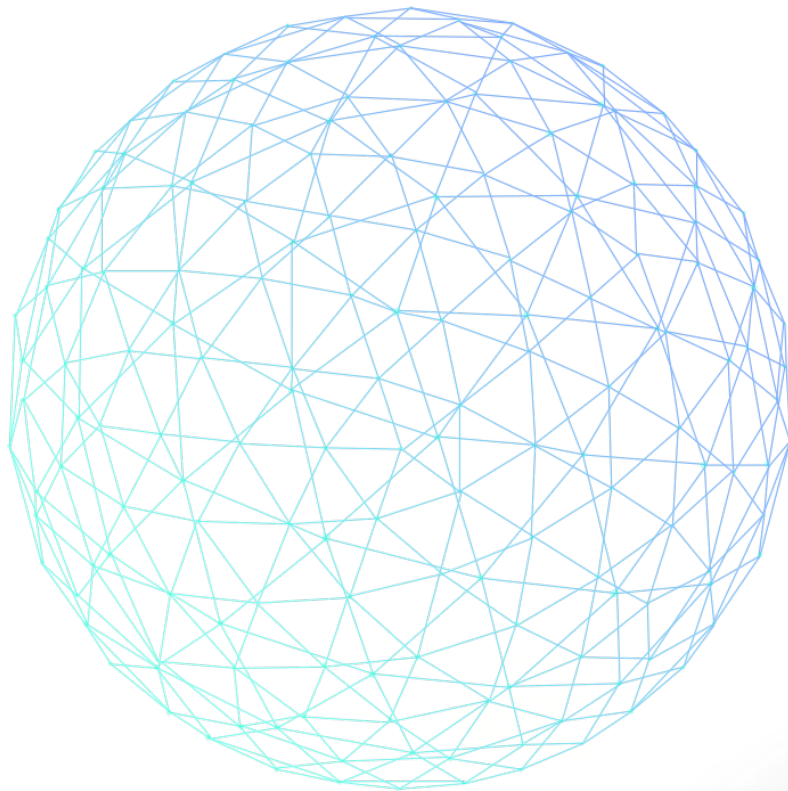


SQLynx

User Guide



【Version : 3.5.0】

Menu

| | |
|--------------------------------------|----------|
| 1. PRODUCT INTRODUCTION | 1 |
| 1.1 About SQLynx | 1 |
| 1.2 Product Versions | 2 |
| 1.3 Product Support Matrix | 4 |
| 1.3.1 System Requirements | 4 |
| 1.3.2 Data Source | 4 |
| 1.4 End User License Agreement | 6 |
| 2. SQLYnx PRO | 9 |
| 2.1 Startup | 9 |
| 2.1.1 Windows Version | 9 |
| 2.1.2 Mac OS Version | 10 |
| 2.1.3 Linux Version | 10 |
| 2.2 Data Operation | 12 |
| 2.2.1 Navigation Pane | 13 |
| 2.2.1.1 Add Database | 14 |
| 2.2.1.2 New Query | 16 |
| 2.2.1.3 New Object | 17 |
| 2.2.1.4 Object Operations | 23 |
| 2.2.2 Information Pane | 35 |
| 2.2.2.1 Object Details Pane | 35 |
| 2.2.2.2 Prompt Pane | 40 |
| 2.2.3 SQL Editor | 41 |
| 2.2.4 Data Viewer | 44 |
| 2.2.4.1 Query Result | 44 |
| 2.2.4.2 Query History | 48 |
| 2.2.4.3 Saved Query | 49 |
| 2.3 Operation Management | 50 |
| 2.3.1 Backup and Restore | 50 |
| 2.3.1.1 Add Backup | 51 |
| 2.3.1.2 Restore Backup | 54 |
| 2.4 Task Center | 55 |
| 2.5 Audit | 56 |
| 2.6 System Setup | 57 |
| 2.6.1 Data Configuration | 57 |
| 2.6.2 System Setup | 59 |
| 2.6.2.1 Data Settings | 59 |
| 2.6.2.2 System Settings | 60 |
| 2.6.3 Switch Theme | 61 |
| 2.7 Account | 62 |
| 2.7.1 My Profile | 62 |
| 2.7.2 Support | 62 |
| 2.7.3 Feedback | 62 |

| | |
|-----------------------------------|------------|
| 2.7.4 About Us | 62 |
| 2.7.5 Sign Out | 63 |
| 3. SQLYnx TEAM | 64 |
| 3.1 Startup | 64 |
| 3.1.1 Windows Version | 64 |
| 3.1.1.1 SQLynx Startup | 64 |
| 3.1.1.2 SQLynx Shutdown..... | 66 |
| 3.1.2 Linux Version..... | 67 |
| 3.1.2.1 SQLynx Startup | 67 |
| 3.2 Data Operation..... | 71 |
| 3.2.1 Navigation Pane | 72 |
| 3.2.1.1 Add Database..... | 73 |
| 3.2.1.2 New Query | 75 |
| 3.2.1.3 New Object | 76 |
| 3.2.1.4 Object Operations..... | 82 |
| 3.2.2 Information Pane | 94 |
| 3.2.2.1 Object Details Pane | 94 |
| 3.2.2.2 Prompt Pane | 99 |
| 3.2.3 SQL Editor | 100 |
| 3.2.4.1 Query Result..... | 103 |
| 3.2.4.2 Query History..... | 107 |
| 3.2.4.3 Saved Query..... | 108 |
| 3.3 Operation Management..... | 109 |
| 3.3.1 Backup and Restore | 109 |
| 3.3.1.1 Add Backup..... | 110 |
| 3.3.1.2 Restore Backup | 112 |
| 3.4 Task Center | 113 |
| 3.5 Audit | 114 |
| 3.6 System Setup | 115 |
| 3.6.1 Data Configuration | 116 |
| 3.6.2 User Management | 118 |
| 3.6.3 Role Settings | 121 |
| 3.6.4 System Setup..... | 122 |
| 3.6.4.1 Data Settings | 122 |
| 3.6.4.2 System Settings | 123 |
| 3.6.5 Switch Theme | 124 |
| 3.6.6 Activate | 124 |
| 3.7 Account | 126 |
| 3.7.1 My Profile..... | 126 |
| 3.7.2 Support | 126 |
| 3.7.3 Feedback | 126 |
| 3.7.4 About Us | 126 |
| 3.7.5 Sign Out..... | 127 |
| 4. SQLYnx ENTERPRISE | 128 |
| 4.1 Startup | 128 |

| | |
|--|------------|
| 4.1.1 Windows Version | 128 |
| 4.1.1.1 SQLynx Startup | 128 |
| 4.1.1.2 SQLynx Shutdown..... | 131 |
| 4.1.2 Linux Version..... | 132 |
| 4.1.2.1 SQLynx Startup | 132 |
| 4.2 Data Operation..... | 136 |
| 4.2.1 Navigation Pane..... | 137 |
| 4.2.1.1 Add Database..... | 138 |
| 4.2.1.2 New Query | 140 |
| 4.2.1.3 New Object | 141 |
| 4.2.1.4 Object Operations..... | 147 |
| 4.2.2.1 Object Details Pane | 160 |
| 4.2.2.2 Prompt Pane | 165 |
| 4.2.3 SQL Editor | 166 |
| 4.2.4.1 Query Result..... | 169 |
| 4.2.4.2 Query History..... | 173 |
| 4.2.4.3 Saved Query..... | 174 |
| 4.3 Operation Management..... | 175 |
| 4.3.1 Backup and Restore | 175 |
| 4.3.1.1 Add Backup..... | 176 |
| 4.3.1.2 Restore Backup | 179 |
| 4.4 Task Center | 180 |
| 4.5 Audit..... | 181 |
| 4.6 System Setup | 182 |
| 4.6.1 Data Configuration | 183 |
| 4.6.2 User Management | 185 |
| 4.6.3 Role Settings | 187 |
| 4.6.4 Risk Configuration | 189 |
| 4.6.5 System Setup | 190 |
| 4.6.5.1 Data Settings | 190 |
| 4.6.5.2 System Settings | 191 |
| 4.6.6 Switch Theme | 192 |
| 4.6.7 Activate | 192 |
| 4.7 Account | 194 |
| 4.7.1 My Profile..... | 194 |
| 4.7.2 Approval Management | 194 |
| 4.7.2 Support | 197 |
| 4.7.3 Feedback | 197 |
| 4.7.4 About Us | 197 |
| 4.7.5 Sign Out..... | 197 |
| 5. Q&A..... | 198 |
| 5.1 How to Reset Password? | 198 |
| 5.2 How to Customize Database Driver Packages? | 199 |
| 5.2.1 Windows Version | 199 |
| 5.2.2 MacOS Version..... | 202 |

| | |
|---|-----|
| 5.2.3 Linux Version | 205 |
| 5.3 How to change the port number? | 208 |
| 5.3.1 Windows Version | 208 |
| 5.3.2 MacOS Version | 208 |
| 5.3.3 Linux Version | 210 |
| 5.4 How to modify the JVM heap size? | 212 |
| 5.4.1 Windows Version | 212 |
| 5.4.2 MacOS Version | 212 |
| 5.4.3 Linux Version | 214 |
| 5.5 Dynamic SQL with Comments | 214 |
| 5.5.1 Supports dynamic SQL through special comment syntax | 214 |

1. Product Introduction

1.1 About SQLynx

SQLynx is a highly secure database management development tool that supports multi-datasource management, such as MySQL, Oracle, PostgreSQL, Hadoop, SQLserver, MongoDB, etc.

It has a complete database management function, including SQL query, user query history record, data import and export, test data generation, SQL statement generation, table structure comparison, etc.

SQLynx is compatible with Windows, MacOS, and Linux operating systems, providing traditional desktop client architecture and web-end synchronous use; it adopts a graphical interface design, which is simple and easy to use; the software does not need to be installed and supports remote access.

For software details and download, please visit official website:

<https://www.sqlynx.com> .

1.2 Product Versions

| No. | Product Comparison | | SQLynx Pro | SQLynx Team | SQLynx Enterprise |
|-----|--------------------|---------------------------------|--|-----------------------------|-------------------|
| 1 | Applicable Users | | For individual (Free for no commercial use) | For Teams or Departments | For Enterprise |
| 2 | Client | Desktop | √ | Unsupported | Unsupported |
| | | WEB | √ | √ | √ |
| 3 | Function | Data Handing | √ | √ | √ |
| | | ITOM | √ | √ | √ |
| | | Risk Management | Unsupported | Unsupported | √ |
| | | Permission Management | Unsupported | √ | √ |
| | | Approval Management | Unsupported | Unsupported | √ |
| | | Team Management | Unsupported | √ | √ |
| | | User Access Record | √ | √ | √ |
| | | User Access Audit & Analysis | √ | √ | √ |
| | | Distributed Deployment | Unsupported | Unsupported | √ |

1.3 Product Support Matrix

1.3.1 System Requirements

| No. | OS | Version | SQLynx Pro | SQLynx Team | SQLynx Enterprise |
|-----|---------|---------------------------|-----------------|--------------------|-------------------|
| 1 | Windows | Windows10/11 | √ | √ | √ |
| | | Windows7/8/8.1 | Web-Client Only | √ | √ |
| | | Server2012/2016/2019/2022 | Unsupported | √ | √ |
| 2 | MacOS | Mainstream version | √ | Remote Access Only | |
| 3 | Linux | Mainstream version | √ | √ | √ |

***Note:** The JDK included in the SQLynx package only supports **AMD64(x86)** architecture. If your server uses a different architecture, opt for a package without JDK and employ your own version of JDK.

1.3.2 Data Source

| No. | Data Source | Version | SQLynx Pro | SQLynx Team | SQLynx Enterprise |
|-----|-------------|------------------------------|------------|-------------|-------------------|
| 1 | Oracle | 11c/11g or later | √ | √ | √ |
| 2 | MySQL | 5.6/5.7/8.0 or later | √ | √ | √ |
| 3 | PostgreSQL | 9.0 or later | √ | √ | √ |
| 4 | SQL Server | 2008/2012/2016/2019 or later | √ | √ | √ |

| | | | | | |
|---|---------|--------------------|-------------|-------------|---|
| 5 | SQLite | Mainstream version | √ | √ | √ |
| 6 | MongoDB | 4.0 or later | √ | √ | √ |
| 7 | Impala | Mainstream version | √ | √ | √ |
| 8 | Hive | 2.0/3.1 or later | Unsupported | Unsupported | √ |

1.4 End User License Agreement

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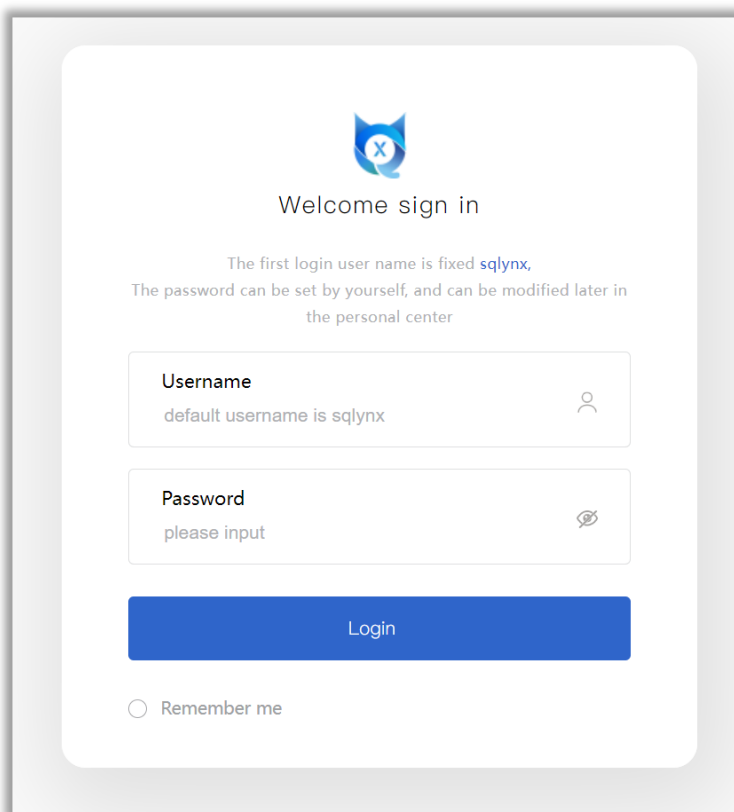
2. SQLynx Pro

SQLynx Pro is intended for individual users.

2.1 Startup

After downloading the SQLynx software package, extract it to a local directory.

Upon initial login, the username is "sqlynx" and the password is set by the user **input**.



2.1.1 Windows Version

A. Launching via an executable file:

1. Open the SQLynx folder and double-click the "sqlynx.exe" file.
2. The SQLynx login page of the desktop client will be displayed.

3. Log in with your username and password.
4. After logging in, users may switch between using the **desktop** or the **WEB client**.
5. Only compatible with **Windows 10/11**.

B. Launching via Command-line:

1. Open the SQLynx folder and double-click the "**sqlynx-ide-startup.bat**" file.
2. The SQLynx login page will be displayed in the web browser.
3. Log in with your username and password.
4. After logging in, only the **WEB client** is available.
5. Compatible with **all versions** of Windows and WinServer.

2.1.2 Mac OS Version

1. Double-click the "**sqlynx.dmg**" file.
2. Go to System Settings > Privacy & Security>General tab, and click "**Allow**" button for SQLynx.
3. The SQLynx login page of the desktop client will be displayed.
4. Enter your username and password to log in.
5. After logging in, users may switch between using the **desktop** or the **WEB client**.

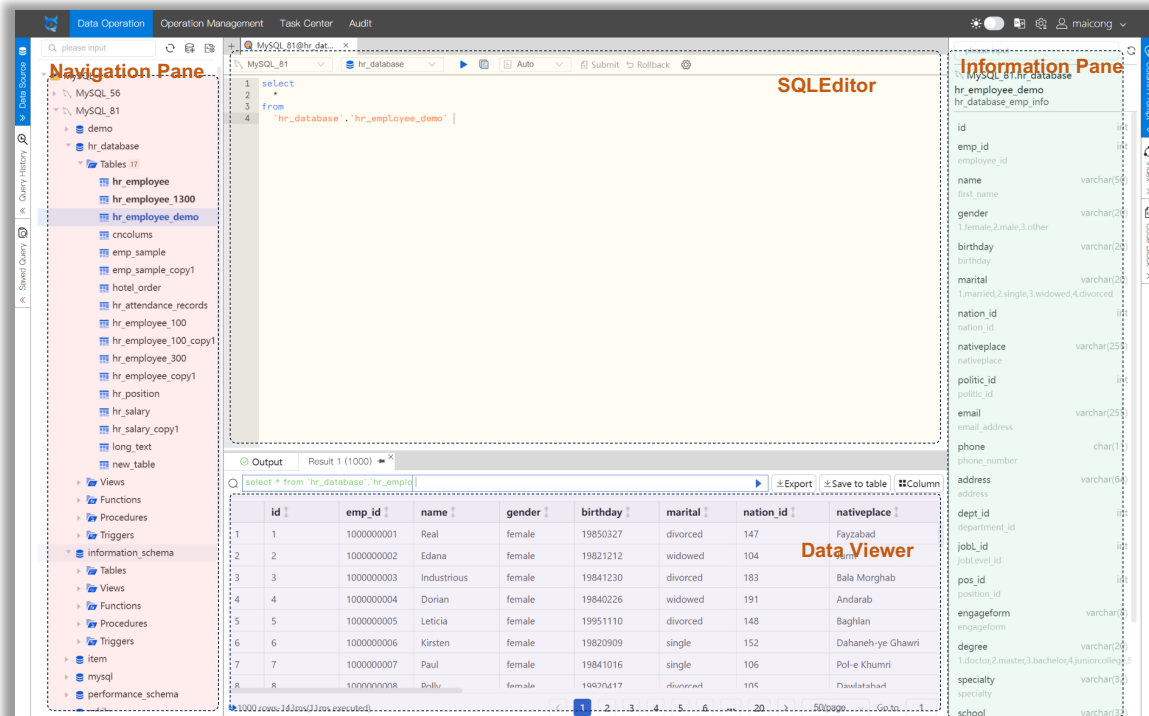
2.1.3 Linux Version

1. Navigate to the script directory.

2. Run the command `./sqlynx-ide.sh`.
3. Enter the command `sh sqlynx-ide.sh start` and hit Enter.
4. Open a browser and go to `http://<ip address>:18888` to access the SQLynx login page.
5. Enter your username and password to log in.
6. After logging in, you can **only use the WEB client**.

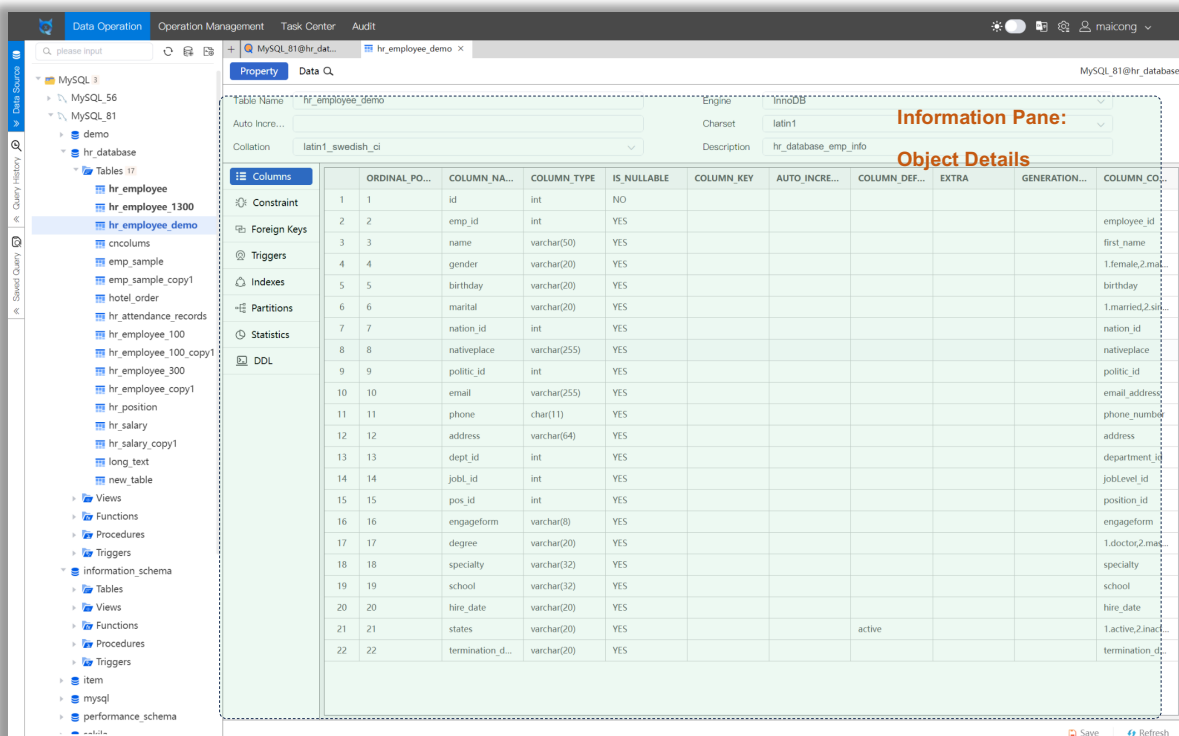
2.2 Data Operation

The data operation module of SQLynx is composed of several areas: the navigation pane, information pane, SQL editor, and data viewer.



The screenshot displays the SQLynx Data Operation interface. On the left is the **Navigation Pane** showing a tree view of the database structure, including tables like `hr_employee_demo`. The central **SQL Editor** contains a SQL query: `select * from 'hr_database'..'hr_employee_demo'`. Below the editor is the **Data Viewer**, which shows the results of the query in a table format. On the right is the **Information Pane**, which displays the schema details for the selected table, including column names and data types.

| id | emp_id | name | gender | birthday | marital | nation_id | nativeplace |
|----|--------|------------|-------------|----------|----------|-----------|-------------|
| 1 | 1 | 1000000001 | Real | female | 19850327 | divorced | 147 |
| 2 | 2 | 1000000002 | Edana | female | 19821212 | widowed | 104 |
| 3 | 3 | 1000000003 | Industrious | female | 19841230 | divorced | 183 |
| 4 | 4 | 1000000004 | Dorian | female | 19840226 | widowed | 191 |
| 5 | 5 | 1000000005 | Leticia | female | 19951110 | divorced | 148 |
| 6 | 6 | 1000000006 | Kirsten | female | 19820909 | single | 152 |
| 7 | 7 | 1000000007 | Paul | female | 19841016 | single | 106 |
| 8 | 8 | 1000000008 | Brilly | female | 19820817 | divorced | 105 |



This screenshot shows the **Information Pane** with the **Object Details** tab selected. It displays the table structure for `hr_employee_demo`, including column names, data types, and constraints. The table has 22 columns.

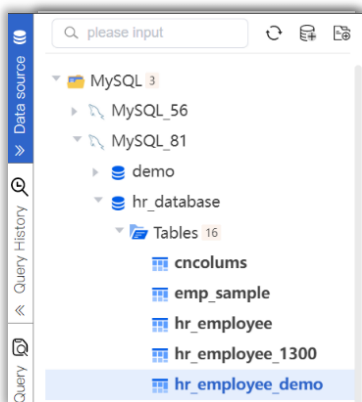
| ORDINAL PO... | COLUMN NA... | COLUMN TYPE | IS NULLABLE | COLUMN KEY | AUTO INCRE... | COLUMN DEF... | EXTRA | GENERATION... | COLUMN CO... |
|---------------|------------------|--------------|-------------|------------|---------------|---------------|--------|---------------|--------------------|
| 1 | id | int | NO | | | | | | |
| 2 | emp_id | int | YES | | | | | | employee_id |
| 3 | name | varchar(50) | YES | | | | | | first_name |
| 4 | gender | varchar(20) | YES | | | | | | 1.female,2.m... |
| 5 | birthday | varchar(20) | YES | | | | | | birthday |
| 6 | marital | varchar(20) | YES | | | | | | 1.married,2.s... |
| 7 | nation_id | int | YES | | | | | | nation_id |
| 8 | nativeplace | varchar(255) | YES | | | | | | nativeplace |
| 9 | politic_id | int | YES | | | | | | politic_id |
| 10 | email | varchar(255) | YES | | | | | | email_address |
| 11 | phone | char(11) | YES | | | | | | phone_number |
| 12 | address | varchar(64) | YES | | | | | | address |
| 13 | dept_id | int | YES | | | | | | department_id |
| 14 | job_id | int | YES | | | | | | jobLevel_id |
| 15 | pos_id | int | YES | | | | | | position_id |
| 16 | engageform | varchar(8) | YES | | | | | | engageform |
| 17 | degree | varchar(20) | YES | | | | | | 1.doctor,2.ma... |
| 18 | specialty | varchar(32) | YES | | | | | | specialty |
| 19 | school | varchar(32) | YES | | | | | | school |
| 20 | hire_date | varchar(20) | YES | | | | | | hire_date |
| 21 | states | varchar(20) | YES | | | | active | | 1.active,2.inac... |
| 22 | termination_d... | varchar(20) | YES | | | | | | termination_d... |





2.2.1 Navigation Pane

The navigation pane is located on the left side of the main window, featuring a tree structure.

It allows browsing information of all successfully added data sources, databases, and database objects.

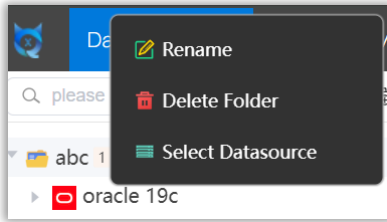
The related operational functions are accessible through the right-click context menu of the mouse.



| # | Location | Function |
|---|---|--|
| 1 |  | Search for database names, object names *Supports fuzzy search; case-sensitive. |
| 2 |  | Refresh |
| 3 |  | Add data source (refer to steps in " System Settings - Data Configuration ") |
| 4 |  | Create folder |

Right-click on the folder, the following menu appears.

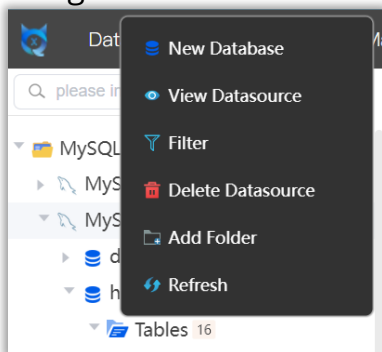
| # | Function | Description |
|---|---------------|---|
| 1 | Rename | Rename the currently selected folder |
| 2 | Delete Folder | Delete the currently selected folder *Only delete the folder, the data sources within it will not be deleted; after the folder is deleted, data |



| | | |
|---|-------------------|--|
| | | sources will automatically be moved out and returned to the navigation pane. |
| 3 | Select Datasource | Configure the addition and removal of data sources for the currently selected folder |

2.2.1.1 Add Database

Right-click on datasource in the navigation pane, and the following menu appears.



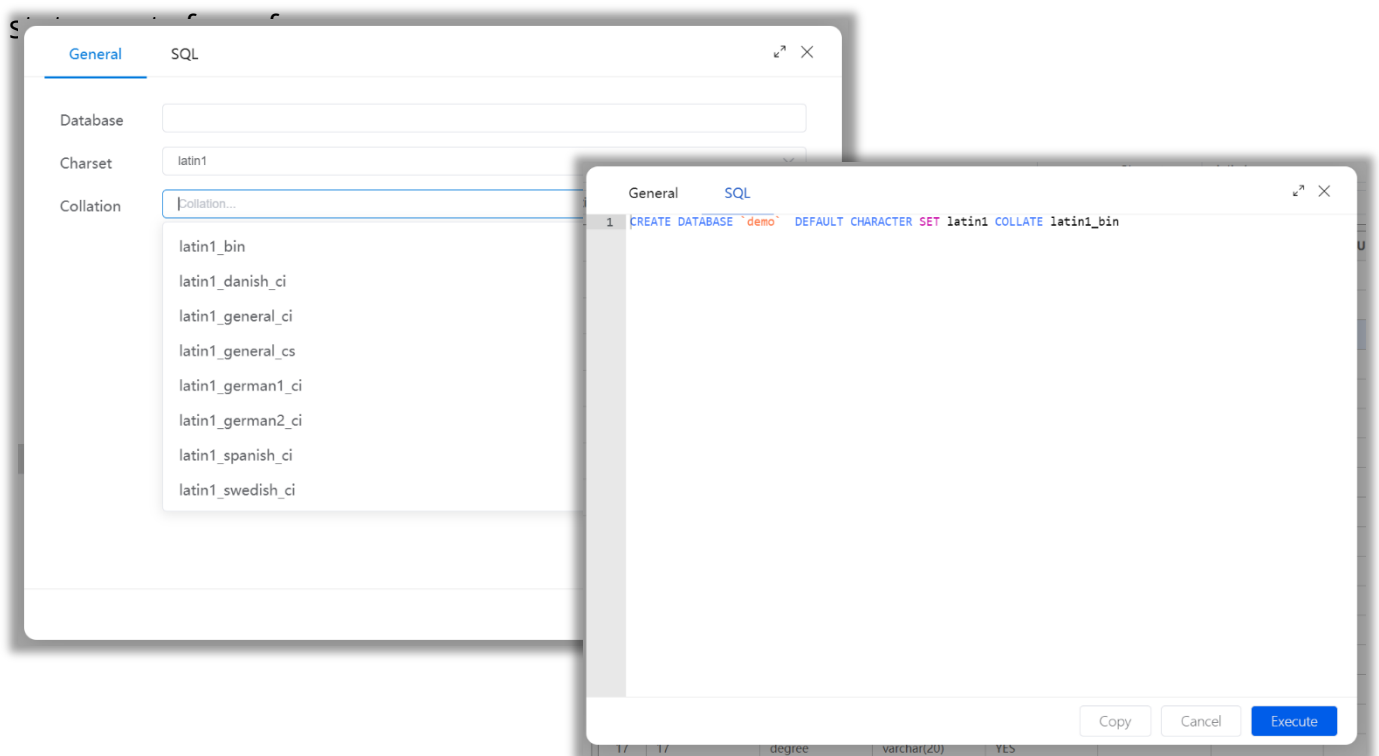
| # | Function | Description |
|---|-----------------|---|
| 1 | New Database | Create a new database, with options to set the database name, character set, and collation. |
| 2 | View Datasource | View the configuration information of the currently selected data source. |
| 3 | Filter | Filter the databases displayed in the current navigation pane. |

| | | |
|---|-------------------|---|
| 4 | Delete Datasource | Delete the currently selected data source *The deletion is irreversible once confirmed, please proceed with caution after verification. |
| 5 | Add Folder | Create a new folder |
| 6 | Refresh | Refresh |

Add Database:

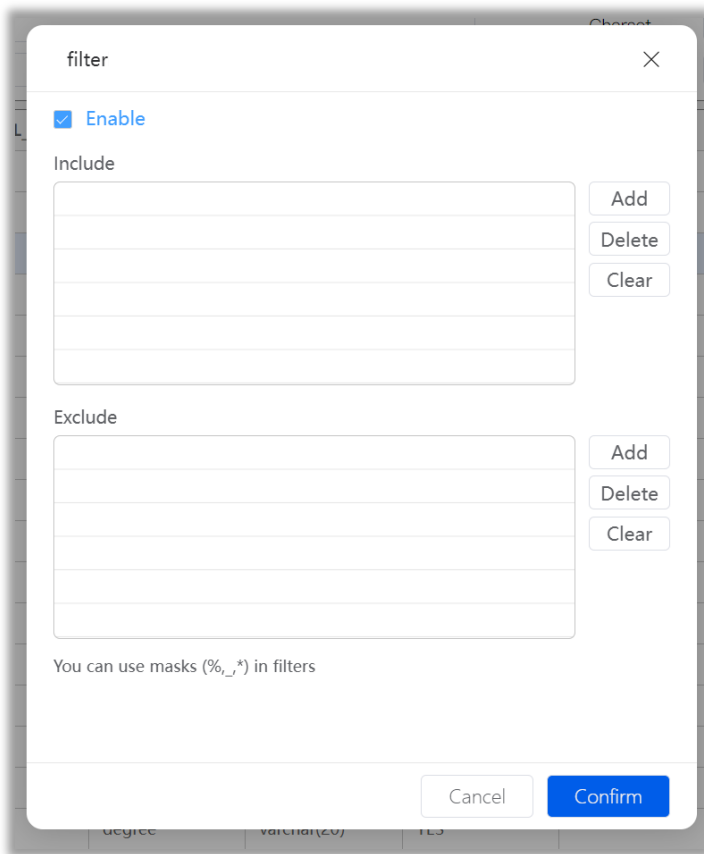
Create a new database and execute the operation after filling out the Database name, character set, and collation rules as required.

The SQL editor on the right will simultaneously display the corresponding SQL



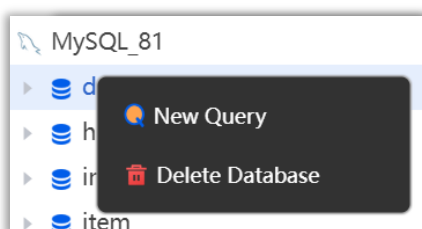
Filter:

You can set filter conditions based on your needs, to include or exclude certain keywords. When performing a fuzzy search, you need to add wildcards.



2.2.1.2 New Query


Expand the data source, right-click on the database name, and the following menu appears.

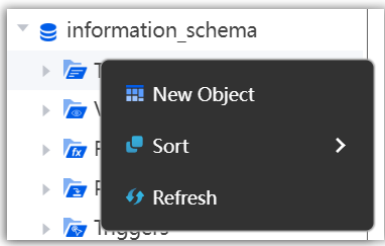


| # | Function | Description |
|---|-----------------|--|
| 1 | New Query | The main window switches to the SQL editor, with the default path being the path of the currently selected database. |
| 2 | Delete Database | Delete the currently selected database *The deletion is irreversible once confirmed, please proceed with caution after verification. |

2.2.1.3 New Object

a. New Table

1. Expand the database, right-click on  "Tables" icon, and the following menu appears.

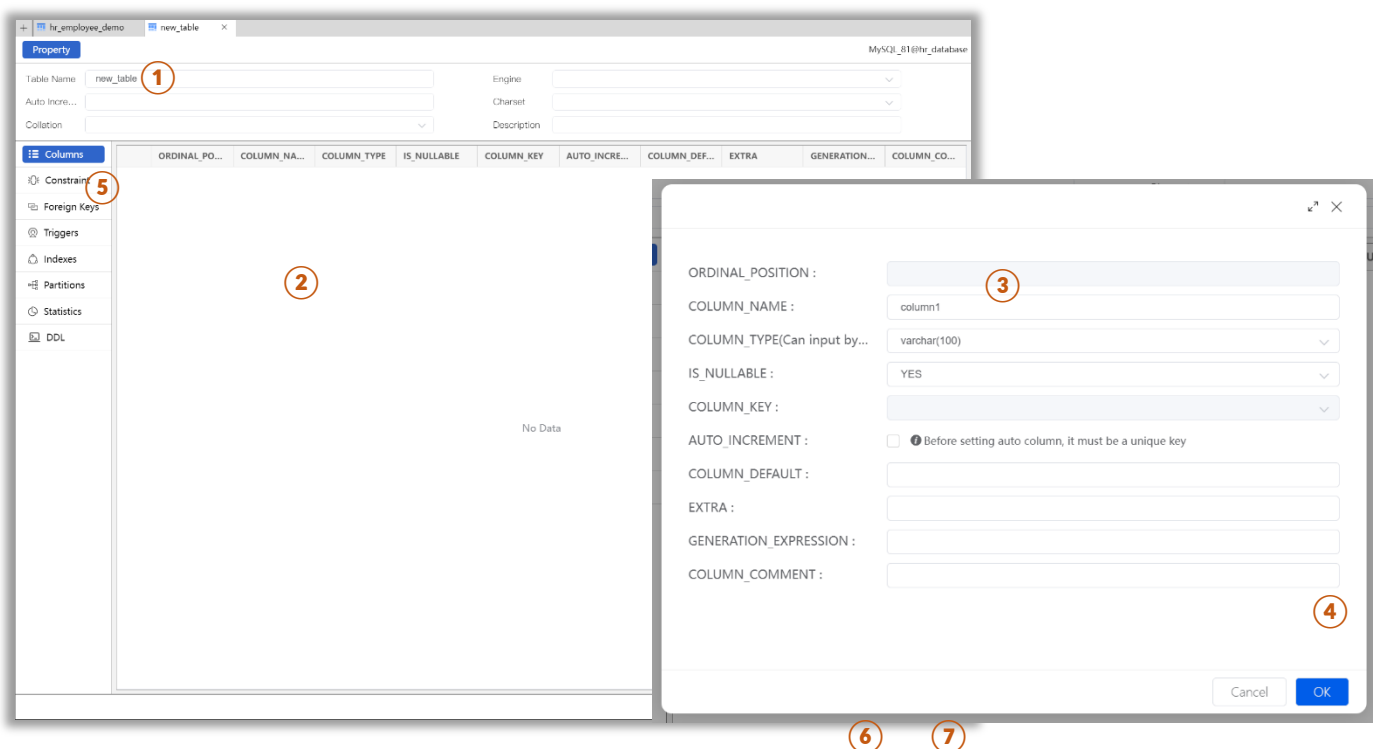


| # | Function | Description |
|---|------------|---|
| 1 | New Object | The main window becomes the object detail pane. where a new table is created. You can modify the table's properties on this page and execute these changes. |
| 2 | Sort | Sort all tables in the current database: By Intelligent Sorting*, By Weight, By Count, By Time, By First Letter. |
| 3 | Refresh | Refresh |

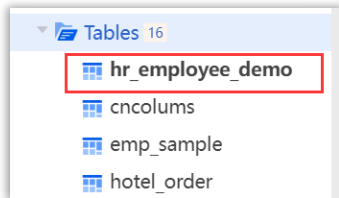
2. Create a New Table

- Click on "**New Object**".
- Set the basic properties of the table in the object detail pane: such as Table Name, Character Set, Collation, and Description.
- Under the "Columns" tab, right-click on the blank area of the data detail box to bring up the context menu, and click "Add".


- In the popup window, configure the column information to be added and click OK; repeat the third step until you have added all the required columns.
- Under the "Constraints" tab, right-click to bring up the context menu and click "Add" to set a primary key for the table, then confirm.
- Click save at the bottom right corner, which opens a popup showing the preview of the SQL statement for creating the table. You can directly click "Execute" to create the table or click "Copy" to save the current statement for further editing in the SQL editor.
- After execution, refresh the database to view the tables or refer to [section 2.2.2.1](#) for steps on adding data post table creation.

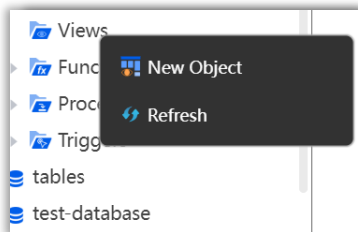


3. * **Intelligent Sorting:** By default, the system employs intelligent sorting to automatically prioritize and bold the tables that the user frequently operates, facilitating quick and easy access.



b. New View

1. Expand the database, right-click on  Views icon, and the following menu appears.

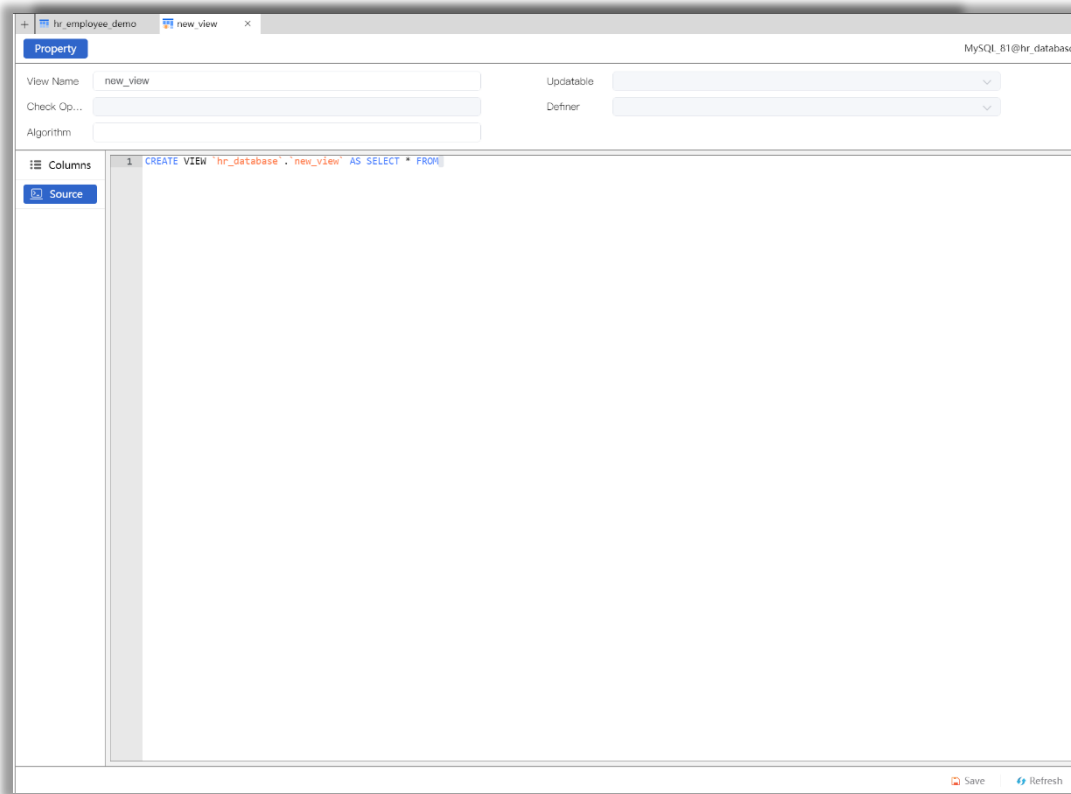


| # | Function | Description |
|---|------------|--|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new view. |
| 2 | Refresh | Refresh |


2. Create New View

- Click on "**Create Object**"
- Set the basic properties of the view in the object detail pane: View Name, Algorithm, etc.

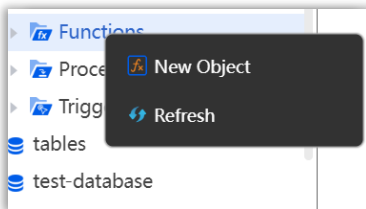
- Write the SQL statement under the "Source" tab to create it, then click save and refresh.



c. New Function

1. Expand the database, right-click on the  "Functions" icon, and the following menu appears.

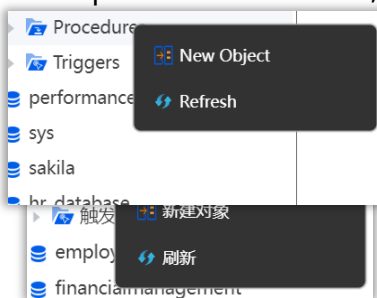
| # | Function | Description |
|---|----------|-------------|
|---|----------|-------------|



| | | |
|---|------------|--|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new function. |
| 2 | Refresh | Refresh |


d. New Procedure

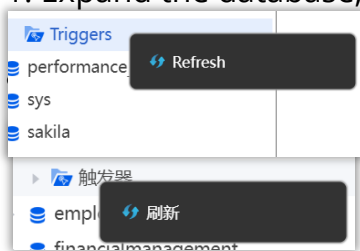
1. Expand the database, right-click on the  "Procedures" icon, and the following



| # | Function | Description |
|---|------------|---|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new procedure. |
| 2 | Refresh | Refresh |

e. Triggers

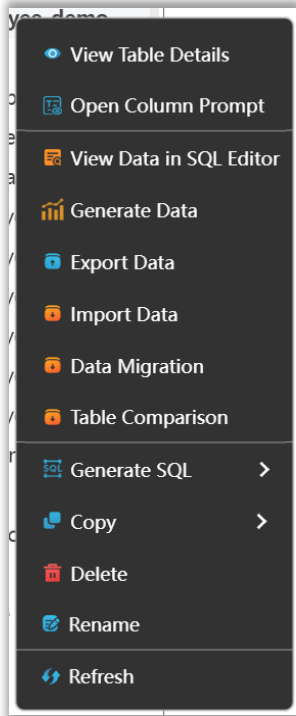
1. Expand the database, right-click on the  "Triggers" icon, and the following menu



| # | Function | Description |
|---|----------|-------------|
| 1 | Refresh | Refresh |

2.2.1.4 Object Operations

a. Table

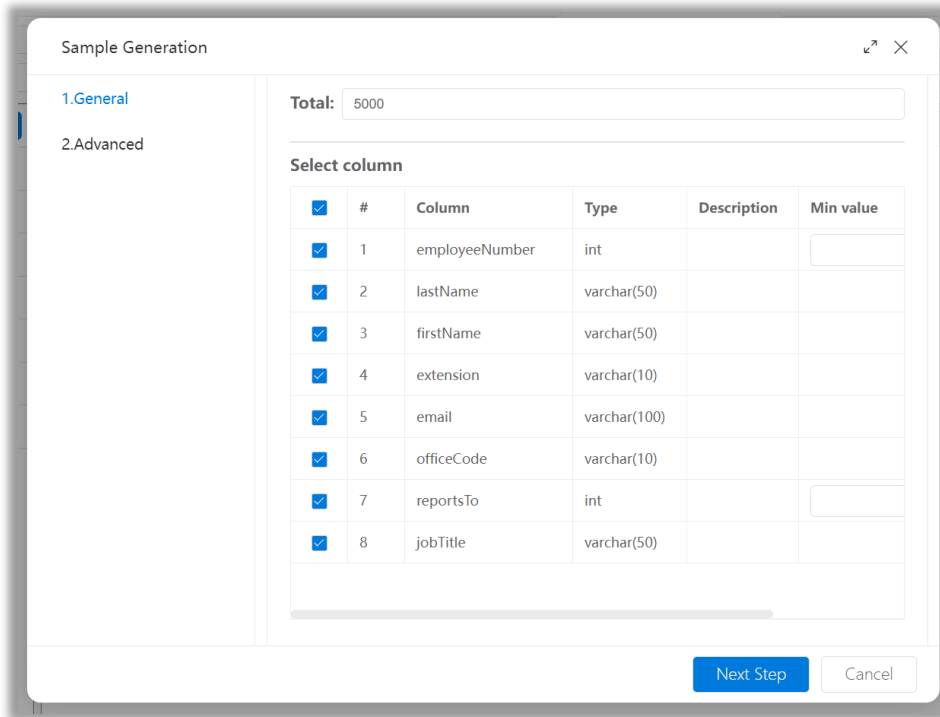


| # | Function | Description |
|---|-------------------------|--|
| 1 | View Table Details | View the details of the currently selected table: the main window displays an object detail pane where you can view table properties and table data (for details, refer to section 2.2.2.1 Object Detail Pane). |
| 2 | Open Column Prompt | When open the query window, click on the menu function or double-click the table name to display prompts on the right screen (for details, refer to section 2.2.2.2 Prompt Pane). |
| 3 | View Data in SQL Editor | Automatically generate the statement "SELECT * FROM current table" and execute the query with the SQL editor (for SQL editor, refer to section 2.2.3 Data Operations - SQL Editor). |
| 4 | Generate Data | Generate test data with the options to replace or append. |
| 5 | Export Data | Export data to local storage, with options for CSV, Excel, or SQL file formats. |

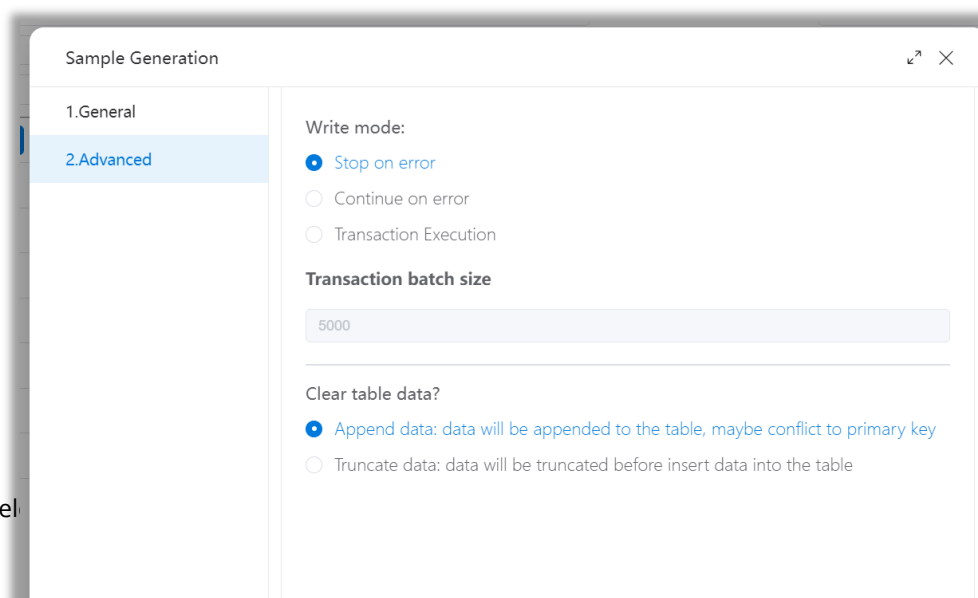
| | | |
|----|------------------|--|
| 6 | Import Data | Import CSV or Excel files from your local machine into the selected table. |
| 7 | Data Migration | Migrate data from the selected table to another table. |
| 8 | Table Comparison | Compare the structural differences of tables from two identical-type databases. |
| 9 | Generate SQL | Automatically generate SQL statements such as select, insert, update, delete, or DDL. |
| 10 | Copy | Within the same database, create a duplicate of the currently selected table, copying either "structure and data" or "structure only". |
| 11 | Delete | Delete the currently selected table. *The deletion is irreversible once confirmed, please proceed with caution after verification. |
| 12 | Rename | Rename the currently selected table. |
| 13 | Refresh | Refresh |

1. Generate Data

Test data can be generated based on table structure. The data generation process operates in the background, and the final results can be viewed in the Task Center under "Generate Data".



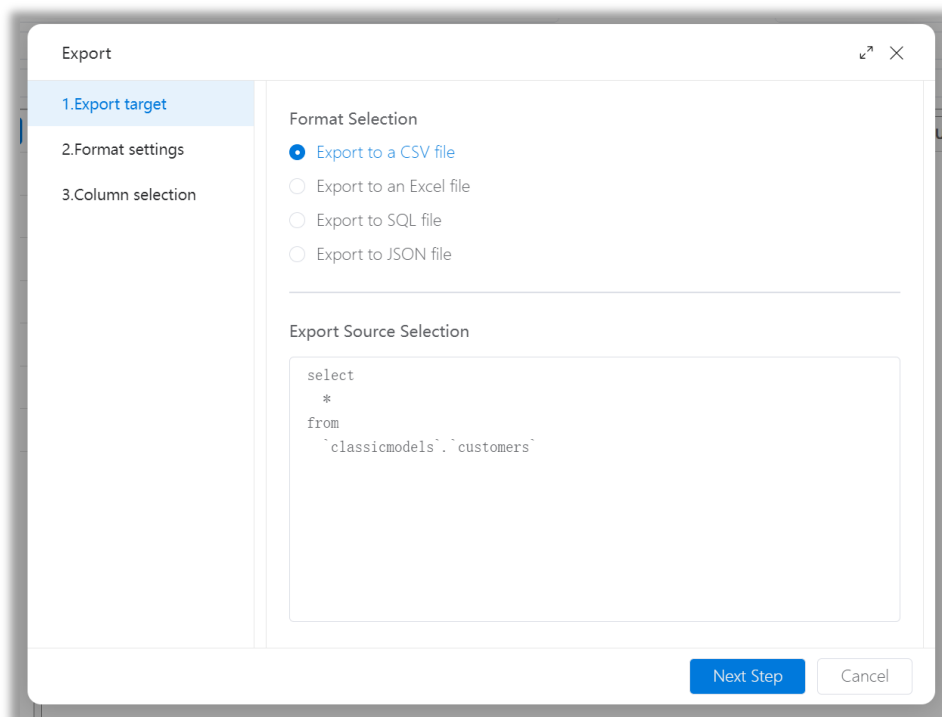
The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.



2. Export Data

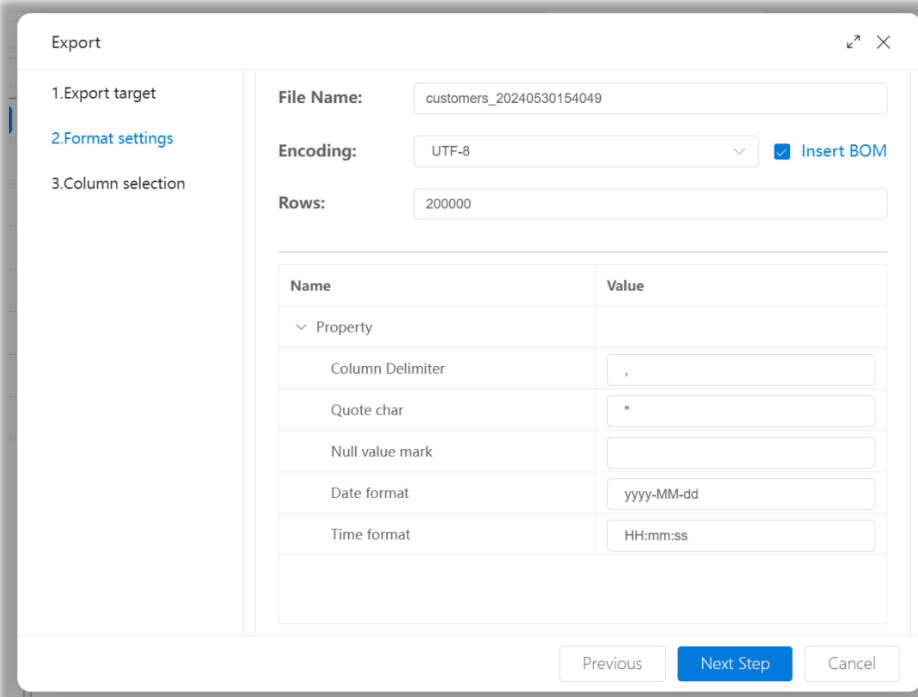
Export the data of the currently selected table to the local system, available in CSV, EXCEL, SQL, and JSON file.

Users can configure the columns of the exported data (all/part), the number of rows, characters, and header format of the export data as needed.

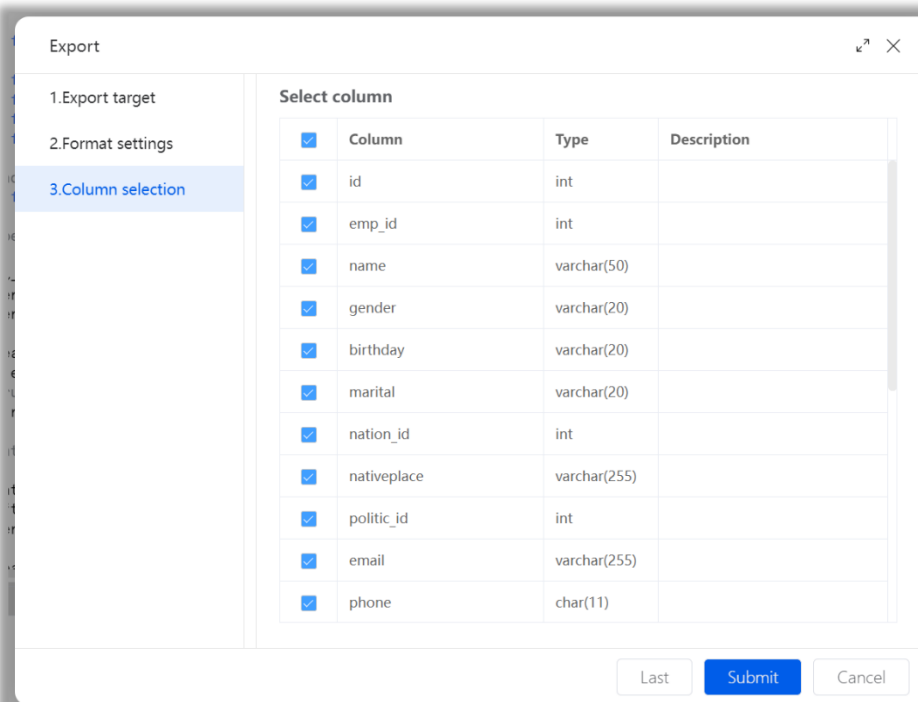


Users can modify the filename, encoding, and number of rows of the exported file as needed.

*When the exported file is in CSV format and needs to be opened in Excel, it is recommended to check the "Insert BOM" option for stronger format compatibility.



The screenshot shows the 'Export' dialog box with the 'Format settings' step selected. The 'File Name' is 'customers_20240530154049', 'Encoding' is 'UTF-8', and 'Rows' is '200000'. The 'Insert BOM' checkbox is checked. Below these are fields for 'Column Delimiter' (comma), 'Quote char' (double quote), 'Null value mark', 'Date format' (yyyy-MM-dd), and 'Time format' (HH:mm:ss). At the bottom are 'Previous', 'Next Step', and 'Cancel' buttons.

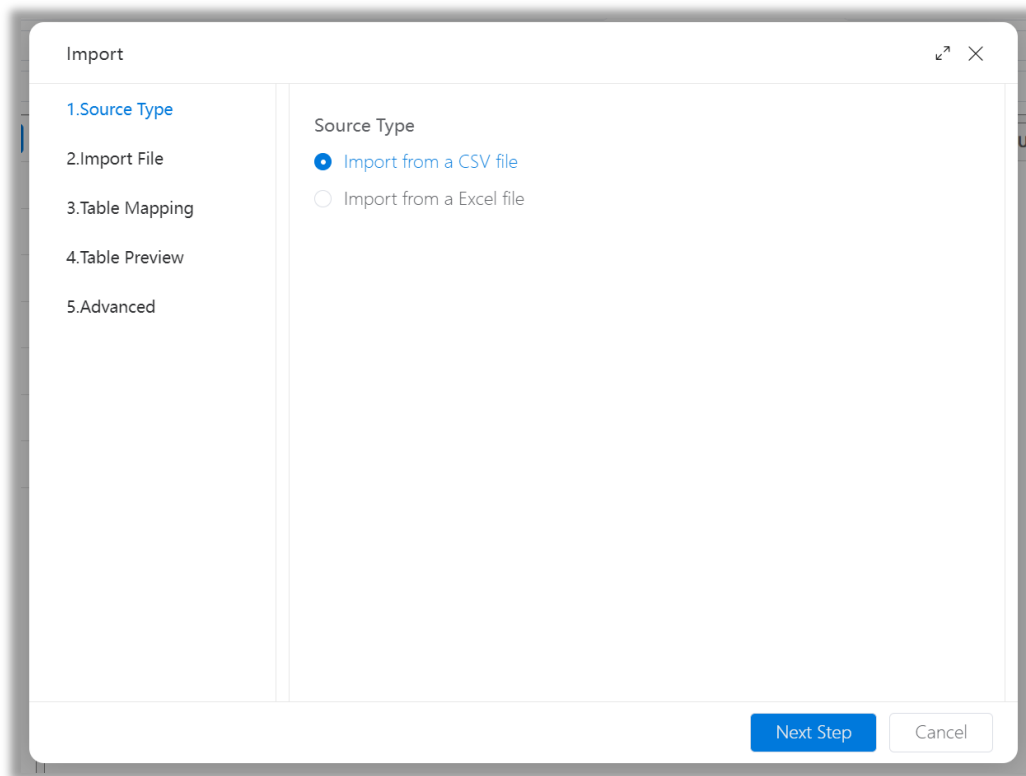


The screenshot shows the 'Export' dialog box with the 'Column selection' step selected. A table titled 'Select column' lists columns with checkboxes, types, and descriptions. All columns are selected. At the bottom are 'Last', 'Submit', and 'Cancel' buttons.

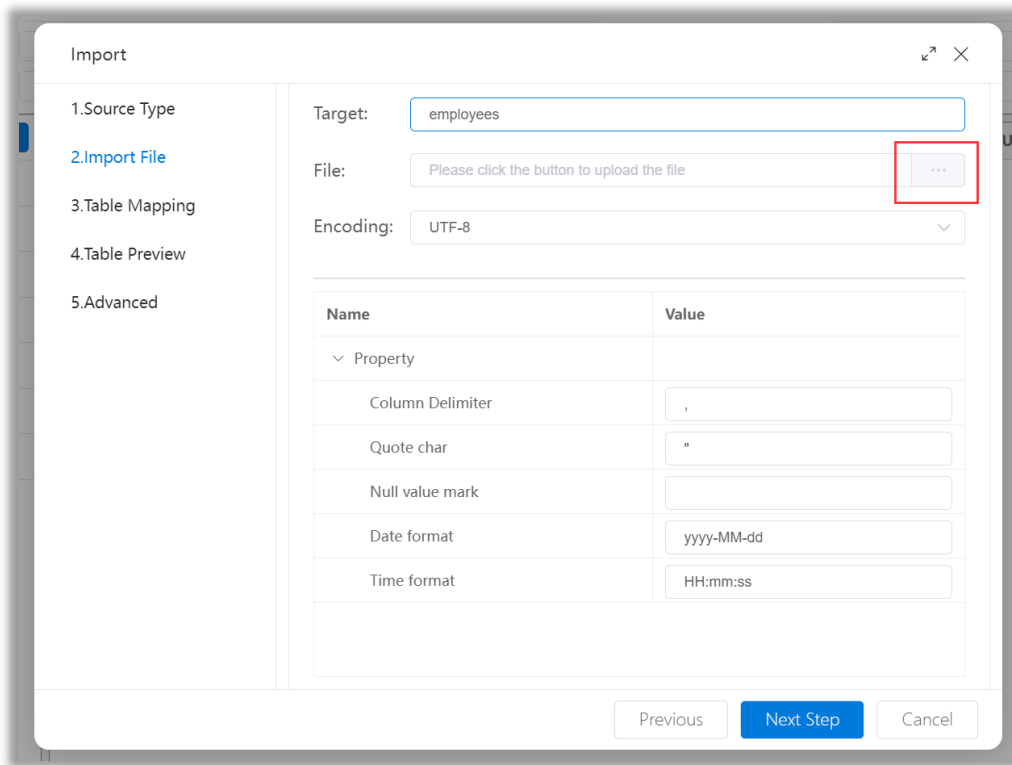
| <input checked="" type="checkbox"/> | Column | Type | Description |
|-------------------------------------|-------------|--------------|-------------|
| <input checked="" type="checkbox"/> | id | int | |
| <input checked="" type="checkbox"/> | emp_id | int | |
| <input checked="" type="checkbox"/> | name | varchar(50) | |
| <input checked="" type="checkbox"/> | gender | varchar(20) | |
| <input checked="" type="checkbox"/> | birthday | varchar(20) | |
| <input checked="" type="checkbox"/> | marital | varchar(20) | |
| <input checked="" type="checkbox"/> | nation_id | int | |
| <input checked="" type="checkbox"/> | nativeplace | varchar(255) | |
| <input checked="" type="checkbox"/> | politic_id | int | |
| <input checked="" type="checkbox"/> | email | varchar(255) | |
| <input checked="" type="checkbox"/> | phone | char(11) | |

3. Import Data

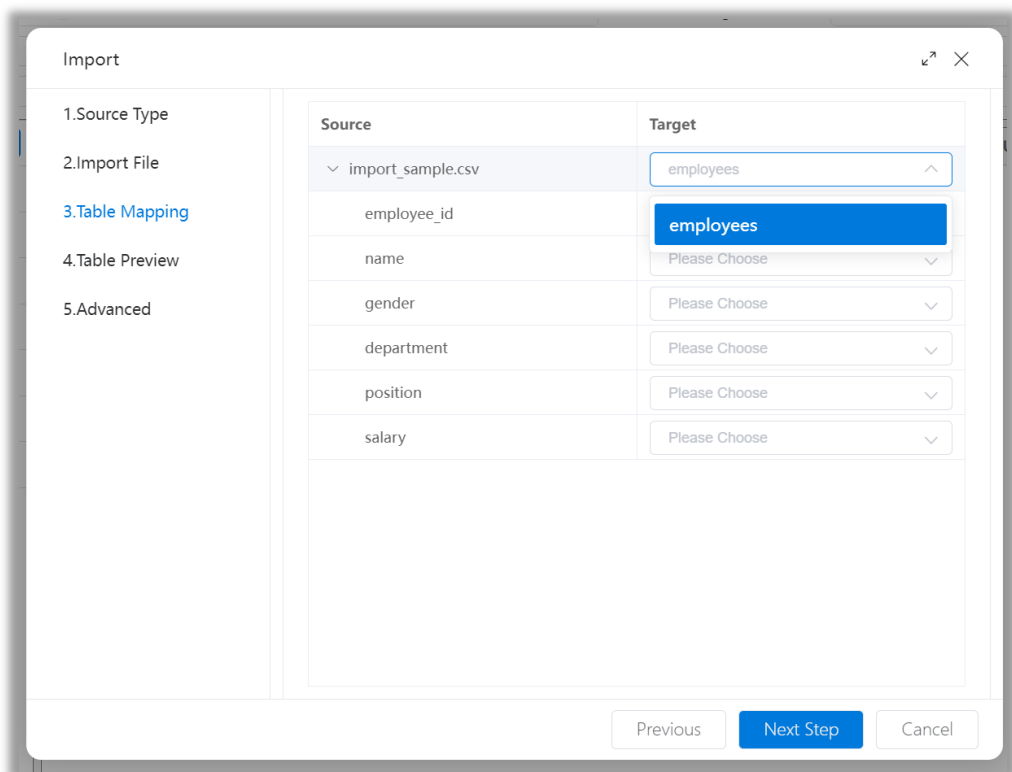
Import a local CSV or Excel file into the currently selected table. (*Importing an SQL file is performed through the context menu in the SQL editor.)



