



User Guide

Insite Analytics 1.0.1



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Welcome

Welcome to the *Insite Analytics* User Guide. This guide is document version 1.0.1.1. For more information on document version, see Document Conventions and Symbols below.

What Is in This Guide

This user guide provides detailed information on the following areas that make up Insite Analytics:

The Query Builder - Here you will learn how to create queries by adding tables, selecting data columns, sorting output, and filtering records. Once saved you will see how easily you can manage, work with, and edit your queries.

Data Connection Management - Data connections link your queries to the different systems and databases across your network where your data is stored. You will see how to create these data connections so you can reference them in your queries.

Document Conventions and Symbols

This user guide conforms to the following conventions:

- In step-by-step procedures, the following are in bold type: buttons, icons, tabs, or words that you click, and keys that you press.
For example: On the **Document** tab, click **Delete Page**.
- In step-by-step procedures, a selection in a drop-down list that you should choose is in bold type, but when you have more than one equally valid choice in a drop-down list, those selections are in italic type.
- In step-by-step procedures, words, letters, numerals, or symbols that you type into a text box or field are in both bold and italic type.
For example: Type ***GO ABCXYZ*** on a command line.
- The document version, shown on the first page of this guide, denotes both the Insite Analytics software version this guide represents and document draft for the release. The document version is in the format X.Y.ZZ.N, where X.Y.ZZ represents the Insite Analytics software version and N represents the document draft number.
For example: If the document version is noted as 1.0.0.1, then the information in this guide is current as of Insite Analytics version 1.0.0, and this guide is the first release of the guide for that version.
- Typically with Insite Analytics, as with most software applications, there are several ways to accomplish the same thing. This guide shows one simple way to perform an action, usually by clicking.

Contacting HelpSystems

Please contact HelpSystems for questions or to receive information about Insite Analytics. You can contact us to receive technical bulletins, updates, program fixes, and other information via electronic mail, Internet, or fax.

For general HelpSystems Information

HelpSystems can be reached by calling 952-933-0609.

For technical support or information

Call our general number 952-933-0609, and ask for technical support.

-or-

Send an E-mail to support.sequel@helpsystems.com.

For information on HelpSystems products, services, and partner programs

Go to the Sequel product page: www.helpsystems.com/sequel.

To download documentation, software, or the latest program fixes

Go to your account page at www.helpsystems.com/user.

Get the Latest Version of Insite Analytics

After the initial installation of Insite Analytics, updates can be found on [Customer Portal download page](#).

Check your current version by opening **Account \ Getting Started** from the Insite side menu.

Insite Analytics Requirements

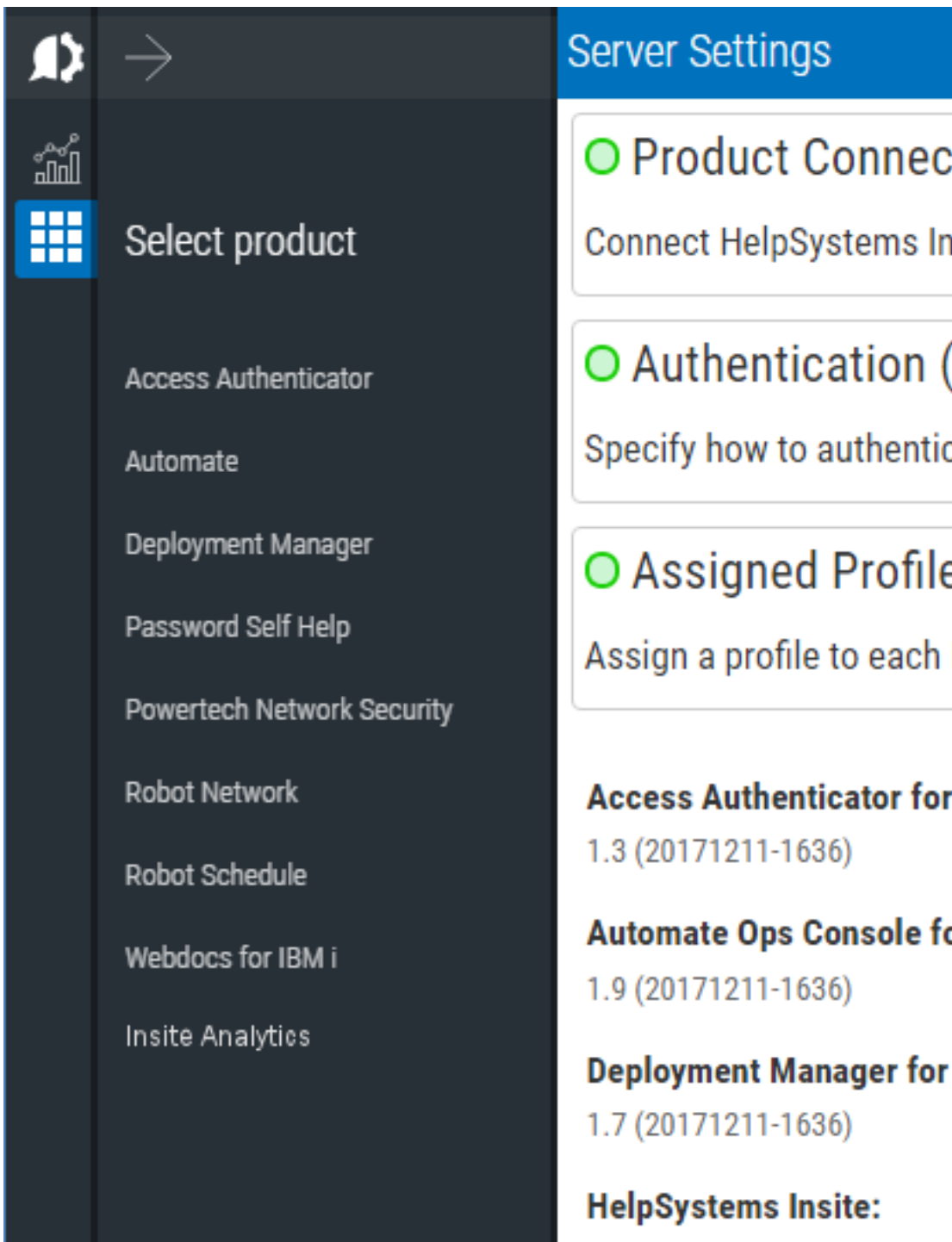
As part of HelpSystems Insite, Insite Analytics requires what Insite requires. For more information and a full list of requirements, see the Knowledge Based article, [HelpSystems Insite System Requirements](#).

Home

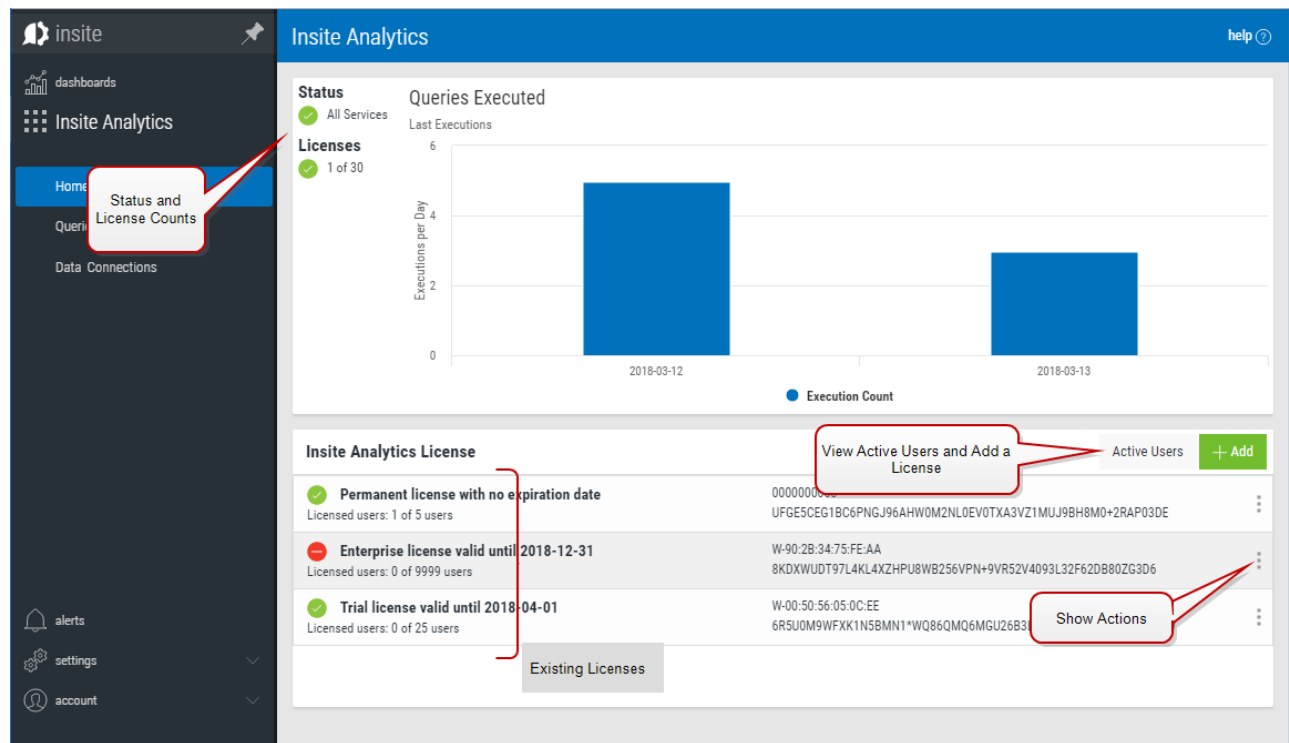
The home page displays after you log onto the Insite server. If you have more than one Insite

product, press the **Choose Product** button .

The Select Product panel opens.



Click on **Insite Analytics** to display the Insite Analytics home page.




The home screen lists current license information and provides access to the following.

- [Queries](#)
- [Data Connections](#)
- [Insite Analytics Licenses and Active Users](#)

Licenses

Current licenses are displayed on the Home page. From here you can add or delete licenses, and view active users.

On this screen you can see the following:

- Overall status of the services.
- A graph of executed queries over time.
- A count of licenses used out of the total number of available licenses.
- A list of applied and expired licenses.
- Show Actions menu. Click  to access the available functions.

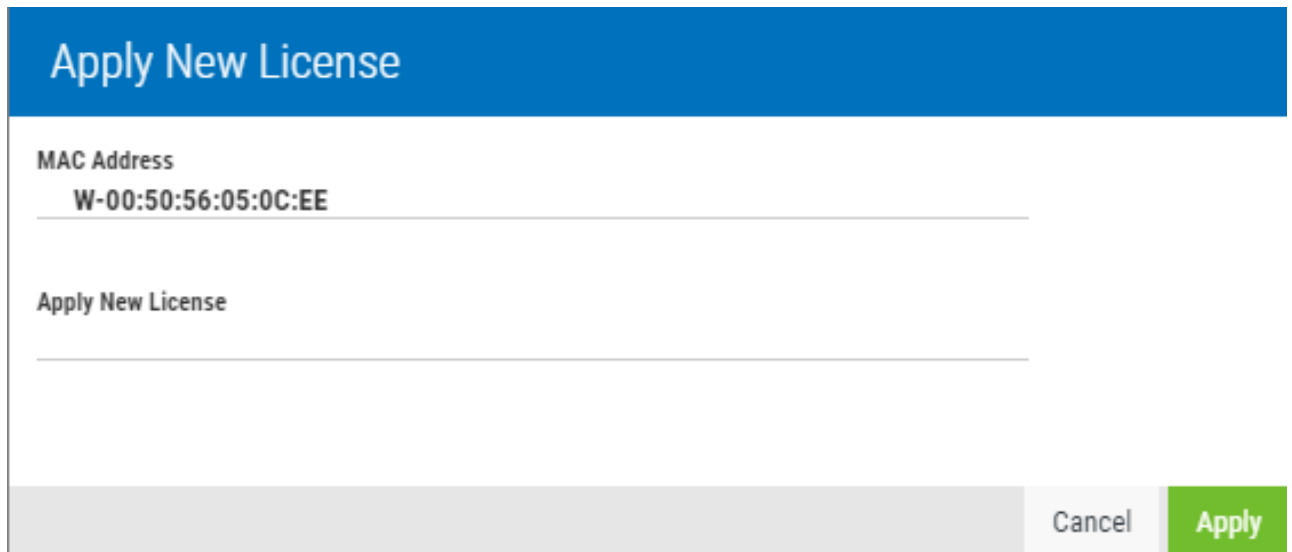
Add a License

Steps

1. From the Home page, press the **Add License** button

A green rectangular button with a white plus sign and the text "Add".

The Apply New License panel opens.

A screenshot of the "Apply New License" panel. It has a blue header with the title "Apply New License". Below the header, there are two input fields. The first is labeled "MAC Address" and contains the text "W-00:50:56:05:0C:EE". The second is labeled "Apply New License" and is empty. At the bottom right, there are two buttons: "Cancel" and "Apply".


2. Enter the new license and press the **Apply** button.

NOTE:

- The license count at the top of the screen is a cumulative amount.
- You can only enter one of each type of license (trial and permanent).
- If you have one trial license applied, you have to delete it before applying another.

