



# Navicat BI

## Version 2 User Guide



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# Chapter 1 - Introduction

## About Navicat BI

**Navicat BI** is a business intelligence (BI) solution. It aims to help users analyze and visualize data from various sources, gain insights, and make informed business decisions.

Navicat BI is available on three platforms - Microsoft Windows, macOS and Linux. Here are some highlights of Navicat BI:

- Support more than 20 chart types.
- Customize multiple pages dashboard.
- Visualize live data.
- Add interactive controls.
- Support Navicat Cloud and Navicat On-Prem Server.

For details, visit our website: <https://www.navicat.com>

## Requirements

### Supported Operating Systems

#### Windows

- Microsoft Windows 7, Windows 8, Windows 8.1, Windows 10, Windows 11, Server 2012, Server 2016, Server 2019, Server 2022

#### macOS

- macOS 11 Big Sur, macOS 12 Monterey, macOS 13 Ventura, macOS 14 Sonoma, macOS 15 Sequoia

#### Linux

##### x86\_64

- Debian 10, Debian 11, Debian 12, Ubuntu 20.04, Ubuntu 22.04, Ubuntu 24.04, Fedora 38, Fedora 39, Fedora 40, Linux Mint 20, Linux Mint 21, Deepin 20, KylinOS Desktop 10

##### aarch64

- Debian 11, Debian 12, Ubuntu 22.04, Ubuntu 24.04, Fedora 38, Fedora 39, Fedora 40, Linux Mint 20, Linux Mint 21, KylinOS Desktop 10

## Supported On-Premises Databases

- MySQL 3.23 or later
- PostgreSQL 7.3 or later
- Oracle 8i or later
- SQLite 2 and 3
- SQL Server 2000 or later
- MariaDB 5.1 or later
- MongoDB 3.0 or later
- OceanBase Community and Enterprise 3.1.0 or later (Enterprise Oracle Mode is not available in macOS Edition)
- TiDB 7 or later
- Drizzle, OurDelta, Percona Server

## Supported Cloud Databases

### Amazon AWS

- Amazon Redshift
- Amazon Aurora for MySQL
- Amazon Aurora for PostgreSQL
- Amazon RDS for MySQL
- Amazon RDS for PostgreSQL
- Amazon RDS for Oracle
- Amazon RDS for SQL Server
- Amazon RDS for MariaDB
- Amazon DocumentDB

### Google Cloud

- Google Cloud SQL for MySQL
- Google Cloud SQL for PostgreSQL

- Google Cloud SQL for SQL Server

## **Oracle Cloud**

- Oracle Database Cloud Service
- Oracle MySQL Cloud Service

## **Microsoft**

- Microsoft Azure SQL Database
- Microsoft Azure Database for MySQL
- Microsoft Azure Database for PostgreSQL
- Microsoft Azure Database for MariaDB

## **MongoDB Cloud Services**

- MongoDB Atlas

## **Alibaba Cloud**

- Alibaba Cloud ApsaraDB RDS for MySQL
- Alibaba Cloud ApsaraDB RDS for PostgreSQL
- Alibaba Cloud ApsaraDB RDS for SQL Server
- Alibaba Cloud ApsaraDB for MongoDB
- Alibaba Cloud ApsaraDB for OceanBase (MySQL Mode)
- Alibaba Cloud PolarDB for MySQL
- Alibaba Cloud PolarDB for PostgreSQL
- Alibaba Cloud PolarDB for Xscale

## **Tencent Cloud**

- Tencent Cloud TencentDB for MySQL
- Tencent Cloud TencentDB for PostgreSQL
- Tencent Cloud TencentDB for SQL Server
- Tencent Cloud TencentDB for MariaDB
- Tencent Cloud TencentDB for MongoDB

## Huawei Cloud

- Huawei Cloud RDS for MySQL
- Huawei Cloud RDS for PostgreSQL
- Huawei Cloud RDS for SQL Server
- Huawei Cloud Document Database Service

## Snowflake

# Installation

We strongly suggest that you shut down any opened applications. This will help ensure a smooth installation.

### Installation for Download Version

1. Download Navicat BI macOS version.
2. Open the **.dmg** file.
3. Drag Navicat BI to your Applications folder to install.

### Installation for CD Version

1. Load the Navicat BI CD Installation disk into the CD-ROM drive.
2. Open the **.dmg** file.
3. Drag Navicat BI to your Applications folder to install.

# Registration

When the trial period is finished, Navicat BI requires a license key or a subscription plan to continue using the features.

**Note:** Perpetual License and Subscription Plan cannot be used at the same Navicat BI. Before changing the registration method, you need to deactivate the license key or sign out your Navicat ID.

### Perpetual License

If you have purchased a perpetual license, you will receive a license key for activating Navicat BI.

In the **Perpetual License** section, paste your license key (16 digits) and click the **Activate** button. Navicat BI contacts our licensing server to activate the license key. If the activation process is successful, the license key details are displayed.

### Manual Activation



Manual activation is available when your computer does not have an internet connection. You will need another computer with an internet connection to complete this activation process.

1. If the online activation is failed, click **Manual Activation**.
2. Copy the Request Code in the **Copy the Request Code Here:** box.
3. Open web browser on a computer with an internet connection and then go to [https://customer.navicat.com/manual\\_activate.php](https://customer.navicat.com/manual_activate.php).
4. Paste/Enter the Request Code into the left box.
5. Click **Get Activation Code**.
6. Copy the generated Activation Code in the right box.
7. Go back to the computer where you are activating Navicat BI.
8. Paste the Activation Code into the **Paste the Activation Code Here:** box.
9. Click **Activate**.

## Subscription Plan

If you have subscribed a plan, you can sign in your Navicat ID to use Navicat BI during the subscription term.

**Note:** Navicat ID is the Email address that you used to subscribe the plan.

In the **Subscription** section, provide your **Navicat ID** and **Password**. After signed in, the subscription plan details are displayed.

Navicat BI contacts our licensing server once per hour to auto reload the plan by default. If you have updated your plan in the portal site, you can use the **Reload Plan** button to force reloading the new plan.

**Note:** Each Navicat ID can connect to only one Navicat BI. If you sign in your Navicat ID in another Navicat BI, you will be signed out from the current Navicat BI.

## Migration / Upgrade

### Migrate Navicat BI to a new computer

1. In Navicat BI, choose **Navicat BI -> Registration**.
2. [Perpetual License] Click **Deactivate** to online deactivate the license key.
3. [Subscription Plan] Click **Sign Out** to sign out your Navicat ID.
4. Uninstall Navicat BI from the existing computer.

5. Re-install Navicat BI in the new computer.

## Upgrade Navicat BI

If you want to upgrade an installed copy of Navicat BI to the latest release, please choose **Navicat BI -> Check for Updates** to start the Updater. It will automatically check your installed version. If there is a new version, simply follow the steps in the Updater to upgrade your Navicat BI. It will replace your previous Navicat BI and your current settings will remain unchanged.

Or, you can submit your registered email address on the [Customer Center](#) to download the latest version installer.

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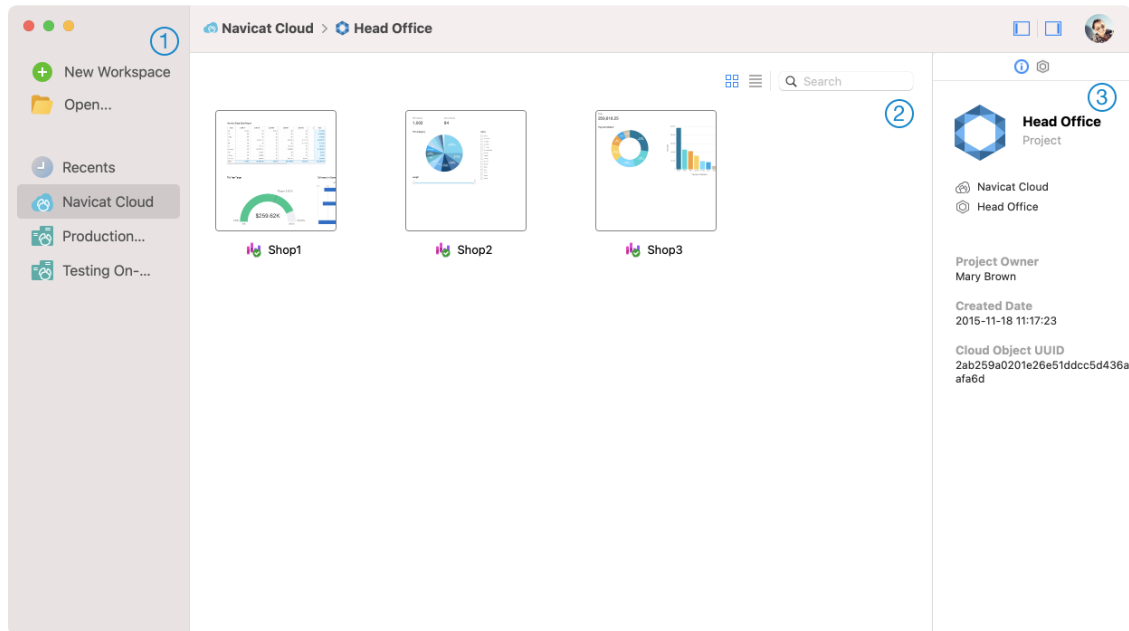
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# Chapter 2 - User Interface

## Main Window



**Hint:** Navicat BI has added support for the system-wide dark mode.



### ① Navigation Pane


The Navigation pane allows you to create new workspaces, open local workspace files, recently opened workspace files, or workspace files in Navicat Cloud / On-Prem Server. If the Navigation pane is hidden, choose **View -> Navigation Pane -> Show Navigation Pane** from the menu bar.

### ② Content Pane

The Content pane contains the workspaces that are in the selected section of the Navigation pane. Use the  **Detail** or  **Icon** buttons to change the view.

### ③ Information Pane

The  **General** tab shows the general information of the workspace or the selected item.

The  **Project** tab shows the project members and the project activities done by the members. Click **+** to add members to the project.

If the Information pane is hidden, choose **View -> Information Pane -> Show Information Pane** from the menu bar.

# Chapter 3 - Collaboration

## About Collaboration

Navicat BI allows you to synchronize connection settings, BI workspaces and virtual group information from Navicat BI, other Navicat family members, different machines and different platforms. You can use Navicat Cloud to host the files. Or, if you have installed our another product, Navicat On-Prem Server, in your environment, you can hosts everything in-house.

Our collaboration feature allows you to give your teammates access to your projects when they log into their accounts. That way, you and your teammates can work on the same project without revealing your username and password. You can even choose to restrict the type of access your teammates have to your project.

## Manage Cloud

### Navicat Cloud

**Navicat Cloud** is a cloud service provided by PremiumSoft for synchronizing connection settings, queries, aggregation pipelines, snippets, model workspaces, BI workspaces and virtual group information.

Navicat Cloud could not connect and access your databases. By which it means, it could only store your connection settings, queries, aggregation pipelines, snippets, model workspaces, BI workspaces and virtual group information; your database passwords and data (e.g. tables, views, etc) will not be stored to Navicat Cloud.

**Note:** You can only sign in to one Navicat Cloud account in the software. PremiumSoft will keep all synchronized files strictly confidential, and all employees are prohibited from viewing/accessing content of files you may store in your Navicat Cloud account.

### Create Navicat Cloud Account

1. In the menu bar, choose **Navicat BI -> Manage Cloud**.
2. In the Manage Cloud window, select **Navicat Cloud**.
3. Click **Create Navicat ID**.
4. Enter the required information and click **Sign Up**. A verification email will send to your email address.
5. Click the link in the email to verify the new account.

**Hint:** You can sign in with the same Navicat ID you use for the Navicat Customer Center.

### Sign In Navicat Cloud

1. In the menu bar, choose **Navicat BI -> Manage Cloud**.
2. In the Manage Cloud window, select **Navicat Cloud**.

3. Enter your **Navicat ID** and **Password**.
4. Click **Sign In**.
5. If you enabled two-step verification in [Navicat Cloud Portal](#), a code will be sent to your phone via your mobile app. Enter the received code to sign in.

### Sign Out Navicat Cloud

1. Close all workspaces in Navicat Cloud.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select **Navicat Cloud**.
4. Click **Sign Out**.

### View Usage

1. At the top right, click your avatar.
2. In the Manage Cloud window, select **Navicat Cloud**.
3. Your usage and current plan will be shown.

### Change Your Picture

1. At the top right, click your avatar.
2. In the Manage Cloud window, select **Navicat Cloud**.
3. Click your avatar.
4. Choose an image file.

### Manage Your Account

You can change your password, enable Two-Step Verification, upgrade Cloud Plan, etc in [Navicat Cloud Portal](#).

1. At the top right, click your avatar.
2. In the Manage Cloud window, select **Navicat Cloud**.
3. Click **Manage Account**.
4. A web browser will automatically open up to Navicat Cloud Portal.

## On-Prem Server

**Navicat On-Prem Server** is an on-premise solution that provides you with the option to host a cloud environment for storing Navicat objects (connection settings, queries, aggregation pipelines, snippets, model workspaces, BI workspaces and virtual group information) internally at your location.

Before you can add an On-Prem Server, you must first set up Navicat On-Prem Server in your environment.

**Note:** You can add multiple On-Prem Server in the software.

### Add New On-Prem Server

1. In the menu bar, choose **Navicat BI -> Manage Cloud**.
2. In the Manage Cloud window, click **+ New On-Prem Server -> New On-Prem Server**.
3. Enter your On-Prem Server login information.

Option	Description
Host	The host name or IP address of your On-Prem Server.
Port	The port number of your On-Prem Server.
Verify Server Certificate	Enable this option to verify the server certificates.
Enable Push Synchronization	Navicat BI receives a silent push notification whenever its files stored in your On-Prem Server changes.

4. Click **OK**.

### Add New On-Prem Server with URI

1. In the menu bar, choose **Navicat BI -> Manage Cloud**.
2. In the Manage Cloud window, click **+ New On-Prem Server -> New On-Prem Server with URI**.
3. Paste your On-Prem Server URI.
4. Click **OK**.

**Note:** The URI can be copied from your On-Prem Server portal site.

### Sign In On-Prem Server

1. In the menu bar, choose **Navicat BI -> Manage Cloud**.
2. In the Manage Cloud window, select the On-Prem Server.
3. Enter your **Username** and **Password**.
4. Click **Sign In**.

5. If you enabled two-step verification, a code will be sent to you via the verification method you have selected.  
Enter the received code to sign in.

### Sign Out On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.

### Edit On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.
5. Control-click your server and select **Edit On-Prem Server**.
6. Edit the On-Prem Server information.
7. Sign in your server.

### Rename On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.
3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.
5. Control-click your server and select **Rename**.
6. Enter the name to describe your On-Prem Server.
7. Sign in your server.

### Remove On-Prem Server

1. Close all workspaces in your On-Prem Server.
2. At the top right, click your avatar.

3. In the Manage Cloud window, select the On-Prem Server.
4. Click **Sign Out**.
5. Control-click your server and select **Remove On-Prem Server**.
6. Click **Delete**.

### View Usage

1. At the top right, click your avatar.
2. In the Manage Cloud window, select the On-Prem Server.
3. Your usage will be shown.

### Change Your Picture

1. At the top right, click your avatar.
2. In the Manage Cloud window, select the On-Prem Server.
3. Click your avatar.
4. Choose an image file.

### Manage Your Account

You can change your password, enable Two-Step Verification, etc in your On-Prem Server web portal.

1. At the top right, click your avatar.
2. In the Manage Cloud window, select the On-Prem Server.
3. Click **Manage Account**.
4. A web browser will automatically open up to your On-Prem Server web portal.

### Push Synchronization

Push Synchronization enables Navicat BI to receive a silent push notification whenever the files stored in Navicat Cloud or On-Prem Server changes.

### Enable Push Synchronization

1. At the top right, click your avatar.
2. In the Manage Cloud window, control-click Navicat Cloud or your On-Prem Server.
3. Turn on **Enable Push Synchronization**.

## Disable Push Synchronization

1. At the top right, click your avatar.
2. In the Manage Cloud window, control-click Navicat Cloud or your On-Prem Server.
3. Turn off **Enable Push Synchronization**.

## Cache and Local Copies

When you logged into Navicat Cloud or your On-Prem Server, Navicat BI saves the cloud object files and some information in the local computer. The cache and local copies use to make sure your changes are saved in the cloud.

### Clear Cache and Local Copies

1. At the top right, click your avatar.
2. In the Manage Cloud window, select Navicat Cloud or your On-Prem Server.
3. Click **Sign Out**.
4. Control-click Navicat Cloud or your On-Prem Server and select **Clear Cache and Local Copies**.
5. Click **Clear**.

### Show In Finder

1. In the main window, select Navicat Cloud or your On-Prem Server.
2. Open your project.
3. Control-click anywhere in the project and select **Show In Finder**.

## Projects

### Work With Projects

A project is a way to structure and organize Navicat objects. You can put related objects in one project, and then share the project with other accounts for collaboration if necessary.

### Create New Projects

1. In the main window, select **Navicat Cloud** or your On-Prem Server.
2. Click **+ New Project**.
3. Enter the name of the new project.
4. Click **OK**.

## Manage Existing Projects

### To rename a project

1. In the main window, control-click the project and select **Rename**.
2. Enter a new project name.

**Note:** Only the project owner and the members with the *Can Manage & Edit* right can rename the project.

### To delete a project

1. In the main window, control-click the project and select **Delete Project**.
2. Click **Delete**.

**Note:** Only the project owner can delete the project.

**Note:** Before you delete the project, you must remove all objects in the project.

### To quit a project

1. In the main window, control-click the project and select **Quit Project**.
2. Click **Quit**.

## Manage Members

### Add Members

1. In the main window, control-click the project and select **Manage Members**.
2. Click **Add Members**.
3. [Navicat Cloud] Enter the member's Navicat ID and press ENTER.
4. [On-Prem Server] Check the boxes of the users that you want to add.
5. Select the member right.
6. Click **Add**.

Member Rights	Privileges
Can Manage & Edit	Read Objects, Write Objects, Manage Members and Rename Projects
Can Edit	Read Objects and Write Objects
Can View	Read Objects

### Manage Existing Members



### To edit the right of a member

1. In the main window, control-click the project and select **Manage Members**.
2. Use the drop-down list next to the member to change the right.
3. Click **Apply**.

### To remove a member from a project

1. In the main window, control-click the project and select **Manage Members**.
2. Click the **X** icon next to the member.
3. Click **Apply**.

## Connections

You can manage the connections that are synchronized to Navicat Cloud or your On-Prem Server. In the menu bar, choose **Tools -> Manage Cloud Connections**.

### Create New Connections

1. In the Manage Cloud Connections window, select a project.
2. Click **New** and select **New Connection**, and then select the server type.
3. Enter the server login information in the [New Connection](#) window.

### Manage Existing Connections

#### To edit a connection

1. In the Manage Cloud Connections window, control-click a connection and select **Edit Connection**.
2. Change the connection settings.
3. Click **OK**.

#### To delete a connection

1. In the Manage Cloud Connections window, control-click a connection and select **Delete Connection**.
2. Click **Delete** in the confirm dialog.

## Virtual Groups

**Virtual Group** aims to provide a platform for logical grouping objects by categories, so that all objects are effectively preserved. It can be applied on connections and workspaces in Navicat Cloud / On-Prem Server.

## Connections

### Create a new group

1. In the menu bar, choose **Tools -> Manage Cloud Connections**.
2. In the Manage Cloud Connections window, control-click a project and select **New Group**.
3. Enter a name for the new group.

### Move a connection to a group

1. In the Manage Cloud Connections window, control-click a connection and select **Manage Group -> Move To**.
2. Select an existing group.

### Move a connection to the top-level

1. In the Manage Cloud Connections window, control-click a connection and select **Manage Group -> Exclude From Group**.

**Hint:** You can also use the drag and drop method to move objects.

## Workspaces

### Create a new group

1. In the main window, select Navicat Cloud or your On-Prem Server.
2. Open a project.
3. Control-click anywhere in the project and select **New Group**.
4. Enter a name for the new group.

