Database Query

Last Modified on 03/28/2024 5:03 pm EDT

Pathway: *Database* > *Database* Query

A database query is a request for specific information from modeled data sources in the database. It allows you to retrieve, export, and review data stored in the database by specifying certain criteria or conditions. After a query has been generated, the results can be exported to Excel and the query can be saved to allow users easy access to re-run the report at a future date.

Da	tabase Query					
SAVE	DQUERY	POSTED WO	RK ORDERS		NEW	UPDATE SAVE AS
ENT	ITIES					LIMIT / SORT
Ac	counts and Si	tes 🔂				
	Work Order	0 🗢				
DISP	PLAY FIELDS					FILTERS
					Display Only Selected	AND * ADD GROUP ADD FILTER
	ENTITY	SEQ	FIELD	ALIAS DES	CRIPTION	Work Order - Posting Status Code equals Pending
	Work Order		Line of Busin			
	Work Order		Division Id			
	Work Order		Site Id			
\checkmark	Work Order	5	Site Name			
\checkmark	Work Order	6	Address Line 1			
	Work Order		Address Line 2			
\checkmark	Work Order	7	City			
	Work Order		State			
	Work Order		Zip			
	Work Order		Access Inform			
	Work Order		Note			
	Work Order		Order Note			
	Work Order		Scheduled Date			
	Work Order		Quantity			
	Work Order		Work Type Id			
\checkmark	Work Order	8	Work Type N			
	Work Order		Equipment Ty			
\checkmark	Work Order	9	Equipment Ty			

Permissions

The following permission is required to create a query:

Permission ID	Permission Name
416	Database Query

Field Descriptions

Field	Description		
Saved Query	Includes a drop down selection of saved queries/reports.		
New	Creates a new query.		
Update	Saves any changes made to a query (added/removed fields, filters, limit/sort and etc.).		

Save As	 Saves the query to the system for future use. Upon saving a popup editor displays to enter a name for the query and includes a 'Public Query' check box. Public Query - if checked, the query is available for any user to view and edit. Otherwise, only the user who created the query will be able to see and use it.
Run	Runs the query based on the selections and filters. Reports generate in a new tab.
Sections	
Entities	Determines the data table the system retrieves information from. Also controls what displays for selection in the Display Fields window.
Limit/Sort	 Optional; Controls the number of rows output and how the data is sorted when it is returned. Limit: Caps the report to only return the number of results entered. Sort: Sorts report columns in either ascending or descending order. All reports default to ascending sort order.
Display Fields	 Data points that can be included in the query results. Fields displayed are unique to the entity selected. Display Only Selected (check box): select to only display the fields you have selected for easier review. Uncheck it to continue adding or removing field selections.
Filters	
And/Or	 Select to toggle the filter between the And/Or option to filter on. And: Requires all filter parameters in the group to be true for a record to return. Limits the report's results. Or: Requires only one of the filter parameters in the group to be true for a record to return. Broadens the report's results.
Add Group	Creates another filter group to further refine the data set that is returned.
Add Filter	Opens the 'Add New Filter' popup to define the filter parameters the report should use.

Create a Query: No Filter(s)

In some cases, users may need a simple report that pulls information from the database without a need for any filters. In that case, the following process can be used:

Database Query		
SAVED QUERY Example Test 2	▼ NEW	UPDATE SAVE AS O RUN
ENTITIES		LIMIT / SORT
Accounts and Sites		ROW LIMIT 🗘 🔘
DISPLAY FIELDS		PILTERS
	Display Only Selected	AND - ADD GROUP ADD FILTER O
ENTITY SEQ FIELD ALIAS	DESCRIPTION	
Accounts and S Account Id		
Accounts and S Parent Ac		
Accounts and S Account O		
Accounts and S Account S		
Accounts and S Account S		
Accounts and S Account D		
Accounts and S Account D		
Accounts and S 1 Account N		
Accounts and S Account N		
Accounts and S 2 Billing Ad		
Accounts and S 3 Billing Ad		
Accounts and S 4 Billing City		

- 1. Click on 'New' from the top of the screen and the 'Select Main Entity' popup window will display.
- 2. Select the 'Entity' (database table) from the drop down.
 - *Optional:* Enter an Alias to change how the database table displays in the report header when the query is run. This will also change how the entity's name is displayed in the Display Fields.
- 3. Select Save and a new query will open.
- 4. Select the check box for each display field you would like the report to include.
 - After all selections are made, check the 'Display Only Selected' check box to review your selections and confirm all desired fields are included.
- 5. Click **Run** and the query will generate in another tab.