Delete Existing Licenses

Steps

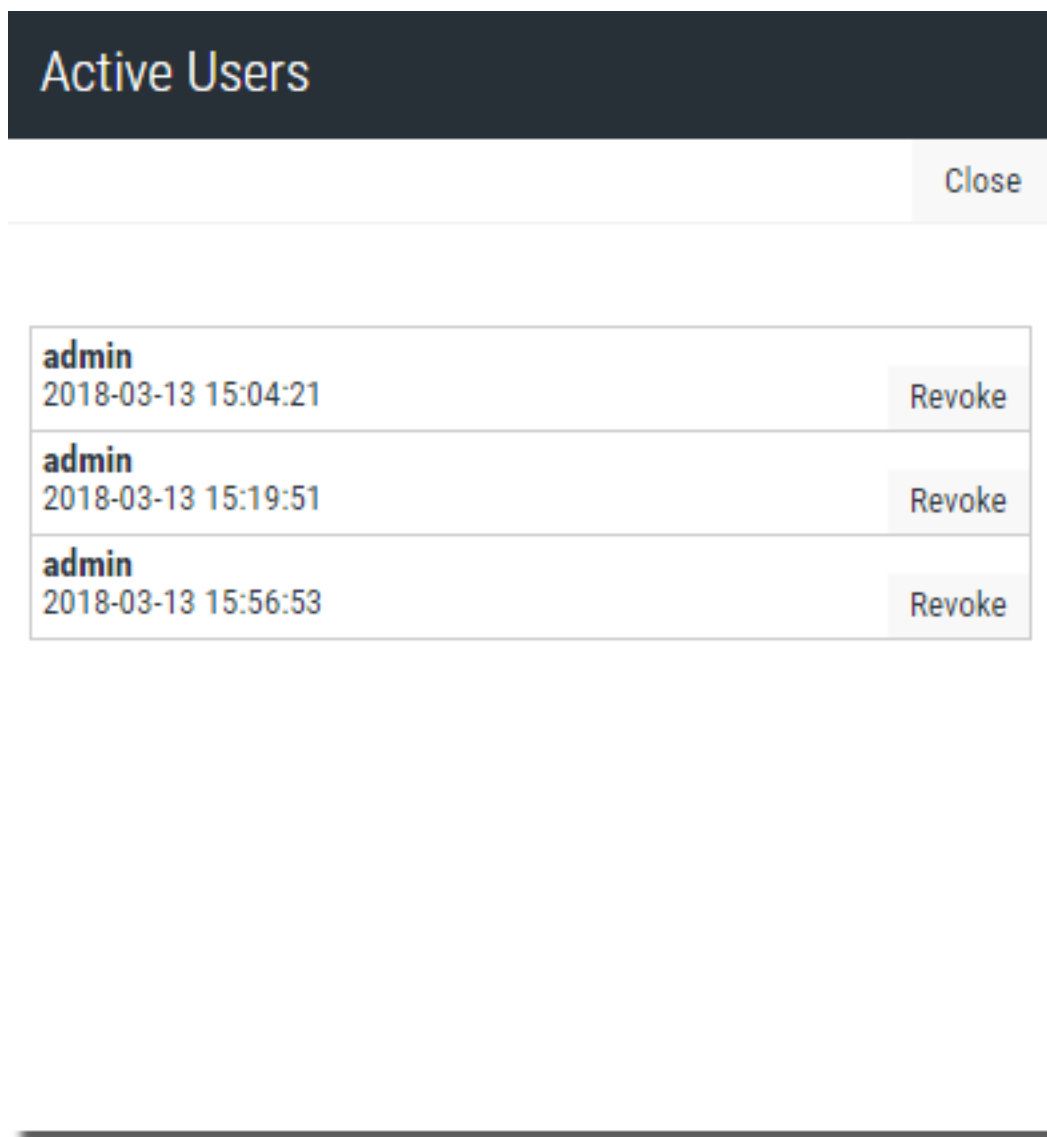
1. Click the **Show Actions** button  located on the left of each license, and select **Delete**
2. You will be prompted to confirm or cancel your request.

Active Users

1. Press the **Active Users** button

Active Users

The Active Users panel opens on the right.



Active Users		Close
admin	2018-03-13 15:04:21	Revoke
admin	2018-03-13 15:19:51	Revoke
admin	2018-03-13 15:56:53	Revoke

2. To disconnect a user, press the **Revoke** button.

Query Builder

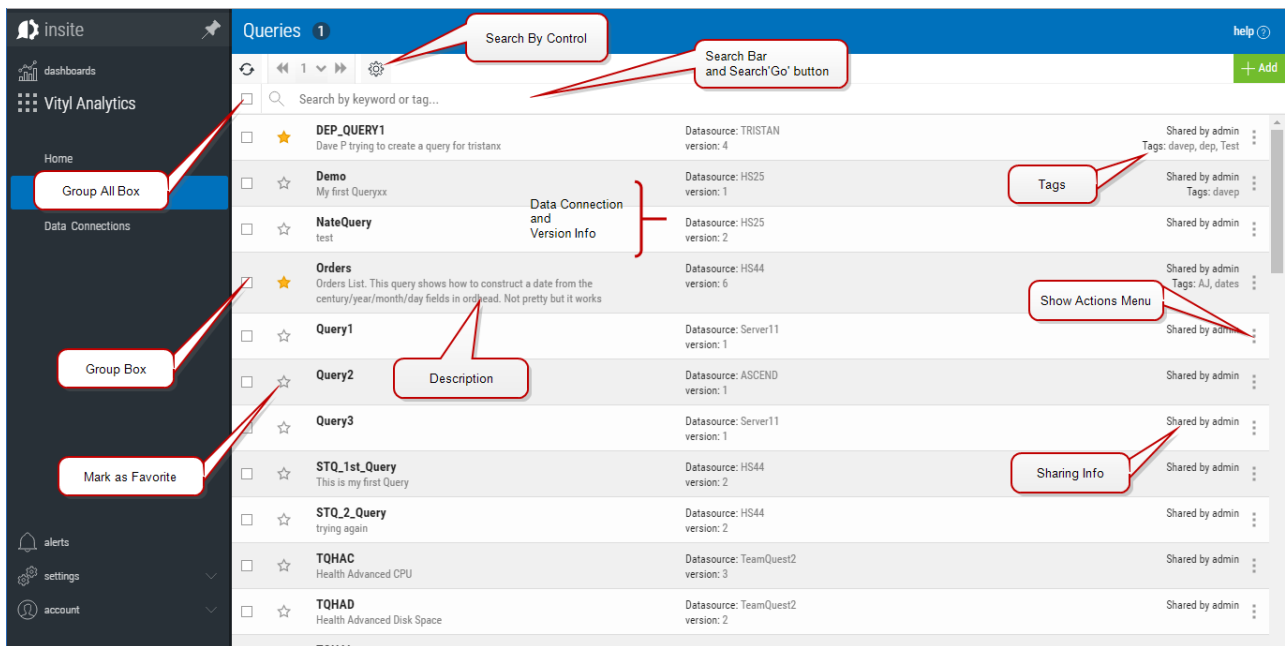
Insite Analytics Query Builder (or simply Query Builder) allows you to create inquiries across your entire network on different systems in order to gather data that can be displayed in Insite Dashboard graphs, and charts.

Data security is enforced using third party authentication and system level data access restrictions based on users, groups, and objects.

Query Builder makes it easy to [work with](#), [create new](#) and [edit existing](#) queries.

Query Builder Interface

Select the **Queries** option  in Insite Analytics to display a list of queries like so:



NOTE:

You will only see queries that you own (created), or queries that have been shared with you.

On this screen you can see the following:

- Group Actions Check Box.
- Search by Control.
- Search Bar.
- The name of the query.
- The system/data connection.

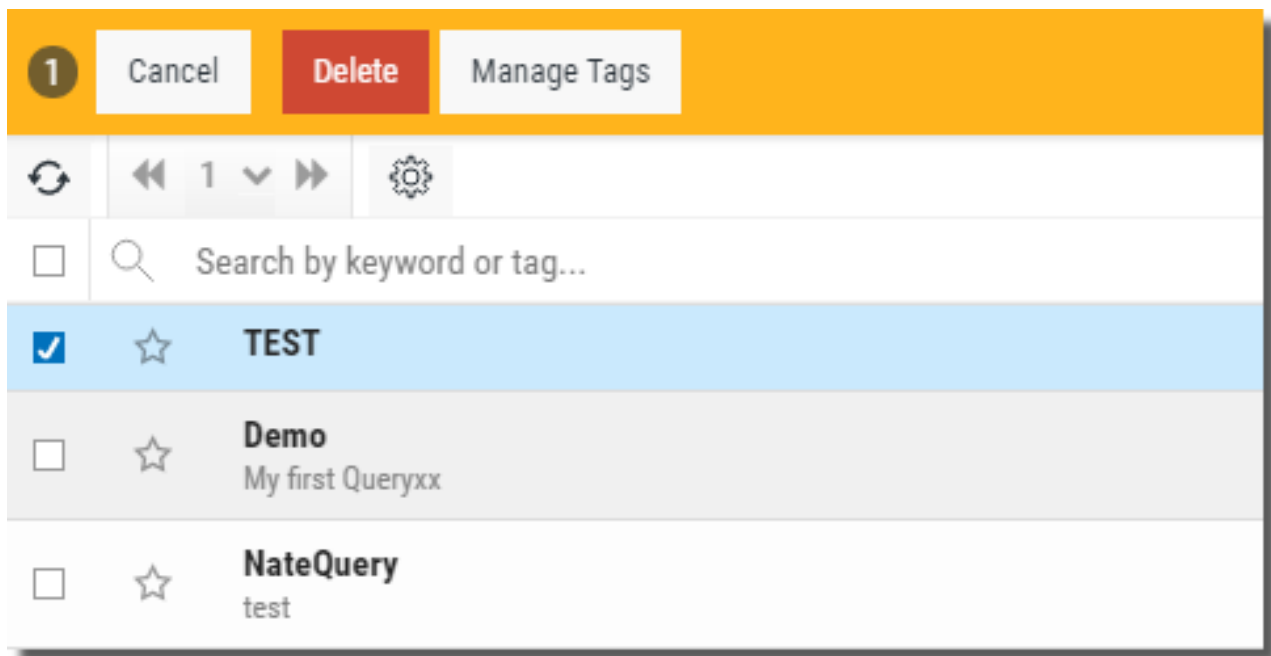
- Sharing information.
- The description of the query.
- Any Tags
- Show (Query) Actions menu.
- Add Query Button.
- Help button.

Work with Queries

As the number of queries grow, there are several features available to help you work with, and manage your queries.


Group Actions

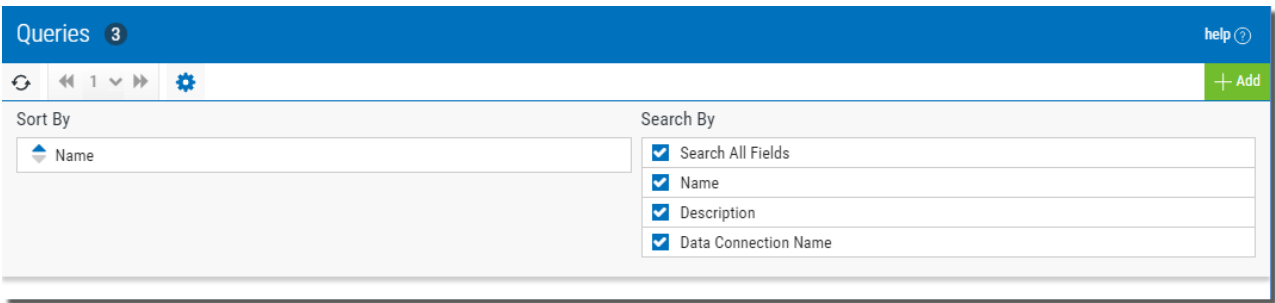
Check the box to the left of each query, or the top box to select all queries.



Available actions are displayed along the top of the screen, and can be applied to the checked items.

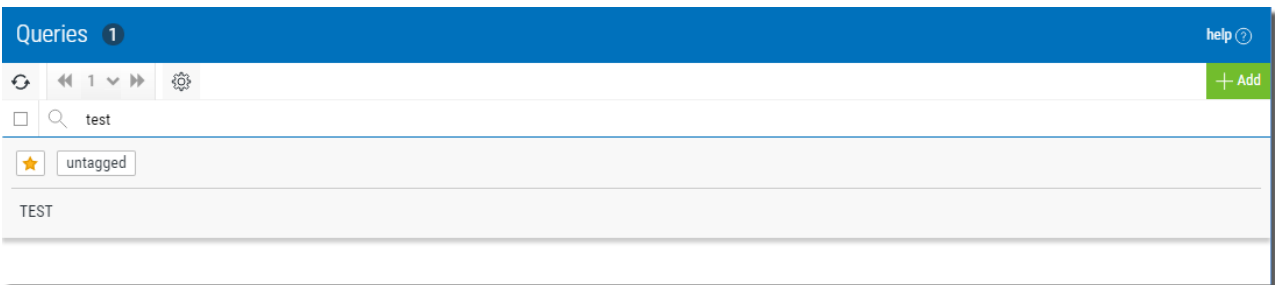
Sorting

The list of queries can be sorted by query name. Press the **Settings**  button to select ascending or descending.





Searching / Filtering

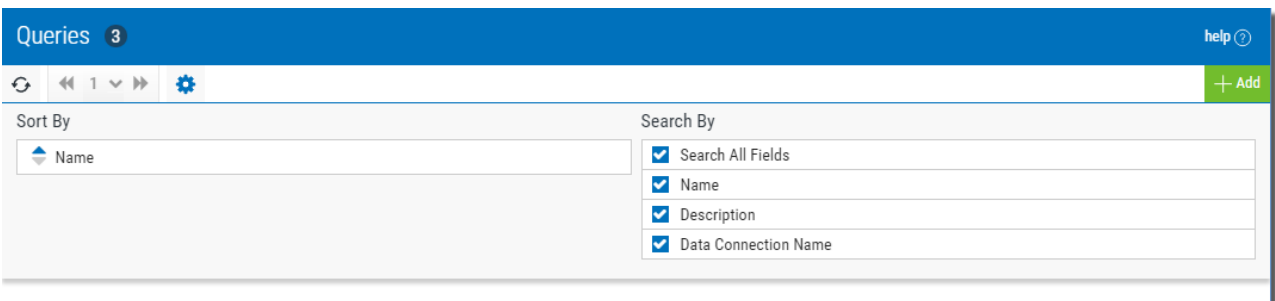
Use searching (filtering) to move through your list of queries and find queries quickly and easily. Enter words, phrases and tag values in the search entry to filter and find queries.



