Introduction to PayServ Query Training

Revised January 2025

NYS Office of the State Comptroller
Bureau of State Payroll Services

Introduction to PayServ (PS) Query Training

Sections

Additional Reference Materials

These are included at the end of this manual for future reference and may not be covered in the presentation.

1. Objectives

Upon completion of this course, participants will be able to:

- Identify the basic components of query design
- Create a basic query
- Open and run an existing query
- Modify and save an existing query as a private version
- Design a query with multiple records
- Download query results to Excel
- Understand the fundamentals of PayServ Query Security
- Save query results in a secure location and understand the importance of data security
- Use the additional materials and on-line reference tools for query support
- Delete existing Queries

2. General Query Overview

All queries are essentially questions – who, how much, how often, when, etc. The questions can be very simple: How much was I paid in my last check? Or very complex: What were the funding sources associated with all employee earnings in my agency for the previous pay period?

Asking a good question and obtaining a valid answer is not always as easy as it sounds. It requires an understanding of the information available and how the data is arranged or structured. It requires knowledge of the best way to extract only those pieces of data needed to answer the question. It requires fine-tuning and formatting and other time-consuming tasks. But, with practice and patience, it can be done.

The basics of query design are essentially the same in all query software packages:

- **Define a purpose** for the query: What do you want to know?
    - The more time spent on this step, the better.
- **Select** the **records** (tables) and **fields** that contain the data: Where is the data located and what is it called?
    - Use reference materials on the PS Query bulletin board and OSC's internet site to locate the records and fields needed in the query.
- **Define criteria** to filter out the information not needed in the report and to include only the transactions that meet the purpose of the query.
    - Any missing criteria could result in thousands of additional rows of data in the report. A query will return (or try to return) what the criteria asks for.
- **Format** the report output
    - Review and modify column headings, field layout, sort order, etc.
- **Build** the query in steps. Run the query after each new criterion is added.
- **Run** the query and save the results.

By following these steps, it is possible to design and run queries to retrieve the information needed for your reports.

Summary of the Tabs in PayServ (PS) Query

There are nine tabs across the top of each PS Query page. Each tab represents a page where specific tasks can be completed. Some of these pages are used regularly in query design while others are more specialized and rarely used.

The *Records* page enables you to select the record(s) needed in your query from a list of the records to which you have access. You will use the Records tab when you create a new query. You can also use the Records tab when adding a new record to an existing query that does not have a hierarchy join or related record join available.

The *Query* page lists all the records you have selected for the query and all the fields in those records. You will use the query page to select fields for the output. You can also use the Query page to add criteria, especially if you want to include a criterion based on a field that is not going to be displayed in the results.

The *Expressions* page enables you to add expressions for your query. Expressions can be used as fields or as criteria in the query. This page is optional when you create a new query and is primarily added with advanced queries.

The *Prompts* page lists any prompt criteria that have been added to your query. It can be used to add new prompts, but the more common use will be to review or edit existing prompts when necessary.

The *Fields* page displays all the fields selected for your query. You can view the field properties and make changes to the headings, re-order or sort fields and aggregate values. Criteria from the fields chosen can be added to the query here.

The *Criteria* page displays the criteria selected for your query. You view and/or edit the criteria properties from this page (e.g., change an equal to condition to an in-list condition; change a criteria value from a constant to a prompt, etc.) You can also delete existing or add new criteria from this page.

The *Having* page is used with advanced query designs.

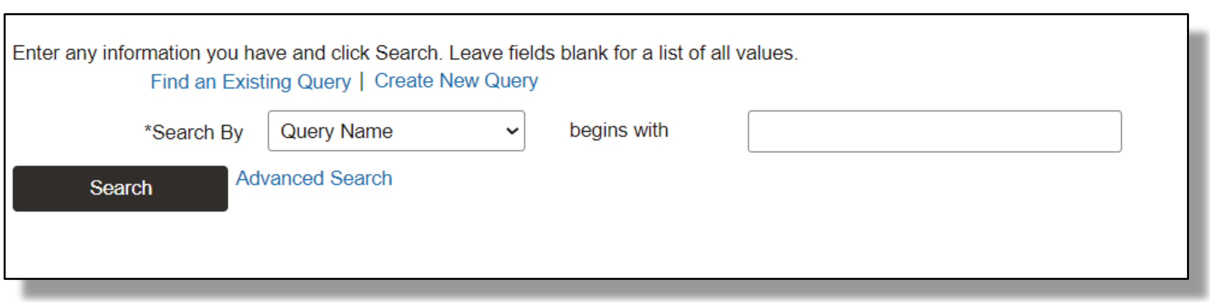
The *View SQL* page enables you to view the underlying SQL code that Query Manager generates based on your query definition. Select the View SQL tab to see the SELECT statement that the Query creates. The code cannot be edited.