Choose a local CSV or Excel file.



In the "Table Mapping" section, confirm the correspondence between columns.

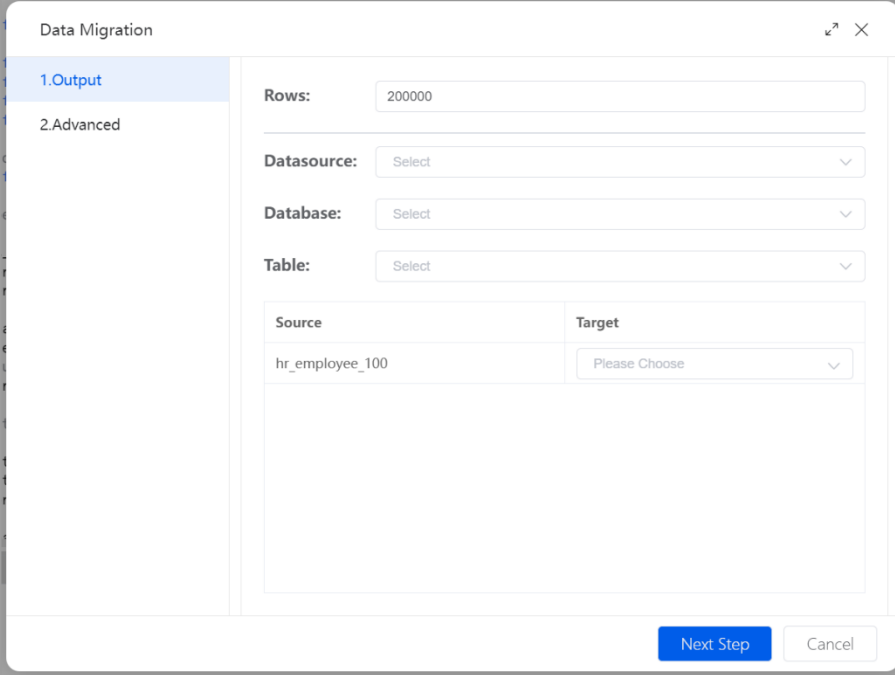


The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.

The screenshot shows the 'Import' dialog box with the 'Advanced' tab selected. The 'Write mode' section has three radio buttons: 'Stop on error' (selected), 'Continue on error', and 'Transaction Execution'. The 'Transaction batch size' is set to 5000. The 'Clear table data?' section has two radio buttons: 'Append data: data will be appended to the table, maybe conflict to primary key' (selected) and 'Truncate data: data will be truncated before insert data into the table'. The 'Submit' button is highlighted in blue.

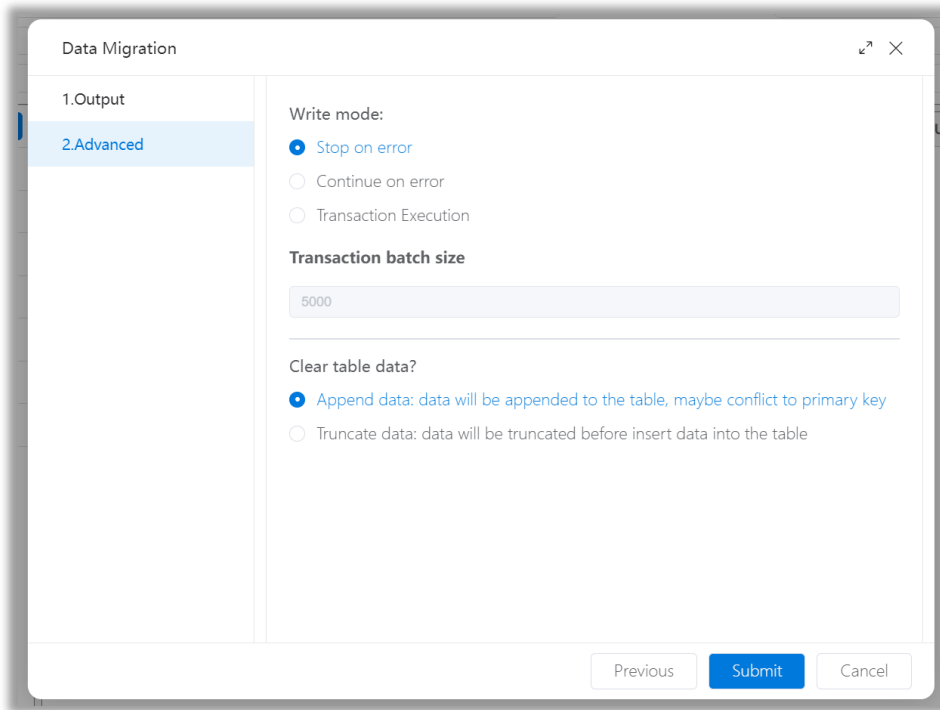
4. Data Migration

Migrate the data from the currently selected table to another table, with support for **transaction execution**.

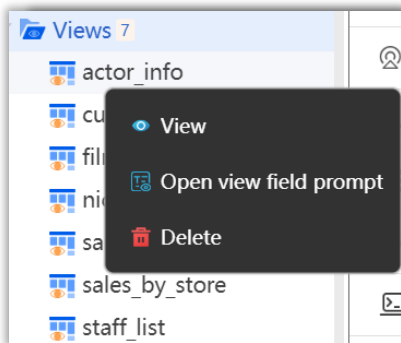


| Source | Target |
|-----------------|---------------|
| hr_employee_100 | Please Choose |

The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.

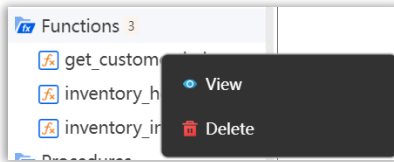


b. View



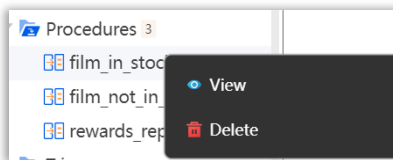
| # | Function | Description |
|---|-------------------------|--|
| 1 | View | View the details of the currently selected view. The main window will display the object details pane, where you can view the properties and data of the view. |
| 2 | Open view column prompt | When open the query window, clicking on the menu function or double-clicking on the current view name will display prompt pane on the right screen. |
| 3 | Delete | Delete the currently selected view. |

c. Function



| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected function. The main window will display the object details pane, where you can view the properties of the function. |
| 2 | Delete | Delete the currently selected function. |

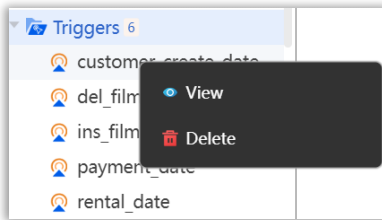
d. Procedure



| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected procedure. The main window will display the object details pane, where you can view the properties of the procedure. |
| 2 | Delete | Delete the currently selected procedure. |

e. Trigger

| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected trigger. The main window will display the object details pane, where you can view the properties of the trigger. |

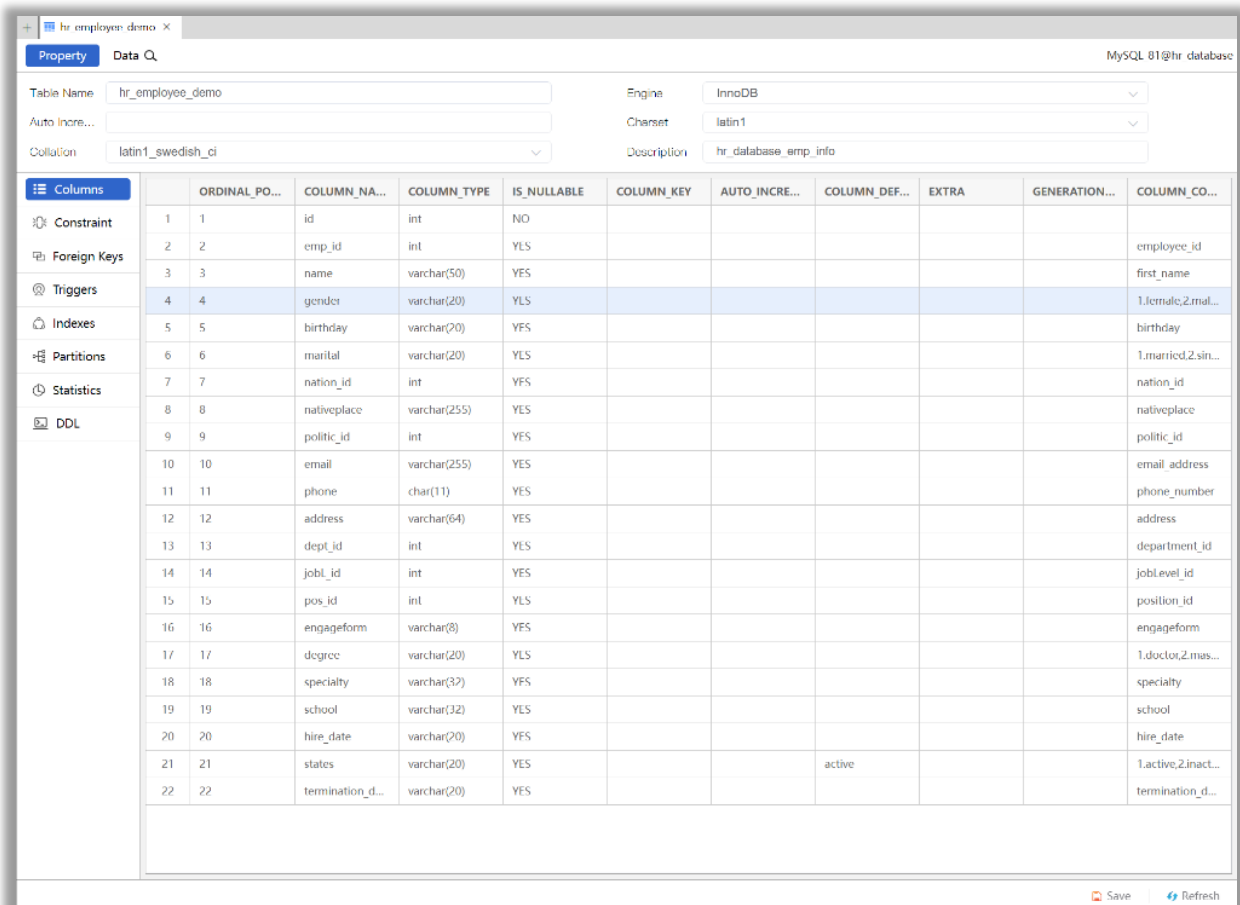


| | | |
|---|--------|--|
| 2 | Delete | Delete the currently selected trigger. |
|---|--------|--|

2.2.2 Information Pane

2.2.2.1 Object Details Pane

Located in the middle of the main window, this is where detailed information about objects can be displayed. The object details pane is usually hidden by default, and clicking on any object to select the view function will make it visible.



The screenshot shows the 'Object Details Pane' for a table named 'hr_employee_demo'. The pane is divided into a left sidebar with navigation options and a main table area. The table lists 22 columns with their respective ordinal positions, names, data types, nullability, and other attributes.

| | ORDINAL_PO... | COLUMN_NA... | COLUMN_TYPE | IS_NULLABLE | COLUMN_KEY | AUTO_INCRE... | COLUMN_DEF... | EXTRA | GENERATION... | COLUMN_CO... |
|--|---------------|------------------|--------------|-------------|------------|---------------|---------------|-------|---------------|---------------------|
| | 1 | id | int | NO | | | | | | |
| | 2 | emp_id | int | YLS | | | | | | employee_id |
| | 3 | name | varchar(50) | YES | | | | | | first_name |
| | 4 | gender | varchar(20) | YLS | | | | | | 1.female;2.mal... |
| | 5 | birthday | varchar(20) | YES | | | | | | birthday |
| | 6 | marital | varchar(20) | YLS | | | | | | 1.married;2.sin... |
| | 7 | nation_id | int | YES | | | | | | nation_id |
| | 8 | nativeplace | varchar(255) | YES | | | | | | nativeplace |
| | 9 | politic_id | int | YES | | | | | | politic_id |
| | 10 | email | varchar(255) | YES | | | | | | email_address |
| | 11 | phone | char(11) | YES | | | | | | phone_number |
| | 12 | address | varchar(64) | YES | | | | | | address |
| | 13 | dept_id | int | YLS | | | | | | department_id |
| | 14 | jobl_id | int | YES | | | | | | joblevel_id |
| | 15 | pos_id | int | YLS | | | | | | position_id |
| | 16 | engageform | varchar(8) | YES | | | | | | engageform |
| | 17 | degree | varchar(20) | YLS | | | | | | 1.doctor;2.mas... |
| | 18 | specialty | varchar(32) | YES | | | | | | specialty |
| | 19 | school | varchar(32) | YES | | | | | | school |
| | 20 | hire_date | varchar(20) | YES | | | | | | hire_date |
| | 21 | states | varchar(20) | YES | | | active | | | 1.active;2.inact... |
| | 22 | termination_d... | varchar(20) | YES | | | | | | termination_d... |

a. Property

Display detailed properties, settings, and parameters of objects such as tables, views, functions, procedures, triggers, etc.

| # | Property | Description | Context Menu | Function |
|---|--------------|--|--------------|---|
| 1 | Columns | Displays the columns and data structure of the current object. | View | View detailed information of the currently selected column. |
| | | | Edit | Modify information of the currently selected column. |
| | | | Add | Add a new column. |
| | | | Delete | Delete the currently selected column. |
| | | | Refresh | Refresh |
| 2 | Constraint | Displays primary key information of the current table. | Add | Add a new primary key. |
| | | | Refresh | Refresh |
| 3 | Foreign Keys | Displays foreign key information of the current table. | N/A | N/A |

| | | | | |
|---|------------|---|--|------------------|
| 4 | Triggers | Displays trigger information of the current table. | N/A | N/A |
| 5 | Indexes | Displays index information of the current table. | Add | Add a new index. |
| | | | Refresh | Refresh |
| 6 | Partitions | Displays partition information of the current table | N/A | N/A |
| 7 | Statistics | Displays statistics information of the current table. | N/A | N/A |
| 8 | DDL | Displays DDL information of the current table. | Users can copy the DDL statement and paste it into the SQL editor for use. | |

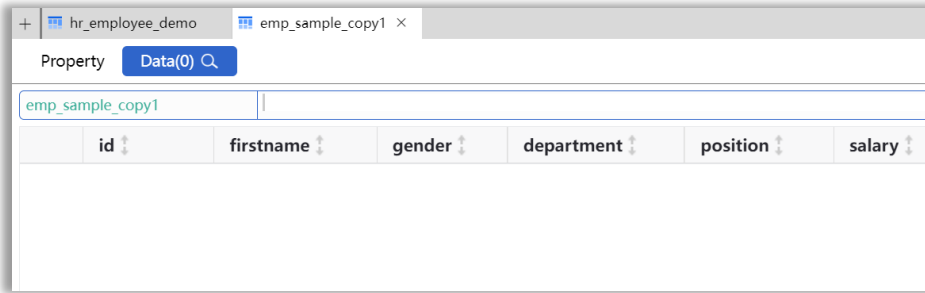
b. Data

Display detailed data for the above objects.

1. No data in the table.

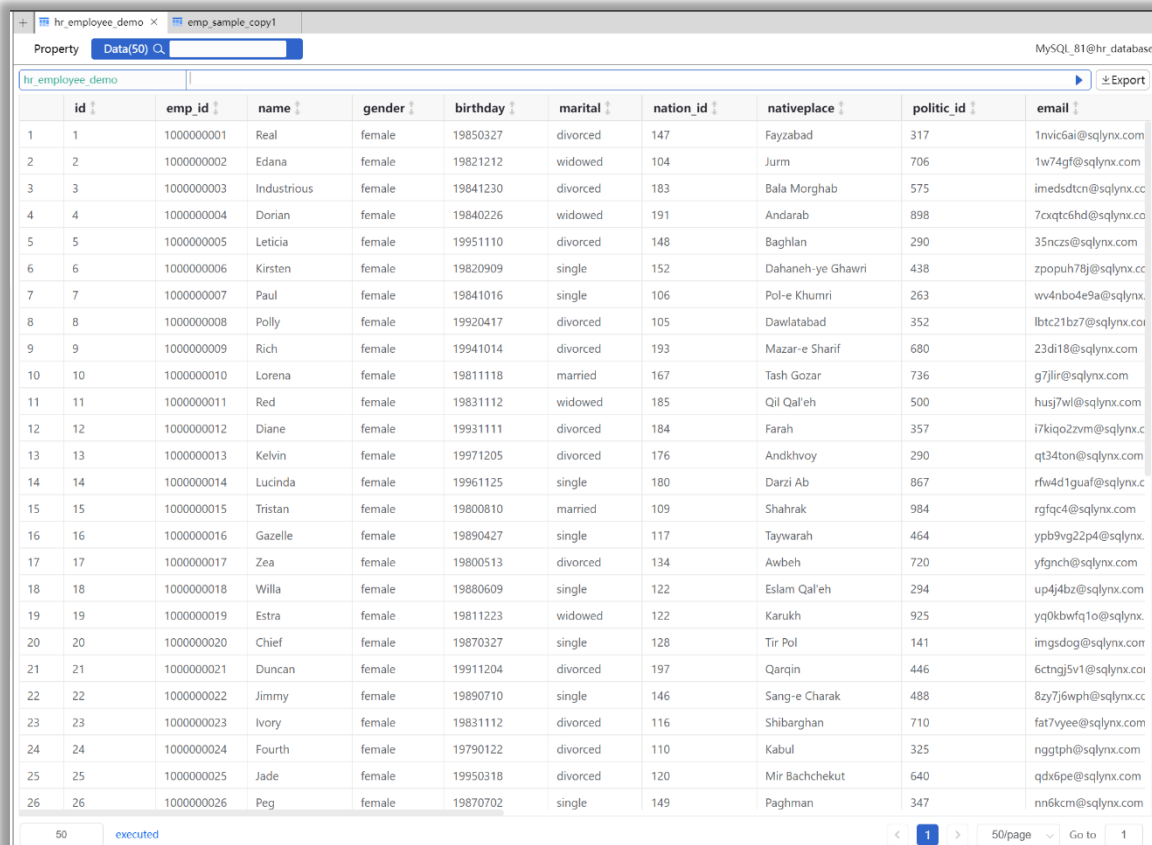
You can right-click in the blank space, select 'Add',

In the popup window, input data according to the configured columns, and execute.




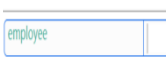

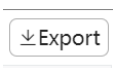
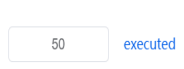
| id | firstname | gender | department | position | salary |
|----|-----------|--------|------------|----------|--------|
|----|-----------|--------|------------|----------|--------|

2. Data exists in the table



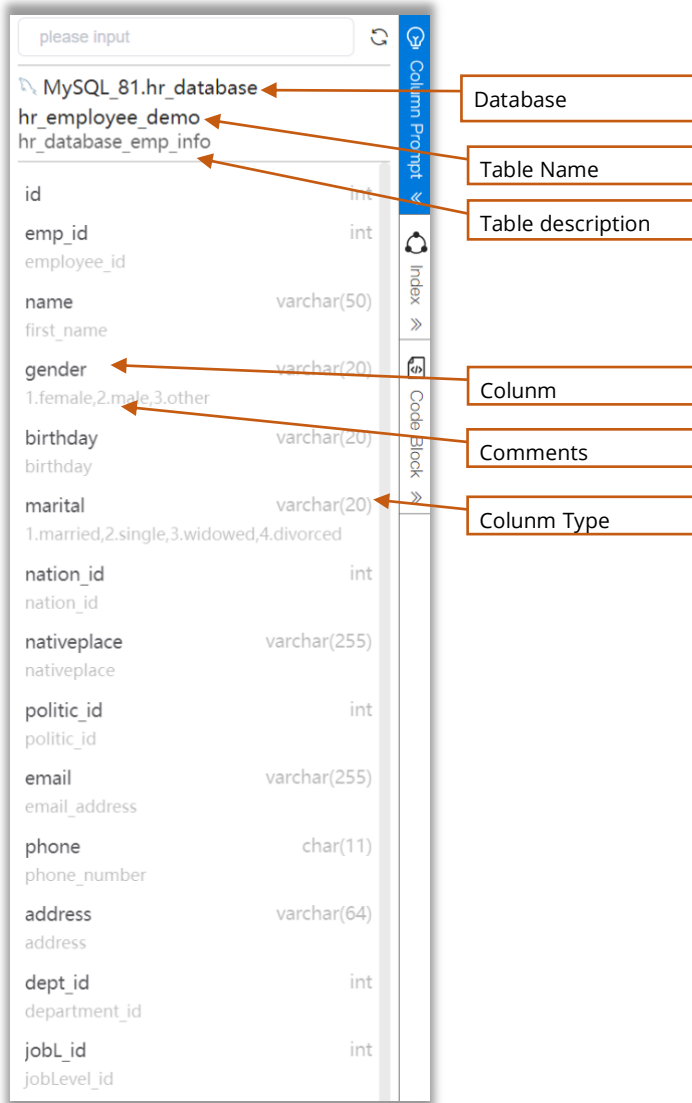
| | id | emp_id | name | gender | birthday | marital | nation_id | nativeplace | politic_id | email |
|----|----|-----------|-------------|--------|----------|----------|-----------|-------------------|------------|----------------------|
| 1 | 1 | 100000001 | Real | female | 19850327 | divorced | 147 | Fayzabad | 317 | 1nvc6ai@sqlynx.com |
| 2 | 2 | 100000002 | Edana | female | 19821212 | widowed | 104 | Jurm | 706 | 1w74gf@sqlynx.com |
| 3 | 3 | 100000003 | Industrious | female | 19841230 | divorced | 183 | Bala Morghab | 575 | imesdtdcn@sqlynx.cc |
| 4 | 4 | 100000004 | Dorian | female | 19840226 | widowed | 191 | Andarab | 898 | 7cxqtc6hd@sqlynx.co |
| 5 | 5 | 100000005 | Leticia | female | 19951110 | divorced | 148 | Baghlan | 290 | 35nczs@sqlynx.com |
| 6 | 6 | 100000006 | Kirsten | female | 19820909 | single | 152 | Dahaneh-ye Ghawri | 438 | zpopuh78j@sqlynx.cc |
| 7 | 7 | 100000007 | Paul | female | 19841016 | single | 106 | Pol-e Khumri | 263 | wv4nb04e9a@sqlynx. |
| 8 | 8 | 100000008 | Polly | female | 19920417 | divorced | 105 | Dawlatabad | 352 | lbt21bz7@sqlynx.coi |
| 9 | 9 | 100000009 | Rich | female | 19941014 | divorced | 193 | Mazar-e Sharif | 680 | 23di18@sqlynx.com |
| 10 | 10 | 100000010 | Lorena | female | 19811118 | married | 167 | Tash Gozar | 736 | g7jllr@sqlynx.com |
| 11 | 11 | 100000011 | Red | female | 19831112 | widowed | 185 | Qil Qal'eh | 500 | husj7wl@sqlynx.com |
| 12 | 12 | 100000012 | Diane | female | 19931111 | divorced | 184 | Farah | 357 | i7kiko2zvm@sqlynx.c |
| 13 | 13 | 100000013 | Kelvin | female | 19971205 | divorced | 176 | Andkhvoy | 290 | qt34ton@sqlynx.com |
| 14 | 14 | 100000014 | Lucinda | female | 19961125 | single | 180 | Darzi Ab | 867 | rffw4d1gua@sqlynx.c |
| 15 | 15 | 100000015 | Tristan | female | 19800810 | married | 109 | Shahrak | 984 | rgfac4@sqlynx.com |
| 16 | 16 | 100000016 | Gazelle | female | 19890427 | single | 117 | Taywarah | 464 | yfb9vg22p4@sqlynx. |
| 17 | 17 | 100000017 | Zea | female | 19800513 | divorced | 134 | Awbeh | 720 | yfgnch@sqlynx.com |
| 18 | 18 | 100000018 | Willa | female | 19880609 | single | 122 | Eslam Qal'eh | 294 | up4j4bz@sqlynx.com |
| 19 | 19 | 100000019 | Estra | female | 19811223 | widowed | 122 | Karukh | 925 | yo0kbfwq1o@sqlynx. |
| 20 | 20 | 100000020 | Chief | female | 19870327 | single | 128 | Tir Pol | 141 | imgsdog@sqlynx.com |
| 21 | 21 | 100000021 | Duncan | female | 19911204 | divorced | 197 | Qarqin | 446 | 6ctngj5v1@sqlynx.coi |
| 22 | 22 | 100000022 | Jimmy | female | 19890710 | single | 146 | Sang-e Charak | 488 | 8zy7j6wph@sqlynx.cc |
| 23 | 23 | 100000023 | Ivory | female | 19831112 | divorced | 116 | Shibarghan | 710 | fat7yee@sqlynx.com |
| 24 | 24 | 100000024 | Fourth | female | 19790122 | divorced | 110 | Kabul | 325 | nggtph@sqlynx.com |
| 25 | 25 | 100000025 | Jade | female | 19950318 | divorced | 120 | Mir Bachchekut | 640 | qdx6pe@sqlynx.com |
| 26 | 26 | 100000026 | Peg | female | 19870702 | single | 149 | Paghman | 347 | mn6kcm@sqlynx.com |

| # | Location | Function | Description |
|---|----------|----------|-------------|
|---|----------|----------|-------------|

| | | | |
|---|---|---------------------|--|
| 1 |  | Full-text Search | Click the magnifying glass icon on the right side of the "Data" tab to perform a full-text search on the current sample data. |
| 2 |  | Data Filter | Allows filtering of current sample data. Enter statement conditions in the blank box on the right side and click the execute button on the far right, such as: gender='F'. After execution, all data with the value 'F' will be displayed. |
| 3 |  | Sort | Clicking on the gray arrow located to the right of the column name allows you to sort the current sample data in ascending or descending order. |
| 4 |  | Export | Export the data of the current table to the local device. Refer to section 2.2.1.4 "Object Operations - Table - Context menu - Export Data" . |
| 5 |  | Rows of sample data | Located at the bottom left corner of the data viewer, the default number of rows displayed is 50. Users can manually input any number as needed. After modification, click on the "Execute" button on the right side. |

2.2.2.2 Prompt Pane

Located on the right side of the main window, this area displays detailed column information for tables, including column names, comments, and column types. The table column prompt pane is usually hidden. When open the query window, double-clicking on any table name or right-clicking and selecting "Open Column Prompt" will display it.



The screenshot shows the 'Column Prompt' window in SQLYNX. The window displays a list of columns for the table 'hr_database_emp_info' in the 'hr_employee_demo' database. The columns and their data types are listed as follows:

| Column Name | Column Type |
|---|--------------|
| id | int |
| emp_id | int |
| employee_id | |
| name | varchar(50) |
| first_name | |
| gender | varchar(20) |
| 1.female,2.male,3.other | |
| birthday | varchar(20) |
| birthday | |
| marital | varchar(20) |
| 1.married,2.single,3.widowed,4.divorced | |
| nation_id | int |
| nation_id | |
| nativeplace | varchar(255) |
| nativeplace | |
| politic_id | int |
| politic_id | |
| email | varchar(255) |
| email_address | |
| phone | char(11) |
| phone_number | |
| address | varchar(64) |
| address | |
| dept_id | int |
| department_id | |
| jobL_id | int |
| jobLevel_id | |

Callouts in the image point to the following elements:

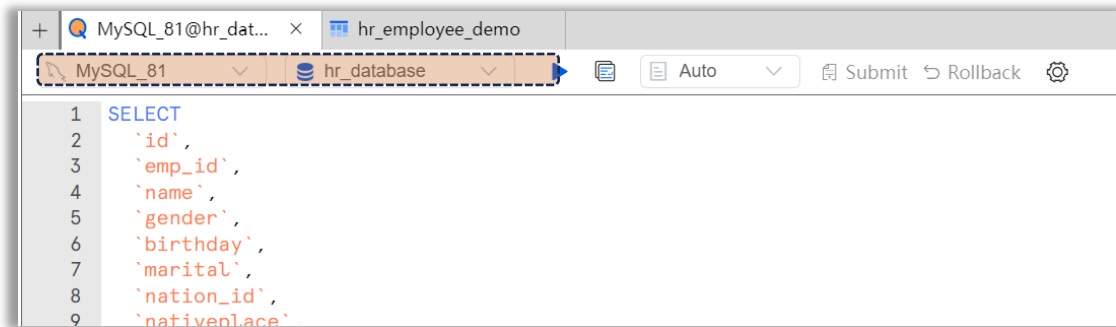
- Database:** MySQL_81.hr_database
- Table Name:** hr_employee_demo
- Table description:** hr_database_emp_info
- Column:** gender
- Comments:** 1.female,2.male,3.other
- Column Type:** varchar(20)





2.2.3 SQL Editor

Located in the middle of the main window, it is usually hidden but will be displayed after creating a new query, revealing the SQL editor page.

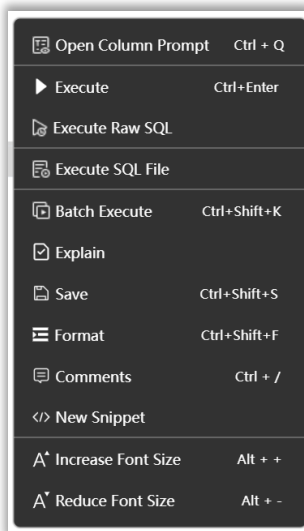
1. Top shortcuts of the SQL editor

Two dropdown boxes below the tabs indicate the current database path information of the SQL editor.



| # | Location | Description |
|---|--|--|
| 1 |  Execute | Quick execution defaults to returning 1000 query results. *The row count can be modified in the "default row count limit" settings. |
| 2 |  Format | One-click formatting of SQL statements for easy readability and inspection. |
| 3 |  Transaction | SQL transaction functionality allows toggling between automatic and transaction commit. |
| 4 |  Settings | These settings are only effective for the current query and can be adjusted for "Default Row Count Limit" and "Max Row Count Limit". Users can choose to keep connection to the current database. |

2. Context Menu



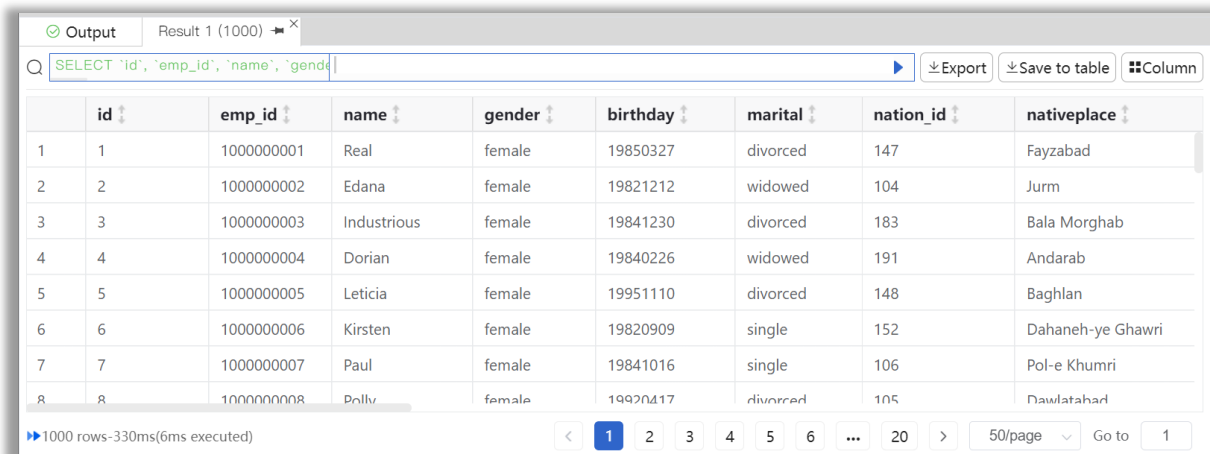
| # | Function | Description |
|---|--------------------|---|
| 1 | Open Column Prompt | Selecting the table name text, and clicking opens column prompt, which brings up the corresponding table's column prompt page on the right screen. |
| 2 | Execute | Quick execution defaults to returning 1000 query results. (Parameter modifications refer to Section 2.6.2.1 Data Settings) |
| 3 | Execute Raw SQL | Execution of Original SQL Statements in the Editing Box. By default, the max row count is set to 10000. (Parameter modifications refer to Section 2.6.2.1 Data Settings) |
| 4 | Execute SQL File | Select and Execute Local SQL Files. |
| 5 | Batch Execute | Execute SQL statements in batches. |
| 6 | Explain | Perform performance analysis on current SQL statements for optimization. |

| | | |
|----|---------------------------|--|
| 7 | Save | Save frequently used SQL statements, with options to copy, modify, or delete. |
| 8 | Format | One-click formatting of SQL statements for readability and inspection. |
| 9 | Comments | Add comments. |
| 10 | New Snippet | Create habitual code blocks, with options to set indexes. Index names can be intelligently prompted in editor status. (All created code blocks can be queried in the personal center.) |
| 11 | Increase/Reduce Font Size | Customize the font size of the SQL editor, which is only valid for the current query window created. |

2.2.4 Data Viewer



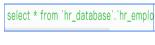

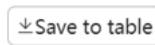

2.2.4.1 Query Result

1. The Data Viewer is located at the bottom center of the main window and displays query results. Double-clicking on the tab name supports full-screen display.

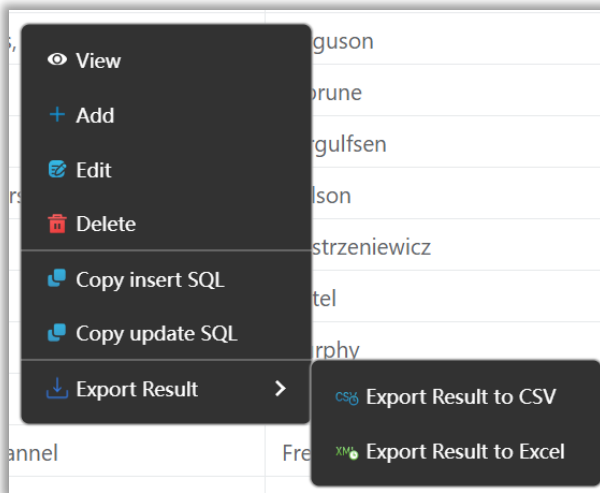


| | id | emp_id | name | gender | birthday | marital | nation_id | nativeplace |
|---|----|------------|-------------|--------|----------|----------|-----------|-------------------|
| 1 | 1 | 1000000001 | Real | female | 19850327 | divorced | 147 | Fayzabad |
| 2 | 2 | 1000000002 | Edana | female | 19821212 | widowed | 104 | Jurm |
| 3 | 3 | 1000000003 | Industrious | female | 19841230 | divorced | 183 | Bala Morghab |
| 4 | 4 | 1000000004 | Dorian | female | 19840226 | widowed | 191 | Andarab |
| 5 | 5 | 1000000005 | Leticia | female | 19951110 | divorced | 148 | Baghlan |
| 6 | 6 | 1000000006 | Kirsten | female | 19820909 | single | 152 | Dahaneh-ye Ghawri |
| 7 | 7 | 1000000007 | Paul | female | 19841016 | single | 106 | Pol-e Khumri |
| 8 | 8 | 1000000008 | Dolly | female | 19920417 | divorced | 105 | Dawlatahar |

| # | Location | Function | Description |
|---|----------|----------|-------------|
|---|----------|----------|-------------|

| | | | |
|---|---|------------------|--|
| 1 |  | Output Log | Viewing the output log of query result. |
| 2 |  | Full-text Search | Click on the magnifying glass icon, in the search box, you can perform full-text search on the current query result . |
| 3 |  | Data Filter | You can filter the current query result by entering statement conditions in the blank box on the right side, and then click on the execute button on the far right, for example: gender='F'. After execution, all data values for 'F' will be displayed. |
| 4 |  | Export | Export all data under the current query statement to the local computer. CSV and Excel formats are supported. |
| 5 |  | Save to Table | Save the data of the current query result to another table. The operation is the same as "Data Migration." |
| 5 |  | Sort | Clicking on the gray arrow located to the right of the column name allows you to sort the current sample data in ascending or descending order. |

2. Context Menu

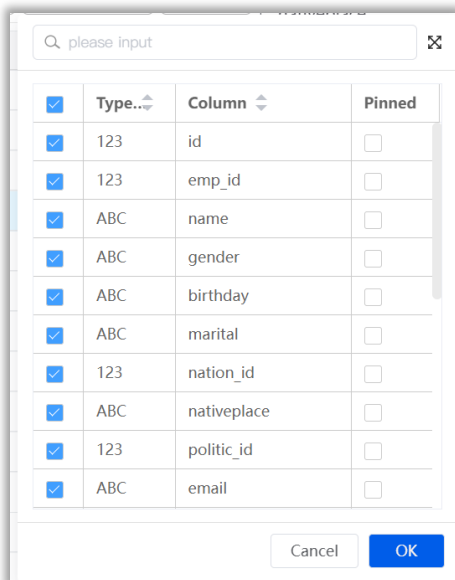


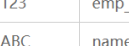



| # | Function | Description |
|---|-----------------|--|
| 1 | View | Viewing the currently selected single row data, but it cannot be modified in view mode. |
| 2 | Add | Inserting single row data into the current table. |
| 3 | Edit | Modifying the currently selected single row data, only applicable for single table queries. |
| 4 | Delete | Deleting the currently selected single row data. |
| 5 | Copy insert SQL | Automatically generating INSERT SQL statements, where the inserted values default to the current selected single row data values. You can copy this SQL statement and paste it directly into the SQL editor for editing and use. |
| 6 | Copy Update SQL | Automatically generating UPDATE SQL statements, where the updated values default to the current selected single row data values. You can copy this SQL statement and paste it directly into the SQL editor for editing and use. |

| | | |
|---|---------------|---|
| 7 | Export Result | Exporting the query result set returned by the current web page to the local computer. CSV and Excel formats are supported. |
|---|---------------|---|

3. Column Operations

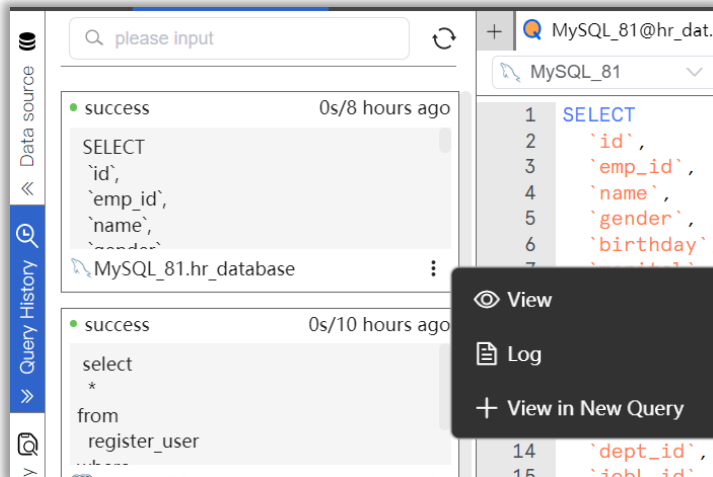
Located at the top right corner of the data viewer, it allows operations such as searching, filtering, sorting, and pinning all columns of the current query result.



| # | Location | Description |
|---|---|---|
| 1 |  | Search for columns within the current table |
| 2 |  | Sort in ascending or descending order |
| 3 |  | Toggle the checkbox to show/hide the columns you want to view |
| 4 |  | Checked columns can be pinned to the leftmost position. |

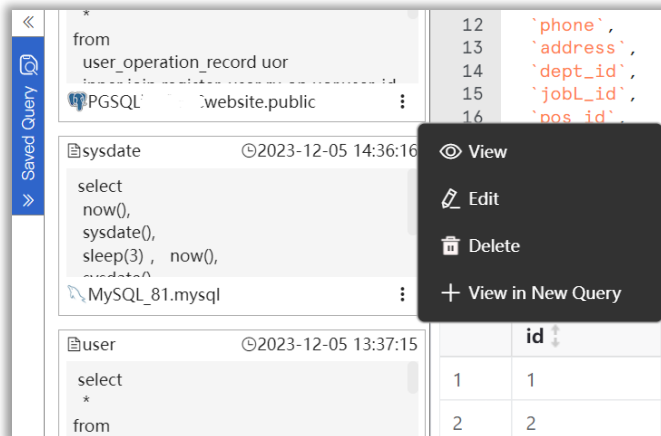
2.2.4.2 Query History

Display the query history executed by the current user. Users can retrieve historical query statements, view the statements, view the logs, or open them in a new window.



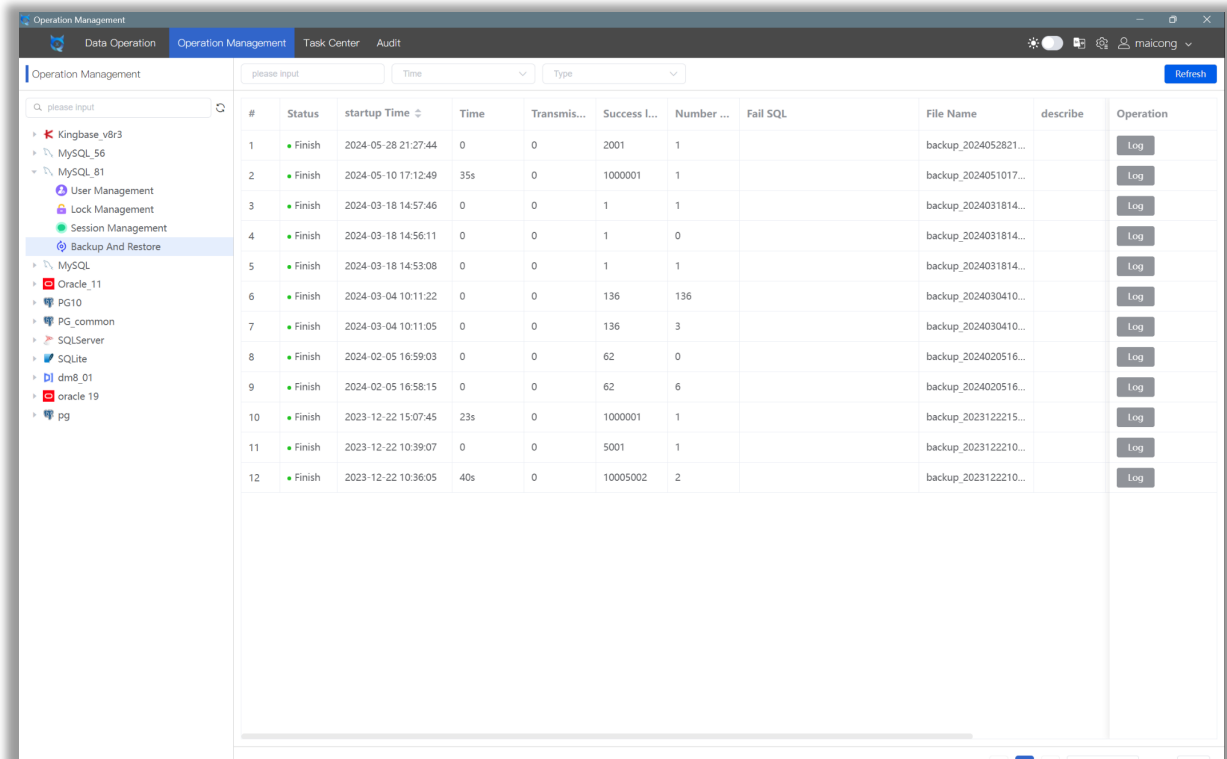
2.2.4.3 Saved Query

Display the commonly used query statements saved by the current user. Users can retrieve saved statements, view, edit, delete, or open them in a new window.



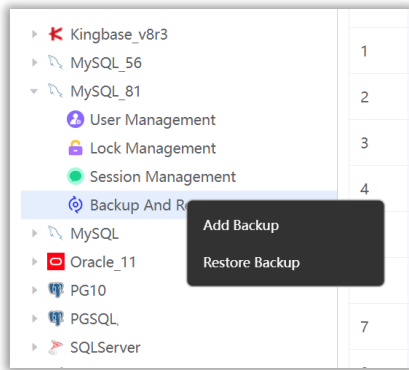
2.3 Operation Management

View user management, lock management, and session management information for the configured data sources. Perform database backup and restoration.



2.3.1 Backup and Restore

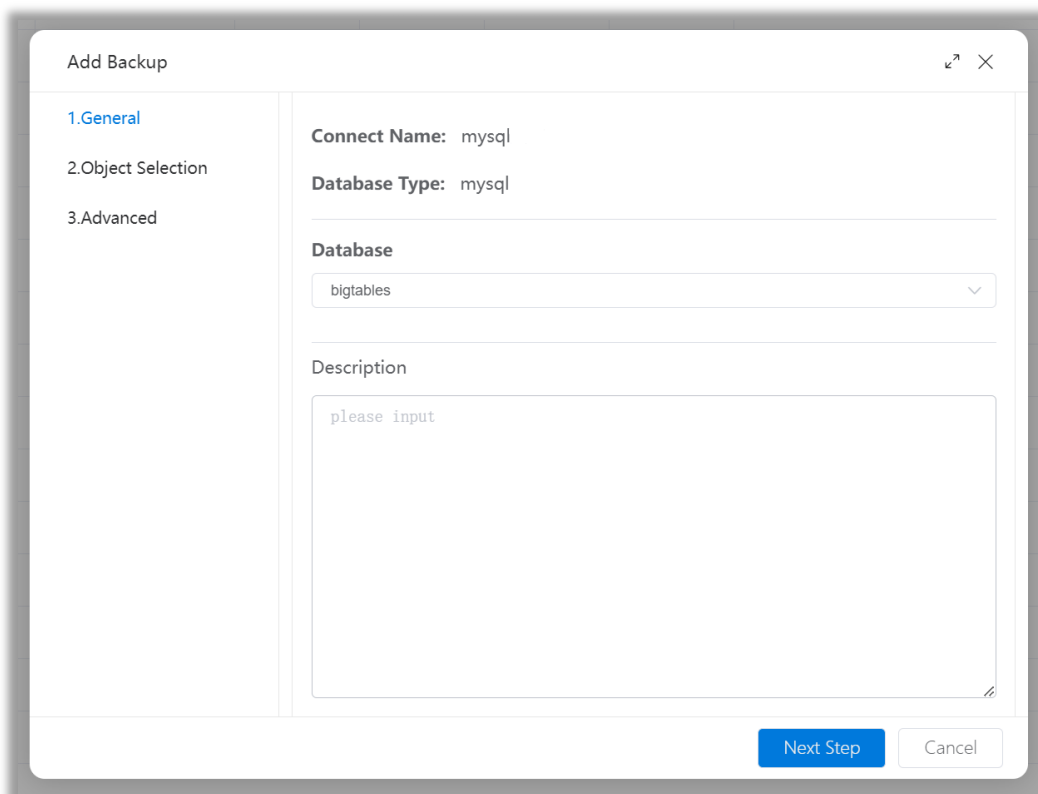
| # | Function | Description |
|---|------------|---|
| 1 | Add Backup | Backup the data from the currently selected database to a local SQL file. |



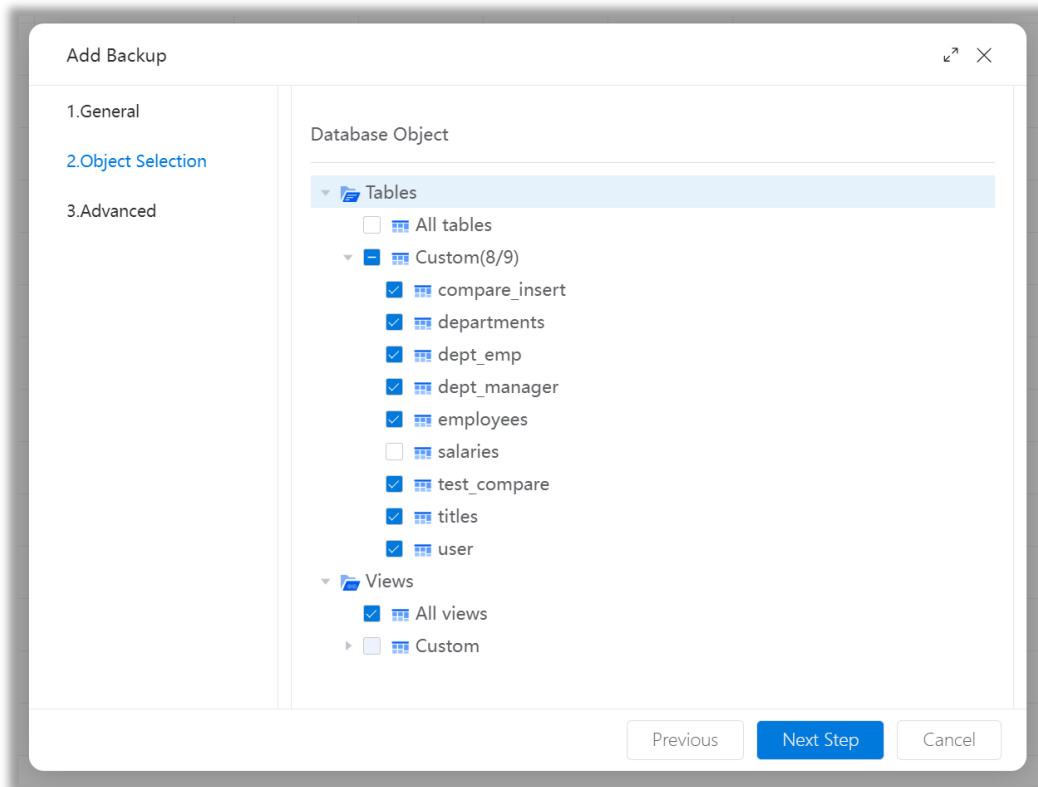
| | | |
|---|----------------|---|
| 2 | Restore Backup | Restore the data from the backup SQL file to the selected database. |
|---|----------------|---|

2.3.1.1 Add Backup

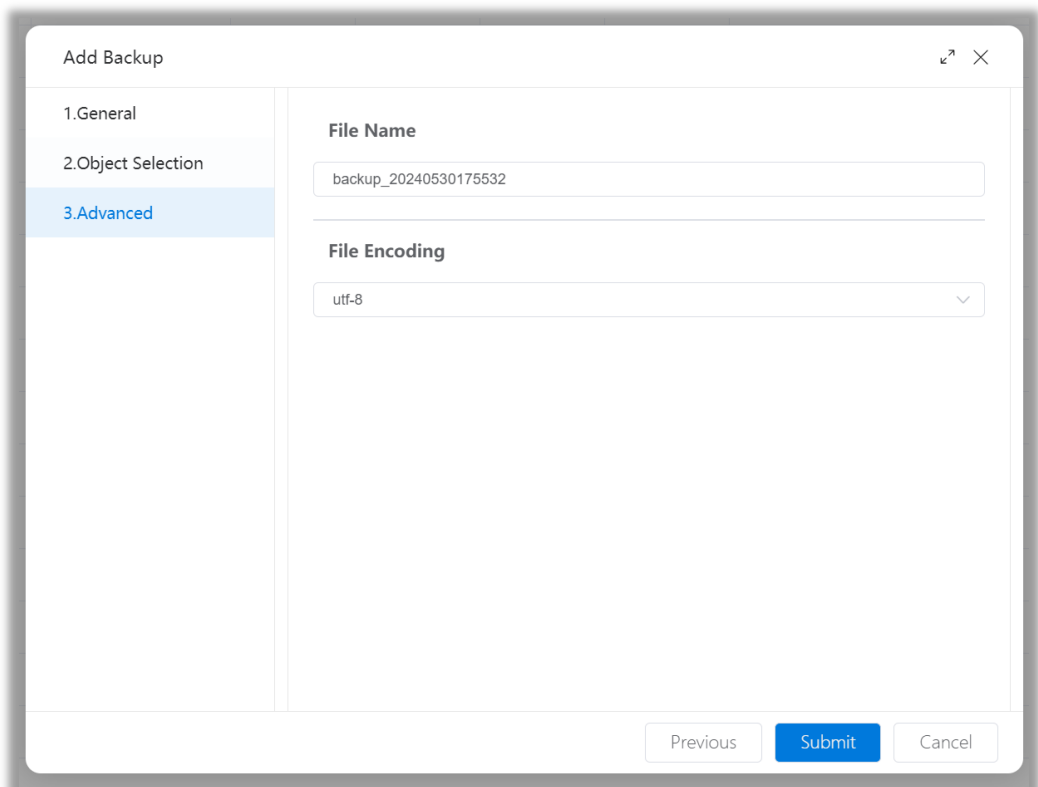
Right-click on the menu and select the "Add Backup" function, then choose the database you want to backup.



You can either select all tables in the database or choose specific tables to backup by customizing your selection.

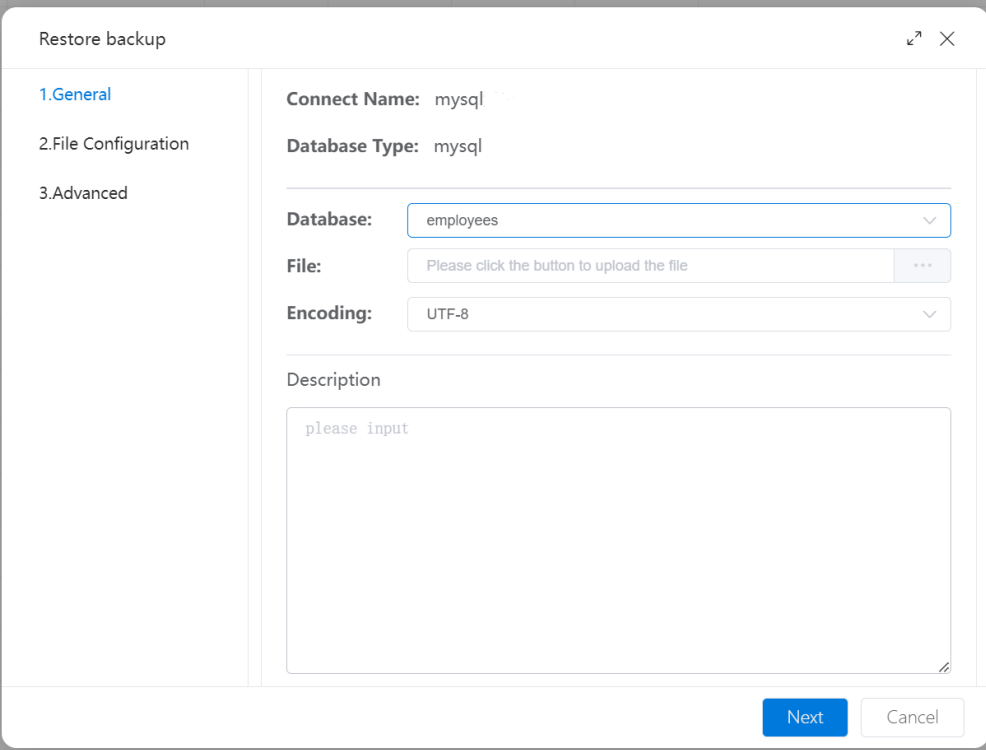


Set the filename and encoding for the backup SQL file, then click "Submit".



2.3.1.2 Restore Backup

Right-click on the menu and select the restore backup function, then choose the local backup SQL file.

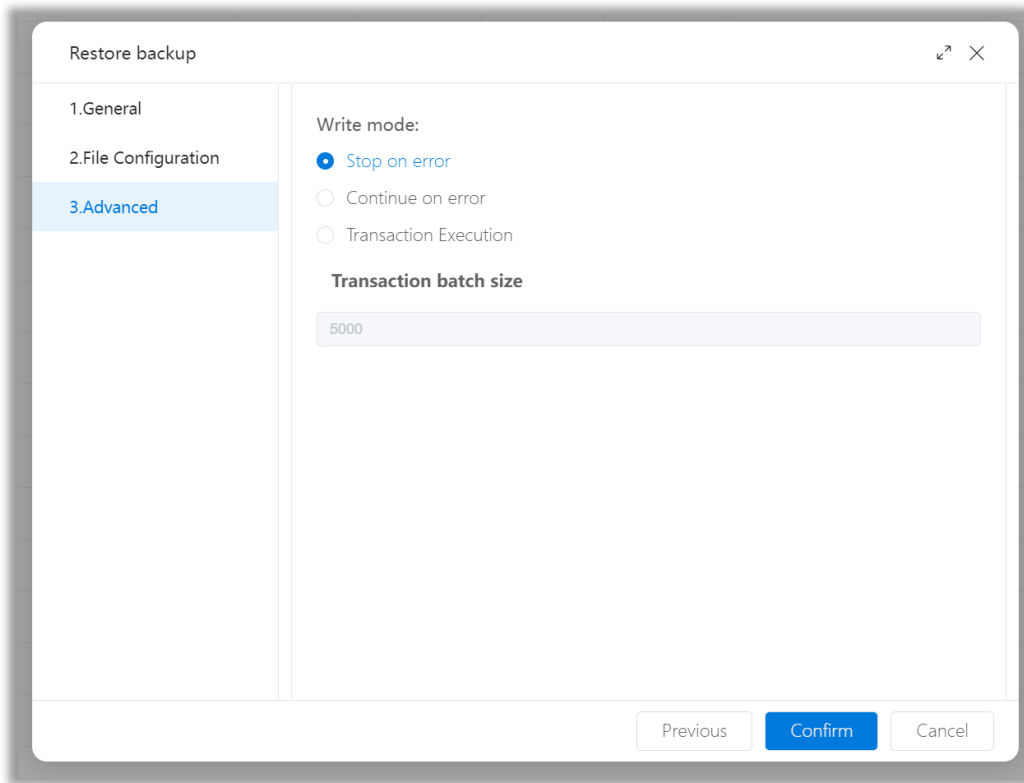


The screenshot shows a "Restore backup" dialog box with the following fields and options:

- Connect Name:** mysql
- Database Type:** mysql
- Database:** employees
- File:** Please click the button to upload the file
- Encoding:** UTF-8
- Description:** please input

Buttons at the bottom right: Next, Cancel

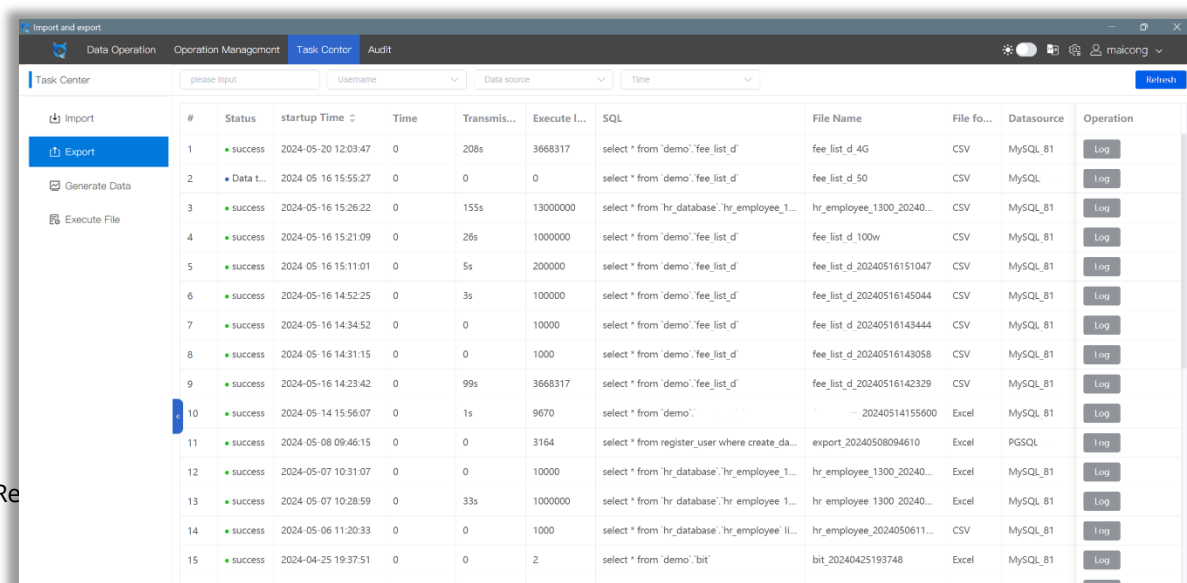
Select whether the restore operation requires transaction execution, and then click "Confirm".



2.4 Task Center

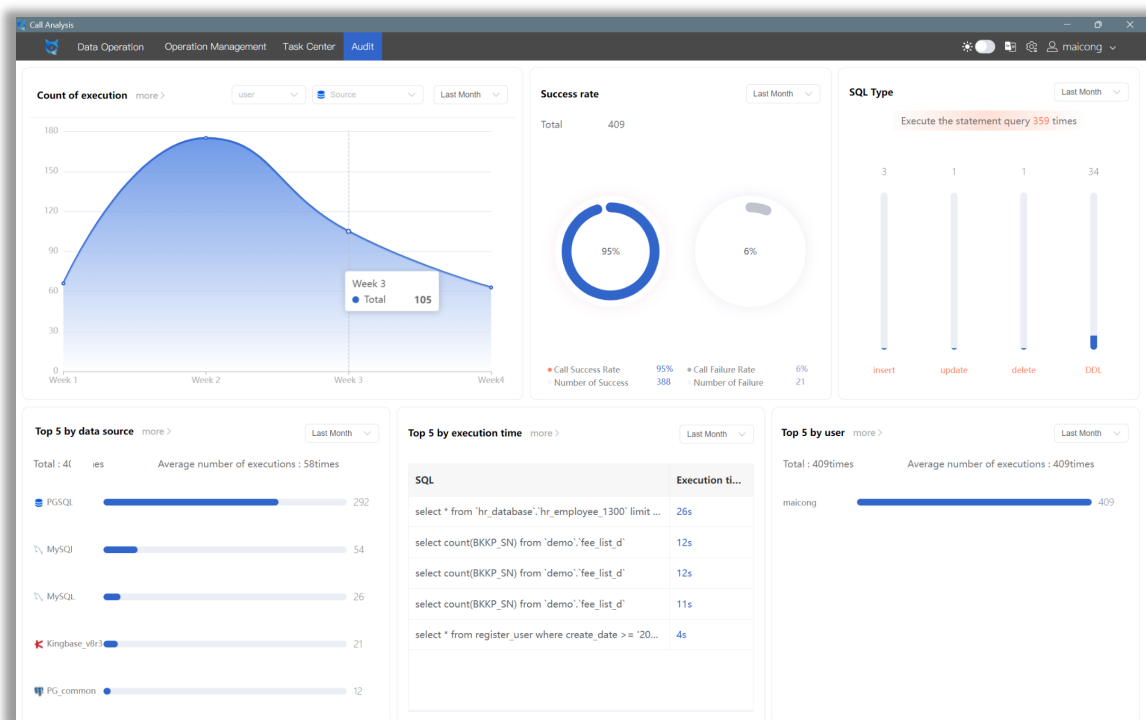
The "Task Center" in the top main menu records user behavior logs related to data import, data export, and generation test data.