### Move a workspace file to a group

1. In the main window, control-click a workspace and select **Manage Group -> Move To**.
2. Select an existing group.

### Move a workspace file to the top-level

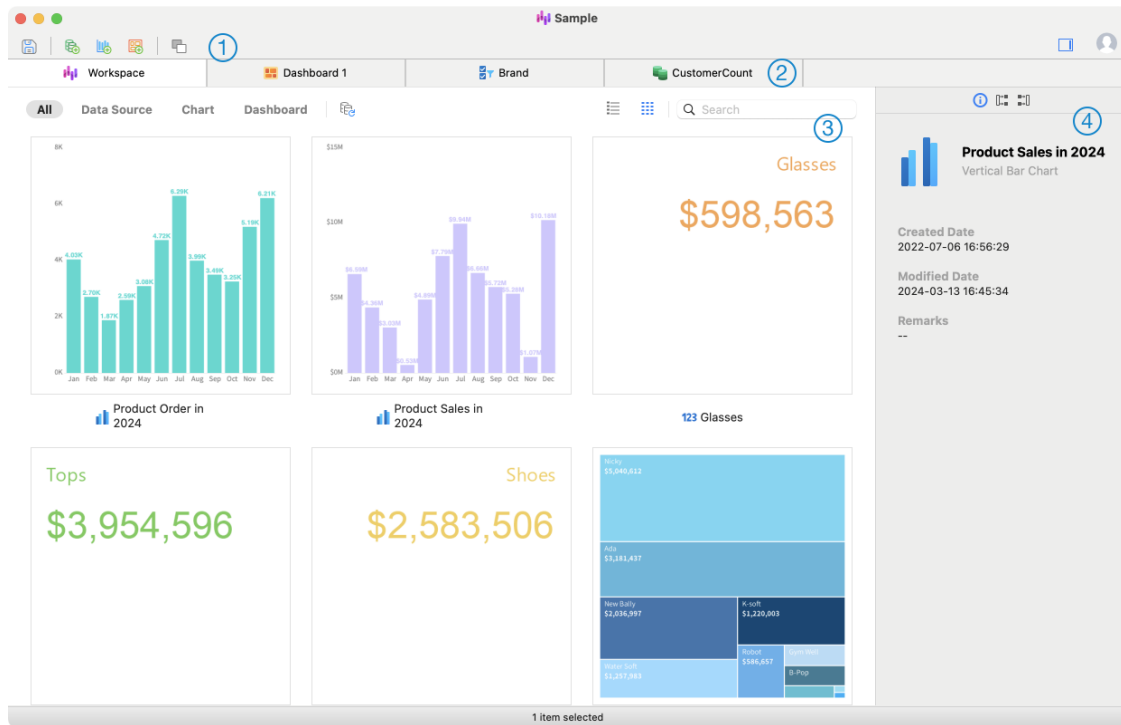
1. In the main window, control-click a workspace and select **Manage Group -> Exclude From Group**.

**Hint:** You can also use the drag and drop method to move objects.

# Chapter 4 - Workspace

## About Workspace

A workspace is the place that comprises dashboards, charts and data sources. You can create multiple dashboards, charts and data sources in a workspace.



### 1 Workspace Toolbar

The Workspace Toolbar provides controls that you can use to create data sources, charts and dashboards.

### 2 Tab Bar

The Tab Bar allows you to switch among the opened items.

### 3 Content Pane

The Content pane shows all items in the workspace. Use the **Detail** or **Icon** button to change the view.


Detail View displays additional information about each item. You can sort items in Detail View, click the column header by which you want to sort the items.

Icon View displays your items as a grid of thumbnail images. You can filter the items by clicking a category (All, Data Source, Chart, Dashboard) in this view.

### 4 Properties Pane

The **General** tab shows the general information of the workspace or the selected item.

The **Using** tab shows the items that the selected item depends on.


The  **Used By** tab shows the items that depend on the selected item.

If the Properties pane is hidden, choose **View -> Show Properties** from the menu bar.

## Create Workspace

### Local Workspace File


The essential steps to create a workspace are:

1. In the main window, click  **New Workspace**.
2. Create data sources, charts and dashboards.
3. Choose **File -> Save**.
4. Enter the file name and choose the save path.
5. Click **Save**.

### Cloud Workspace File

If you have logged into Navicat Cloud / On-Prem Server, you can store the workspace in a project.

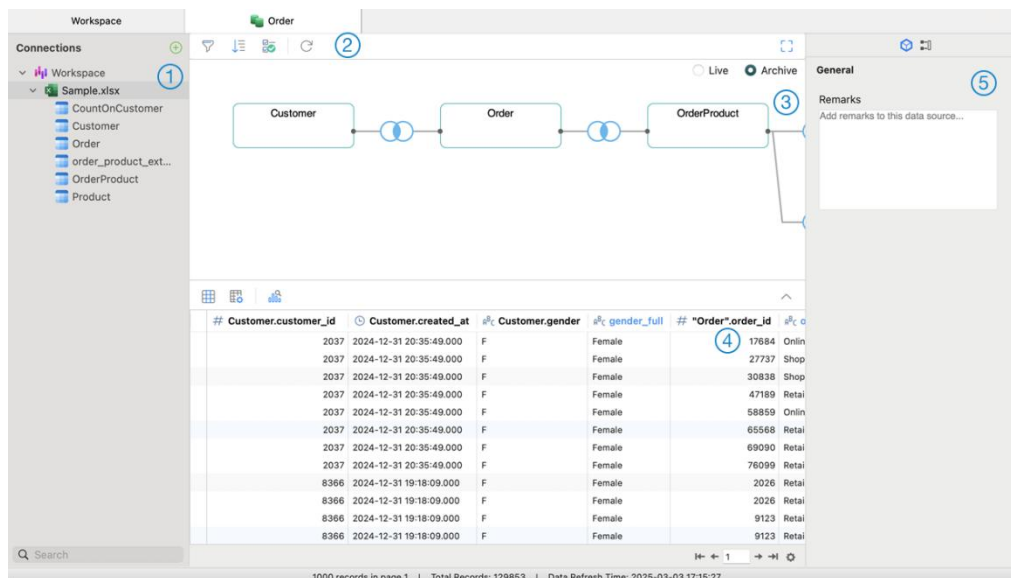
The essential steps to create a workspace are:

1. In the main window, click  **New Workspace**.
2. Create data sources, charts and dashboards.
3. Choose **File -> Save to Cloud**.
4. Enter the workspace name and choose the project.
5. Click **OK**.

# Chapter 5 - Data Source

## About Data Source

Data sources reference tables in your connections or data in files/ODBC sources, and can select data from tables on different server types. The fields in the dataset can be used to construct a chart. When building a chart, you will need to specify the data source that the chart uses.



### 1 Connections Pane

The Connections pane is the basic way to navigate with connections, databases, tables, queries.

### 2 Data Source Toolbar

The Data Source Toolbar provides controls that you can use to manipulate the data.

### 3 Design Pane


The Design pane allows you to build the data source visually.

Navicat BI provides two modes for connecting your data: Live and Achieve.


**Live** mode retrieves data from your servers whenever the data source is being used / loaded. It offers the convenience of real-time updates, with any changes in the underlying data reflected.

**Archive** mode retrieves data from your servers during the data source creation, and stored the retrieved data in the workspace for later use by building charts.

### 4 Preview Pane

The Preview pane displays the data of the data source. You can click the  icon to show or hide the columns.

### 5 Properties Pane


The  **Properties** tab shows the general information of the data source. You can add a remark to the data source.

The  **Used By** tab shows the charts that depend on the data source.


If the Properties pane is hidden, choose **View -> Show Properties** from the menu bar.

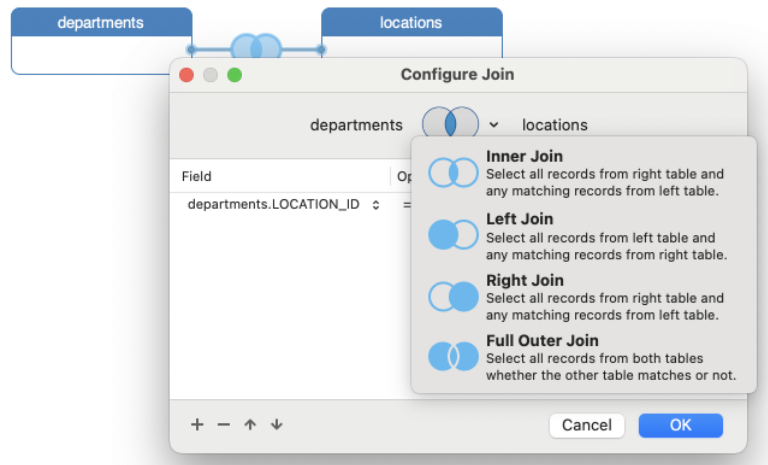
## Create Data Source

The essential steps to create a data source are:

1. In the Workspace window, click .
2. Enter the name of the data source and select the desired connections, files or existing data sources.

Option	Description
Database	Create data source using existing connections in Navicat Cloud or On-Prem Server, or create a new connection in the workspace. For more information about connection settings, see <a href="#">Connect to Database Server</a> .
File/ODBC	Import data to the workspace, or link the data source to the data in a supported external file or ODBC source. For more information about import steps, see <a href="#">Import Data from File/ODBC</a> .
Recent Connections	Choose the connections used in other existing data sources in the workspace.

3. Click **OK**.
4. A tab will open for you to edit the data source.
5. If you want to add more connections, click **+** and follow the steps.
6. Drag and drop tables from the Connections pane to the Design pane. You can view the table data by clicking .
7. Drag and drop a node to another to create the join.
8. Configure the join type and join fields if necessary.




**Hint:** After creating the join, you can change the join settings at any time by clicking the join icon on the connector.

9. Choose **Live** mode or **Archive** mode.
10. Click **Apply and Refresh Data** to view the data.

### Add Query to Database Connection

For database connections, you can save query results to create a new dataset.


#### To create a new query

1. On the Connections pane, double-click  **New Data Source Query**.
2. Write the statement in [Query Editor](#). You can also use [Query Builder](#) to build the query visually.
3. Click **Save Query**.
4. Enter the name of the query and click **Save**.

### Add Aggregation Pipeline to Database Connection

For MongoDB database connections, you can save aggregation pipeline results to create a new dataset.

#### To create a new query

1. On the Connections pane, double-click  **New Data Source Aggregation Pipeline**.
2. Build the pipeline using [Pipeline Builder](#).
3. Click **Save Pipeline**.
4. Enter the name of the query and click **Save**.

# Database Connection

## Connect to Database Server

You can create a connection to connect your server: MySQL, MariaDB, PostgreSQL, Oracle, SQLite, SQL Server, MongoDB, Snowflake.

## MySQL / MariaDB General Settings

To successfully establish a new connection to local/remote server - no matter via SSL, SSH or HTTP, set the database login information in the General tab. If your Internet Service Provider (ISP) does not provide direct access to its server, Secure Tunneling Protocol (SSH) / HTTP is another solution.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

## Oracle General Settings

To successfully establish a new connection to local/remote server - no matter via SSH, set the database login information in the General tab. If your Internet Service Provider (ISP) does not provide direct access to its server, Secure Tunneling Protocol (SSH) is another solution.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Connection Type	<b>Basic</b> - In Basic mode, it connects to Oracle through the Oracle Call Interface (OCI). <b>TNS</b> - In TNS mode, it connects to Oracle server using an alias entry from a tnsnames.ora file through the Oracle Call Interface (OCI).
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
Service Name	Enter the Service Name or SID. Select the corresponding radio button.
Role	Indicate that the database user is connecting with either the Default, SYSOPER or SYSDBA system privilege.
OS authentication	Use OS user login credentials to authenticate database users.



User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

**Note:** OCI is an application programming interface that allows an application developer to use a third-generation language's native procedure or function calls to access the Oracle database server and control all phases of SQL statement execution. OCI is a library of standard database access and retrieval functions in the form of a dynamic-link library. See also: [Settings](#)

## PostgreSQL General Settings

To successfully establish a new connection to local/remote server - no matter via SSL, SSH or HTTP, set the database login information in the General tab. If your Internet Service Provider (ISP) does not provide direct access to its server, Secure Tunneling Protocol (SSH) / HTTP is another solution.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
Initial Database	Set the initial database which user connects when making connection.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

## SQL Server General Settings

To successfully establish a new connection to local/remote server - no matter via SSH, set the database login information in the General tab. If your Internet Service Provider (ISP) does not provide direct access to its server, Secure Tunneling Protocol (SSH) is another solution.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Initial Database	Set the initial database which user connects when making connection.
Authentication	<b>SQL Server Authentication</b> - Use login records to validate the connection. <b>Windows Authentication</b> - When a user connects through a Windows user account, SQL Server validates the account name and password using the Windows principal token in the operating system.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.

## SQLite General Settings

To successfully establish a new connection to local/remote server - no matter via HTTP, set the database login information in the General tab. If your Internet Service Provider (ISP) does not provide direct access to its server, HTTP is another solution.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Type	<b>Existing Database File</b> - Connect to an existing database in the <b>Database File</b> . <b>New SQLite 3</b> - Create a new SQLite 3 database in the <b>Database File</b> . <b>New SQLite 2</b> - Create a new SQLite 2 database in the <b>Database File</b> .
Database File	Specify the initial database file. If the HTTP Tunnel is enabled, you need to enter an absolute file path of the database file in your web server.
User Name	User name for connecting to the database.
Password	Password for connecting to the database.

## MongoDB General Settings

To successfully establish a new connection to local/remote server - no matter via SSL or SSH, set the database login information in the General tab. If your Internet Service Provider (ISP) does not provide direct access to its server, Secure Tunneling Protocol (SSH) is another solution.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Type	The type of your MongoDB server: Standalone, Shard Cluster or Replica Set.
SRV Record	Check this option to connect the server using an SRV Record.
Host	A host name where the database is situated or the IP address of the server.
Endpoint	The Endpoint for connecting to the Amazon Web Services instance.
Port	A TCP/IP port for connecting to the database server.
Member	Add or remove the members of replica set or the instances of sharded cluster to the connection.
Read Preference	Choose the replica set read preference for this connection.
Replica Set	The name of the replica set.
Authentication	<b>None</b> - No authentication. <b>Password</b> - Specify the <b>Authentication Database</b> name associated with the <b>User Name</b> and <b>Password</b> .

	<b>LDAP</b> - Specify the <b>User Name</b> and <b>Password</b> . <b>Kerberos</b> - Set the Kerberos <b>Service Name</b> and the user <b>Principal</b> . <b>X.509</b> - x.509 certificate authentication.
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## Use MongoDB URI

You can also use a MongoDB URI to connect your MongoDB server. Simply click the **URI** button and paste the URI. Navicat BI will automatically fill out the options in the General, SSL and SSH tabs.

## Snowflake General Settings

To successfully establish a new connection, set the database login information in the General tab.

Option	Description
Connection Name	Enter a friendly name to best describe your connection.
Add To	After you logged in <a href="#">Navicat Cloud</a> or <a href="#">On-Prem Server</a> , you can choose to save the connection to My Connections or a project.
Configuration Method	Choose the configuration method of the database server. Either using user credentials (Default), data source names (DSN), Native SSO or Browser-Based SSO.
Host	A host name where the database is situated or the IP address of the server.
Warehouse	The warehouse to use once connected.
Role	The default access control role to use.
Port	A TCP/IP port for connecting to the database server.
User Name	User name for connecting to the database server.
Password	Password for connecting to the database server.
Data Source	Choose the data source you have set.
Native SSO URL	The Okta URL endpoint for your Okta account.

## Databases Settings

### MySQL, Oracle, PostgreSQL, SQL Server, MariaDB, MongoDB

In the **Databases** tab, you can set which databases will be shown in the Connections pane when connecting to your server. It is not obligatory. To start working with custom database settings, check **Use custom database list**. Then, check the preferable databases in the **Name** column.

#### Add a hidden database to the list

1. Click the **+** button.
2. Enter the database name.
3. Check the newly added database in the database list.

#### Remove a database from the list

1. Select the database in the database list.
2. Click the - button.

**Note:** The database will be just removed from the database list box, it will still exist in the server.

## SQLite

In the **Databases** tab, you can attach SQLite database files to the connection. Click the + button and enter the information:

Option	Description
Database Name	Enter the database name which displays in Navicat BI.
Database File	Choose the file path of a database file.
Encrypt	Check this option and provide the <b>Password</b> if the database file is encrypted.

To detach a database, select it from the list and click the - button.

## SSL Settings

Secure Sockets Layer (SSL) is a protocol for transmitting private documents via the Internet. To get a secure connection, the first thing you need to do is to install OpenSSL Library and download Database Source.

**Note:** Available only for MySQL, PostgreSQL, MariaDB and MongoDB. Support from PostgreSQL 8.4 or later.

## MySQL and MariaDB Connections

To provide authentication details, enable **Use authentication** and fill in the required information:

### Client Key

The SSL key file in PEM format to use for establishing a secure connection.

### Client Certificate

The SSL certificate file in PEM format to use for establishing a secure connection.

### CA Certificate

The path to a file in PEM format that contains a list of trusted SSL certificate authorities.

### Verify server certificate against CA

Check the server's Common Name value in the certificate that the server sends to the client.

### Specified Cipher

A list of permissible ciphers to use for SSL encryption.

## PostgreSQL Connection

Choose the **SSL Mode**:

allow	First try a non-SSL connection; if that fails, try an SSL connection.
prefer	First try an SSL connection; if that fails, try a non-SSL connection.
require	Only try an SSL connection.
verify-ca	Only try an SSL connection, and verify that the server certificate is issued by a trusted CA.
verify-full	Only try an SSL connection, verify that the server certificate is issued by a trusted CA and that the server hostname matches that in the certificate.

To provide authentication details, enable **Use authentication** and fill in the required information:

### Client Key

The path of the client private key.

### Client Certificate

The path of the client certificate.

### Root Certificate

The path of the trusted certificate authorities.

### Certificate Revocation List

The file path of the SSL certificate revocation list (CRL).

## MongoDB Connection

To provide authentication details, enable **Use authentication** and fill in the required information:

### Client Key

The SSL key file in PEM format to use for establishing a secure connection.

### Client Key Password

The password of the key file.

### Allow any server SSL certificates

Check this option if your MongoDB server allows any server SSL certificates.

### CA Certificate

The path to a file in PEM format that contains a list of trusted SSL certificate authorities.

## Certificate Revocation List

The file path of the SSL certificate revocation list (CRL).

## Allow invalid host names

Check this option to allow invalid hostnames in SSL certificates.

## SSH Settings

**Secure SHell (SSH)** is a program to log in into another computer over a network, execute commands on a remote server, and move files from one machine to another. It provides strong authentication and secure encrypted communications between two hosts, known as **SSH Port Forwarding (Tunneling)**, over an insecure network. Typically, it is employed as an encrypted version of Telnet.

In a Telnet session, all communications, including username and password, are transmitted in plain-text, allowing anyone to listen-in on your session and steal passwords and other information. Such sessions are also susceptible to session hijacking, where a malicious user takes over your session once you have authenticated. SSH serves to prevent such vulnerabilities and allows you to access a remote server's shell without compromising security.

**Note:** Available only for MySQL, Oracle, PostgreSQL, SQL Server, MariaDB and MongoDB.

Please make sure that the parameter - "AllowTcpForwarding" in the Linux server must be set to value "yes", otherwise, the SSH port forwarding will be disabled. To look for the path: /etc/ssh/sshd\_config. By default, the SSH port forwarding should be enabled. Please double check the value settings.

Even the server support SSH tunnel, however, if the port forwarding being disabled, Navicat BI cannot connect via SSH Port 22.

## Host

A host where SSH server is activated.

**Note:** The host name in the General tab should be set relatively to the SSH server which provided by your database hosting company.

## Port

A port where SSH server is activated, by default it is 22.

## User Name

A user on SSH server machine. (It is not a user of database server.)

## Authentication Method

Password	Provide the SSH server user <b>Password</b> .
Public Key	<b>Private Key</b>

	<p>It is used together with your public key. The private key should be readable only by you.</p> <p><b>Passphrase</b></p> <p>A passphrase is exactly like a password, except that it applies to the keys you are generating and not an account.</p>
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## Use compression

Request compression of all data (including stdin, stdout, stderr, and data for forwarded X11 and TCP connections). The compression algorithm is the same used by gzip(1), and the "level" can be controlled by the CompressionLevel option for protocol version 1.

**Note:** HTTP Tunnel and SSH Tunnel cannot be function simultaneously. The SSH Tunnel is disabled when you select the HTTP Tunnel and vice versa.

## HTTP Settings

HTTP Tunneling is a method for connecting to a server that uses the same protocol (http://) and the same port (port 80) as a web server does. It is used while your ISPs do not allow direct connections, but allows establishing HTTP connections.

**Note:** Available only for MySQL, PostgreSQL, SQLite and MariaDB.

## Uploading the Tunneling Script

To use this connection method, first thing you need to do is to upload the tunneling script to the web server where your server is located.

**Note:** Click the **Export Tunnel Script** button to extract the script file, **ntunnel\_mysql.php** (for both MySQL and MariaDB), **ntunnel\_pgsql.php** or **ntunnel\_sqlite.php**.

## Setting up HTTP Tunnel

The following instruction guides you through the process of configuring a HTTP connection.

1. Select the HTTP tab and enable **Use HTTP tunnel**.
2. Enter URL of the tunneling script.  
e.g. [http://www.navicat.com/ntunnel\\_mysql.php](http://www.navicat.com/ntunnel_mysql.php)
3. If the tunneling script is hosted in a password protected server, you can provide the required authentication details.
4. If your server installed a Web Application Firewall, you can check the **Encode outgoing query with base64** option.
5. If you have to access internet over a proxy server, click the **Proxy Settings** button and provide the details.

**Note:** HTTP Tunnel and SSH Tunnel cannot be function simultaneously. The SSH Tunnel is disabled when you select the HTTP Tunnel and vice versa.

## Compatibility Settings

If your server is a variant of MySQL or has proxy middleware installed, you can enable compatibility mode and set the corresponding settings for the connection.

**Note:** Available only for MySQL.

### Force lower\_case\_table\_names as

Set the value of the lower\_case\_table\_name system variable.

### Force sql\_mode as

Set the value of the sql\_mode system variable.

### Force NDB cluster support as

Include or exclude the support for the NDBCLUSTER storage engine.

### Force database listing method as

Use the SHOW DATABASES statement to retrieve the information for listing databases, or select the information from the INFORMATION\_SCHEMA database.

### Force view listing method as

Use the SHOW FULL TABLES statement to retrieve the information for listing tables, or select the information from the INFORMATION\_SCHEMA database.