Create a Query with Filter(s)

Some reports require the use of a filter to refine the results to a specific data set, such as accounts assigned to a specific zip code. In scenarios similar to this, the following process can be used:

Database Query			
SAVED QUERY Aliena Test 2	▼ NEW	UPDATE SAVE AS	RUN
ENTITIES		LIMIT / SORT	
Accounts and Sites 🕂		ROW LIMIT 🗘 🖨	
DISPLAY FIELDS		FILTERS	
	Display Only Selected	AND -	ADD GROUP ADD FILTER
ENTITY SEQ FIELD ALIAS	DESCRIPTION	Accounts and Sites - Billing Zip in (78652)	
Accounts and S Account Id			
Accounts and S Parent Acco			
Accounts and S Account Ol	EDIT FILTER		? 😣
Accounts and S Account Sta			
Accounts and S Account Sta	COLUMN Billing Zip -	in 👻 78652	C
Accounts and S Account Div			
Accounts and S Account Div		Negated SAVE	
Accounts and S 1 Account Na			
Accounts and S Account Na			
Accounts and S 2 Billing Addr			
Accounts and S 3 Billing Addr			
Accounts and S 4 Billing City			
Accounts and S 5 Billing State			

- 1. Click on 'New' from the top of the screen and the 'Select Main Entity' popup window will display.
- 2. Select the Entity (database table) from the drop down.
 - Optional: Enter an Alias to change how the database table displays in the report header when the query is run. This will also change how the entity's name is displayed in the Display Fields.
- 3. Click Save and a new query will open.
- 4. Select the check box for each display field you would like the report to include.
- 5. Select the And/Or toggle button to indicate how you would like the system to look at the data. This is important if more than one filter is used. If only one filter is used, the And/Or toggle does not affect what is returned.
- 6. Click on 'Add Filter' to display the 'Add New Filter' popup.
 - Select the column you would like to filter the data on (first drop down box).
 - Select the operator you would like to perform the filter on (middle drop down box).
 - Enter the value of the filter the data should be filtered on.
 - Click Save when finished.
- 7. Click "Run" when all filters are added and the query will generate in a new tab.

Filter Operators

Operators control how the filter will process the data and return results. Different results are returned based on the operator that is used as detailed in the examples below.

f	ILTERS	
Display Only Selected	AND Accounts and Sites - Billing Zip in (77532)	ADD GROUP ADD FILTER
EDIT FILTER		2 8
COLUMN Billing Zip	• in • 77532	• •
	Negated SAVE	

Operator Examples

Example 1:

In the example below, the "In" operator was used and the results were limited to only billing zip codes that were an exact match to the filter parameter entered. In this example, 16 records were returned.

	Database Query	Aliena Test 2 - 08/08/2023 2:24:06	pm				
	16 records 🔶						
	ACCOUNT NAME	BILLING ADDRESS LINE 1	BILLING ADDRESS LINE 2	BILLING CITY	BILLING STATE	BILLING ZIP	ACCOUNT MANAGER NAME
				CROSBY	TX	77532	House Account
				CROSBY	TX	77532	House Account
				DAYTON	TX	77532	House Acct non System
				Crosby	TX	77532	House Acct non System
				Conduc	TV	77532	Alice Cuevas
ILTER					? 😣	77532	Megan Nguyen
	Dillion Zin					77532	Matt lori gmail Eckstrom
JMN	Billing Zip	• In • 77532	2		•••	77532	Matt lori gmail Eckstrom
		Negated SAVE					

Example 2:

In the example below, the operator "Starts With" was used and results were broadened to include any account/site that started with the values entered for the billing zip code. In this case, the results included the zip code's "plus-four" codes or "add-on" codes that a user included at the time the zip code was entered into the system. In this example, 274 records were returned.

Database Quer	ny Aliena Test 2 - 08/08	8/2023 2:41:41 pm						
274 records							0	
ACCOUNT NAME	BILL	ING ADDRESS LINE 1	BILLING ADDRESS LINE 2	BILLING CITY	BILLING STATE	BILLING ZIP	ACCOUNT MANAGER NAME	
				CROSBY	TX	77532-0698	Dave Pike	
				CROSBY	TX	77532-0698	House Account	
						77532-5519	House Account	
EDIT HETER			_			77532-5253	House Account	
COLUMN	Billing Zip 👻	starts with	77532			77532-5100	House Account	
		L				77532-5603	House Account	
		Negated	SAVE			77532-5956	House Account	
				CRUSET	10	77532	House Account	
				CROSBY	TX	77532-3125	House Account	
				CROSBY	TX	77532-6170	House Account	
				CROSBY	TX	77532-4089	House Account	
				CROSBY	TX	77532-3919	House Account	
				CROSBY	TX	77532-0656	House Account	

Examples: Groups and Filters

Example: Single Group, Multiple Filters (OR Statement)

In the example below, the **OR statement** is used for each filter that is added to the group. This will broaden the results that are returned as only one of the filter parameters must be true for the account to be included in the report.

Expected Results:

- Accounts and Sites will be returned if any of the following are true:
 - 1. Account Manager's name starts with H, OR
 - 2. Account Manager's name starts with M, OR
 - 3. The account's division is in Dayton.

In this example, the following **operators** are used:

- Starts With: Searches and pulls the results based on the first value of the data point. If large amounts of data are being searched, it is recommended to use another operator to better refine the results.
- In: Specific search and data must be an exact match to be included in the returned results.