If the data generation process takes too long due to a large amount of data being generated, or if there is a need to terminate the data generation operation, you can click on the "Terminate" option in the rightmost action column of the corresponding record in the Task Center to stop the SQL execution operation.

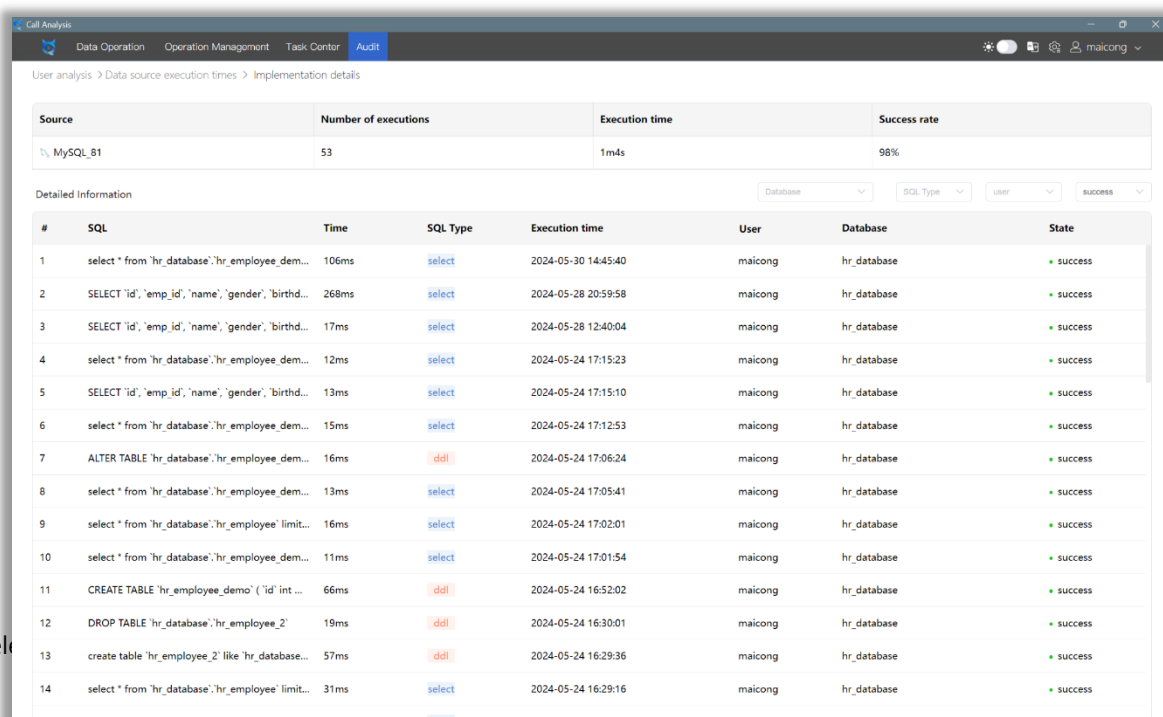


2.5 Audit

Based on operation logs, user behavior records can be automatically analyzed to generate corresponding data visualization charts based on dimensions such as execution frequency, success rate, SQL type, classification by data source, classification by execution time, and classification by operating user.



Clicking on "More" allows you to view detailed operation data and filter for export.

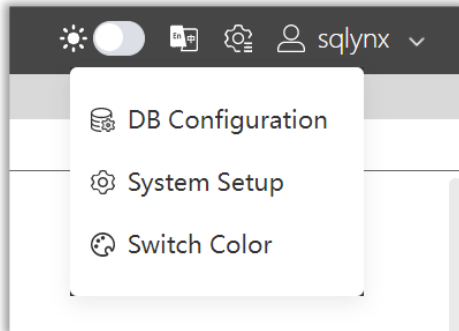







The screenshot shows the 'Detailed Information' view of the audit data, displaying a table of individual SQL executions with various filters and columns.

| # | SQL | Time | SQL Type | Execution time | User | Database | State |
|----|--|-------|----------|---------------------|---------|-------------|---------|
| 1 | select * from 'hr_database','hr_employee_dem... | 106ms | select | 2024-05-30 14:45:40 | maicong | hr_database | success |
| 2 | SELECT id,"emp_id","name","gender","birthd... | 268ms | select | 2024-05-28 20:59:58 | maicong | hr_database | success |
| 3 | SELECT id,"emp_id","name","gender","birthd... | 17ms | select | 2024-05-28 12:40:04 | maicong | hr_database | success |
| 4 | select * from 'hr_database','hr_employee_dem... | 12ms | select | 2024-05-24 17:15:23 | maicong | hr_database | success |
| 5 | SELECT id,"emp_id","name","gender","birthd... | 13ms | select | 2024-05-24 17:15:10 | maicong | hr_database | success |
| 6 | select * from 'hr_database','hr_employee_dem... | 15ms | select | 2024-05-24 17:12:53 | maicong | hr_database | success |
| 7 | ALTER TABLE 'hr_database','hr_employee_dem... | 16ms | ddl | 2024-05-24 17:06:24 | maicong | hr_database | success |
| 8 | select * from 'hr_database','hr_employee_dem... | 13ms | select | 2024-05-24 17:05:41 | maicong | hr_database | success |
| 9 | select * from 'hr_database','hr_employee' limit... | 16ms | select | 2024-05-24 17:02:01 | maicong | hr_database | success |
| 10 | select * from 'hr_database','hr_employee_dem... | 11ms | select | 2024-05-24 17:01:54 | maicong | hr_database | success |
| 11 | CREATE TABLE 'hr_employee_demo' ('id' int ... | 66ms | ddl | 2024-05-24 16:52:02 | maicong | hr_database | success |
| 12 | DROP TABLE 'hr_database','hr_employee_2' | 19ms | ddl | 2024-05-24 16:30:01 | maicong | hr_database | success |
| 13 | create table 'hr_employee_2' like 'hr_database... | 57ms | ddl | 2024-05-24 16:29:36 | maicong | hr_database | success |
| 14 | select * from 'hr_database','hr_employee' limit... | 31ms | select | 2024-05-24 16:29:16 | maicong | hr_database | success |

2.6 System Setup

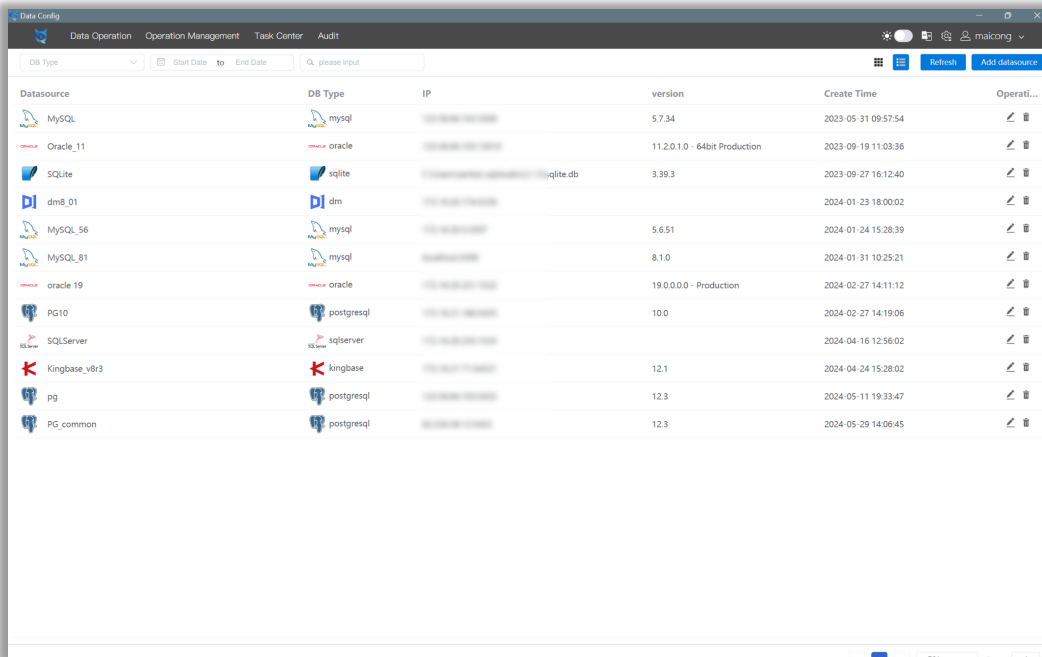
Located on the top-right corner of the main menu, here you can operate the system settings for SQLynx.



| # | Location | Description |
|---|---|--|
| 1 |  | Switch system mode between light/dark mode |
| 2 |  | Switch between displaying system menus in Chinese or English |
| 3 |  | Configuration operations for data sources |
| 4 |  | System displays data, font size, and other global parameter settings |
| 5 |  | Switch theme color |

2.6.1 Data Configuration

You can view, add, modify, and delete data sources in SQLynx.

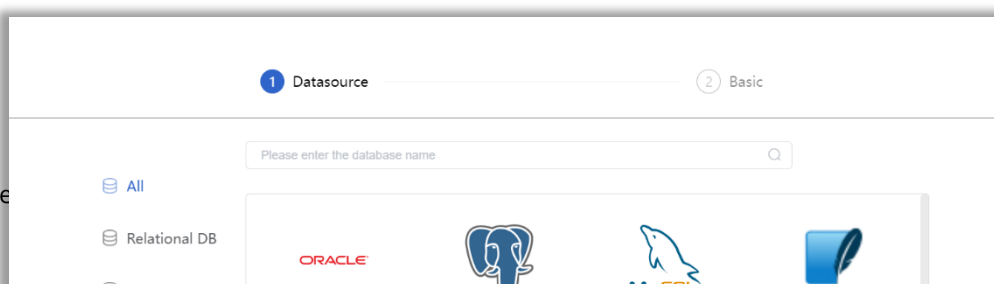


| Datasource | DB Type | IP | version | Create Time | Operati... |
|---------------|------------|----|-------------------------------|---------------------|------------|
| MySQL | mysql | | 5.7.34 | 2023-05-31 09:57:54 | |
| Oracle_11 | oracle | | 11.2.0.1.0 - 64bit Production | 2023-09-19 11:03:36 | |
| SQLite | sqlite | | 3.39.3 | 2023-09-27 16:12:40 | |
| dms_01 | dms | | | 2024-01-23 18:00:02 | |
| MySQL_56 | mysql | | 5.6.51 | 2024-01-24 15:28:39 | |
| MySQL_81 | mysql | | 8.1.0 | 2024-01-31 10:25:21 | |
| oracle 19 | oracle | | 19.0.0.0.0 - Production | 2024-02-27 14:11:12 | |
| PG10 | postgresql | | 10.0 | 2024-02-27 14:19:06 | |
| SQLServer | sqlserver | | | 2024-04-16 12:56:02 | |
| Kingbase_v8r3 | kingbase | | 12.1 | 2024-04-24 15:28:02 | |
| pg | postgresql | | 12.3 | 2024-05-11 19:33:47 | |
| PG_common | postgresql | | 12.3 | 2024-05-29 14:06:45 | |

1. Add Data source:

- Click on **"Add Data Source"**.
- In the guided popup window, select the appropriate database and click "Next."
- Enter the basic settings of the data source, such as the **business system name**, **data source address**, **port number**, **username**, and **password**.
- If more configuration is needed, click on **"Advanced Settings"** to replace the database driver version, character set, add connection properties, driver properties, etc.
- Click on **"Test" button**. If the test is successful, it means the data source can be added. If the test fails, please check if the data source and network connection are correct.

***Note:** For connection properties, driver properties, and other parameters, please refer to the JDBC documentation released by the added data source's official.

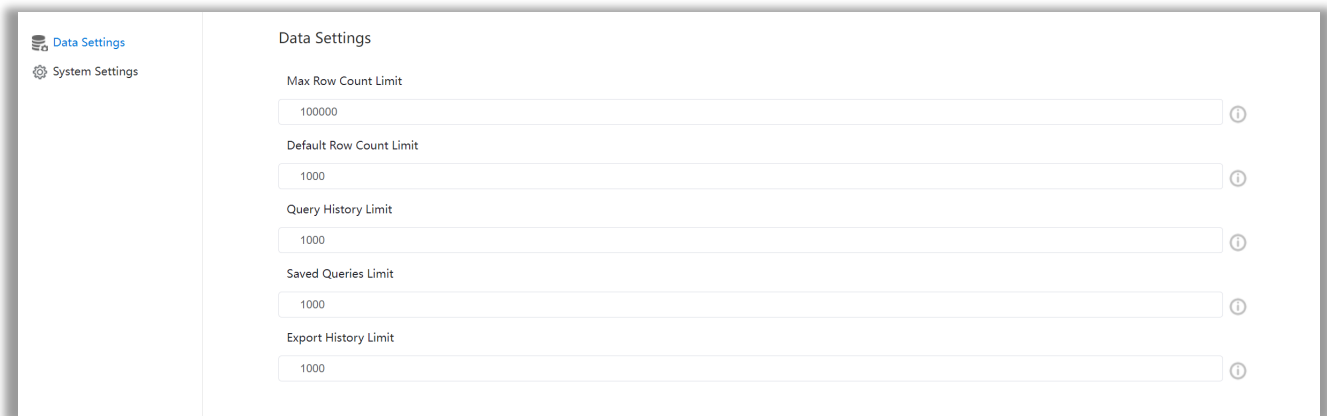


2.6.2 System Setup

You can adjust the settings for query results, JVM, and system theme according to the user's actual usage needs.

2.6.2.1 Data Settings

Based on the user's actual usage needs, you can modify the following data parameters.



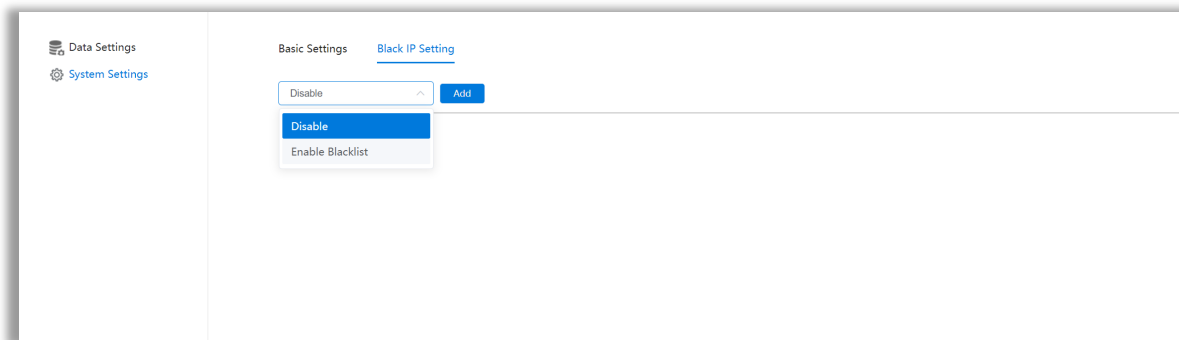
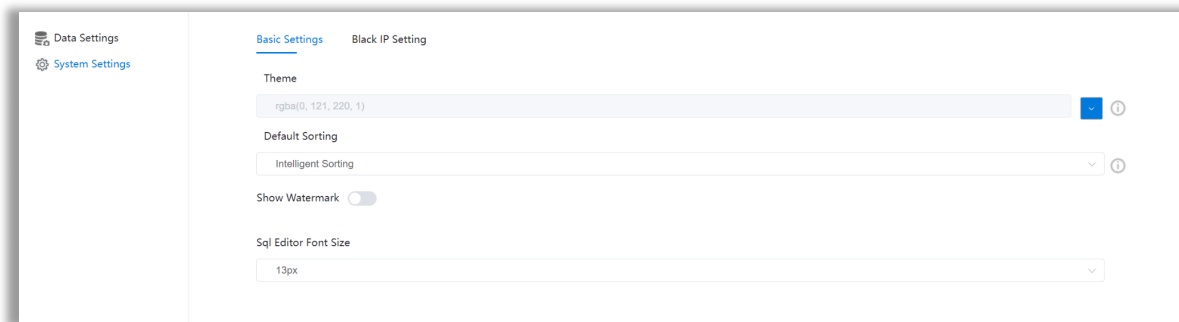
1. Modify to the desired numerical value.
2. After saving, return to the homepage (no need to restart SQLynx).

| # | Data Settings | Default | Description |
|---|-------------------------|---------|---|
| 1 | Max Row Count Limit | 10000 | The upper limit of max rows returned when executing query statements in SQLynx. |
| 2 | Default Row Count Limit | 1000 | The upper limit of default rows returned when using "Execute" to query. |
| 3 | Query History Limit | 1000 | The upper limit of query history logs saved in " Query History ". |
| 4 | Saved Queries Limit | 1000 | The upper limit of commonly used query statements saved in " Saved Query ". |

| | | | |
|---|----------------------|------|---|
| 5 | Export History Limit | 1000 | The upper limit of historical export data logs. |
|---|----------------------|------|---|

2.6.2.2 System Settings

According to the user's actual usage needs, you can modify the theme color and default sorting. After modification, save it without the need to restart SQLynx.



| # | System Settings | Default | Description |
|---|-----------------|---------------------|---|
| 1 | Theme | Color Parameters | Default theme color scheme, can be customized according to user preferences |
| 2 | Default Sorting | Intelligent Sorting | default sorting rule within SQLynx |

| | | | |
|---|-------------------------|---------|---|
| 3 | Show Watermark | Off | Option to toggle whether to display watermark |
| 4 | SQL Editor Font Size | 13px | Option to set the font size of the SQL editor (applies to all SQL editors) |
| 5 | Blacklist Setting | Disable | Option to enable or disable the blacklist feature |

2.6.3 Switch Theme

You can switch between the default orange, blue, and purple theme colors.

2.7 Account

2.7.1 My Profile

1. Modify Login Password

Click on "Settings" to modify the password in the pop-up window.

2. Saved SQL

Display the user's "Saved Queries" records, with options to modify, copy, or delete.

3. Snippets

Display the user's "Code Blocks" records, with options to modify or delete.

4. Preferences

Display the user's current theme color scheme and default sorting rules.

2.7.2 Support

SQLynx Official Website: <https://www.sqlynx.com>

2.7.3 Feedback

Send an email to [**service@sqlynx.com**](mailto:service@sqlynx.com) for assistance.

2.7.4 About Us

Display the SQLynx version, Java version, and server time currently in use by the user.

2.7.5 Sign Out

Sign out of the SQLynx account.

3. SQLynx Team

3.1 Startup

3.1.1 Windows Version

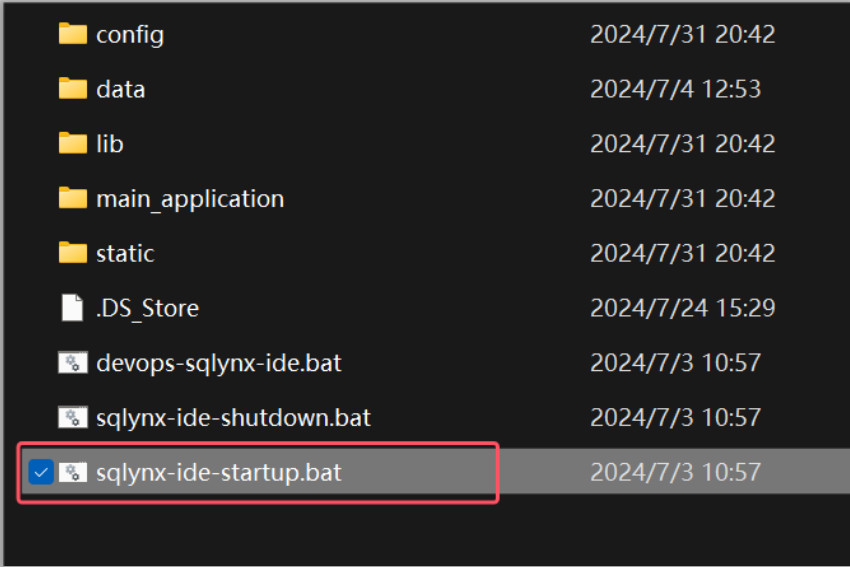
3.1.1.1 SQLynx Startup

1. Download and unzip the SQLynx package locally. After unzipping, a folder named 'sqlynx' will be created, navigate to its directory.



📁 sqlynx_win_no_jdk_3.5.0 2024/7/31 20:41

2. In the folder, double-click the “sqlynx-ide-startup.bat” file.

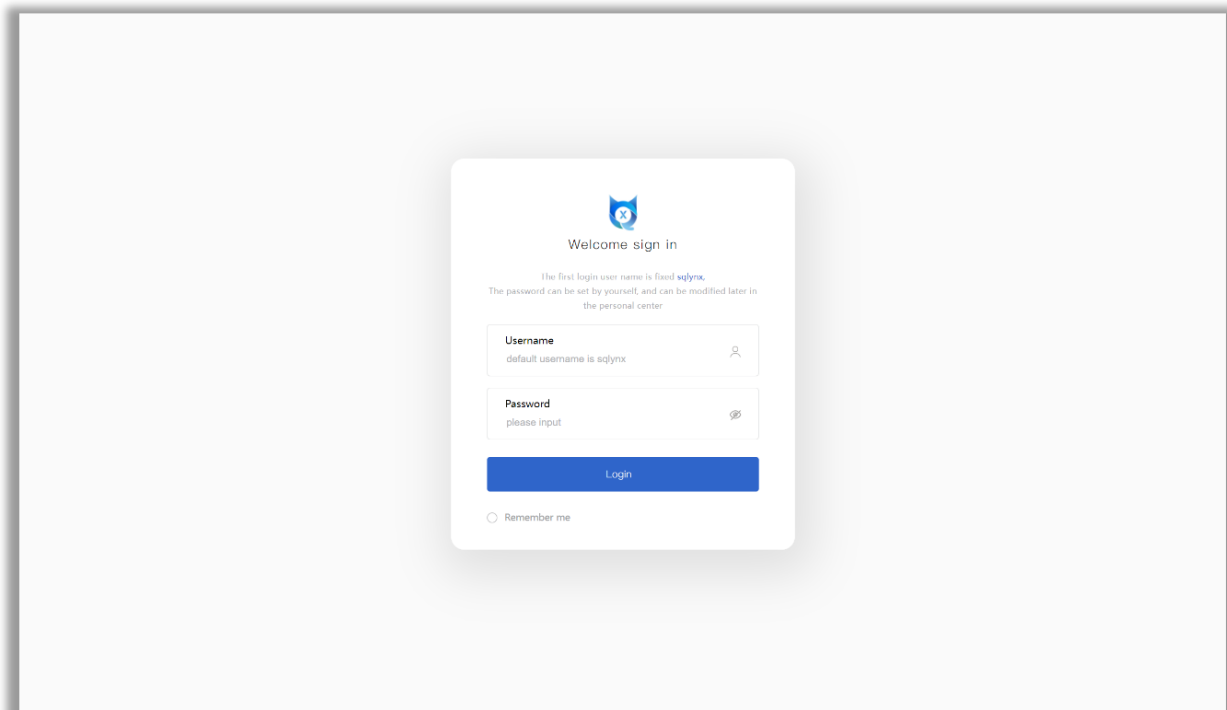


| | |
|--|-----------------|
| 📁 config | 2024/7/31 20:42 |
| 📁 data | 2024/7/4 12:53 |
| 📁 lib | 2024/7/31 20:42 |
| 📁 main_application | 2024/7/31 20:42 |
| 📁 static | 2024/7/31 20:42 |
| 📁 .DS_Store | 2024/7/24 15:29 |
| 🔗 devops-sqlynx-ide.bat | 2024/7/3 10:57 |
| 🔗 sqlynx-ide-shutdown.bat | 2024/7/3 10:57 |
| 🔗 <input checked="" type="checkbox"/> sqlynx-ide-startup.bat | 2024/7/3 10:57 |

3. After double-clicking the sqlynx-ide-startup.bat file, a command window will pop up.

```
sqlynx is loading, please wait...
SQLynx start Done
Press any key to continue...
```

4. The SQLynx login page will automatically open in your browser, indicating successful deployment. If it does not automatically redirect, manually launch your browser and navigate to `http://<server IP address>:18888`. The default port is 18888, which supports custom port number modification.

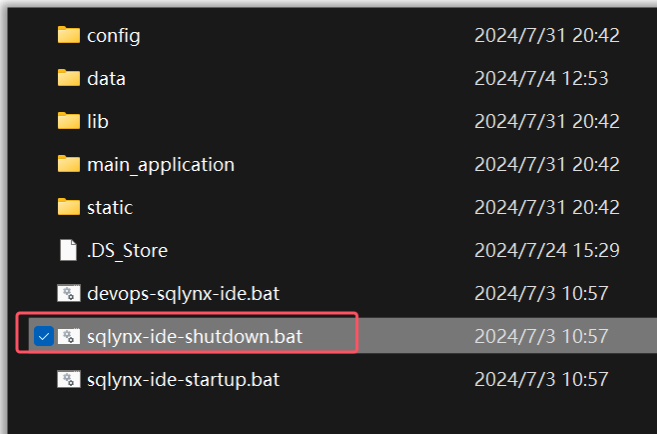


5. Log in with your username and password. The default username is **“sqlynx,”** and the initial password is set by the user input.

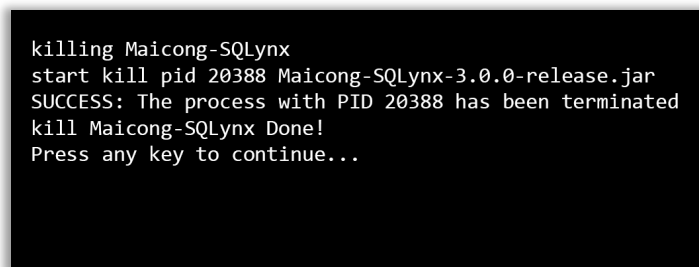
6. After logging in, **only the WEB client** of SQLynx is available; desktop client is not supported.

3.1.1.2 SQLynx Shutdown

1. Go to the sqlynx folder, double-click the **sqlynx-ide-shutdown.bat** file.



2. A command window will pop up, indicating the server has been shut down.



3.1.2 Linux Version

3.1.2.1 SQLynx Startup

1. Download the SQLynx package and unzip it to the current folder with the command

```
unzip <filename>
```

**Example: unzip sqlynx_enterprise_linux_no_jdk_3.5.0.zip*

```
root@localhost downloads % unzip sqlynx_enterprise_linux_no_jdk_3.5.0.zip
Archive:  sqlynx_enterprise_linux_no_jdk_3.5.0.zip
  creating: sqlynx/
  inflating: sqlynx/sqlynx-ide.sh
  inflating: sqlynx/devops-sqlynx-ide-3.5.0-release-jar-with-dependencies.jar
  creating: sqlynx/config/
  inflating: sqlynx/config/sqlynx.yaml
  creating: sqlynx/ext/
  inflating: sqlynx/ext/sdtype.jar
  inflating: sqlynx/ext/sdoapi.jar
  inflating: sqlynx/ext/sdoutl.jar
  inflating: sqlynx/ext/sdodep3prt.jar
  creating: sqlynx/dep_lib/
  inflating: sqlynx/dep-lib/jaxb-impl-2.2.3-1.jar
  inflating: sqlynx/dep-lib/druid-1.1.24.jar
  inflating: sqlynx/dep-lib/spring-boot-starter-test-2.6.7.jar
  inflating: sqlynx/dep-lib/jsonassert-1.5.0.jar
  inflating: sqlynx/dep-lib/jakarta.xml.binding-api-2.3.3.jar
  inflating: sqlynx/dep-lib/json-path-2.6.0.jar
  inflating: sqlynx/dep-lib/mongodb-driver-sync-4.9.0.jar
  inflating: sqlynx/dep-lib/spring-context-5.3.19.jar
  inflating: sqlynx/dep-lib/fastjson-1.2.83.jar
  inflating: sqlynx/dep-lib/assertj-core-3.21.0.jar
  inflating: sqlynx/dep-lib/hadoop-auth-2.7.3.jar
  inflating: sqlynx/dep-lib/httpcore-4.4.15.jar
  inflating: sqlynx/dep-lib/slf4j-api-1.7.36.jar
  inflating: sqlynx/dep-lib/junit-jupiter-5.8.2.jar
```

You can also unzip to a specific directory using the command

```
unzip <filename> -d <path>
```

If unzip is not installed, you can install it with the command

```
yum install -y unzip zip
```

2. After unzipping, a folder named 'sqlynx' will be created. Enter the directory with the

```
command cd sqlynx
```

```
root@localhost downloads % cd sqlynx
root@localhost sqlynx %
```

3. By running the ls command, you can see a file named **sqlynx-ide.sh** in the directory

```
root@localhost sqlynx % ls
SQLynx-ide-3.5.0-release.jar      devops-sqlynx-ide-3.5.0-release-jar-with-dependencies.jar
README_cn.md                     devops-sqlynx-ide.sh
README_en.md                     ext
config                           lib
data                             sqlynx-ide.sh
dep_lib                          static
```

4. Execute the command: `./sqlynx-ide.sh`

You will see the following prompt:

```
root@localhost sqlynx % ./sqlynx-ide.sh

*****
**                                     **
**      sqlynx-ide commands          **
**                                     **
*****
**      sh sqlynx-ide.sh start       **
**      sh sqlynx-ide.sh stop        **
**      sh sqlynx-ide.sh restart     **
*****
```

The three instructions displayed are:

[sh sqlynx-ide.sh start] Start service

[sh sqlynx-ide.sh stop] Out of service

[sh sqlynx-ide.sh restart] Restart service

5. Execute the command `sh sqlynx-ide.sh start` to start the service

```

root@localhost sqlynx % sh sqlynx-ide.sh start

          (M)         (S)
        (a)         (Q)
      (i)         (L)
    (n)         (Y)
  (g)         (N)
 (o)         (X)
(o)         (X)

sqlynx-ide server is starting
JAVA_OPTS:
-server
-Xms256m
-Xmx8g
-XX:+UseG1GC
-XX:+UseStringDeduplication
-Xloggc:./log/sqlynx-ide-gc.log
-XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=./log/sqlynx-ide-heapdump
-Dfile.encoding=utf-8

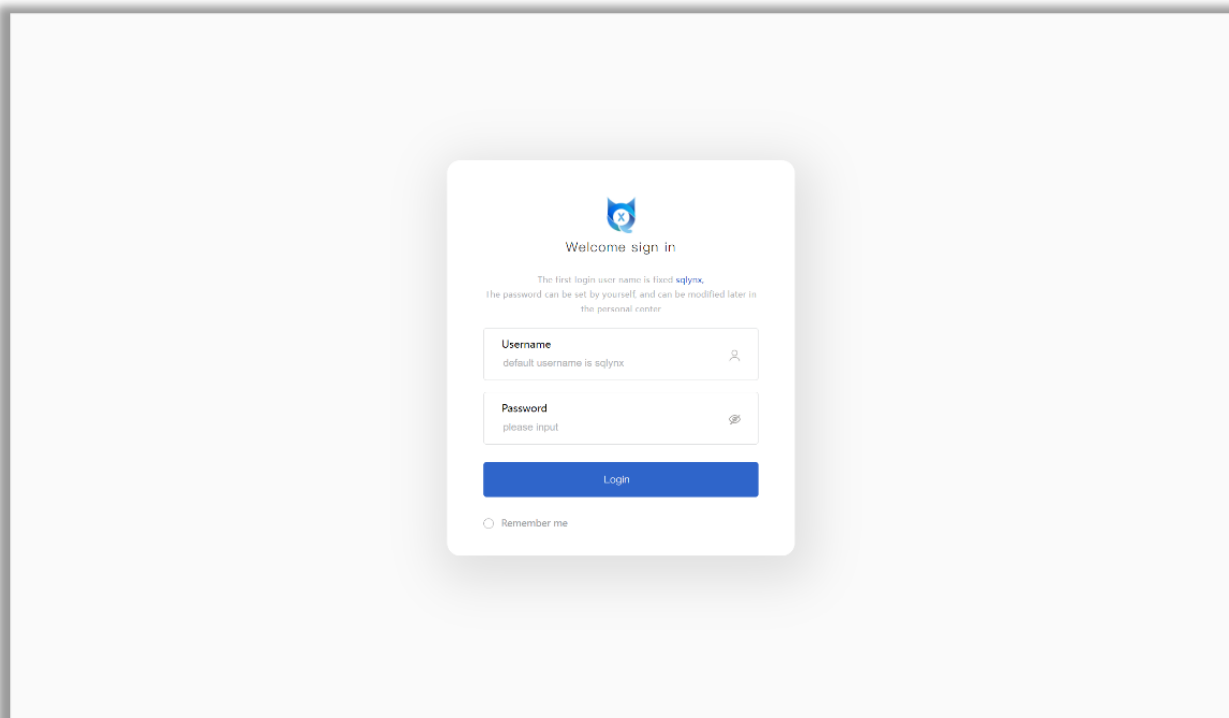
Please waiting start

sqlynx-ide server start complete

```

6. After starting, you can access the SQLynx web page by using a browser to navigate to `http://<server IP address>:18888`. The default port is 18888, and it supports customization.

The appearance of the login page indicates a successful installation of SQLynx.

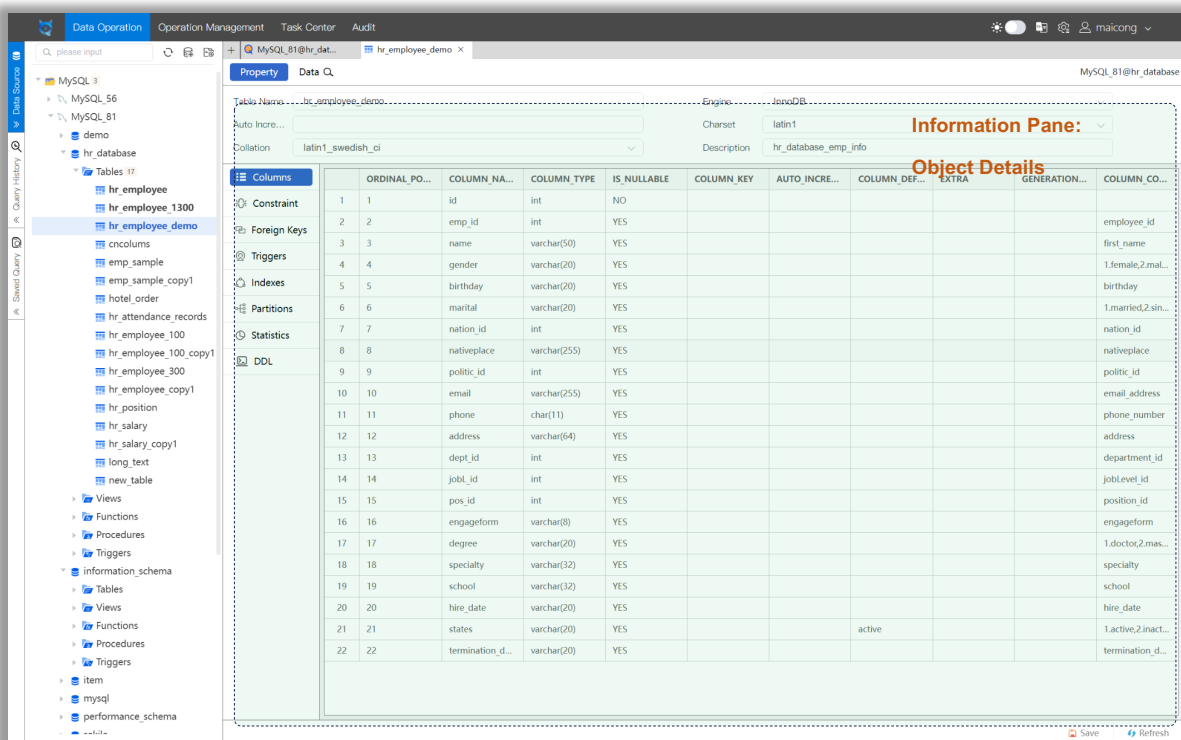
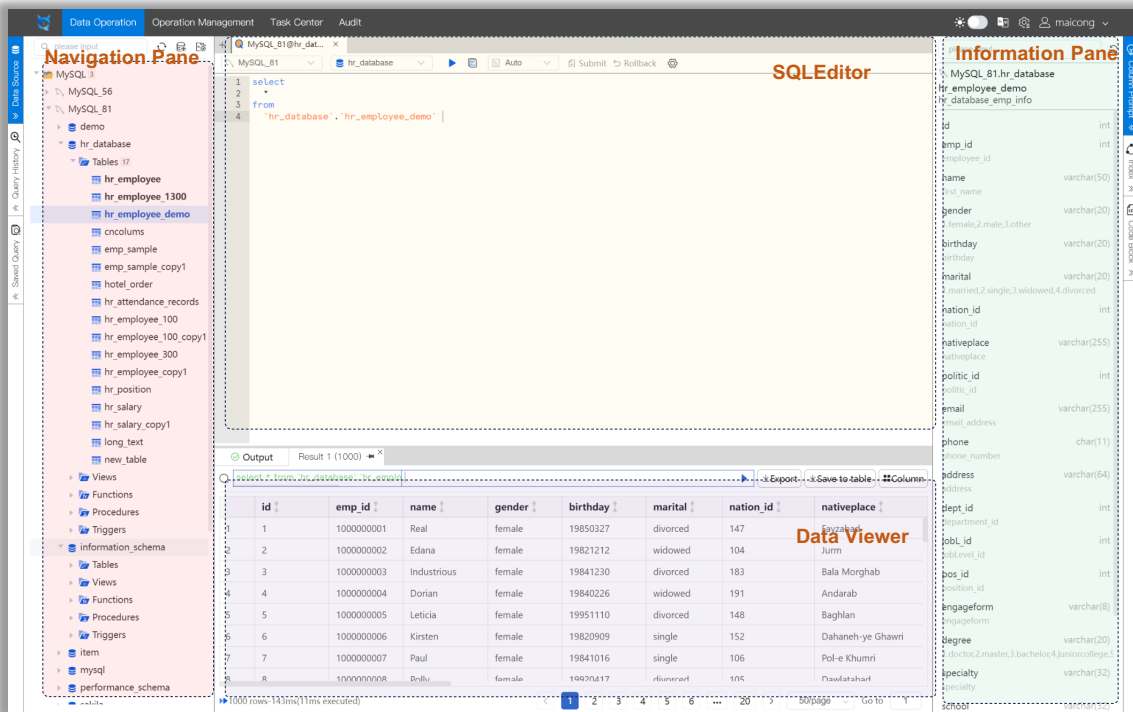


7. Login with your username and password. The default username is **“sqlynx”** with the initial password set by the user input.

8. After logging in, **only the WEB client** of SQLynx is available; desktop client is not supported.

3.2 Data Operation

The data operation module of SQLynx is composed of several areas: the navigation pane, information pane, SQL editor, and data viewer.

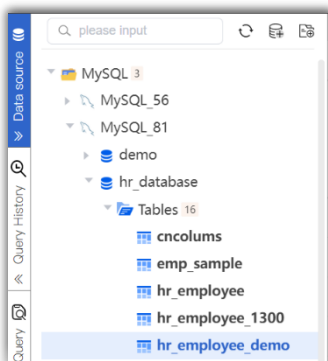






3.2.1 Navigation Pane

The navigation pane is located on the left side of the main window, featuring a tree structure.

It allows browsing information of all successfully added data sources, databases, and database objects.

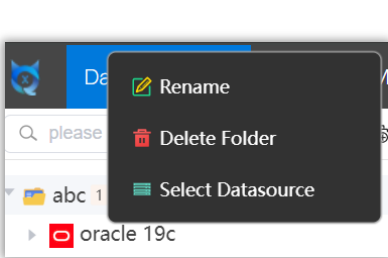
The related operational functions are accessible through the right-click context menu of the mouse.



| # | Location | Description |
|---|---|--|
| 1 |  | Search for database names, object names *Supports fuzzy search; case-sensitive. |
| 2 |  | Refresh |
| 3 |  | Add data source (refer to steps in " System Settings - Data Configuration ") |
| 4 |  | Create folder |

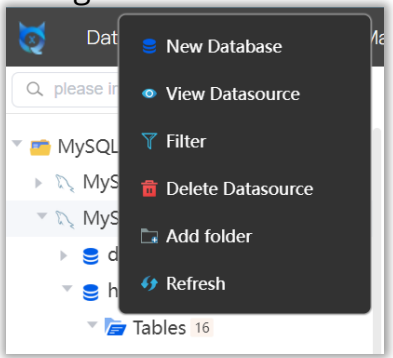
Right-click on the folder, the following menu appears.

| # | Function | Description |
|---|---------------|--|
| 1 | Rename | Rename the currently selected folder |
| 2 | Delete Folder | Delete the currently selected folder *Only delete the folder, the data sources within it will not be deleted; after the folder is deleted, data sources will |

| | | | | | | | | |
|---|--|--|--|---|---|-------------------|--|--|
|  <p>A screenshot of the SQLYNX navigation pane. A context menu is open over a folder named 'abc 1'. The menu items are: 'Rename' (pencil icon), 'Delete Folder' (trash icon), and 'Select Datasource' (checkmark icon). Below the folder, there is a sub-item 'oracle 19c' with a red square icon.</p> | <table border="1"> <tr> <td></td> <td></td> <td>automatically be moved out and returned to the navigation pane.</td> </tr> <tr> <td>3</td> <td>Select Datasource</td> <td>Configure the addition and removal of data sources for the currently selected folder</td> </tr> </table> | | | automatically be moved out and returned to the navigation pane. | 3 | Select Datasource | Configure the addition and removal of data sources for the currently selected folder | |
| | | automatically be moved out and returned to the navigation pane. | | | | | | |
| 3 | Select Datasource | Configure the addition and removal of data sources for the currently selected folder | | | | | | |

3.2.1.1 Add Database

Right-click on data source in the navigation pane, and the following menu appears.

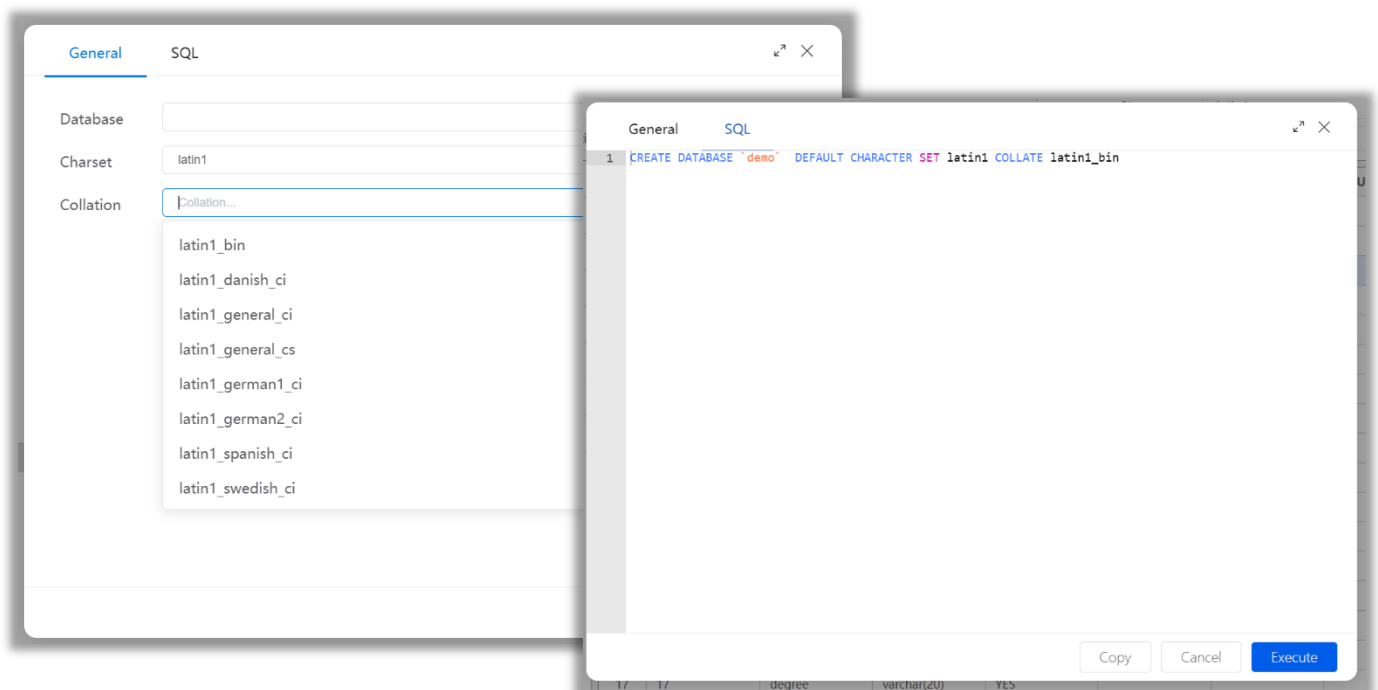
|  <p>A screenshot of the SQLYNX navigation pane. A context menu is open over a data source. The menu items are: 'New Database' (database icon), 'View Datasource' (eye icon), 'Filter' (funnel icon), 'Delete Datasource' (trash icon), 'Add folder' (folder icon), and 'Refresh' (refresh icon). Below the menu, there are 'Tables 16'.</p> | <table border="1"> <thead> <tr> <th>#</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>New Database</td> <td>Create a new database, with options to set the database name, character set, and collation.</td> </tr> <tr> <td>2</td> <td>View Datasource</td> <td>View the configuration information of the currently selected data source</td> </tr> <tr> <td>3</td> <td>Filter</td> <td>Filter the databases displayed in the current navigation pane</td> </tr> </tbody> </table> | # | Function | Description | 1 | New Database | Create a new database, with options to set the database name, character set, and collation. | 2 | View Datasource | View the configuration information of the currently selected data source | 3 | Filter | Filter the databases displayed in the current navigation pane | |
|--|---|---|----------|-------------|---|--------------|---|---|-----------------|--|---|--------|---|--|
| # | Function | Description | | | | | | | | | | | | |
| 1 | New Database | Create a new database, with options to set the database name, character set, and collation. | | | | | | | | | | | | |
| 2 | View Datasource | View the configuration information of the currently selected data source | | | | | | | | | | | | |
| 3 | Filter | Filter the databases displayed in the current navigation pane | | | | | | | | | | | | |

| | | |
|---|-------------------|---|
| 4 | Delete Datasource | Delete the currently selected data source *The deletion is irreversible once confirmed, please proceed with caution after verification. |
| 5 | Add Folder | Create a new folder |
| 6 | Refresh | Refresh |

Add Database:

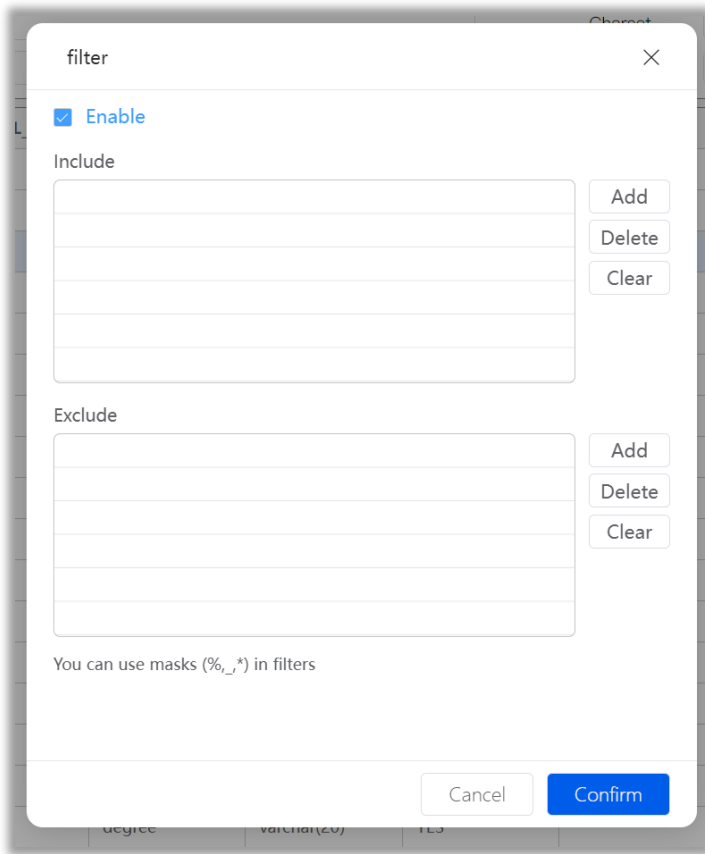
Create a new database and execute the operation after filling out the Database name, character set, and collation rules as required.

The SQL editor on the right will simultaneously display the corresponding SQL statements for reference.



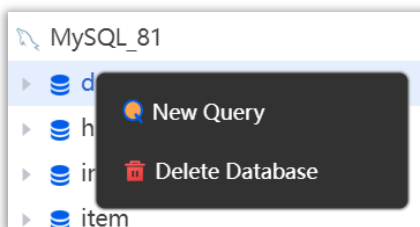
Filter:

You can set filter conditions based on your needs, to include or exclude certain keywords. When performing a fuzzy search, you need to add wildcards.



3.2.1.2 New Query


Expand the data source, right-click on the database name, and the following menu appears.

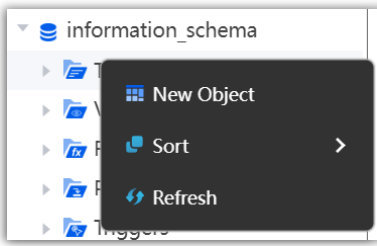


| # | Function | Description |
|---|-----------------|--|
| 1 | New Query | The main window switches to the SQL editor, with the default path being the path of the currently selected database. |
| 2 | Delete Database | Delete the currently selected database *The deletion is irreversible once confirmed, please proceed with caution after verification. |

3.2.1.3 New Object

a. New Table

1. Expand the database, right-click on the  Tables icon, and the following menu appears.

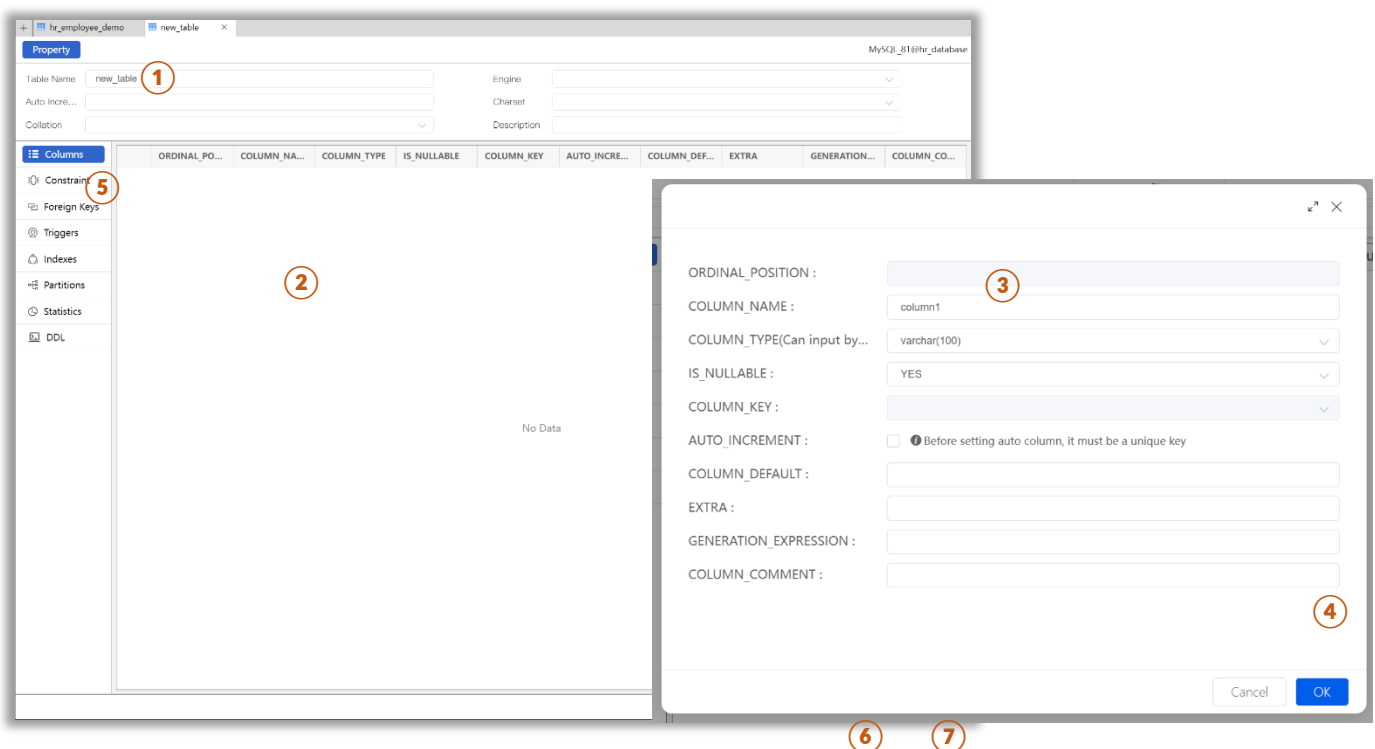


| # | Function | Description |
|---|------------|---|
| 1 | New Object | The main window becomes the object detail pane. where a new table is created. You can modify the table's properties on this page and execute these changes. |
| 2 | Sort | Sort all tables in the current database: By Intelligent Sorting*, By Weight, By Count, By Time, By First Letter. |
| 3 | Refresh | Refresh |

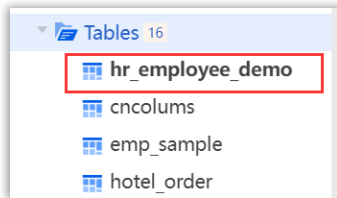
2. Create a New Table

- Click on "**New Object**".
- Set the basic properties of the table in the object detail pane: such as Table Name, Character Set, Collation, and Description.
- Under the "Columns" tab, right-click on the blank area of the data detail box to bring up the context menu, and click "Add".

- In the popup window, configure the column information to be added and click OK; repeat the third step until you have added all the required columns.
- Under the "Constraints" tab, right-click to bring up the context menu and click "Add" to set a primary key for the table, then confirm.
- Click save at the bottom right corner, which opens a popup showing the preview of the SQL statement for creating the table. You can directly click "Execute" to create the table or click "Copy" to save the current statement for further editing in the SQL editor.
- After execution, refresh the database to view the tables or refer to [section 3.2.2.1](#) for steps on adding data post table creation.

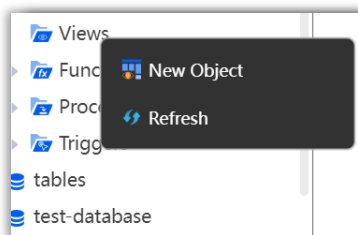


3. * Intelligent Sorting: By default, the system employs intelligent sorting to automatically prioritize and bold the tables that the user frequently operates, facilitating quick and easy access.



b. New View

1. Expand the database, right-click on the  'Views' icon, and the following menu appears.

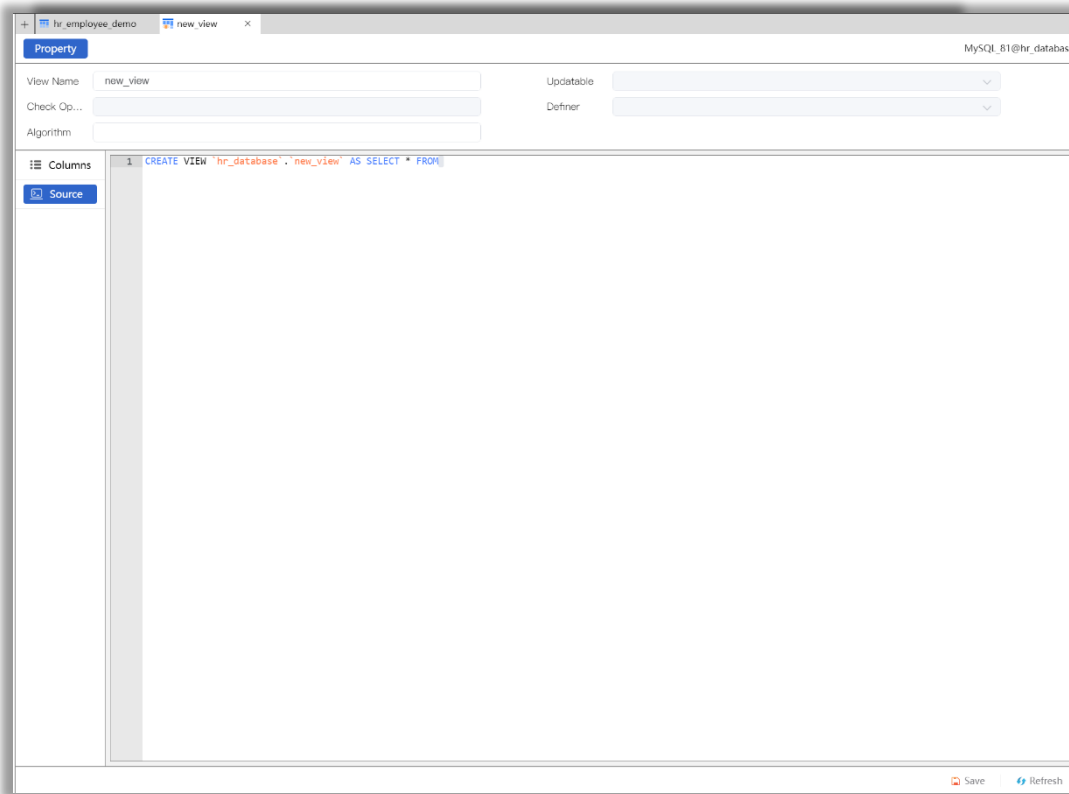


| # | Function | Description |
|---|------------|--|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new view. |
| 2 | Refresh | Refresh |


2. Create New View

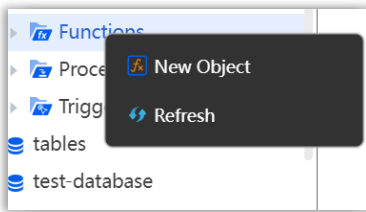
- Click on "**Create Object**"
- Set the basic properties of the view in the object detail pane: View Name, Algorithm, etc.

- Write the SQL statement under the "Source" tab to create it, then click save and refresh.



c. New Function

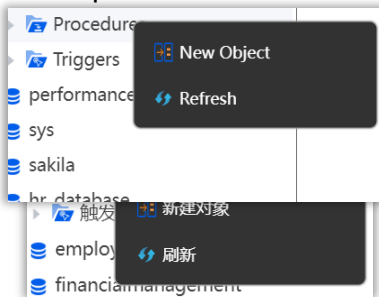
1. Expand the database, right-click on the  "Functions" icon, and the following menu appears.



| # | Function | Description |
|---|------------|--|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new function. |
| 2 | Refresh | Refresh |

d. New Procedure

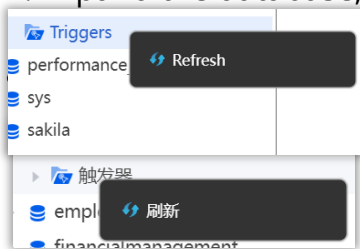
1. Expand the database, right-click on the "Procedures" icon, and the following



| # | Function | Description |
|---|------------|---|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new procedure. |
| 2 | Refresh | Refresh |

e. Triggers

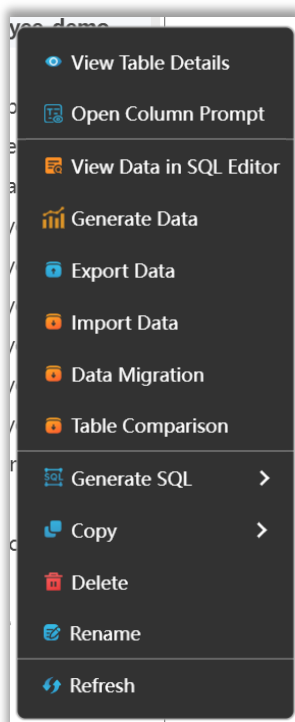
1. Expand the database, right-click on the "Triggers" icon, and the following menu



| # | Function | Description |
|---|----------|-------------|
| 1 | Refresh | Refresh |

3.2.1.4 Object Operations

a. Table

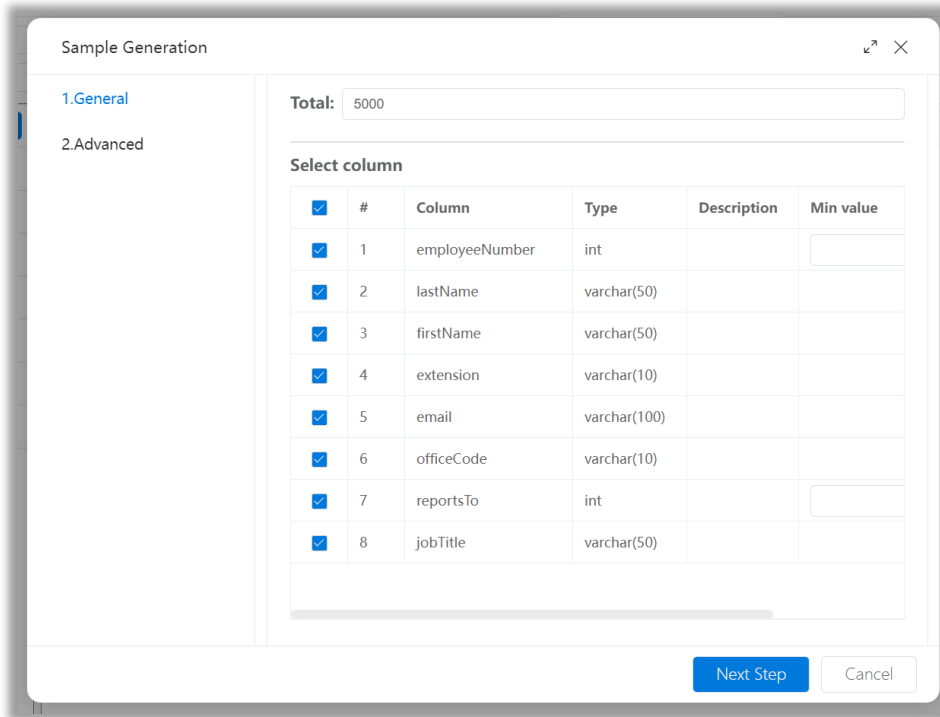


| # | Function | Description |
|---|-------------------------|--|
| 1 | View Table Details | View the details of the currently selected table: the main window displays an object detail pane where you can view table properties and table data (for details, refer to section 3.2.2.1 Object Detail Pane). |
| 2 | Open Column Prompt | When open the query window, click on the menu function or double-click the table name to display prompts on the right screen (for details, refer to section 3.2.2.2 Prompt Pane). |
| 3 | View Data in SQL Editor | Automatically generate the statement "SELECT * FROM current table" and execute the query with the SQL editor (for SQL editor, refer to section 3.2.3 Data Operations - SQL Editor). |
| 4 | Generate Test Data | Generate test data with the options to replace or append. |
| 5 | Export Data | Export data to local storage, with options for CSV, Excel, or SQL file formats. |

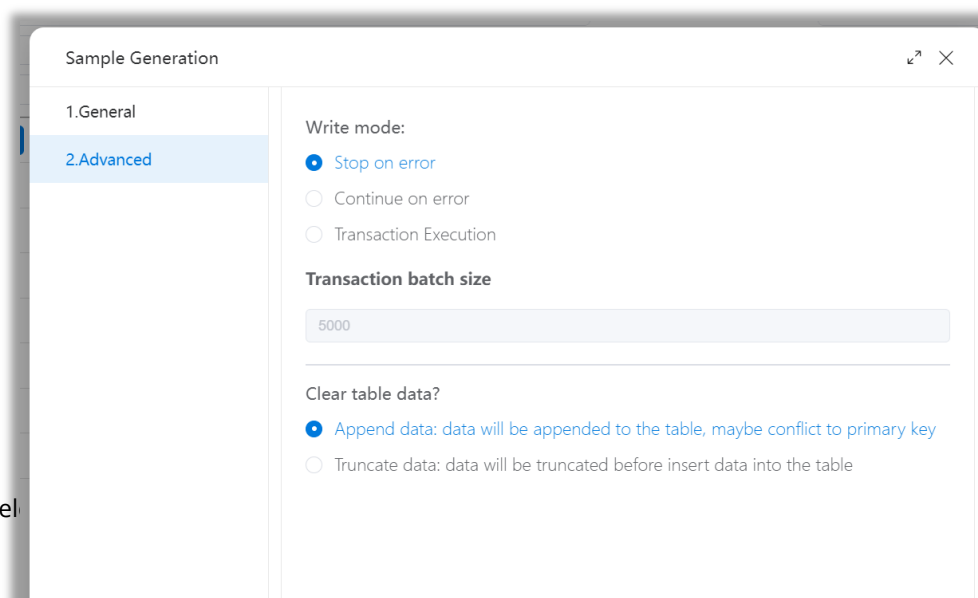
| | | |
|----|------------------|--|
| 6 | Import Data | Import CSV or Excel files from your local machine into the selected table. |
| 7 | Data Migration | Migrate data from the selected table to another table. |
| 8 | Table Comparison | Compare the structural differences of tables from two identical-type databases. |
| 9 | Generate SQL | Automatically generate SQL statements such as select, insert, update, delete, or DDL. |
| 10 | Copy | Within the same database, create a duplicate of the currently selected table, copying either "structure and data" or "structure only". |
| 11 | Delete | Delete the currently selected table. *The deletion is irreversible once confirmed, please proceed with caution after verification. |
| 12 | Rename | Rename the currently selected table. |
| 13 | Refresh | Refresh |

1. Generate Data

Test data can be generated based on table structure. The data generation process operates in the background, and the final results can be viewed in the Task Center under "Generate Data".