## File/ODBC Connection

### Import Data from File/ODBC

You can import data to the workspace or link the data source to the data in a supported external file or ODBC source.

**Note:** The steps depend on the file type you are chosen.

- [Choose File Format](#)
- [Choose Source File](#)
- [Choose Record Format / File Options](#)
- [Choose Format Options](#)
- [Choose Target Table](#)



- [Adjust Field Structures](#)
- [Preview Data](#)
- [Start Import](#)

## Choose File Format

Select one of the available import types for the source file.

## Choose Source File

You can import data to the workspace or link the data source to the data in a supported external file or ODBC source.

Browse the source file name. The file extension in the **File** text box changes according to the selected import type in the first step. Select the **Encoding** for the source file.


## ODBC

### Setting up an ODBC Data Source Connection

1. Install suitable ODBC Administrator and the corresponding driver for file.
2. In Applications, select **Utilities -> ODBC Administrator**.
3. Click the **Add** button in the **User DSN** tab.
4. Select the appropriate ODBC driver and click the **OK** button.
5. Enter the required information.
6. Click the **Finish** button to see your ODBC Driver in the list.

**Note:** You can consult with the driver provider about how to setup the DSN.

### Connecting to ODBC Data Source in Navicat BI

1. Click  in **Import from**.
2. Choose the data source from the **Connection** drop-down menu and provide valid username and password.
3. All available tables will be included in the list in the next step if connection is success.

## Choose Record Format / File Options

### TXT, CSV

#### Record Delimiter

Specify the record separator of the file.

## Delimited

Import the text file with delimited format.

## Fixed Width

Import the text file with fixed-width format. To delimit the source column bounds, click on the desired position to create a break line. Simply drag it to move it or double-click it to remove it.

☒ Fixed Width - Fields are aligned in columns with spaces between each field

Lines with arrows signify field breaks. To CREATE a break line, click at the desired position. To DELETE a break line, click on the line. To MOVE a break line, drag it.

0	10	20	30	40	50
JOB_ID	JOB_TITLE	MIN_SALARY			
AC_ACCOUNT	Public Accountant	4200			
AC_MGR	Accounting Manager	8200			
AD_ASST	Administration Assistant	3000			
AD_PRES	President	20000			
AD_VP	Administration Vice President	15000			
FI_ACCOUNT	Accountant	4200			
FI_MGR	Finance Manager	8200			
HR_REP	Human Resources Representative	4000			
IT_PROG	Programmer	4000			
MK_MAN	Marketing Manager	9000			
MK_REP	Marketing Representative	4000			

## Field Delimiter

Specify the field separator.

## Text Qualifier

Specify the character that encloses text values.

## XML

### Tag that identifies a table row

Define a tag to identify rows.

### Consider tag attributes as table field

For example:

```
<row age="17">
```

```
<id>1</id>
```

```
<name>size</name>
```

```
</row>
```

With this option is on, Navicat BI will recognize "age" as a field together with "id" and "name", otherwise, only "id" and "name" will be imported as fields.

**Note:** Navicat BI does not support multiple level of XML file.

## Excel

Sheets will be shown in the list.

## ODBC, Access

The **Add Query** button allows you to construct a query to import only certain rows from your source tables. In other words, import only rows that satisfy the criteria set by you. Tables or queries will be shown in the list.

## Choose Format Options

The following options depend on the file format chose in the first step.

### Field Name Row

Indicate which row should Navicat BI recognize as field names.

### Data Row

Indicate which row should Navicat BI start and stop reading the actual data.

**Note:** If no field names are defined for the file, uncheck the Field Name Row option.

### Date Format

Specify the format for date.

### Four Digit Years

Check this option to display four digits for years.

### Date Delimiter

Specify the date separator.

### Time Delimiter

Specify the time separator.

### Decimal Symbol

Specify the decimal separator for decimal number.




### Thousand Separator

Specify the thousand separator for number.

## Choose Target Table

You are allowed to define a new name for the target table.

For importing multiple tables, all tables will be shown in the list.

Source File	Target Table
countries	 countries
duty_time	 duty_time
jobs	 jobs

## Adjust Field Structures

Navicat BI will make assumption on the field types and length in the source table. You are allowed to choose desired type from the drop-down list.

**Hint:** For importing multiple tables, select other tables from the **Source Table** drop-down list.

employees <- employees			
Source Field	Target Field	Type	
<input checked="" type="checkbox"/> EMPLOYEE_ID	EMPLOYEE_ID	Number	⬆⬇⬆
<input checked="" type="checkbox"/> FIRST_NAME	FIRST_NAME	String	⬆⬇⬆
<input checked="" type="checkbox"/> LAST_NAME	LAST_NAME	String	⬆⬇⬆
<input checked="" type="checkbox"/> EMAIL	EMAIL	Number	⬆⬇⬆
<input checked="" type="checkbox"/> PHONE_NUMBER	PHONE_NUMBER	DateTime	⬆⬇⬆
<input checked="" type="checkbox"/> HIRE_DATE	HIRE_DATE	Date	⬆⬇⬆
<input checked="" type="checkbox"/> JOB_ID	JOB_ID	Time	⬆⬇⬆
<input checked="" type="checkbox"/> SALARY	SALARY	String	⬆⬇⬆
		Number	⬆⬇⬆

If you are importing via ODBC, the **Condition Query** button opens the **WHERE** dialog where you can specify a *WHERE* clause to import only certain rows from the source. In other words, import only rows that satisfy the criteria set by you.

**Hint:** Do not include the word *WHERE* in the clause.

## Preview Data

In this step, you can preview the data for each table.

### Continue on error

Ignore errors that are encountered during the import process.

## Start Import

### Import Data to Workspace

Click the **Import** button to begin the import process. The wizard will display the import progress, execution time, and success or failure messages.

After the import process finished, you can click the **Message Log** button to view the import log.

### Link to Data in External File

Click the **OK** button.

# Add Query

## RDBMS - Query Editor

Query Editor allows you to create and edit queries.

**Hint:** SELECT statement will be automatically generated in Query Editor while you build in Query Builder.

Navicat BI provides a wide range advanced features, such as compelling code editing capabilities, smart code-completion, SQL formatting, and more.

### SQL Formatting

#### Beautify SQL

To format the SQL, just simply control-click on the editor and select **Beautify SQL**.

#### Minify SQL

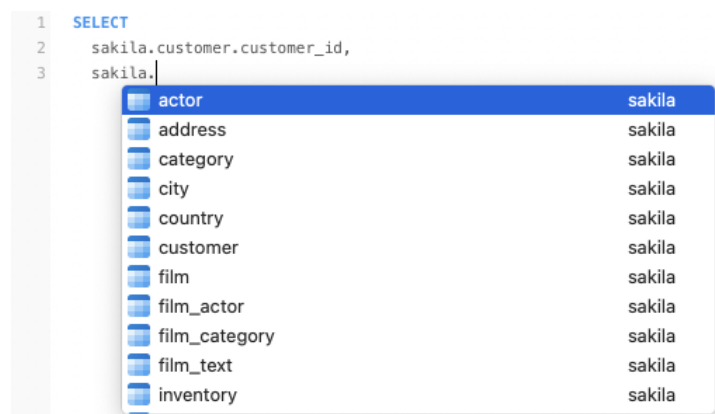
To minify the format of the SQL, just simply control-click on the editor and select **Minify SQL**.

### Code Completion

Code completion feature in Navicat BI pops up a list of suggestions as you type your SQL statement in the editor. It assists you with statement completion and the available properties of database objects, for example databases, tables, fields, views etc with their appropriate icons and information.

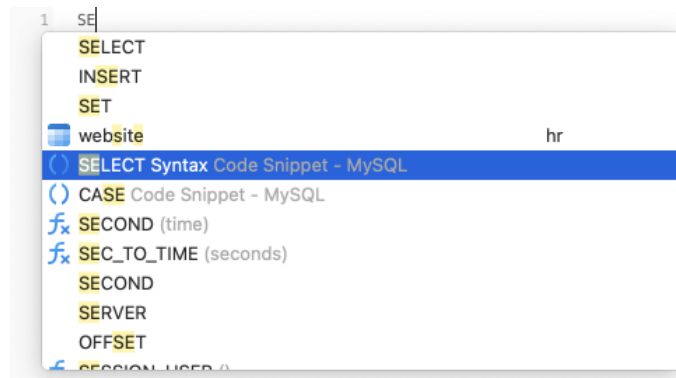
To invoke code completion, just simply press '.' for the available properties of database object currently in the scope.

When the suggestion list appears, press TAB to insert the first item. You can also select the needed item using UPPER ARROW or DOWN ARROW and then press TAB or ENTER.



In addition, code completion can be invoked by typing a character or pressing ESC on your keyboard for SQL keywords/database objects.

If you select a snippet name from the list, the saved code will be inserted to the editor.



**Hint:** Resize the suggestion list by dragging the lower right corner.





You can enable or disable the code completion feature in [Settings](#).

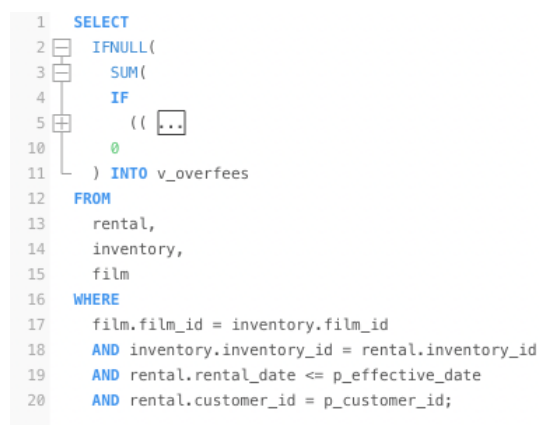
## Clipboard Stack

When you copy or cut some codes as usual in the editor, the copied content will also be added to Clipboard Stack. Clipboard Stack can store up to 10 items and use the last-in-first-out logic. To paste an item from Clipboard Stack, you can press COMMAND-SHIFT-V. Press COMMAND-SHIFT-V multiple times to cycle through Clipboard Stack.

## Code Folding

Code folding feature enables you to collapse blocks of code such that only the first line of the block appears in Query Editor.

A block of code that can be folded is indicated by an icon  to the left of the first line of the block. A vertical line extends from the icon to the bottom of the foldable code. In contrast, a folded block of code is indicated by an icon  to left of the code block. You can fold the block by clicking  or expand it by clicking .



## Syntax Highlight

Navicat BI uses syntax highlighting which depending on the database associated with the query. Different databases have different sets of reserved keywords. You can configure the associated colors for different text fragments in [Settings](#).

## Brace Highlight

Navicat BI supports to highlight the matching brace in the editor, i.e. () .

**Note:** The cursor must be on a brace to show the highlight.

```
1  SELECT
2  IFNULL(
3  SUM(
4  IF
5  (
6      TO_DAYS( rental.return_date ) - TO_DAYS( rental.rental_date )) > film.rental_duration,
7      (( TO_DAYS( rental.return_date ) - TO_DAYS( rental.rental_date )) - film.rental_duration ),
8      0
9  ),
10  0
11  ) INTO v_overfees
12  FROM
```

## Find and Replace

### Find

The Find bar is provided for quick searching for the text in the editor. Just simply choose **Edit -> Find -> Find** from the menu or press COMMAND-F, and then enter a search string.

Incremental searching is used here. As you type, the matched text is found and highlighted instantly. This saves your time from typing the entire text.

The search starts at the cursor's current position to the end of the file.

To find the previous or next occurrence, just simply click ◀ or ▶ .

### Replace

To open the Replace bar, simply choose **Edit -> Find -> Find and Replace** from the menu bar or press OPTION-COMMAND-F. Then, enter the text you want to search and replace.

Click the **Replace** button to replace the first occurrence.

Click the **Replace All** button to replace all occurrences automatically.

There are some additional options for Find and Replace, click 🔍 :

Option	Description
Regular Expression	Search regular expressions.
Match Case	Enable case sensitive search.
Whole Words	Return the objects that match the entire word of the search string.

## Copy with Quotes

To copy the SQL statement with quotes, just simply control-click the highlighted SQL. Then, select **Copy with Quotes** and choose the format.

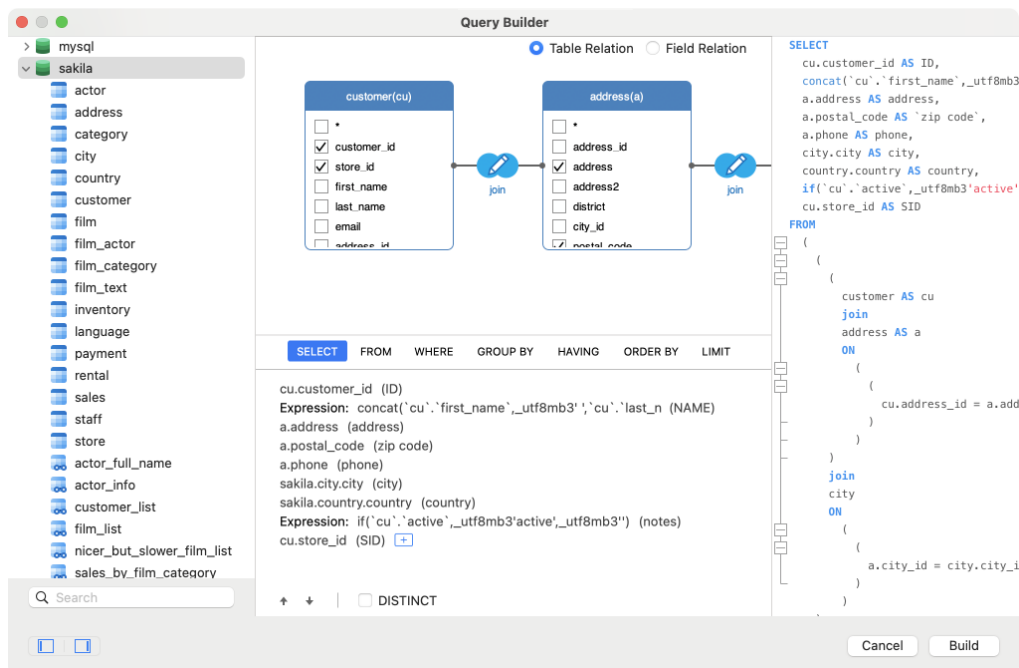
## RDBMS - Query Builder

Navicat BI provides a useful tool called **Query Builder** for building queries visually. It allows you to create and edit queries without knowledge of SQL. Even if you are familiar with SQL, the convenient and fluent graphical interface makes it easier to create relations and visualize the query.

In the New Query window, click the  button to open the visual Query Builder.

All database objects are displayed on the left **Object** pane. Whereas on the middle pane, it is divided into two portions: the upper **Diagram** pane, and the lower **Criteria** pane. When building the query, you can view the auto-generated query on the right **SQL** pane.

**Note:** Query Builder supports SELECT statement only.



### Add Objects to Query

The first step is to decide which tables and views you need to add to the query.

To add tables and views to the query, use one of the following methods:

- Drag them from the Object pane to the Diagram pane.
- Double-click them on the Object pane.

You can set aliases for tables, views and subqueries by double-clicking the object title on the Diagram pane and entering the name to use as an alias for the object name.

After you have added objects to the diagram, you can use the **FROM** tab to adjust the query to your needs.

- To change the object, click the object and select an identifier.
- To add the table alias, click **<Alias>**.






You can control-click an object on the Diagram pane and select **Remove**, or simply press DELETE key to remove the selected object from the query.

When you remove an object, Query Builder automatically removes joins that involve that object.

## Choose Output Fields

To include fields in the query, use one of the following methods:

- Check the left checkbox of a field name you want to add to the query on the Diagram pane.
- To include all the fields for an object, check the \* checkbox on the Diagram pane.
- To add all fields for all objects, click  on the **SELECT** tab and select **All fields(\*)**.

The selected fields display on the **SELECT** tab. You can specify additional output field options.

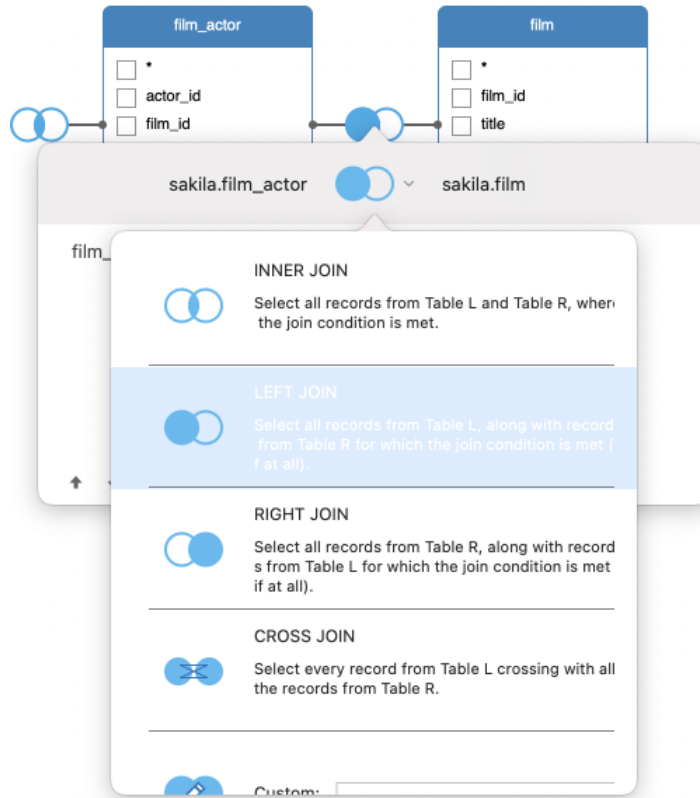
- Check the **DISTINCT** checkbox to force the query to return distinct results.
- To add the field alias, click **<Alias>** and enter the name.
- Click the identifier and select the **Aggregate** function.
- Use the up arrow and down arrow buttons to change the order of fields.

## Set Field Association

Query Builder will automatically join the tables as per the foreign key relations. If you want to associate database objects manually, just select a field from an object and drag it to a field in another object. A connector line appears between the two objects to visually represent the relationship and the join type.

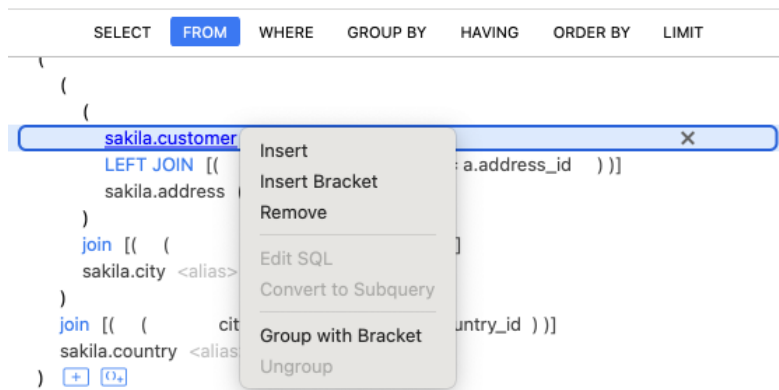
There are two views to show the connector lines: Table Relation and Field Relation. The **Field Relation** view allows you to identify matching fields in two tables, while the **Table Relation** view displays the join relationship between the two tables.

All joins are initially created as INNER JOIN by default. To change the association, click or double-click the connector line on the Diagram pane or click the JOIN keyword on the **FROM** tab, and then select a join type. If a join type is not listed, you can enter a customized one in the **Custom** textbox.



To remove a join, control-click the connector line and select **Remove**.

To modify the join condition, control-click a connector line and select **Edit Join**, or click the condition on the **FROM** tab.




The pop-up menu options of the FROM tab:

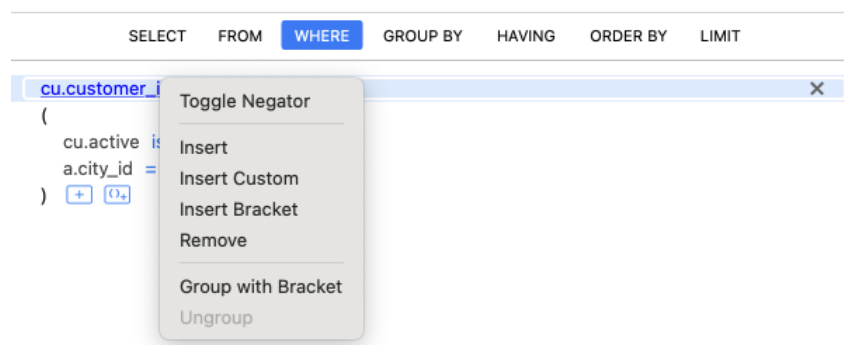
Option	Description
Insert	Add an identifier, an expression or a subquery.
Insert Bracket	Add a pair of parentheses.
Remove	Remove the identifier, expression or subquery.
Edit SQL	Edit the subquery.
Convert to Subquery	Convert the condition to a subquery.
Clear and Convert to USING Clause	Remove the ON condition and convert it to USING clause.
Clear and Convert to ON Clause	Remove the USING condition and convert it to ON clause.

Group with Bracket	Add parentheses to group the selected conditions.
Ungroup	Remove the parentheses.

## Set Filter Criteria

When retrieving data, you may want to set up a filtering expression. To filter data returned by the query, control-click a field on the Diagram pane and select **Add Field To -> WHERE** and an operator.

The condition is added to the **WHERE** tab. You can edit the value there by clicking **<Value>**. If you want to add a condition with parentheses, click . You can change a logical operator (and/or) by clicking it. Use the up arrow and down arrow buttons to change the order of conditions.