Database Query			
SAVED QUERY Example Te	st 2	- NEW	UPDATE SAVE AS 🗢 RUN
ENTITIES			LIMIT / SORT
Accounts and Sites			ROW LIMIT C
DISPLAY FIELDS			FILTERS
		Display Only Selected	OR ADD GROUP ADD FILTER 🗢
ENTITY SEQ	FIELD ALIAS	DESCRIPTION	Accounts and Sites - Account Manager Name starts with H
Accounts and S	Account Id		Accounts and Sites - Account Manager Name starts with M
Accounts and S	Parent Acc		Accounts and Sites - Account Division Name in (Dayton)
Accounts and S	Account Ol		
Accounts and S	Account St		
Accounts and S	Account St		
Accounts and S	Account Di		

Example: Single Group, Multiple Filters (AND Statement)

In the example below, the **AND statement** is used for each filter that is added to the group. This will restrict the results that are returned as it requires all to be true for the account.

Expected Results:

- Accounts and Sites will be returned if both of the following filter parameters are true:
 - 1. The account is in the Houston division AND
 - 2. The Account Class Name contains 'Roll'.

In this example, the following **operators** were used:

- **Equals** requires an exact match of the parameter (Houston) to the division of the account/site.
- Contains provides flexibility in how results are searched. Users may find this option helpful

if they aren't sure how data was entered in the system, but do know it contains specific character values.

Database Query	ccounts in 06095 - 08/04/2023	2:20:31 pm ×	
SAVED QUERY Accounts	in 06095		EW UPDATE SAVE AS 🗢 RUN
ENTITIES			LIMIT / SORT
Accounts and Sites			ROW LIMIT C
DISPLAY FIELDS			FILTERS
		Display Only Selected	AND - ADD GROUP ADD FILTER
ENTITY SE	Q FIELD ALIAS	DESCRIPTION	Accounts and Sites - Account Division Name equals Houston
Accounts and S	Account Id		Accounts and Sites - Account Class Name contains Roll
Accounts and S	Parent Acc		
Accounts and S	Account O		
Accounts and S	Account St		
Accounts and S	Account St		
Accounts and S	Account D		
Accounts and S 8	Account D		

Example: Multi-Group with Filters

The option to add another group with its own set of filters allows users to further narrow down the results they would like the query to return. Building from the first example, the example below depicts what a report will look like with multiple groups and filters using the AND/OR statements.

Expected Results:

- Accounts and Sites will be returned if any of the following are true from the first group:
 - 1. The division for the account equals Houston, OR
 - 2. The Billing Zip is in 06095
- <u>AND</u> any the following MUST also be true from the second group for an account to be included in the report.
 - 1. The 'Bill By Site" must be null/blank for the account.

In this example, the following **operators** were used:

- Equals requires an exact match of the parameter (Houston) to the division of the account/site.
- In Specific search and data must be an exact match to be included in the returned results.
- Is Null Checks for the absence of a value in the database. In other terms, it's a way of finding missing or unknown information. Example: Find all account contacts who do not have a phone number.

Database Query	bunts in 06095 - 08/04/2023 2:20:31 pm	
SAVED QUERY Accounts in 0	06095 ¥ NEW	UPDATE SAVE AS O RUN
ENTITIES		LIMIT / SORT
Accounts and Sites		ROW LIMIT 🗘 🔘
DISPLAY FIELDS		FILTERS
	Display Only Selected	OR 🛛 👻 ADD GROUP ADD FILTER 🗢
ENTITY SEQ	FIELD ALIAS DESCRIPTION	Accounts and Sites - Account Division Name equals Houston Image: Constraint of the second
Accounts and S Accounts and S	Account O Account S	AND 🚽 ADD GROUP ADD FILTER 🖨
Accounts and S Accounts and S	Account S Account D	Accounts and Sites - Bill By Site is null
Accounts and S	Account D	
Accounts and S 1	Account N	
Accounts and S 2 Accounts and S 3	Billing Ad Billing Ad	

Run an Existing Query

To run an existing query, select the name of the query from the Saved Query drop down field and click 'Run'. When a query is run, it will open in another tab where it can be reviewed and exported to Excel.

Database Query Accounts in 06095 - 08/04/2023 2:20:31 pm	
SAVED QUERY Accounts in 06095	UPDATE SAVE AS 🗢 RUN 2
ENTITIES	LIMIT / SORT
Accounts and Sites	ROW LIMIT 🗘 🗘
DISPLAY FIELDS	FILTERS
Selected	AND 🔽 ADD GROUP ADD FILTER
ENTITY SEQ FIELD ALIAS DESCRIPTION	Accounts and Sites - Account Division Name equals Houston
Accounts and S Account to	Accounts and Sites - Billing Zip equals 06095
Accounts and S Account Q	
Accounts and S Account S	
Accounts and S Account S	
Accounts and S Account D	
Accounts and S Account D	
Accounts and S 1 Account N	
Accounts and S Account N	
Accounts and S 2 Billing Ad	
Accounts and S 3 Billing Ad	
Accounts and S 4 Billing City	