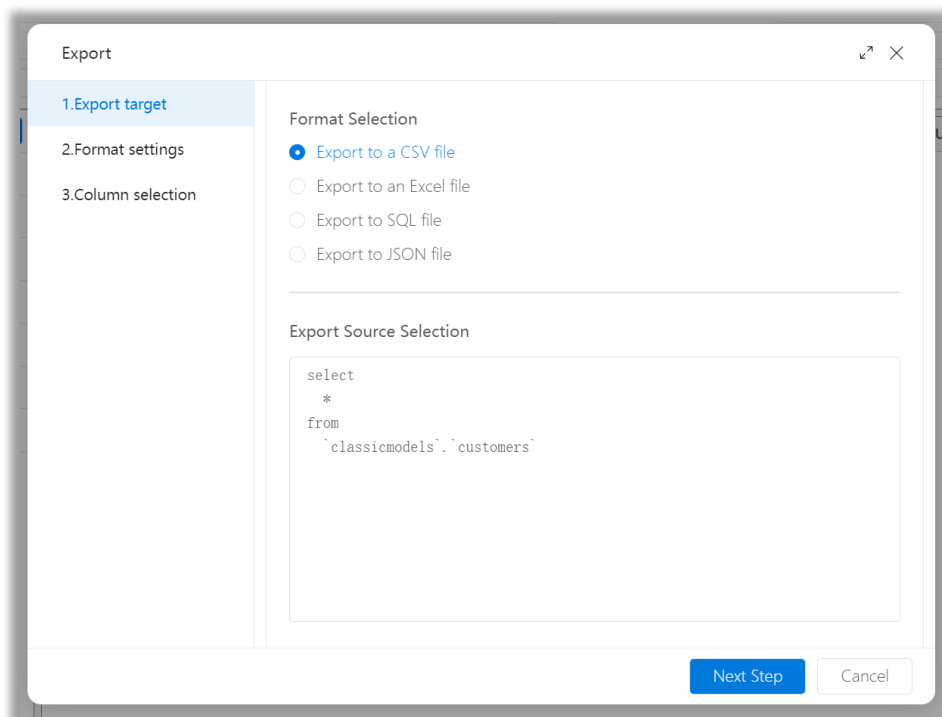
The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.



2. Export Data

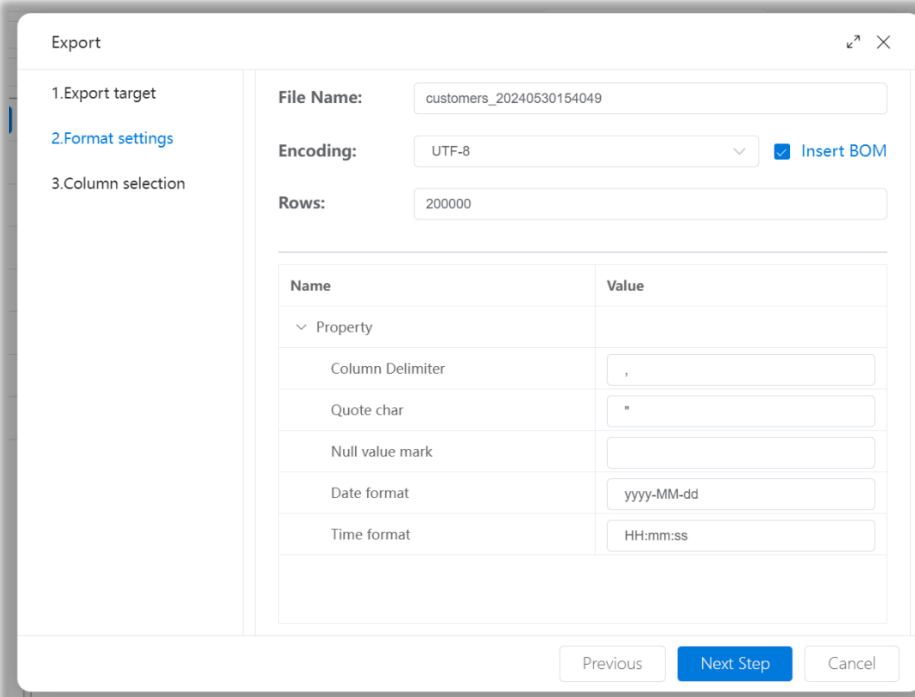
Export the data of the currently selected table to the local system, available in CSV, EXCEL, SQL, and JSON file.

Users can configure the columns of the exported data (all/part), the number of rows, characters, and header format of the export data as needed.

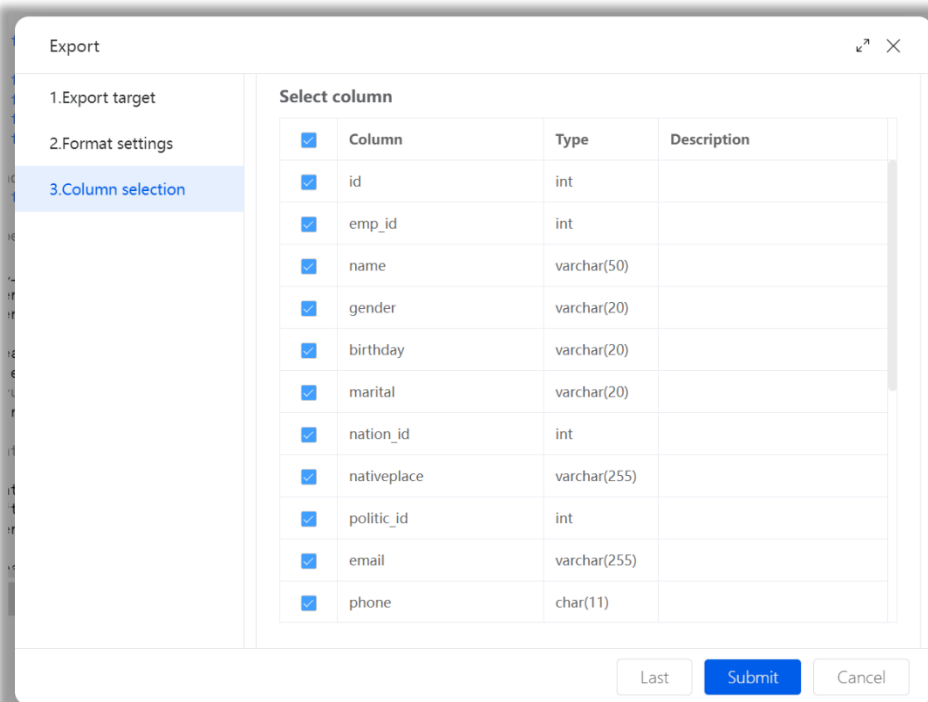


Users can modify the filename, encoding, and number of rows of the exported file as needed.

*When the exported file is in CSV format and needs to be opened in Excel, it is recommended to check the "Insert BOM" option for stronger format compatibility.



The screenshot shows the 'Export' dialog box with the 'Format settings' step selected. The 'File Name' is 'customers_20240530154049', 'Encoding' is 'UTF-8', and 'Rows' is '200000'. The 'Insert BOM' checkbox is checked. Below these are fields for 'Column Delimiter' (comma), 'Quote char' (double quote), 'Null value mark', 'Date format' (yyyy-MM-dd), and 'Time format' (HH:mm:ss). At the bottom are 'Previous', 'Next Step', and 'Cancel' buttons.

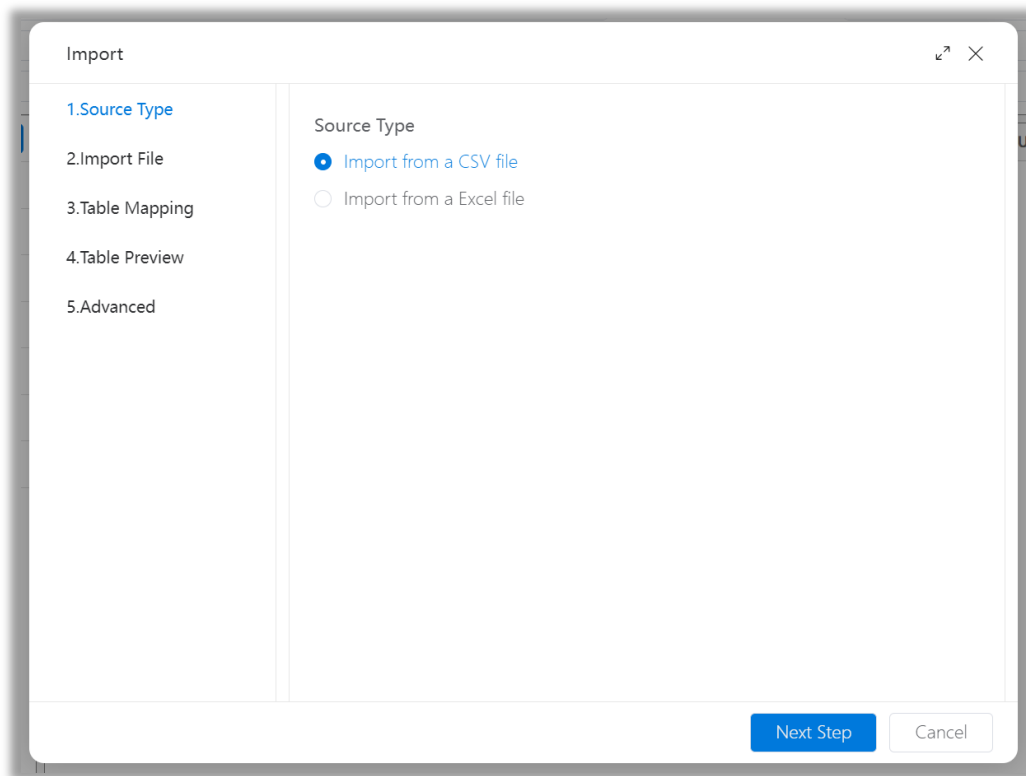


The screenshot shows the 'Export' dialog box with the 'Column selection' step selected. A table titled 'Select column' lists columns with checkboxes, types, and descriptions. All columns are selected. At the bottom are 'Last', 'Submit', and 'Cancel' buttons.

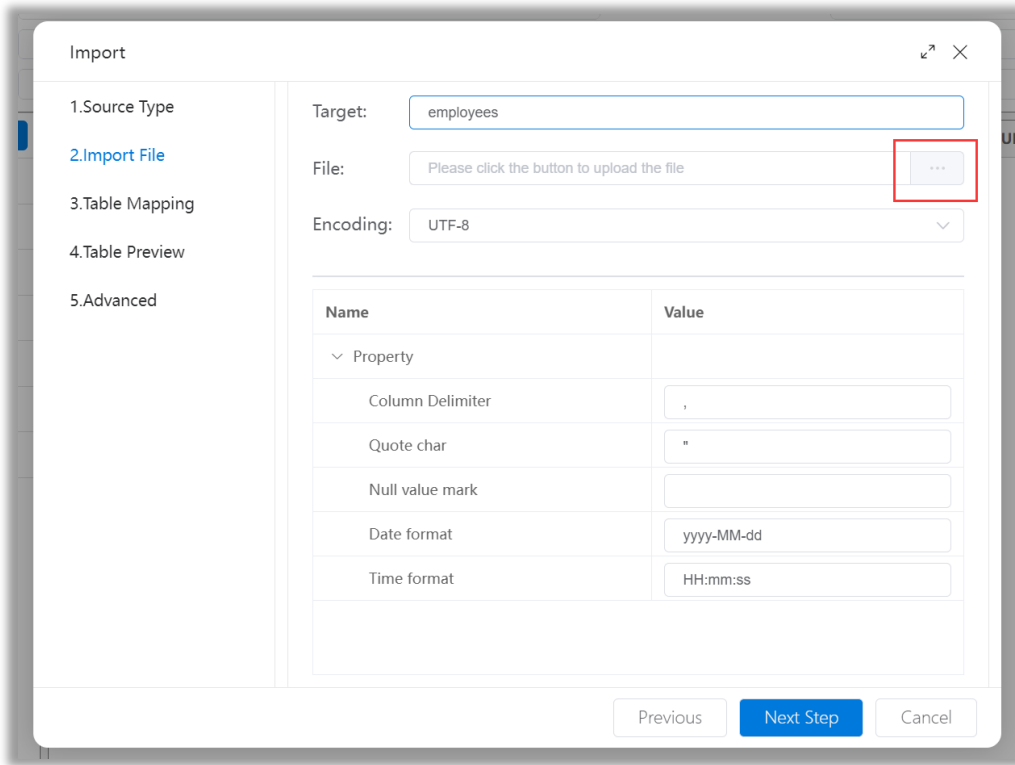
| <input checked="" type="checkbox"/> | Column | Type | Description |
|-------------------------------------|-------------|--------------|-------------|
| <input checked="" type="checkbox"/> | id | int | |
| <input checked="" type="checkbox"/> | emp_id | int | |
| <input checked="" type="checkbox"/> | name | varchar(50) | |
| <input checked="" type="checkbox"/> | gender | varchar(20) | |
| <input checked="" type="checkbox"/> | birthday | varchar(20) | |
| <input checked="" type="checkbox"/> | marital | varchar(20) | |
| <input checked="" type="checkbox"/> | nation_id | int | |
| <input checked="" type="checkbox"/> | nativeplace | varchar(255) | |
| <input checked="" type="checkbox"/> | politic_id | int | |
| <input checked="" type="checkbox"/> | email | varchar(255) | |
| <input checked="" type="checkbox"/> | phone | char(11) | |

3. Import Data

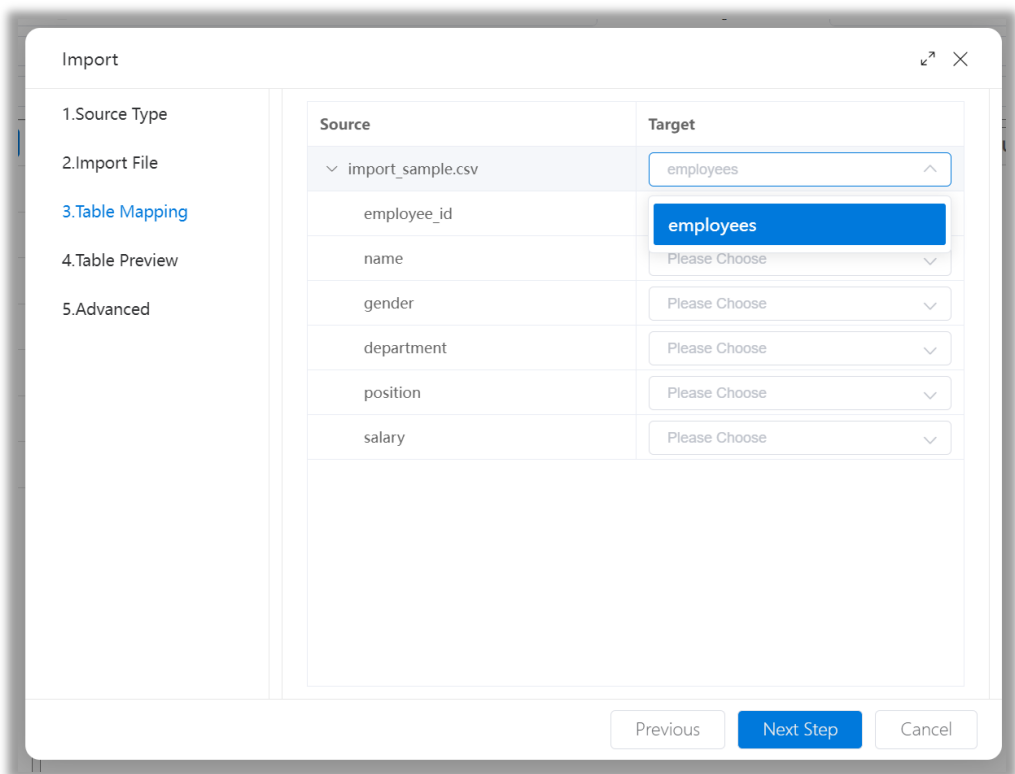
Import a local CSV or Excel file into the currently selected table. (*Importing an SQL file is performed through the context menu in the SQL editor.)



Choose a local CSV or Excel file.



In the "Table Mapping" section, confirm the correspondence between columns.



The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.

Import

1. Source Type

2. Import File

3. Table Mapping

4. Table Preview

5. Advanced

Write mode:

- Stop on error
- Continue on error
- Transaction Execution

Transaction batch size

5000

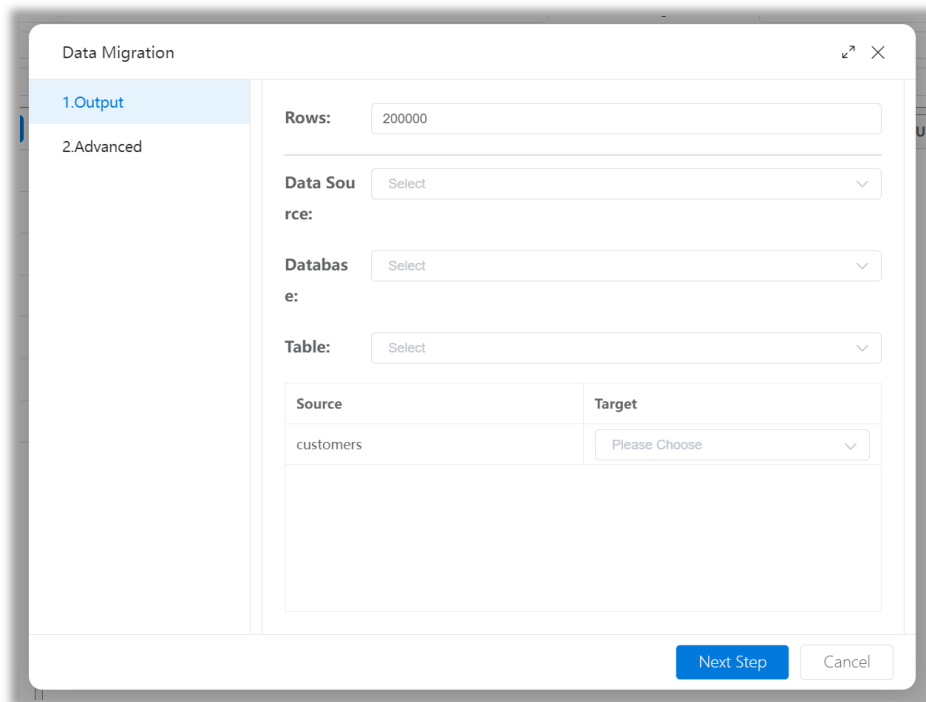
Clear table data?

- Append data: data will be appended to the table, maybe conflict to primary key
- Truncate data: data will be truncated before insert data into the table

Previous Submit Cancel

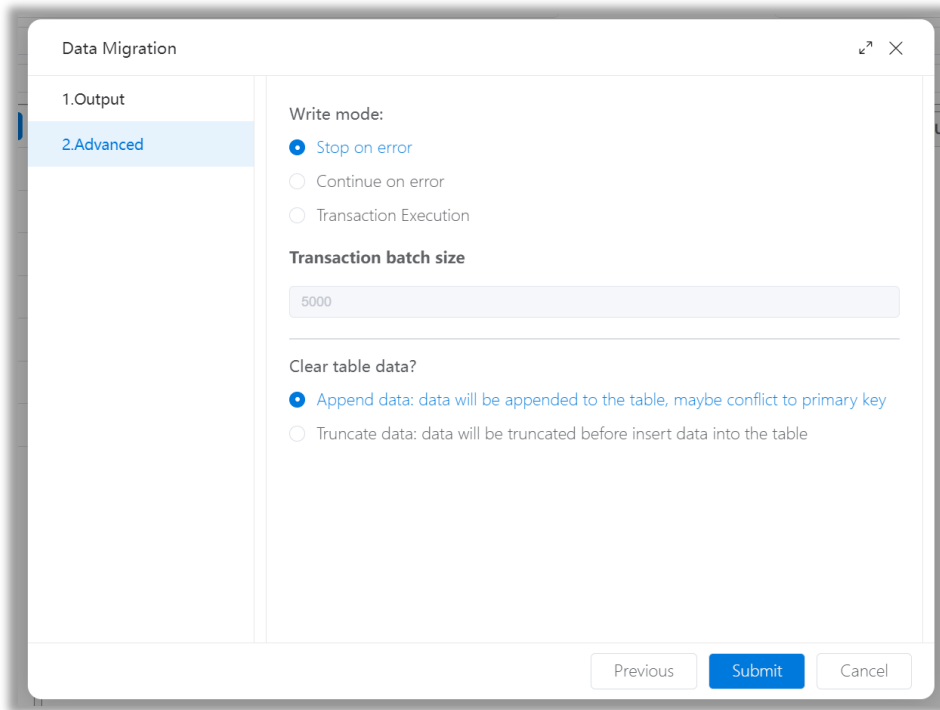
4. Data Migration

Migrate the data from the currently selected table to another table, with support for **transaction execution**.

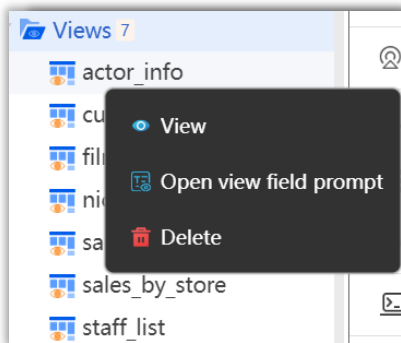


| Source | Target |
|-----------|---------------|
| customers | Please Choose |

The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.

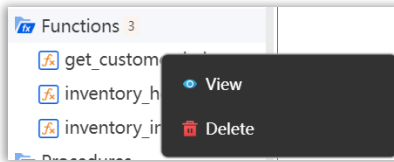


b. View



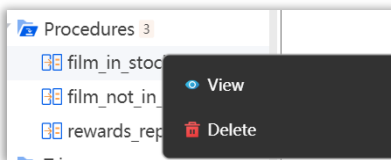
| # | Function | Description |
|---|-------------------------|--|
| 1 | View | View the details of the currently selected view. The main window will display the object details pane, where you can view the properties and data of the view. |
| 2 | Open view column prompt | When open the query window, clicking on the menu function or double-clicking on the current view name will display prompt pane on the right screen. |
| 3 | Delete | Delete the currently selected view. |

c. Function



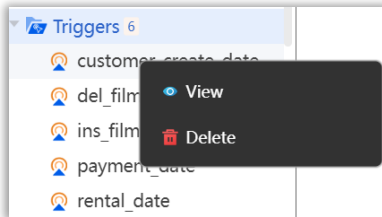
| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected function. The main window will display the object details pane, where you can view the properties of the function. |
| 2 | Delete | Delete the currently selected function. |

d. Procedure



| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected procedure. The main window will display the object details pane, where you can view the properties of the procedure. |
| 2 | Delete | Delete the currently selected procedure. |

e. Trigger

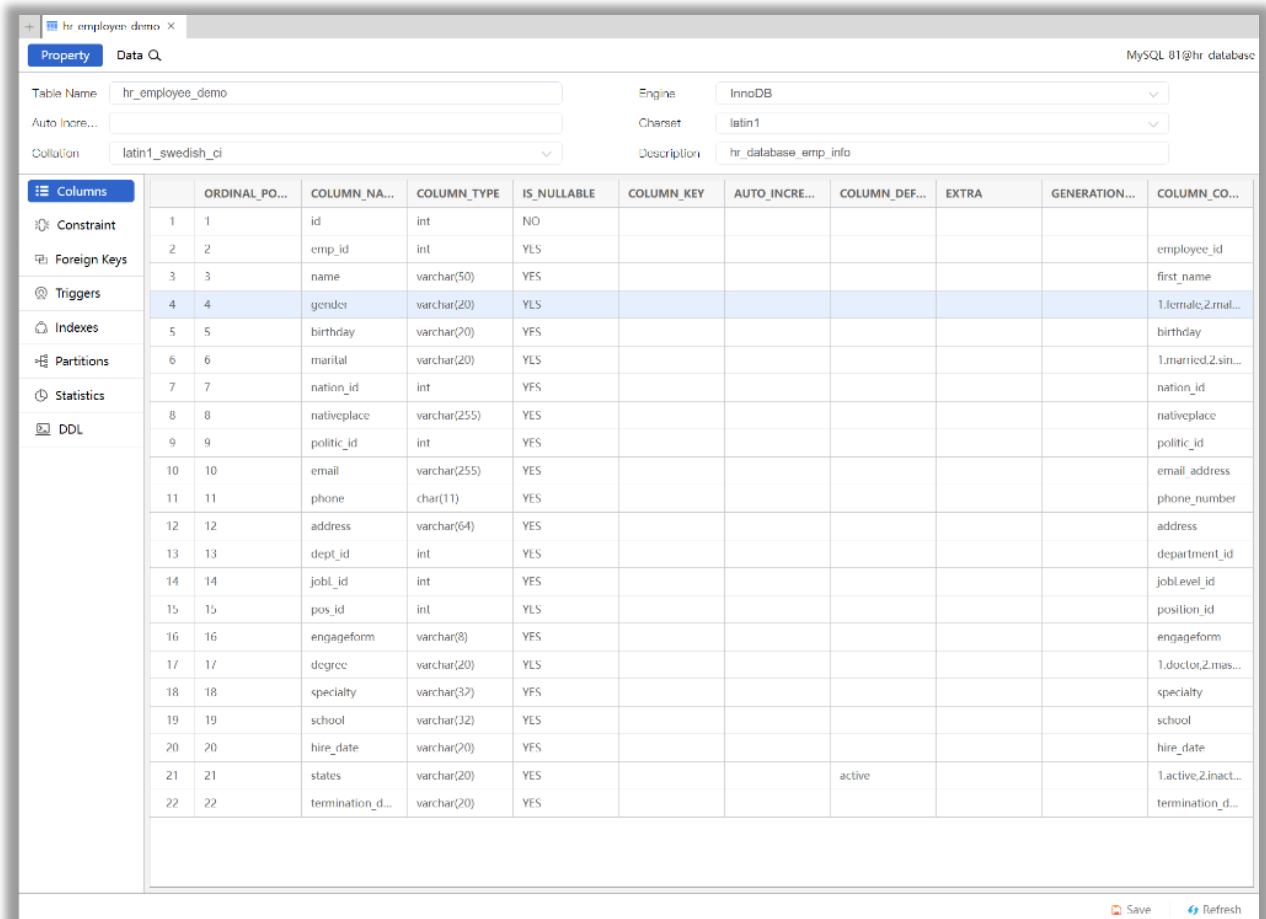


| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected trigger. The main window will display the object details pane, where you can view the properties of the trigger. |
| 2 | Delete | Delete the currently selected trigger. |

3.2.2 Information Pane

3.2.2.1 Object Details Pane

Located in the middle of the main window, this is where detailed information about objects can be displayed. The object details pane is usually hidden by default, and clicking on any object to select the view function will make it visible.



The screenshot shows the 'Object Details Pane' for a table named 'hr_employee_demo' in a MySQL database. The pane is divided into several sections: 'Property', 'Columns', 'Constraint', 'Foreign Keys', 'Triggers', 'Indexes', 'Partitions', 'Statistics', and 'DDL'. The 'Columns' section is currently selected and displays a table with the following data:

| | ORDINAL_PO... | COLUMN_NA... | COLUMN_TYPE | IS_NULLABLE | COLUMN_KEY | AUTO_INCRE... | COLUMN_DEF... | EXTRA | GENERATION... | COLUMN_CO... |
|--|---------------|------------------|--------------|-------------|------------|---------------|---------------|-------|---------------|---------------------|
| | 1 | id | int | NO | | | | | | |
| | 2 | emp_id | int | YES | | | | | | employee_id |
| | 3 | name | varchar(50) | YES | | | | | | first_name |
| | 4 | gender | varchar(20) | YES | | | | | | 1.female,2.mal... |
| | 5 | birthday | varchar(20) | YES | | | | | | birthday |
| | 6 | marital | varchar(20) | YES | | | | | | 1.married,2.sin... |
| | 7 | nation_id | int | YES | | | | | | nation_id |
| | 8 | nativeplace | varchar(255) | YES | | | | | | nativeplace |
| | 9 | politic_id | int | YES | | | | | | politic_id |
| | 10 | email | varchar(255) | YES | | | | | | email_address |
| | 11 | phone | char(11) | YES | | | | | | phone_number |
| | 12 | address | varchar(64) | YES | | | | | | address |
| | 13 | dept_id | int | YES | | | | | | department_id |
| | 14 | jobl_id | int | YES | | | | | | jobLevel_id |
| | 15 | pos_id | int | YES | | | | | | position_id |
| | 16 | engageform | varchar(8) | YES | | | | | | engageform |
| | 17 | degrec | varchar(20) | YES | | | | | | 1.doctor,2.mas... |
| | 18 | specialty | varchar(32) | YES | | | | | | specialty |
| | 19 | school | varchar(32) | YES | | | | | | school |
| | 20 | hire_date | varchar(20) | YES | | | | | | hire_date |
| | 21 | states | varchar(20) | YES | | | active | | | 1.active,2.inact... |
| | 22 | termination_d... | varchar(20) | YES | | | | | | termination_d... |

At the bottom of the pane, there are 'Save' and 'Refresh' buttons.

a. Property

Display detailed properties, settings, and parameters of objects such as tables, views, functions, procedures, triggers, etc.

| # | Property | Description | Context Menu | Function |
|---|--------------|--|--------------|---|
| 1 | Columns | Displays the columns and data structure of the current object. | View | View detailed information of the currently selected column. |
| | | | Edit | Modify information of the currently selected column. |
| | | | Add | Add a new column. |
| | | | Delete | Delete the currently selected column. |
| | | | Refresh | Refresh |
| 2 | Constraint | Displays primary key information of the current table. | Add | Add a new primary key. |
| | | | Refresh | Refresh |
| 3 | Foreign Keys | Displays foreign key information of the current table. | N/A | N/A |

| | | | | |
|---|------------|---|--|------------------|
| 4 | Triggers | Displays trigger information of the current table. | N/A | N/A |
| 5 | Indexes | Displays index information of the current table. | Add | Add a new index. |
| | | | Refresh | Refresh |
| 6 | Partitions | Displays partition information of the current table | N/A | N/A |
| 7 | Statistics | Displays statistics information of the current table. | N/A | N/A |
| 8 | DDL | Displays DDL information of the current table. | Users can copy the DDL statement and paste it into the SQL editor for use. | |

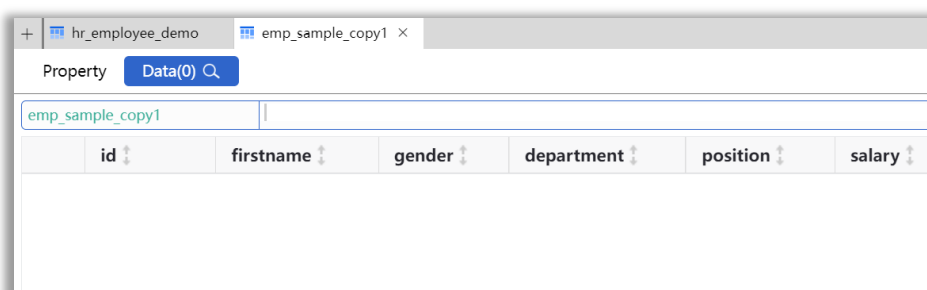
b. Data

Display detailed data for the above objects.

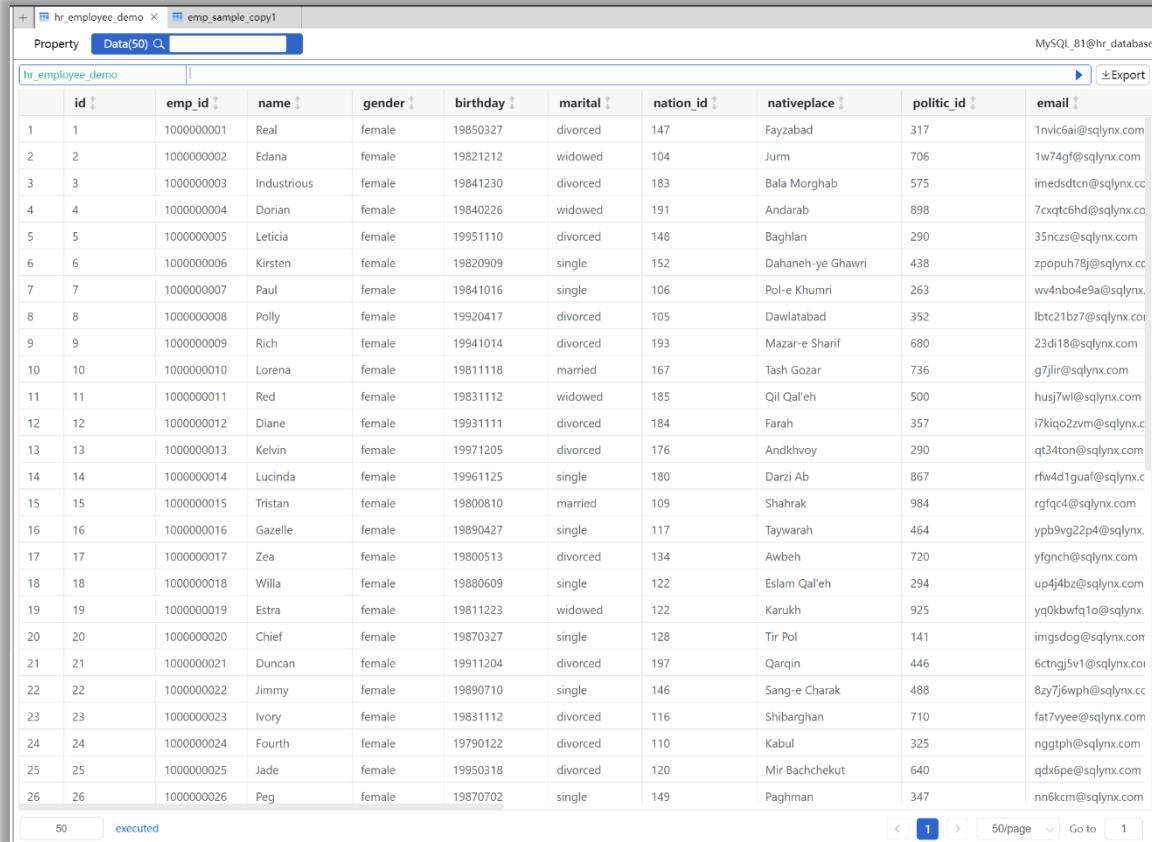
1. No data in the table.

You can right-click in the blank space, select 'Add',


In the popup window, input data according to the configured columns, and execute.

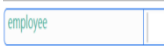





2. Data exists in the table



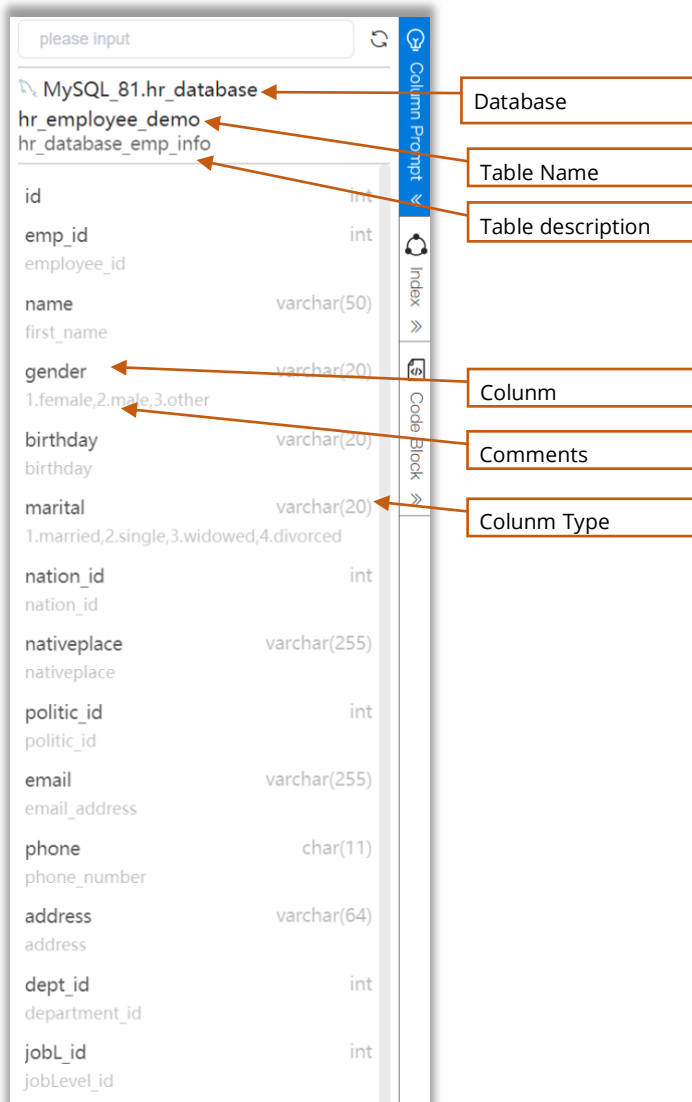
| | id | emp_id | name | gender | birthday | marital | nation_id | nativeplace | polttic_id | email |
|----|----|-----------|-------------|--------|----------|----------|-----------|-------------------|------------|----------------------|
| 1 | 1 | 100000001 | Real | female | 19850327 | divorced | 147 | Fayzabad | 317 | 1nvc6ai@sqlynx.com |
| 2 | 2 | 100000002 | Edana | female | 19821212 | widowed | 104 | Jurm | 706 | 1w74gf@sqlynx.com |
| 3 | 3 | 100000003 | Industrious | female | 19841230 | divorced | 183 | Bala Morghab | 575 | imedstdtcn@sqlynx.cc |
| 4 | 4 | 100000004 | Dorian | female | 19840226 | widowed | 191 | Andarab | 898 | 7cxqtct6hd@sqlynx.co |
| 5 | 5 | 100000005 | Leticia | female | 19951110 | divorced | 148 | Baghlan | 290 | 35nczs@sqlynx.com |
| 6 | 6 | 100000006 | Kirsten | female | 19820909 | single | 152 | Dahaneh-ye Ghawri | 438 | zpopuh78j@sqlynx.cc |
| 7 | 7 | 100000007 | Paul | female | 19841016 | single | 106 | Pol-e Khumni | 263 | wv4nb04e9a@sqlynx. |
| 8 | 8 | 100000008 | Polly | female | 19920417 | divorced | 105 | Dawlatabad | 352 | lbtct21bz7@sqlynx.co |
| 9 | 9 | 100000009 | Rich | female | 19941014 | divorced | 193 | Mazar-e Sharif | 680 | 23di18@sqlynx.com |
| 10 | 10 | 100000010 | Lorena | female | 19811118 | married | 167 | Tash Gozar | 736 | g7jlr@sqlynx.com |
| 11 | 11 | 100000011 | Red | female | 19831112 | widowed | 185 | Qil Qal'eh | 500 | husj7wl@sqlynx.com |
| 12 | 12 | 100000012 | Diane | female | 19931111 | divorced | 184 | Farah | 357 | i7kico2vm@sqlynx.c |
| 13 | 13 | 100000013 | Kelvin | female | 19971205 | divorced | 176 | Andkhvoy | 290 | qt34ton@sqlynx.com |
| 14 | 14 | 100000014 | Lucinda | female | 19961125 | single | 180 | Darzi Ab | 867 | rflw4d1gua@sqlynx.c |
| 15 | 15 | 100000015 | Tristan | female | 19800810 | married | 109 | Shahrak | 984 | rgfqc4@sqlynx.com |
| 16 | 16 | 100000016 | Gazelle | female | 19890427 | single | 117 | Taywarah | 464 | ypb9vg22p4@sqlynx. |
| 17 | 17 | 100000017 | Zea | female | 19800513 | divorced | 134 | Awbeh | 720 | yfgnch@sqlynx.com |
| 18 | 18 | 100000018 | Willia | female | 19880609 | single | 122 | Eslam Qal'eh | 294 | up4j4bz@sqlynx.com |
| 19 | 19 | 100000019 | Estra | female | 19811223 | widowed | 122 | Karukh | 925 | yq0kbwrfq1o@sqlynx. |
| 20 | 20 | 100000020 | Chief | female | 19870327 | single | 128 | Tir Pol | 141 | imgsdog@sqlynx.com |
| 21 | 21 | 100000021 | Duncan | female | 19911204 | divorced | 197 | Qarqin | 446 | 6ctngj5v1@sqlynx.co |
| 22 | 22 | 100000022 | Jimmy | female | 19890710 | single | 146 | Sang-e Charak | 488 | 8zy7j6wph@sqlynx.cc |
| 23 | 23 | 100000023 | Ivory | female | 19831112 | divorced | 116 | Shibarghan | 710 | fat7vyee@sqlynx.com |
| 24 | 24 | 100000024 | Fourth | female | 19790122 | divorced | 110 | Kabul | 325 | nggtp@sqlynx.com |
| 25 | 25 | 100000025 | Jade | female | 19950318 | divorced | 120 | Mir Bachchekut | 640 | qdx6pe@sqlynx.com |
| 26 | 26 | 100000026 | Peg | female | 19870702 | single | 149 | Paghman | 347 | nn6kcm@sqlynx.com |

| # | Location | Function | Description |
|---|---|------------------|---|
| 1 |  | Full-text Search | Click the magnifying glass icon on the right side of the "Data" tab to perform a full-text search on the current sample data. |

| | | | |
|---|---|---------------------|--|
| 2 |  | Data Filter | Allows filtering of current sample data. Enter statement conditions in the blank box on the right side and click the execute button on the far right, such as: gender='F'. After execution, all data with the value 'F' will be displayed. |
| 3 |  | Sort | Clicking on the gray arrow located to the right of the column name allows you to sort the current sample data in ascending or descending order. |
| 4 |  | Export | Export the data of the current table to the local device. Refer to section 3.2.1.4 "Object Operations - Table - Context menu - Export Data" . |
| 5 |  | Rows of sample data | Located at the bottom left corner of the data viewer, the default number of rows displayed is 50. Users can manually input any number as needed. After modification, click on the "Execute" button on the right side. |

3.2.2.2 Prompt Pane

Located on the right side of the main window, this area displays detailed column information for tables, including column names, comments, and column types. The table column prompt pane is usually hidden. When open the query window, double-clicking on any table name or right-clicking and selecting "Open Column Prompt" will display it.



The screenshot shows the 'Column Prompt' pane in SQLYNX. The pane is titled 'Column Prompt' and displays the following information:

- Database:** MySQL_81.hr_database
- Table Name:** hr_employee_demo
- Table description:** hr_database_emp_info
- Columns:**
 - id (int)
 - emp_id (int)
 - employee_id (int)
 - name (varchar(50))
 - first_name (varchar(50))
 - gender (varchar(20))
 - birthday (varchar(20))
 - marital (varchar(20))
 - nation_id (int)
 - nativeplace (varchar(255))
 - politic_id (int)
 - email (varchar(255))
 - phone (char(11))
 - address (varchar(64))
 - dept_id (int)
 - jobL_id (int)
- Comments:**
 - 1.female,2.male,3.other (for gender)
 - 1.married,2.single,3.widowed,4.divorced (for marital)
- Column Type:** (indicated by the data type in parentheses next to each column name)

Annotations with arrows point to these specific elements in the screenshot:

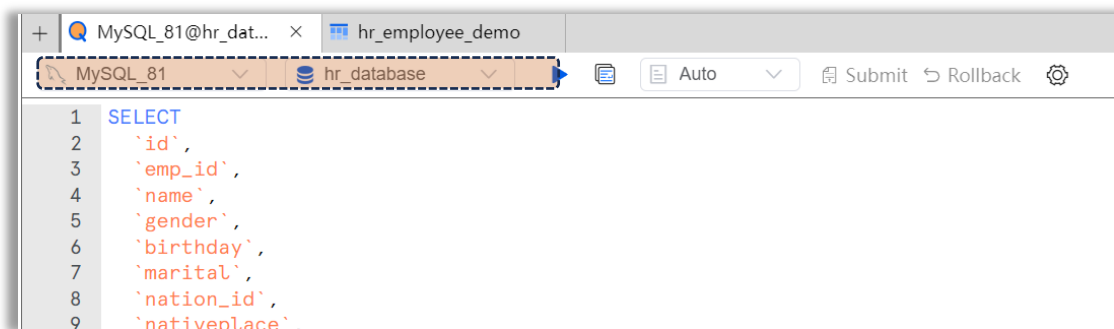
- Database
- Table Name
- Table description
- Column
- Comments
- Column Type





3.2.3 SQL Editor

Located in the middle of the main window, it is usually hidden but will be displayed after creating a new query, revealing the SQL editor page.

1. Top shortcuts of the SQL editor

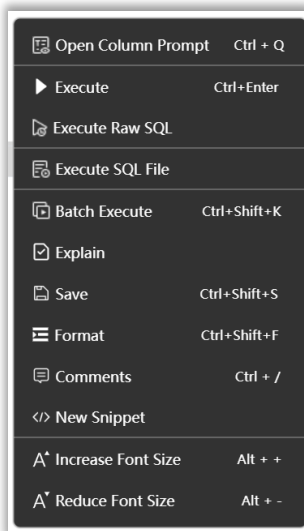
Two dropdown boxes below the tabs indicate the current database path information of the SQL editor.



| # | Shortcut | Description |
|---|--|---|
| 1 |  Execute | Quick execution defaults to returning 1000 query results. *The row count can be modified in the "default row count limit" settings. |
| 2 |  Format | One-click formatting of SQL statements for easy readability and inspection. |
| 3 |  Transaction | SQL transaction functionality allows toggling between automatic and transaction commit. |
| 4 |  Settings | These settings are only effective for the current query and can be adjusted for "Default Row Count Limit" and "Max Row Count Limit". |

| | | |
|--|--|--|
| | | Users can choose to keep connection to the current database. |
|--|--|--|

2. Context Menu



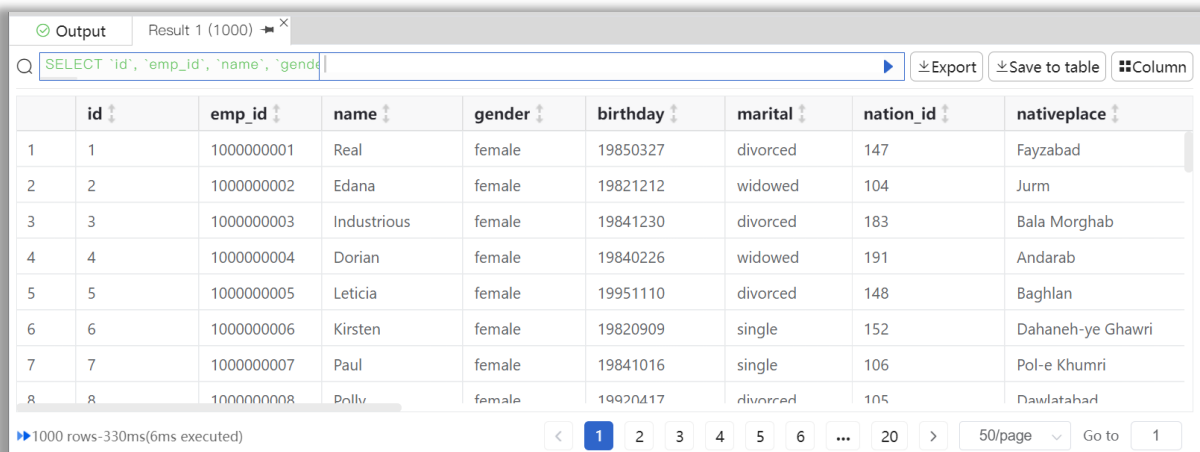
| # | Function | Description |
|---|--------------------|---|
| 1 | Open Column Prompt | Selecting the table name text, and clicking opens column prompt, which brings up the corresponding table's column prompt page on the right screen. |
| 2 | Execute | Quick execution defaults to returning 1000 query results. (Parameter modifications refer to Section 3.6.4.1 Data Settings) |
| 3 | Execute Raw SQL | Execution of Original SQL Statements in the Editing Box. By default, the max row count is set to 10000. (Parameter modifications refer to Section 3.6.4.1 Data Settings) |
| 4 | Execute SQL File | Select and Execute Local SQL Files. |
| 5 | Batch Execute | Execute SQL statements in batches. |
| 6 | Explain | Perform performance analysis on current SQL statements for optimization. |

| | | |
|----|---------------------------|--|
| 7 | Save | Save frequently used SQL statements, with options to copy, modify, or delete. |
| 8 | Format | One-click formatting of SQL statements for readability and inspection. |
| 9 | Comments | Add comments. |
| 10 | New Snippet | Create habitual code blocks, with options to set indexes. Index names can be intelligently prompted in editor status. (All created code blocks can be queried in the personal center.) |
| 11 | Increase/Reduce Font Size | Customize the font size of the SQL editor, which is only valid for the current query window created. |


3.2.4 Data Viewer


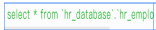

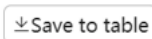

3.2.4.1 Query Result

1. The Data Viewer is located at the bottom center of the main window and displays query results. Double-clicking on the tab name supports full-screen display.

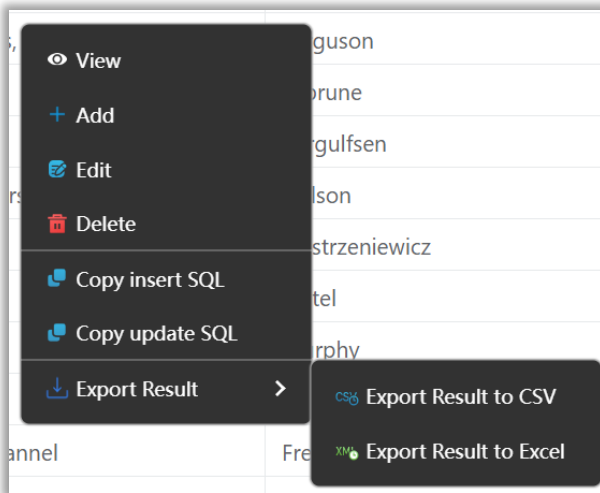


| | id | emp_id | name | gender | birthday | marital | nation_id | nativeplace |
|---|----|------------|-------------|--------|----------|----------|-----------|-------------------|
| 1 | 1 | 1000000001 | Real | female | 19850327 | divorced | 147 | Fayzabad |
| 2 | 2 | 1000000002 | Edana | female | 19821212 | widowed | 104 | Jurm |
| 3 | 3 | 1000000003 | Industrious | female | 19841230 | divorced | 183 | Bala Morghab |
| 4 | 4 | 1000000004 | Dorian | female | 19840226 | widowed | 191 | Andarab |
| 5 | 5 | 1000000005 | Leticia | female | 19951110 | divorced | 148 | Baghlan |
| 6 | 6 | 1000000006 | Kirsten | female | 19820909 | single | 152 | Dahaneh-ye Ghawri |
| 7 | 7 | 1000000007 | Paul | female | 19841016 | single | 106 | Pol-e Khumri |
| 8 | 8 | 1000000008 | Polly | female | 19920417 | divorced | 105 | Dawlatabad |

| # | Location | Function | Description |
|---|--|------------|---|
| 1 |  Output | Output Log | Viewing the output log of query result. |

| | | | |
|---|---|------------------|--|
| 2 |  | Full-text Search | Click on the magnifying glass icon, in the search box, you can perform full-text search on the current query result . |
| 3 |  | Data Filter | You can filter the current query result by entering statement conditions in the blank box on the right side, and then click on the execute button on the far right, for example: gender='F'. After execution, all data values for 'F' will be displayed. |
| 4 |  | Export | Export all data under the current query statement to the local computer. CSV and Excel formats are supported. |
| 5 |  | Save to Table | Save the data of the current query result to another table. The operation is the same as "Data Migration." |
| 5 |  | Sort | Clicking on the gray arrow located to the right of the column name allows you to sort the current sample data in ascending or descending order. |

2. Context Menu

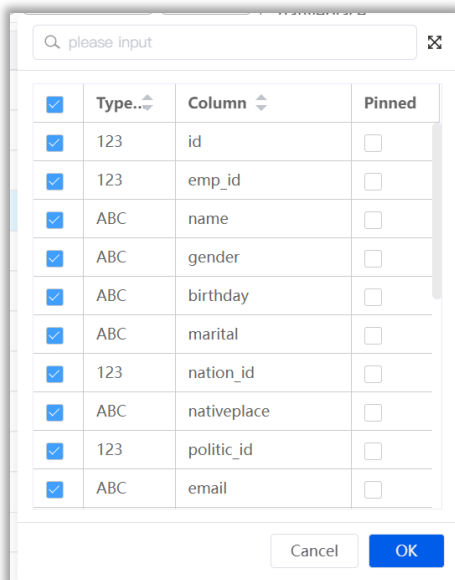


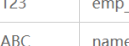



| # | Function | Description |
|---|-----------------|--|
| 1 | View | Viewing the currently selected single row data, but it cannot be modified in view mode. |
| 2 | Add | Inserting single row data into the current table. |
| 3 | Edit | Modifying the currently selected single row data, only applicable for single table queries. |
| 4 | Delete | Deleting the currently selected single row data. |
| 5 | Copy insert SQL | Automatically generating INSERT SQL statements, where the inserted values default to the current selected single row data values. You can copy this SQL statement and paste it directly into the SQL editor for editing and use. |
| 6 | Copy Update SQL | Automatically generating UPDATE SQL statements, where the updated values default to the current selected single row data values. You can copy this SQL statement and paste it directly into the SQL editor for editing and use. |

| | | |
|---|---------------|---|
| 7 | Export Result | Exporting the query result set returned by the current web page to the local computer. CSV and Excel formats are supported. |
|---|---------------|---|

3. Column Operations

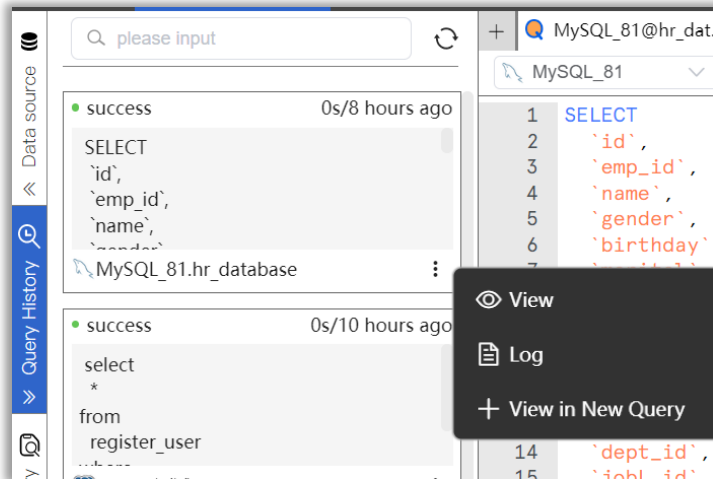
Located at the top right corner of the data viewer, it allows operations such as searching, filtering, sorting, and pinning all columns of the current query result.



| # | Location | Description |
|---|---|---|
| 1 |  | Search for columns within the current table |
| 2 |  | Sort in ascending or descending order |
| 3 |  | Toggle the checkbox to show/hide the columns you want to view |
| 4 |  | Checked columns can be pinned to the leftmost position. |

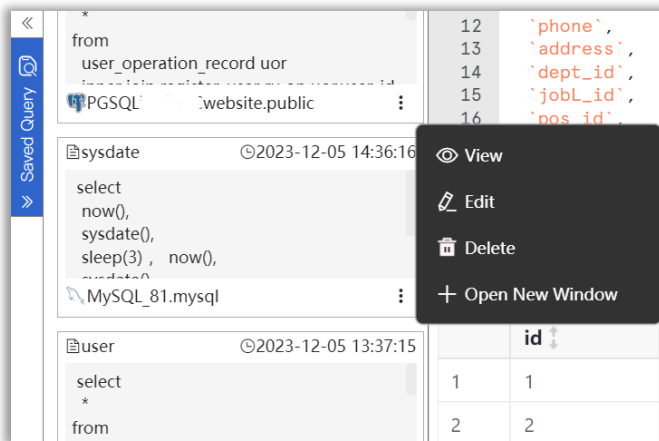
3.2.4.2 Query History

Display the query history executed by the current user. Users can retrieve historical query statements, view the statements, view the logs, or open them in a new window.



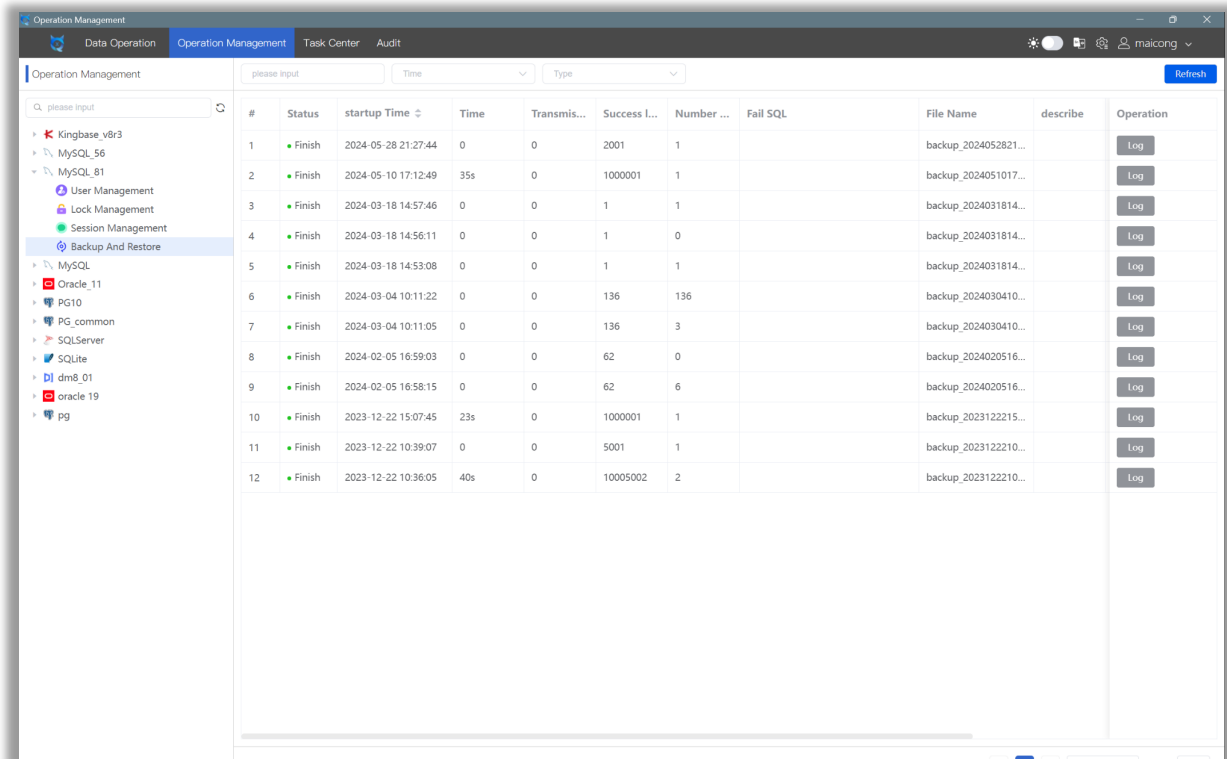
3.2.4.3 Saved Query

Display the commonly used query statements saved by the current user. Users can retrieve saved statements, view, edit, delete, or open them in a new window.



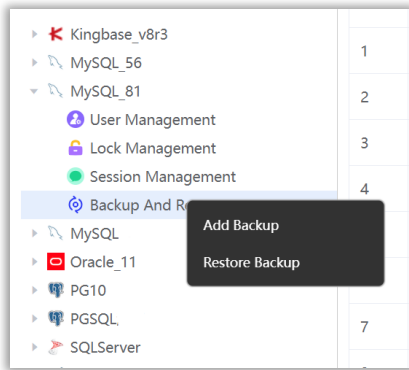
3.3 Operation Management

View user management, lock management, and session management information for the configured data sources. Perform database backup and restoration.