The pop-up menu options of the WHERE tab:

Option	Description
Toggle Negator	Reverse the meaning of the condition.
Insert	Add a condition.
Insert Custom	Add a custom condition.
Insert Bracket	Add a pair of parentheses.
Remove	Remove the condition.
Group with Bracket	Add parentheses to group the selected conditions.
Ungroup	Remove the parentheses.

## Group Resulting Data

You can set the conditions for grouping query records by control-clicking a field in the Diagram pane and selecting **Add Field To -> GROUP BY -> Add Field**.

The condition is added to the **GROUP BY** tab. Use the up arrow and down arrow buttons to change the order of fields.

On the **HAVING** tab, you can filter summarized data or grouped data. Select the identifiers, operators, aggregate or enter expressions to include in the condition. Use the up arrow and down arrow buttons to change the order of conditions.

The pop-up menu options of the HAVING tab:

Option	Description
Toggle Negator	Reverse the meaning of the condition.

Insert	Add a condition.
Insert Custom	Add a custom condition.
Insert Bracket	Add a pair of parentheses.
Remove	Remove the condition.
Group with Bracket	Add parentheses to group the selected conditions.
Ungroup	Remove the parentheses.

## Sort Resulting Data

You can set the way of sorting query records by control-clicking a field on the Diagram pane and selecting **Add Field To -> ORDER BY -> ASC** or **DESC**. The condition will be added to the ORDER BY tab.

## Limit Resulting Data

On the **LIMIT** tab, you can limit your query results to those that fall within a specified range.

### Offset


Specify the number of records to be skipped. It is optional.

### Limit

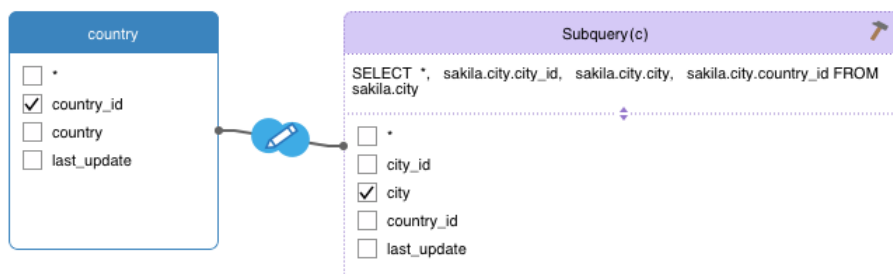
Specify the number of records to be displayed.


**Note:** Available only for MySQL, PostgreSQL, SQLite and MariaDB.

## Add Expressions/Subqueries

You can add an expression or a subquery to further limit the query results. On the **FROM** tab, click  and select the **Expression/Subquery** tab.

After entered an expression or a subquery, confirm editing by pressing the ENTER key. It will be added to the Diagram pane indicates that the statement contains an expression or a subquery and identifies the columns it is on.



By clicking the  button, you will be switched to a subquery layer where you can build it visually in the same way as the main query.

You can always go back to the main query by clicking **(Main Query)**.

## View Generated SQL

The **SQL** pane presents a read-only, formatted representation of the SQL generated by Query Builder. You can copy the SQL that appears in the SQL pane for use in other tools. In a subquery layer, you can enable **Show Current Layer Only** to show the subquery SQL.

## MongoDB - Query Editor

Query Editor allows you to create and edit queries.

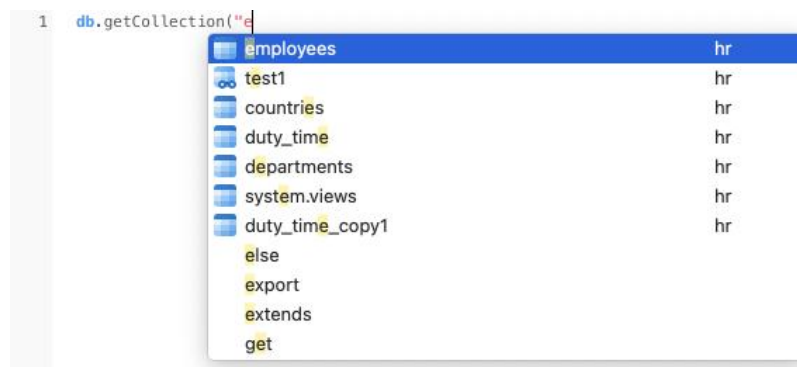
**Hint:** Script will be automatically generated in Query Editor while you build in Find Builder.

Navicat BI provides a wide range advanced features, such as compelling code editing capabilities, smart code-completion, and more.

### Code Completion

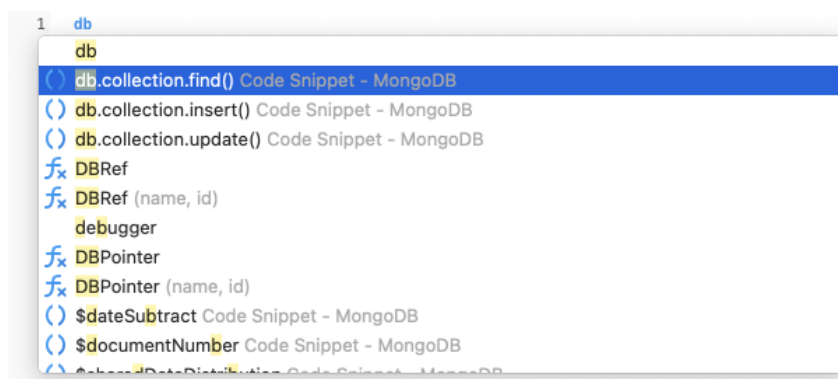
Code completion feature in Navicat BI pops up a list of suggestions as you type your script in the editor. It assists you with database names, collection names, view names, document field names and shell methods with their appropriate icons and information.

Code completion can be invoked by typing a dot (.), a character or pressing ESC.



When the suggestion list appears, press TAB to insert the first item. You can also select the needed item using UPPER ARROW or DOWN ARROW and then press TAB or ENTER.

If you select a snippet name from the list, the saved code will be inserted to the editor.



**Hint:** Resize the suggestion list by dragging the lower right corner.





You can enable or disable the code completion feature in [Settings](#).

## Clipboard Stack

When you copy or cut some codes as usual in the editor, the copied content will also be added to Clipboard Stack. Clipboard Stack can store up to 10 items and use the last-in-first-out logic. To paste an item from Clipboard Stack, you can press COMMAND-SHIFT-V. Press COMMAND-SHIFT-V multiple times to cycle through Clipboard Stack.

## Code Folding

Code folding feature enables you to collapse blocks of code such that only the first line of the block appears in Query Editor.

A block of code that can be folded is indicated by an icon  to the left of the first line of the block. A vertical line extends from the icon to the bottom of the foldable code. In contrast, a folded block of code is indicated by an icon  to left of the code block. You can fold the block by clicking  or expand it by clicking .

```
1  db.getCollection("employees").find({
2    $or: [{
3      $and: [{  ...
8   }, {
9
10  }]
11 }])
```

## Syntax Highlight

Navicat BI uses syntax highlighting which depending on the database associated with the query. Different databases have different sets of reserved keywords. You can configure the associated colors for different text fragments in [Settings](#).

## Brace Highlight

Navicat BI supports to highlight the matching brace in the editor, i.e. ( ) .

**Note:** The cursor must be on a brace to show the highlight.

```
1  db.getCollection("employees").find({
2    $or: [{
3      $and: [{
4       "DEPARTMENT_ID": 105
5     }, {
6       "JOB_ID": "T190"
7     }
8   }, {
9     "MANAGER_ID":
10  }]
11 }])
```

## Find and Replace

### Find

The Find bar is provided for quick searching for the text in the editor. Just simply choose **Edit -> Find -> Find** from the menu or press COMMAND-F, and then enter a search string.

Incremental searching is used here. As you type, the matched text is found and highlighted instantly. This saves your time from typing the entire text.

The search starts at the cursor's current position to the end of the file.


To find the previous or next occurrence, just simply click  or .

## Replace

To open the Replace bar, simply choose **Edit -> Find -> Find and Replace** from the menu bar or press OPTION-COMMAND-F. Then, enter the text you want to search and replace.

Click the **Replace** button to replace the first occurrence.

Click the **Replace All** button to replace all occurrences automatically.

There are some additional options for Find and Replace, click :


Option	Description
Regular Expression	Search regular expressions.
Match Case	Enable case sensitive search.
Whole Words	Return the objects that match the entire word of the search string.

## Copy with Quotes

To copy the script with quotes, just simply control-click the highlighted script. Then, select **Copy with Quotes** and choose the format.

## MongoDB - Find Builder

Navicat BI provides Find Builder for building queries visually to select documents in a collection or view. It allows you to create and edit queries without knowledge of the *find* command.

In New Query window, click the  button to open the visual Find Builder.

Select the name of the collection or view to query from the **Collection/View** drop-down menu.

## Filter

In this tab, you can specify selection filters for the query. Documents that meet the conditions will be returned. If you not specify the filter, all documents will be returned.

## Projection

In this tab, you can choose which fields to include or exclude in the returned documents. If you not specify the projection, all fields will be returned.


## Sort

In this tab, you can sort the returned documents by fields in ascending or descending order.

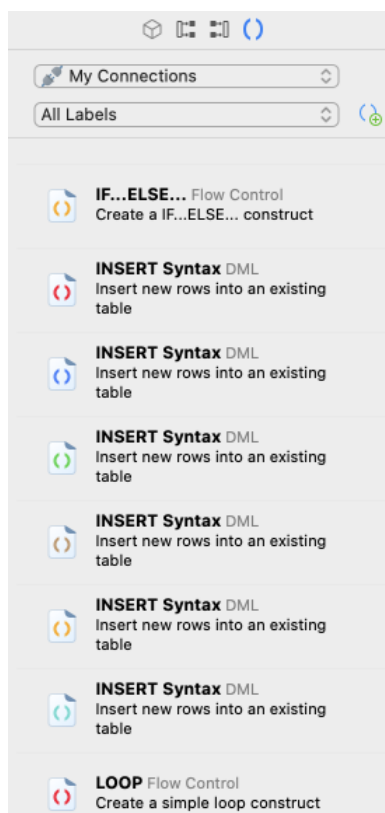
## Limit

In this tab, you can limit the maximum number of documents to return and set the number of documents to skip.

## Code Snippets

Code Snippets provide an easy way for you to insert reusable code into editor when writing statements or scripts. The Code Snippet pane is on the right side of the editor. You can click the  icon to open the library.

The library includes built-in and user-defined snippets. Choose a label from the drop-down menu or enter a search string in the Search box to filter the list. If you want to show the available snippets according to your database type, you can control-click anywhere on the library and disable **Show Snippets For Other Database Type**.



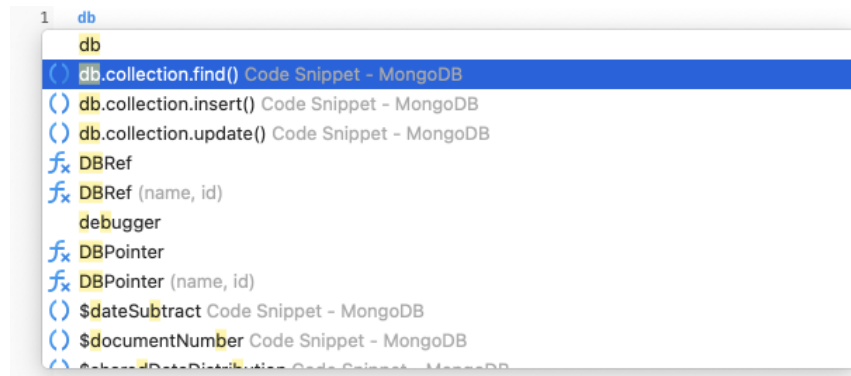
Built-in snippets are non-editable. A user-defined snippet can be edited by double-clicking it in the library and clicking **Edit**. If you want to hide the built-in snippets, you can control-click anywhere on the library and disable **Show Preset Snippets**.

## Use Code Snippets

There are two ways to insert a snippet into the editor.

- You can start typing the name of a snippet in the editor. Smart code completion will pop up a list of suggestions for the word completion automatically. Select a snippet name from the list, the saved code will be inserted to the editor.





- You can simply drag and drop a snippet from the library into the editor.

After inserting the snippet with placeholders to the editor, you can easily navigate to them by clicking on one of the placeholders, and then using the TAB key and entering the information.


```

1 CASE case_value
2   WHEN when_value THEN
3     statement_list
4   ELSE
5     statement_list
6 END CASE;
7



```

## Create Code Snippets

You can create your own code snippets and add them to the library. To create a code snippet, select your desired code in the editor, then control-click and select **Create Snippet**, or simply drag and drop the selected code to the Code Snippet pane.

Alternatively, click  in the Code Snippet pane. If you use this method, you must manually enter the code in the New Snippet window; code selected in the editor is not automatically added to the Code box.

**Hint:** Code snippets (.nsnippet) are stored under the default path, e.g. ~/Library/Application Support/PremiumSoft CyberTech/Navicat CC/Common/Snippet.

Option / Button	Description
Untitled text box	Enter the name of the snippet that displays in the library and the code completion list.
Database Type	Choose the database server type of the snippet.
Label	Choose an existing label or enter a new label name for the snippet.
Remarks	Enter a description for the snippet that displays in the library.
Code	Enter the code.
	Add a placeholder by highlighting any words in the code and click this button. The placeholder will be highlighted in light green.
	Remove a placeholder by highlighting it in the code and click this button.

## Move / Copy Snippet To Project

If you have logged in to Navicat Cloud or On-Prem Server, you can synchronize the custom snippet in My Connections to a project.

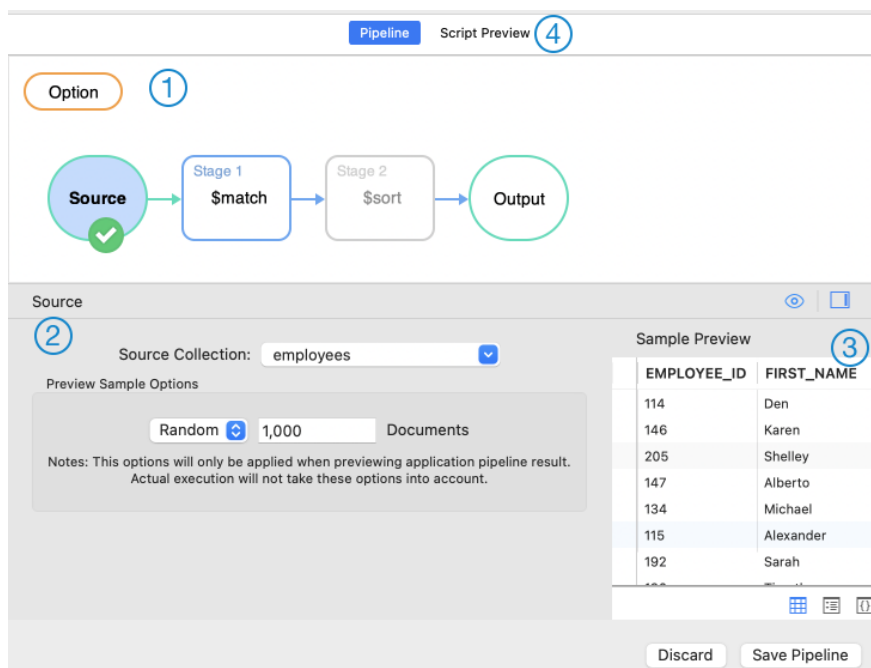
1. Control-click a snippet and select **Move Snippet To** or **Copy Snippet To**.
2. Select an existing project.
3. The snippet will be moved or copied to the project.

**Hint:** You can move / copy a snippet in a project to My Connections in a similar way.

## Add Aggregation Pipeline

### Pipeline Builder

Pipeline Builder allows you to build a simple aggregation pipeline by defining stage operators. It consists of the following sections: Pipeline, Stage Editor, Input/Output Preview, Script Preview.



#### 1 Pipeline

A diagram to illustrate the aggregation pipeline. You can see all stages at a glance and add, delete, and move them as needed.

#### 2 Stage Editor

The Stage Editor is where you edit the selected stage.




#### 3 Input/Output Preview Pane

The Input Preview and Output Preview panes allow you to view the input documents and results at each stage.

#### 4 Script Preview

You can view the aggregation pipeline script.

### Toolbar

Button	Description
	Import a script file to build the pipeline.
	<b>Preview All</b> - Preview the output. <b>Preview All with Reload</b> - Reload the sampled documents and preview the output.
	Stop the executing pipeline.

## Choose Source Collection


The source input of the pipeline is a single collection or view. Select **Source** in the pipeline and fill in the following options.

Option	Description
Source Collection	Choose a collection or view as the source.
Preview Sample Options	Set the limit on the number of sampled documents.


## Work with Aggregation Pipeline Stage

You can break down a complex query into easier stages. In each stage, you complete a different operation on the data, such as filtering, grouping, sorting, and transforming. You can check whether your query is functioning properly at every stage by examining both its input and output. There is no limit to the number of stages used in the query, or how you combine them.

### Add Stage

1. Hover over an arrow.
2. Click the  icon.

### Move Stage

1. Hover over a stage.
2. Click and hold the  icon.
3. Move it to the desired location.

### Enable / Disable Stage

1. Hover over a stage.
2. Turn on or off the stage.

### Check Stage Input / Output

1. Hover over a stage.
2. Click **Preview**.

## Delete Stage

1. Control-click a stage and select **Delete**.

## Modify Pipeline Settings

You can click **Option** to view and change pipeline settings.

# Modify Data Source Connections

## Project Connection

### To change a project connection to a workspace connection

1. On the Connections pane, control-click a connection and select **Convert to Workspace Connection**.
2. The connection will be moved to the "Workspace" section.

### To recreate a not found connection

If the server connection in the project was removed, it will be moved to the "Not Found in Project" section. You may need to recreate the connection in order to connect the server.

1. On the Connections pane, control-click a connection and select **Recreate Connection in Project**.
2. Enter the connection properties.
3. Click **OK**.

## Workspace Connection

### To edit the settings of a database connection

1. On the Connections pane, control-click a database connection and select **Edit Connection**.
2. Follow the steps to edit the connection.

### To change the user password of a database connection

1. On the Connections pane, control-click a database connection and select **Change Connection Password**.
2. Enter the database user password.
3. Click **OK**.

### To edit the settings of a file connection

1. On the Connections pane, control-click a file connection and select **Edit File Connection Settings**.
2. Follow the steps to edit the connection.

## To change the path of a linked file connection

1. On the Connections pane, control-click a file connection and select **Change Linked File Path**.
2. Follow the steps to edit the connection.

## To recreate a not found connection

If Navicat BI cannot find the connection in the workspace, it will be moved to the "Not Found in Navicat BI" section. You may need to recreate the connection in order to connect the server.

1. On the Connections pane, control-click a connection and select **Recreate Connection in Workspace**.
2. Enter the connection properties.
3. Click **OK**.

## View Data

After applying and refreshing the data source, the data is displayed in the bottom data grid. You can navigate among the records/pages using the **Navigation Bar** buttons.



Button	Description
↩	<b>First Page</b> - move to the first page.
←	<b>Previous Page</b> - move to the previous page.
→	<b>Next Page</b> - move to the next page.
➡	<b>Last Page</b> - move to the last page.
⚙	<b>Limit Record Setting</b> - set number of records showing on each page.


Use the **Limit Record Setting** ⚙ button to enter to the edit mode.

Limit  records per page

Check this option if you want to limit the number of records showed on each page. Otherwise, all records will be displayed in one single page. And, set the value in the edit box. The number representing the number of records showed per page.

**Note:** This setting mode will take effect on current data source only. To adjust the global settings, see [Settings](#).

## Show/Hide Columns

If there are many columns in the data source and you want to hide some of them from the grid, just simply click  Select the columns that you would like to hide.


The hidden columns will disappear from the grid.



To unhide the columns, just simply click . Select the columns that you would like to redisplay.

## Filter / Sort / Project Data

If your data source has many data or fields, you may find it easier to limit the data or fields to just the ones you want so you can simplify the data selections.

### Filter Data

Filter pane allows you to facilitate creating and applying filter criteria that you specify for the data. Click  from the toolbar to activate the Filter pane.

1. To add a new condition to the criteria, just simply click . If you want to add a condition with parentheses, click .

**Hint:** To add parentheses to existing conditions, simply control-click on the selected conditions and select **Group with Bracket**. To remove the parentheses, control-click a bracket and select **Delete Bracket** or **Delete Bracket and Conditions**.

2. Click on the field name (next to the checkbox) and choose a field from the list.
3. Click on the operator (next to the field name) and choose a filter operator.


Filter Operator	Operator Description
=	The field is equal to 'value'.
!=	The field is not equal to 'value'.
<	The field is less than 'value'.
<=	The field is less than or equal to 'value'.
>	The field is greater than 'value'.
>=	The field is greater than or equal to 'value'.
contains	The field contains 'value'.
does not contain	The field does not contain 'value'.
begin with	The field starts with 'value'.
does not begin with	The field does not start with 'value'.
end with	The field ends with 'value'.
does not end with	The field does not end with 'value'.
is null	The field is NULL.
is not null	The field is NOT NULL.
is empty	The field is empty.
is not empty	The field is not empty.
is between	The field is between 'value1' and 'value2'.
is not between	The field is not between 'value1' and 'value2'.
is in list	The field is in the list of ('value1','value2',...).
is not in list	The field is not in the list of ('value1','value2',...).

