	Off	⌄	User
Steward	User who can create, update, and delete a glossary, and approve, edit, and delete terms	Off	⌄	User
Private Analytics Content Creator	User who can create analytics content in their personal space, create alerts and subscription …	Off	⌄	User
Collaboration Platform User	User who can access Qlik features from collaboration platforms	Off	⌄	User
Automation Creator	Users who can create Automations	Anyone at y881ibsjobxy52w	⌄	User
Automl Experiment Contributor	User who can access ML experiments based on their space permissions	Anyone at y881ibsjobxy52w	⌄	User
Automl Deployment Contributor	User who can access ML deployments based on their space permissions	Anyone at y881ibsjobxy52w	⌄	User
Embedded Analytics User	User who can only access Qlik Sense apps directly in embedded use cases, blocking access t…	Off	⌄	User

In Qlik Cloud, we have several security roles which can be granted to users and admins. Particularly, we are interested in giving the user accessibility to the subscription and the alerts panels in the Management Console. This is granted with the Analytics Admin.

For a more detailed explanation of the different type of security roles, please use the following link:

https://help.qlik.com/en-US/cloud-services/Subsystems/Hub/Content/Sense_Hub/Admin/SaaS-user-permissions.htm

Open up the accordion menu:

Security role		Description		Type	
Analytics Admin		Partial administrator who has access to the Management Console, but only to the areas of governance and content		Admin	⌄

And use the assign button to grant Charlie Chaplin's user, Analytics Admin role:

Users

All users	Permissions

Security role		Description		Type	
Analytics Admin		Partial administrator who has access to the Management Console, but only to the areas of governance and content		Admin	⌃

Users	Groups

🔍 Search   Unassign   Assign

☐	Name	Email

No users assigned to this role
Users that have been assigned to this role are
listed here.

Assign

Rows per page: 5 ⌄   0-0 of 0   ‹ ›

Assign users (AnalyticsAdmin) ⓘ   ✕

┌───┐
│ cha   │
└───┘

CC	**Charlie Chaplin**
	vigox25171@fectode.com

You have not selected any users
Filter by name or email to find users to assign to
the role

Cancel   Assign

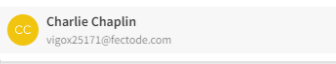| Security role		Description		Type	
Analytics Admin		Partial administrator who has access to the Management Console, but only to the areas of governance and content		Admin	⌃

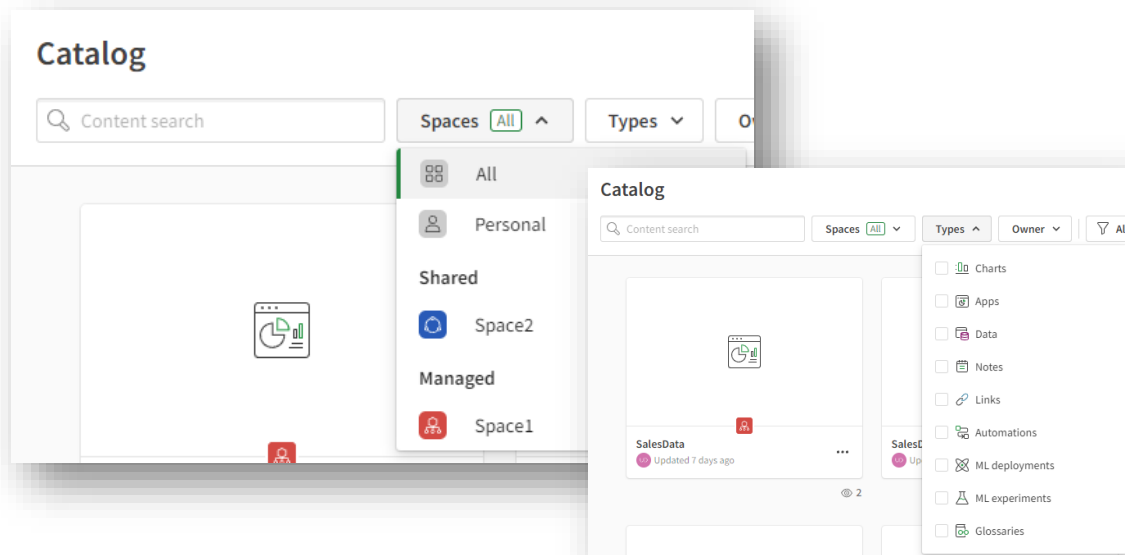| ☐	Name		Email
☐	Charlie Chaplin	ⓘ	vigox25171@fectode.com