3.3.1 Backup and Restore

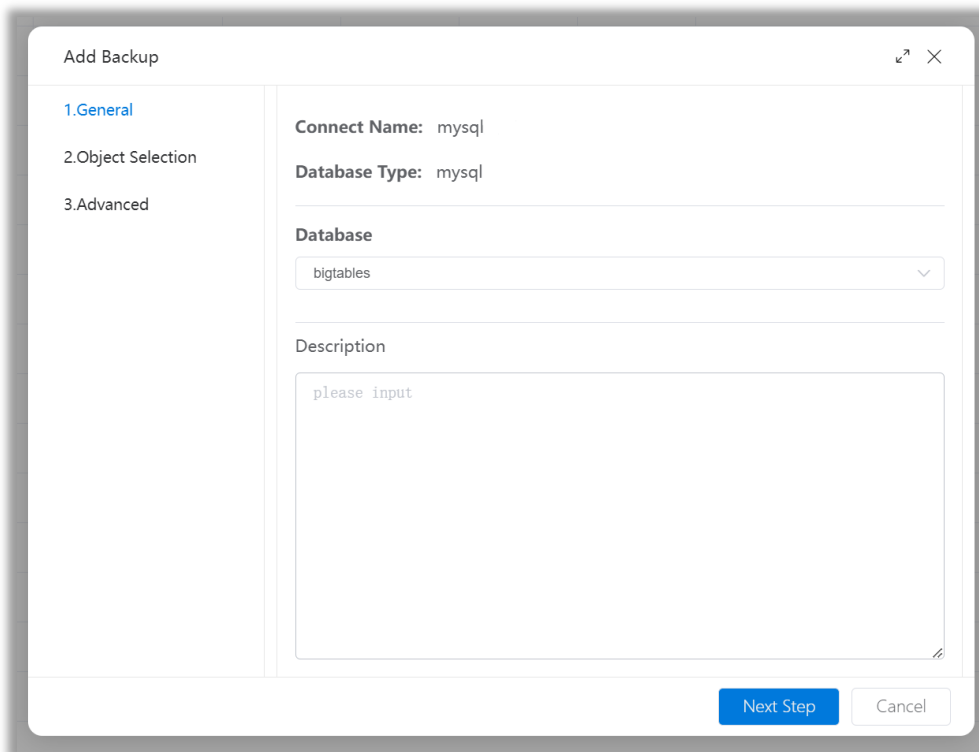
| # | Location | Description |
|---|------------|---|
| 1 | Add Backup | Backup the data from the currently selected database to a local SQL file. |



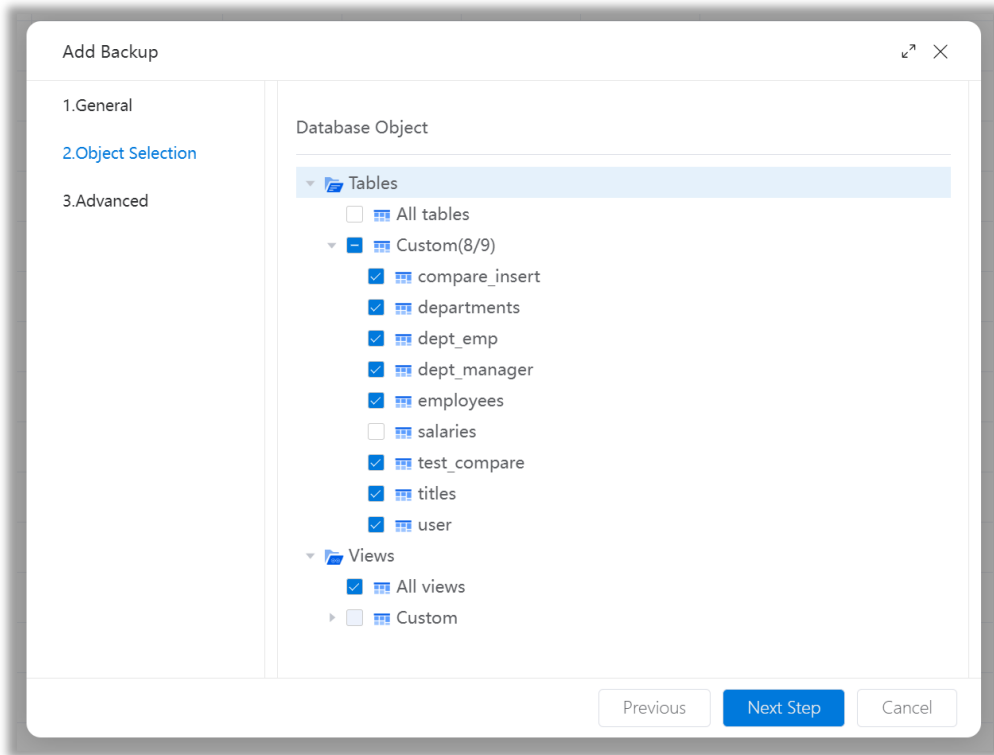
| | | |
|---|----------------|---|
| 2 | Restore Backup | Restore the data from the backup SQL file to the selected database. |
|---|----------------|---|

3.3.1.1 Add Backup

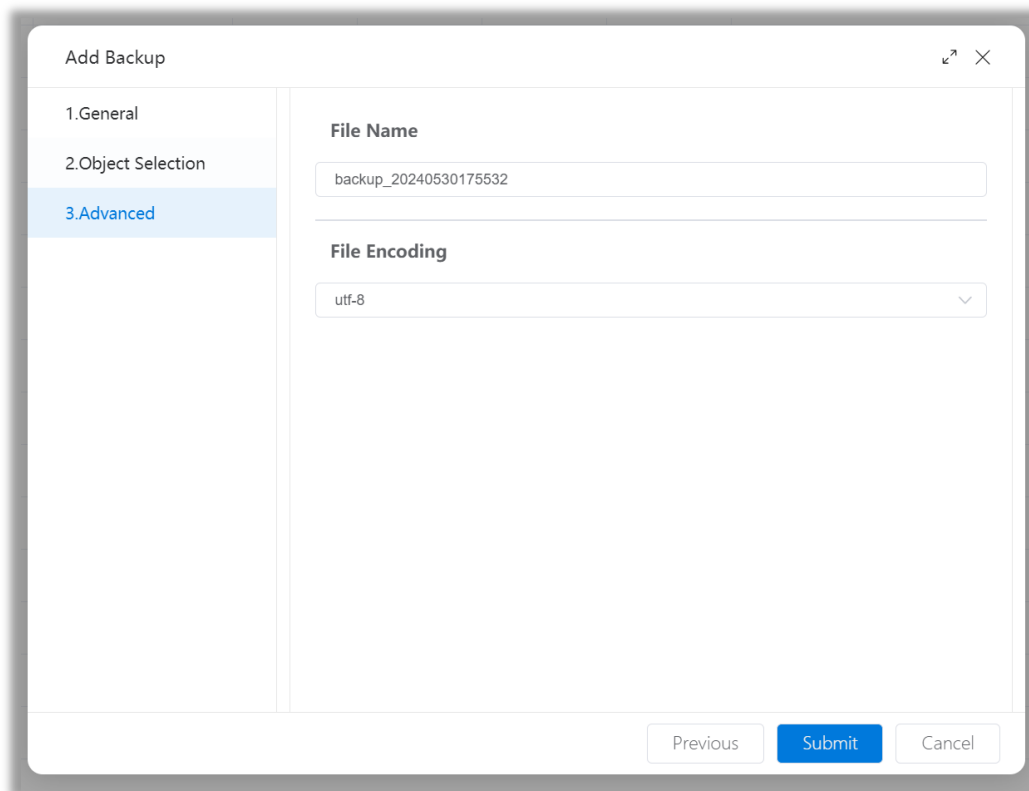
Right-click on the menu and select the "Add Backup" function, then choose the database you want to backup.



You can either select all tables in the database or choose specific tables to backup by customizing your selection.

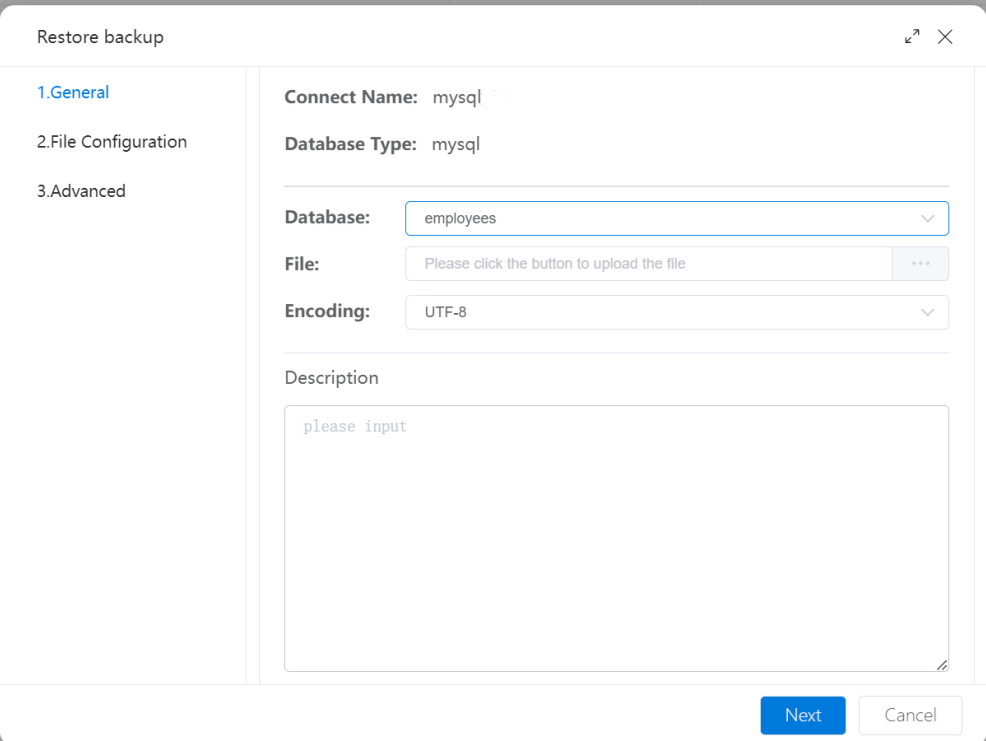


Set the filename and encoding for the backup SQL file, then click "Submit".



3.3.1.2 Restore Backup

Right-click on the menu and select the restore backup function, then choose the local backup SQL file.



Restore backup

1. General

2. File Configuration

3. Advanced

Connect Name: mysql

Database Type: mysql

Database: employees

File: Please click the button to upload the file

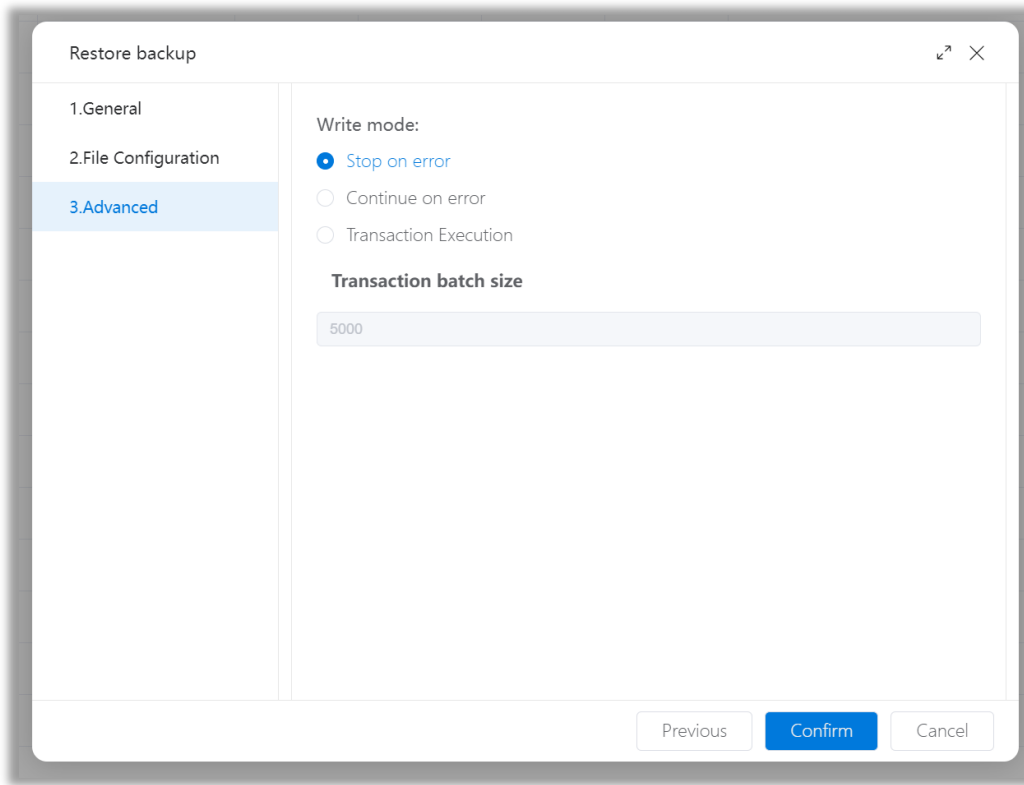
Encoding: UTF-8

Description

please input

Next Cancel

Select whether the restore operation requires transaction execution, and then click "Confirm".



3.4 Task Center

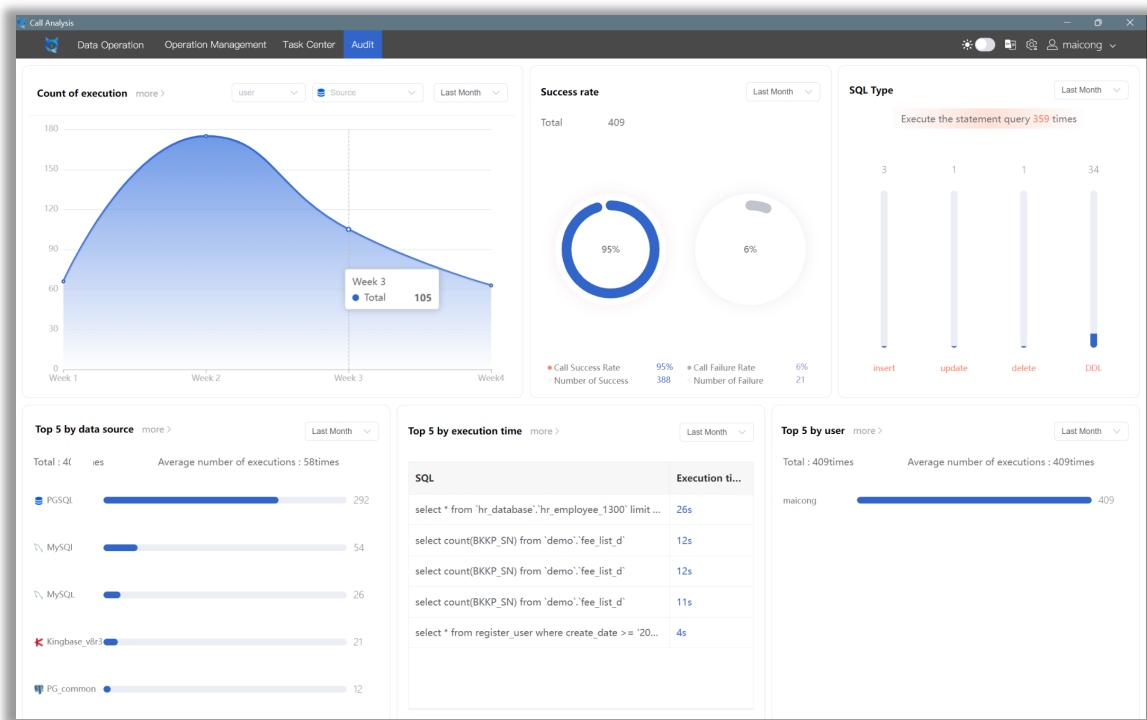
The "Task Center" in the top main menu records user behavior logs related to data import, data export, and generation test data.

If the data generation process takes too long due to a large amount of data being generated, or if there is a need to terminate the data generation operation, you can click on the "Terminate" option in the rightmost action column of the corresponding record in the Task Center to stop the SQL execution operation.

| # | Status | startup Time | Time | Transmis... | Execute I... | SQL | File Name | File fo... | Datasource | Operation |
|----|-----------|---------------------|------|-------------|--------------|--|---------------------------|------------|------------|-----------|
| 1 | success | 2024-05-20 12:03:47 | 0 | 208s | 3668317 | select * from 'demo'.fee_list_d' | fee_list_d_4G | CSV | MySQL_81 | Log |
| 2 | Data t... | 2024-05-16 15:55:27 | 0 | 0 | 0 | select * from 'demo'.fee_list_d' | fee_list_d_50 | CSV | MySQL | Log |
| 3 | success | 2024-05-16 15:26:22 | 0 | 155s | 13000000 | select * from 'hr_database'.hr_employee_1... | hr_employee_1300_20240... | CSV | MySQL_81 | Log |
| 4 | success | 2024-05-16 15:21:09 | 0 | 26s | 1000000 | select * from 'demo'.fee_list_d' | fee_list_d_100w | CSV | MySQL_81 | Log |
| 5 | success | 2024-05-16 15:11:01 | 0 | 5s | 200000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516151047 | CSV | MySQL_81 | Log |
| 6 | success | 2024-05-16 14:52:25 | 0 | 3s | 100000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516145044 | CSV | MySQL_81 | Log |
| 7 | success | 2024-05-16 14:34:52 | 0 | 0 | 10000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516143444 | CSV | MySQL_81 | Log |
| 8 | success | 2024-05-16 14:31:15 | 0 | 0 | 1000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516143058 | CSV | MySQL_81 | Log |
| 9 | success | 2024-05-16 14:23:42 | 0 | 99s | 3668317 | select * from 'demo'.fee_list_d' | fee_list_d_20240516142329 | CSV | MySQL_81 | Log |
| 10 | success | 2024-05-14 15:56:07 | 0 | 1s | 9670 | select * from 'demo'. | ...20240514155600 | Excel | MySQL_81 | Log |
| 11 | success | 2024-05-08 09:46:15 | 0 | 0 | 3164 | select * from register_user where create_da... | export_20240508094610 | Excel | PGSQL | Log |
| 12 | success | 2024-05-07 10:31:07 | 0 | 0 | 10000 | select * from 'hr_database'.hr_employee_1... | hr_employee_1300_20240... | Excel | MySQL_81 | Log |
| 13 | success | 2024-05-07 10:28:59 | 0 | 33s | 1000000 | select * from 'hr_database'.hr_employee_1... | hr_employee_1300_20240... | Excel | MySQL_81 | Log |
| 14 | success | 2024-05-06 11:20:33 | 0 | 0 | 1000 | select * from 'hr_database'.hr_employee' li... | hr_employee_2024050611... | CSV | MySQL_81 | Log |
| 15 | success | 2024-04-25 19:37:51 | 0 | 0 | 2 | select * from 'demo'.bit' | bit_20240425193748 | Excel | MySQL_81 | Log |
| 16 | success | 2024-04-25 19:37:43 | 0 | 0 | 2 | select * from 'demo'.bit' | bit_20240425193739 | CSV | MySQL_81 | Log |

3.5 Audit

Based on operation logs, user behavior records can be automatically analyzed to generate corresponding data visualization charts based on dimensions such as execution frequency, success rate, SQL type, classification by data source, classification by execution time, and classification by operating user.



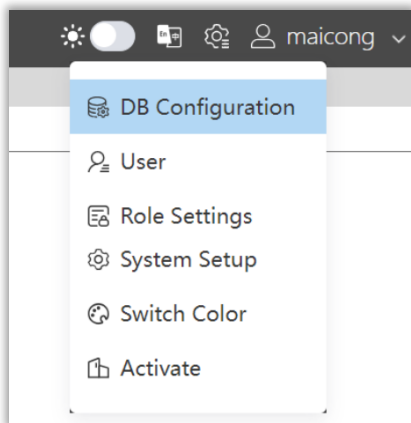
Clicking on "More" allows you to view detailed operation data and filter for export.



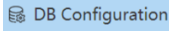

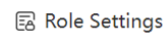
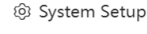
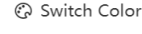

The screenshot shows the 'Detailed Information' table for user analysis, displaying a list of SQL queries with their execution details. The table includes columns for ID, SQL statement, execution time, SQL type, execution timestamp, user, database, and state.

| # | SQL | Time | SQL Type | Execution time | User | Database | State |
|----|--|-------|----------|---------------------|---------|-------------|---------|
| 1 | select * from 'hr_database','hr_employee_dem... | 106ms | select | 2024-05-30 14:45:40 | maicong | hr_database | success |
| 2 | SELECT id,'emp_id','name','gender','birthd... | 268ms | select | 2024-05-28 20:59:58 | maicong | hr_database | success |
| 3 | SELECT id,'emp_id','name','gender','birthd... | 17ms | select | 2024-05-28 12:40:04 | maicong | hr_database | success |
| 4 | select * from 'hr_database','hr_employee_dem... | 12ms | select | 2024-05-24 17:15:23 | maicong | hr_database | success |
| 5 | SELECT id,'emp_id','name','gender','birthd... | 13ms | select | 2024-05-24 17:15:10 | maicong | hr_database | success |
| 6 | select * from 'hr_database','hr_employee_dem... | 15ms | select | 2024-05-24 17:12:53 | maicong | hr_database | success |
| 7 | ALTER TABLE 'hr_database','hr_employee_dem... | 16ms | ddl | 2024-05-24 17:06:24 | maicong | hr_database | success |
| 8 | select * from 'hr_database','hr_employee_dem... | 13ms | select | 2024-05-24 17:05:41 | maicong | hr_database | success |
| 9 | select * from 'hr_database','hr_employee' limit... | 16ms | select | 2024-05-24 17:02:01 | maicong | hr_database | success |
| 10 | select * from 'hr_database','hr_employee_dem... | 11ms | select | 2024-05-24 17:01:54 | maicong | hr_database | success |
| 11 | CREATE TABLE 'hr_employee_demo' ('id' int ... | 66ms | ddl | 2024-05-24 16:52:02 | maicong | hr_database | success |
| 12 | DROP TABLE 'hr_database','hr_employee_2' | 19ms | ddl | 2024-05-24 16:30:01 | maicong | hr_database | success |
| 13 | create table 'hr_employee_2' like 'hr_database... | 57ms | ddl | 2024-05-24 16:29:36 | maicong | hr_database | success |
| 14 | select * from 'hr_database','hr_employee' limit... | 31ms | select | 2024-05-24 16:29:16 | maicong | hr_database | success |

3.6 System Setup

Located on the top-right corner of the main menu, here you can operate the system settings for SQLynx.

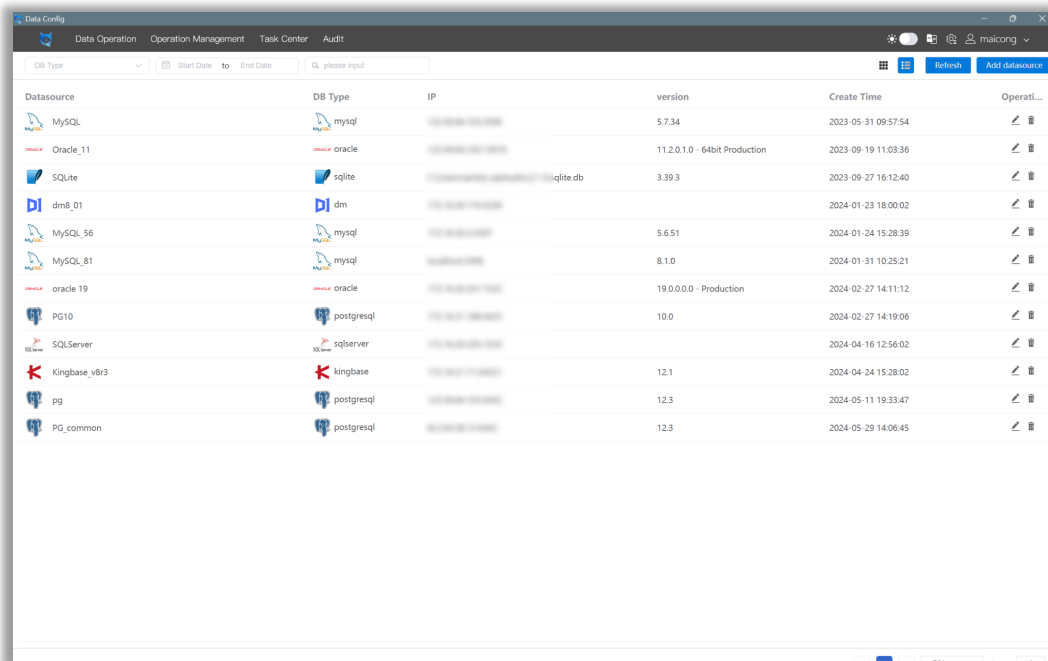


| # | Location | Description |
|---|---|---|
| 1 |  | Switch system mode between light/dark mode |
| 2 |  | Switch between displaying system menus in English or Chinese |
| 3 |  | Configuration operations for data sources |
| 4 |  | Managing user information such as creation, configuration, or deletion |
| 5 |  | Managing group information such as creation, configuration, or deletion |
| 6 |  | System displays data, font size, and other global parameter settings |
| 7 |  | Switch theme color |
| 8 |  | Upload the license file to activate the product |

3.6.1 Data Configuration

You can view, add, modify, and delete data sources in SQLynx.

***Note:** In the SQLynx Team, **only the [Administrator] account** has the permission to configure data source operations.

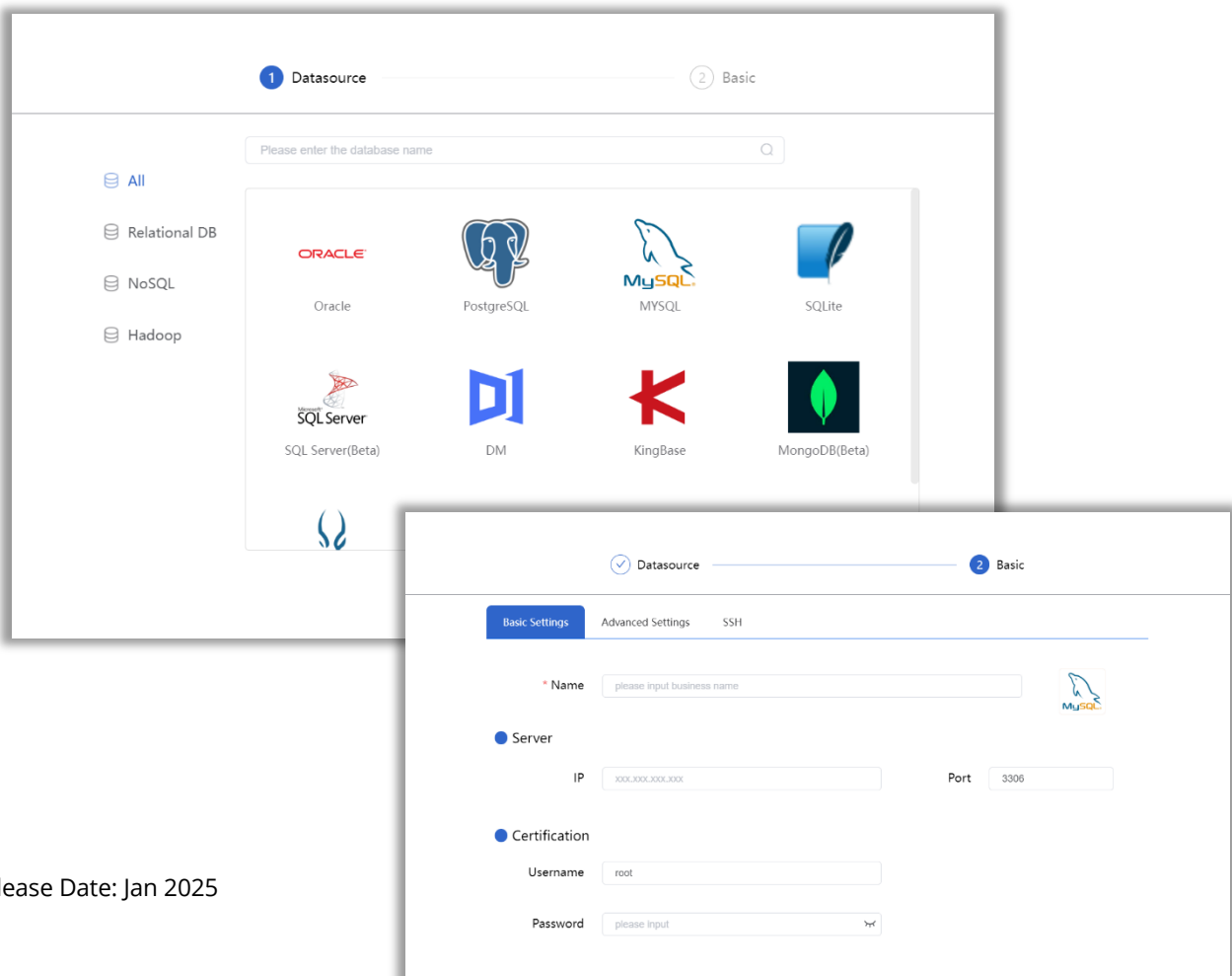


| Datasource | DB Type | IP | version | Create Time | Operati... |
|---------------|------------|---------------|-------------------------------|---------------------|------------|
| MySQL | mysql | 192.168.1.100 | 5.7.34 | 2023-05-31 09:57:54 | 🔍 🗑️ |
| Oracle_11 | oracle | 192.168.1.101 | 11.2.0.1.0 - 64bit Production | 2023-09-19 11:03:36 | 🔍 🗑️ |
| SQLite | sqlite | 192.168.1.102 | sqlite db | 2023-09-27 16:12:40 | 🔍 🗑️ |
| dm8_01 | dm | 192.168.1.103 | | 2024-01-23 18:00:02 | 🔍 🗑️ |
| MySQL_56 | mysql | 192.168.1.104 | 5.6.51 | 2024-01-24 15:28:39 | 🔍 🗑️ |
| MySQL_81 | mysql | 192.168.1.105 | 8.1.0 | 2024-01-31 10:25:21 | 🔍 🗑️ |
| oracle 19 | oracle | 192.168.1.106 | 19.0.0.0.0 - Production | 2024-02-27 14:11:12 | 🔍 🗑️ |
| PG10 | postgresql | 192.168.1.107 | 10.0 | 2024-02-27 14:19:06 | 🔍 🗑️ |
| SQLServer | sqlserver | 192.168.1.108 | | 2024-04-16 12:56:02 | 🔍 🗑️ |
| Kingbase_v8r3 | kingbase | 192.168.1.109 | 12.1 | 2024-04-24 15:28:02 | 🔍 🗑️ |
| pg | postgresql | 192.168.1.110 | 12.3 | 2024-05-11 19:33:47 | 🔍 🗑️ |
| PG_common | postgresql | 192.168.1.111 | 12.3 | 2024-05-29 14:06:45 | 🔍 🗑️ |

1. Add Data source:

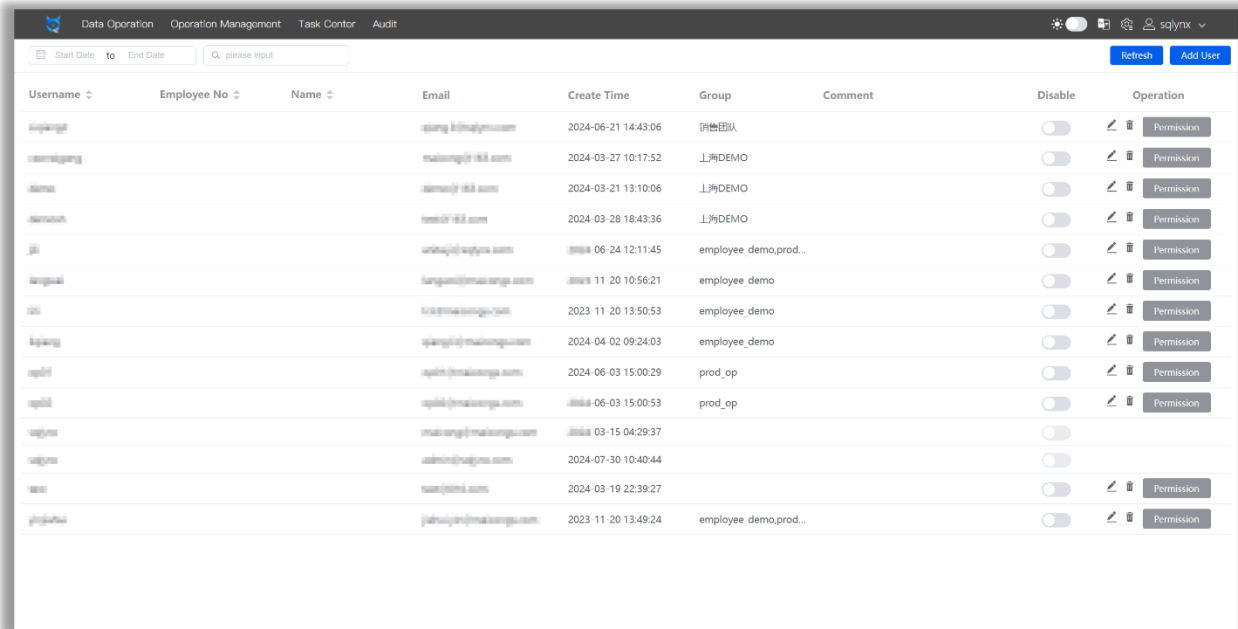
- Click on "**Add Data Source**."
- In the guided popup window, select the appropriate database and click "Next."
- Enter the basic settings of the data source, such as the **business system name**, **data source address**, **port number**, **username**, and **password**.
- If more configuration is needed, click on "**Advanced Settings**" to replace the database driver version, character set, add connection properties, driver properties, etc.
- Click on "**Test**" **button**. If the test is successful, it means the data source can be added. If the test fails, please check if the data source and network connection are correct.

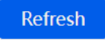
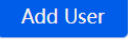


***Note:** For connection properties, driver properties, and other parameters, please refer to the JDBC documentation released by the added data source's official.


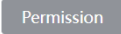


3.6.2 User Management

The default login user "sqlynx" has administrative rights, allowing for the management of all team data sources and member permissions.



| # | Location | Function | Description |
|---|---|-------------------------|---|
| 1 | Search box | Search user information | Search for user information under the current admin permissions |
| 2 |  | Refresh | Refresh the current page |
| 3 |  | Add User | Enter information to create a new user |
| 4 |  | Disable | Disable/Enable login permissions for users under current admin rights |
| 5 |  | Edit | Edit user information under current admin rights |

| | | | |
|---|---|---------------------|---|
| 6 |  | Delete | Delete user accounts under current admin rights |
| 7 |  | Check Permission | View the permissions owned by the user |

To add a new user: Enter the username, password, and email in sequence, then save.

Users can be assigned to different groups based on their permissions.

User information management
↗ ×

Basic information

*** Username**

*** Role**

*** Password** ✕

Password security level : medium

Employee No

Name

*** Email**

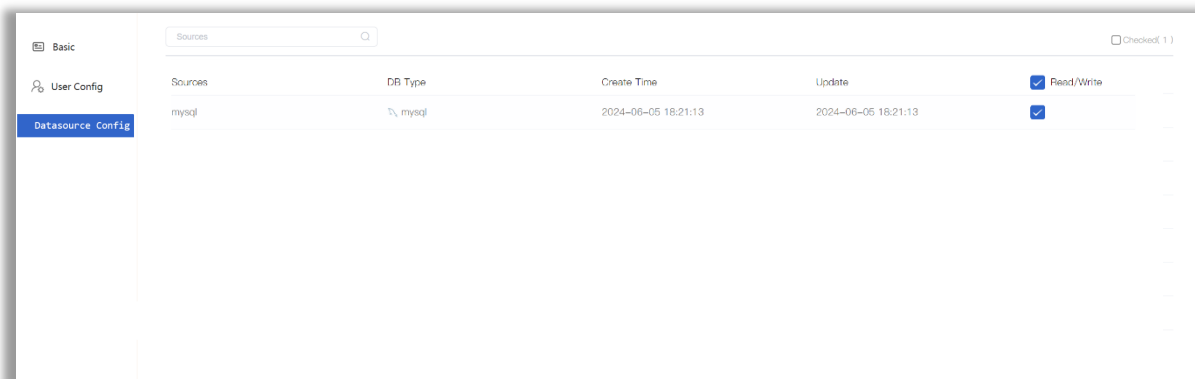
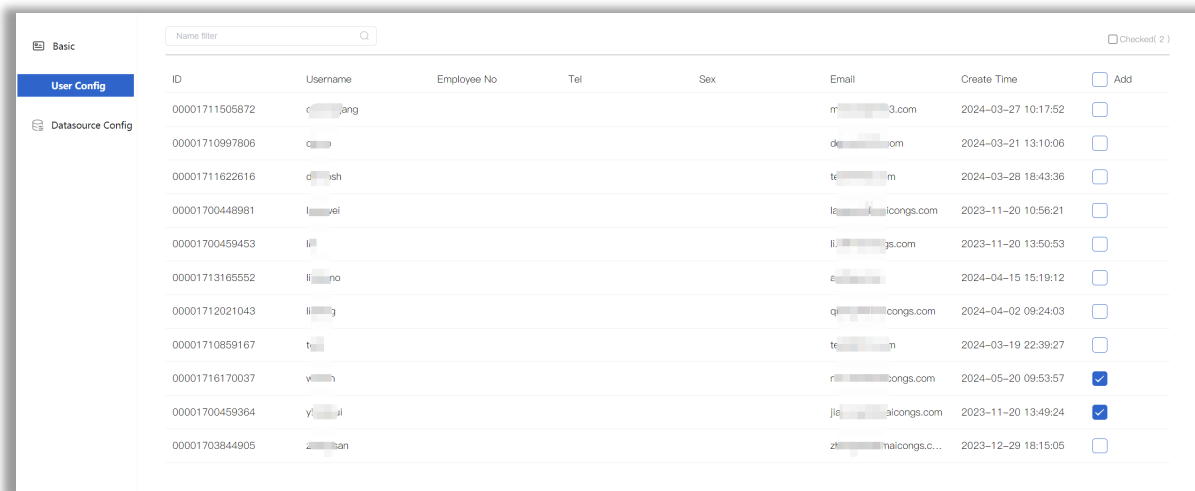
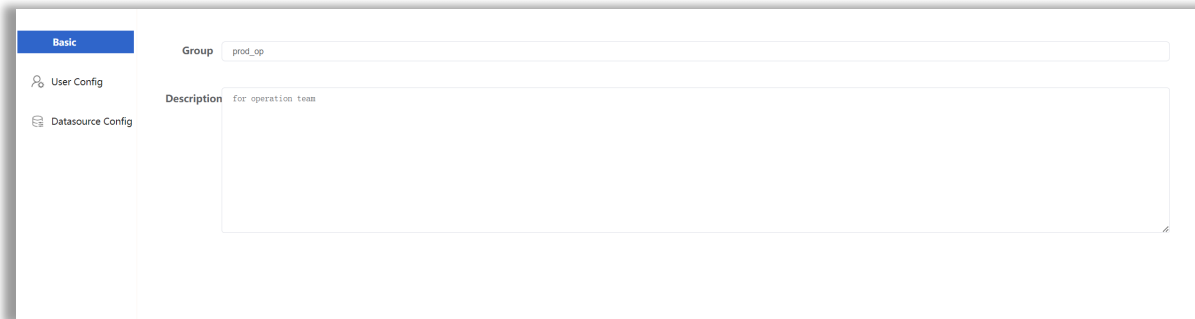
Comment

Group (Admin user can not related to any groups)

| <input type="checkbox"/> | Group | Description |
|--------------------------|-------------|-------------|
| <input type="checkbox"/> | DEMO | |
| <input type="checkbox"/> | : | |
| <input type="checkbox"/> | d_op | |
| <input type="checkbox"/> | emo | abc |
| <input type="checkbox"/> | ployee_demo | |
| <input type="checkbox"/> | t | test |

3.6.3 Role Settings

Group with varying permissions can be created, with the ability to add or remove group members. This setup allows for the management of user permissions for accessing and editing data sources.

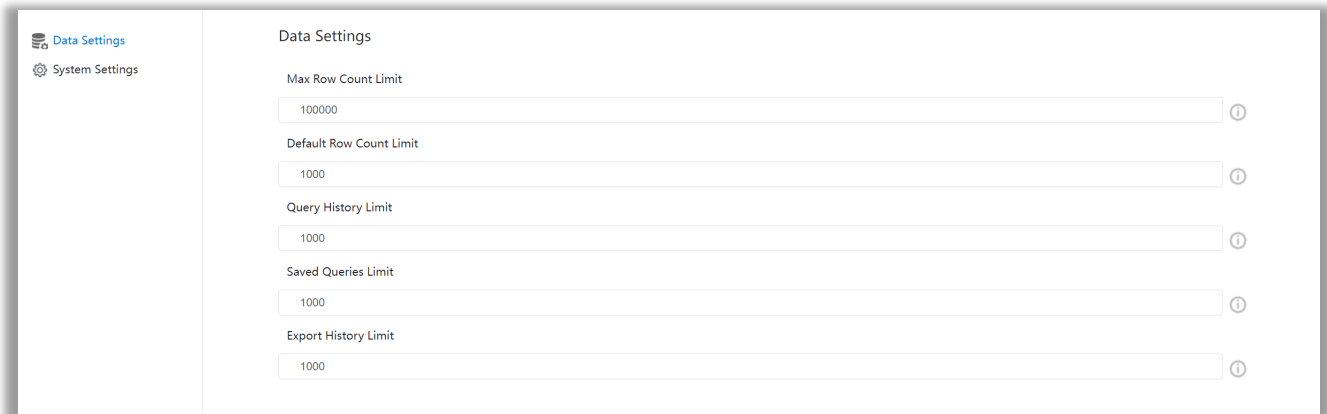


3.6.4 System Setup

You can adjust the settings for query results, JVM, and system theme according to the user's actual usage needs.

3.6.4.1 Data Settings

Based on the user's actual usage needs, you can modify the following data parameters.



| Setting Name | Default Value |
|-------------------------|---------------|
| Max Row Count Limit | 10000 |
| Default Row Count Limit | 1000 |
| Query History Limit | 1000 |
| Saved Queries Limit | 1000 |
| Export History Limit | 1000 |

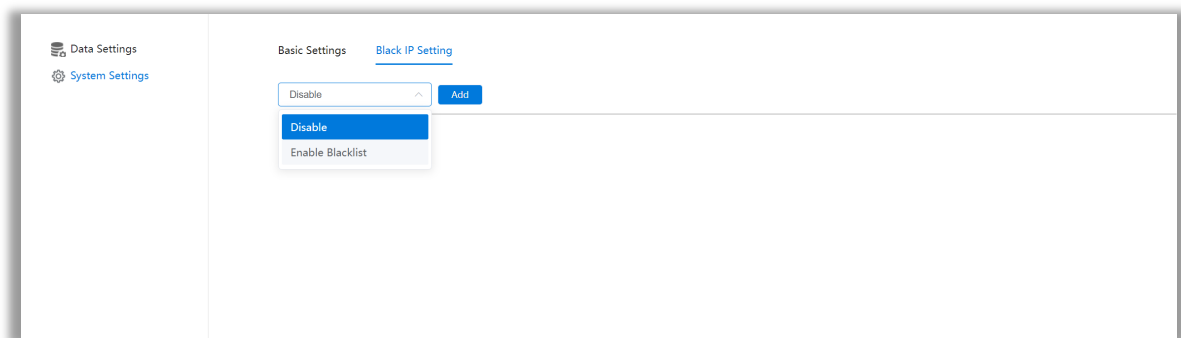
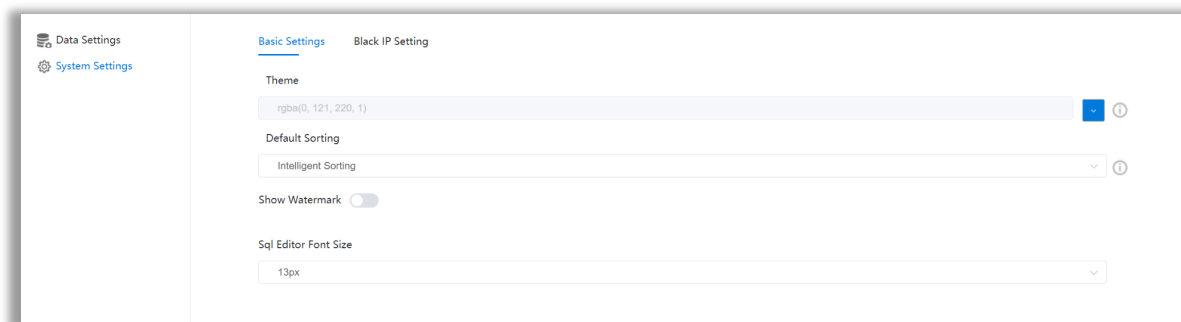
1. Modify to the desired numerical value.
2. After saving, return to the homepage (no need to restart SQLynx).

| # | Data Settings | Default | Description |
|---|-------------------------|---------|---|
| 1 | Max Row Count Limit | 10000 | The upper limit of max rows returned when executing query statements in SQLynx. |
| 2 | Default Row Count Limit | 1000 | The upper limit of default rows returned when using "Execute" to query. |
| 3 | Query History Limit | 1000 | The upper limit of query history logs saved in " Query History ". |
| 4 | Saved Queries Limit | 1000 | The upper limit of commonly used query statements saved in " Saved Query ". |

| | | | |
|---|----------------------|------|---|
| 5 | Export History Limit | 1000 | The upper limit of historical export data logs. |
|---|----------------------|------|---|

3.6.4.2 System Settings

According to the user's actual usage needs, you can modify the theme color and default sorting. After modification, save it without the need to restart SQLynx.



| # | System Settings | Default | Description |
|---|-----------------|---------------------|---|
| 1 | Theme | Color Parameters | Default theme color scheme, can be customized according to user preferences |
| 2 | Default Sorting | Intelligent Sorting | default sorting rule within SQLynx |

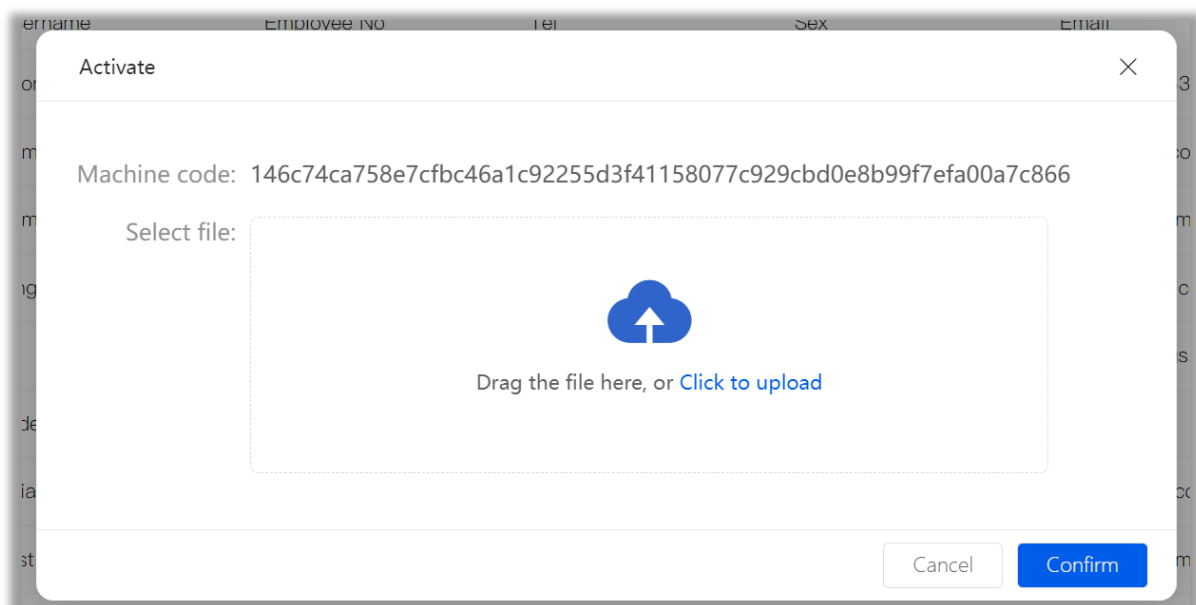
| | | | |
|---|----------------------|---------|--|
| 3 | Show Watermark | Off | Option to toggle whether to display watermark |
| 4 | SQL Editor Font Size | 13px | Option to set the font size of the SQL editor (applies to all SQL editors) |
| 5 | Blacklist Setting | Disable | Option to enable or disable the blacklist feature |

3.6.5 Switch Theme

You can switch between the default orange, blue, and purple theme colors.

3.6.6 Activate

When purchasing or renewing software products, you can upload the license file provided by SQLynx here to activate the SQLynx Team.



3.7 Account

3.7.1 My Profile

1. Modify Login Password

Click on "Settings" to modify the password in the pop-up window.

2. Saved SQL

Display the user's "Saved Query" records, with options to modify, copy, or delete.

3. Snippets

Display the user's "Code Blocks" records, with options to modify or delete.

4. Preferences

Display the user's current theme color scheme and default sorting rules.

3.7.2 Support

SQLynx Official Website: <https://www.sqlynx.com>

3.7.3 Feedback

Send an email to service@sqlynx.com for assistance.

3.7.4 About Us

Display the SQLynx version, Java version, and server time currently in use by the user.

3.7.5 Sign Out

Sign out of the SQLynx account.

4. SQLynx Enterprise

4.1 Startup

4.1.1 Windows Version

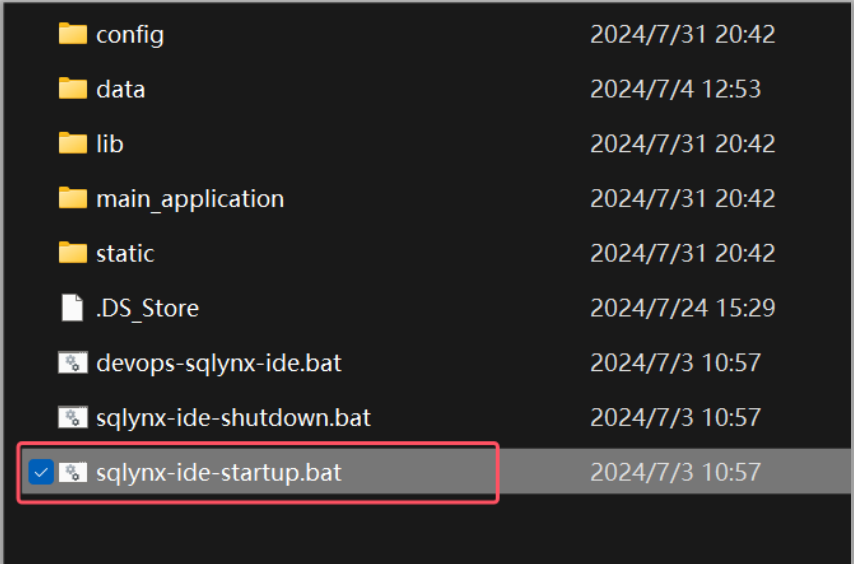
4.1.1.1 SQLynx Startup

1. Download and unzip the SQLynx package locally. After unzipping, a folder named 'sqlynx' will be created, navigate to its directory.



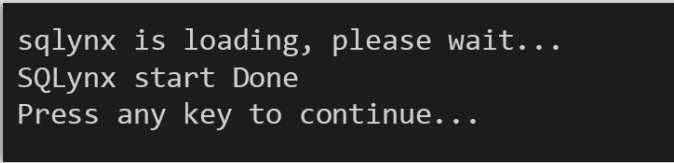
sqlynx_win_no_jdk_3.5.0 2024/7/31 20:41

2. In the folder, double-click the “sqlynx-ide-startup.bat” file.



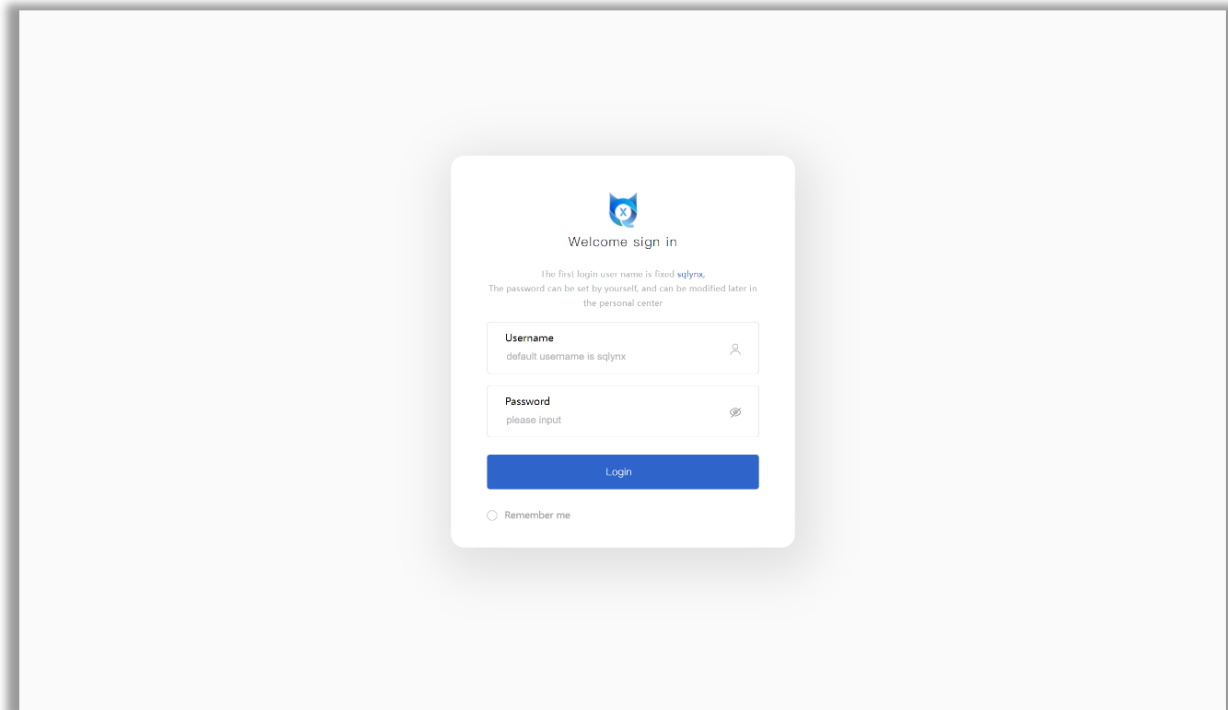
| | |
|--|-----------------|
| config | 2024/7/31 20:42 |
| data | 2024/7/4 12:53 |
| lib | 2024/7/31 20:42 |
| main_application | 2024/7/31 20:42 |
| static | 2024/7/31 20:42 |
| .DS_Store | 2024/7/24 15:29 |
| devops-sqlynx-ide.bat | 2024/7/3 10:57 |
| sqlynx-ide-shutdown.bat | 2024/7/3 10:57 |
| <input checked="" type="checkbox"/> sqlynx-ide-startup.bat | 2024/7/3 10:57 |

3. After double-clicking the sqlynx-ide-startup.bat file, a command window will pop up.



```
sqlynx is loading, please wait...
SQLynx start Done
Press any key to continue...
```


4. The SQLynx login page will automatically open in your browser, indicating successful deployment. If it does not automatically redirect, manually launch your browser and navigate to `http://<server IP address>:18888`. The default port is 18888, which supports custom port number modification.

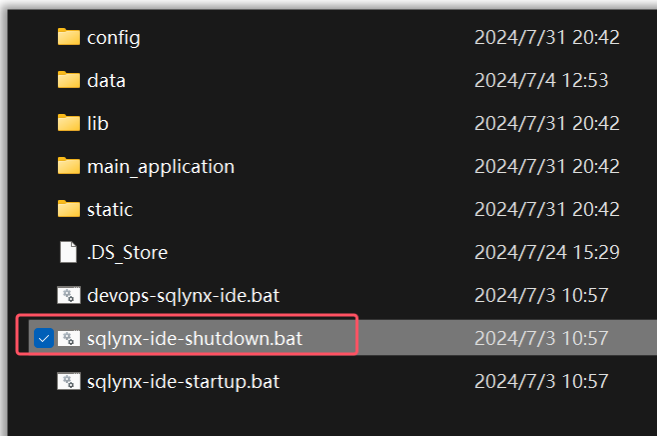


5. Log in with your username and password. The default username is **“sqlynx,”** and the initial password is set by the user input.

6. After logging in, **only the WEB client** of SQLynx is available; desktop client is not supported.

4.1.1.2 SQLynx Shutdown

1. Go to the sqlynx folder, double-click the **sqlynx-ide-shutdown.bat** file.



2. A command window will pop up, indicating the server has been shut down.

```

killing Maicong-SQLynx
start kill pid 20388 Maicong-SQLynx-3.0.0-release.jar
SUCCESS: The process with PID 20388 has been terminated
kill Maicong-SQLynx Done!
Press any key to continue...

```

4.1.2 Linux Version

4.1.2.1 SQLynx Startup

1. Download the SQLynx package and unzip it to the current folder with the command

```
unzip <filename>
```

**Example: unzip sqlynx_enterprise_linux_no_jdk_3.5.0.zip*

```
root@localhost downloads % unzip sqlynx_enterprise_linux_no_jdk_3.5.0.zip
Archive:  sqlynx_enterprise_linux_no_jdk_3.5.0.zip
  creating: sqlynx/
  inflating: sqlynx/sqlynx-ide.sh
  inflating: sqlynx/devops-sqlynx-ide-3.5.0-release-jar-with-dependencies.jar
  creating: sqlynx/config/
  inflating: sqlynx/config/sqlynx.yaml
  creating: sqlynx/ext/
  inflating: sqlynx/ext/sdoctype.jar
  inflating: sqlynx/ext/sdoapi.jar
  inflating: sqlynx/ext/sdoutl.jar
  inflating: sqlynx/ext/sdodep3prt.jar
  creating: sqlynx/dep_lib/
  inflating: sqlynx/dep-lib/jaxb-impl-2.2.3-1.jar
  inflating: sqlynx/dep-lib/druid-1.1.24.jar
  inflating: sqlynx/dep-lib/spring-boot-starter-test-2.6.7.jar
  inflating: sqlynx/dep-lib/jsonassert-1.5.0.jar
  inflating: sqlynx/dep-lib/jakarta.xml.binding-api-2.3.3.jar
  inflating: sqlynx/dep-lib/json-path-2.6.0.jar
  inflating: sqlynx/dep-lib/mongodb-driver-sync-4.9.0.jar
  inflating: sqlynx/dep-lib/spring-context-5.3.19.jar
  inflating: sqlynx/dep-lib/fastjson-1.2.83.jar
  inflating: sqlynx/dep-lib/assertj-core-3.21.0.jar
  inflating: sqlynx/dep-lib/hadoop-auth-2.7.3.jar
  inflating: sqlynx/dep-lib/httpcore-4.4.15.jar
  inflating: sqlynx/dep-lib/slf4j-api-1.7.36.jar
  inflating: sqlynx/dep-lib/junit-jupiter-5.8.2.jar
```

You can also unzip to a specific directory using the command

```
unzip <filename> -d <path>
```

If unzip is not installed, you can install it with the command

```
yum install -y unzip zip
```

2. After unzipping, a folder named 'sqlynx' will be created. Enter the directory with the

```
command cd sqlynx
```

```
root@localhost downloads % cd sqlynx
root@localhost sqlynx %
```

3. By running the ls command, you can see a file named **sqlynx-ide.sh** in the directory

```
root@localhost sqlynx % ls
SQLynx-ide-3.5.0-release.jar      devops-sqlynx-ide-3.5.0-release-jar-with-dependencies.jar
README_cn.md                     devops-sqlynx-ide.sh
README_en.md                     ext
config                           lib
data                              sqlynx-ide.sh
dep_lib                           static
```

4. Execute the command: `./sqlynx-ide.sh`

You will see the following prompt:

```
root@localhost sqlynx % ./sqlynx-ide.sh

*****
**                                     **
**      sqlynx-ide commands          **
**                                     **
*****
**      sh sqlynx-ide.sh start       **
**      sh sqlynx-ide.sh stop       **
**      sh sqlynx-ide.sh restart    **
*****
```

The three instructions displayed are:

[sh sqlynx-ide.sh start] Start service

[sh sqlynx-ide.sh stop] Out of service

[sh sqlynx-ide.sh restart] Restart service

5. Execute the command `sh sqlynx-ide.sh start` to start the service

```

root@localhost sqlynx % sh sqlynx-ide.sh start

          (M)         (S)
        (a)         (Q)
      (i)         (L)
    (n)         (Y)
  (g)         (N)
 (o)         (X)
(o)         (X)

sqlynx-ide server is starting
JAVA_OPTS:
-server
-Xms256m
-Xmx8g
-XX:+UseG1GC
-XX:+UseStringDeduplication
-Xloggc:./log/sqlynx-ide-gc.log
-XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=./log/sqlynx-ide-heapdump
-Dfile.encoding=utf-8

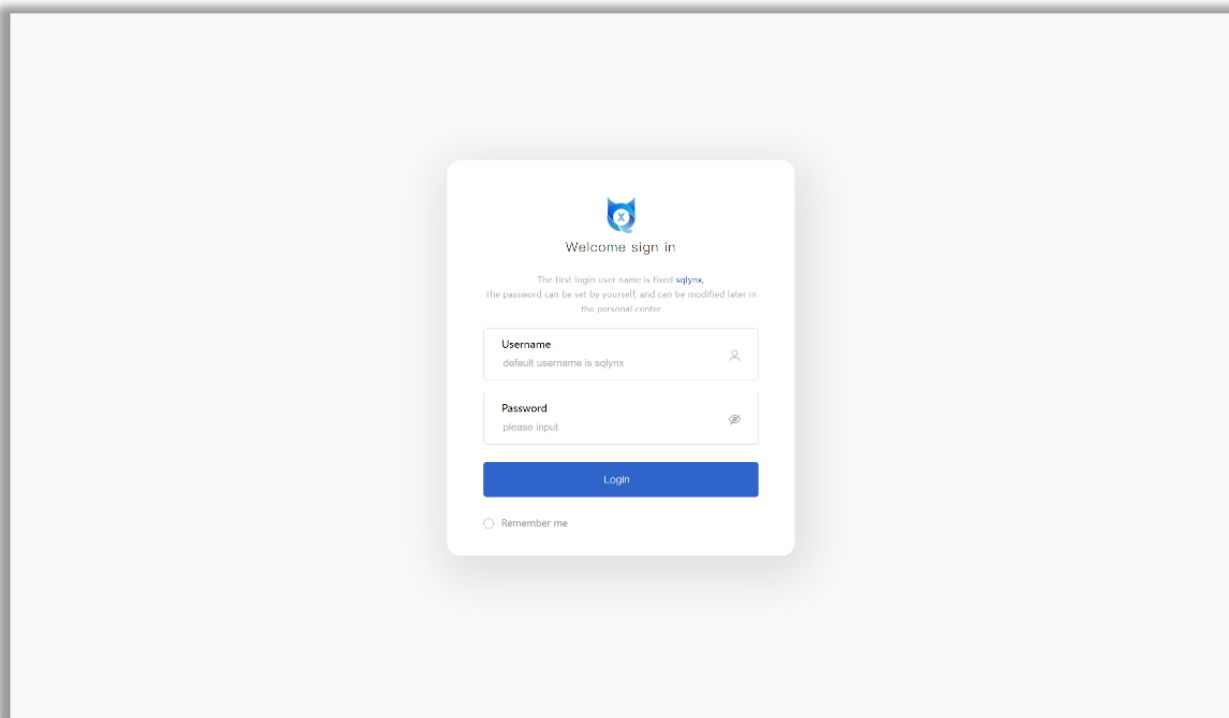
Please waiting start

sqlynx-ide server start complete

```

6. After starting, you can access the SQLynx web page by using a browser to navigate to `http://<server IP address>:18888`. The default port is 18888, and it supports customization.

The appearance of the login page indicates a successful installation of SQLynx.

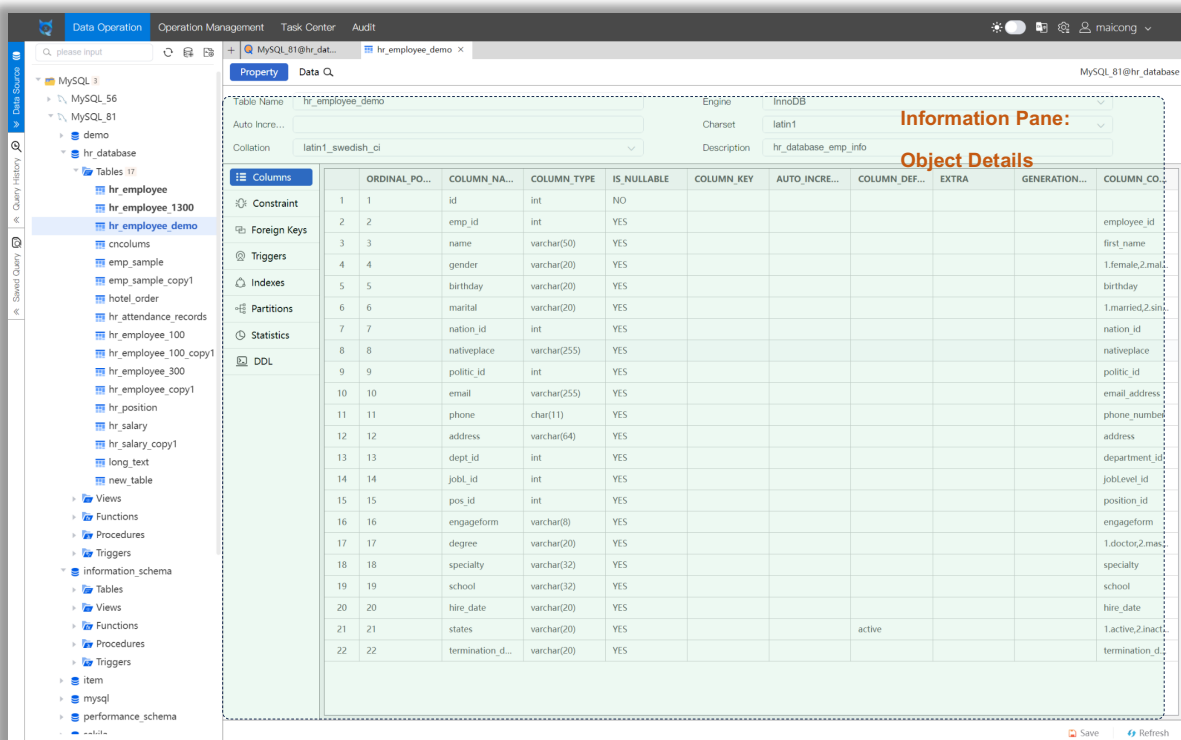
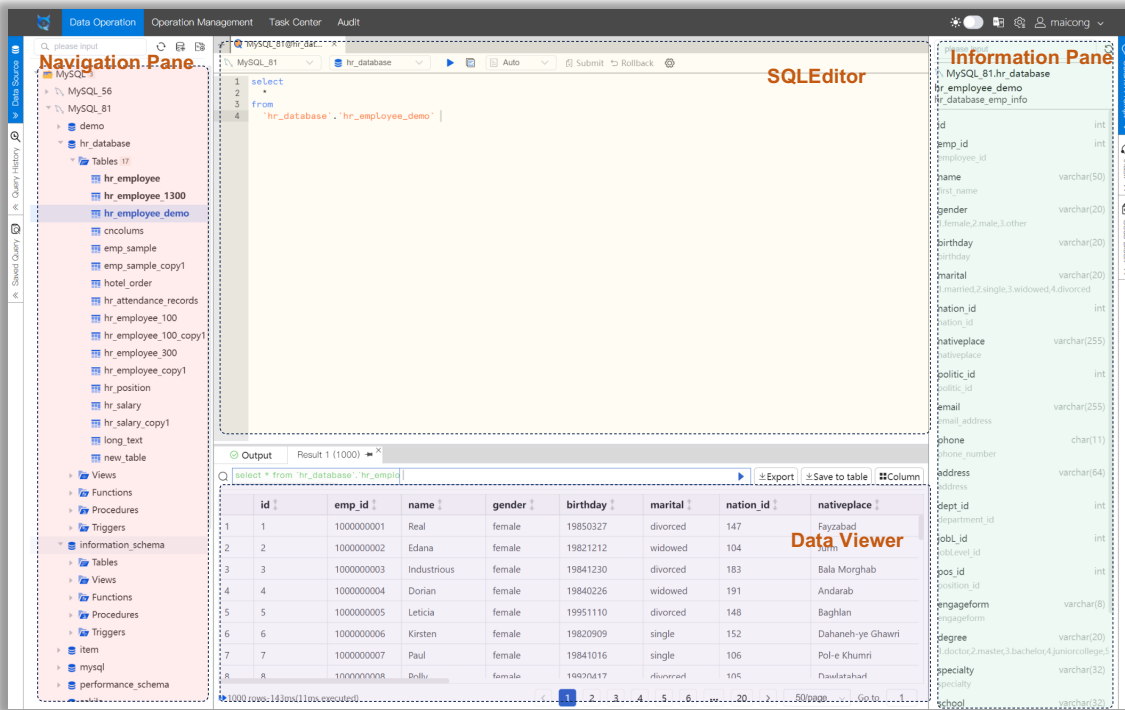


7. Login with your username and password. The default username is **“sqlynx”** with the initial password set by the user input.