Notice the mini list of found objects as you enter your search string or tag names. Press the **Search**

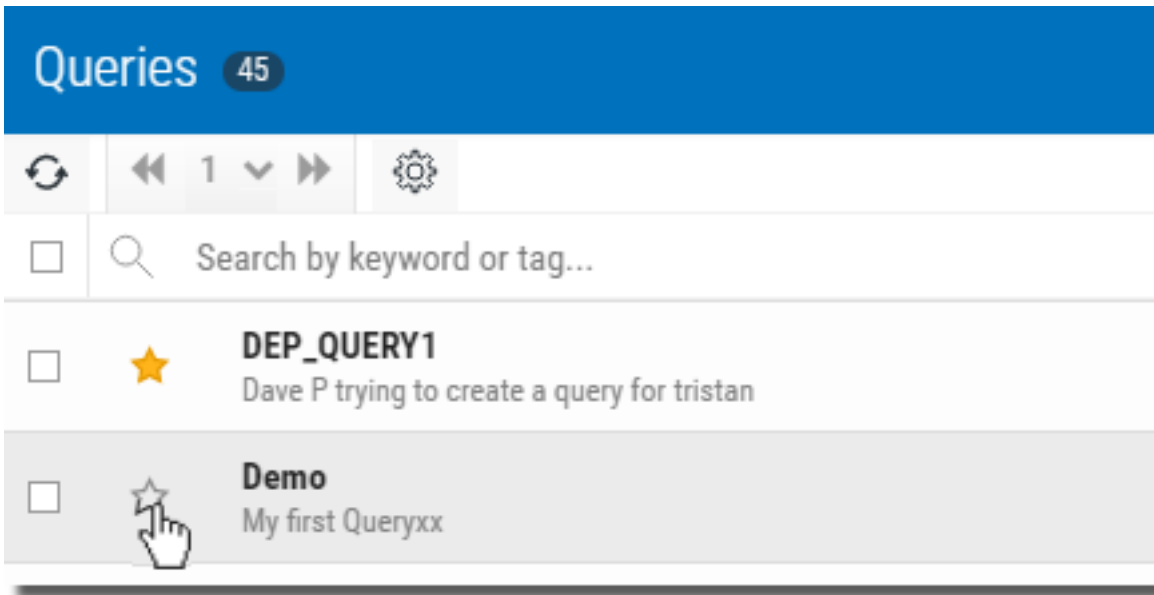
button  to change the displayed list of queries.

Press the **Settings** button  to define any limits to your search. In the **Search By** list, select areas to focus your search.



Favorites

Check the star next to the query name to mark it as a favorite. You can then press the star in the top search area to limit queries to a list of favorites.



Tags

Tags (keywords) can be created and assigned to queries to provide another method for organizing queries. In the Query Actions menu (shown below) select Manage Tags.

Show (Query) Actions

The Query Actions menu is available to the right of every query in the list, and provides access to the following functions:

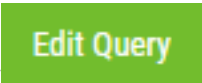
Edit

Use this option to make changes to existing queries.



1. Press the **Show Actions** button and select the **Edit** option.

The option first displays the Edit Query panel on the right. Here you can make quick changes to the description, tags, caching, groups, and so on. See *Query Attributes* on page 20 for more details.



2. Press the **Save and Edit Query** button to open the query editor. See *Edit Existing Queries* on page 38 for more details.

Tags

Use this option to create, edit and delete query tags.

Press the **Show Actions** button



and select the **Tags** option. The Manage Tags panel opens on the right of the display.

To create a new tag:

1. On the tag entry line type a new tag and press enter. This tag will be added to the query you stated with, and it will also be available to all other queries via the Show Actions menu for each query.


2. Press **Save**  when done.

To add an existing tag:

1. Use the drop-down list to select, or type the name of a tag, if you know it, and the list will filter so you can quickly add.


2. Press **Save**  when done.

To remove a tag from a query:

1. Click the x inside the tag to delete from the selected list, or backspace over it.
2. Press **Save**  when done.

Download

Use this option to create and download query results as a .CSV file.


1. Press the **Show Actions** button  and select the **Download** option (you may be prompted for credentials in order to access the query).
A window displays so you can give the file a name.

Export to CSV File

File name

Cancel

Download


2. Press the **Download** button  and the browser will display the progress.
The file is saved in the Windows Downloads folder.

Favorite

Use this option to denote the query as a favorite.

Delete

Use this option to delete an existing query.

1. Press the **Show Actions** button  and select the **Delete** option.
A second screen displays to confirm your request or cancel.

Delete Query

Are you sure you want to delete this query?

Cancel


Delete

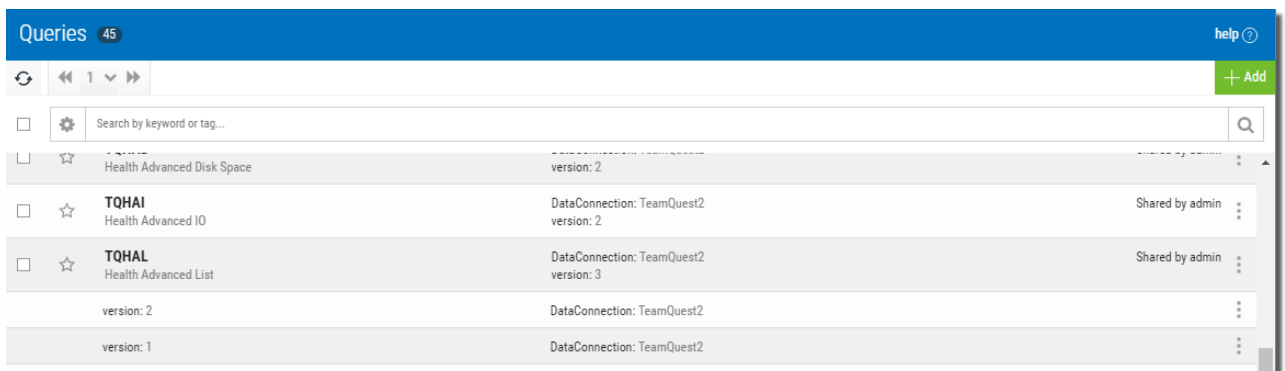
2. Press the **Delete** button


Delete

Show/Hide Versions

Every time you make and save a change to a query a version is created in the background.

1. To see the versions, press the **Show Actions** button  and select the **Versions** option.
The query will expand and displays the versions below.



2. To close, press the **Show Actions** button  and select Hide Versions

Hide Versions

Close

Press to close the Show Actions panel.

Create a New Query

Creating a new query is fast and easy using the Query Builder Wizard Mode (the default). During the creation process you will be able to:

- Add and Join tables
- Choose, edit and create columns
- Create grouped results
- Filter results
- Sort results

To start press **Add Query**

+ Add

Query Attributes

The New Query panel opens on the right.

The screenshot shows the Query Builder interface. On the left, a list of queries is displayed with columns for Name, Data Connection, Tags, and Shared by. The 'New Query' panel on the right is open, showing fields for Name, Description, Select Data Connection (ACCESS_HS0409), Tags, Caching (no), Edit Rights, Users, Groups, and All (no).

Fill in the options (described below) and press **Edit Query** to continue.

Edit Query

Options

Name - Enter a name for the query. Only alphanumeric characters (a-z, A-Z, 0-9)—not including punctuation or symbols—are allowed. Spaces are not allowed (an underscore _ is a good substitute).

Description - Enter text to describe the query. Any character value is allowed--even spaces.

Add to Favorites - Click Yes to mark the query as a favorite. This is optional.

Select Data Connection - Use the drop-down to select a data connection (location of the data tables) for the query. See *Data Connection Management* on page 49 for more on this topic.

Tags - Add tags to aid in searching. Tags can be created, added and remove as described in *Tags* on page 16. This is optional.

Caching - Set to cache the results for the query.

No: Set by default. Result will be processed 'fresh' when the query is run.

Yes: Set to turn caching on for the query. The results will be held based on the Permanence setting below:

Permanent - This option is available only if Caching is turned on. Select if you want the caching for the query to be permanent.

No: This the default. Choose one of the following durations to determine how long to retain the initial results: Daily, Weekly, Monthly, Quarterly, or Yearly.

Yes: The query will always cache its initial result

Caching Explained.

Caching is a mechanism that saves the results of a query for a specific moment in time. It is useful for both for *performance* reasons and so that the query can freeze a *moment in time*.

Performance: Consider a scenario where a user creates a query, adds it to a dashboard, and then shares it with the entire company (500 employees) who all open the dashboard at the same time.

If data caching is used, the first time the Query is run the query will execute the SQL statement once, and save the results. Subsequent users will get the cached data, preventing the query from running 500 SQL statements.

Moment in Time: This is an attempt to freeze non-time series data to a specific moment in time. Data often changes over time in the database, but users may want to show the data as it was at the time they authored the query.

For example, a query might show current EOY sales numbers on Dec 31st, 2017. The CEO creates a dashboard over this Query and sends to the whole Company. Over the course of January 2018 additional sales are made, and the data continues to change. If/when a user opens the CEO's dashboard on January 23rd, 2018, you want them to see the dashboard as the CEO saw it on Dec 31st. To see the same cached data forever, make it Permanent.

Sharing - Select using the drop-down list to share the query with users and/or groups.

Users: Choose any of the listed users to share the query with.

Groups: Choose any of the listed groups to share the query with.

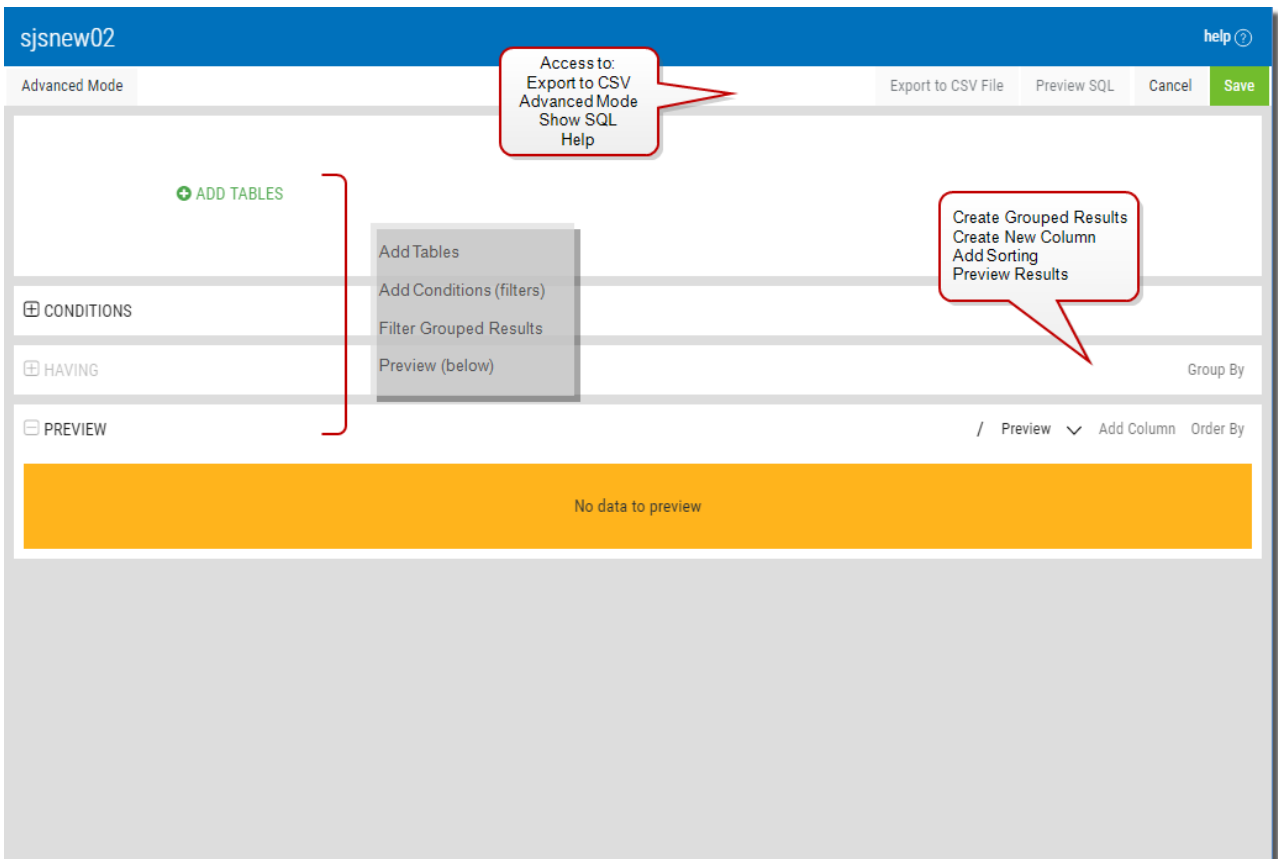
Edit Rights - Select using the drop-down list to grant editing rights to users and/or groups.

Users: Choose any of the listed users to allow editing rights to the query.

Groups: Choose any of the listed groups to allow editing rights to the query.

Query Editor

After the initial values (above) are defined and saved the Query Editor displays:



On this screen you can see the following:


- The main design section broken into 'bands' for Tables, Conditions (filters), Filtered Grouped Results, and the Preview.
- Buttons along the top to access Export to CSV, Advanced Mode, Preview SQL and Help.
- Buttons on the bottom two bands to:
 - *Add Grouped Results* on page 33
 - *Add (create) a New Column* on page 32
 - *Add Sorting* on page 37
 - *Preview Results* on page 25

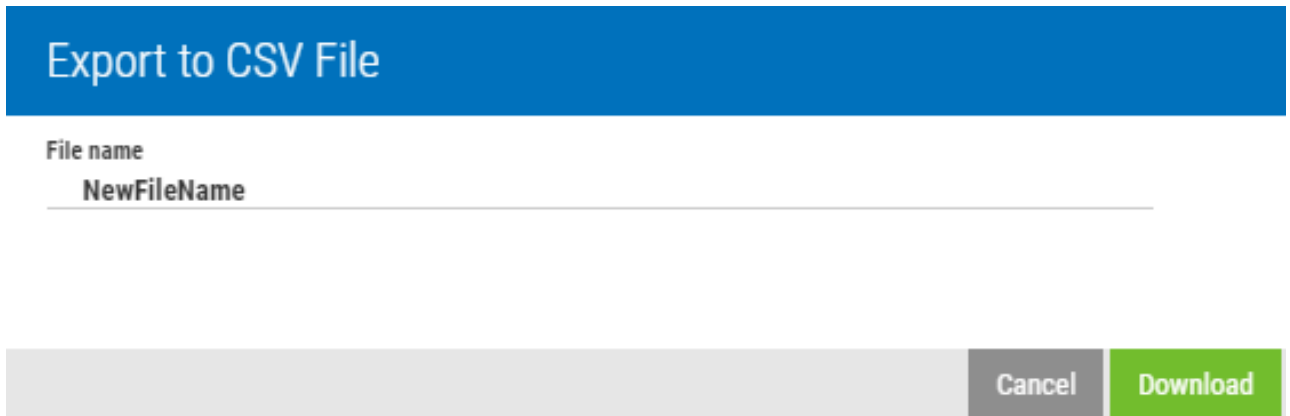
From here you can create your query and:

- *Add Tables* on page 25
- *Add and Create Columns* on page 29
- *Add Grouped Results* on page 33
- *Add Record Selection Conditions* on page 34
- *Add Sorting* on page 37


Export to CSV File

Use this option to create and download query results as a .CSV file.