4. Click on **<?>** to activate the appropriate editor and enter the criteria values. The editor used in the criteria values box is determined by the data type assigned to the corresponding field.
5. Click on the logical operator (next to the criteria values) to choose **and** or **or**.
6. Repeat step 1-5 to add another new condition.
7. Click **Apply and Refresh Data** to see the result of the filtering you made.


**Hint:** If you want to reverse the meaning of the conditions, control-click the selected conditions and select **Toggle Negator**.


## Sort Data

Navicat BI offers the ability to sort and order data. Click  from the toolbar to activate the Sort pane.

1. To add a new criteria, just simply click .
2. Click on the field name (next to the checkbox) and choose a field from the list.
3. Click on the sorting order to choose **ASC** or **DESC**.
4. Repeat step 1-3 to add another new criteria.
5. Click **Apply and Refresh Data** to see the result of the sorting you made.

## Project Data

You can choose which fields to include or exclude in the data source. Click  from the toolbar to activate the Projection pane.

1. Choose to **Include** or **Exclude** fields.
2. To add a new criteria, just simply click .
3. Click on the field name (next to the checkbox) and choose a field from the list.
4. Repeat step 2-3 to add another new criteria.
5. Click **Apply and Refresh Data** to see the result of the projection you made.


## Add Custom Fields

You can extend your data with customized fields. New fields can be created by changing the field type, concatenating other fields, mapping to other values or sorting based on another field/customized order.

### Create Custom Field


#### Type-Changed Field

Field types (String, Number, Date/Time) are assigned to every field based on the actual data type of the field. If the field was not interpreted correctly, you can adjust the field type.

1. In the bottom data grid, select a field and click  -> **Type-Changed Field** to get started.
2. In the pop-up window, enter the **Target Field Name**.
3. Choose the **Target Field Type**.
4. Choose the **Source Field Name**.
5. Set the **Source Field Data Format** if necessary.
6. Click **OK**.


### Concatenated Field

You can add a new field and concatenate the data from two already existing fields.

1. In the bottom data grid, select a field and click  -> **Concatenated Field** to get started.
2. In the pop-up window, enter the **Name** of the target field.
3. Double-click a field on the **Source Fields** pane to add it to the body.
4. Edit the body and enable the **Set null if all field values are null or empty** option if necessary.
5. Click **OK**.

### Mapped Field


You can create a new field populated with the results of applying a mapping rule on every value in the source field.

1. In the bottom data grid, select a field and click  -> **Mapped Field** to get started.
2. In the pop-up window, enter the **Target Field Name**.
3. Choose the **Source Field Name**.
4. Click **Add** to create a new mapping rule.
5. Enable the **Compare source values with case sensitive** option if necessary.
6. Choose the action for the values that are not in the mapping rules.
7. Click **OK**.

### Custom-Sorted Field




You can create a new field to rearrange the order of the values, based on another field, or a custom order. When you sort this new field in the chart, it will be sorted in the order you set.

1. In the bottom data grid, select a field and click  -> **Custom-Sorted Field** to get started.
2. In the pop-up window, enter the **Target Field Name**.
3. Choose the **Source Field Name**.
4. [Reference Field] Choose the field which the sort order of the target field will be based on.
5. [Custom Sort] Customize the order of the field values by moving the values to the **Sorted Values** list.
6. Click **OK**.

### Calculated Field

You can create a new field with a custom expression. You can use functions, fields and operators in the expression.

1. In the bottom data grid, select a field and click  -> **Calculated Field** to get started.
2. In the pop-up window, enter the **Target Field Name**.
3. Enter an expression in the **Body** text box.
4. Click **OK**.


### Edit Custom Field

1. In the bottom data grid, control-click on the customized field and select **Edit field\_name**.
2. In the pop-up window, modify the field properties.
3. Click **OK**.

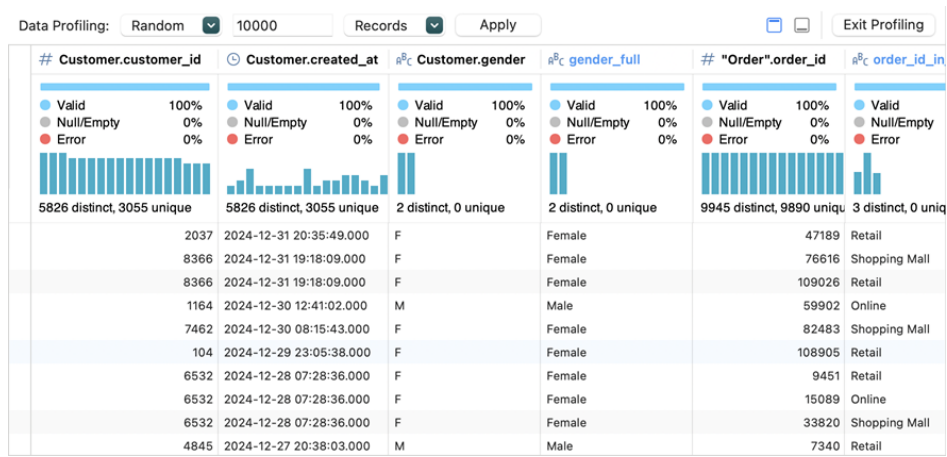
### Delete Custom Field

1. In the bottom data grid, control-click on the customized field and select **Remove field\_name**.

## Examine Data Source Using Data Profiling

You can profile a data source to unveil intricate patterns, trends, and relationships in the data, and identify discrepancies and errors in custom fields, enabling a meticulous examination of data integrity and accuracy. To initiate the profiling process, simply click . In the Data Profiling bar, choose the number of records you want to profile and click **Start**.

After the profiling finished, the data profile results appear. The results show all the columns and their statistics in the profile run. You can modify the number of records and then re-profile the data.

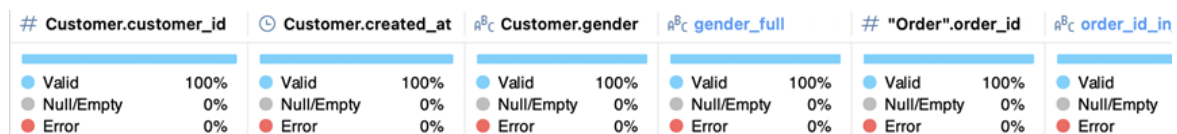


## Column Quality & Distribution

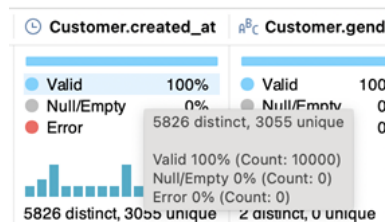
The Column Quality & Distribution pane provides the quality of the data in terms of distinct values, unique values, NULL values and non-NULL values, also it displays column distribution charts associated with the column values.

### Column Quality

The column quality includes a small bar chart and column quality categories (displayed as percentages). It displays directly underneath the column name.



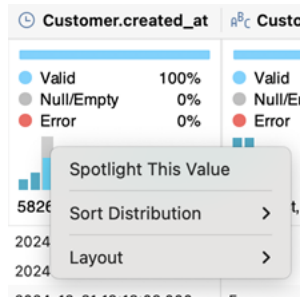
By hovering over any category, it will show you the numerical distribution of the value qualities throughout the column.



### Column Distribution

In column distribution charts, you can see the frequency and distribution of the values in each of the columns as in histogram.

By default, the data in these visualizations is sorted in ascending order of the values. You can change the sorting order and category by right-clicking the chart and select **Sort Distribution**.



By hovering over any bar, it will show you the value and the numerical distribution of the quality of that value throughout the column.

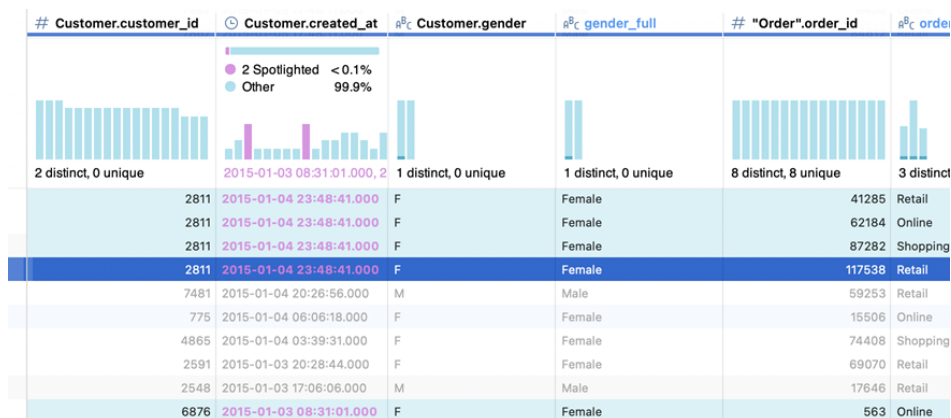
You can change the display style that works best for you by right-clicking a bar and choosing **Compact** or **Detailed**. Compact View hides Column Quality information, while Detailed View shows both Column Quality & Distribution information.

### Add Spotlight

Use spotlights to draw attention to specific values on the result. To spotlight values, use one of the following methods:

- Click a column quality category or a bar in the Column Quality & Distribution pane.
- Control-click a bar in the Column Quality & Distribution pane and select **Spotlight This Value** or **Add Spotlight**.
- Control-click a value in the grid and select **Spotlight This Value** or **Add Spotlight**.

**Hint:** Remove the spotlighted values in the same way.

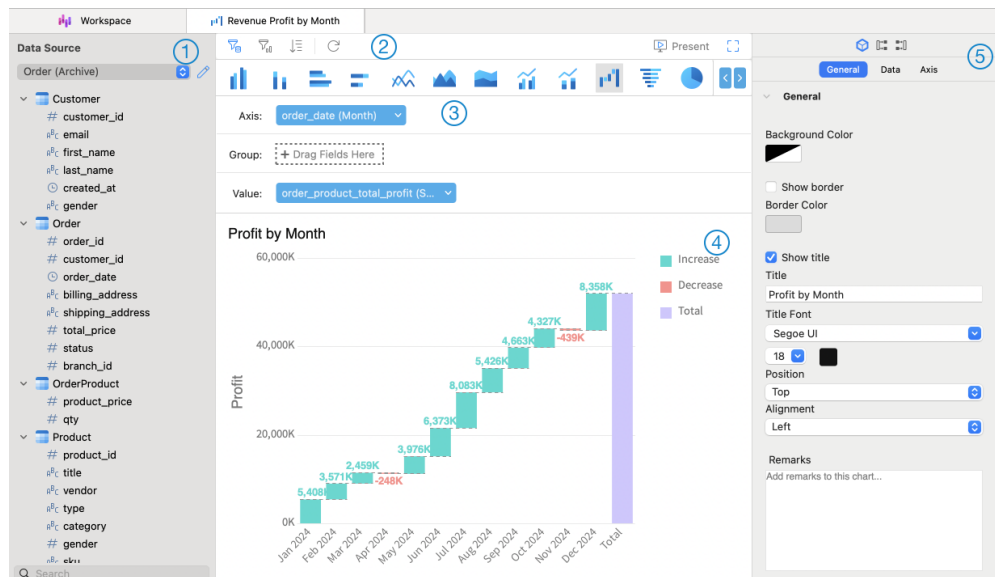


# Chapter 6 - Chart

## About Chart

A chart provides visual representations of the data in your data source. It maps to a single data source, and can display correlations between several fields in the data. You can even make the chart interactive by adding a control chart.

**Note:** You must add a [data source](#) before you can begin building charts.



### 1 Data Source Pane

The Data Source pane is the basic way to navigate with the data sources. If the Data Source pane is hidden, choose **View -> Show Data Source** from the menu bar.

### 2 Chart Toolbar

The Chart Toolbar provides controls that you can use to manipulate the data.

### 3 Metric Pane

The Metric pane allows you to choose the chart type and add fields to the shelves from the Data Source Pane. If the Metric pane is hidden, choose **View -> Show Metric** from the menu bar.

### 4 Preview Pane

The Preview pane displays the chart.

### 5 Properties Pane

The **Properties** tab includes the basic layout settings, data format settings and so on. The properties vary with the type of the chart.


The **Using** tab shows the data sources that the chart depends on.

The  **Used By** tab shows the dashboards that depend on the chart.

If the Properties pane is hidden, choose **View -> Show Properties** from the menu bar.

## Build Chart

The essential steps to create a chart are:

1. In the Workspace window, click .
2. Select the data source and enter the name of the chart.
3. A tab will open for you to edit the chart.
4. Choose the [Chart Type](#) on the middle pane.

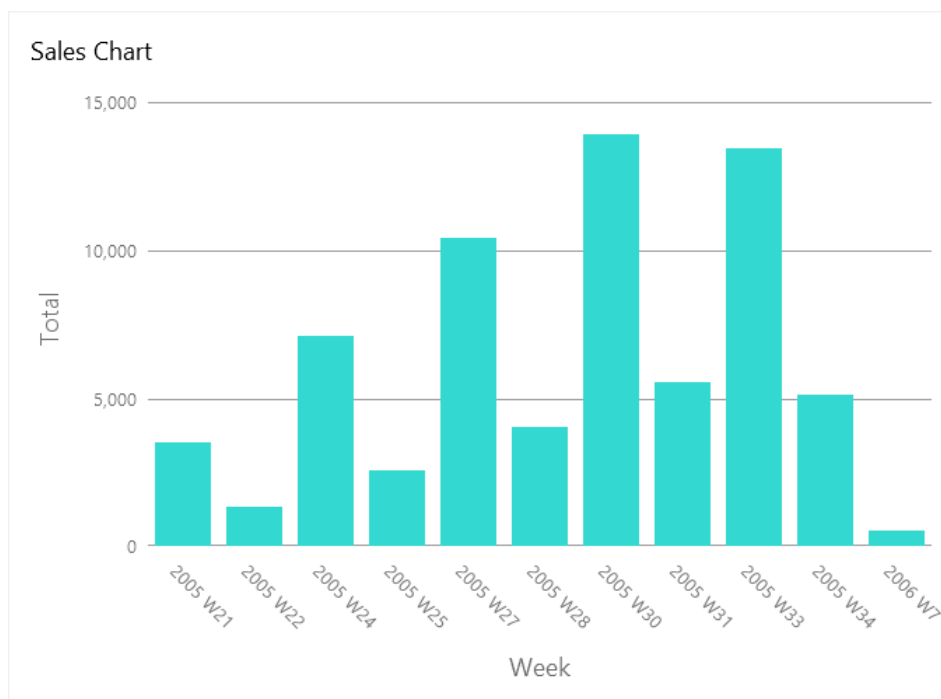


**Hint:** The type of chart you will use is normally determined by the type of the data.

5. Drag fields to the corresponding shelf in the Metric pane to set axis, values, etc.
6. Select the properties on the right pane which can be further customized for your chart.

**Hint:** Each chart type has different properties.

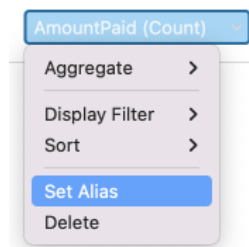
7. The chart shows on the Preview pane.



### Set Field Alias

You can create aliases for fields so that their labels appear differently in the chart.

1. Click the down arrow in the field box.
2. Select **Set Alias**.



3. Enter the alias name.

## Filter / Sort Data

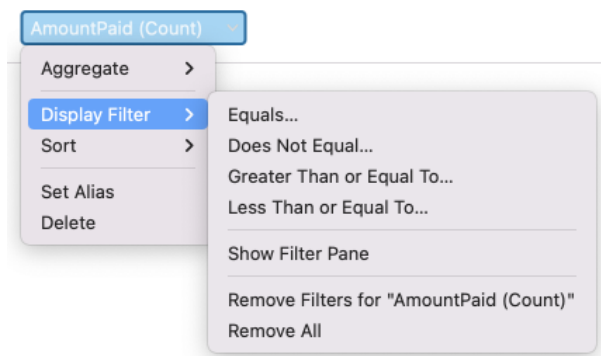
### Filter Source Data in Chart

You can use the [Data Filter](#) pane to filter the source data in the current chart.

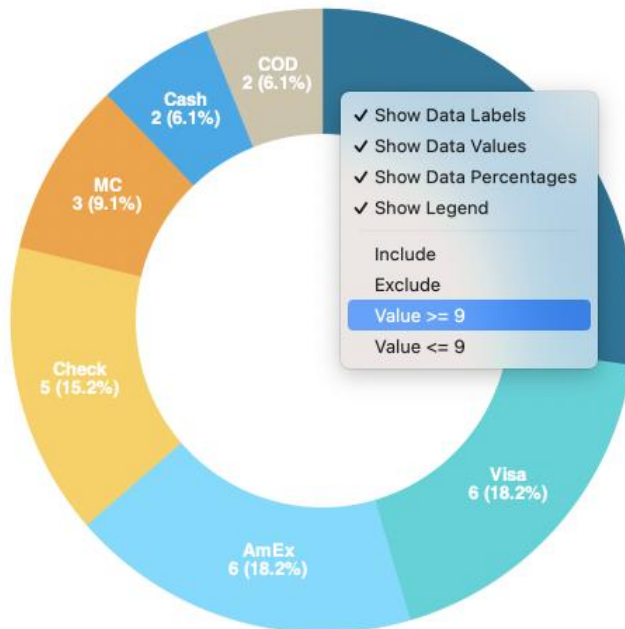
### Filter Display Data in Chart

You can filter the display data in 3 ways:

- Click the down arrow in the field box and select **Display Filter**.



- Use the [Display Filter](#) pane.
- Control-click a series / data points on the chart.

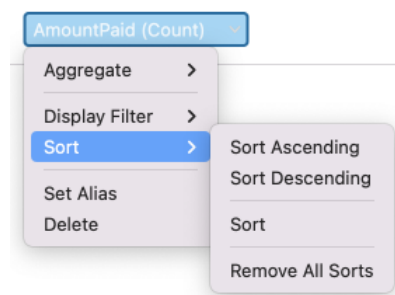


**Hint:** If you want to clear the filter, you need to use the Display Filter pane.

## Sort Data

You can sort the data in 2 ways:

- Click the down arrow in the field box and select **Sort**.

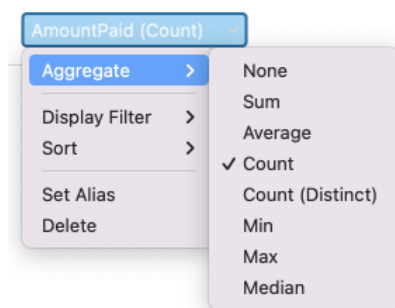


- Use the [Sort](#) pane.

## Apply Aggregate Function

Aggregate functions allow you to summarize or change the granularity of your data.

- Click the down arrow in the field box.



2. Select **Aggregate** and choose an aggregate function.

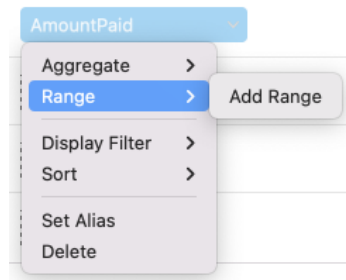
Function	Description
<b>Number</b>	
Sum	Return the sum of all values. Null values are ignored.
Average	Return the average of all the values. Null values are ignored.
Count	Return the number of items. Null values are not counted.
Count(Distinct)	Return the number of distinct items. Null values are not counted.
Min	Return the minimum value across all records. Null values are ignored.
Max	Return the maximum value across all records. Null values are ignored.
Median	Return the median value across all records. Null values are ignored.
<b>DateTime</b>	
Count	Return the number of items. Null values are not counted.
Count(Distinct)	Return the number of distinct items. Null values are not counted.
Year	Return the year of the date (0000-9999).
Quarter	Return the year of the date (0000-9999) and the quarter of the year (Q1-Q4).
Month	Return the year (0000-9999) and the month (01-12) of the date.
Week	Return the year of the date (0000-9999) and the week of the year (W01-W52, start of week is Sunday).
Day	Return the date.
Hour	Return the date and the hour of the time (00-23).
Minute	Return the date, the hour of the time (00-23) and the minute of the time (00-59).
Second	Return the datetime.
Quarter (Extract)	Return the quarter of the year (Q1-Q4).
Month (Extract)	Return the month of the date (01-12).
Week (Extract)	Return the week of the year (W01-W52, start of week is Sunday).
Day (Extract)	Return the day of the date (01-31).
Hour (Extract)	Return the hour of the time (00-23).
Minute (Extract)	Return the minute of the time (00-59).
Second (Extract)	Return the second of the time (00-59).
<b>Text</b>	
First	Return the value of the first record.
Last	Return the value of the last record.
Count	Return the number of items. Null values are not counted.
Count(Distinct)	Return the number of distinct items. Null values are not counted.

## Add Range

You can aggregate data into ranges without the need to create any additional calculations in the data source.



1. Click the down arrow in the field box.



2. Select **Add Range**.
3. Edit the range settings.

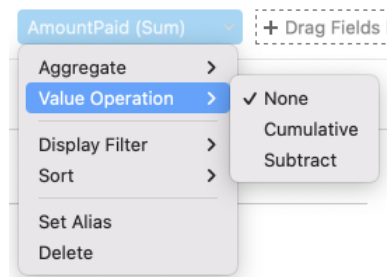
Option	Description
<b>Range Type - Fixed</b>	
Bin Size	Either enter the size of a bin or click <b>Calculate</b> to let Navicat BI calculate a value for you.
<b>Range Type - Custom</b>	
Stop Values	Add the bin boundaries.