8. After logging in, **only the WEB client** of SQLynx is available; desktop client is not supported.

4.2 Data Operation

The data operation module of SQLynx is composed of several areas: the navigation pane, information pane, SQL editor, and data viewer.

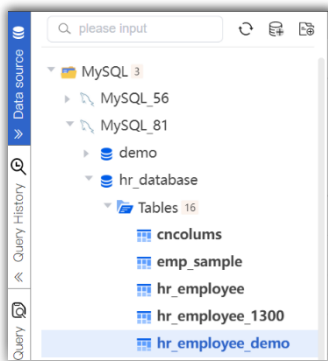


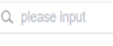



4.2.1 Navigation Pane

The navigation pane is located on the left side of the main window, featuring a tree structure.

It allows browsing information of all successfully added data sources, databases, and database objects.

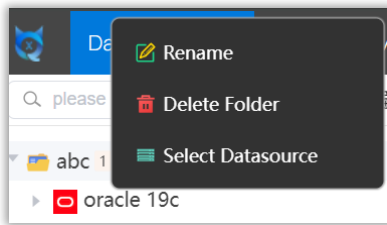
The related operational functions are accessible through the right-click context menu of the mouse.



| # | Location | Description |
|---|---|--|
| 1 |  | Search for database names, object names *Supports fuzzy search; case-sensitive. |
| 2 |  | Refresh |
| 3 |  | Add data source (refer to steps in " System Settings - Data Configuration ") |
| 4 |  | Create folder |

Right-click on the folder, the following menu appears.

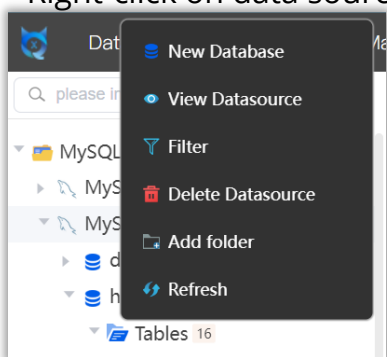
| # | Function | Description |
|---|---------------|--|
| 1 | Rename | Rename the currently selected folder |
| 2 | Delete Folder | Delete the currently selected folder *Only delete the folder, the data sources within it will not be deleted; after the folder is deleted, data sources will automatically be moved out and returned to the navigation pane. |



| | | |
|---|-------------------|--|
| 3 | Select Datasource | Configure the addition and removal of data sources for the currently selected folder |
|---|-------------------|--|

4.2.1.1 Add Database

Right-click on data source in the navigation pane, and the following menu appears.



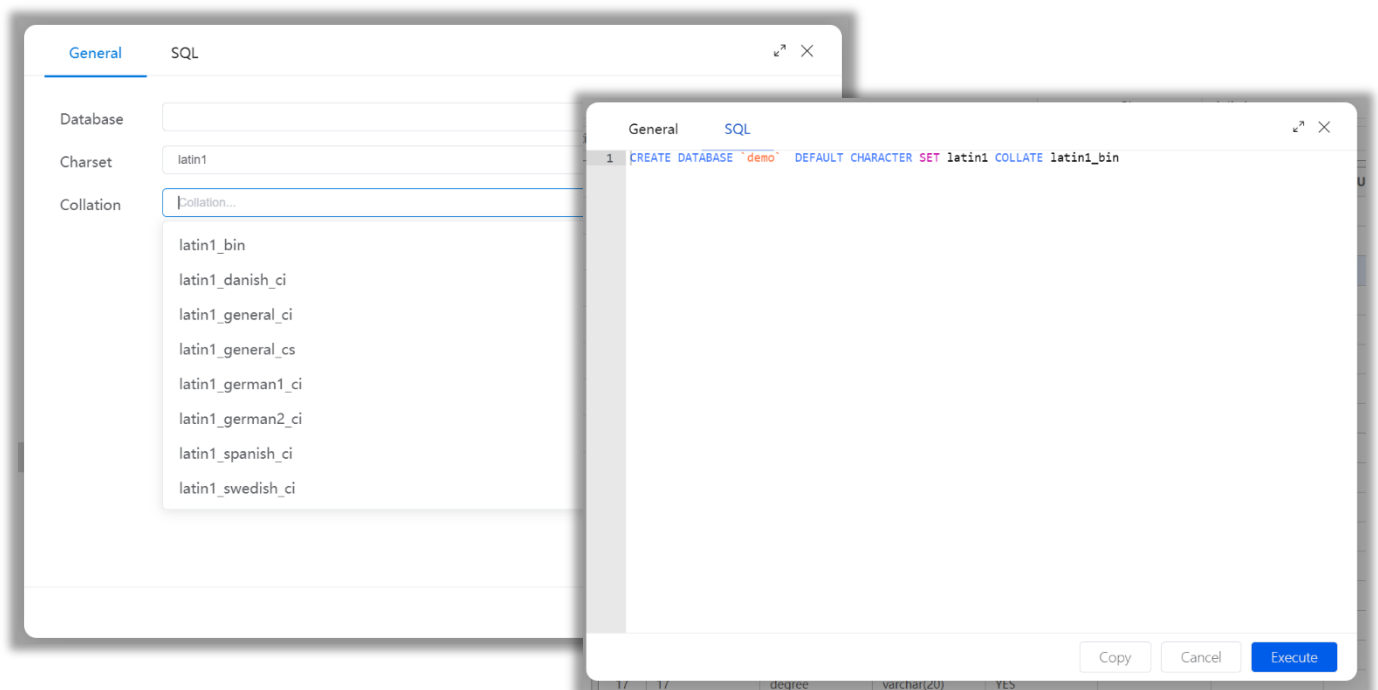
| # | Function | Description |
|---|-----------------|---|
| 1 | New Database | Create a new database, with options to set the database name, character set, and collation. |
| 2 | View Datasource | View the configuration information of the currently selected data source |
| 3 | Filter | Filter the databases displayed in the current navigation pane |

| | | |
|---|-------------------|---|
| 4 | Delete Datasource | Delete the currently selected data source *The deletion is irreversible once confirmed, please proceed with caution after verification. |
| 5 | Add Folder | Create a new folder |
| 6 | Refresh | Refresh |

Add Database:

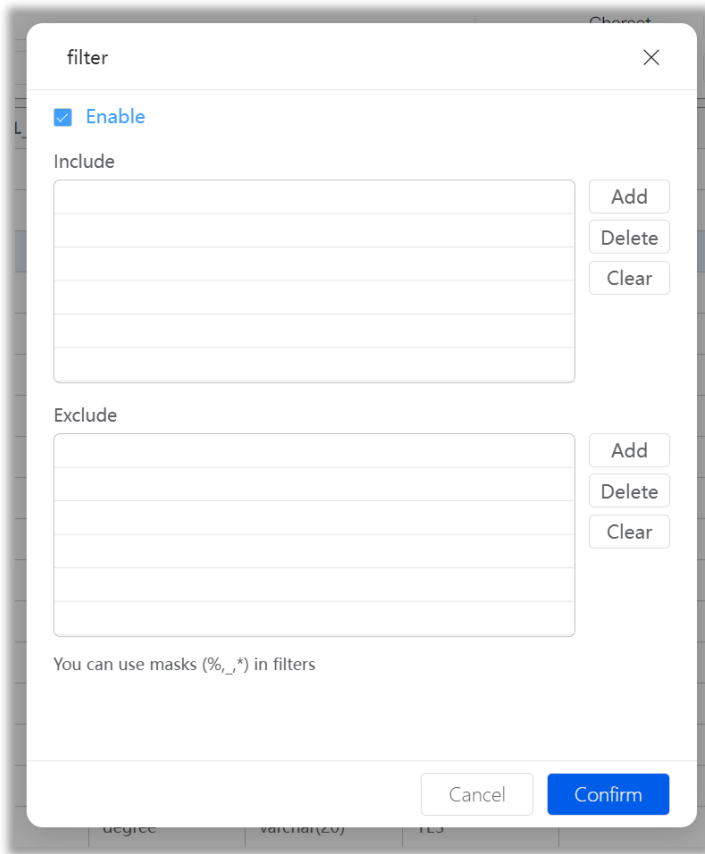
Create a new database and execute the operation after filling out the Database name, character set, and collation rules as required.

The SQL editor on the right will simultaneously display the corresponding SQL statements for reference.



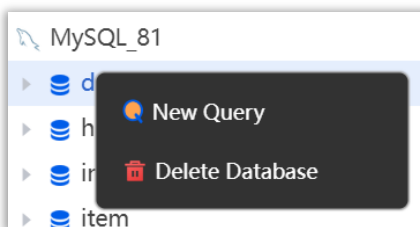
Filter:

You can set filter conditions based on your needs, to include or exclude certain keywords. When performing a fuzzy search, you need to add wildcards.



4.2.1.2 New Query


Expand the data source, right-click on the database name, and the following menu appears.

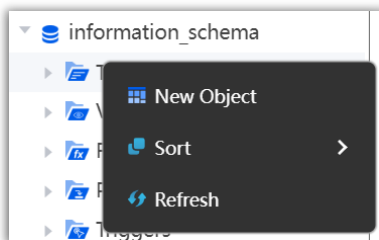


| # | Function | Description |
|---|-----------------|--|
| 1 | New Query | The main window switches to the SQL editor, with the default path being the path of the currently selected database. |
| 2 | Delete Database | Delete the currently selected database *The deletion is irreversible once confirmed, please proceed with caution after verification. |

4.2.1.3 New Object

a. New Table

1. Expand the database, right-click on the  "Tables" icon, and the following menu appears.

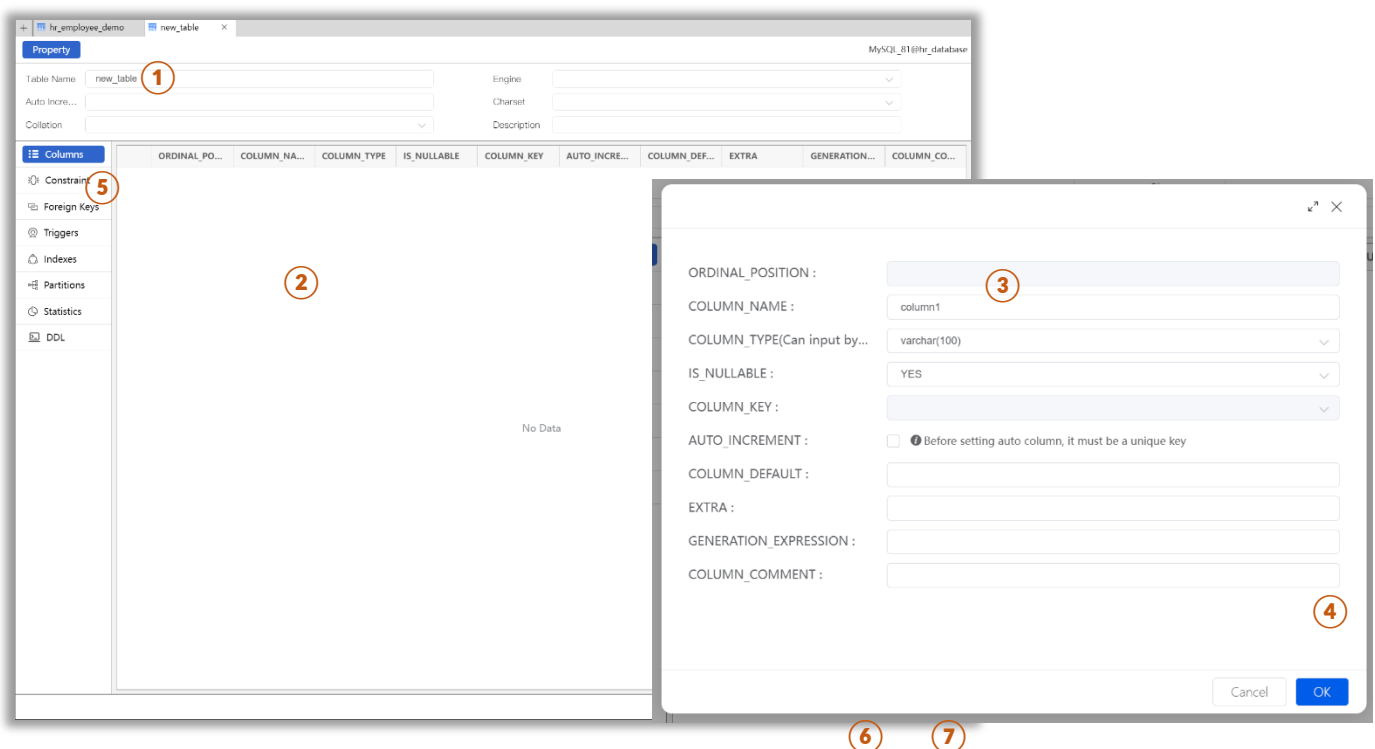


| # | Function | Description |
|---|------------|---|
| 1 | New Object | The main window becomes the object detail pane. where a new table is created. You can modify the table's properties on this page and execute these changes. |
| 2 | Sort | Sort all tables in the current database: By Intelligent Sorting*, By Weight, By Count, By Time, By First Letter. |
| 3 | Refresh | Refresh |

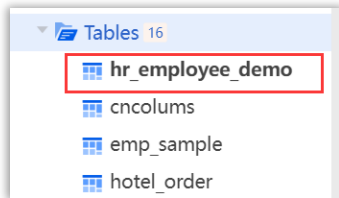
2. Create a New Table

- Click on "**New Object**".
- Set the basic properties of the table in the object detail pane: such as Table Name, Character Set, Collation, and Description.
- Under the "Columns" tab, right-click on the blank area of the data detail box to bring up the context menu, and click "Add".


- In the popup window, configure the column information to be added and click OK; repeat the third step until you have added all the required columns.
- Under the "Constraints" tab, right-click to bring up the context menu and click "Add" to set a primary key for the table, then confirm.
- Click save at the bottom right corner, which opens a popup showing the preview of the SQL statement for creating the table. You can directly click "Execute" to create the table or click "Copy" to save the current statement for further editing in the SQL editor.
- After execution, refresh the database to view the tables or refer to [section 4.2.2.1](#) for steps on adding data post table creation.

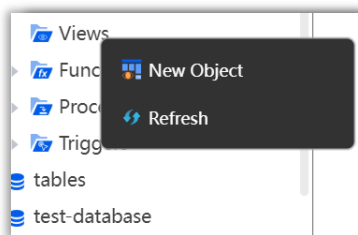


3. * Intelligent Sorting: By default, the system employs intelligent sorting to automatically prioritize and bold the tables that the user frequently operates, facilitating quick and easy access.



b. New View

1. Expand the database, right-click on the  "Views" icon, and the following menu appears.

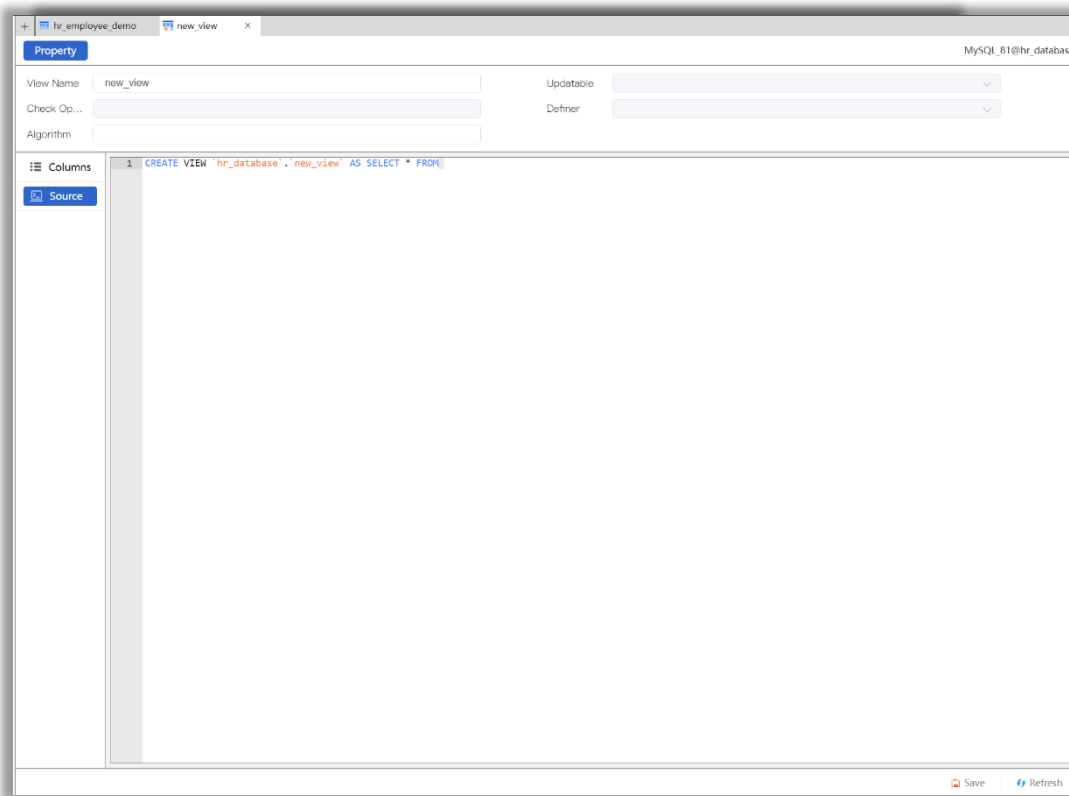


| # | Function | Description |
|---|------------|--|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new view. |
| 2 | Refresh | Refresh |


2. Create New View

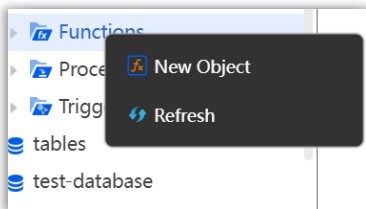
- Click on "**Create Object**"
- Set the basic properties of the view in the object detail pane: View Name, Algorithm, etc.

- Write the SQL statement under the "Source" tab to create it, then click save and refresh.



c. New Function

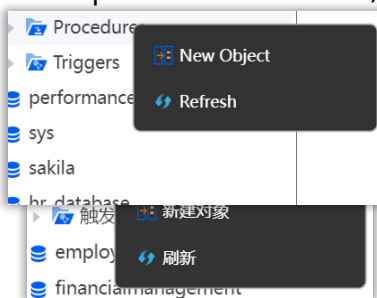
1. Expand the database, right-click on the  "Functions" icon, and the following menu appears.



| # | Function | Description |
|---|------------|--|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new function. |
| 2 | Refresh | Refresh |


d. New Procedure

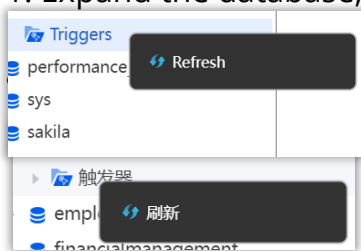
1. Expand the database, right-click on the  "Procedures" icon, and the following



| # | Function | Description |
|---|------------|---|
| 1 | New Object | The main window becomes the object detail pane. And you can create a new procedure. |
| 2 | Refresh | Refresh |

e. Triggers

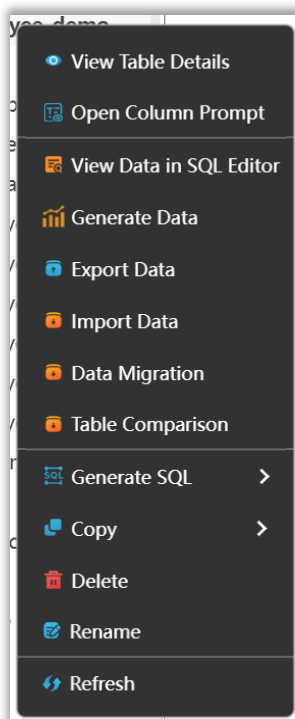
1. Expand the database, right-click on the  "Triggers" icon, and the following menu



| # | Function | Description |
|---|----------|-------------|
| 1 | Refresh | Refresh |

4.2.1.4 Object Operations

a. Table

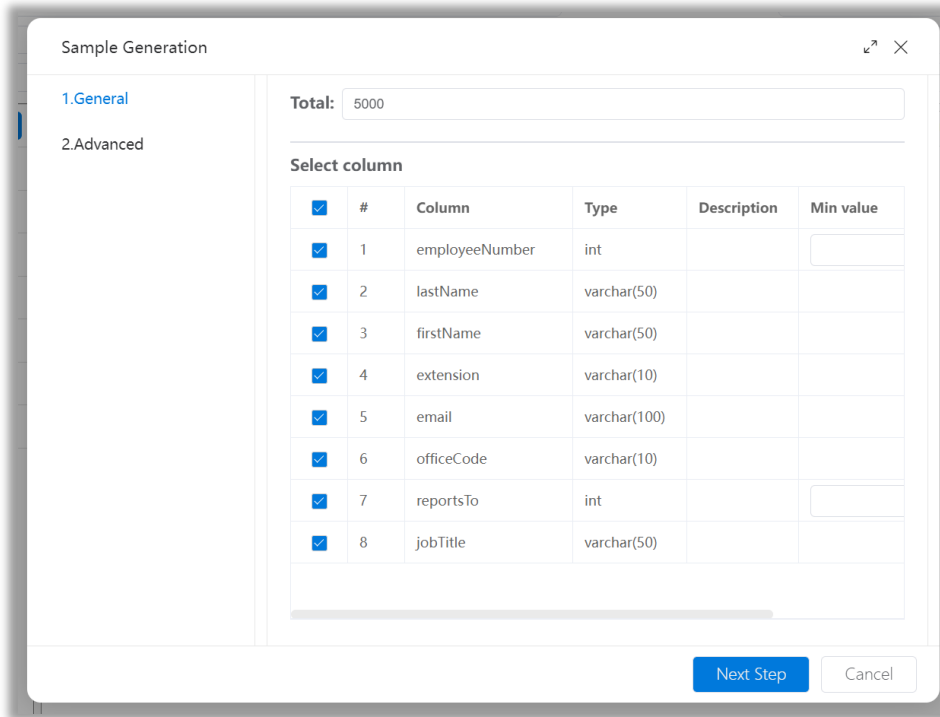


| # | Function | Description |
|---|-------------------------|--|
| 1 | View Table Details | View the details of the currently selected table: the main window displays an object detail pane where you can view table properties and table data (for details, refer to section 4.2.2.1 Object Detail Pane). |
| 2 | Open Column Prompt | When open the query window, click on the menu function or double-click the table name to display prompts on the right screen (for details, refer to section 4.2.2.2 Prompt Pane). |
| 3 | View Data in SQL Editor | Automatically generate the statement "SELECT * FROM current table" and execute the query with the SQL editor (for SQL editor, refer to section 4.2.3 Data Operations - SQL Editor). |
| 4 | Generate Test Data | Generate test data with the options to replace or append. |
| 5 | Export Data | Export data to local storage, with options for CSV, Excel, or SQL file formats. |

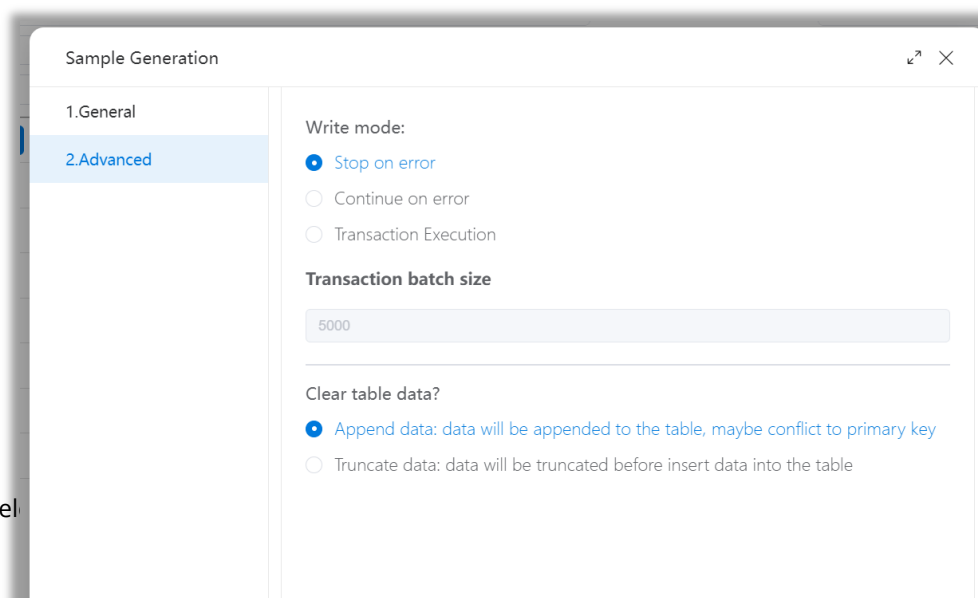
| | | |
|----|------------------|--|
| 6 | Import Data | Import CSV or Excel files from your local machine into the selected table. |
| 7 | Data Migration | Migrate data from the selected table to another table. |
| 8 | Table Comparison | Compare the structural differences of tables from two identical-type databases. |
| 9 | Generate SQL | Automatically generate SQL statements such as select, insert, update, delete, or DDL. |
| 10 | Copy | Within the same database, create a duplicate of the currently selected table, copying either "structure and data" or "structure only". |
| 11 | Delete | Delete the currently selected table. *The deletion is irreversible once confirmed, please proceed with caution after verification. |
| 12 | Rename | Rename the currently selected table. |
| 13 | Refresh | Refresh |

1. Generate Data

Test data can be generated based on table structure. The data generation process operates in the background, and the final results can be viewed in the Task Center under "Generate Data".



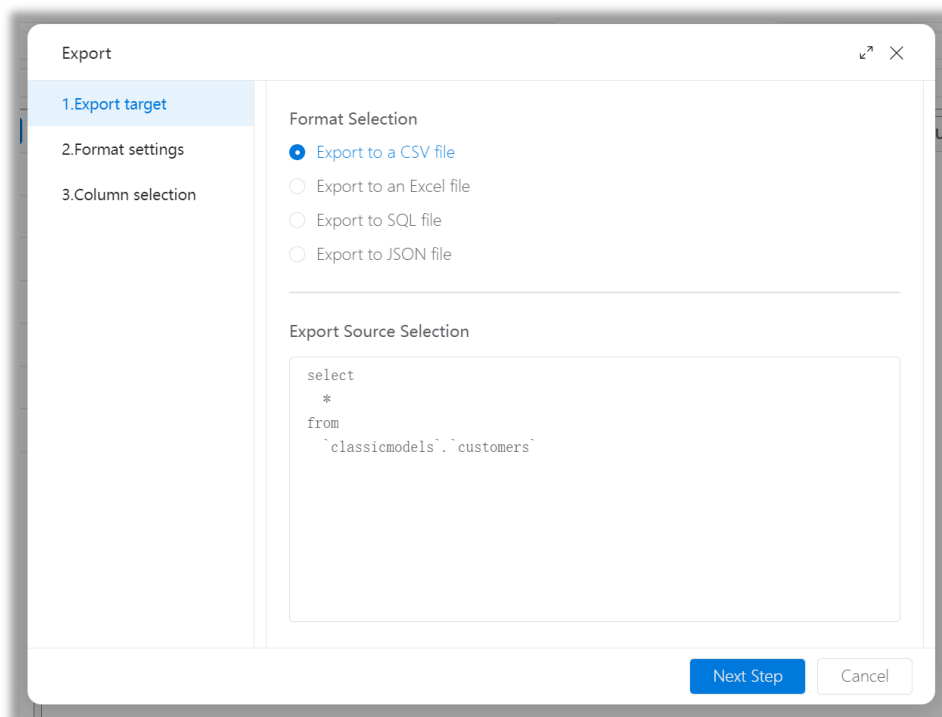
The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.



2. Export Data

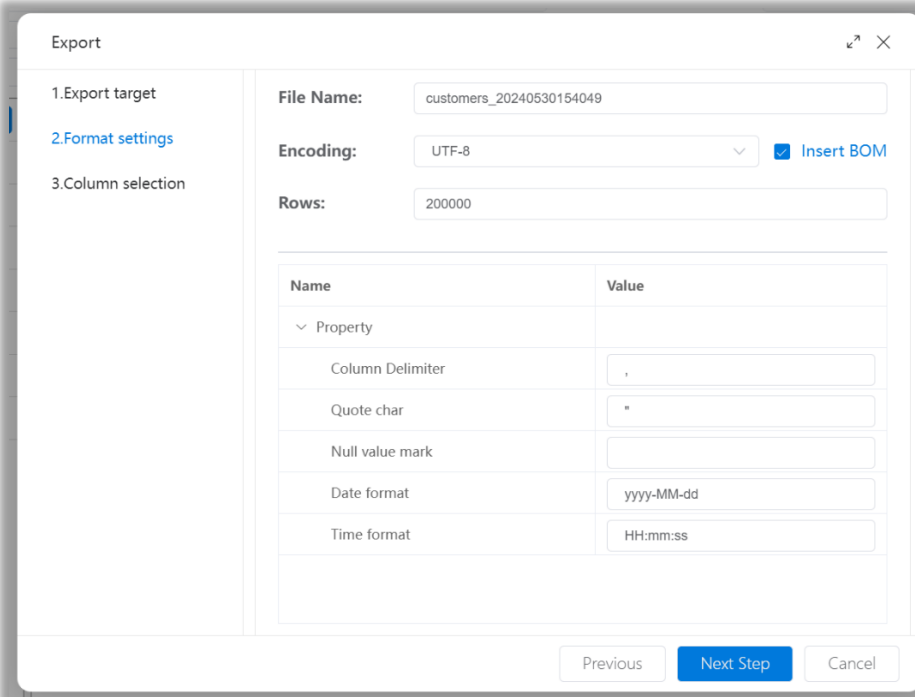
Export the data of the currently selected table to the local system, available in CSV, EXCEL, SQL, and JSON file.

Users can configure the columns of the exported data (all/part), the number of rows, characters, and header format of the export data as needed.

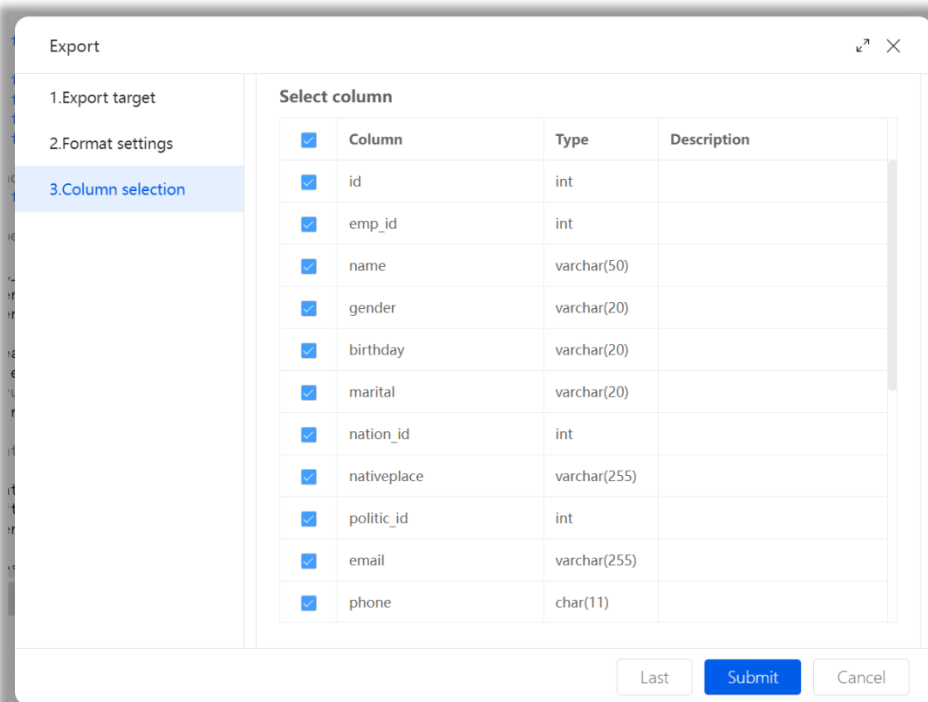


Users can modify the filename, encoding, and number of rows of the exported file as needed.

*When the exported file is in CSV format and needs to be opened in Excel, it is recommended to check the "Insert BOM" option for stronger format compatibility.



The screenshot shows the 'Export' dialog box with the 'Format settings' step selected. The 'File Name' is 'customers_20240530154049', 'Encoding' is 'UTF-8', and 'Rows' is '200000'. The 'Insert BOM' checkbox is checked. Below these are fields for 'Column Delimiter' (comma), 'Quote char' (double quote), 'Null value mark', 'Date format' (yyyy-MM-dd), and 'Time format' (HH:mm:ss). At the bottom are 'Previous', 'Next Step', and 'Cancel' buttons.



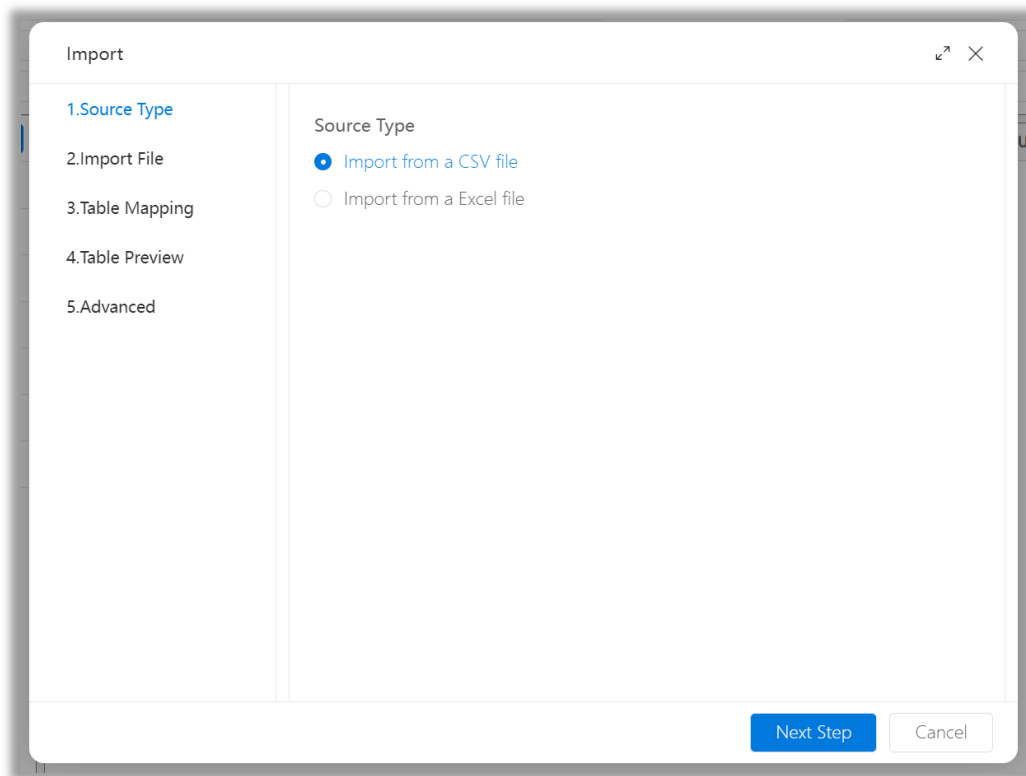
The screenshot shows the 'Export' dialog box with the 'Column selection' step selected. A table titled 'Select column' is displayed with the following columns: 'Column', 'Type', and 'Description'. All columns in the table have a checked checkbox in the first column.

| Column | Type | Description |
|-------------------------------------|-------------|--------------|
| <input checked="" type="checkbox"/> | id | int |
| <input checked="" type="checkbox"/> | emp_id | int |
| <input checked="" type="checkbox"/> | name | varchar(50) |
| <input checked="" type="checkbox"/> | gender | varchar(20) |
| <input checked="" type="checkbox"/> | birthday | varchar(20) |
| <input checked="" type="checkbox"/> | marital | varchar(20) |
| <input checked="" type="checkbox"/> | nation_id | int |
| <input checked="" type="checkbox"/> | nativeplace | varchar(255) |
| <input checked="" type="checkbox"/> | politic_id | int |
| <input checked="" type="checkbox"/> | email | varchar(255) |
| <input checked="" type="checkbox"/> | phone | char(11) |

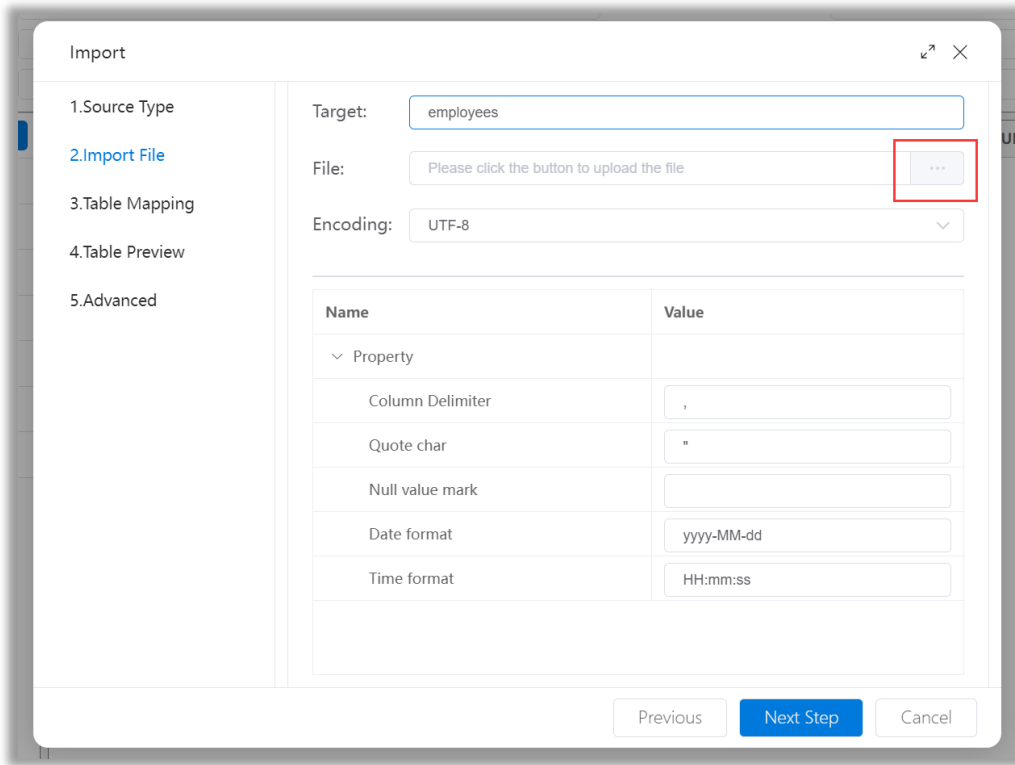
At the bottom are 'Last', 'Submit', and 'Cancel' buttons.

3. Import Data

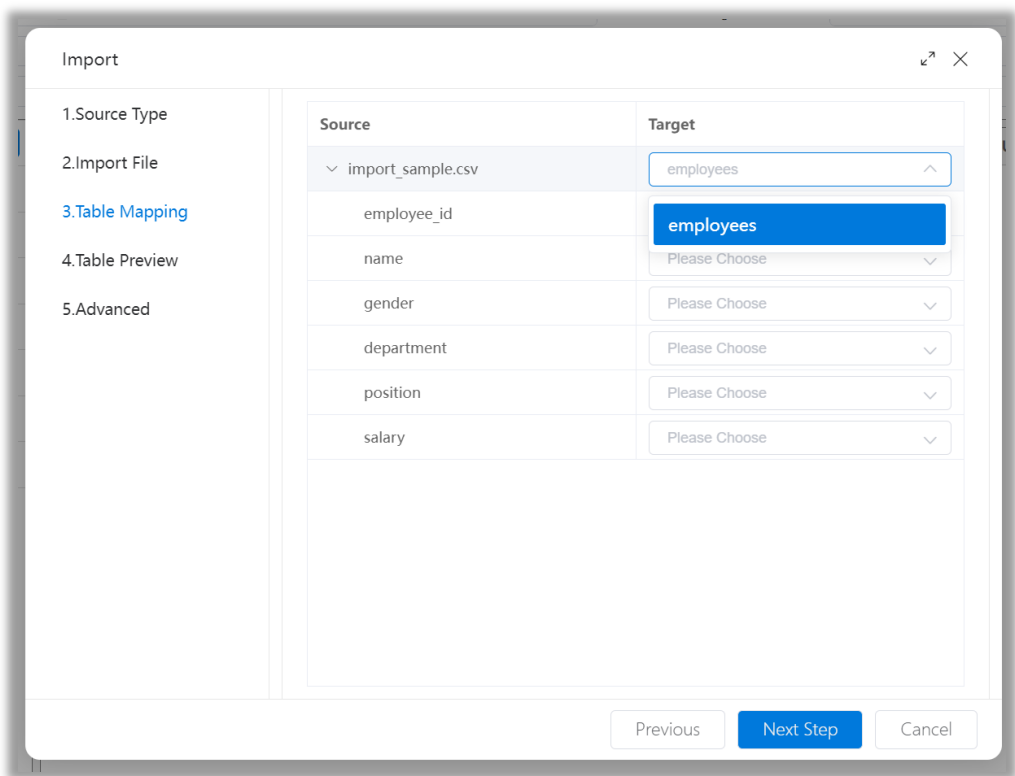
Import a local CSV or Excel file into the currently selected table. (*Importing an SQL file is performed through the context menu in the SQL editor.)



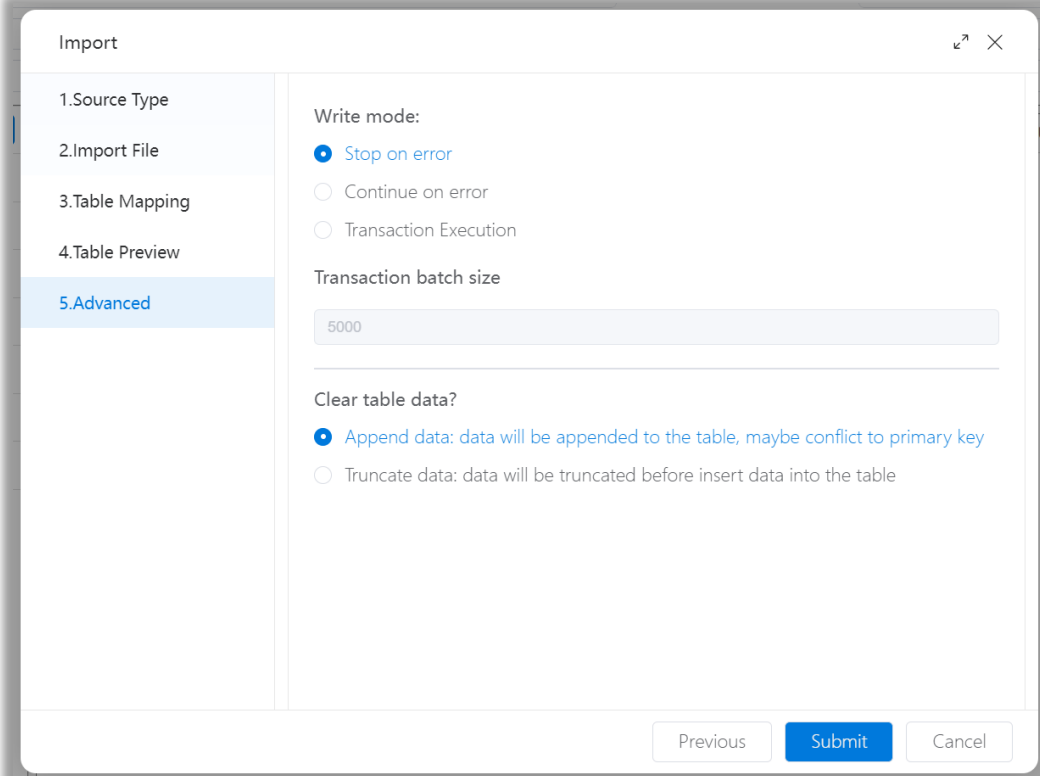
Choose a local CSV or Excel file.



In the "Table Mapping" section, confirm the correspondence between columns.



The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.



Import

1. Source Type

2. Import File

3. Table Mapping

4. Table Preview

5. Advanced

Write mode:

- Stop on error
- Continue on error
- Transaction Execution

Transaction batch size

5000

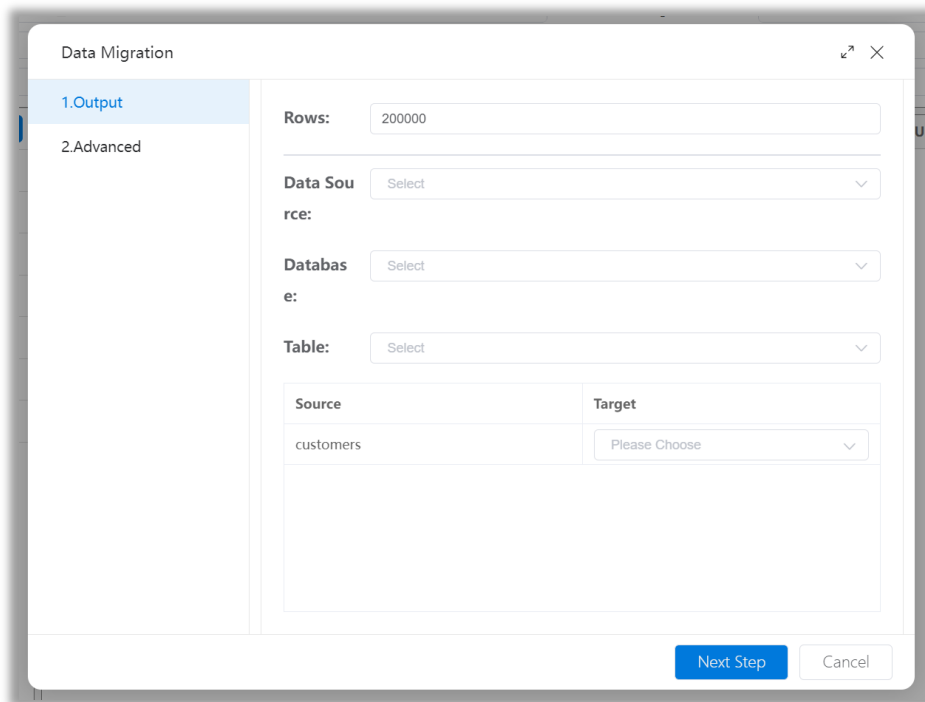
Clear table data?

- Append data: data will be appended to the table, maybe conflict to primary key
- Truncate data: data will be truncated before insert data into the table

Previous Submit Cancel

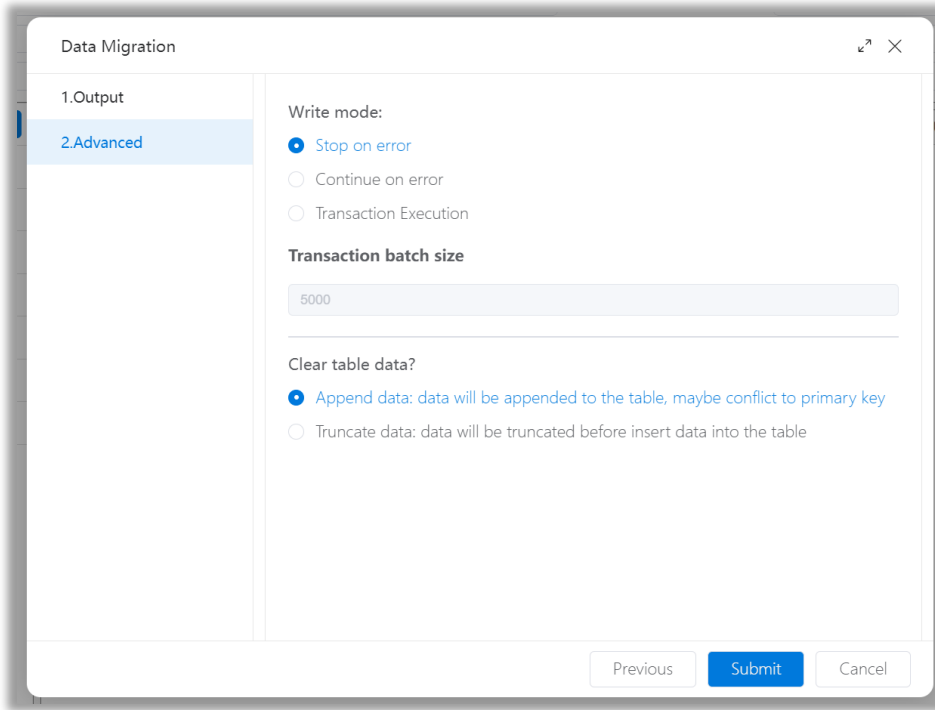
4. Data Migration

Migrate the data from the currently selected table to another table, with support for **transaction execution**.

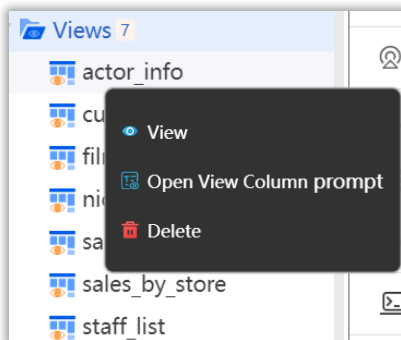


| Source | Target |
|-----------|---------------|
| customers | Please Choose |

The write mode supports **stop on error**, **continue on error**, or **transaction execution**. By selecting the transaction execution mode, you can set the transaction batch size according to user needs. Moreover, users can choose to **append data** based on the existing data in the target table or **truncate data** within the table, depending on their business requirements.

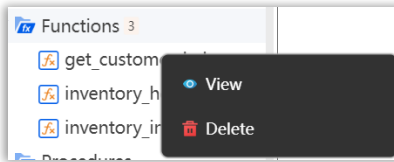


b. View



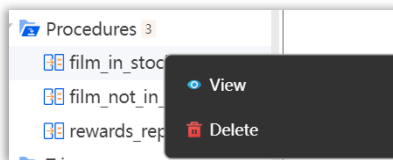
| # | Function | Description |
|---|-------------------------|--|
| 1 | View | View the details of the currently selected view. The main window will display the object details pane, where you can view the properties and data of the view. |
| 2 | Open view column prompt | When open the query window, clicking on the menu function or double-clicking on the current view name will display prompt pane on the right screen. |
| 3 | Delete | Delete the currently selected view. |

c. Function



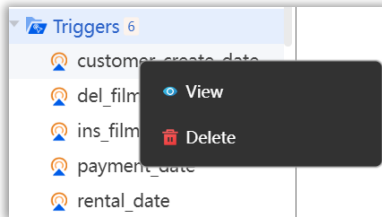
| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected function. The main window will display the object details pane, where you can view the properties of the function. |
| 2 | Delete | Delete the currently selected function. |

d. Procedure



| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected procedure. The main window will display the object details pane, where you can view the properties of the procedure. |
| 2 | Delete | Delete the currently selected procedure. |

e. Trigger

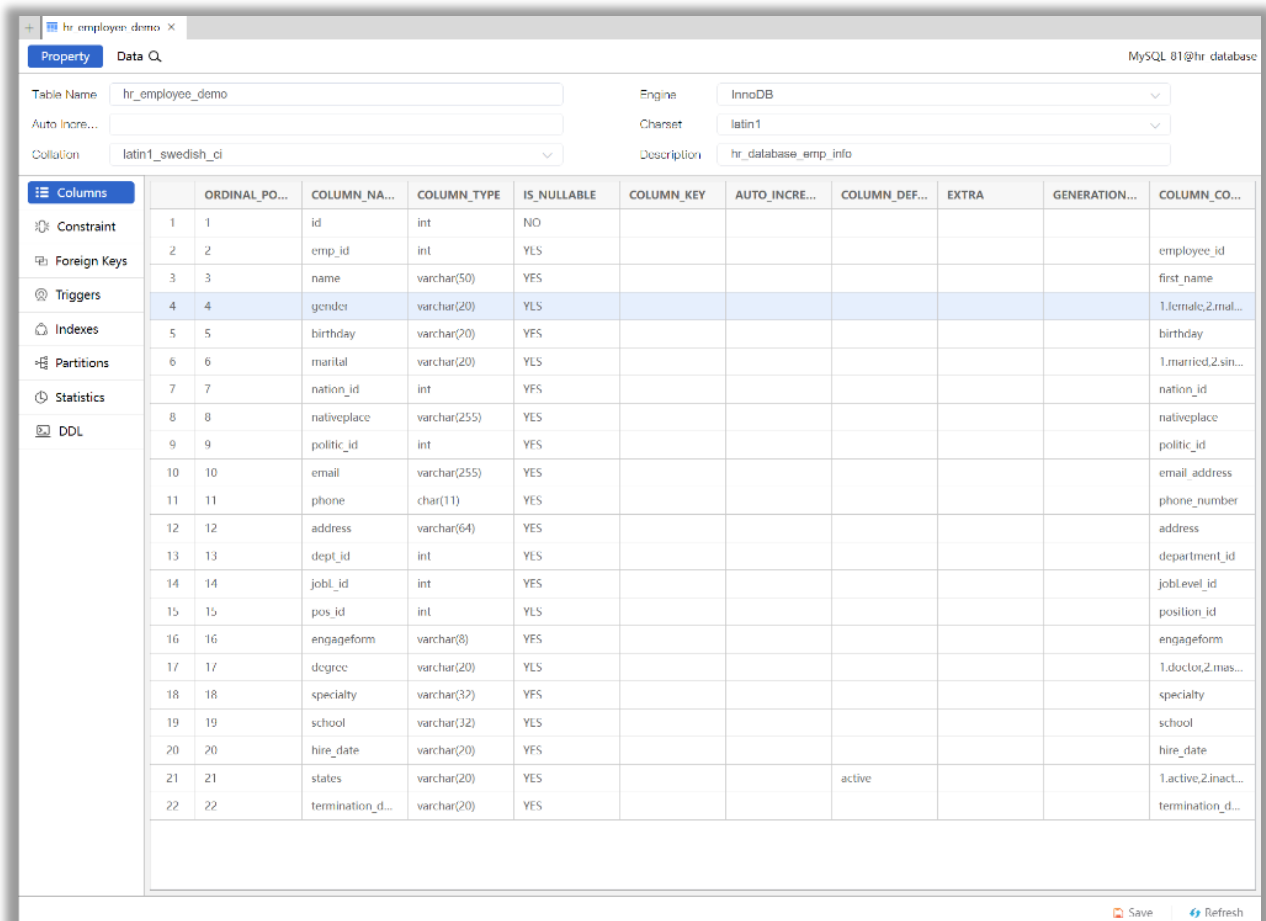


| # | Function | Description |
|---|----------|---|
| 1 | View | View the details of the currently selected trigger. The main window will display the object details pane, where you can view the properties of the trigger. |
| 2 | Delete | Delete the currently selected trigger. |

4.2.2 Information Pane

4.2.2.1 Object Details Pane

Located in the middle of the main window, this is where detailed information about objects can be displayed. The object details pane is usually hidden by default, and clicking on any object to select the view function will make it visible.



The screenshot shows the Object Details Pane for the table `hr_employee_demo` in the `hr_database_emp_info` database. The table is using the `InnoDB` engine and `latin1` charset. The pane displays a list of columns with their ordinal positions, names, types, nullability, and other attributes.

| | ORDINAL_PO... | COLUMN_NA... | COLUMN_TYPE | IS_NULLABLE | COLUMN_KEY | AUTO_INCRE... | COLUMN_DEF... | EXTRA | GENERATION... | COLUMN_CO... |
|--------------|---------------|------------------|--------------|-------------|------------|---------------|---------------|-------|---------------|---------------------|
| Constraint | 1 | id | int | NO | | | | | | |
| Foreign Keys | 2 | emp_id | int | YES | | | | | | employee_id |
| | 3 | name | varchar(50) | YES | | | | | | first_name |
| Triggers | 4 | gender | varchar(20) | YES | | | | | | 1.female,2.mal... |
| | 5 | birthday | varchar(20) | YES | | | | | | birthday |
| Indexes | 6 | marital | varchar(20) | YES | | | | | | 1.married,2.sin... |
| | 7 | nation_id | int | YES | | | | | | nation_id |
| Partitions | 8 | nativeplace | varchar(255) | YES | | | | | | nativeplace |
| | 9 | politic_id | int | YES | | | | | | politic_id |
| Statistics | 10 | email | varchar(255) | YES | | | | | | email_address |
| | 11 | phone | char(11) | YES | | | | | | phone_number |
| DDL | 12 | address | varchar(64) | YES | | | | | | address |
| | 13 | dept_id | int | YES | | | | | | department_id |
| | 14 | jobl_id | int | YES | | | | | | jobLevel_id |
| | 15 | pos_id | int | YES | | | | | | position_id |
| | 16 | engageform | varchar(8) | YES | | | | | | engageform |
| | 17 | degree | varchar(20) | YES | | | | | | 1.doctor,2.mas... |
| | 18 | specialty | varchar(32) | YES | | | | | | specialty |
| | 19 | school | varchar(32) | YES | | | | | | school |
| | 20 | hire_date | varchar(20) | YES | | | | | | hire_date |
| | 21 | states | varchar(20) | YES | | | active | | | 1.active,2.inact... |
| | 22 | termination_d... | varchar(20) | YES | | | | | | termination_d... |

a. Property

Display detailed properties, settings, and parameters of objects such as tables, views, functions, procedures, triggers, etc.

| # | Property | Description | Context Menu | Function |
|---|--------------|--|--------------|---|
| 1 | Columns | Displays the columns and data structure of the current object. | View | View detailed information of the currently selected column. |
| | | | Edit | Modify information of the currently selected column. |
| | | | Add | Add a new column. |
| | | | Delete | Delete the currently selected column. |
| | | | Refresh | Refresh |
| 2 | Constraint | Displays primary key information of the current table. | Add | Add a new primary key. |
| | | | Refresh | Refresh |
| 3 | Foreign Keys | Displays foreign key information of the current table. | N/A | N/A |

| | | | | |
|---|------------|---|--|------------------|
| 4 | Triggers | Displays trigger information of the current table. | N/A | N/A |
| 5 | Indexes | Displays index information of the current table. | Add | Add a new index. |
| | | | Refresh | Refresh |
| 6 | Partitions | Displays partition information of the current table | N/A | N/A |
| 7 | Statistics | Displays statistics information of the current table. | N/A | N/A |
| 8 | DDL | Displays DDL information of the current table. | Users can copy the DDL statement and paste it into the SQL editor for use. | |

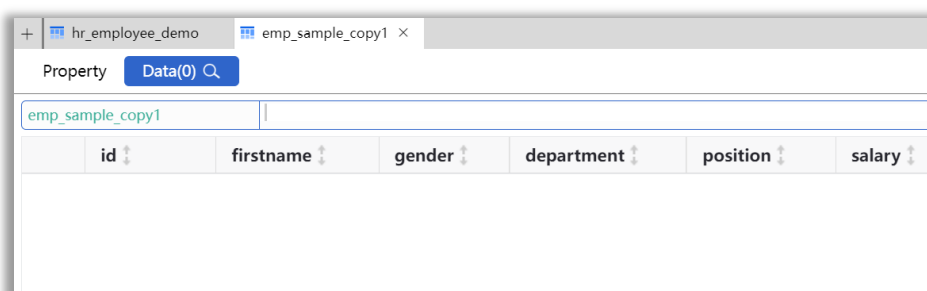
b. Data

Display detailed data for the above objects.

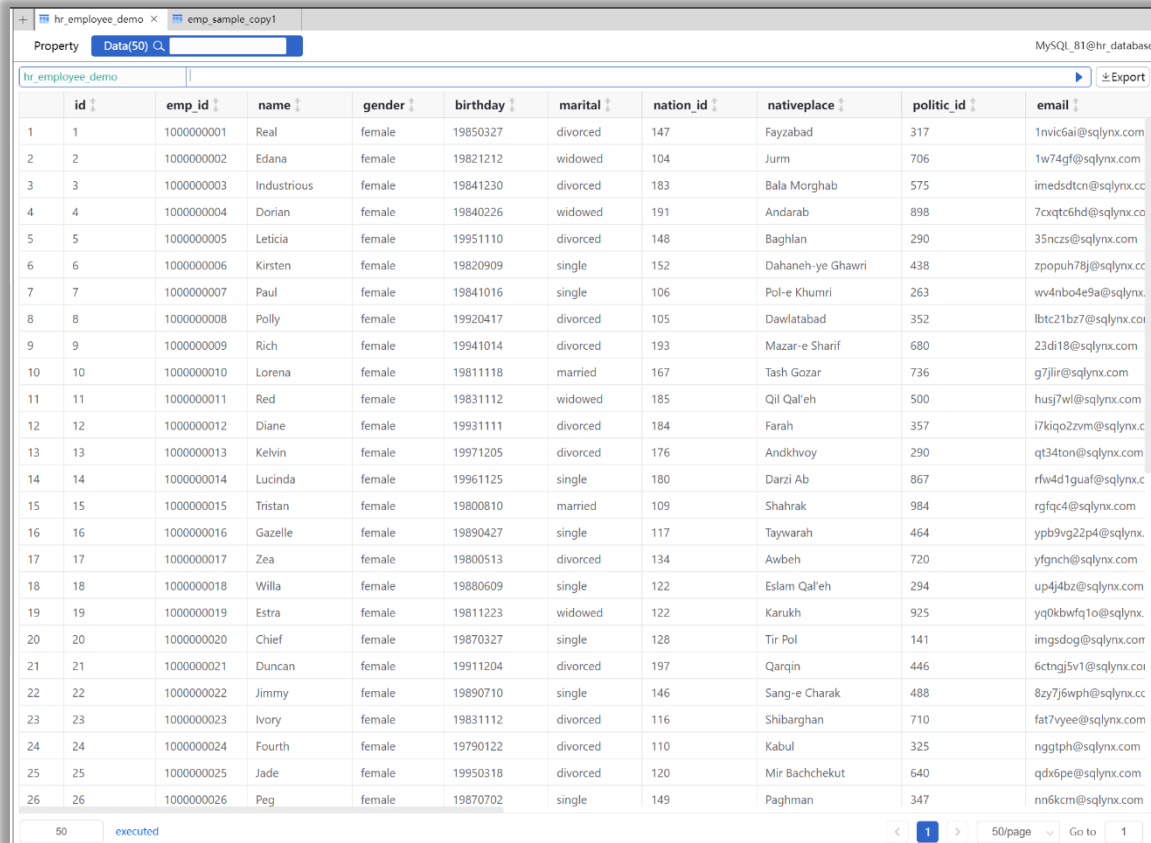
1. No data in the table.