1. Press the **Export to CSV File**  button.
A window displays so you can give the file a name.

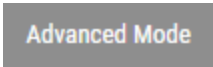


The dialog box has a blue header with the text "Export to CSV File". Below the header, there is a label "File name" followed by a text input field containing "NewFileName". At the bottom of the dialog, there are two buttons: a grey "Cancel" button and a green "Download" button.

2. Press the **Download** button  and the browser will display the progress.
The file is saved in the Windows Downloads folder.

Advanced vs. Wizard Mode

By default the query editor operates in Wizard Mode. This creates logical steps to the creation process (adding tables, joins, columns, sorting, and so on). Switching to Advanced Mode allows you to review and modify the existing SQL.

To access this mode press the **Advanced Mode** button  at the top of the editor. This button toggles between the two modes. The editor changes to display the SQL.

Test1
help ?

Wizard Mode
Cancel
Save

```

SELECT CUSTMAST.AMTDU, CUSTMAST.CNAME, CUSTMAST.CSTTE, CUSTMAST.CPHON, CUSTMAST.CTYPE, CUSTMAST.REGON,
CUSTMAST.CUSNO, CUSTMAST.REGON
FROM SEQUELEX.CUSTMAST CUSTMAST
WHERE CUSTMAST.AMTDU > 0
ORDER BY CUSTMAST.CUSNO ASC

```

Validate

Preview
Preview
Add Column

CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	
AMTDU	CNAME	state	CPHON	CTYPE	REGON	CUSNO	REGON	
DECIMAL	CHARACTER	CHARACTER	DECIMAL	CHARACTER	DECIMAL	DECIMAL <i>sort: asc</i>	DECIMAL	

To switch back press the **Wizard Mode** button

Wizard Mode

WARNING:

If you make and save any changes to the SQL while in advanced mode, you cannot return to wizard mode

Preview SQL

Preview SQL

Press the **Preview SQL** button to quickly review the SQL for the query.

SQL Query

```

SELECT "CUSTMAST"."CNAME", "CUSTMAST"."CSTTE", "CUSTMAST"."CTYPE", "CUSTMAST"."CRLIM", "CUSTMAST"."AMTDU",
"ORDHEAD"."ORDNO", "ORDHEAD"."OTYPE", "ORDHEAD"."ORVAL", "ORDHEAD"."ORTOT"
FROM SEQUELEX.CUSTMAST "CUSTMAST" INNER JOIN SEQUELEX.ORDHEAD "ORDHEAD" ON
"CUSTMAST"."CUSNO"="ORDHEAD"."CUSNO"

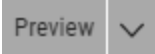
```

Close

The contents of this display cannot be edited.

Preview Results

While in the query editor you can quickly preview the results of the query.

Press the Preview button  to display sample results. Use the down arrow to select the number of sample records to process. The bottom half of the display fills with results.


Add Tables

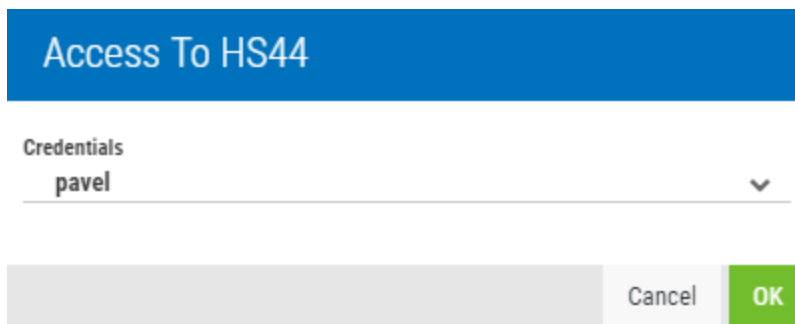
In order for your query to return results you must add to it at least one table. Sometimes you may have to add multiple tables to capture all the data for a given request. In this case you will need to [join tables](#) together.

The tables you use (and need), and how they should be joined is determined by the database design, and how files in the database relate to each other. This information can be learned over time, or provided by someone in your organization.

The process below to add tables is the same for new queries, and for [modifying](#) existing queries (once opened in the editor). To remove tables, or modify the join see the topics, *Add or Remove Tables* on page 41, and *Modify or Delete the Join* on page 42.

Steps

1. Once in the Query Editor (see *Create a New Query* on page 19 for information) press the **Add Table**  button. Depending on the selected data connection, you may be prompted to select or provide a credential to access any tables.
 - a. You can select an existing credential from the list (or Custom).

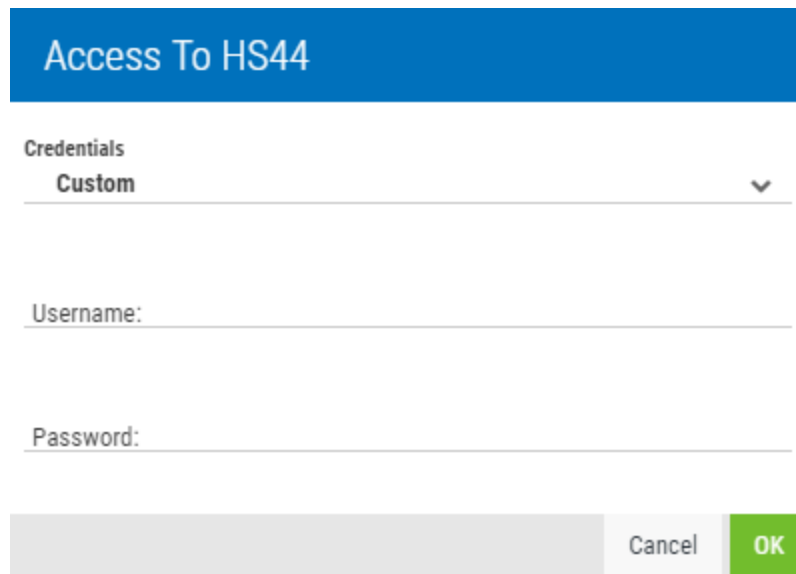


Access To HS44

Credentials
pavel

Cancel OK

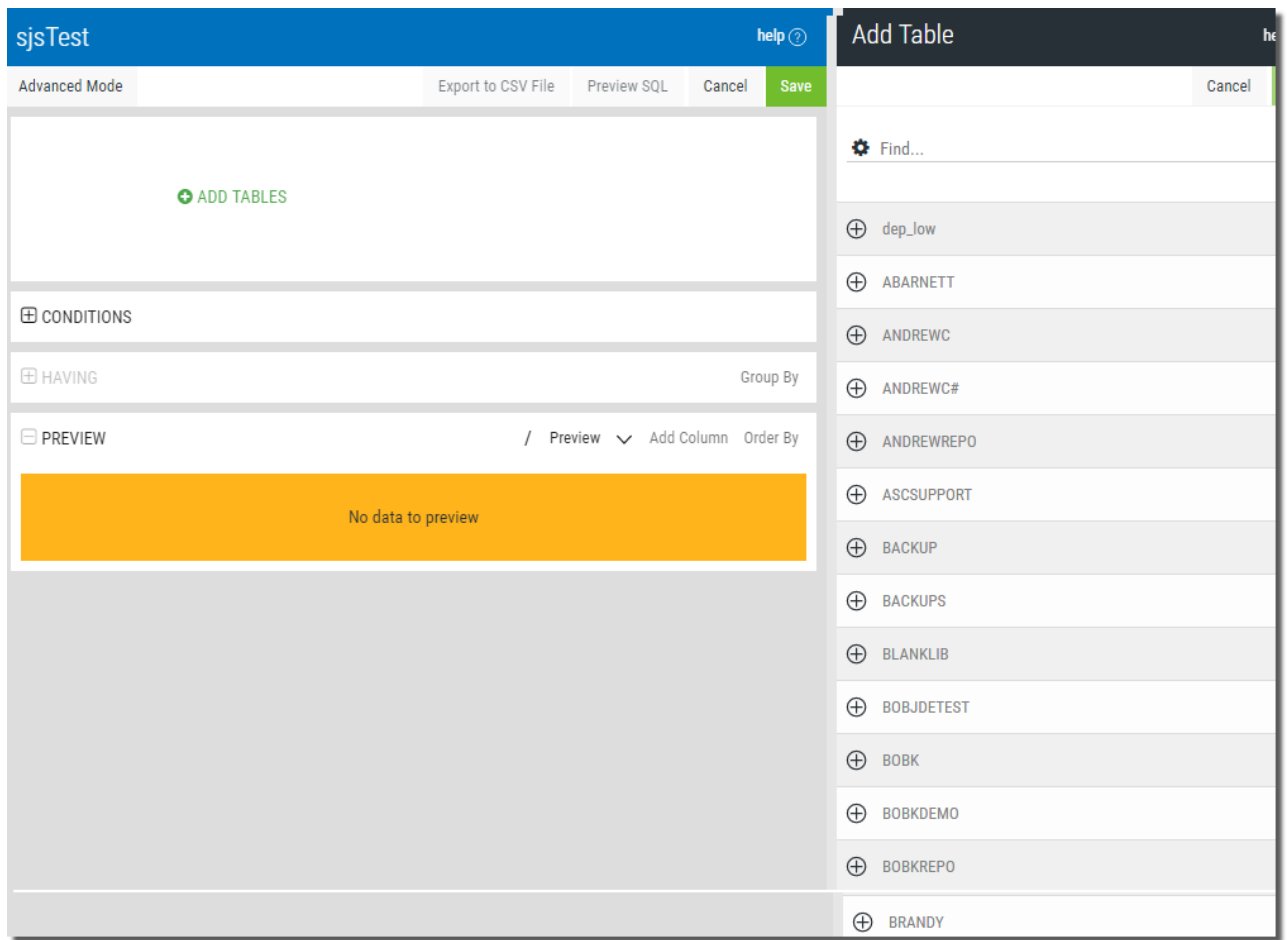
- i. Press **OK** to continue.
 - b. If you select **Custom**, an expanded screen displays.



The dialog box has a blue header with the text "Access To HS44". Below the header, there is a section titled "Credentials" with a dropdown menu currently set to "Custom". Underneath, there are two text input fields labeled "Username:" and "Password:". At the bottom right, there are two buttons: "Cancel" and "OK".

- i. Enter a **Username** and **Password**.
- ii. Press **OK** to continue.

The Add Table panel opens on the right.



The screenshot shows the main application window titled "sjsTest" with a blue header. The header includes a "help" icon. Below the header, there is a toolbar with buttons for "Advanced Mode", "Export to CSV File", "Preview SQL", "Cancel", and "Save". The main area of the application is divided into several sections: "ADD TABLES" (with a green plus icon), "CONDITIONS", "HAVING" (with a "Group By" dropdown), and "PREVIEW" (with a "Preview" dropdown and "Add Column" and "Order By" buttons). The "PREVIEW" section shows a message "No data to preview" on an orange background. On the right side, the "Add Table" panel is open, displaying a list of tables with a search bar and a "Cancel" button. The list of tables includes: dep_low, ABARNETT, ANDREWC, ANDREWC#, ANDREWREPO, ASCSUPPORT, BACKUP, BACKUPS, BLANKLIB, BOBJDETEST, BOBK, BOBKDEMO, BOBKREPO, and BRANDY.

2. Use the drop-down list to select, or type the name of a table if you know it, and the list will filter so you can quickly add.
3. Click to select a table like so:

Save

4. Press the **Save** button to add the table to the editor.

The query editor displays the selected table(s) in the top section, and all the columns in the table like so:

Selected Table(s)

CUSTMAST 27/27

ADD TABLES

CONDITIONS

HAVING

Selected Columns

PREVIEW

CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST
CUSNO	CNAME	CADD1	CADD2	CADD3	CSTTE	CZIPC	CPHON	CTYPE	CRLIM	AMTDU	OF
DECIMAL	CHARACTER	CHARACTER	CHARACTER	CHARACTER	CHARACTER	CHARACTER	DECIMAL	CHARACTER	DECIMAL	DECIMAL	DEC

5. To add additional tables, repeat the process starting at step 1.

Join Tables

Selecting more than one table for your query opens the Modify Join panel on the right.

The screenshot displays the 'Query Builder' interface. The main workspace shows two tables, 'CUSTMAST' (27/27 rows) and 'ORDHEAD' (18/18 rows), connected by a join symbol. The right sidebar, titled 'Modify Join', provides options for different join types: Left Join, Right Join, Inner Join (which is currently selected), and Full Join. Below these options, the 'ON' clause is being configured. It shows 'CUSTMAST.CUSNO' on the left and 'ORDHEAD.ORDNO' on the right, with an equals sign between them. The bottom of the main window shows a 'PREVIEW' section with a table of columns: CUSTMAST.CUSNO (DECIMAL), CUSTMAST.CNAME (CHARACTER), CUSTMAST.CADD1 (CHARACTER), CUSTMAST.CADD2 (CHARACTER), CUSTMAST.CADD3 (CHARACTER), CUSTMAST.CSTTE (CHARACTER), CUSTMAST.CZIPC (CHARACTER), and CUSTMAST.CPH (DECIMAL).

Steps

1. Choose one of the four join options.

The different types will produce the following results:



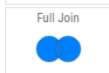
Left Join - Return all rows from the left table plus any matched rows in the right table.



Right Join - Return all rows from the right table plus any matched rows in the left table.



Inner Join - Return only matched rows between both tables.



Full Join - Return all rows from each file plus any matched rows.

2. In the 'ON' section, use the drop-down for each table pair to select the column(s) to join the tables on. You can type partial column names to search.