Rows per page: 5 ⌄   1-1 of 1   ‹ ›

For the user no need to log out to appreciate changes, just refresh his windows will now expose the Management Console option in the launcher menu:
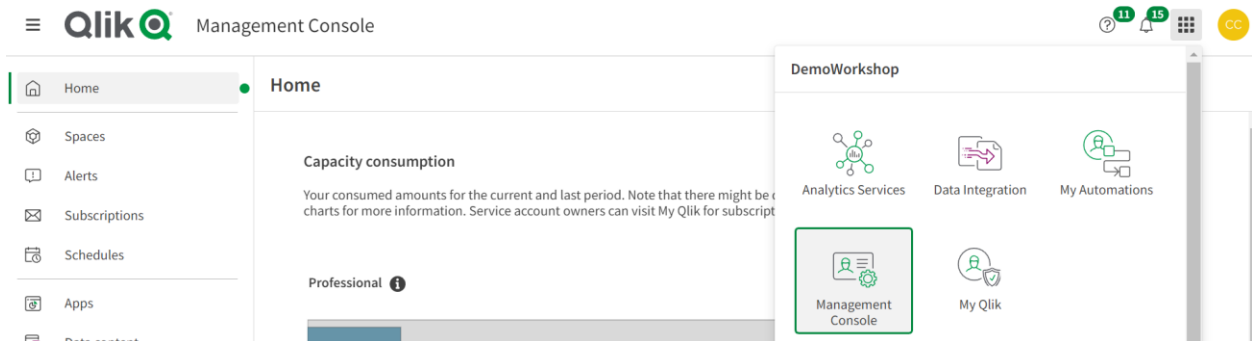
Final review of the HOME/HUB

Now that some activity has been performed in the HUB we can appreciate better the different sections available and their potential usage, in the Catalog section: apps, data charts, notes, links, automations etc…

In the generated tab in Collections:

*** Congratulations, you have successfully completed this workshop! ***

Next Steps: Training and Support

Upon completion of this short introduction to Qlik Sense Tenant Admin there are some recommended next steps:

Training

1. **Free Training - QCC**
   Take our free learning modules in the Qlik Continuous Classroom, our self-service learning platform (qcc.qlik.com). From here you can go to to the Academic Program learning site, by selecting 'Programmes' in the menu bar, then underneath the 'Academic Program' subheading, select the link 'Access Resources' Each module includes fully searchable videos as well as exercises, reference guides, quizzes and more. Individual and corporate subscriptions available for full access.

2. **Getting Started: Step by Step Guide**
   Follow this step by step guide to get started with Qlik Sense.
   (https://help.qlik.com/en-US/onboarding)

3. **Free Qlik Sense Applications**
   Download free Qlik Sense applications to showcase in class.

   Visit Demo Page (https://demos.qlik.com) to download now.

   We recommend you review the following areas:
   - **New to Qlik Sense**
     o https://community.qlik.com/t5/New-to-Qlik-Sense/bd-p/new-to-qlik-sense
   - **Resource Library**
     o https://community.qlik.com/t5/Qlik-Resources/ct-p/qlik-company
   - **Qlik Sense Video Tutorials**
     o https://community.qlik.com/t5/Qlik-Sense-Enterprise-Documents/New-to-Qlik-Sense-Topics-You-Need-to-Know/ta-p/1530582