4. Click **OK**.

## Set Value Operation

You can create a chart that shows a running total as values are added or subtracted.


1. Click the down arrow in the field box.



2. Select **Value Operation** and choose an operation.


Operation	Description
Cumulative	Sum the values cumulatively.
Subtract	Subtract the value with its previous value.

## Present Chart

You can present the chart using the whole screen. The title bar, toolbars, tab bar, Data Source pane, Metric pane and Properties pane will be hidden while in this mode. To open a chart in present view, click  **Present**.

To exit present view, press the ESC key and the workspace window will be returned to its previous state.

## Sort Chart

In the Present mode, you can organize your data in a chart with one click. You can sort data series by a value. Simply click the  icon to sort on a different value and select the sorting order.

# Chart Types

## About Chart Types

Navicat BI provides a variety of different chart types so data can be displayed in a meaningful way.

Here is a complete list of available chart types:

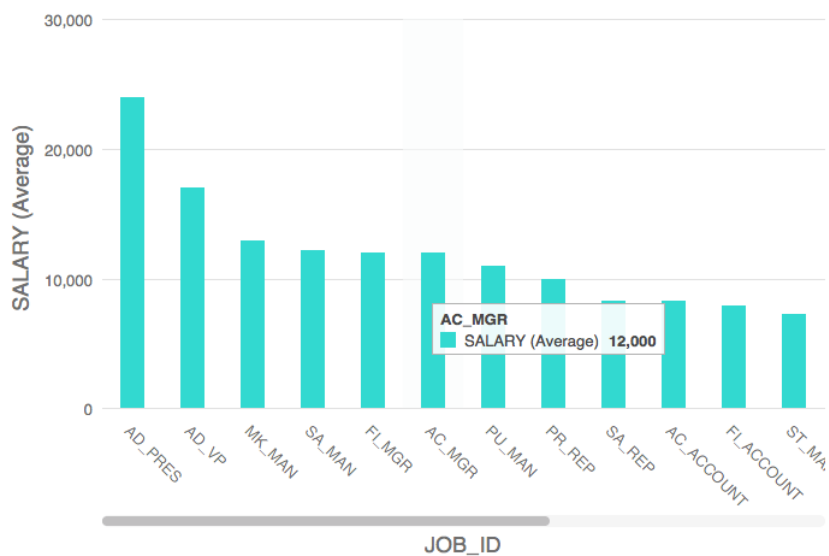
- Vertical Bar Chart
- Vertical Stacked Bar Chart
- Horizontal Bar Chart
- Horizontal Stacked Bar Chart
- Line Chart
- Area Chart
- Stacked Area Chart
- Bar and Line Chart
- Stacked Bar and Line Chart
- Waterfall Chart
- Tornado Chart
- Pie Chart
- Donut Chart
- Scatter Chart
- Heatmap
- Treemap
- Value
- Trend
- KPI

- Gauge
- Table
- Pivot Table
- Control

## Bar Chart

A bar chart provides high-level overviews of data trends by comparing values within a specific category.

- Vertical Bar Chart
- Vertical Stacked Bar Chart
- Horizontal Bar Chart
- Horizontal Stacked Bar Chart






## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.

Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show Bar Labels	Display the data labels of the selected series.
Bar Label Contains	Display the data values or/and the percentages on the labels.
Bar Label Position	Set the position of the bar labels.
Use 100% stacked	Use 100% stacked bars to show values for hierarchical data. (Each bar height is 100%, and the colored bar segments represent the components' relative contributions to the total bar.)
Bar Label Font	Set the font style of the bar labels.
Use custom data value color	Customize the color of the labels of the data values.
Positive Data Value Color	Set the color of the positive value labels.
Negative Data Value Color	Set the color of the negative value labels.
Show only top #	Only the top # data are displayed.
Style	Plot discrete or continuous data series on the chart.
Density	Choose the density of the data series.
Color	Set the color palette of the data series.
All Data Colors	Allow setting the color for each series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>X-Axis</b>	
Show X-Axis title	Display the title of X-Axis.
X-Axis Title	Specify the title of X-Axis.
Font	Set the font style of X-Axis title.

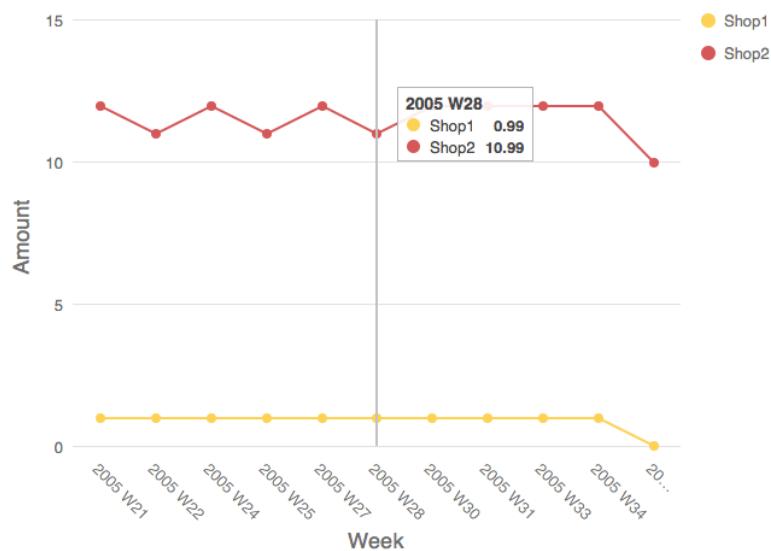
Show X-Axis title at the end of axis	Display the title at the end of X-Axis.
Show X-Axis labels	Display labels on X-Axis.
Font / Bold	Set the font style of X-Axis labels.
X-Axis Label Rotation	Rotate X-Axis labels.
X-Axis Label Interval	Change the interval between X-Axis labels.
Show X-Axis	Display X-Axis line.
X-Axis Color	Set the color of X-Axis line.
<b>Y-Axis</b>	
Show Y-Axis title	Display the title of Y-Axis.
Y-Axis Title	Specify the title of Y-Axis.
Font	Set the font style of Y-Axis title.
Show Y-Axis title at the end of axis	Display the title at the end of Y-Axis.
Show Y-Axis labels	Display labels on Y-Axis.
Font / Bold	Set the font style of Y-Axis labels.
Show Y-Axis	Display Y-Axis line.
Y-Axis Color	Set the color of Y-Axis line.
Show grid line	Display the grid line of Y-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on Y-Axis.
Tick Interval	Set the interval of the tick marks in axis units.
<b>Assistant Line</b>	
	Add an assistant line to the chart to show visual data trends, averages, normal distributions, etc.
	Remove the selected assistant line.
	Rename the selected assistant line.
Value	Select a data series for the assistant line.
Group Value	Select a group value for the assistant line.
Type	Choose the type of assistant line you want.
Show R <sup>2</sup> value	Display the R <sup>2</sup> value on the chart.
Forward Forecast / Backward Forecast	Specify the number of periods to include in a forecast.
Align with other lines	Align the assistant line with others.
Period	Specify the number of data points used to average the point value.
Smooth	Smooth the angles of the line.
Use custom color	Customize the color of the line.
Line Color	Set the color of the line.
Cap Style	Choose the cap style of the line.
Dash Style	Choose the dash style of the line.

Join Style	Choose the join style of the line.
Visible	Check this box to show the line.

## Line / Area Chart

A line or area chart displays information as a series of data points connected by straight line segments.

- Line Chart
- Area Chart
- Stacked Area Chart






## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.

Label Color	Set the color of the legend labels.
<b>Data</b>	
Use smoothed line	Plot a smooth line through the data points.
Show Line Labels / Show Area Labels	Display the data labels of the selected series.
Line Label Contains	Display the data values or/and the percentages on the labels.
Line Label Pattern	Select the values that will be displayed on the chart.
Show markers	Display the marker points on the line / area.
Use 100% stacked	Use 100% stacked areas to show values for hierarchical data. (The area height is 100%, and the colored area segments represent the components' relative contributions to the total area.)
Use custom data value color	Customize the color of the labels of the data values.
Positive Data Value Color	Set the color of the positive value labels.
Negative Data Value Color	Set the color of the negative value labels.
Show only top #	Only the top # data are displayed.
Density	Choose the density of the data series.
Color	Set the color palette of the data series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>X-Axis</b>	
Show X-Axis title	Display the title of X-Axis.
X-Axis Title	Specify the title of X-Axis.
Font	Set the font style of X-Axis title.
Show X-Axis title at the end of axis	Display the title at the end of X-Axis.
Show X-Axis labels	Display labels on X-Axis.
Font / Bold	Set the font style of X-Axis labels.
X-Axis Label Rotation	Rotate X-Axis labels.
X-Axis Label Interval	Change the interval between X-Axis labels.

Show X-Axis	Display X-Axis line.
X-Axis Color	Set the color of X-Axis line.
<b>Y-Axis</b>	
Show Y-Axis title	Display the title of Y-Axis.
Y-Axis Title	Specify the title of Y-Axis.
Font	Set the font style of Y-Axis title.
Show Y-Axis title at the end of axis	Display the title at the end of Y-Axis.
Show Y-Axis labels	Display labels on Y-Axis.
Font / Bold	Set the font style of Y-Axis labels.
Show Y-Axis	Display Y-Axis line.
Y-Axis Color	Set the color of Y-Axis line.
Show grid line	Display the grid line of Y-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on Y-Axis.
Tick Interval	Set the interval of the tick marks in axis units.
<b>Assistant Line</b>	
	Add an assistant line to the chart to show visual data trends, averages, normal distributions, etc.
	Remove the selected assistant line.
	Rename the selected assistant line.
Value	Select a data series for the assistant line.
Group Value	Select a group value for the assistant line.
Type	Choose the type of assistant line you want.
Show R <sup>2</sup> value	Display the R <sup>2</sup> value on the chart.
Forward Forecast / Backward Forecast	Specify the number of periods to include in a forecast.
Align with other lines	Align the assistant line with others.
Period	Specify the number of data points used to average the point value.
Smooth	Smooth the angles of the line.
Use custom color	Customize the color of the line.
Line Color	Set the color of the line.
Cap Style	Choose the cap style of the line.
Dash Style	Choose the dash style of the line.
Join Style	Choose the join style of the line.
Visible	Check this box to show the line.

## Bar and Line Chart

Mixing bar and line chart in the same visual is a good way to emphasize the difference between series while still maintaining their relationship.



- Bar and Line Chart
- Stacked Bar and Line Chart






## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

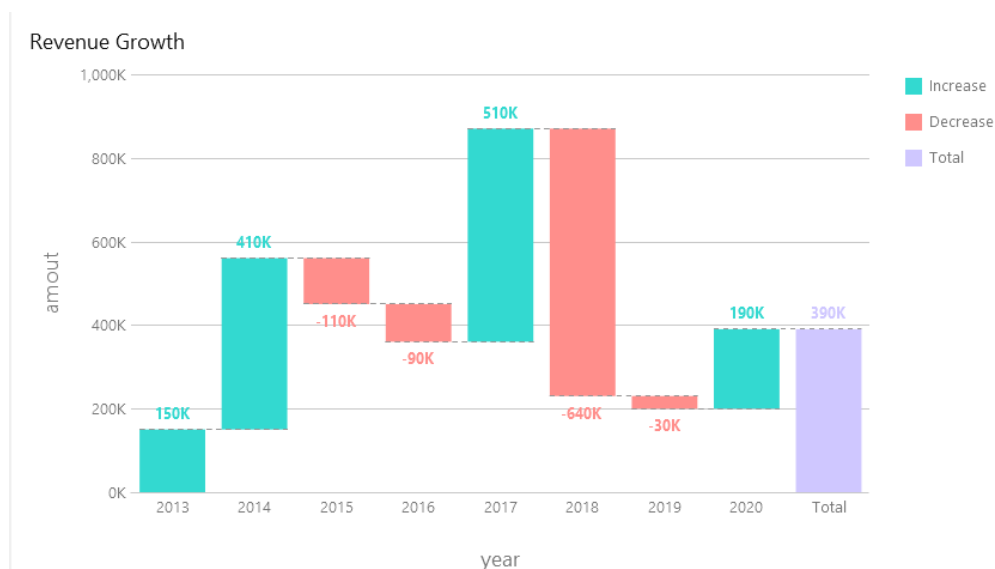
Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Use smoothed line	Plot a smooth line through the data points.
Show Labels	Display the data labels of the selected series.
Bar Label Contains	Display the data values or/and the percentages on the labels.
Bar Label Position	Set the position of the bar labels.
Bar Label Font	Set the font style of the bar labels.
Use 100% stacked bar	Use 100% stacked bars to show values for hierarchical data. (Each bar

	height is 100%, and the colored bar segments represent the components' relative contributions to the total bar.)
Line Label Contains	Display the data values or/and the percentages on the labels.
Line Label Pattern	Select the values that will be displayed on the chart.
Show line markers	Display the marker points on the line.
Use custom data value color	Customize the color of the labels of the data values.
Positive Data Value Color	Set the color of the positive value labels.
Negative Data Value Color	Set the color of the negative value labels.
Show only top #	Only the top # data are displayed.
Style	Plot discrete or continuous data series on the chart.
Density	Choose the density of the data series.
Color	Set the color palette of the data series.
All Bar Data Colors	Allow setting the color for each series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>X-Axis</b>	
Show X-Axis title	Display the title of X-Axis.
X-Axis Title	Specify the title of X-Axis.
Font	Set the font style of X-Axis title.
Show X-Axis title at the end of axis	Display the title at the end of X-Axis.
Show X-Axis labels	Display labels on X-Axis.
Font / Bold	Set the font style of X-Axis labels.
X-Axis Label Rotation	Rotate X-Axis labels.
X-Axis Label Interval	Change the interval between X-Axis labels.
Show X-Axis	Display X-Axis line.
X-Axis Color	Set the color of X-Axis line.
<b>Y-Axis / Secondary Y-Axis</b>	
Show Y-Axis title / Show	Display the title of Y-Axis.

Secondary Y-Axis title	
Y-Axis Title / Secondary Y-Axis Title	Specify the title of Y-Axis.
Font	Set the font style of Y-Axis title.
Show Y-Axis title at the end of axis / Show Secondary Y-Axis title at the end of axis	Display the title at the end of Y-Axis.
Show Y-Axis labels / Show Secondary Y-Axis labels	Display labels on Y-Axis.
Font / Bold	Set the font style of Y-Axis labels.
Show Y-Axis / Show Secondary Y-Axis	Display Y-Axis line.
Y-Axis Color / Secondary Y-Axis Color	Set the color of Y-Axis line.
Show grid line	Display the grid line of Y-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on Y-Axis.
Tick Interval	Set the interval of the tick marks in axis units.
<b>Assistant Line</b>	
	Add an assistant line to the chart to show visual data trends, averages, normal distributions, etc.
	Remove the selected assistant line.
	Rename the selected assistant line.
Value	Select a data series for the assistant line.
Group Value	Select a group value for the assistant line.
Type	Choose the type of assistant line you want.
Show R <sup>2</sup> value	Display the R <sup>2</sup> value on the chart.
Forward Forecast / Backward Forecast	Specify the number of periods to include in a forecast.
Align with other lines	Align the trend line with others.
Period	Specify the number of data points used to average the point value.
Smooth	Smooth the angles of the line.
Use custom color	Customize the color of the line.
Line Color	Set the color of the line.
Cap Style	Choose the cap style of the line.
Dash Style	Choose the dash style of the line.
Join Style	Choose the join style of the line.
Visible	Check this box to show the line.

## Waterfall Chart

A waterfall chart is a special type of bar chart. It is useful for understanding how the starting value is affected by a series of changes (increase or decrease).



## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

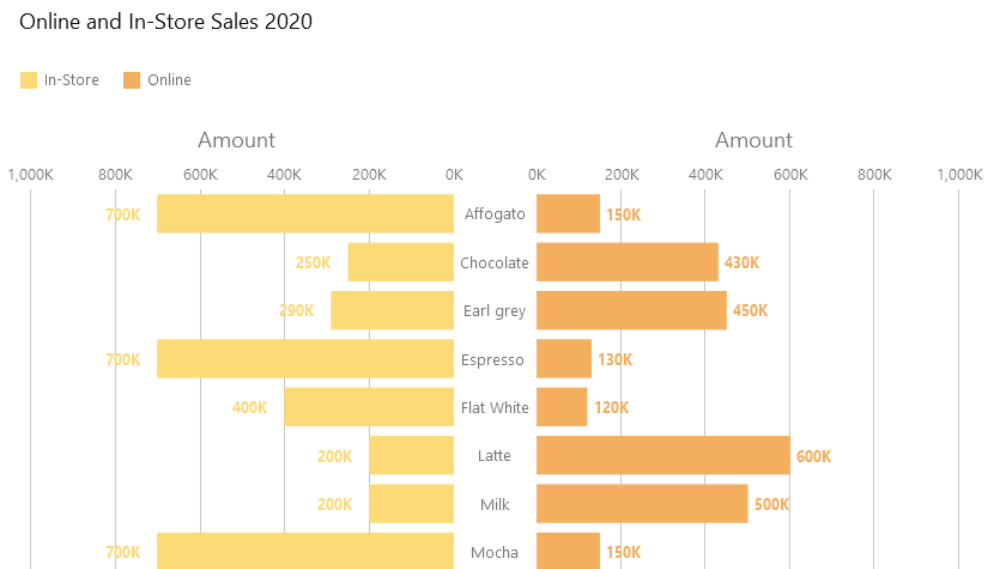
Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show data values	Display the values of the data series.
Bar Label Position	Set the position of the bar labels.
Bar Label Font	Set the font style of the bar labels.
Total Bar Color	Set the color of the Total bar.

Subtotal Bar Color	Set the color of the Subtotal bar.
Total Bar Title	Specify the title of the Total bar.
Use increase and decrease color	Color the bars with Increase Color and Decrease Color.
Increase Color	Set the color of the bar when the value increases.
Decrease Color	Set the color of the bar when the value decreases.
Use custom data value color	Customize the color of the labels of the data values.
Positive data value color	Set the color of the positive value labels.
Negative data value color	Set the color of the negative value labels.
Show only top #	Only the top # data are displayed.
Style	Plot discrete or continuous bars on the chart.
Density	Choose the density of the bars.
Group Value Sorting	Sort the group values (from Decrease to Increase, or from Increase to Decrease).
Color	Set the color palette of the data series.
All Data Colors	Allow setting the color for each series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>X-Axis</b>	
Show X-Axis title	Display the title of X-Axis.
X-Axis Title	Specify the title of X-Axis.
Font	Set the font style of X-Axis title.
Show X-Axis title at the end of axis	Display the title at the end of X-Axis.
Show X-Axis labels	Display labels on X-Axis.
Font / Bold	Set the font style of X-Axis labels.
X-Axis Label Rotation	Rotate X-Axis labels.
X-Axis Label Interval	Change the interval between X-Axis labels.
Show X-Axis	Display X-Axis line.
X-Axis Color	Set the color of X-Axis line.

Y-Axis	
Show Y-Axis title	Display the title of Y-Axis.
Y-Axis Title	Specify the title of Y-Axis.
Font	Set the font style of Y-Axis title.
Show Y-Axis title at the end of axis	Display the title at the end of Y-Axis.
Show Y-Axis labels	Display labels on Y-Axis.
Font / Bold	Set the font style of Y-Axis labels.
Show Y-Axis	Display Y-Axis line.
Y-Axis Color	Set the color of Y-Axis line.
Show grid line	Display the grid line of Y-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on Y-Axis.
Tick Interval	Set the interval of the tick marks in axis units.

## Tornado Chart

A tornado chart is a special type of bar chart. It is useful for comparing data among different types of data or categories.



## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.

Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show Bar Labels	Display the data labels of the selected series.
Bar Label Contains	Display the data values or/and the percentages on the labels.
Bar Label Position	Set the position of the bar labels.
Bar Label Font	Set the font style of the bar labels.
Use stack	Use stacked bars to show values.
Use 100% stacked	Use 100% stacked bars to show values for hierarchical data. (Each bar height is 100%, and the colored bar segments represent the components' relative contributions to the total bar.)
Stacked Bar Style	Determine how the stacked section is displayed.
Negative Data Bar Background Color	Set the color of the negative data bars.
Minimum Value	Set the minimum value of the bar.
Data Label Color	Set the color of the data labels on the bars.
Use custom data value color	Customize the color of the labels of the data values.
Positive data value color	Set the color of the positive value labels.
Negative data value color	Set the color of the negative value labels.
Show only top #	Only the top # data are displayed.
Style	Plot discrete or continuous bars on the chart.
Density	Choose the density of the bars.
Color	Set the color palette of the data series.
All Data Colors	Allow setting the color for each series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.