3. Press the **Save** button.:

Save

The query editor displays the two tables with the join like so:

The screenshot shows the 'sjsTest' query builder interface. At the top, there's a blue header with 'sjsTest' and a 'help' icon. Below the header, there's a toolbar with 'Advanced Mode', 'Export to CSV File', 'Preview SQL', 'Cancel', and 'Save'. The main workspace shows a join between two tables: 'CUSTMAST' (27/27) and 'ORDHEAD' (18/18), connected by a join symbol. To the right of the tables is a green '+ ADD TABLES' button. Below the workspace, there are sections for 'CONDITIONS', 'HAVING', and 'PREVIEW'. The 'PREVIEW' section shows a table with 10 columns: CUSNO, CNAME, CADD1, CADD2, CADD3, CSTTE, CZIPC, CPHON, CTYPE, and CRLIM, each with its data type listed below it.

Repeat this process for each file you wish to add.

Add and Create Columns

As with tables, you need at least one column (or all columns) in a query to display meaningful information. The assumption here is that your query has at least one table selected. In the query builder you can add, rename, create new, group by, remove, and sort columns.

The processes below are the same for new queries, and for [modifying](#) existing queries (once opened in the editor). To modify, re-sequence, or remove columns, see the topic, *Modify Columns* on page 43.

Select Existing Columns

NOTE:

By default, every time a file is added to a query all columns are selected and added to the query.

Steps

- Once in the Query Editor (see *Create a New Query* on page 19 for information) press the table



icon for the table containing the columns you wish to work with.

The Edit Table panel opens on the right showing all the columns in the table.

The screenshot shows the 'Edit table: ORDHEAD' panel on the right side of the Query Builder interface. The panel has a dark header with the title 'Edit table: ORDHEAD' and a 'help' icon. Below the header are buttons: 'Delete' (red), 'Select All' (grey), 'Deselect All' (grey), 'Cancel' (grey), and 'Save' (green). Underneath are tabs for 'Alias' and 'ORDHEAD'. The 'ORDHEAD' tab is active, showing a 'Find...' search bar and a 'Select columns' list. The list contains various column names with checkboxes, some of which are checked: ORDNO, OTYPE, ORVAL, and ORTOT. Other columns like CUSNO, COOMN, COODY, COOYR, COOCC, CUSPO, SHIPV, TRMCD, TRMDS, OSTAT, CURLN, ORWGT, HOUSE, INVNO, CUSNUM, and COOYR are unchecked.

- Check or uncheck individual column names, or press the **Select All** or **Deselect All** buttons to add and/or remove columns.

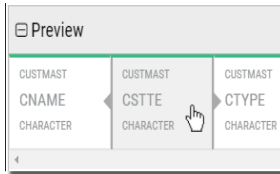
- Press **Save** when finished.



Apply a Function to a Column

Steps

1. For the column you wish to alter, simply click on the header of the column in the results section.




The Column Setting panel opens on the right.

The screenshot shows the Query Builder interface. The main panel displays a query diagram with two tables, CUSTMAST and ORDHEAD, connected by a join. Below the diagram are sections for CONDITIONS, HAVING, and PREVIEW. The PREVIEW section shows a table with columns CUSNO, CNAME, CADD1, CADD2, CADD3, CSTTE, and CZ. The Column settings panel on the right shows the Name(CSTTE) as CSTTE and a list of aggregate functions: SUM, AVG, COUNT, COUNT_BIG, MIN, MAX, DATE, DAY, DAYOFWEEK, DAYOFWEEK_ISO, DAYOFYEAR, and DAYS.

2. Select a function from the drop-down list. If you hover over the function you will see a brief description and syntax.
[pic]
3. Once selected you will have to edit to make sure the starting field is placed inside the function correctly.

[pic]

4. Press **Save**  when finished.

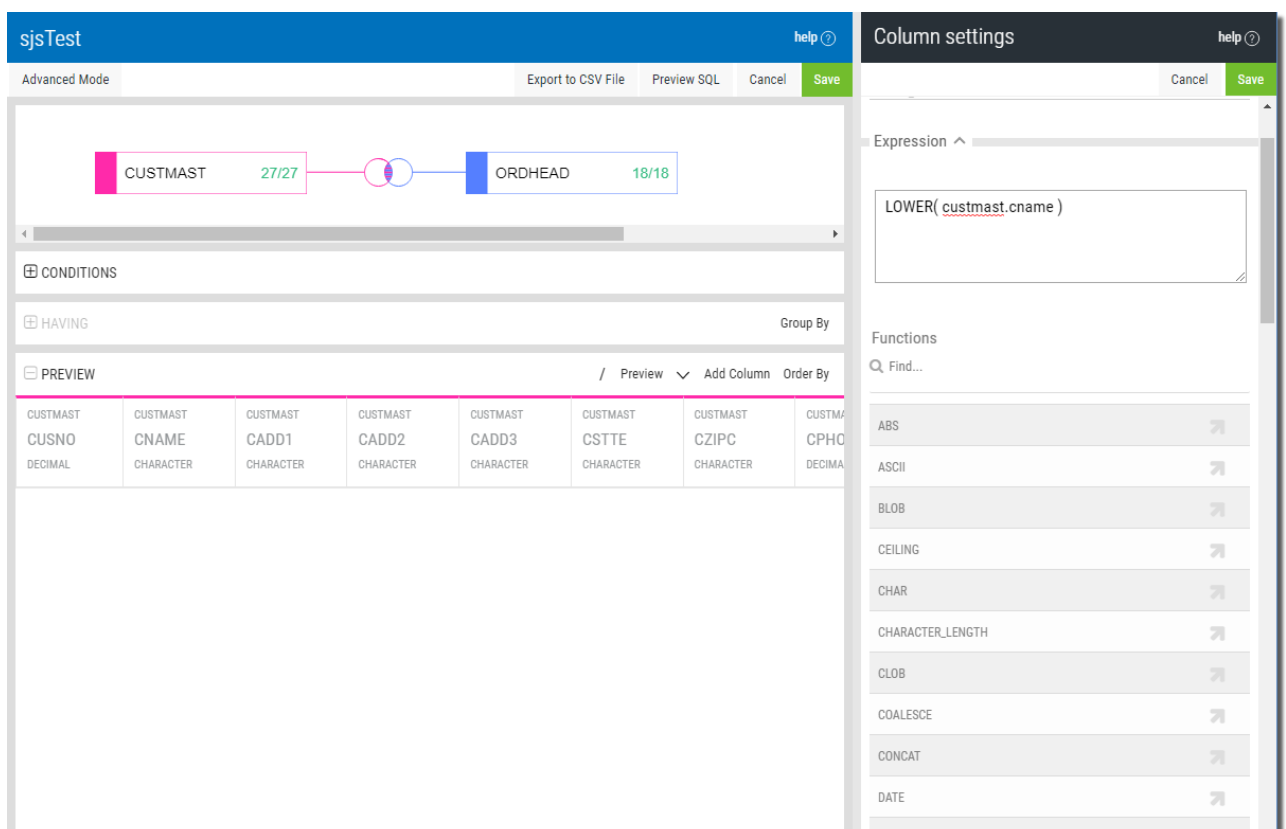
Add (create) a New Column

New columns can be created by applying function to existing columns, or modifying columns using numeric or character functions.


Steps

1. Press the **Add Column**  button.

The Column Setting panel opens on the right.



The screenshot shows the 'sjsTest' Query Builder interface. The main workspace displays a query diagram with 'CUSTMAST' (27/27) and 'ORDHEAD' (18/18) connected by a join symbol. Below the diagram are sections for 'CONDITIONS', 'HAVING', and 'PREVIEW'. The 'PREVIEW' section shows a table with columns: CUSTMAST CUSNO, CUSTMAST CNAME, CUSTMAST CADD1, CUSTMAST CADD2, CUSTMAST CADD3, CUSTMAST CSTTE, CUSTMAST CZIPC, and CUSTMAST CPHC. On the right, the 'Column settings' panel is open, showing the 'Expression' field with the text 'LOWER(custmast.cname)'. Below the expression field is a 'Functions' list with a search bar and various functions like ABS, ASCII, BLOB, CEILING, CHAR, CHARACTER_LENGTH, CLOB, COALESCE, CONCAT, and DATE, each with a right-pointing arrow.

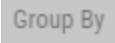
2. Enter a **Name** for the new column.
3. Select a function from the drop-down, and replace the 'expression' with a column name.
4. Press **Save**  when finished.

Add Grouped Results

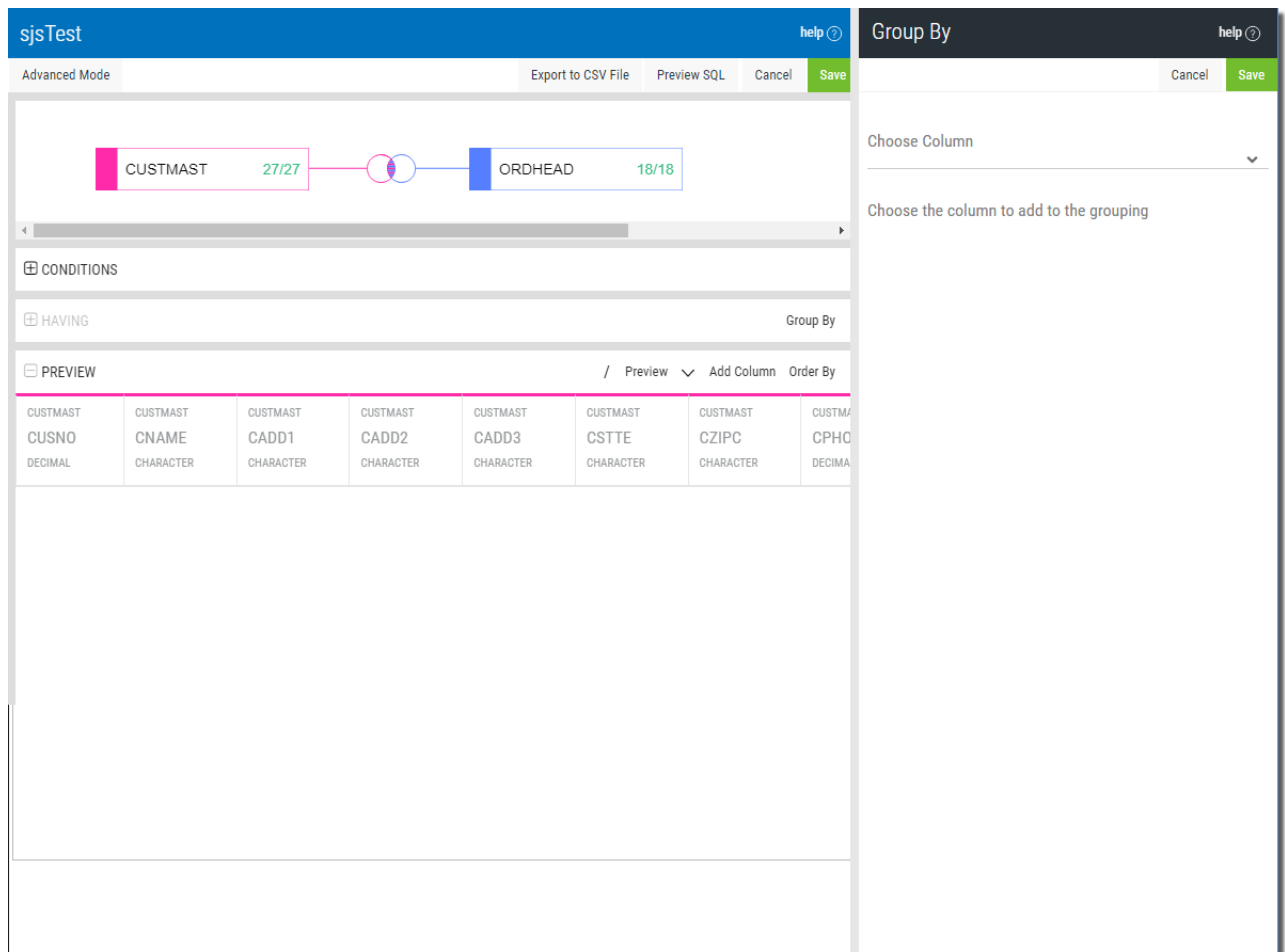
A grouping query allows you to identify the fields that group records into sets so that the aggregate functions (SUM, MIN, MAX, etc.) added to columns can present total results for the group. Grouping records into sets can be very useful when you want to create "summary only" queries. In a grouped query you can count records, calculate totals or averages, or find the highest or lowest values within each record set.

The process below is the same for new queries, and for [modifying](#) existing queries (once opened in the editor).

Steps

1. Once in the Query Editor (see *Create a New Query* on page 19 for information) press **Group By** button .

The Group By panel opens on the right.



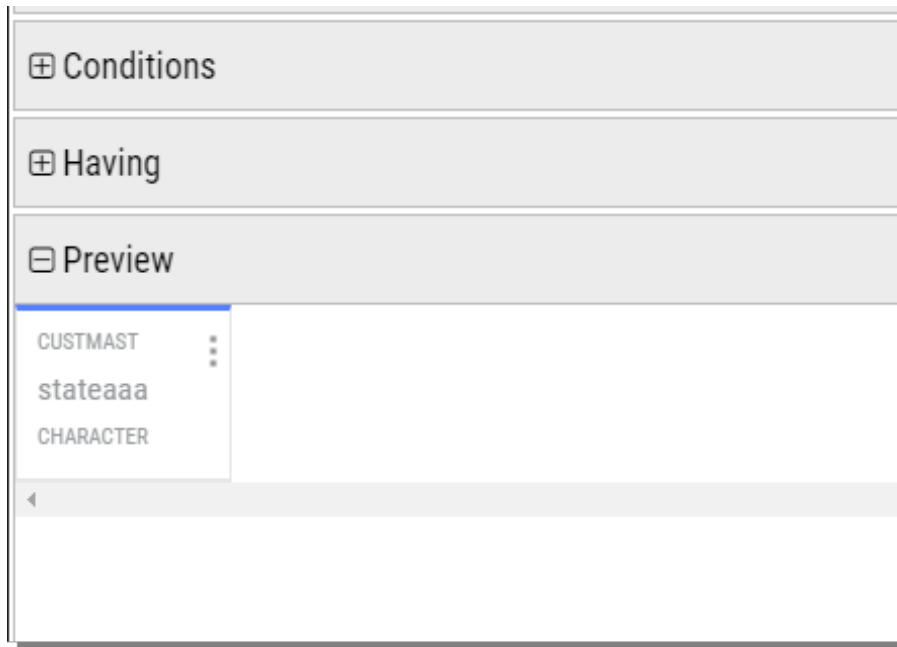
The screenshot shows the Query Builder interface with the 'Group By' panel open on the right. The main editor area on the left shows a query diagram with two tables, 'CUSTMAST' (27/27) and 'ORDHEAD' (18/18), connected by a join symbol. Below the diagram are sections for 'CONDITIONS', 'HAVING', and 'PREVIEW'. The 'PREVIEW' section shows a table with columns: CUSTMAST, CUSNO, CNAME, CADD1, CADD2, CADD3, CSTTE, CZIPC, and CPHC. The 'Group By' panel on the right has a 'Choose Column' dropdown and a 'Choose the column to add to the grouping' text.