You can right-click in the blank space, select 'Add',


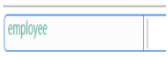
In the popup window, input data according to the configured columns, and execute.


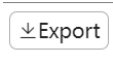
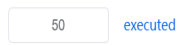


2. Data exists in the table



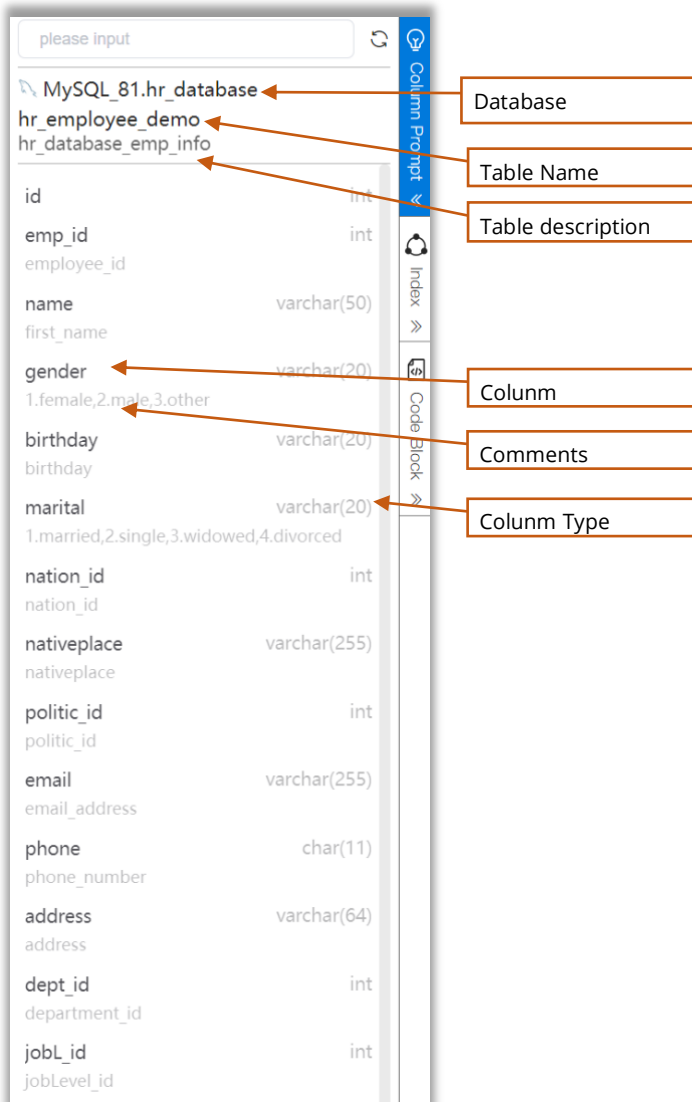
| | id | emp_id | name | gender | birthday | marital | nation_id | nativeplace | politic_id | email |
|----|----|-----------|-------------|--------|----------|----------|-----------|-------------------|------------|-----------------------|
| 1 | 1 | 100000001 | Real | female | 19850327 | divorced | 147 | Fayzabad | 317 | 1nvc6ai@sqlynx.com |
| 2 | 2 | 100000002 | Edana | female | 19821212 | widowed | 104 | Jurm | 706 | 1w74gf@sqlynx.com |
| 3 | 3 | 100000003 | Industrious | female | 19841230 | divorced | 183 | Bala Morghab | 575 | imedsdctn@sqlynx.cc |
| 4 | 4 | 100000004 | Dorian | female | 19840226 | widowed | 191 | Andarab | 898 | 7cxqtc6hd@sqlynx.cc |
| 5 | 5 | 100000005 | Leticia | female | 19951110 | divorced | 148 | Baghlan | 290 | 35nczs@sqlynx.com |
| 6 | 6 | 100000006 | Kirsten | female | 19820909 | single | 152 | Dahaneh-ye Ghawri | 438 | zpopuh78j@sqlynx.cc |
| 7 | 7 | 100000007 | Paul | female | 19841016 | single | 106 | Pol-e Khumri | 263 | wv4nbo4e9a@sqlynx.com |
| 8 | 8 | 100000008 | Polly | female | 19920417 | divorced | 105 | Dawlatabad | 352 | lbtct21bz7@sqlynx.com |
| 9 | 9 | 100000009 | Rich | female | 19941014 | divorced | 193 | Mazar-e Sharif | 680 | 23di18@sqlynx.com |
| 10 | 10 | 100000010 | Lorena | female | 19811118 | married | 167 | Tash Gozar | 736 | g7jlr@sqlynx.com |
| 11 | 11 | 100000011 | Red | female | 19831112 | widowed | 185 | Qil Qal'eh | 500 | husj7wl@sqlynx.com |
| 12 | 12 | 100000012 | Diane | female | 19931111 | divorced | 184 | Farah | 357 | i7kiqo2zvm@sqlynx.c |
| 13 | 13 | 100000013 | Kelvin | female | 19971205 | divorced | 176 | Andkhvoy | 290 | qt34ton@sqlynx.com |
| 14 | 14 | 100000014 | Lucinda | female | 19961125 | single | 180 | Darzi Ab | 867 | rfw4d1gua@sqlynx.c |
| 15 | 15 | 100000015 | Tristan | female | 19800810 | married | 109 | Shahrak | 984 | rgfqc4@sqlynx.com |
| 16 | 16 | 100000016 | Gazelle | female | 19890427 | single | 117 | Taywarah | 464 | ypb9vg22p4@sqlynx.com |
| 17 | 17 | 100000017 | Zea | female | 19800513 | divorced | 134 | Awbeh | 720 | yfgnch@sqlynx.com |
| 18 | 18 | 100000018 | Willa | female | 19880609 | single | 122 | Eslam Qal'eh | 294 | up4j4bz@sqlynx.com |
| 19 | 19 | 100000019 | Estra | female | 19811223 | widowed | 122 | Karukh | 925 | yq0kbwfq1o@sqlynx.com |
| 20 | 20 | 100000020 | Chief | female | 19870327 | single | 128 | Tir Pol | 141 | imgsdog@sqlynx.com |
| 21 | 21 | 100000021 | Duncan | female | 19911204 | divorced | 197 | Qarqin | 446 | 6ctngj5v1@sqlynx.coi |
| 22 | 22 | 100000022 | Jimmy | female | 19890710 | single | 146 | Sang-e Charak | 488 | 8zy7j6wph@sqlynxccc |
| 23 | 23 | 100000023 | Ivory | female | 19831112 | divorced | 116 | Shibarghan | 710 | fat7yee@sqlynx.com |
| 24 | 24 | 100000024 | Fourth | female | 19790122 | divorced | 110 | Kabul | 325 | nggtph@sqlynx.com |
| 25 | 25 | 100000025 | Jade | female | 19950318 | divorced | 120 | Mir Bachchekut | 640 | qdx6pe@sqlynx.com |
| 26 | 26 | 100000026 | Peg | female | 19870702 | single | 149 | Paghman | 347 | nn6kcm@sqlynx.com |

| # | Location | Function | Description |
|---|---|------------------|--|
| 1 |  | Full-text Search | Click the magnifying glass icon on the right side of the "Data" tab to perform a full-text search on the current sample data. |
| 2 |  | Data Filter | Allows filtering of current sample data. Enter statement conditions in the blank box on the right side and click the execute button on the far right, such |

| | | | |
|---|---|---------------------|---|
| | | | as: gender='F'. After execution, all data with the value 'F' will be displayed. |
| 3 |  | Sort | Clicking on the gray arrow located to the right of the column name allows you to sort the current sample data in ascending or descending order. |
| 4 |  | Export | Export the data of the current table to the local device. Refer to section 4.2.1.4 "Object Operations - Table - Context menu - Export Data" . |
| 5 |  | Rows of sample data | Located at the bottom left corner of the data viewer, the default number of rows displayed is 50. Users can manually input any number as needed. After modification, click on the "Execute" button on the right side. |

4.2.2.2 Prompt Pane

Located on the right side of the main window, this area displays detailed column information for tables, including column names, comments, and column types. The table column prompt pane is usually hidden. When open the query window, double-clicking on any table name or right-clicking and selecting "Open Column Prompt" will display it.



The screenshot shows the 'Column Prompt' pane in SQLYNX. The pane is titled 'Column Prompt' and displays the following information:

- Database:** MySQL_81.hr_database
- Table Name:** hr_employee_demo
- Table description:** hr_database_emp_info
- Columns:**
 - id (int)
 - emp_id (int)
 - employee_id (int)
 - name (varchar(50))
 - first_name (varchar(50))
 - gender (varchar(20))
 - birthday (varchar(20))
 - marital (varchar(20))
 - nation_id (int)
 - nativeplace (varchar(255))
 - politic_id (int)
 - email (varchar(255))
 - phone (char(11))
 - address (varchar(64))
 - dept_id (int)
 - jobL_id (int)
- Comments:**
 - 1.female,2.male,3.other (for gender)
 - 1.married,2.single,3.widowed,4.divorced (for marital)
- Column Type:** (indicated by the data type in parentheses next to each column name)

Annotations with arrows point to these elements:

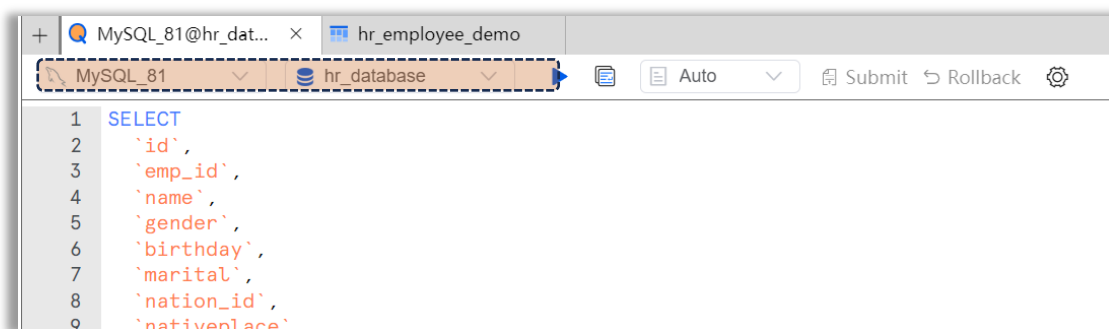
- Database
- Table Name
- Table description
- Column
- Comments
- Column Type




4.2.3 SQL Editor


Located in the middle of the main window, it is usually hidden but will be displayed after creating a new query, revealing the SQL editor page.

1. Top shortcuts of the SQL editor

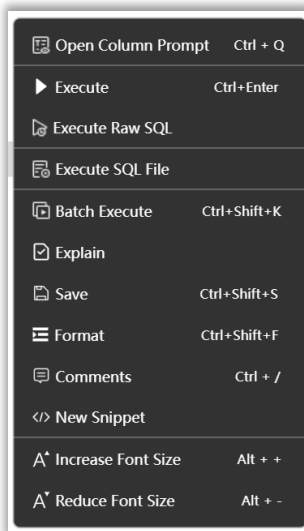
Two dropdown boxes below the tabs indicate the current database path information of the SQL editor.



| # | Shortcut | Description |
|---|--|---|
| 1 |  Execute | Quick execution defaults to returning 1000 query results. *The row count can be modified in the "default row count limit" settings. |
| 2 |  Format | One-click formatting of SQL statements for easy readability and inspection. |
| 3 |  Transaction | SQL transaction functionality allows toggling between automatic and transaction commit. |

| | | |
|---|--|---|
| 4 |  Settings | <p>These settings are only effective for the current query and can be adjusted for “Default Row Count Limit” and “Max Row Count Limit”.</p> <p>Users can choose to keep connection to the current database.</p> |
|---|--|---|

2. Context Menu



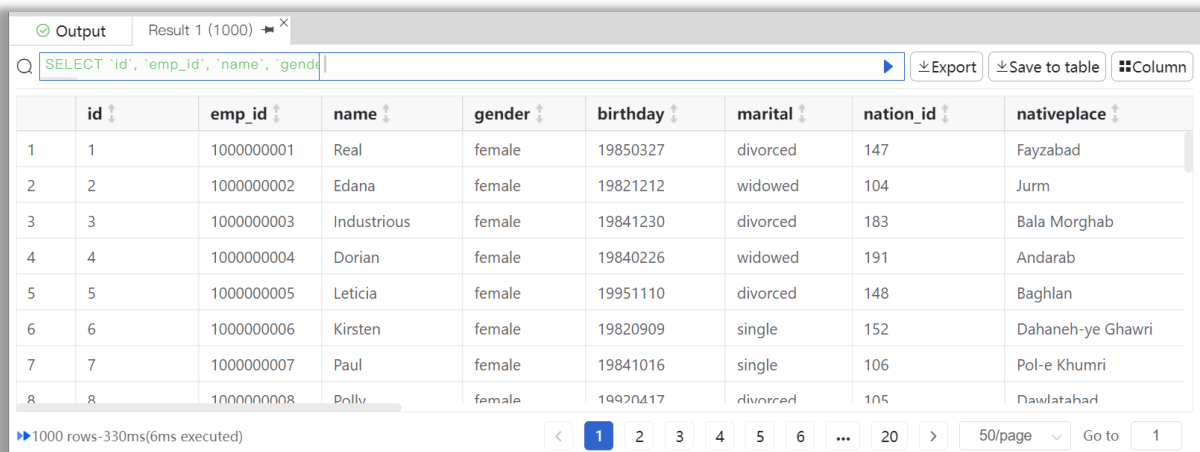
| # | Function | Description |
|---|--------------------|---|
| 1 | Open Column Prompt | Selecting the table name text, and clicking opens column prompt, which brings up the corresponding table's column prompt page on the right screen. |
| 2 | Execute | Quick execution defaults to returning 1000 query results. (Parameter modifications refer to Section 4.6.5.1 Data Settings) |
| 3 | Execute Raw SQL | Execution of Original SQL Statements in the Editing Box. By default, the max row count is set to 10000. (Parameter modifications refer to Section 4.6.5.1 Data Settings) |
| 4 | Execute SQL File | Select and Execute Local SQL Files. |
| 5 | Batch Execute | Execute SQL statements in batches. |
| 6 | Explain | Perform performance analysis on current SQL statements for optimization. |

| | | |
|----|---------------------------|--|
| 7 | Save | Save frequently used SQL statements, with options to copy, modify, or delete. |
| 8 | Format | One-click formatting of SQL statements for readability and inspection. |
| 9 | Comments | Add comments. |
| 10 | New Snippet | Create habitual code blocks, with options to set indexes. Index names can be intelligently prompted in editor status. (All created code blocks can be queried in the personal center.) |
| 11 | Increase/Reduce Font Size | Customize the font size of the SQL editor, which is only valid for the current query window created. |


4.2.4 Data Viewer


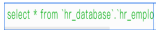

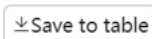

4.2.4.1 Query Result

1. The Data Viewer is located at the bottom center of the main window and displays query results. Double-clicking on the tab name supports full-screen display.

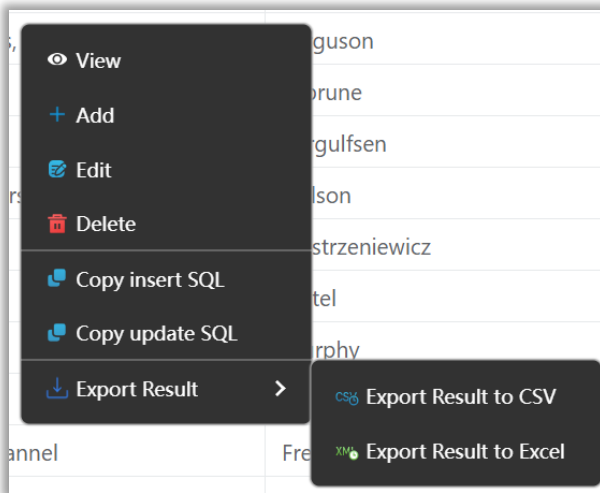


| | id | emp_id | name | gender | birthday | marital | nation_id | nativeplace |
|---|----|------------|-------------|--------|----------|----------|-----------|-------------------|
| 1 | 1 | 1000000001 | Real | female | 19850327 | divorced | 147 | Fayzabad |
| 2 | 2 | 1000000002 | Edana | female | 19821212 | widowed | 104 | Jurm |
| 3 | 3 | 1000000003 | Industrious | female | 19841230 | divorced | 183 | Bala Morghab |
| 4 | 4 | 1000000004 | Dorian | female | 19840226 | widowed | 191 | Andarab |
| 5 | 5 | 1000000005 | Leticia | female | 19951110 | divorced | 148 | Baghlan |
| 6 | 6 | 1000000006 | Kirsten | female | 19820909 | single | 152 | Dahaneh-ye Ghawri |
| 7 | 7 | 1000000007 | Paul | female | 19841016 | single | 106 | Pol-e Khumri |
| 8 | 8 | 1000000008 | Polly | female | 19920417 | divorced | 105 | Dawlatabad |

| # | Location | Function | Description |
|---|--|------------|---|
| 1 |  Output | Output Log | Viewing the output log of query result. |

| | | | |
|---|---|------------------|--|
| 2 |  | Full-text Search | Click on the magnifying glass icon, in the search box, you can perform full-text search on the current query result . |
| 3 |  | Data Filter | You can filter the current query result by entering statement conditions in the blank box on the right side, and then click on the execute button on the far right, for example: gender='F'. After execution, all data values for 'F' will be displayed. |
| 4 |  | Export | Export all data under the current query statement to the local computer. CSV and Excel formats are supported. |
| 5 |  | Save to Table | Save the data of the current query result to another table. The operation is the same as "Data Migration." |
| 5 |  | Sort | Clicking on the gray arrow located to the right of the column name allows you to sort the current sample data in ascending or descending order. |

2. Context Menu

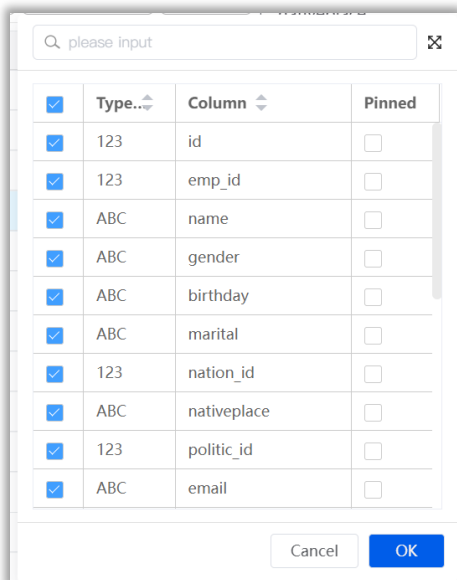


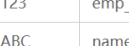



| # | Function | Description |
|---|-----------------|--|
| 1 | View | Viewing the currently selected single row data, but it cannot be modified in view mode. |
| 2 | Add | Inserting single row data into the current table. |
| 3 | Edit | Modifying the currently selected single row data, only applicable for single table queries. |
| 4 | Delete | Deleting the currently selected single row data. |
| 5 | Copy insert SQL | Automatically generating INSERT SQL statements, where the inserted values default to the current selected single row data values. You can copy this SQL statement and paste it directly into the SQL editor for editing and use. |
| 6 | Copy Update SQL | Automatically generating UPDATE SQL statements, where the updated values default to the current selected single row data values. You can copy this SQL statement and paste it directly into the SQL editor for editing and use. |

| | | |
|---|------------------|---|
| 7 | Export Result | Exporting the query result set returned by the current web page to the local computer. CSV and Excel formats are supported. |
|---|------------------|---|

3. Column Operations

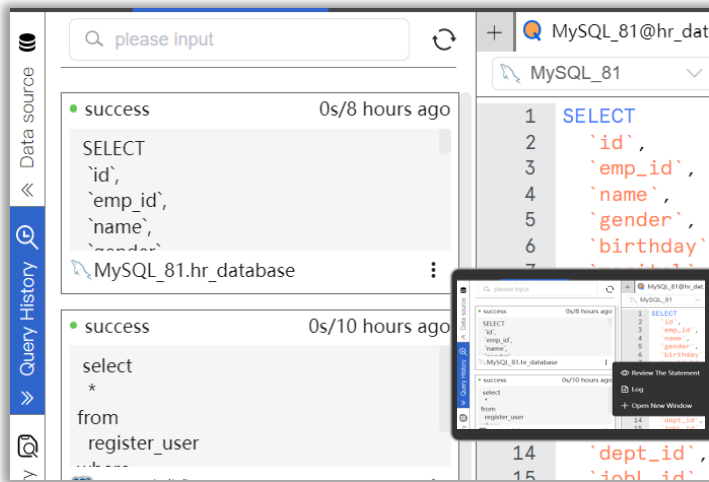
Located at the top right corner of the data viewer, it allows operations such as searching, filtering, sorting, and pinning all columns of the current query result.



| # | Location | Description |
|---|---|---|
| 1 |  | Search for columns within the current table |
| 2 |  | Sort in ascending or descending order |
| 3 |  | Toggle the checkbox to show/hide the columns you want to view |
| 4 |  | Checked columns can be pinned to the leftmost position. |

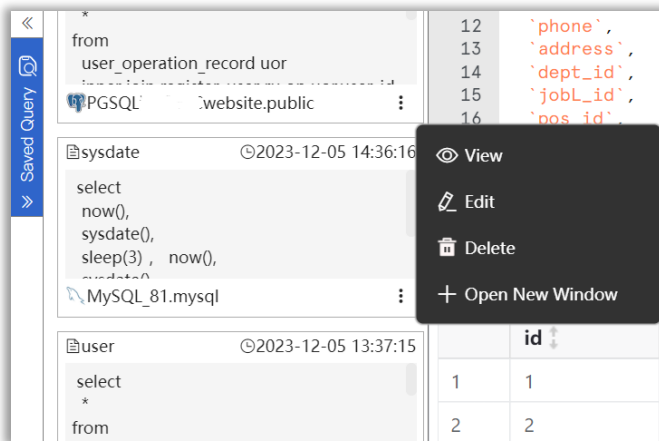
4.2.4.2 Query History

Display the query history executed by the current user. Users can retrieve historical query statements, view the logs, or open them in a new window.



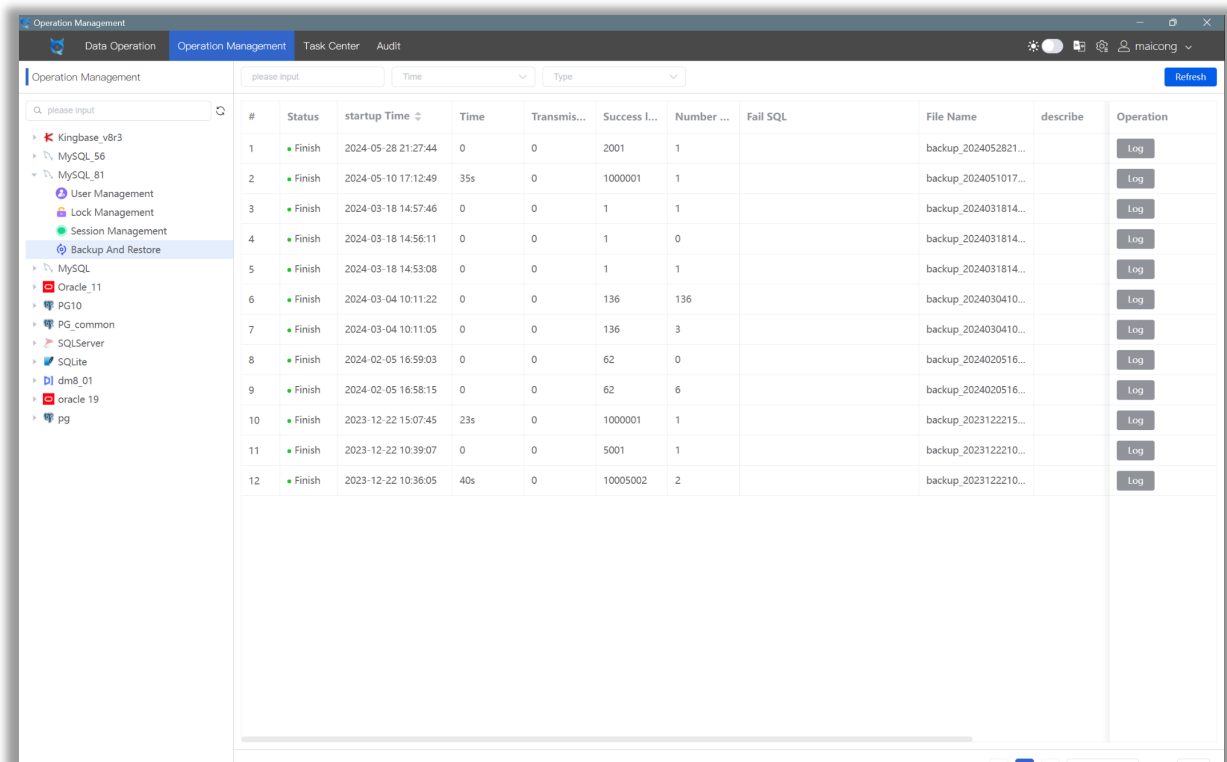
4.2.4.3 Saved Query

Display the commonly used query statements saved by the current user. Users can retrieve saved statements, view, edit, delete, or open them in a new window.



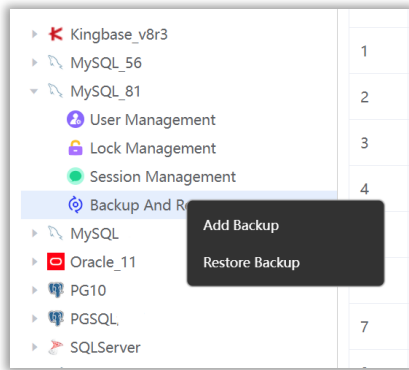
4.3 Operation Management

View user management, lock management, and session management information for the configured data sources. Perform database backup and restoration.



4.3.1 Backup and Restore

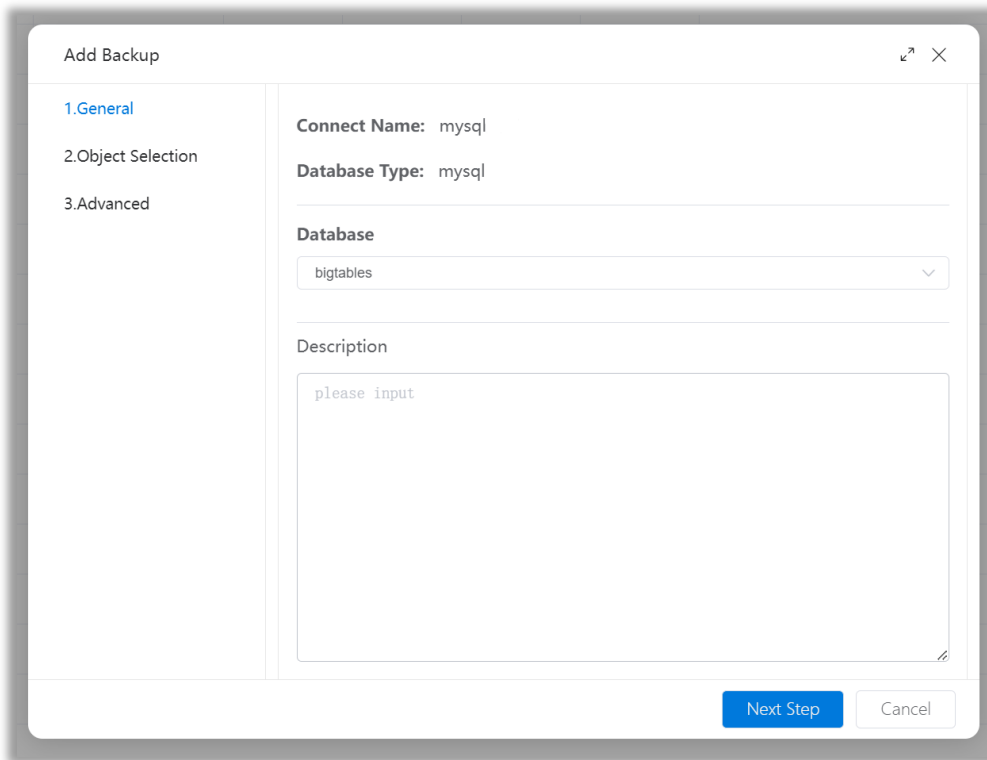
| # | Function | Description |
|---|------------|---|
| 1 | Add Backup | Backup the data from the currently selected database to a local SQL file. |



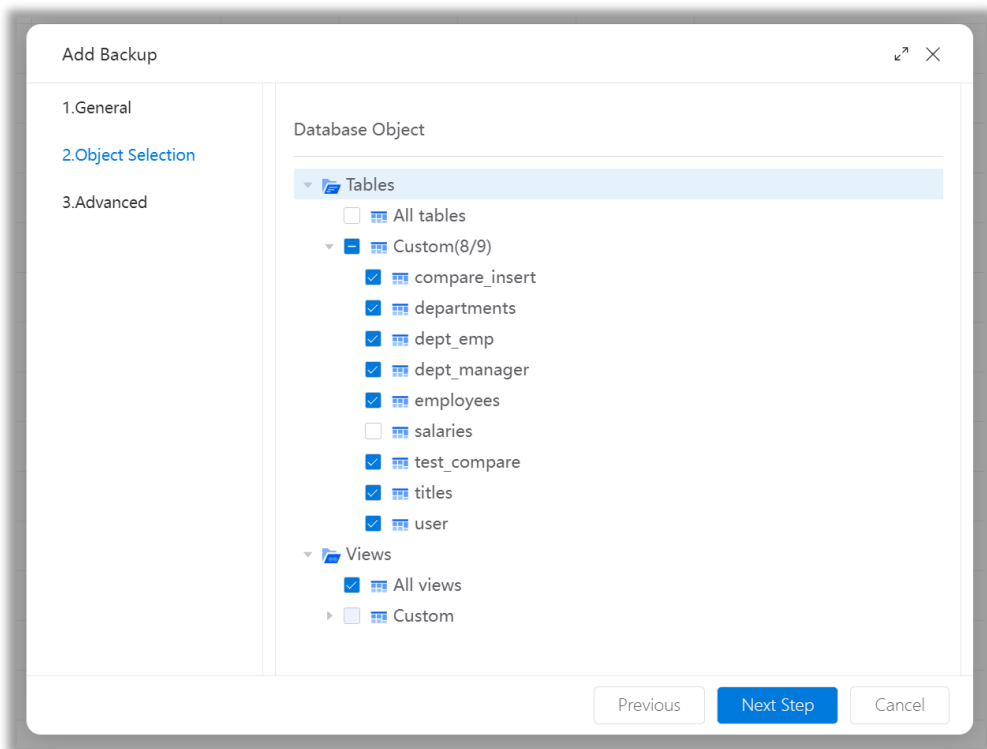
| | | |
|---|----------------|---|
| 2 | Restore Backup | Restore the data from the backup SQL file to the selected database. |
|---|----------------|---|

4.3.1.1 Add Backup

Right-click on the menu and select the "Add Backup" function, then choose the database you want to backup.



You can either select all tables in the database or choose specific tables to backup by customizing your selection.



Set the filename and encoding for the backup SQL file, then click "Submit".

Add Backup ↗ ×

- 1.General
- 2.Object Selection
- 3.Advanced

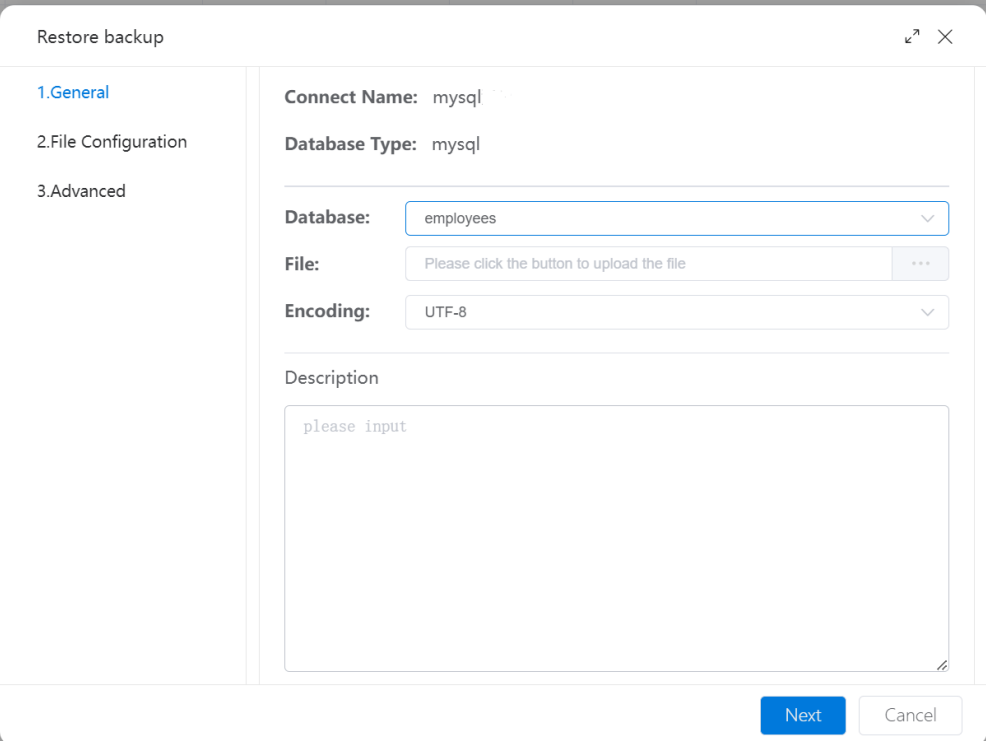
File Name

File Encoding

Previous **Submit** Cancel

4.3.1.2 Restore Backup

Right-click on the menu and select the restore backup function, then choose the local backup SQL file.

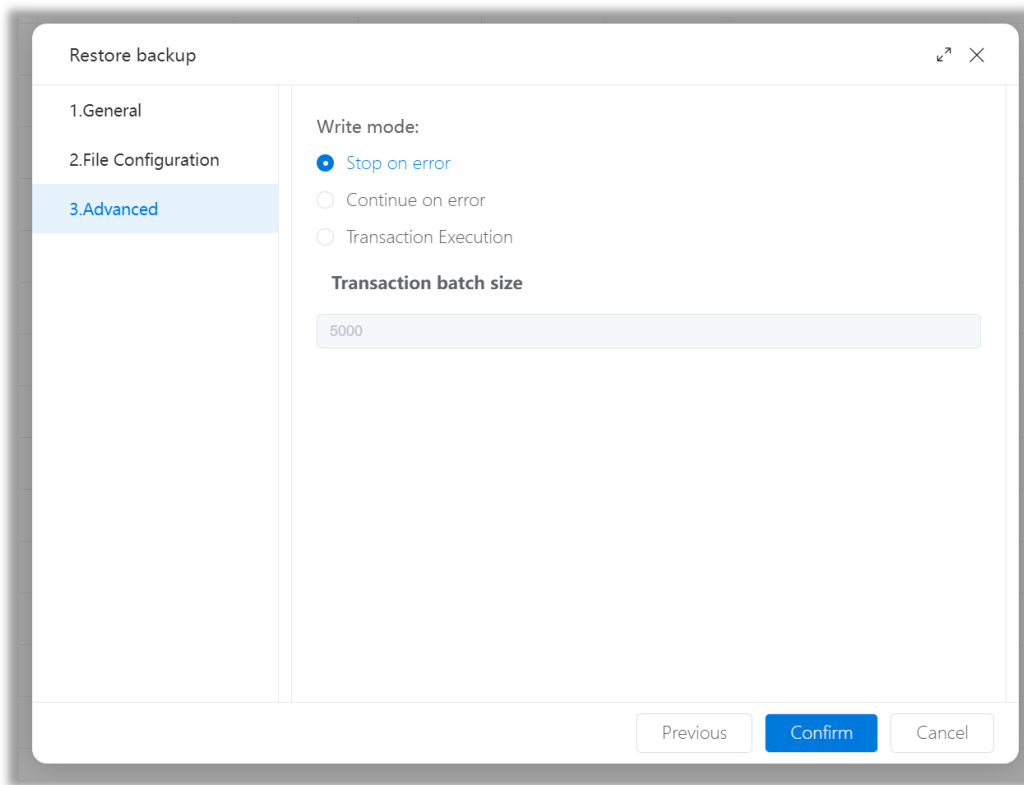


The screenshot shows a 'Restore backup' dialog box with the following fields and options:

- Connect Name:** mysql
- Database Type:** mysql
- Database:** employees
- File:** Please click the button to upload the file
- Encoding:** UTF-8
- Description:** please input

Buttons: Next, Cancel

Select whether the restore operation requires transaction execution, and then click "Confirm".



4.4 Task Center

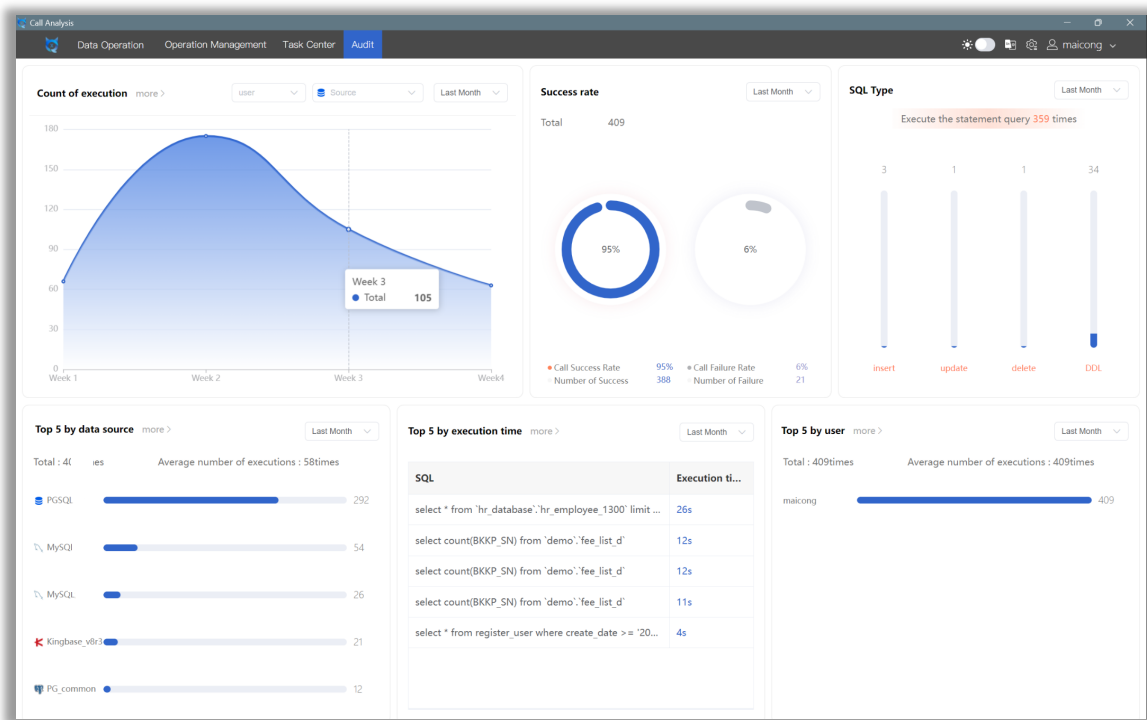
The "Task Center" in the top main menu records user behavior logs related to data import, data export, and generation test data.

If the data generation process takes too long due to a large amount of data being generated, or if there is a need to terminate the data generation operation, you can click on the "Terminate" option in the rightmost action column of the corresponding record in the Task Center to stop the SQL execution operation.

| # | Status | startup Time | Time | Transmis... | Execute I... | SQL | File Name | File fo... | Datasource | Operation |
|----|-----------|---------------------|------|-------------|--------------|--|---------------------------|------------|------------|-----------|
| 1 | success | 2024-05-20 12:03:47 | 0 | 208s | 3668317 | select * from 'demo'.fee_list_d' | fee_list_d_4G | CSV | MySQL_81 | Log |
| 2 | Data t... | 2024-05-16 15:55:27 | 0 | 0 | 0 | select * from 'demo'.fee_list_d' | fee_list_d_50 | CSV | MySQL | Log |
| 3 | success | 2024-05-16 15:26:22 | 0 | 155s | 13000000 | select * from 'hr_database'.hr_employee_1... | hr_employee_1300_20240... | CSV | MySQL_81 | Log |
| 4 | success | 2024-05-16 15:21:09 | 0 | 26s | 1000000 | select * from 'demo'.fee_list_d' | fee_list_d_100w | CSV | MySQL_81 | Log |
| 5 | success | 2024-05-16 15:11:01 | 0 | 5s | 200000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516151047 | CSV | MySQL_81 | Log |
| 6 | success | 2024-05-16 14:52:25 | 0 | 3s | 100000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516145044 | CSV | MySQL_81 | Log |
| 7 | success | 2024-05-16 14:34:52 | 0 | 0 | 10000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516143444 | CSV | MySQL_81 | Log |
| 8 | success | 2024-05-16 14:31:15 | 0 | 0 | 1000 | select * from 'demo'.fee_list_d' | fee_list_d_20240516143058 | CSV | MySQL_81 | Log |
| 9 | success | 2024-05-16 14:23:42 | 0 | 99s | 3668317 | select * from 'demo'.fee_list_d' | fee_list_d_20240516142329 | CSV | MySQL_81 | Log |
| 10 | success | 2024-05-14 15:56:07 | 0 | 1s | 9670 | select * from 'demo'. | ...20240514155600 | Excel | MySQL_81 | Log |
| 11 | success | 2024-05-08 09:46:15 | 0 | 0 | 3164 | select * from register_user where create_da... | export_20240508094610 | Excel | PGSQL | Log |
| 12 | success | 2024-05-07 10:31:07 | 0 | 0 | 10000 | select * from 'hr_database'.hr_employee_1... | hr_employee_1300_20240... | Excel | MySQL_81 | Log |
| 13 | success | 2024-05-07 10:28:59 | 0 | 33s | 1000000 | select * from 'hr_database'.hr_employee_1... | hr_employee_1300_20240... | Excel | MySQL_81 | Log |
| 14 | success | 2024-05-06 11:20:33 | 0 | 0 | 1000 | select * from 'hr_database'.hr_employee' li... | hr_employee_2024050611... | CSV | MySQL_81 | Log |
| 15 | success | 2024-04-25 19:37:51 | 0 | 0 | 2 | select * from 'demo'.bit' | bit_20240425193748 | Excel | MySQL_81 | Log |
| 16 | success | 2024-04-25 19:37:43 | 0 | 0 | 2 | select * from 'demo'.bit' | bit_20240425193739 | CSV | MySQL_81 | Log |

4.5 Audit

Based on operation logs, user behavior records can be automatically analyzed to generate corresponding data visualization charts based on dimensions such as execution frequency, success rate, SQL type, classification by data source, classification by execution time, and classification by operating user.



Clicking on "More" allows you to view detailed operation data and filter for export.

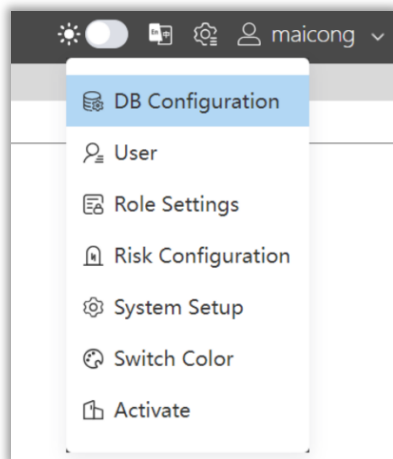
The screenshot shows a detailed view of SQL execution logs. It includes a summary table and a main log table with filters for Database, SQL Type, User, and Success.



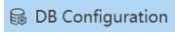

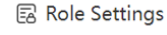



| Source | Number of executions | Execution time | Success rate |
|----------|----------------------|----------------|--------------|
| MySQL_81 | 53 | 1m4s | 98% |

| # | SQL | Time | SQL Type | Execution time | User | Database | State |
|----|---|-------|----------|---------------------|---------|-------------|---------|
| 1 | select * from hr_database.hr_employee_dem... | 106ms | select | 2024-05-30 14:45:40 | maicong | hr_database | success |
| 2 | SELECT id, emp_id, name, gender, birthd... | 268ms | select | 2024-05-28 20:59:58 | maicong | hr_database | success |
| 3 | SELECT id, emp_id, name, gender, birthd... | 17ms | select | 2024-05-28 12:40:04 | maicong | hr_database | success |
| 4 | select * from hr_database.hr_employee dem... | 12ms | select | 2024-05-24 17:15:23 | maicong | hr_database | success |
| 5 | SELECT id, emp_id, name, gender, birthd... | 13ms | select | 2024-05-24 17:15:10 | maicong | hr_database | success |
| 6 | select * from hr_database.hr_employee dem... | 15ms | select | 2024-05-24 17:12:53 | maicong | hr_database | success |
| 7 | ALTER TABLE hr_database.hr_employee dem... | 16ms | ddl | 2024-05-24 17:06:24 | maicong | hr_database | success |
| 8 | select * from hr_database.hr_employee dem... | 13ms | select | 2024-05-24 17:05:41 | maicong | hr_database | success |
| 9 | select * from hr_database.hr_employee limit... | 16ms | select | 2024-05-24 17:02:01 | maicong | hr_database | success |
| 10 | select * from hr_database.hr_employee dem... | 11ms | select | 2024-05-24 17:01:54 | maicong | hr_database | success |
| 11 | CREATE TABLE hr_employee_demo ('id' int ... | 66ms | ddl | 2024-05-24 16:52:02 | maicong | hr_database | success |
| 12 | DROP TABLE hr_database.hr_employee_2' | 19ms | ddl | 2024-05-24 16:30:01 | maicong | hr_database | success |
| 13 | create table hr_employee_2' like hr_database... | 57ms | ddl | 2024-05-24 16:29:36 | maicong | hr_database | success |
| 14 | select * from hr_database.hr_employee limit... | 31ms | select | 2024-05-24 16:29:16 | maicong | hr_database | success |

4.6 System Setup

Located on the top-right corner of the main menu, here you can operate the system settings for SQLynx.

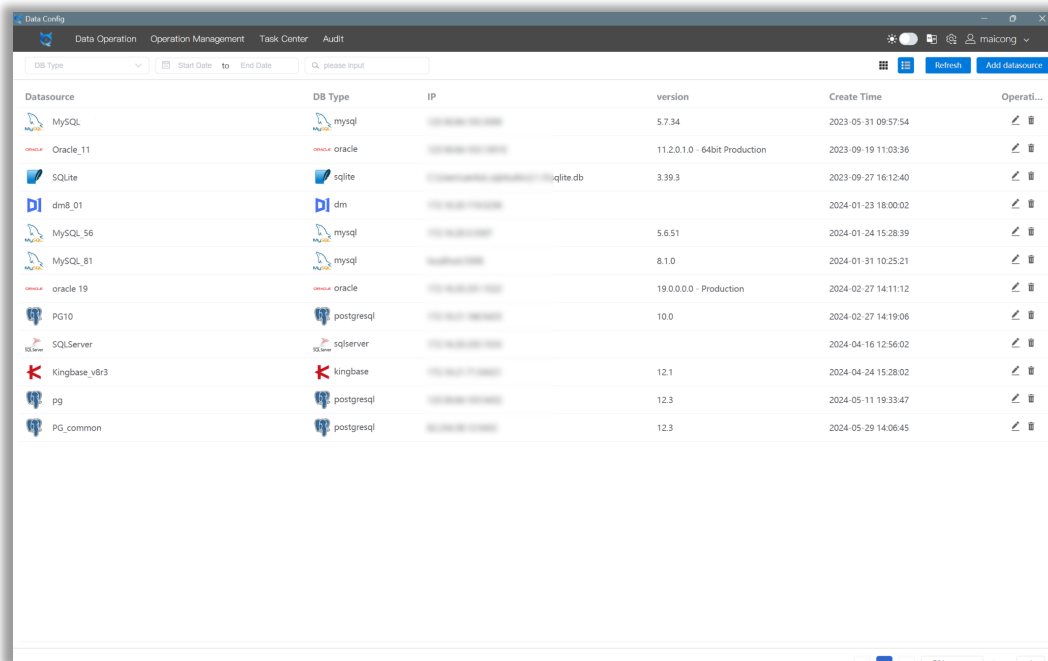


| # | Location | Description |
|---|---|---|
| 1 |  | Switch system mode between light/dark mode |
| 2 |  | Switch between displaying system menus in English or Chinese |
| 3 |  | Configuration operations for data sources |
| 4 |  | Managing user information such as creation, configuration, or deletion |
| 5 |  | Managing group information such as creation, configuration, or deletion |
| 6 |  | Users can customize and configure risk rules |
| 7 |  | System displays data, font size, and other global parameter settings |
| 8 |  | Switch theme color |
| 9 |  | Upload the license file to activate the product |

4.6.1 Data Configuration

You can view, add, modify, and delete data sources in SQLynx.

***Note:** In the SQLynx Enterprise, **only the [Administrator] account** has the permission to configure data source operations.



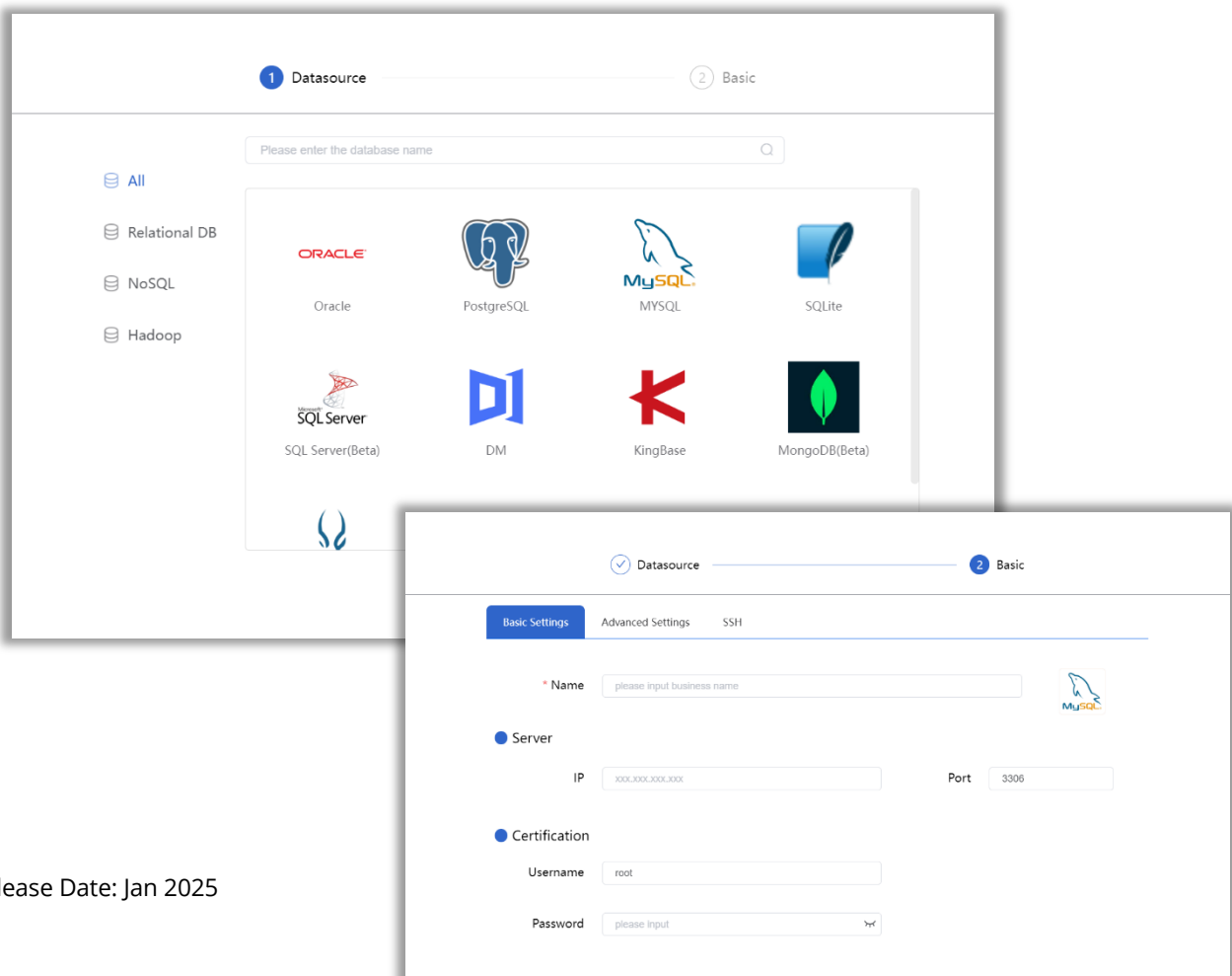
The screenshot shows the 'Data Config' window in SQLynx. It features a navigation bar with 'Data Operation', 'Operation Management', 'Task Center', and 'Audit'. Below the navigation bar is a search and filter area with a 'DB Type' dropdown, date range filters, and a search input. The main area contains a table of data sources with columns for 'Datasource', 'DB Type', 'IP', 'version', 'Create Time', and 'Operati...'. The table lists various database instances including MySQL, Oracle, SQLite, dm8_01, dm8_56, dm8_81, oracle 19, PG10, SQLServer, Kingbase_v8r3, pg, and PG_common.

| Datasource | DB Type | IP | version | Create Time | Operati... |
|---------------|------------|---------------|-------------------------------|---------------------|------------|
| MySQL | mysql | 192.168.1.100 | 5.7.34 | 2023-05-31 09:57:54 | 🔍 🗑️ |
| Oracle_11 | oracle | 192.168.1.101 | 11.2.0.1.0 - 64bit Production | 2023-09-19 11:03:36 | 🔍 🗑️ |
| SQLite | sqlite | 192.168.1.102 | sqlite db | 2023-09-27 16:12:40 | 🔍 🗑️ |
| dm8_01 | dm | 192.168.1.103 | | 2024-01-23 18:00:02 | 🔍 🗑️ |
| MySQL_56 | mysql | 192.168.1.104 | 5.6.51 | 2024-01-24 15:28:39 | 🔍 🗑️ |
| MySQL_81 | mysql | 192.168.1.105 | 8.1.0 | 2024-01-31 10:25:21 | 🔍 🗑️ |
| oracle 19 | oracle | 192.168.1.106 | 19.0.0.0.0 - Production | 2024-02-27 14:11:12 | 🔍 🗑️ |
| PG10 | postgresql | 192.168.1.107 | 10.0 | 2024-02-27 14:19:06 | 🔍 🗑️ |
| SQLServer | sqlserver | 192.168.1.108 | | 2024-04-16 12:56:02 | 🔍 🗑️ |
| Kingbase_v8r3 | kingbase | 192.168.1.109 | 12.1 | 2024-04-24 15:28:02 | 🔍 🗑️ |
| pg | postgresql | 192.168.1.110 | 12.3 | 2024-05-11 19:33:47 | 🔍 🗑️ |
| PG_common | postgresql | 192.168.1.111 | 12.3 | 2024-05-29 14:06:45 | 🔍 🗑️ |

3. 1. Add Data source:

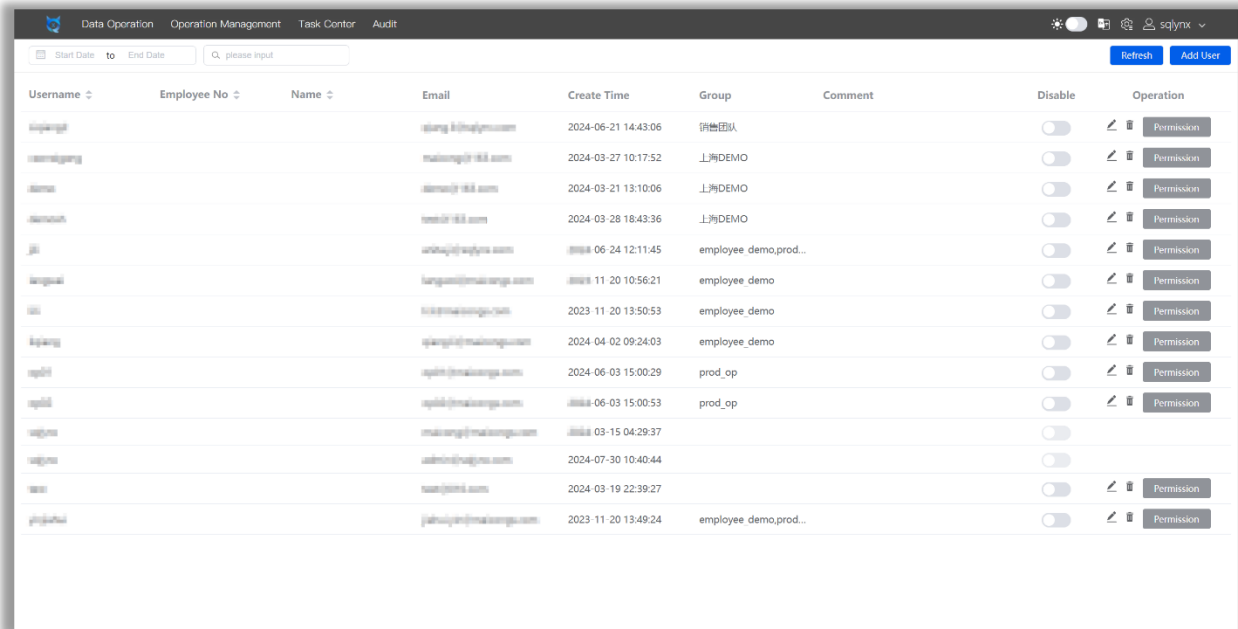
- Click on "**Add Data Source**."
- In the guided popup window, select the appropriate database and click "Next."
- Enter the basic settings of the data source, such as the **business system name**, **data source address**, **port number**, **username**, and **password**.
- If more configuration is needed, click on "**Advanced Settings**" to replace the database driver version, character set, add connection properties, driver properties, etc.
- Click on "**Test**" **button**. If the test is successful, it means the data source can be added. If the test fails, please check if the data source and network connection are correct.

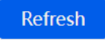
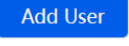


***Note:** For connection properties, driver properties, and other parameters, please refer to the JDBC documentation released by the added data source's official.


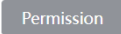


4.6.2 User Management

The default login user "sqlynx" has administrative rights, allowing for the management of all team data sources and member permissions.



| # | Location | Function | Description |
|---|---|-------------------------|---|
| 1 | Search box | Search user information | Search for user information under the current admin permissions |
| 2 |  | Refresh | Refresh the current page |
| 3 |  | Add User | Enter information to create a new user |
| 4 |  | Disable | Disable/Enable login permissions for users under current admin rights |
| 5 |  | Edit | Edit user information under current admin rights |

| | | | |
|---|---|---------------------|---|
| 6 |  | Delete | Delete user accounts under current admin rights |
| 7 |  | Check Permission | View the permissions owned by the user |

To add a new user: Enter the username, password, and email in sequence, then save.


Users can be assigned to different groups based on their permissions.

User information management
↗ ×

Basic information

* **Username**

* **Role** ▾

* **Password** 

Password security level : medium

Employee No

Name

* **Email**

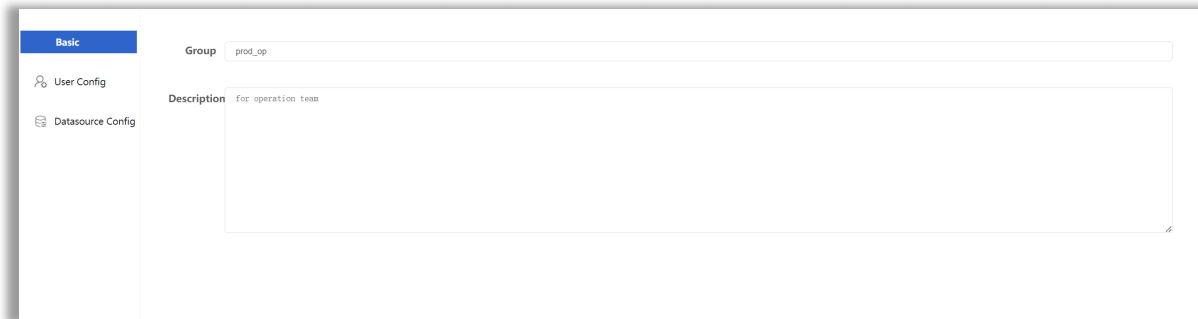
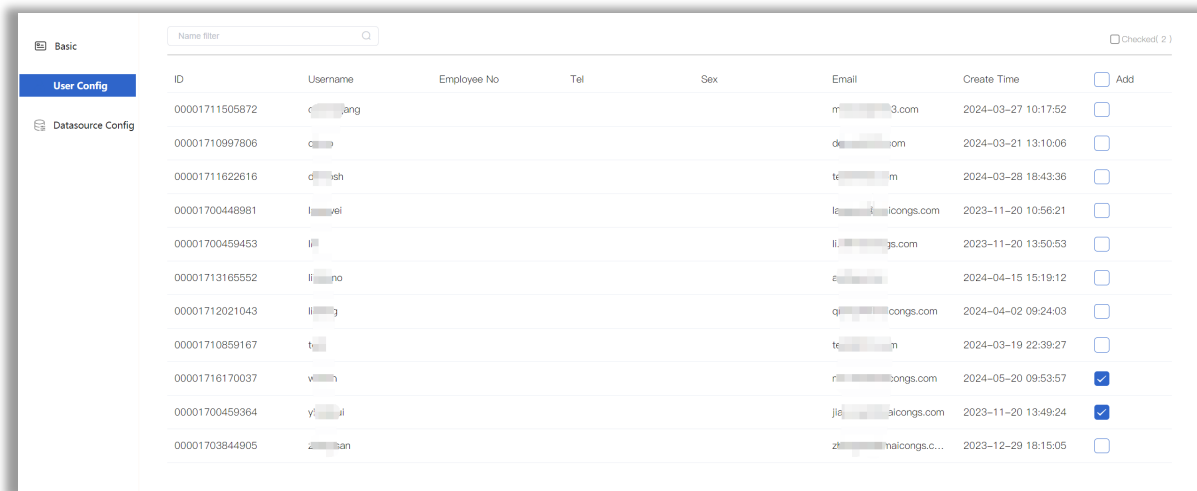
Comment

Group (Admin user can not related to any groups)

| <input type="checkbox"/> | Group | Description |
|--------------------------|--------------|-------------|
| <input type="checkbox"/> | DEMO | |
| <input type="checkbox"/> | : | |
| <input type="checkbox"/> | d_op | |
| <input type="checkbox"/> | emo | abc |
| <input type="checkbox"/> | mployee_demo | |
| <input type="checkbox"/> | t | test |

4.6.3 Role Settings

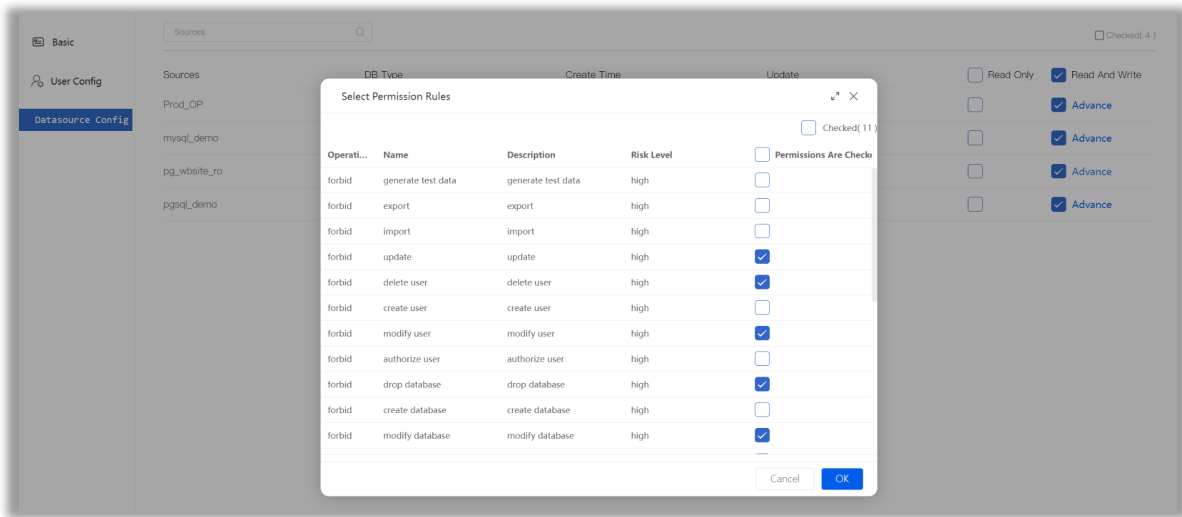
Group with varying permissions can be created, with the ability to add or remove group members. This setup allows for the management of user permissions for accessing and editing data sources.