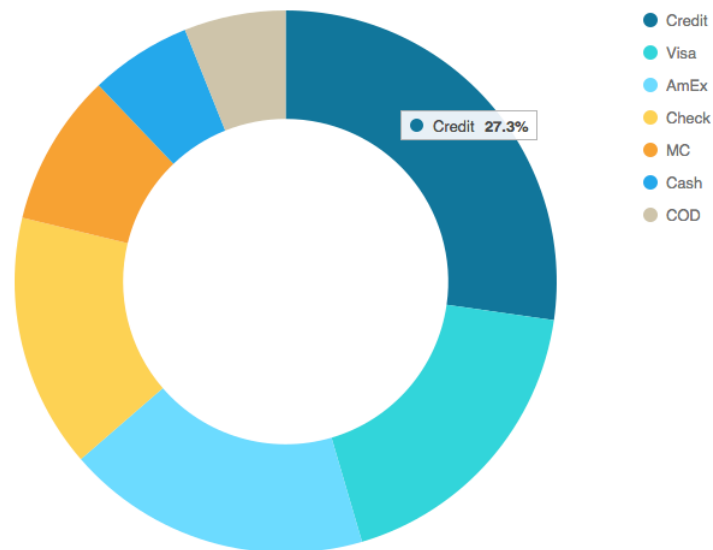
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>Y-Axis</b>	
Axis position	Set the position of Y-Axis.
Show Y-Axis title	Display the title of Y-Axis.
Y-Axis Title	Specify the title of Y-Axis.
Font	Set the font style of Y-Axis title.
Fill missing values	Use a continuous axis. The data series are positioned according to their domain value.
Y-Axis Label Interval	Change the interval between Y-Axis labels.
Show Y-Axis labels	Display labels on Y-Axis.
Y-Axis Color	Set the color of Y-Axis line.
<b>X-Axis</b>	
Show X-Axis title	Display the title of X-Axis.
Left X-Axis Title	Specify the title of the left X-Axis.
Right X-Axis Title	Specify the title of the right X-Axis.
Font	Set the font style of X-Axis title.
Show X-Axis title at the end of axis	Display the title at the end of X-Axis.
Show X-Axis labels	Display labels on X-Axis.
Show X-Axis	Display X-Axis line.
X-Axis Color	Set the color of X-Axis line.
Show grid line	Display the grid line of X-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on X-Axis.
Tick Interval	Set the interval of the tick marks in axis units.

## Pie / Donut Chart

A pie or donut chart displays data in a series of segments of a circle, with larger segments representing larger data values.

- Pie Chart
- Donut Chart





## Chart Properties

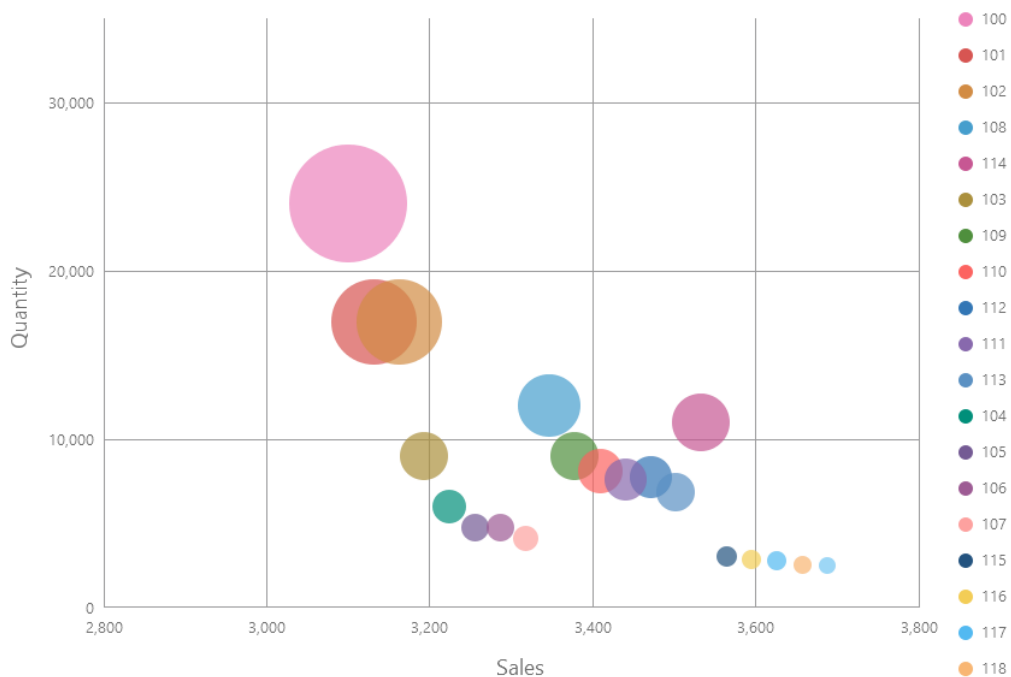
Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show data labels	Display data labels that clarify the data series.
Show data values	Display the values of the data series.
Show data percentages	Display the data percentages of the slices.
Show label inside slice	Position the slice labels inside the slice. Labels for smaller slices are hidden.
Show label over other slices	All labels are shown. Labels for smaller slices will overlap other slices.
Show slice separator	Add white borders between pie / donut slices.
Data Label Color	Set the color of the data label.

Show only top #	Only the top # data are displayed.
Slice	Group the small slices to a single slice (called Others).
Color	Set the color palette of the data series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>Group</b>	
Show group title	Display the title of the group.
Group Title	Specify the title of the group.
Group Title Font	Set the font style of the group title.

## Scatter Chart




A scatter chart plots data with individual data points placed along the X and Y axes.



## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

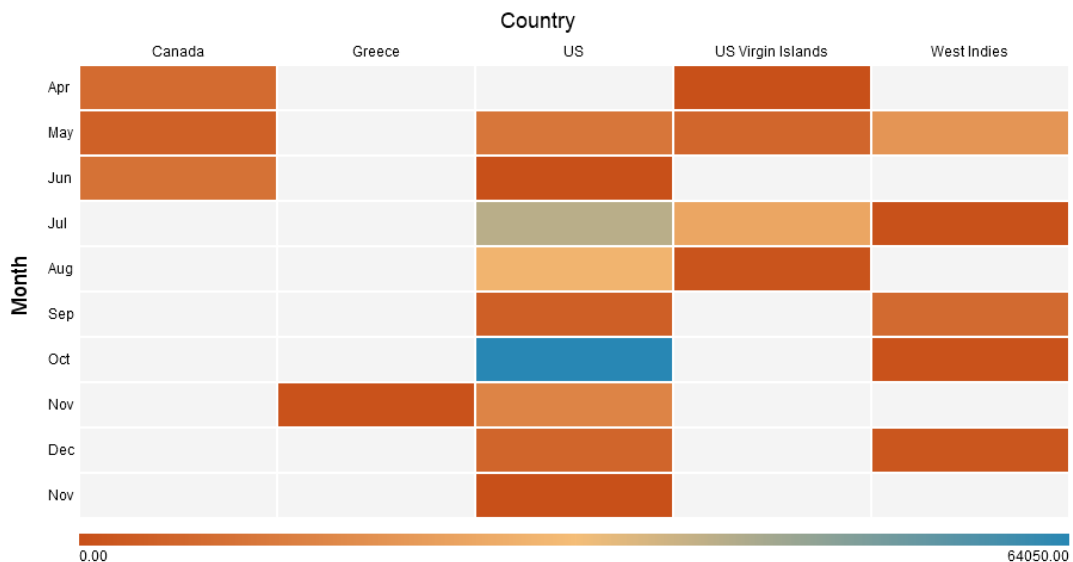
Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show size values	Display the size of the bubbles.
Density	Choose the density of the data series.
Color	Set the color palette of the data series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>X-Axis</b>	
Show X-Axis title	Display the title of X-Axis.
X-Axis Title	Specify the title of X-Axis.
Font	Set the font style of X-Axis title.
Show X-Axis title at the end of axis	Display the title at the end of X-Axis.
Show X-Axis labels	Display labels on X-Axis.
Font / Bold	Set the font style of X-Axis labels.
X-Axis Label Rotation	Rotate X-Axis labels.

X-Axis Label Interval	Change the interval between X-Axis labels.
Show X-Axis	Display X-Axis line.
X-Axis Color	Set the color of X-Axis line.
Show grid line	Display the grid line of X-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on X-Axis.
Tick Interval	Set the interval of the tick marks in axis units.
<b>Y-Axis</b>	
Show Y-Axis title	Display the title of Y-Axis.
Y-Axis Title	Specify the title of Y-Axis.
Font	Set the font style of Y-Axis title.
Show Y-Axis title at the end of axis	Display the title at the end of Y-Axis.
Show Y-Axis labels	Display labels on Y-Axis.
Font / Bold	Set the font style of Y-Axis labels.
Show Y-Axis	Display Y-Axis line.
Y-Axis Color	Set the color of Y-Axis line.
Show grid line	Display the grid line of Y-Axis.
Use custom range	Set the range of the grid lines. Enter values in <b>Start</b> and <b>End</b> . The graph drawing beyond this range will be clipped off.
Use custom interval	Change the Interval on Y-Axis.
Tick Interval	Set the interval of the tick marks in axis units.
<b>Assistant Line</b>	
	Add an assistant line to the chart to show visual data trends, averages, normal distributions, etc.
	Remove the selected assistant line.
	Rename the selected assistant line.
Value	Select a data series for the assistant line.
Group Value	Select a group value for the assistant line.
Type	Choose the type of assistant line you want.
Show R <sup>2</sup> value	Display the R <sup>2</sup> value on the chart.
Forward Forecast / Backward Forecast	Specify the number of periods to include in a forecast.
Align with other lines	Align the assistant line with others.
Period	Specify the number of data points used to average the point value.
Smooth	Smooth the angles of the line.
Use custom color	Customize the color of the line.
Line Color	Set the color of the line.
Cap Style	Choose the cap style of the line.
Dash Style	Choose the dash style of the line.

Join Style	Choose the join style of the line.
Visible	Check this box to show the line.

## Heatmap

A heatmap represents data in a tabular format as a range of color. A more intense color represents a larger aggregated value for a particular data point.



## Chart Properties

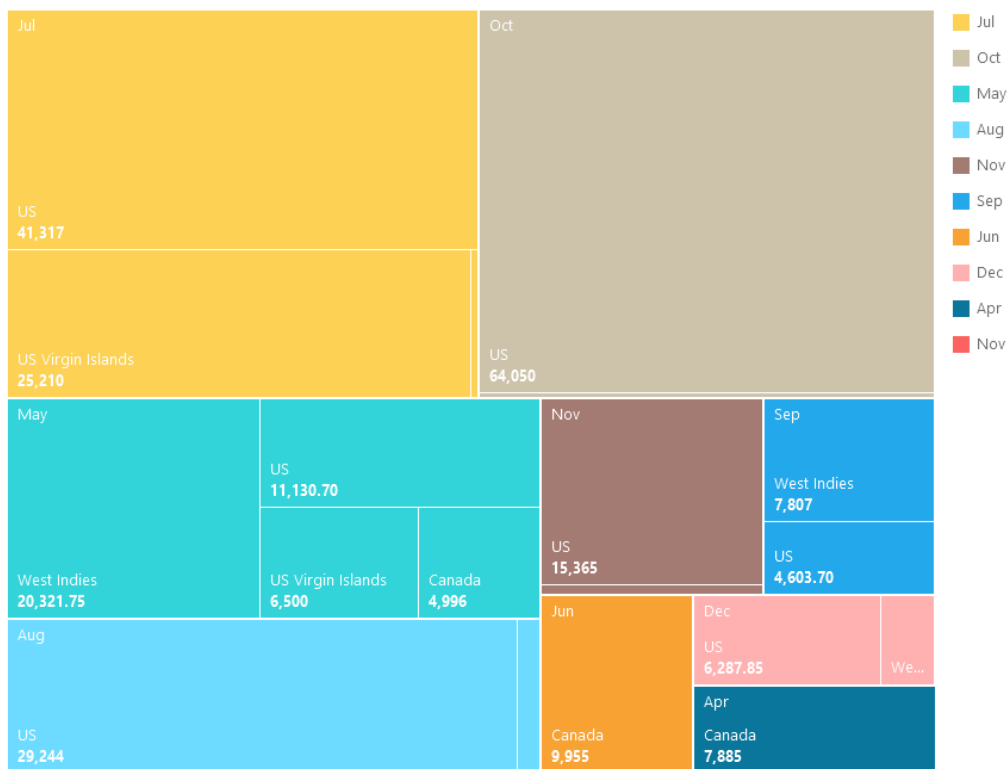
Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show data values	Display the values of the data series.

Show data percentages	Display the percentages of the data series.
Font	Set the font style of data labels.
Diverging	Use diverging color scale.
Use custom min/max values	Customize the color of the min, center, and max values. Navicat BI calculates the cell color based on the color of these values.
Min Color	Set the color of the minimum value in the colormap.
Center Color	Set the color of the value at which to center the colormap.
Max Color	Set the color of the maximum value in the colormap.
Min Value	Specify the minimum value.
Max Value	Specify the maximum value.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>Column</b>	
Show column title	Display the title of the column.
Column Title	Specify the title of the column.
Column Title Font	Set the font style of the column title.
Show column label	Display the column label.
Column Label Color	Set the color of the column label.
<b>Row</b>	
Show row title	Display the title of the row.
Row Title	Specify the title of the row.
Row Title Font	Set the font style of the row title.
Show row label	Display the row label.
Row Label Color	Set the color of the row label.

## Treemap

A treemap is an alternative way of visualizing the hierarchical structure while also displaying quantities for each category via area size.



## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Legend</b>	
Show legend	Display the legend container.
Position	Set the position for the legend.
Align	Set the vertical or horizontal alignment of the legend.
Label Color	Set the color of the legend labels.
<b>Data</b>	
Show data point names	Display the names of the data points.
Show data values	Display the values of the data points.
Show data percentages	Display the data percentages of the data points.
Data Label Color	Set the color of the data label.

Tile	Group the small tiles to a single tile (called Others).
Color	Set the color palette of the data points.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .

## Value

A value displays a single aggregated value from a data field, e.g. total.

Total

\$259,619.25

## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Data</b>	
Data Label Font	Set the font style of the data label.
Negative Font Color	Set the color of the negative value.
Align	Set the horizontal alignment of the data label.



Data Formats - Number	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
Data Formats - DateTime	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .

## Trend

A trend displays that the current value is trending up or down compared to the previous value, and the percentage change.

514.18   
2,523.01 -79.6%

## Chart Properties

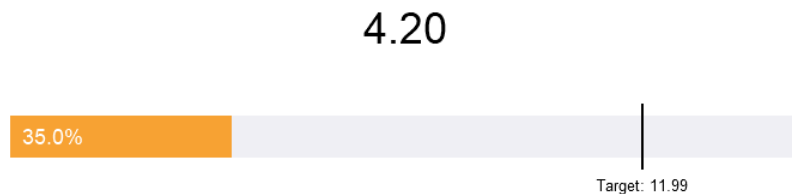
Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Data</b>	
Show previous value	Display the previous value.
Show difference	Display the <b>Value</b> / <b>Percentage</b> difference between the current value and the previous value.
Show indicator	Display the up or down indicator.

Main Label Font	Set the font style of the main label.
Previous Value Color	Set the color of the previous value.
Target Met Color	Set the color of the indicator and the percentage when the value is trending up.
Target Missed Color	Set the color of the indicator and the percentage when the value is trending down.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.

## KPI

A KPI displays a comparison between a key value and its target value with a progress bar.



## Chart Properties

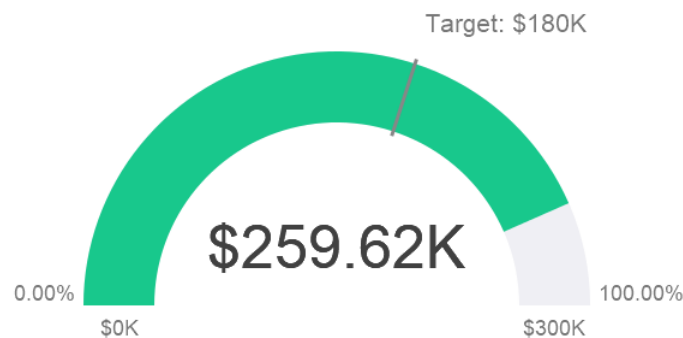
Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Data</b>	
Main Label Displayed	Display the <b>Actual</b> value or the <b>Comparison</b> percentage in the main label.

Main Label Font	Set the font style of the main label.
Indicator Thickness	Set the font size of the sub-label on the bar.
Sub Label Color	Set the color of the sub-label on the bar.
Target Caption	Specify the caption of the target label.
Use custom target value	Set the target value.
Target Label Color	Set the color of the target label.
Target Met Color	Set the color of the bar when the value reaches the target.
Target Missed Color	Set the color of the bar when value does not reach the target.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.

## Gauge

A gauge is a meter type chart. It has a circular arc and displays a single value which measures the progress toward the target value (the goal).



## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.

Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Data</b>	
Show pointer	Display the needle.
Pipe Width Percentage	Set the percentage that the scale occupies the gauge area.
Background Color	Set the background color of the scale when the needle is not displayed.
Target Color	Set the color of the target line.
Pointer Color	Set the color of the needle.
Value Display	Display the actual data or the comparison percentage of the value.
Value Font	Set the font style of the value.
Target Display	Display the actual data or the comparison percentage of the target value.
Target Caption	Specify the caption of the target label.
Use custom target value	Set the target value.
Target Font	Set the font style of the target value.
Min/Max Displayed	Display the actual data or the comparison percentages of the minimum and maximum values.
Use custom min value	Set the value that the scale starts at.
Use custom max value	Set the value that the scale ends.
Min/Max Font	Set the font style of the minimum and maximum values.
Partition Label Displayed	Display the actual data or the comparison percentages of the partition labels.
Partition Label Font	Set the font style of the partition labels.
Partition (Max. 8)	Divide the scale into number of partitions.
Partition Style	Divide the scale equally or custom the starting percentage of each partition.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.

## Table

A table represents data in a tabular view and calculates the total at the end of each column.

Job Title	No. of Employees
AC_ACCOUNT	31
AC_MGR	31
AD_ASST	31
AD_PRES	31
AD_VP	62
FI_ACCOUNT	155
FI_MGR	31
HR_REP	31
IT_PROG	155
MK_MAN	31
MK_REP	31
PR_REP	31
PU_CLERK	155
PU_MAN	31
SA_MAN	155
SA_REP	930
SH_CLERK	620
ST_CLERK	620
ST_MAN	155
	3317.00

## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Data</b>	
Font	Set the font style of the field names and data.
Show alternate row colors	Apply color to alternate rows.
Show vertical grid line	Display the vertical grid line.
Show horizontal grid line	Display the horizontal grid line.
Color	Set the color palette of the data series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	

Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>Databar</b>	
Style	Format the cells by using data bars.
Show bar only item	Only show the data bars in the cells, without the numbers.
Custom min/max values	Customize the min and max values of the data bars.
Min value	Specify the minimum value of the data bar.
Max value	Specify the maximum value of the data bar.
Positive bar color	Set the color of the data bars with positive values.
Negative bar color	Set the color of the data bars with negative values.
Axis color	Set the color of the axis for separating the positive bar and the negative bar.
<b>Total</b>	
Show total	Display totals in the last row of the table.
Total Color	Set the color of the total values.

## Pivot Table

A pivot table shows measure values for the intersection of two dimensions and represents data in a tabular view.

Monthly State Sales Report

State	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
BC	\$7,885		\$9,955					17840.00
CA						\$971.70		7259.55
Corfu								766.80
FL		\$2,814.70	\$0	\$32,793	\$10,712			46319.70
GA			\$0		\$18,532			18532.00
HI		\$3,115		\$8,524			\$64,050	91054.00
Jamaica		20,321.75		\$343.80		\$7,807	\$787.80	31070.20
OR		\$5,201	\$0			\$3,632		8833.00
Ontario		\$4,996						4996.00
St. Croix	\$0	\$6,500		\$25,210	\$1,238			32948.00
<b>Total</b>	<b>7885.00</b>	<b>42948.45</b>	<b>9955.00</b>	<b>66870.80</b>	<b>30482.00</b>	<b>12410.70</b>	<b>64837.80</b>	<b>259619.25</b>

## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.

<b>Data</b>	
Font	Set the font style of the field names and data.
Show alternate row colors	Apply color to alternate rows.
Show vertical grid line	Display the vertical grid line.
Show horizontal grid line	Display the horizontal grid line.
Color	Set the color palette of the data series.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.
Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .
<b>Databar</b>	
Style	Format the cells by using data bars.
Show bar only item	Only show the data bars in the cells, without the numbers.
Custom min/max values	Customize the min and max values of the data bars.
Min value	Specify the minimum value of the data bar.
Max value	Specify the maximum value of the data bar.
Positive bar color	Set the color of the data bars with positive values.
Negative bar color	Set the color of the data bars with negative values.
Axis color	Set the color of the axis for separating the positive bar and the negative bar.
<b>Total</b>	
Show row total	Display totals in the last row of the table. Enter the name of the row total, and set the color of the values and the background color.
Show column total	Display totals in the last column of the table. Enter the name of the column total, and set the color of the values and the background color.
Show row subtotal	Display totals in the last row of the group. Enter the name of the row subtotal, and set the color of the values and the background color.
Show column subtotal	Display totals in the last column of the group. Enter the name of the column subtotal, and set the color of the values and the background color.

## Control

A control allows you to filter the data series of all charts in the dashboard that have the same data source during the presentation.