2. Use the drop-down list to select a column.
3. Press **Save**

 Save

when finished.

The editor displays the selected field in the Preview section.



Grouped results can be filtered by creating a Having expression. See the topic *Add Record Selection Conditions* on page 34 for more on this.

Add Record Selection Conditions

Record selection condition expressions indicate which records from the underlying tables are chosen during query execution. In essence, an expression is evaluated as either true, false, or unknown for each record retrieved by the data manager. If it evaluates to a true condition, the record is accepted and returned. Otherwise, the record is rejected and another is retrieved from the database.

The processes below are the same for new queries, and for [modifying](#) existing queries (once opened in the editor).

Create an Expression

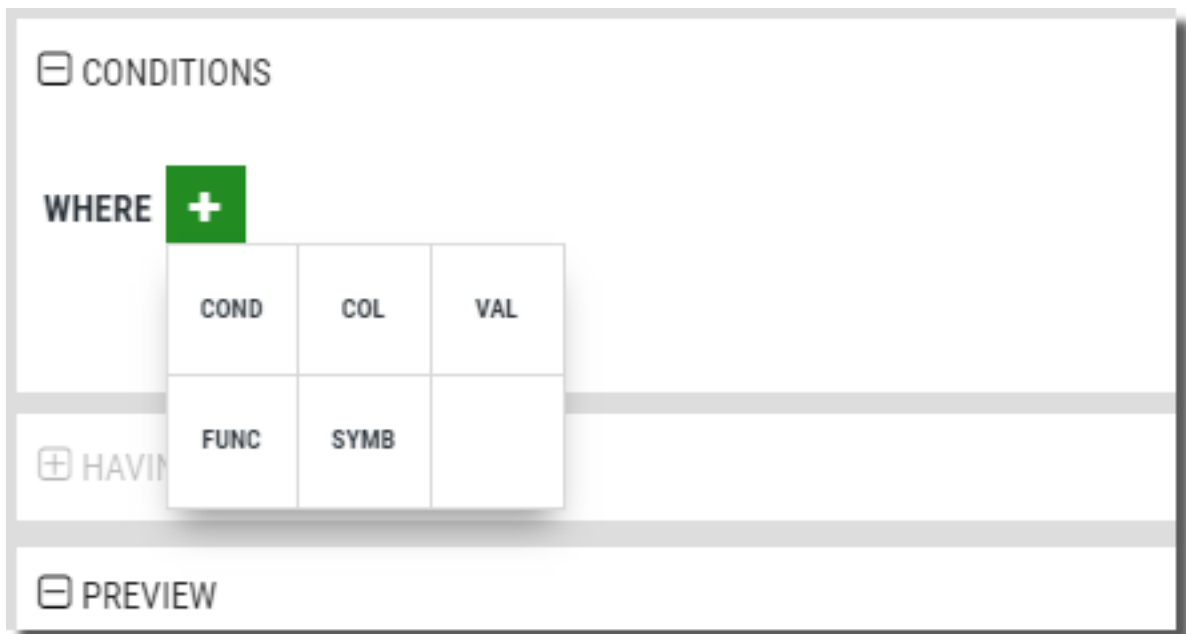
Steps

1. Once in the Query Editor (see *Create a New Query* on page 19 for information) press the **Conditions** band.

The band will expand to display the expression builder.



2. Hover your mouse on the **Add Element** button  to view the available elements that make up and can be added to the condition expression.



Select one of the following:

COND - Condition. Choose from any of the standard or boolean conditions (AND, OR, =, <, >, and so on).

COL - Column. Select a column from any of the tables used by the query.

VAL - Value. Enter a numeric or character value for the expression like, `filename.state = "IL"`.

NEST - Use to create parenthetical expressions by adding open and closed parentheses.

TAB - Insert a tab to indent.

BRK - Add a break for a new line.

Each added element will provide you with an entry box—many with drop-down lists—in order to select different items for the element, to enter values, or insert parentheses. At the same

time, a new **Add Element**  button displays so you can continue and add to the expression.

CONDITIONS

WHERE CUSTMAST.AMTDU

COND	COL	VAL
FUNC	SYMB	

HAVING

PREVIEW

Most expressions are very simple and follow the form:

COL- COND - COL for example: `table.price > table.cost`

COL - COND - VAL for example: `table.price = 100`

- Continue adding elements to complete the condition.

- Press **Save** when finished.

Save

Conditions for Grouped Results

Just as with detail queries, grouped queries can use expressions to filter the records returned. The HAVING condition is similar to the condition created above (for the WHERE clause), but it applies to the grouped records rather than the underlying "un-grouped" or detail records.

The tests allowed in the HAVING condition are the same as those allowed above with the addition of one more for aggregate functions.

Steps

- Press the **Having** band.

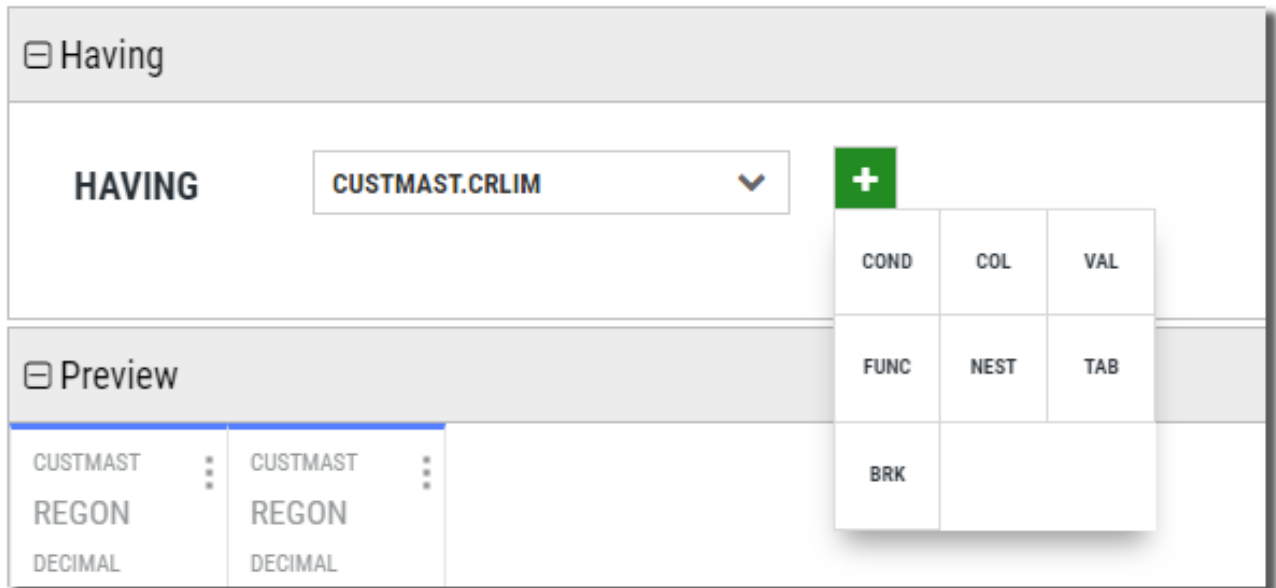
The band will expand to display the expression builder.

Having

HAVING

Preview

2. Hover your mouse on the **Add Element** button  to view the available elements that make up and can be added to the condition expression.



The screenshot shows the 'Having' section with a dropdown menu open. The dropdown menu contains the following options: COND, COL, VAL, FUNC, NEST, TAB, and BRK. The 'Preview' section shows a table with columns CUSTMAST, REGON, and DECIMAL.

Select one of the following:

COND - Condition. Choose from any of the standard or boolean conditions (AND, OR, =, <, >, and so on).

COL - Column. Select a column from any of the tables used by the query.

VAL - Value. Enter a numeric or character value for the expression like, `filename.state = "IL"`.

NEST - Use to create parenthetical expressions by adding open and closed parentheses.

FUNC - Aggregate functions such as SUM, AVG, MAX, MIN applied to a column can be part of a Having Condition.


TAB - Insert a tab to indent.

BRK - Add a break for a new line.

Each added element will provide you with an entry box—many with drop-down lists—in order to select different items for the element, to enter values, or insert parentheses. At the same

time, a new **Add Element**  button displays so you can continue and add to the expression.

3. Continue adding elements to complete the condition.

4. Press **Save**  when finished.

Add Sorting

Sorting results will help you review the data when later working with the query output. Any column available to the query (selected or not) can be used for the sort.

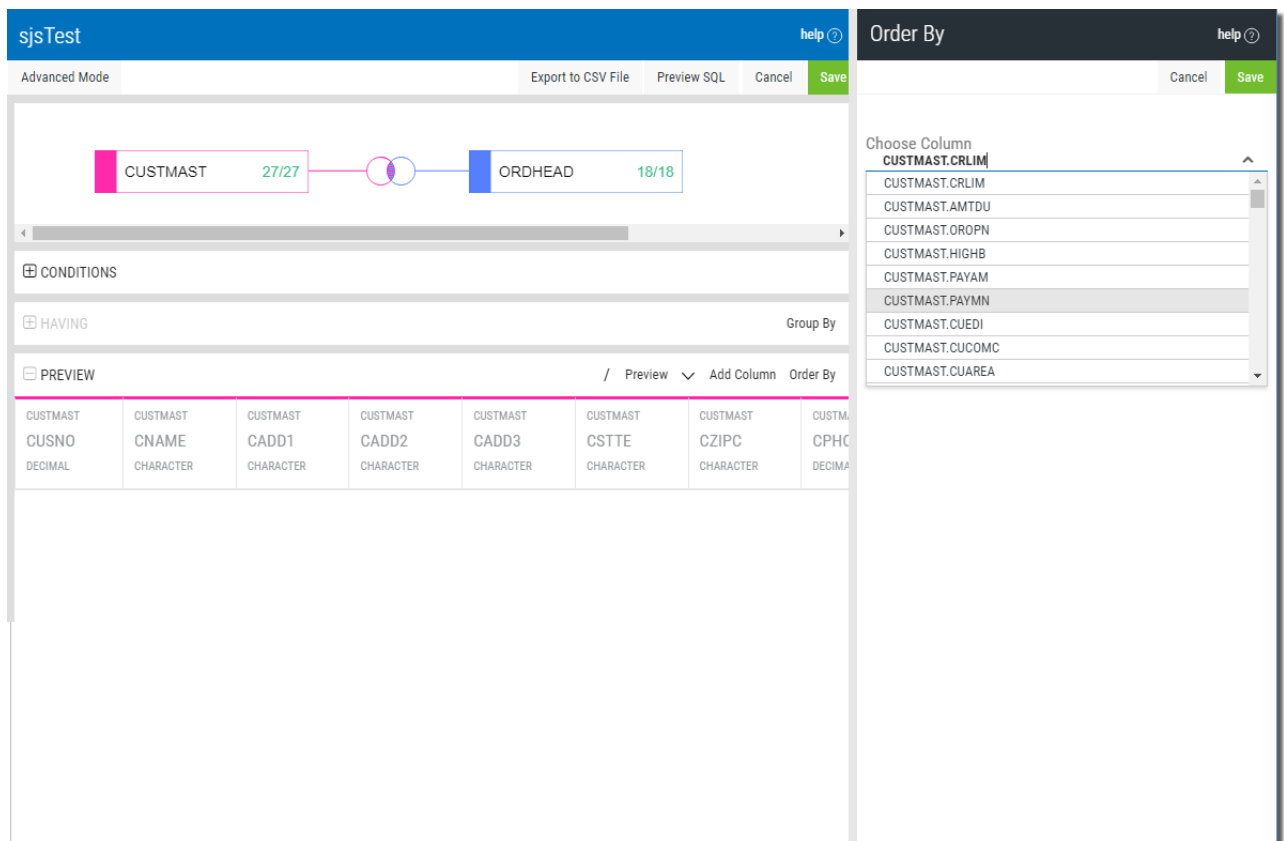
The process below is the same for new queries, and for [modifying](#) existing queries (once opened in the editor).

Steps

1. Once in the Query Editor (see *Create a New Query* on page 19 for information) press the

Order By  button.

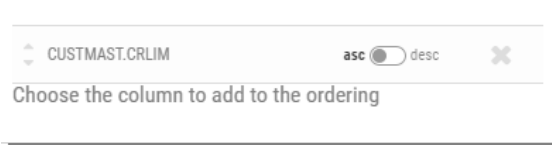
The Order By panel opens on the right.




The screenshot shows the Query Builder interface. The main editor displays a query with two tables: CUSTMAST (27/27) and ORDHEAD (18/18). The Order By panel is open on the right, showing a 'Choose Column' dropdown with CUSTMAST.CRLIM selected. Below the dropdown is a table of columns with their data types.

Column	Data Type
CUSTMAST.CUSNO	DECIMAL
CUSTMAST.CNAME	CHARACTER
CUSTMAST.CADD1	CHARACTER
CUSTMAST.CADD2	CHARACTER
CUSTMAST.CADD3	CHARACTER
CUSTMAST.CSTTE	CHARACTER
CUSTMAST.CZIPC	CHARACTER
CUSTMAST.CPHC	DECIMAL

2. Use the drop-down list to select a column to sort on.
Use the switch to choose **Asc**(ending) or **Desc**(ending).



The screenshot shows the Order By panel with the selected column CUSTMAST.CRLIM and the sort order switch set to asc. Below the switch is a text input field for choosing the column to add to the ordering.

3. Press **Save**  when finished.

Edit Existing Queries

You will use the query editor to edit an existing query in the same manner it was used to create the query. You might want to edit your query by:

- Modifying the query attributes like name, description, tags, sharing and edit rights
- Adding or removing tables
- Changing the join
- Modifying columns
- Modifying record selection conditions
- Removing or Modifying Sorting
- Adding Grouping.

Steps

1. To edit any query for any of the items above you have to press the **Show Actions** button



located on the left of each query, and select the **Edit Query** option.