Support

Knowledge base

To resolve doubts and understand our product in-depth, our knowledge base is certainly the greatest place where to start from. It is reachable by going to Qlik Community and selecting Support in the Support menu:
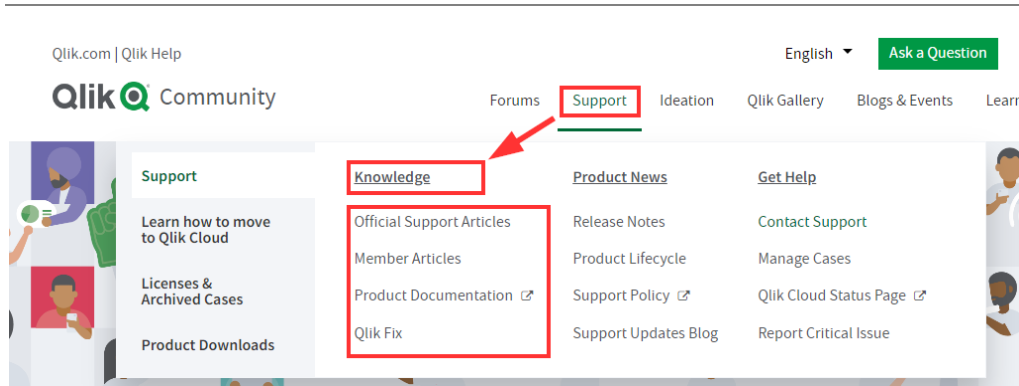
Qlik Community

Qlik Community is a website for people to share their Qlik knowledge and resources on a global level. It contains hundreds of best practices, tutorial videos, informative discussion topics and much more. You can login to Qlik Community using your Qlik login. Visit Qlik Community to learn more.

Product and customer Support provided by our support specialists
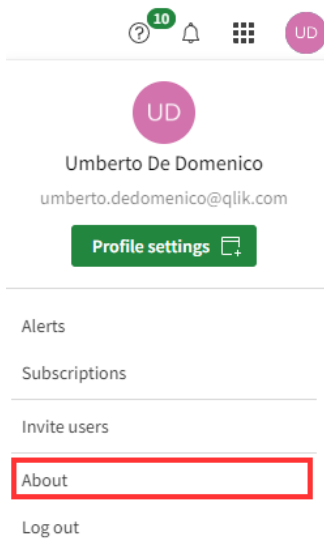
Access our support portal at support.qlik.com to manage all your support needs. If you need to talk to a customer or product specialist you will use our chat bot tool and, if needed, a case will be later on created by our representative. Currently chat bot is the chosen recommendation because we have verified it speeds up case treatment and issue resolution.
When in need of contacting support ensure you have handy your tenant admin details available in the about section of the user profile:
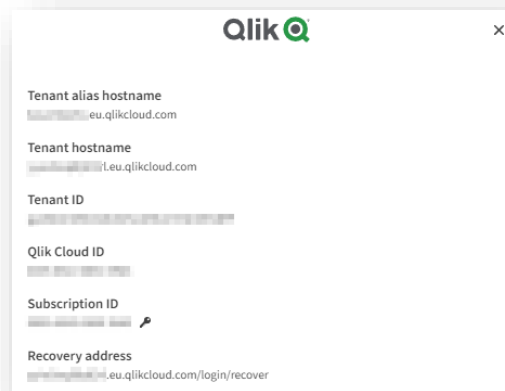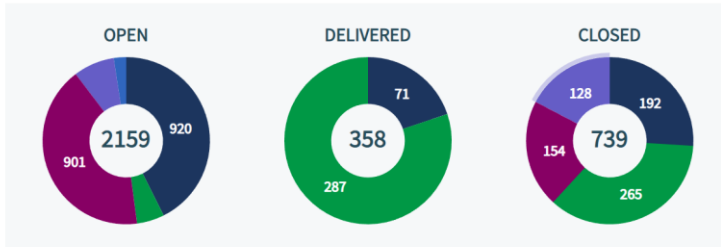

Suggest an Idea

Traditionally, Qlik has always been very attentive to customers' suggestions; we believe ensuring the product reflect customers' needs is one of the key factors to make a winning product. This is why we have a dedicate page, constantly monitored by our product managers where users can propose new functionalities or modifying those currently available. Visit the page and explore
https://community.qlik.com/t5/Suggest-an-Idea/idb-p/qlik-ideas

Check out the status of all your ideas!

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