### Month

- ☐ April
- ☐ May
- ☐ June
- ☐ July
- ☐ August
- ☐ September
- ☐ October
- ☐ November
- ☐ December
- ☐ November

## Chart Properties

Once you have selected a chart type, you can customize the chart by changing its properties:

Option	Description
<b>General</b>	
Background Color	Set the background color of the chart area.
Show border	Display the outer chart border.
Border Color	Set the color of the outer chart border.
Show title	Display the chart's main title.
Title	Specify the title of the chart.
Title Font	Set the font style of the title.
Position	Set the position of the title.
Align	Set the vertical or horizontal alignment of the title.
Remarks	Enter remarks for the chart.
<b>Data</b>	
Data Label Color	Set the color of the data label.
Style	Show the data as a list, a range or a combo box.
<b>Data Formats - Number</b>	
Prefix	Add prefix characters to all the numeric data on the chart.
Unit	Choose the unit to shorten the numeric data.
Suffix	Specify the suffix to label the customized unit.
Divider	Specify the divider for the customized unit.
Thousand Separator	Choose the thousands separator for numeric data.
Decimal Separator	Choose the decimal separator for numeric data.



Decimal Places	Specify decimal places for numeric data.
Negatives	Choose the format negative numbers are displayed.
<b>Data Formats - DateTime</b>	
Date / Time	Choose the date and time format of the data.
Custom	Customize <a href="#">the date and time format</a> .

## DateTime Formats

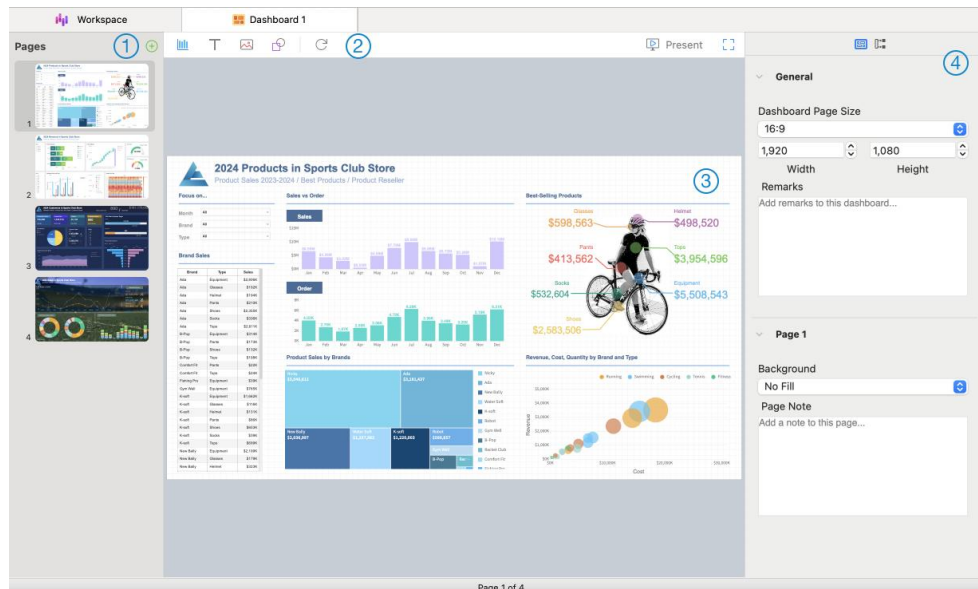
The following table shows specifiers you can use to create user-defined data formats for DateTime fields in a chart.

Specifier	Description
D	Display the day as a number without a leading zero (1-31).
DD	Display the day as a number with a leading zero (01-31).
M	Display the month as a number without a leading zero (1-12).
MM	Display the month as a number with a leading zero (01-12).
MMM	Display the month as an abbreviation (Jan-Dec).
MMMM	Display the month as a full month name (January-December).
MMMMM	Display the month as a narrow name (J-D).
YY	Display the year in two-digit numeric format with a leading zero (00-99).
YYYY	Display the year in four-digit numeric format (0000-9999).
h	Display the hour as a number without a leading zero using the 12-hour clock (1-12).
hh	Display the hour as a number with a leading zero using the 12-hour clock (01-12).
H	Display the hour as a number without a leading zero using the 24-hour clock (0-23).
HH	Display the hour as a number with a leading zero using the 24-hour clock (00-23).
m	Display the minute as a number without a leading zero (0-59).
mm	Display the minute as a number with a leading zero (00-59).
S	Display the second as a number without a leading zero (0-59).
SS	Display the second as a number with a leading zero (00-59).
wd	Display the day as a single letter abbreviation (S-S).
Wd	Display the day as an abbreviation (Sun-Sat).
WD	Display the day as a full name (Sunday-Saturday).
w	Display the week of the year (1-52, start of week is Sunday).
WW	Display the week of the year (W01-W52, start of week is Sunday).
q	Display the quarter of the year (1-4).
QQ	Display the quarter of the year (Q1-Q4).
p	Display an uppercase AM with any hour before noon; display an uppercase PM with any hour between noon and 11:59 P.M.

# Chapter 7 - Dashboard

## About Dashboard

Dashboard is a collection of charts which allows you to create and view your data visualizations. When you modify a chart, any dashboards containing it will reflect the changes.



### ① Pages Pane

The Pages pane shows thumbnail images of each page in the dashboard. If the Pages pane is hidden, choose **View -> Show Pages** from the menu bar.

### ② Dashboard Toolbar

The Dashboard Toolbar provides controls that you can use to refresh the data and present the dashboard.

### ③ Design Pane

You can design your dashboard on the Design pane. All added objects can be moved (by dragging them with mouse or by keyboard), resized, aligned to the grid, etc.

### ④ Properties Pane


The **Dashboard Properties** tab includes the basic layout settings. The properties vary with the type of the object.

The **Using** tab shows the charts and data sources that the dashboard depends on.


If the Properties pane is hidden, choose **View -> Show Properties** from the menu bar.

## Build Dashboard

The essential steps to create a dashboard are:

1. In the Workspace window, click .
2. Enter the name of the dashboard.
3. Click **OK**.
4. A tab will be opened for your newly created dashboard.
5. Design your dashboard.
6. Select the properties on the right pane which can be further customized for your dashboard.

**Note:** Each object has different properties.

**Hint:** You can refresh dashboard to update data in charts with the most current data from their respective data sources. To manually refresh the dashboard, click .

## Working with Grids

### Show Grid

To turn the grid on in the dashboard, choose **View** -> **Show Grid** from the menu bar.

### Snap to Grid

To align objects on the dashboard with the grid, choose **View** -> **Snap to Grid** from the menu bar.

## Add Pages

The Pages pane shows all pages in the dashboard. It displays thumbnails of your dashboard pages.

### To add a new page

1. On the Dashboard tab, click the **+** button on the Pages pane.
2. A blank page will be added and selected.

## Properties

The available properties of a page:



Option	Description
<b>General</b>	
Dashboard Page Size	Customize the size of pages in the dashboard.
Remarks	Enter remarks for the dashboard.
<b>Page #</b>	
Background	Set the background color of the page. If you choose <b>Image Fill</b> , you can choose the image file and the scaling option.

Opacity	Set the opacity of the image.
Page Note	Enter the reference, comment, or explanation of the page.

## Add Charts

Charts provide visual representations of the data in your data source.

### To add a chart

1. On the Dashboard tab, click .
2. All available charts in the workspace will be shown as thumbnails. If no charts are available, click  to create one. For detailed instructions on creating charts, see [Build Charts](#).
3. Drag a chart to the Design pane.

### Properties


The available properties of a chart:

Option	Description
Position	Customize the position of the chart.
Size	Customize the size of the chart.
Target Charts	Choose which charts in the dashboard the chart can control.
<b>Chart Interaction</b>	
As an interaction control	Set the chart as an interaction control.
Related charts	<p><b>None</b> - Disable the interaction behavior of the chart.</p> <p><b>Highlight</b> - Cross-highlight the chart on the dashboard by the selected data point. The unrelated data is still visible but dimmed.</p> <p><b>Filter</b> - Cross-filter the chart on the dashboard by the selected data point. The unrelated data isn't visible.</p>

## Add Text Labels

Text labels are typically used to help document the dashboard, such as adding a dashboard title, URL links.

### To add a text label

1. On the Dashboard tab, click .
2. Place it on the dashboard.
3. Enter the caption.

### Properties


The available properties of a text label:

Option	Description
Position	Customize the position of the label.
Size	Customize the size of the label.
Caption	Enter the caption of the label.
Horizontal Alignment / Vertical Alignment	Specify the text alignment of the label caption.
Padding	Set the horizontal and vertical padding for the text.
Font	Set the font style of the label caption.
Bold	Apply a bold style to the label caption.
Italic	Apply an italic style to the label caption.
Background Color	Set the background color of the label.
URL	Enter URL path to set the text as a hyperlink.

## Add Images

You can insert images (BMP, JPG, JPEG or PNG files) to your dashboard for design or identification purposes.

### To add an image

1. On the Dashboard tab, click .
2. Select an image file in the Open dialog box.

### Properties

The available properties of an image:

Option	Description
Opacity	Set the opacity of the image.
Position	Customize the position of the image.
Size	Customize the size of the image.
Original Size	Reset the image to its original size.
URL	Enter URL path to set the image as a hyperlink.

## Add Shapes

Navicat BI includes some pre-defined shapes for creating a dashboard: line, arrow, rectangle, ellipse, database, cloud, trigger, server, desktop, mobile, man, woman.

### To add a shape

1. On the Dashboard tab, click  and choose a shape type.

2. Place it on the dashboard.

### To add a vertex on a line or an arrow

1. Select a line or an arrow on the dashboard.
2. Press and hold the SHIFT key and click on it.

### To delete a vertex on a line or an arrow

1. Select a line or an arrow on the dashboard.
2. Press and hold the SHIFT key and click on the vertex.

## Properties

The available properties of a shape:

Option	Description
Position	Customize the position of the shape.
Size	Customize the size of the shape. Only for rectangle, ellipse, database, cloud, trigger, server, desktop, mobile, man and woman.
Color	Set the color of the shape.
Show border	Display the outer shape border. Only for rectangle, ellipse, database, cloud, trigger, server, desktop, mobile, man and woman.
Border Color	Change the color of the shape's border. Only for rectangle, ellipse, database, cloud, trigger, server, desktop, mobile, man and woman.
Border Width	Choose the thickness of the border. Only for rectangle, ellipse, database, cloud, trigger, server, desktop, mobile, man and woman.
Line Width	Choose the thickness of the shape.
Cap Style	Choose the cap style of the line/arrow.
Dash Style	Choose the dash style of the line/arrow.
Join Style	Choose the join style of the line/arrow.
Begin Arrow Style	Choose the style of the arrow's back.
End Arrow Style	Choose the style of the arrow's front.

## Arrange Objects

You can arrange the objects on a dashboard page in the following ways:

- Move objects forward and backward to layer them.

- Align an object with other objects.
- Distribute the objects horizontally or vertically.
- Group objects to more easily move them as a single unit and synchronize the axis of the related charts.
- Lock objects to prevent them from moving, modifying, or deleting.

### Move Objects Forward / Backward

To send an object to the back of the dashboard, control-click it and select **Send to Back**.

To bring an object to the front of the dashboard, control-click it and select **Bring to Front**.

### Align Objects

Select multiple objects, then control-click and select **Alignment** -> **Align Left**, **Align Center**, **Align Right**, **Align Top**, **Align Middle** or **Align Bottom**.

### Change Objects Distribution

Select multiple objects, then control-click and select **Distribute** -> **Horizontal** or **Vertical**.

### Group Objects

Select multiple objects, then click **Group** on the Properties pane and enable the following properties if necessary.

Option	Description
Link Scrolling	Synchronize the scrollbar of all charts.
Link Highlight	Hover over a data point on one of the charts will highlight the same data points on the others.
Show Hints When Highlight	Pop up the hint labels when hovering over a data point on one of the charts.

### Ungroup Objects

Select the group, then click **Ungroup** on the Properties pane.


### Lock Objects

Select an object, then click **Lock** on the Properties pane.

### Unlock Objects

Select the locked object, then click **Unlock** on the Properties pane.

# Present Dashboard

You can present the dashboard using the whole screen. The title bar, toolbar, tab bar, Pages pane, Control List and Properties pane will be hidden while in this mode. To open a dashboard in present view, click  **Present**.

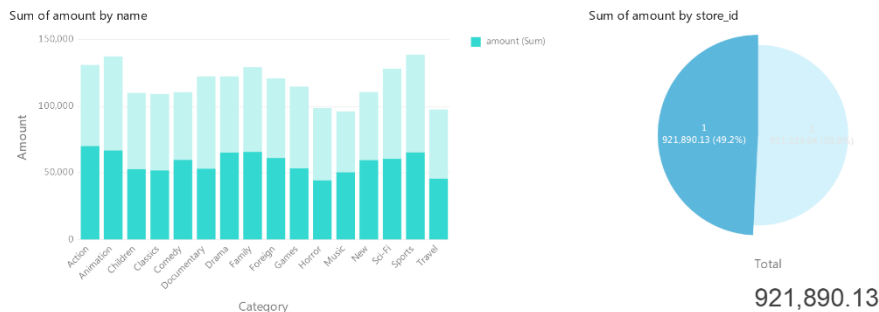
Use the arrow keys to navigate between pages.

To exit present view, press the ESC key and the workspace window will be returned to its previous state.

## Chart Interaction

All charts on a dashboard with the same data source can be interconnected. If you select a data point on one of the charts, all the other charts on the dashboard page that contain the same data will change based on your selection.



You can turn off chart interaction, or change the behavior to cross-filtering or cross-highlighting in the [dashboard properties](#).



If you have added a [control](#) chart to your dashboard, you can filter the data series of all charts by using the control.

## Sort Chart

In the Present mode, you can organize your data in a chart with one click. You can sort data series by a value.

1. Hover over a chart until you see the  icon in the upper-right corner.
2. Click the  icon to sort on a different value and select the sorting order.

# Print & Export Dashboard

## Print to a printer

Choose **File** -> **Print** to send your dashboard pages directly to the printer. You can set the printer option in the pop-up window.

## Export to a file

Choose **File** -> **Export To** and choose the file format to create a PDF, PNG, SVG or JPG file of your dashboard pages.




# Chapter 8 - Other Advanced Tools

## Useful Features

Navicat BI provides variety of tools that improve user experience when working on workspaces.


- [Switch Theme](#)
- [Focus Mode](#)
- [Share via URI](#)
- [Search Filter](#)

## Switch Theme

Charts and dashboards are not affected by the OS system theme. If you want use a Dark theme for your charts, click  to change the theme.

## Focus Mode

**Focus** is a feature that helps you reduce distractions and set boundaries. It removes everything from the screen except the form you are working and enters the full screen mode.

When you want to concentrate on a specific activity, you can turn it on by simply clicking the  icon.

To exit Focus Mode, you can simply click the  icon at the top right.

## Share via URI

Navicat BI allows you share a workspace with your teammates by the URL of the workspace. Navicat users can use the generated URI to access the workspace.

### Obtain URI

You can obtain the URI of a workspace in the General tab of the Information pane. Simply click **Share** and copy the URI in the popup window. You can enable **Hide host info** to remove the connection host parameter in the URI.

### Open Object via URI

1. In the main window, choose **File -> Open with Navicat URI**.
2. Paste the URI.
3. Click **OK**.
4. Change the connection mapping by clicking **Other Options** if necessary.

Option	Description
Mapped Connection	Automatically map the connection in the URI to the connection with the most similar information in Navicat.
Existing Connection	Choose an existing connection in Navicat.
New Connection	Create a new connection in Navicat.

5. Open the object.

## Search Filter

Navicat BI provides search filters for searching your objects in the main window and tree structures.

Simply enter a search string in the **Search** text box directly.

You can remove the filter by deleting the search string.

# Chapter 9 - Configurations

## Settings

Navicat BI provides several options for customizing its user interface and performance.

To open the Settings window, choose **Navicat BI -> Settings** from the menu bar.

## General

### Main Window

#### Use safe confirm dialog

With this option is on, Navicat BI will prompt a double confirmation dialog for safe deletion when deleting objects in the main window.

### Usage Data

#### Share Usage Data

Check this option to let your device sends us information about how you use Navicat BI to help us improve it. You can view the information being shared by clicking the **Usage Data** button.

### Update

#### Automatically check for updates

Check this option to allow Navicat BI checks for new version when it starts.

#### Include anonymous system profile

Check this option to send us your system information, such as your macOS version to improve our Navicat BI when Navicat BI checks for updating.

## Code Completion

#### Use code completion

When you type the . (dot) symbol or a character, the editor will offer you a pop-up list that showing some suggestions for the code completion.

#### Auto update code completion info

With this option is on, Navicat BI will get the latest database information for code completion from your server automatically when you open the database/schema.

### **Auto select first suggestion**

Select the first item automatically when the suggestion list pops up. Therefore, pressing ENTER or TAB will insert the selected item. Otherwise, you need to use arrow keys to select the suggestion item.

### **Clear Code Completion Info**

Delete the information for code completion feature that stored on your device.

## **Editor**

### **Disable syntax highlight and code completion if SQL larger than: MB**

The highlighting and code completion features can be limited by setting the maximum file size (e.g. 10) to increase performance.

### **Show**

#### **Show line number**

Display line numbers at the left side of the editor for easily reference.

#### **Use code folding**

Code folding allows codes to collapse as a block and only the first line displayed in the editor.

#### **Use brace highlighting**

Highlight the pair of braces when your cursor moves to either one brace for easily reference.

#### **Use syntax highlighting**

Syntax highlight helps viewing codes clearly. Codes are highlighted in the editor with different colors and fonts according to the categories they belong to.

### **Text Layout**

#### **Tab Width: spaces**

Enter the number of characters that a tab occupies, e.g. 5.

#### **Insert spaces when pressing Tab**

Insert space characters when the Tab key is pressed.

#### **Use word wrap**

Enable the word wrap mode in the editor.

## Font and Colors

### Font

Define the font and its size used by the editor.

#### Use default font

Check this option to use the default font settings.

### Syntax Colors

Format your queries in the editor with colored syntax highlighting to improve readability. Set font colors to mark out different text fragments: Common, Keyword, String, Number, Comment and Background. Click on th

## Records

### Records

Limit records ☐ records per page

Check this option if you want to limit the number of records showed on each page in the data grid globally. Otherwise, all records will be displayed in one single page.

**Note:** To adjust the settings for particular data grid, see [View Data](#).

### Grid

#### Font

Define the font and its size used by the grid.

#### Use default font

Check this option to use the default font settings.

#### Row shading

Apply shading to alternate rows or every third row in the grid for viewing data clearly. Choose **None** if you do not want to apply shading.

## Auto Recovery

### Autosave modified BI workspaces

Save automatically after modifications in BI workspaces by defining the interval (e.g. Every 3 minutes).

# File Locations

## Logs Location

Navicat BI provides number of [log files](#) to keep track on the actions have been performed in Navicat BI and they are located in the Logs Location path.

## Profiles Location

The internal files of Navicat BI are located in the Profiles Location path.

# Environment

## Executables

### SQLite3 Dynamic Library Path

Specify the location of SQLite3 Dynamic Library.

**Hint:** Restart Navicat BI to take effect.

## OCI Environment

**Hint:** Restart Navicat BI to take effect.

### OCI library (libclntsh.dylib)

Specify the location which contains Oracle libraries for instant client and SQL\*Plus (e.g. ORACLE\_HOME/lib). Always required.

### Use bundled OCI library

**Oracle library** has already included in Navicat BI. Check this option to use the bundled library, e.g. /Applications/Navicat BI.app/Contents/OCI.

Oracle Instant Client is the simplest way to deploy a full Oracle Client application built with OCI, OCCI, JDBC-OCI, or ODBC drivers. It provides the necessary Oracle Client libraries in a small set of files. You can also download Oracle Instant Client through -

### [Oracle Instant Client](#)

Download the appropriate Instant Client packages for your platform and the CPU. All installations REQUIRE the Basic or Basic Lite package. Unzip the packages and set the path points to it.

### ORACLE\_HOME

Specify the location of ORACLE\_HOME for full client only. Instant client should leave it blank.

## TNS\_ADMIN

Specify the location of the tnsnames.ora file (e.g. ORACLE\_HOME/network/admin). It is optional. Required when using TNS connection.

# Advanced

## Logs Location

### Logs Location

Specify the location for storing the log files.

### Enable diagnostic logging

Generate a log file to assist with tracking down any problems in Navicat BI.

**Hint:** Restart Navicat BI to take effect.

## Connectivity

### Verify server certificate against CA

Enable this option to verify that the server certificate against the list of trusted CA.

### Connectivity Diagnosis

Click **Test Connectivity** to test the network connectivity between the web service and your machine.

# Chapter 10 - Hot Keys

## BI Hot Keys

Keys	Action
COMMAND-S	Save
COMMAND-N	New Workspace
COMMAND-O	Open Local Workspace
SHIFT-COMMAND-O	Open Workspace from Navicat Cloud
OPTION-COMMAND-P	Present Dashboard
COMMAND-R	Refresh Data
COMMAND-U	Open with Navicat URI



# Chapter 11 - Trace Logs

## Log Files

Navicat BI provides number of log files to keep track on the actions have been performed in Navicat BI and they are located in the default folder, e.g. ~/Library/Application Support/PremiumSoft CyberTech/Navicat CC/Navicat BI/Logs. You are allowed to change the log files location under [Settings](#).

File	Description
QueryExec.log	Store the statements or scripts of all operations executed over databases and database objects in Navicat BI.  <b>Note:</b> This log will be overwritten while Navicat BI is being restarted.
navicat.log	Store information to assist with tracking down any problems in Navicat BI. You can enable this log in <a href="#">Settings</a> .  <b>Note:</b> This log will be overwritten while Navicat BI is being restarted.