The option first displays the Edit Query panel on the right.

The screenshot shows the 'Queries' panel on the left with a list of 51 queries. The 'Edit Query' panel on the right is open for a query named 'TEST'. The panel includes fields for Name, Description, Select Data Connection (set to ACCESS_HS0409), Tags, Caching (set to no), Edit Rights (Users and Groups), and All (set to no).

Query Name	Data Connection	Tags	Shared by
ASDF	Server11		admin
DEP_QUERY1	TRISTAN	davep, dep, Test	admin
Demo	HS25	davep	admin
Lustest	fordelete		admin
NateQuery	HS25		admin
Orders	HS44	AJ, dates	admin
Query1	Server11		admin
Query2	ASCEND		admin
Query3	Server11		admin
STQ_1st_Query	HS44		admin
STQ_2_Query	HS44		admin
TQHAC	TeamQuest2		admin
TQHAD	TeamQuest2		admin
TQHAI	TeamQuest2		admin
TQHAL	TeamQuest2		admin
TQHAM	TeamQuest2		admin
TQHAT	TeamQuest2		admin

2. Modify the Query Attributes (optional)

This initial panel allows for quick changes to the name, description, tags, caching, groups, and so on. See *Query Attributes* on page 20 for more information on the items in this panel.

To save query attributes without opening the editor, press the **Save and Close**

Save And Close

button.

Edit Query

3. Press the **Edit Query** button to open the query editor. Depending on the selected data connection, you may be prompted to select or provide a credential to access the query.

- a. You can select an existing credential from the list (or Custom).

Access To HS44

Credentials
pavel

Cancel OK

- i. Press **OK** to continue.

- b. If you select **Custom**, an expanded screen displays.

Access To HS44

Credentials
Custom

Username:

Password:


Cancel OK

- i. Enter a **Username** and **Password**.
 - ii. Press **OK** to continue.

The query editor displays.

sjsTest help

Advanced Mode Export to CSV File Preview SQL Cancel Save

CUSTMAST 27/27  ORDHEAD 18/18 + ADD TABLES

⊞ CONDITIONS

⊞ HAVING Group By

⊞ PREVIEW / Preview ▼ Add Column Order By

CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST	CUSTMAST
CUSNO	CNAME	CADD1	CADD2	CADD3	CSTTE	CZIPC	CPHON	CTYPE	CRLIM
DECIMAL	CHARACTER	CHARACTER	CHARACTER	CHARACTER	CHARACTER	CHARACTER	DECIMAL	CHARACTER	DECIMAL

From here you can now modify the query in any of the following areas:

- *Add or Remove Tables* on page 41
- *Modify or Delete the Join* on page 42
- *Modify Columns* on page 43
- *Modify Record Selection Conditions* on page 46
- *Modify the Sort* on page 47
- *Modify Grouping* on page 46

Add or Remove Tables

Add Tables

To add tables to a query, press the **Add Table**  **+ ADD TABLES** button and follow the steps detailed in the topic, *Add Tables* on page 25.

Remove Tables

1. In the Query Editor press the table icon representing the table you want to remove.

The Edit Table panel opens on the right.

The screenshot shows the 'Query Builder' interface with a query named 'sjsTest'. The main workspace displays a join between 'CUSTMAST' (27/27) and 'ORDHEAD' (18/18). On the right, the 'Edit table: ORDHEAD' panel is open, featuring a 'Delete' button, 'Select All', 'Deselect All', 'Cancel', and 'Save' buttons. Below these is a 'Select columns' list with checkboxes for various columns. The 'ORDNO' column is checked.

Column	Type
CUSNO	DECIMAL
CNAME	CHARACTER
CADD1	CHARACTER
CADD2	CHARACTER
CADD3	CHARACTER
CSTTE	CHARACTER
CZIPC	CHARACTER

2. Press the **Delete** button.

3. Press **Save** when finished.

Modify or Delete the Join

1. In the Query Editor press the join icon between any two file pairs.
The Modify Join panel opens on the right.

2. To modify the current join, select a different join type and press **Save**.

3. To remove the current join, simply press the **Delete** button.

Modify Columns

Adding Columns

You have two options:

- To add columns from the current tables in the query, press the table icon



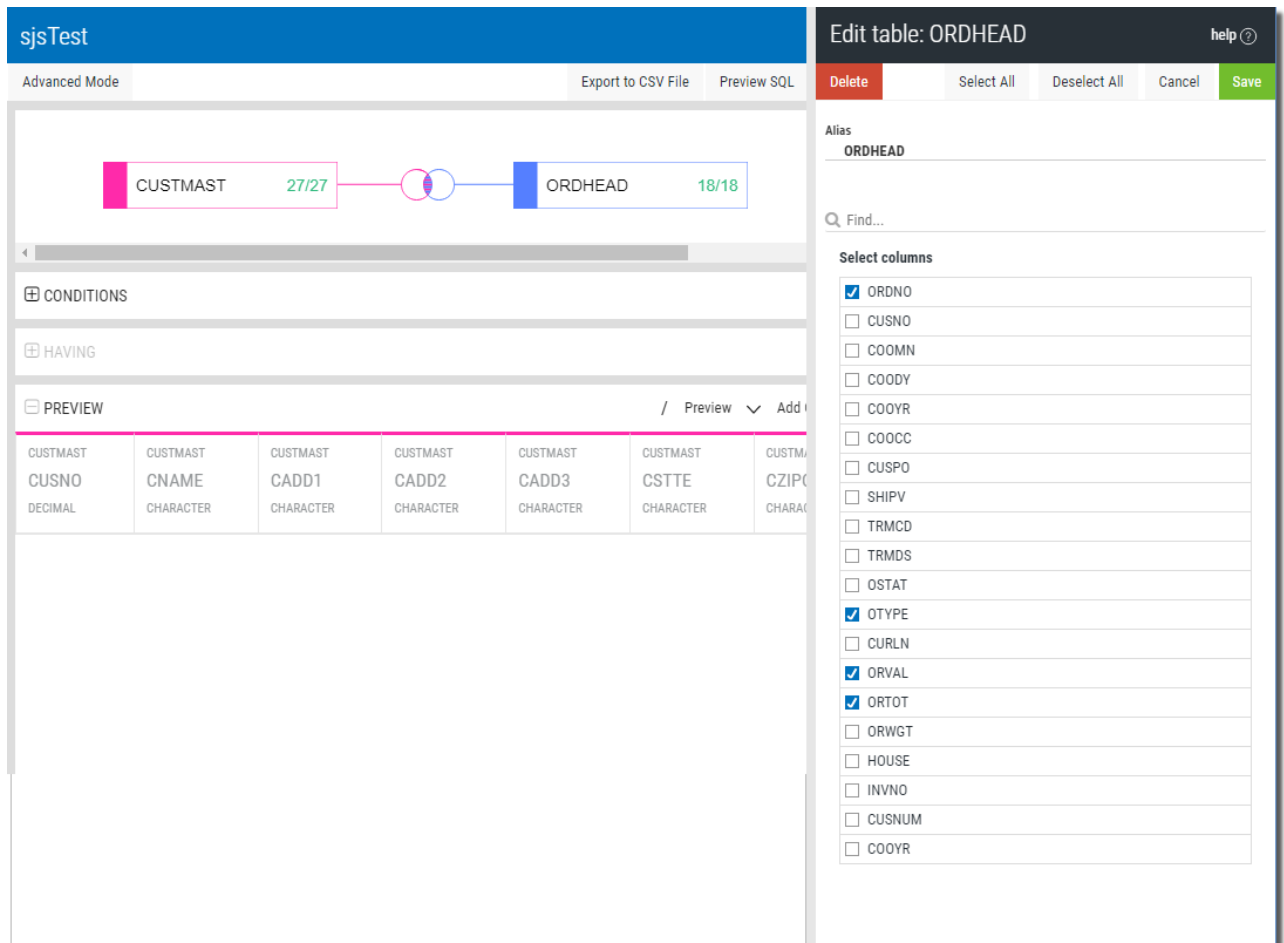
for the table containing the columns you wish to work with, and follow the steps detailed in the topic, *Select Existing Columns* on page 29.

- To add a new column (create), press the **Add Column** button, and follow the steps detailed in the topic, *Add (create) a New Column* on page 32.

Remove Columns


1. Press the table icon  for the table containing the columns you wish to work with.

The Edit Table panel opens on the right showing all the columns in the table.



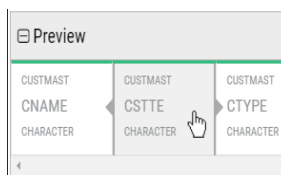
The screenshot shows the 'Edit table: ORDHEAD' panel on the right side of the interface. The panel has a 'Delete' button, 'Select All', 'Deselect All', 'Cancel', and 'Save' buttons. Below these is a search bar 'Find...' and a 'Select columns' section. The 'Select columns' section lists columns with checkboxes: ☒ ORDNO, ☐ CUSNO, ☐ COOMN, ☐ COODY, ☐ COOYR, ☐ COOCC, ☐ CUSPO, ☐ SHIPV, ☐ TRMCD, ☐ TRMDS, ☐ OSTAT, ☒ OTYPE, ☐ CURLN, ☒ ORVAL, ☒ ORTOT, ☐ ORWGT, ☐ HOUSE, ☐ INVNO, ☐ CUSNUM, and ☐ COOYR. Below the list is a 'Preview' section showing a table with columns: CUSNO, CNAME, CADD1, CADD2, CADD3, CSTTE, and CZIPC. The table has a header row and a data row.

2. Uncheck individual column names, or press the **Deselect All** buttons to remove columns.

3. Press **Save**  when finished.

Rename a Column

1. Press the column you wish to alter.



The Column Setting panel opens on the right.

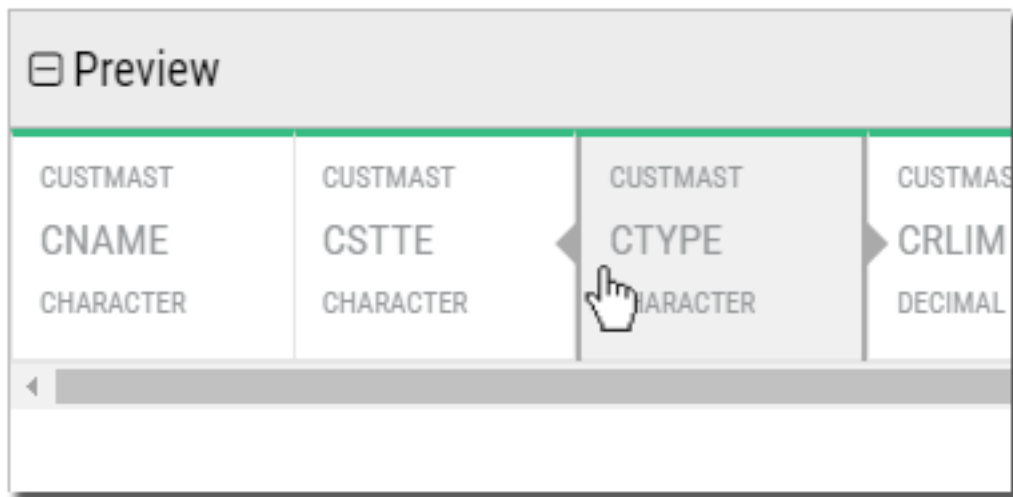
The screenshot shows the Query Builder interface with the 'Column settings' panel open on the right. The main panel displays a query diagram with 'CUSTMAST' (27/27) and 'ORDHEAD' (18/18) connected by a join symbol. Below the diagram are sections for 'CONDITIONS', 'HAVING', and 'PREVIEW'. The 'PREVIEW' section shows a table with columns: CUSTMAST, CUSNO, CNAME, CADD1, CADD2, CADD3, CSTTE, and CZ. The 'Column settings' panel on the right has a 'Name(CSTTE)' field set to 'CSTTE', a text area with 'CSTTE as CSTTE', and a list of 'Aggregate functions' including SUM, AVG, COUNT, COUNT_BIG, MIN, MAX, DATE, DAY, DAYOFWEEK, DAYOFWEEK_ISO, DAYOFYEAR, and DAYS.

2. Change the Name value and press **Save**.

Repeat this process for each column you wish to change.

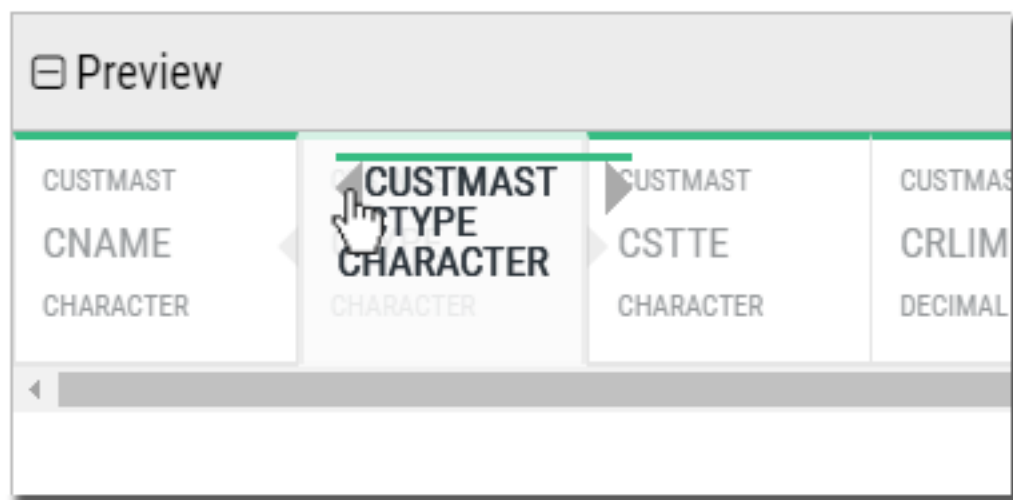
Re-sequence Column Order

1. Hover over the column you wish to move.
Notice movement handles appear on each side of the column.



- Click-and-drag the right arrow to move the column to the right, or click-and-drag the left arrow to move the column to the left.

As you move over other columns they will move to allow the selected column to be inserted.



- Drop the column between or next to any other existing column.

Modify Grouping

Modify the columns in a Grouping Query just as you would for any query. You can rename, remove, and add new columns to the query.