The screenshot shows the 'User Config' page with a list of users. The table has the following columns: ID, Username, Employee No, Tel, Sex, Email, Create Time, and an 'Add' checkbox. Two users have their 'Add' checkboxes checked.

| ID | Username | Employee No | Tel | Sex | Email | Create Time | Add |
|----------------|----------|-------------|-----|-----|-------|---------------------|-------------------------------------|
| 00001711505872 | ... | ... | ... | ... | ... | 2024-03-27 10:17:52 | <input type="checkbox"/> |
| 00001710997806 | ... | ... | ... | ... | ... | 2024-03-21 13:10:06 | <input type="checkbox"/> |
| 00001711622616 | ... | ... | ... | ... | ... | 2024-03-28 18:43:36 | <input type="checkbox"/> |
| 00001700448981 | ... | ... | ... | ... | ... | 2023-11-20 10:56:21 | <input type="checkbox"/> |
| 00001700459453 | ... | ... | ... | ... | ... | 2023-11-20 13:50:53 | <input type="checkbox"/> |
| 00001713165552 | ... | ... | ... | ... | ... | 2024-04-15 15:19:12 | <input type="checkbox"/> |
| 00001712021043 | ... | ... | ... | ... | ... | 2024-04-02 09:24:03 | <input type="checkbox"/> |
| 00001710859167 | ... | ... | ... | ... | ... | 2024-03-19 22:39:27 | <input type="checkbox"/> |
| 00001716170037 | ... | ... | ... | ... | ... | 2024-05-20 09:53:57 | <input checked="" type="checkbox"/> |
| 00001700459364 | ... | ... | ... | ... | ... | 2023-11-20 13:49:24 | <input checked="" type="checkbox"/> |
| 00001703844905 | ... | ... | ... | ... | ... | 2023-12-29 18:15:05 | <input type="checkbox"/> |

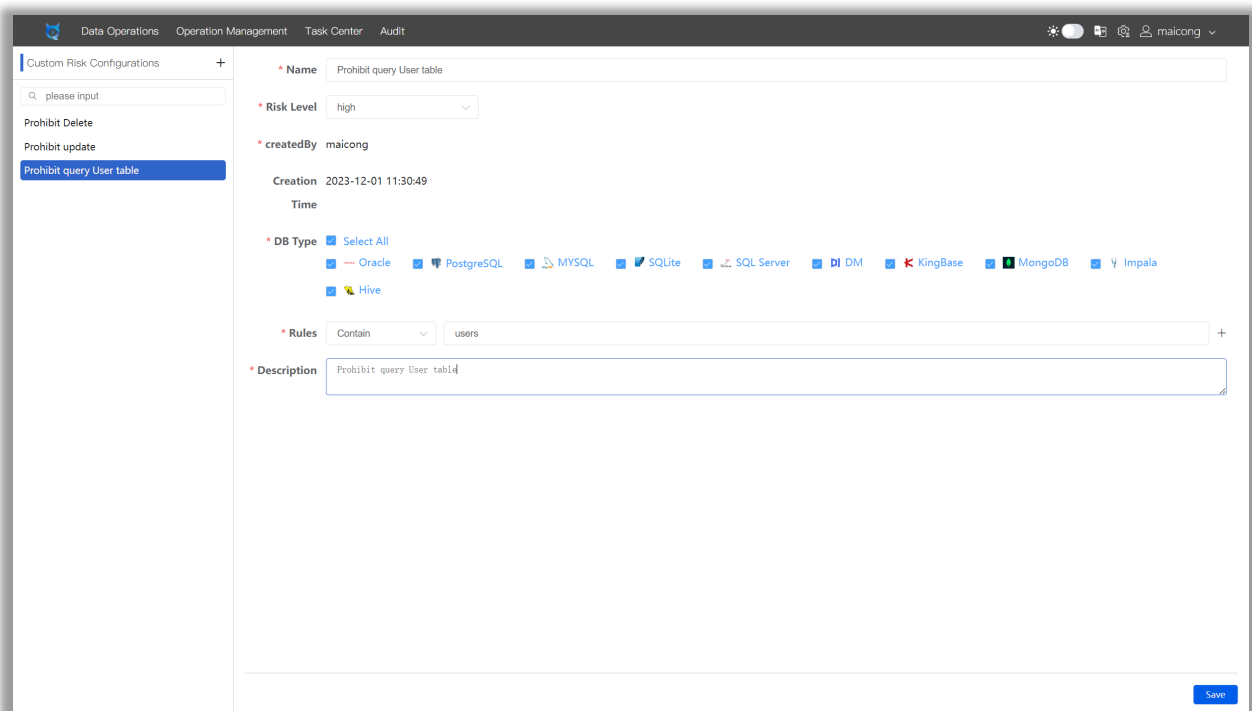
SQLynx Premium supports advanced configurations, allowing administrators to set permissions that restrict group members from performing specific data operations on tables such as select, delete, update, etc.



4.6.4 Risk Configuration

With over twenty common risk rules preset in the advanced configuration based on the 4.6.3 role settings, users can further customize the risk rules according to their needs, for example, "prohibit update", "prohibit query user table", etc.

Once the risk rules are successfully configured and saved, they will be synchronized to the role settings > advanced configuration list for user access.



The screenshot displays the 'Custom Risk Configurations' interface. On the left, a sidebar lists configuration options: 'Prohibit Delete', 'Prohibit update', and 'Prohibit query User table' (which is selected). The main area contains a form for the 'Prohibit query User table' rule. The form fields are as follows:

- Name:** Prohibit query User table
- Risk Level:** high
- createdBy:** maicong
- Creation Time:** 2023-12-01 11:30:49
- DB Type:** Select All (checked), Oracle, PostgreSQL, MySQL, SQLite, SQL Server, DI DM, KingBase, MongoDB, Impala, Hive.
- Rules:** Contain (dropdown), users (input field)
- Description:** Prohibit query User table

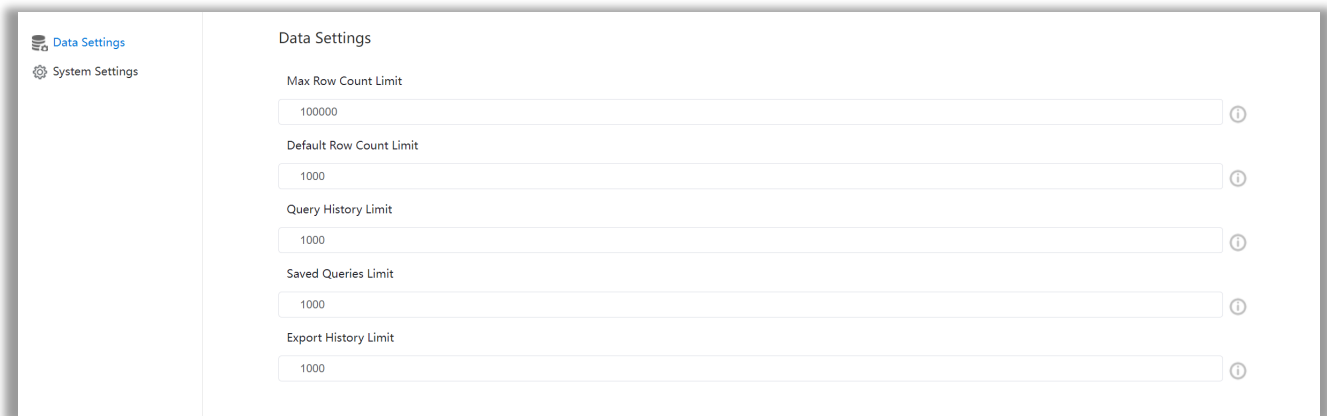
A 'Save' button is located at the bottom right of the form.

4.6.5 System Setup

You can adjust the settings for query results, JVM, and system theme according to the user's actual usage needs.

4.6.5.1 Data Settings

Based on the user's actual usage needs, you can modify the following data parameters.



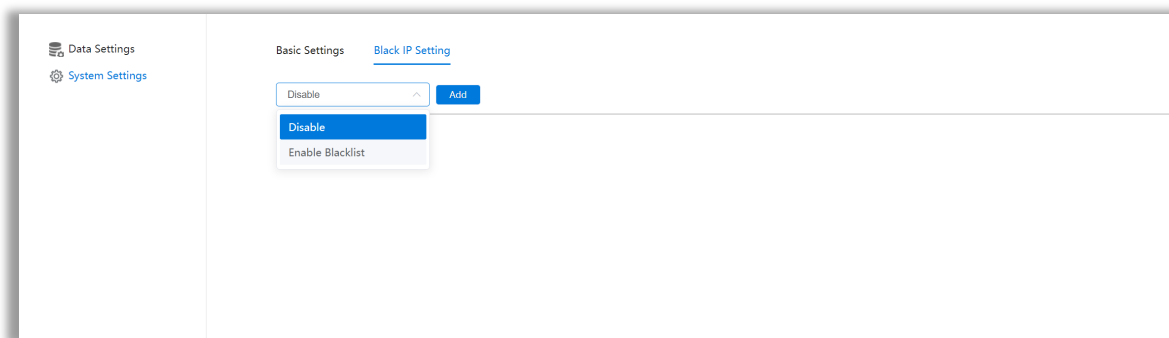
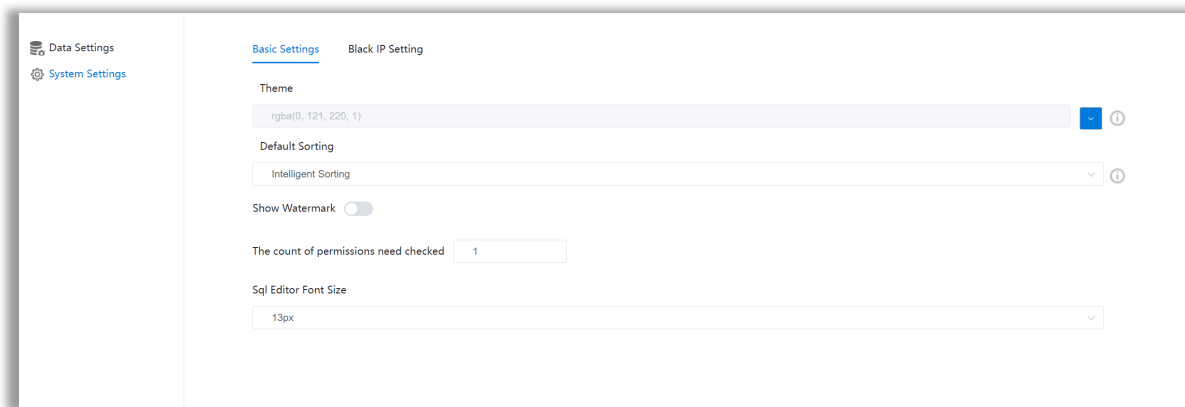
1. Modify to the desired numerical value.
2. After saving, return to the homepage (no need to restart SQLynx).

| # | Data Settings | Default | Description |
|---|-------------------------|---------|---|
| 1 | Max Row Count Limit | 10000 | The upper limit of max rows returned when executing query statements in SQLynx. |
| 2 | Default Row Count Limit | 1000 | The upper limit of default rows returned when using "Execute" to query. |
| 3 | Query History Limit | 1000 | The upper limit of query history logs saved in " Query History ". |
| 4 | Saved Queries Limit | 1000 | The upper limit of commonly used query statements saved in " Saved Query ". |

| | | | |
|---|----------------------|------|---|
| 5 | Export History Limit | 1000 | The upper limit of historical export data logs. |
|---|----------------------|------|---|

4.6.5.2 System Settings

According to the user's actual usage needs, you can modify the theme color and default sorting. After modification, save it without the need to restart SQLynx.



| # | System Settings | Default | Description |
|---|-----------------|------------------|---|
| 1 | Theme | Color Parameters | Default theme color scheme, can be customized according to user preferences |

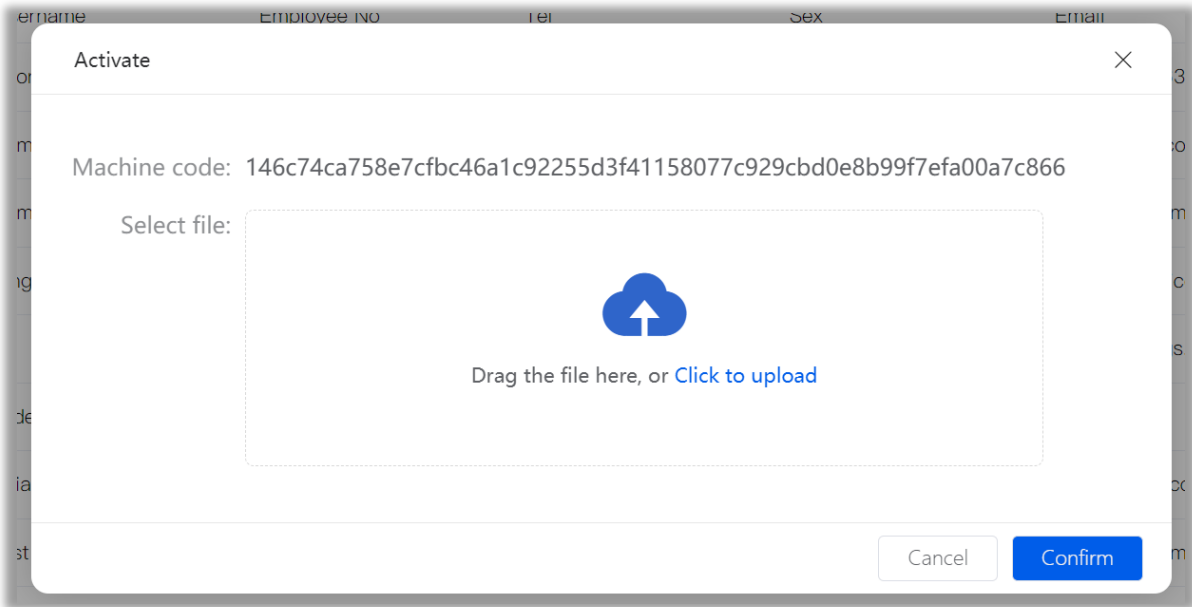
| | | | |
|---|---------------------------------------|------------------------|--|
| 2 | Default Sorting | Intelligent Sorting | default sorting rule within SQLynx |
| 3 | Show Watermark | Off | Option to toggle whether to display watermark |
| 4 | The count of permissions need checked | 1 | The upper limit of times allowed to check when applying for permissions. |
| 5 | SQL Editor Font Size | 13px | Option to set the font size of the SQL editor (applies to all SQL editors) |
| 6 | Blacklist Setting | Disable | Option to enable or disable the blacklist feature |

4.6.6 Switch Theme

You can switch between the default orange, blue, and purple theme colors.

4.6.7 Activate

When purchasing or renewing software products, you can upload the license file provided by SQLynx here to activate the SQLynx Enterprise.



4.7 Account

4.7.1 My Profile

1. Modify Login Password

Click on "Settings" to modify the password in the pop-up window.

2. Saved SQL

Display the user's "Saved Query" records, with options to modify, copy, or delete.

3. Snippets

Display the user's "Code Blocks" records, with options to modify or delete.

4. Preferences

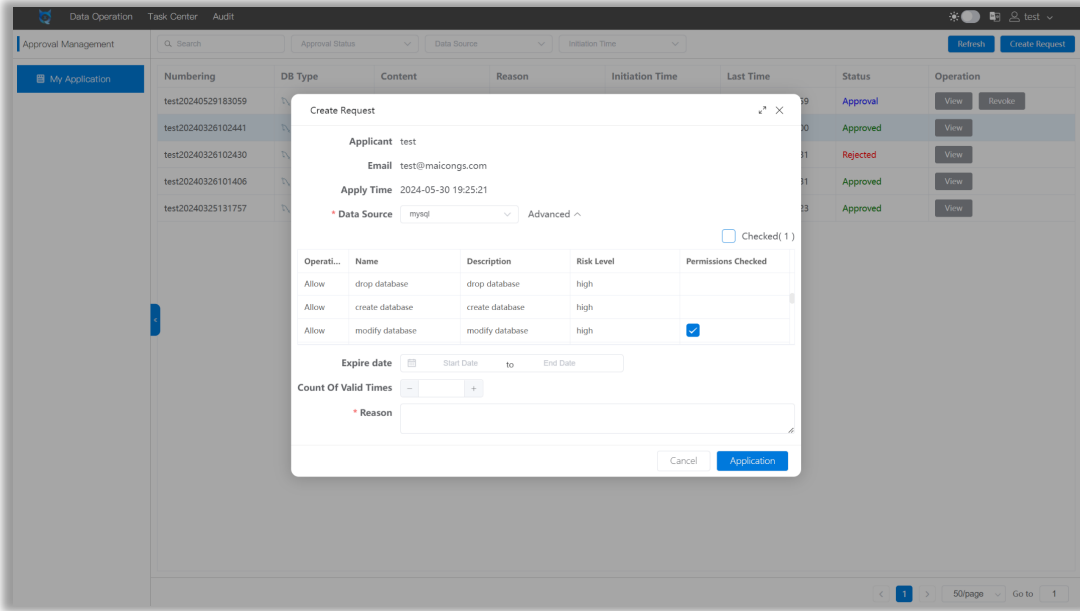
Display the user's current theme color scheme and default sorting rules.

4.7.2 Approval Management

Requests for permission to access or perform actions on data sources, which are not currently allowed under their account, are initiated by users with normal user rights.

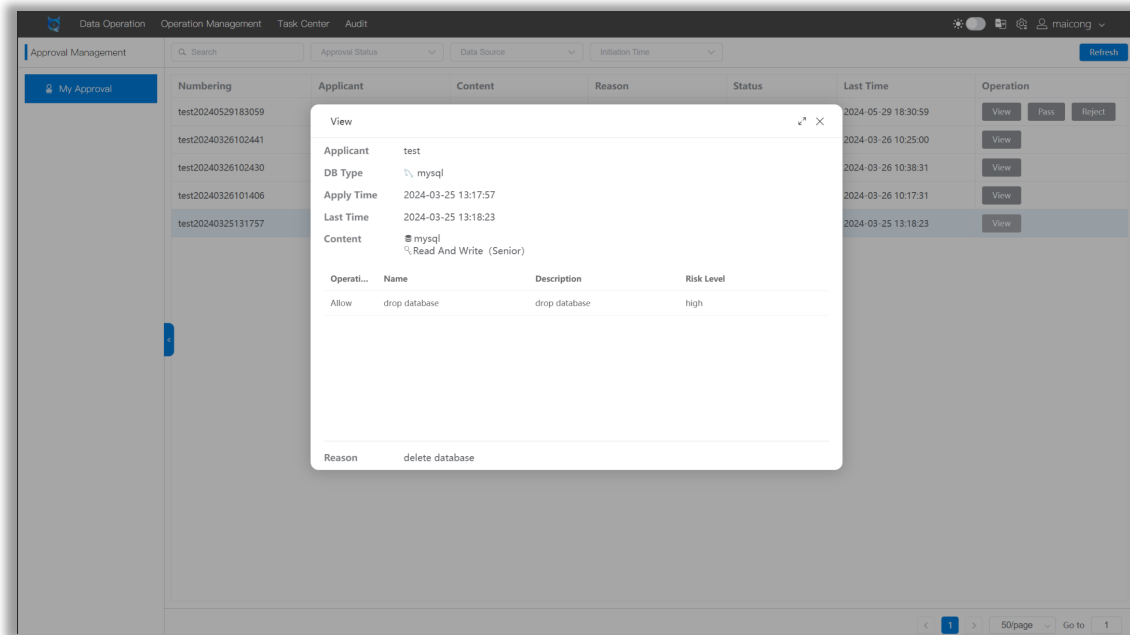
After submission, these requests are reviewed and approved by administrators.

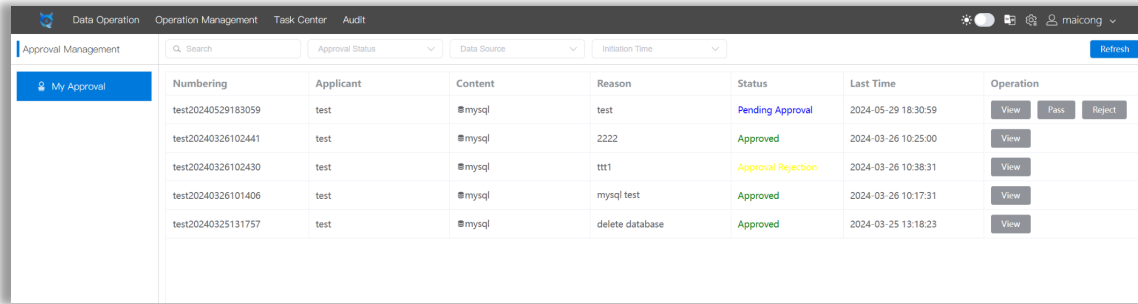
Approval management interfaces for normal user.



| Numbering | DB Type | Content | Reason | Initiation Time | Last Time | Status | Operation |
|--------------------|---------|---------|-----------------|---------------------|---------------------|----------|-------------|
| test20240529183059 | mysql | mysql | test | 2024-05-29 18:30:59 | 2024-05-29 18:30:59 | Approval | View Revoke |
| test20240326102441 | mysql | mysql | 2222 | 2024-03-26 10:24:41 | 2024-03-26 10:25:00 | Approved | View |
| test20240326102430 | mysql | mysql | ttt1 | 2024-03-26 10:24:30 | 2024-03-26 10:38:31 | Rejected | View |
| test20240326101406 | mysql | mysql | mysql test | 2024-03-26 10:14:06 | 2024-03-26 10:17:31 | Approved | View |
| test20240325131757 | mysql | mysql | delete database | 2024-03-25 13:17:57 | 2024-03-25 13:18:23 | Approved | View |

Approval management interfaces for administrator.





The screenshot displays the 'Approval Management' section of the SQLYnx interface. It features a navigation bar with 'Data Operation', 'Operation Management', 'Task Center', and 'Audit'. Below the navigation bar, there are filters for 'Approval Status', 'Data Source', and 'Initiation Time', along with a search bar and a 'Refresh' button. The main content is a table with the following columns: 'Numbering', 'Applicant', 'Content', 'Reason', 'Status', 'Last Time', and 'Operation'. The table contains five rows of data, each with a 'View' button in the 'Operation' column. The first row has a 'Pass' and 'Reject' button as well.

| Numbering | Applicant | Content | Reason | Status | Last Time | Operation |
|--------------------|-----------|---------|-----------------|--------------------|---------------------|------------------|
| test20240529183059 | test | mysql | test | Pending Approval | 2024-05-29 18:30:59 | View Pass Reject |
| test20240326102441 | test | mysql | 2222 | Approved | 2024-03-26 10:25:00 | View |
| test20240326102430 | test | mysql | ttt1 | Approval Rejection | 2024-03-26 10:38:31 | View |
| test20240326101406 | test | mysql | mysql test | Approved | 2024-03-26 10:17:31 | View |
| test20240325131757 | test | mysql | delete database | Approved | 2024-03-25 13:18:23 | View |

4.7.2 Support

SQLynx Official Website: <https://www.sqlynx.com>

4.7.3 Feedback

Send an email to [**service@sqlynx.com**](mailto:service@sqlynx.com) for assistance.

4.7.4 About Us

Display the SQLynx version, Java version, and server time currently in use by the user.

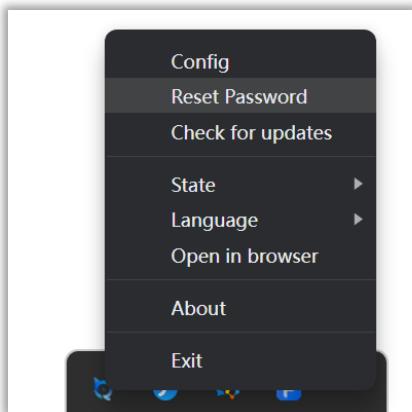
4.7.5 Sign Out

Sign out of the SQLynx account.

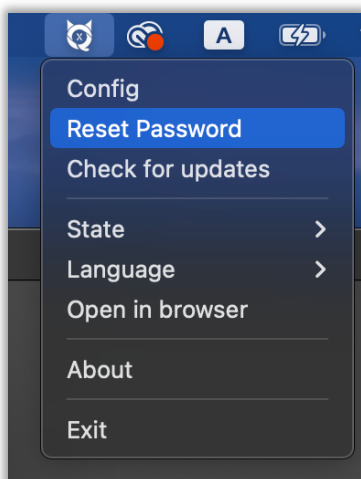
5. Q&A

5.1 How to Reset Password?

1. **Windows:** To reset your password in SQLynx, find the SQLynx icon in the system tray at the bottom right corner, right-click it to open a menu, select the reset password option, enter the new password in the popup, and reset it.



2. **Mac OS:** To reset your password in SQLynx, find the SQLynx icon in the status menu at the top right corner, right-click to open a menu, choose the reset password option, enter the new password in the popup, and reset it.



3. **Linux:** Run the command `./devops-sqlynx-ide.sh` to access the following page, choose "1.reset admin password", enter the path for SQLynx database sqlite.db, then input the reset password. Successful update is indicated by "update SQLiteDb password is completed".

```
Maicong-devops
├── 1. reset admin password
└── 2. historical version data migration

Please enter the command [1-2]:
```

5.2 How to Customize Database Driver Packages?

5.2.1 Windows Version

Applicable to **SQLynx Pro, SQLynx Enterprise, SQLynx Premium.**

1. Open the SQLynx folder at the following path:

```
\sqlynx_win_3.5.0\sqlynx\resources\app\sqlynx\lib
```

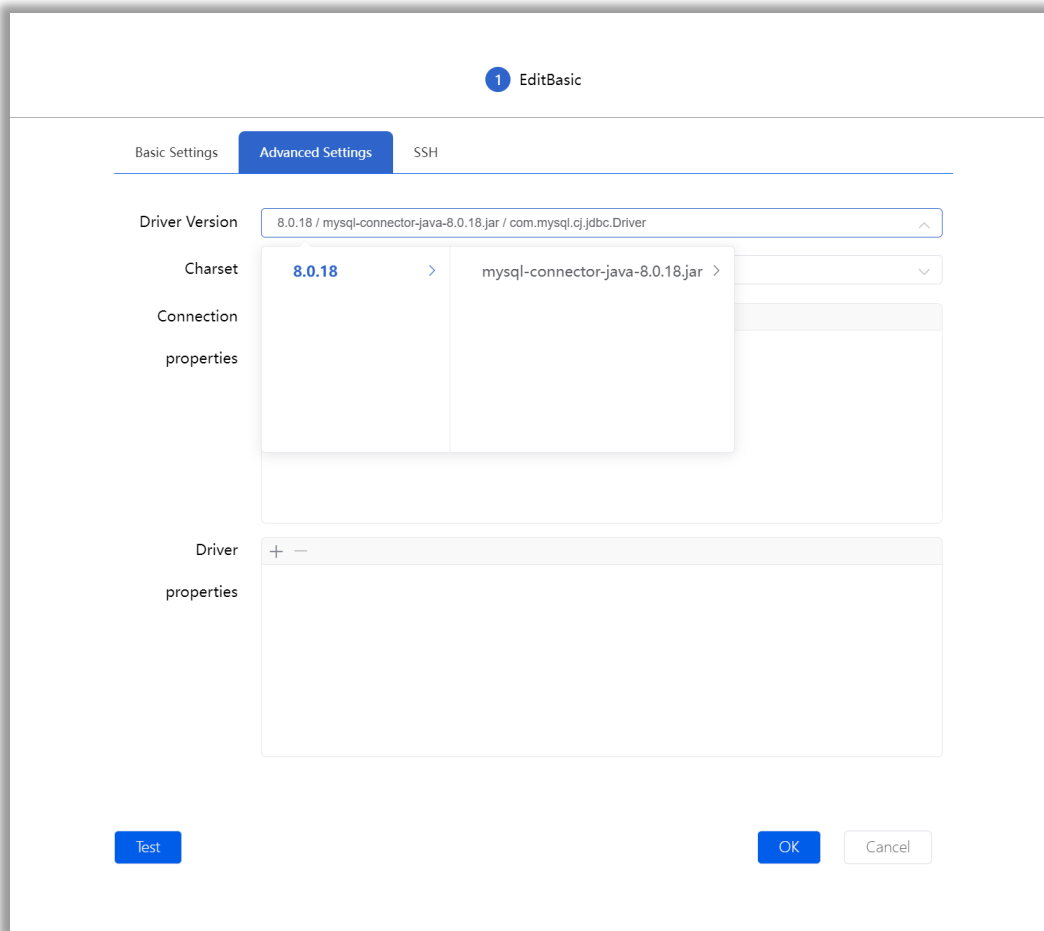
2. Choose the relevant database folder as needed (using MySQL as an example).

```
> ... sqlynx > resources > app > sqlynx > lib > mysql >
```

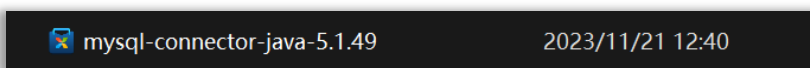
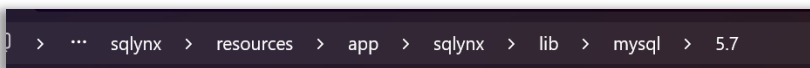
```
8.0.18
```

```
2023/11/20 10:29
```

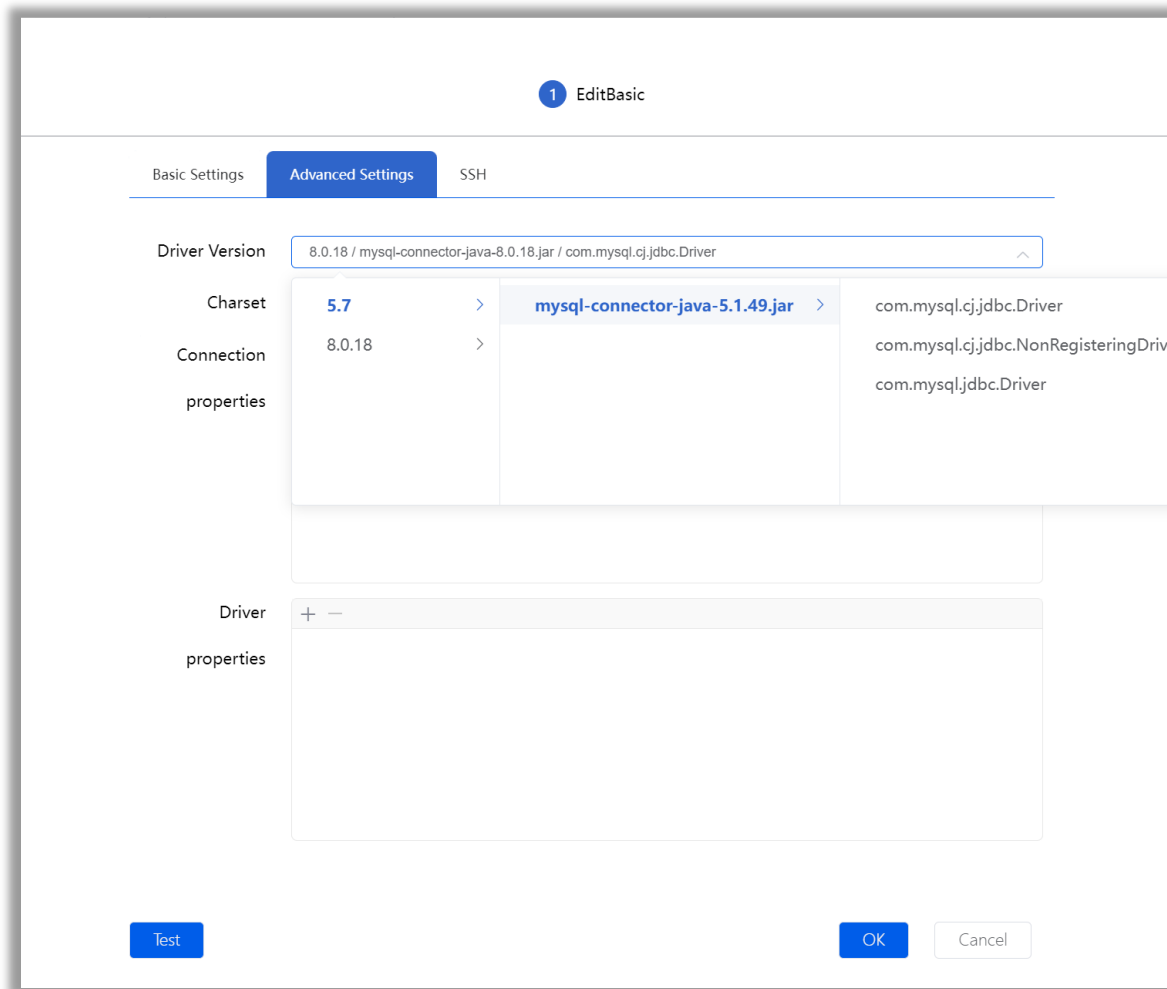
The currently selectable driver version under SQLynx data source configuration's advanced settings corresponds to 8.0.18.



Create a new folder named after the driver package version you wish to replace (e.g., for version 5.7, it is recommended to name it after the version number), and copy the corresponding jar file into this folder.



Restart SQLynx, go to data source configuration - advanced settings, the custom saved 5.7 version driver package will appear in the dropdown menu.

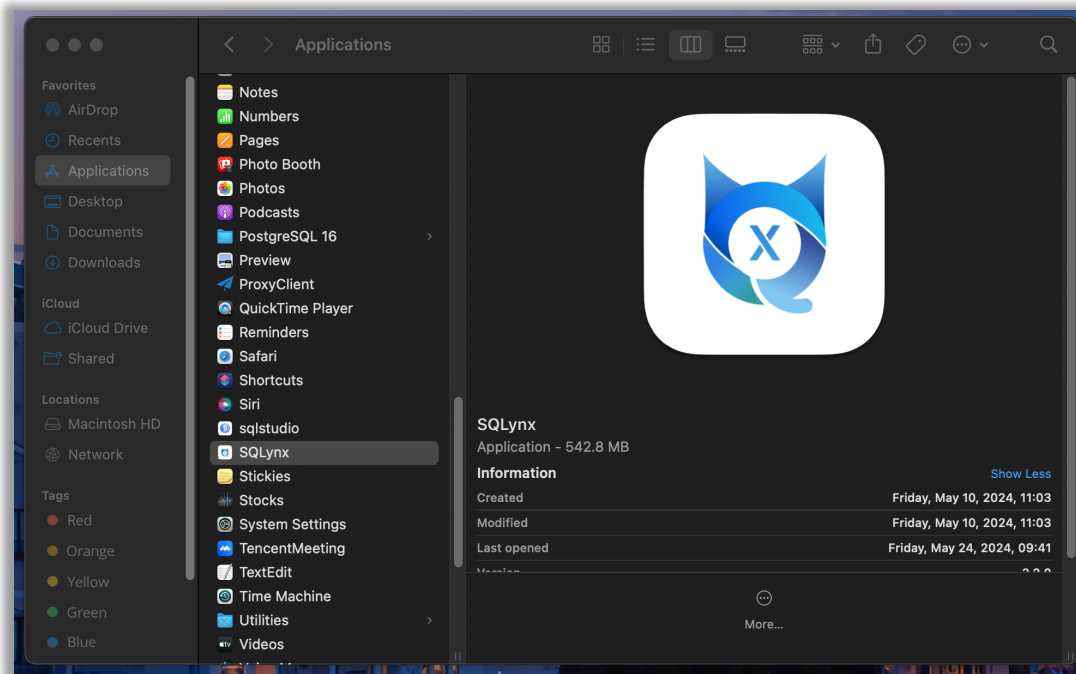


After switching to the custom driver package, click "Test" again to ensure the data source connection is normal. Successful test means the driver package has been successfully changed, click OK, return to the main window, and it can be used normally. The method to add other database drivers is the same as above.

5.2.2 MacOS Version

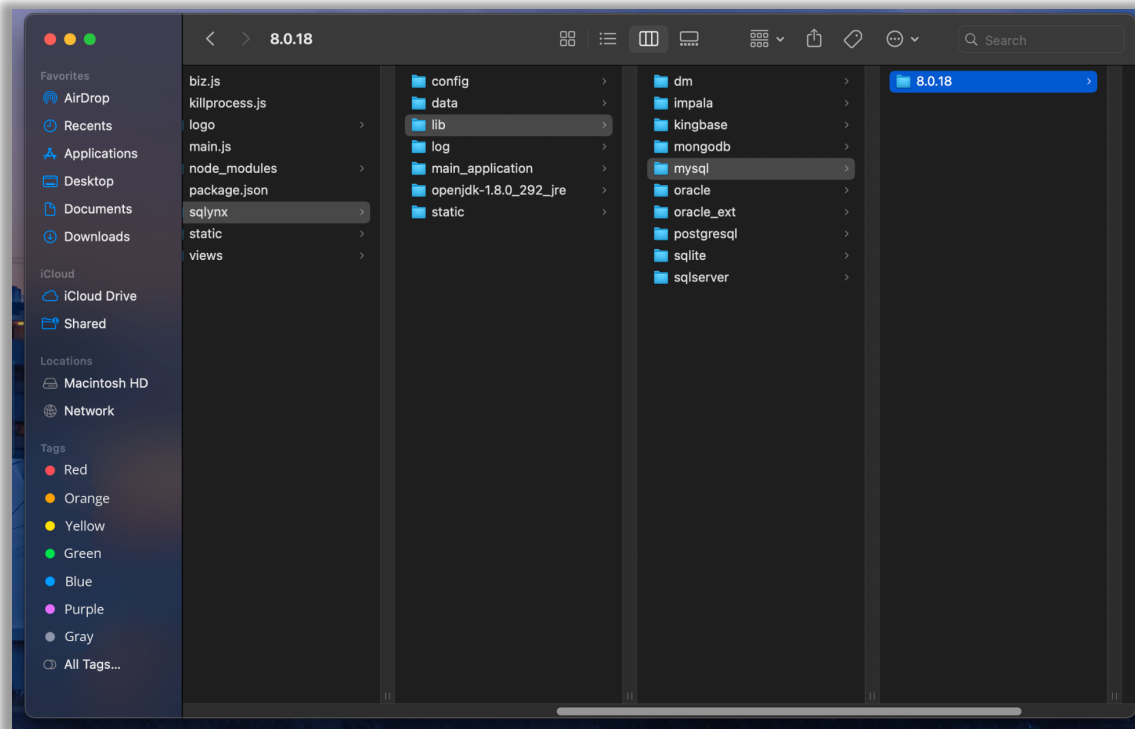
Applicable to **SQLynx Pro**.

1. Open Applications, select SQLynx as shown below.



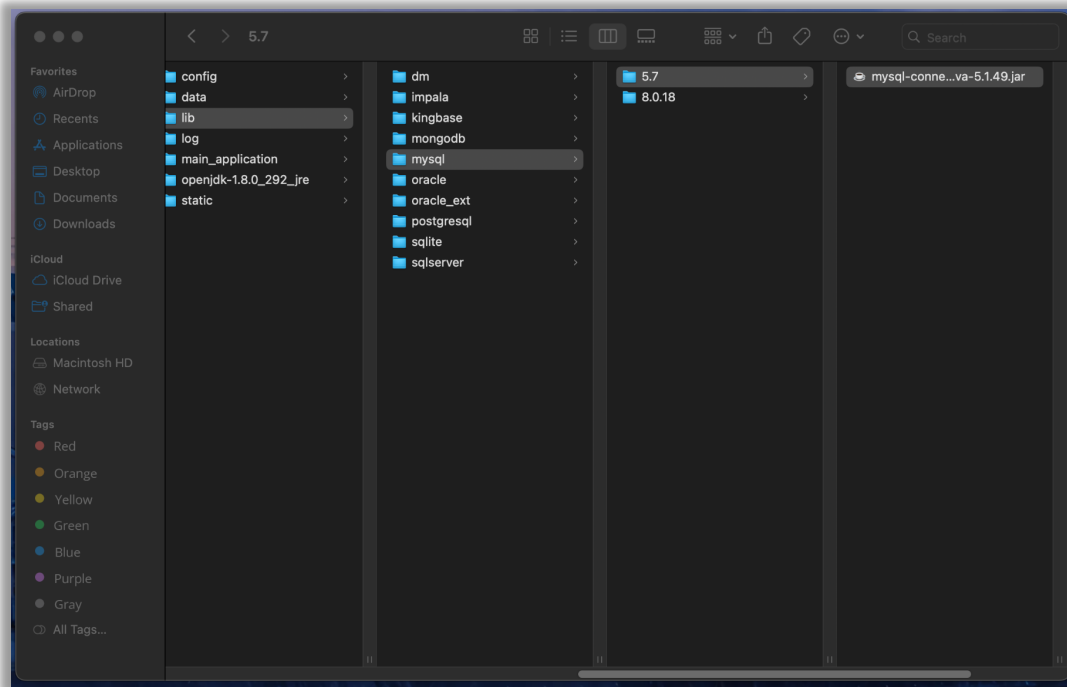
2. Right-click on the SQLynx icon and select "Show Package Contents", then follow the directory (using MySQL as an example):

`/Applications/SQLynx.app/Contents/Resources/app/sqlynx/lib/mysql`



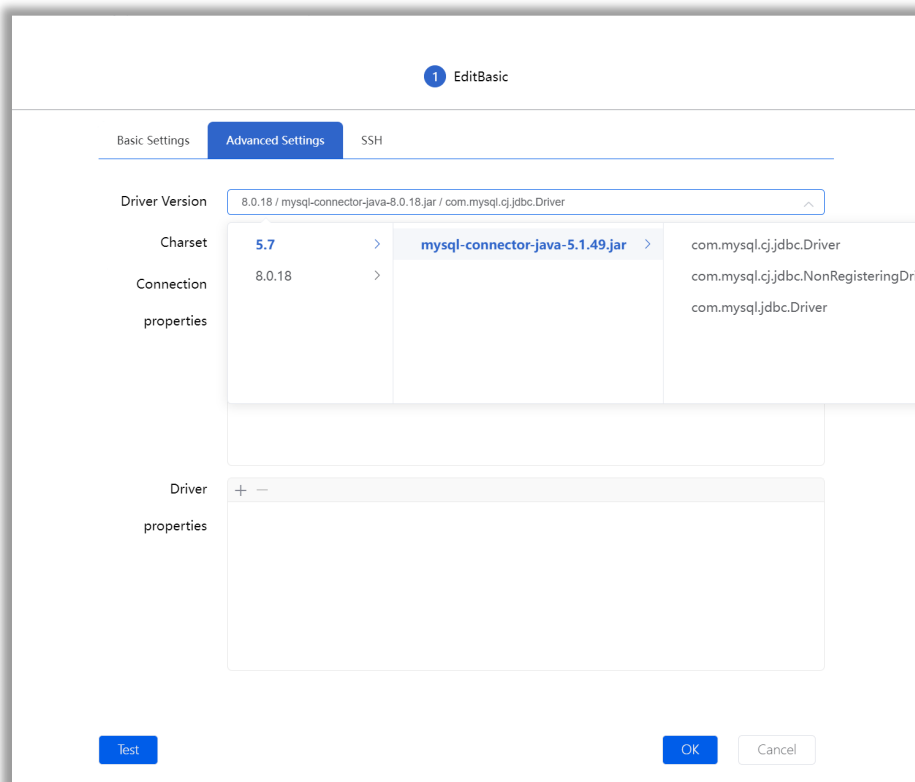
3. To add a 5.7 MySQL driver, create a folder named 5.7, as shown below (it is recommended to name it after the version number).

4. Go into the 5.7 folder, place the appropriate driver downloaded from the database's official website into the folder, as shown below.



5. Restart SQLynx.

6. In adding a data source, you can see the just added driver for MySQL, and the method for adding other database drivers is the same as above.



5.2.3 Linux Version

Applicable to **SQLynx Pro, SQLynx Team, SQLynx Enterprise.**

1. Open the main directory of SQLynx, located in the software folder under

sqlynx_3.0.0

```
cd sqlynx_3.0.0/
```

```
[root@maicong-dev001 software]# cd sqlynx_3.0.0/
[root@maicong-dev001 sqlynx_3.0.0]# pwd
/software/sqlynx_3.0.0
[root@maicong-dev001 sqlynx_3.0.0]#
```

2. Navigate to the lib/mysql directory

```
cd lib/mysql/
```

```
[root@maicong-dev001 sqlynx_3.0.0]# cd lib/mysql/
[root@maicong-dev001 mysql]# ls
8.0.18
[root@maicong-dev001 mysql]# pwd
/software/sqlynx_3.0.0/lib/mysql
[root@maicong-dev001 mysql]# ls
```

3. Create a folder named 5.7 (for version 5.7 as an example)

```
mkdir 5.7
```

```
[root@maicong-dev001 mysql]# pwd
/software/sqlynx_3.0.0/lib/mysql
[root@maicong-dev001 mysql]# ls
8.0.18
[root@maicong-dev001 mysql]# mkdir 5.7
[root@maicong-dev001 mysql]#
```

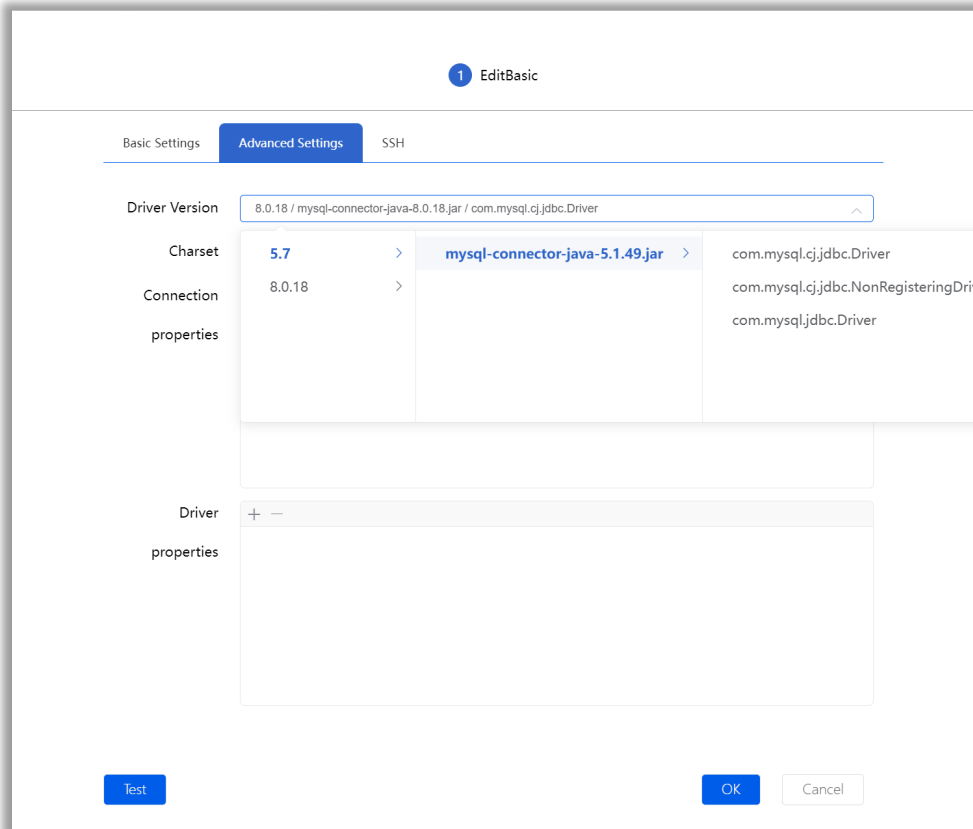
4. Put the corresponding database driver package JAR file into the newly created folder

```
cd 5.7
```

```
cp -rf /root/mysql-connector-java-5.1.49.jar
```

```
[root@maicong-dev001 mysql]# cd 5.7
[root@maicong-dev001 5.7]# cp -rf /root/mysql-connector-java-
mysql-connector-java-5.1.49.jar mysql-connector-java-8.0.28.jar
[root@maicong-dev001 5.7]# cp -rf /root/mysql-connector-java-5.1.49.jar
[root@maicong-dev001 5.7]# ls
mysql-connector-java-5.1.49.jar
[root@maicong-dev001 5.7]#
```

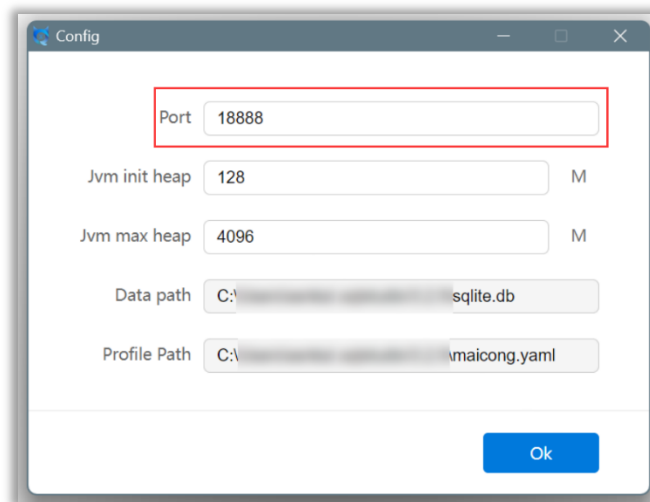
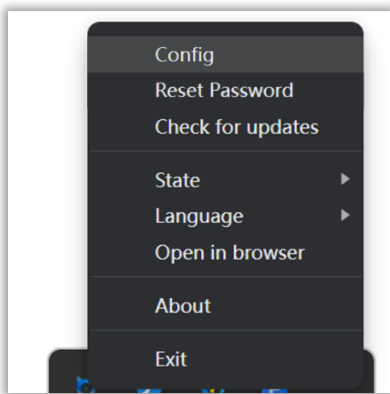
5. In adding a data source, you can select MySQL and see the just added driver, and the method for adding other database drivers is the same as above.



5.3 How to change the port number?

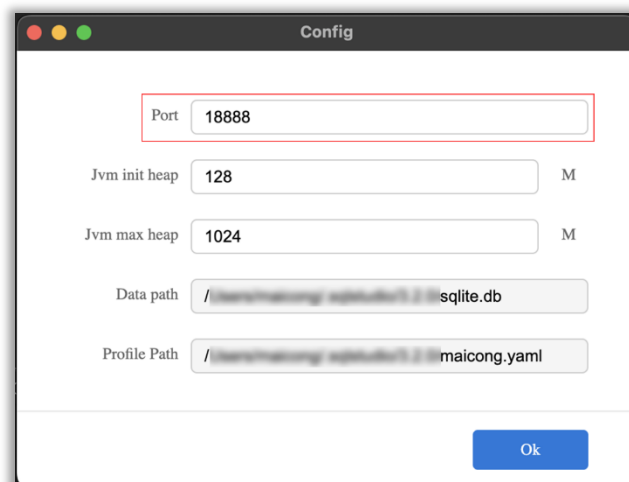
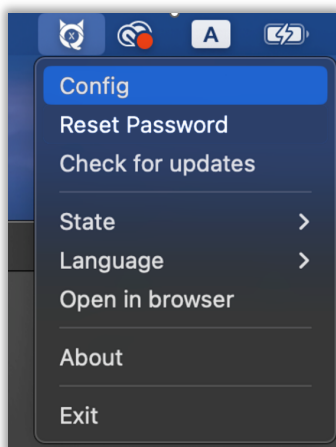
5.3.1 Windows Version

To change the port number in SQLynx, find the SQLynx icon in the system tray at the bottom right corner, right-click to open a menu, select the config option, modify the port number in the popup, save, and restart SQLynx to activate the changes.



5.3.2 MacOS Version

To change the port number in SQLynx, find the SQLynx icon in the status menu at the top right, right-click to open a menu, select the config option, modify the port number in the popup, save, and restart SQLynx to activate the changes.



5.3.3 Linux Version

Enter the SQLynx directory and update the configuration file as illustrated.

1. Execute the command

```
vi config/sqlynx.yaml
```

Display the following content.

```
##### MaiCongSoftWare Configuration #####
#
# NOTE: MAICONGSOFTWARE comes with reasonable defaults for most settings.
#       Before you set out to tweak and tune the configuration, make sure you
#       understand what are you trying to accomplish and the consequences.
#
# The primary way of configuring a node is via this file. This template lists
# the most important settings you may want to configure for a production cluster.
#
# Please consult the documentation for further information on configuration options:
# http://www.maicongs.com/#/listdocu
#
# ----- Network -----
# set the server run port for backend and frontend, this is backend port
# must
server.port: 18889

# ----- DB configuration -----
master.datasource.initial-size: 10
master.datasource.max-active: 100
master.datasource.min-idle: 10
# set the sqlite local path (have default if not set)
#master.datasource.url: jdbc:sqlite:xxx/sqlite.db
master.datasource.url:

# ----- LOG -----
# log level, you can set info, error, warn, debug
logging.level.com.mc.dao: info

# ----- MYBATIS -----
mybatis.check-config-location: true
mybatis.config-location: classpath:mybatis/mybatis-config.xml
mybatis.mapper-locations: classpath:mybatis/mapper/*.xml
mybatis.type-aliases-package: com.mc.entity

# ----- Network -----
server.tomcat.accept-count: 800
server.tomcat.max-connections: 20000
server.tomcat.max-max-threads: 1000
server.tomcat.uri-encoding: UTF-8

# ----- SPRING -----
spring.http.encoding.charset: UTF-8
spring.http.encoding.enabled: true
spring.http.encoding.force: true
spring.messages.encoding: UTF-8
spring.mvc.async.request-timeout: 180000
spring.mvc.pathmatch.matching-strategy: ant_path_matcher
spring.messages.basename: i18n/messages

# ----- multipart -----
spring.servlet.multipart.max-file-size: 1024MB
spring.servlet.multipart.max-request-size: 1024MB
```


2. Press the i key to enter **INSERT** mode and change the server.port number.

```

===== MaiCongSoftware Configuration =====
#
# NOTE: MAICONGSOFTWARE comes with reasonable defaults for most settings.
# Before you set out to tweak and tune the configuration, make sure you
# understand what are you trying to accomplish and the consequences.
#
# The primary way of configuring a node is via this file. This template lists
# the most important settings you may want to configure for a production cluster.
#
# Please consult the documentation for further information on configuration options:
# http://www.maicongs.com/#/listdocu
#
# ----- Network -----
# set the server run port for backend and frontend, this is backend port
# must
server.port: 18889

# ----- DB configuration -----
master.datasource.initial-size: 10
master.datasource.max-active: 100
master.datasource.min-idle: 10
# set the sqlite local path (have default if not set)
#master.datasource.url: jdbc:sqlite:xxx/sqlite.db
master.datasource.url:

# ----- LOG -----
# log level, you can set info, error, warn, debug
logging.level.com.mc.dao: info

# ----- MYBATIS -----
mybatis.check-config-location: true
mybatis.config-location: classpath:mybatis/mybatis-config.xml
mybatis.mapper-locations: classpath:mybatis/mapper/*.xml
mybatis.type-aliases-package: com.mc.entity

# ----- Network -----
server.tomcat.accept-count: 800
server.tomcat.max-connections: 20000
server.tomcat.max-max-threads: 1000
server.tomcat.uri-encoding: UTF-8

# ----- SPRING -----
spring.http.encoding.charset: UTF-8
spring.http.encoding.enabled: true
spring.http.encoding.force: true
spring.messages.encoding: UTF-8
spring.mvc.async.request-timeout: 180000
spring.mvc.pathmatch.matching-strategy: ant_path_matcher
spring.messages.basename: i18n/messages

# ----- multipart -----
spring.servlet.multipart.max-file-size: 1024MB
spring.servlet.multipart.max-request-size: 1024MB

-- INSERT --

```

3. Press the esc key to exit INSERT mode, then type the command :wq to save the changes and exit.

```

===== MaiCongSoftware Configuration =====
#
# NOTE: MAICONGSOFTWARE comes with reasonable defaults for most settings.
# Before you set out to tweak and tune the configuration, make sure you
# understand what are you trying to accomplish and the consequences.
#
# The primary way of configuring a node is via this file. This template lists
# the most important settings you may want to configure for a production cluster.
#
# Please consult the documentation for further information on configuration options:
# http://www.maicongs.com/#/listdocu
#
# ----- Network -----
# set the server run port for backend and frontend, this is backend port
# must
server.port: 18889

# ----- DB configuration -----
master.datasource.initial-size: 10
master.datasource.max-active: 100
master.datasource.min-idle: 10
# set the sqlite local path (have default if not set)
#master.datasource.url: jdbc:sqlite:xxx/sqlite.db
master.datasource.url:

# ----- LOG -----
# log level, you can set info, error, warn, debug
logging.level.com.mc.dao: info

# ----- MYBATIS -----
mybatis.check-config-location: true
mybatis.config-location: classpath:mybatis/mybatis-config.xml
mybatis.mapper-locations: classpath:mybatis/mapper/*.xml
mybatis.type-aliases-package: com.mc.entity

# ----- Network -----
server.tomcat.accept-count: 800
server.tomcat.max-connections: 20000
server.tomcat.max-max-threads: 1000
server.tomcat.uri-encoding: UTF-8

# ----- SPRING -----
spring.http.encoding.charset: UTF-8
spring.http.encoding.enabled: true
spring.http.encoding.force: true
spring.messages.encoding: UTF-8
spring.mvc.async.request-timeout: 180000
spring.mvc.pathmatch.matching-strategy: ant_path_matcher
spring.messages.basename: i18n/messages

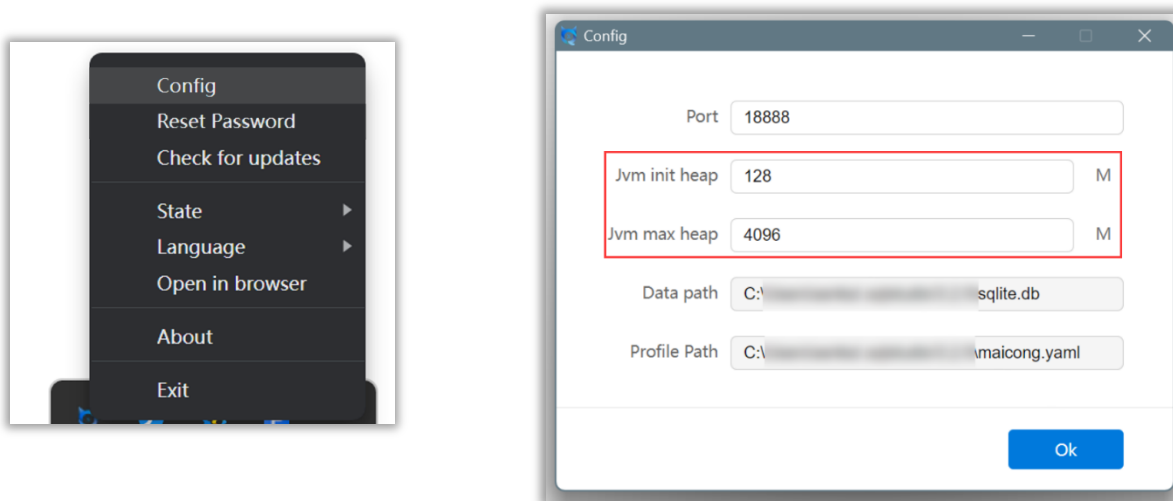
# ----- multipart -----
spring.servlet.multipart.max-file-size: 1024MB
spring.servlet.multipart.max-request-size: 1024MB

```

5.4 How to modify the JVM heap size?

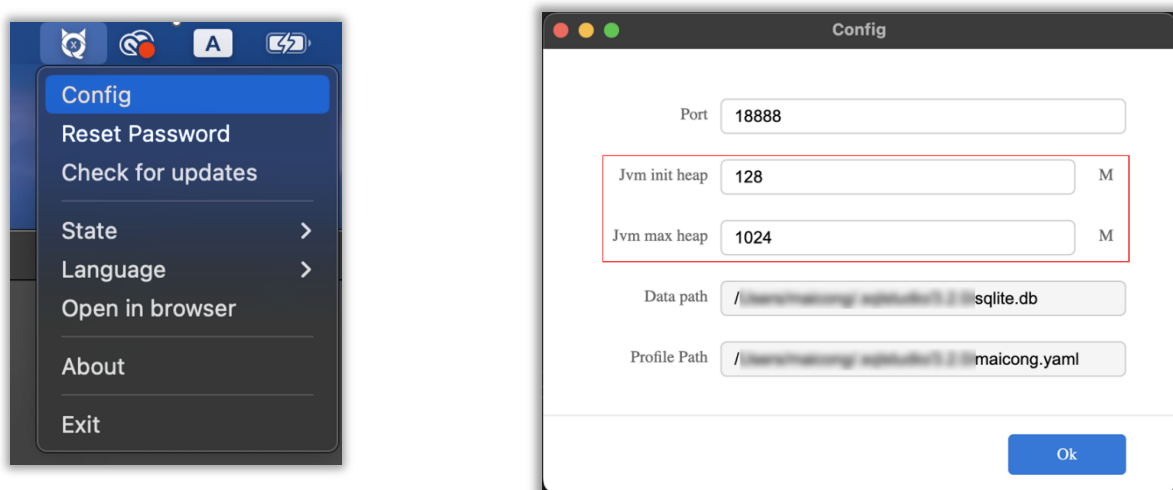
5.4.1 Windows Version

To modify the JVM heap size in SQLynx, find the SQLynx icon in the system tray at the bottom right, right-click and select the config option, adjust the JVM heap size in the popup, save, and restart SQLynx for the changes to take effect.



5.4.2 MacOS Version

To modify the JVM heap size in SQLynx, find the SQLynx icon in the status menu at the top right corner, right-click and select the config option, adjust the JVM heap size in the popup, save, and restart SQLynx for the changes to take effect.



5.4.3 Linux Version

Enter the SQLynx directory and update the configuration file following the example.

1. Execute the command

```
vi sqlynx-ide.sh
```

to see the following:

```
JAVA_OPTS="
-server
-Xms256m
-Xmx4g
-XX:+UseG1GC
-XX:+UseStringDeduplication
-Xloggc:./log/maicong-sqlstudio-gc.log
-XX:+HeapDumpOnOutOfMemoryError
-XX:HeapDumpPath=./log/maicong-sqlstudio-heapdump
-Dfile.encoding=utf-8"
```

-Xms represents the initial heap memory allocated by the JVM.

-Xmx represents the maximum heap memory that JVM allows to allocate.

Adjust the heap size based on the actual situation of the server.

5.5 Dynamic SQL with Comments

5.5.1 Supports dynamic SQL through special comment syntax

You can define variables in comments, and SQLynx will automatically recognize and replace these variables when executing the SQL script.

Example:

Sql:

```
-- @set tableName='employees'
-- @set paraName=5000
```

```
SELECT * FROM ${tableName} WHERE salary > ${ paraName };
```

In the example above:

1. -- @set is used to define variables. The values ('employees' and 5000) are assigned to the variables tableName and paraName.
2. \${tableName} and \${ paraName } are placeholders that will be dynamically replaced with the values of the variables when the query is executed.
3. SQLynx automatically recognizes the variables set via @set comments and substitutes them in the SQL query when you run it.