See *Modify Columns* on page 43, and *Modify Record Selection Conditions* on page 46 for more information.

Modify Record Selection Conditions

Each element of a Condition or Having expression can be moved or removed.


Steps

1. Expand the band you wish to edit (Conditions or Having).
The Full condition is exposed.

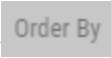
2. Simply hover over the element to reveal the two controls on the left of the element.



3. Press the X to remove, or select the 4-headed arrow to drag and move the element to a different location in the expression. Depending on the element, you can use the drop-down to select a different value or condition.

4. Press **Save**  when finished.

Modify the Sort

1. In the Query Editor press the **Order By**  button.
The Order By panel opens on the right.

Order By help ?

Cancel Save

Choose Column

Press the X to remove a sort

CUSTMAST.CSTTE asc desc X

CUSTMAST.CUSNO asc desc X

Choose the column to add to the ordering

Press the up or down arrows to move the column in the sort sequence.

2. **To Add:** Use the drop-down list to select another column to add to the sort. Use the switch to choose **Asc**(cending) or **Desc**(ending).

CUSTMAST.CRLIM asc desc X

Choose the column to add to the ordering

3. **To Remove:** Press the X on the right of any existing column to remove it from the sort.
4. **To Re-sequence:** Press the up a down arrows to the left of the column to changes its position in the sort.

5. Press **Save** Save when finished.

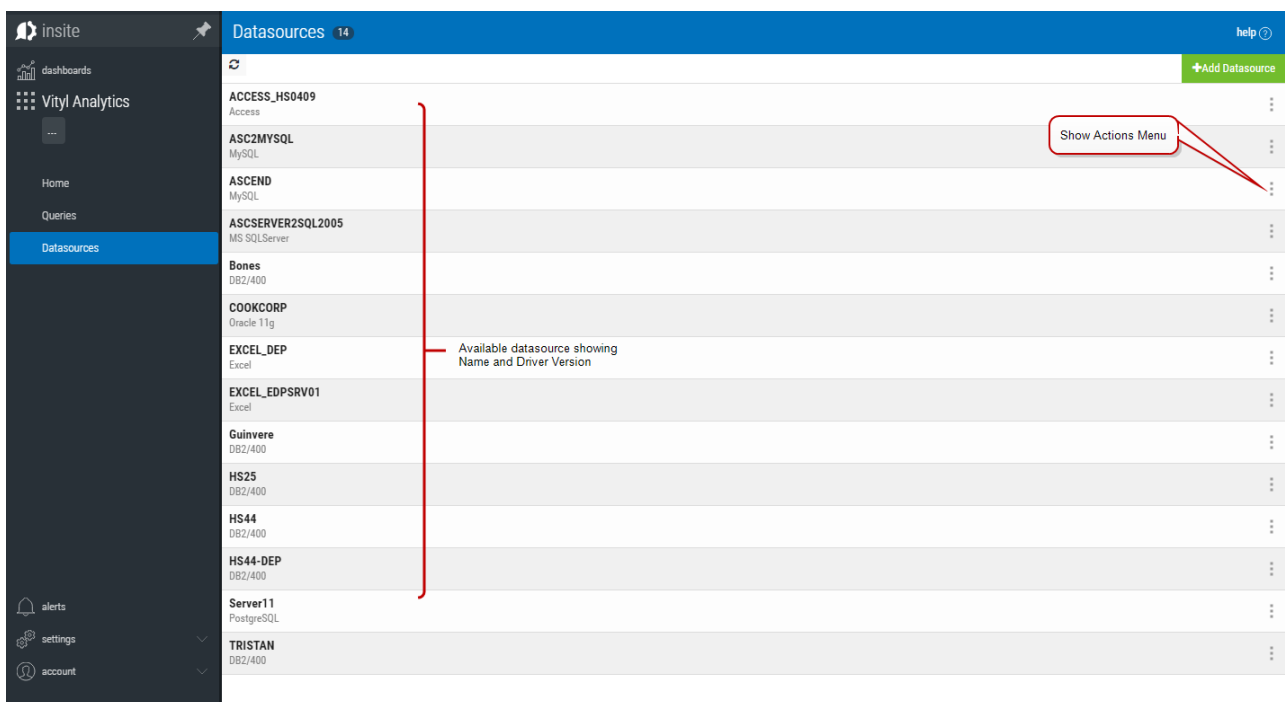
Data Connection Management

Data connections define the link between your queries and the different systems and databases across your network where your data is stored. Refer to this section to create, manage and edit data connections for Insite Analytics.


Data Connections Interface

Data Connections

Select the **Data Connections** option in Insite Analytics to display a list of data connections like so:




On this screen you can see the following:

- List of data connections with their name and driver type.
- Show Actions menu. Click  to access the following functions: Edit the Data Connection, and Delete.

Work with Data Connections

Working with data connections is very simple. You will either delete, modify or create them. To create a data connection press the Add Data Connectionssource button. This process is discussed in detail in the topic *Create a New Data Connection* on page 50.

To edit the datasource, edit permissions, or delete a data connection you will use the Show Actions menu located on the right for each data connection. Press the **Show Actions** button  to access the following functions:

Edit


Select this option to open and modify the data connection. See *Edit Data Connections* on page 55 for more detailed information.

Delete


Select this option to delete the data connection. You will be prompted to confirm or cancel your request.

Create a New Data Connection

Creating new data connections is simple with Insite Analytics. You can create a connection to data on many systems such as IBM i, MySQL, MS SQLServer, MS Access, and others.

To create a new data connection press the **Add Data Connection**  button at the top of the data connections panel. The New Data Connection panel open on the right.

The screenshot shows the 'Data Connections' management interface. On the left, a list of existing connections is displayed, including ACCESS_HS0409 (Access), ASC2MYSQL (MySQL), ASCEND (MySQL), ASCSERVER2SQL2005 (MS SQLServer), Bones (DB2/400), COOKCORP (Oracle 11g), EXCEL_DEP (Excel), EXCEL_EDPSRV01 (Excel), fordelete (DB2/400), Guinvere (DB2/400), HS25 (DB2/400), HS44 (DB2/400), HS44_DEP-Edited (DB2/400), and HS44_LOCALSYS (DB2/400). On the right, the 'New Data Connection' dialog box is open, showing fields for Name, URL, Driver (set to Access), Restrictions, Users, Groups, Restrict All (set to no), and Credentials (Username and Password fields with an 'Add' button).

Fill in the options (described below) to define the data connection, and press **Save**  to continue.

Options

Name - Enter a name for the data connection. Only alphanumeric characters (a-z, A-Z, 0-9)—not including punctuation or symbols—are allowed. Spaces are not allowed (an underscore _ is a good substitute).

URL - This is a string that defines the location of the server and the database you want to connect to. The syntax of the string is very specific depending on the type of database defined by the Driver value specified (below). Review the table below for the syntax of each Driver (database) type.

Access

Syntax Example:

```
jdbc:access://<COMPUTER_NAME>/<PATH>/<FILE_
NAME>?maxScanRows=<NN>
```

Where:

<COMPUTER_NAME> = The name of PC, as identified to the network where the Access or Excel file is located. This value is mandatory.

<PATH> = The full path (including drive letter) to the directory containing Excel or Access files. On Windows, there must be a "Share" to the path on <COMPUTER NAME> that the IBM i profile running the job has authority to.

<FILE_NAME> = Add the specific name of the file to use with the connection. This value is mandatory.

<NN> = The maximum number of rows to return.

DB2/400**Syntax Example:**

```
jdbc:as400://<HOSTNAME>;prompt=false;extended metadata =
true;translate binary = true;libraries=<LIB_LIST>
```

Where:

<HOSTNAME> = The name of IBI i host.

<LIB_LIST> = Specify libraries to override the user's default library list.

Excel**Syntax Example:**

```
jdbc:excel://<COMPUTER_NAME>/<PATH>/<FILE_
NAME>?maxScanRows=<NN>
```

Where:

<COMPUTER_NAME> = The name of PC, as identified to the network where the Access or Excel file is located. This value is mandatory.

<PATH> = The full path (including drive letter) to the directory containing Excel or Access files. On Windows, there must be a "Share" to the path on <COMPUTER NAME> that the IBM i profile running the job has authority to.

<FILE_NAME> = Add the specific name of the file to use with the connection. This value is mandatory.

<NN> = The maximum number of rows to return.

MS SQL Server

Syntax Example:

```
jdbc:sqlserver://<HOSTNAME>:<PORTNUMBER>;<INSTANCENAME>
```

Where:

<HOSTNAME> = The network resolvable name or address of the SQLServer host.

<PORTNUMBER> = The TCP/IP port for the server. The listener port number is usually 1433.

<INSTANCENAME> = The network resolvable name or address of the SQL Server instance to be used. Omit the instance name portion if you are connecting to the default (usually MSSQLServer) instance.

MySQL

Syntax Example:

```
jdbc:mysql://<HOSTNAME>:<PORTNUMBER>/<DATABASENAME>
```

Where:

<HOSTNAME> = The network resolvable name or address of the MySQL host.

<PORTNUMBER> = The TCP/IP port for the server. The listener port number is usually 3306.

<DATABASENAME> = The name of the database to be accessed.

Oracle 11g

Syntax Example:

```
jdbc:oracle:thin:@<HOSTNAME>:<PORTNUMBER>/<SIDNAME>
```

Where:

<HOSTNAME> = The network resolvable name or address of the Oracle host.

<PORTNUMBER> = The TCP/IP port for the server. The listener port number is usually 1521 and is defined in the network\admin\listener.ora file in the oracle product library.

<SIDNAME> = The name of the service (often ORCL).

PostgreSQL

Syntax Example:

```
jdbc:postgresql://<HOSTNAME>:<PORTNUMBER>/<DATABASENAME>
```

Where:



<HOSTNAME> = The network resolvable name or address of the PostgreSQL host.

<PORTNUMBER> = The TCP/IP port for the server. The listener port number is usually 3306.

<DATABASENAME> = The name of the database to be accessed.

Driver - Select the driver based on the type of database you wish to use.

Credentials - For the host/server defined in the URL above, enter a valid username and password of the user that will process requests by this data connection. Press the **Show Password**

button  to see the password after you enter it. Press the **Add User** button  to add the user to the data connection. You can enter more than one user. When using the data connection (to define, or edit a query) you will be prompted to choose one of these users.

Edit Data Connections

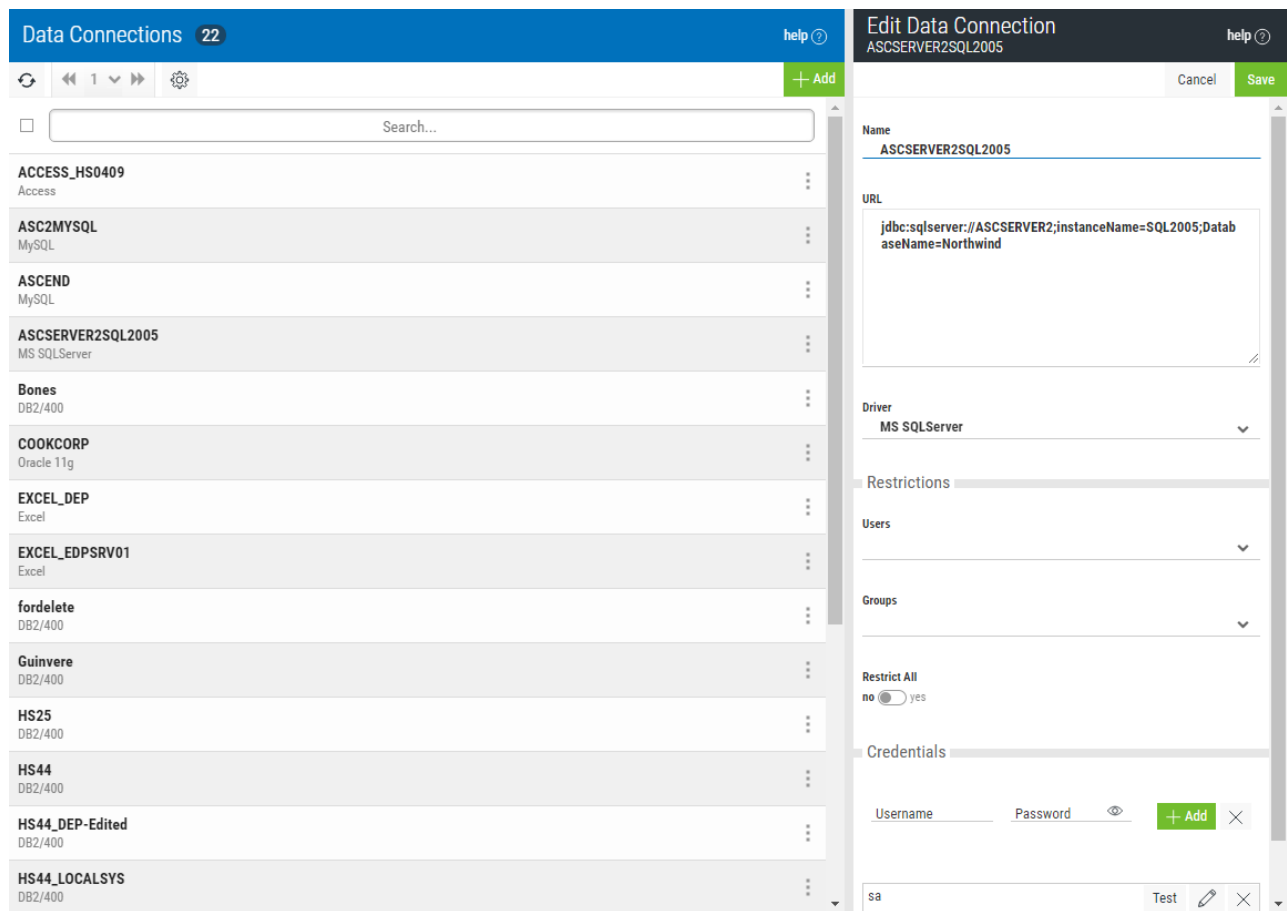
The process to edit a data connection is very similar to create one.

Steps

1. To the right of the data connection you wish to edit, press the **Show Actions** button and

select **Edit**.

The Edit Data Connection panel opens on the right.



2. Modify any of the items in the panel. All the options are discussed in the topic *Create a New Data Connection* on page 50.

3. Press **Save** when finished making changes.

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