Log In to PayServ (PS) Query

1. Log in to the OSC E-Gov website (just as you would from your agency). Your screen may be different depending upon your access.

2. Click **PayServ** under the **PayServ Applications** heading.
3. The **PayServ Bulletin Board** opens.
4. The **Bulletin Board** displays announcements and links to various information and training material.
5. Click the **Proceed to PayServ** button. The **PayServ Main Menu** is now visible in the top left corner of the screen.
6. From the Main Menu select **Reporting Tools.** The **Reporting Tools** page opens and includes **Query** options to create a new query or locate an existing query.
7. Open the **Query Manager** from the **Query** choices.

Note: based on your security you may see other folders other than Reporting Tools.



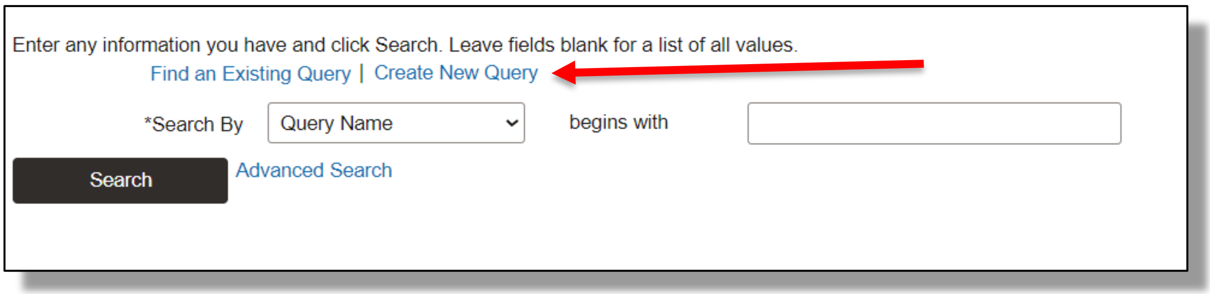
3. Creating a New Query

One of the easiest ways to become familiar with Payroll data is to run queries that provide information about a single employee.

The first query will retrieve the current JOB row. The current row is the transaction that has an effective date closest to but not greater than the current date. If there is more than one transaction with the same effective date, the current row is the transaction with the highest sequence number on that date.

This query will use the **JOB** record and include criteria for a single Empl ID.

1. Click the Create New Query hyperlink

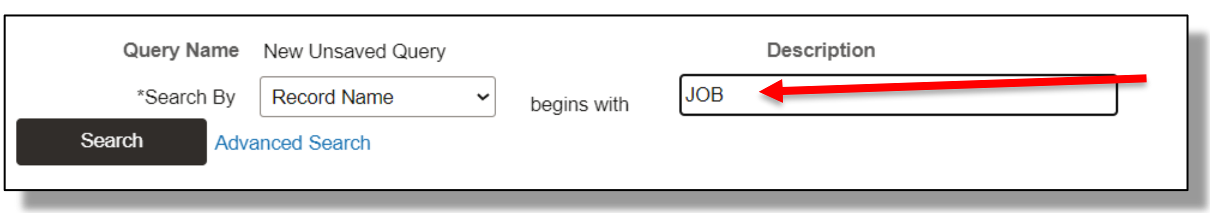


The Records Tab

The Query Manager's *Records* page will be displayed. This page is used to select the record(s) needed for the query. In PS Query, the term record is equivalent to table.

To determine what record/table to access, think about where you find or enter the information in PayServ.

2. Enter *"JOB"* in the **Search Description** box to pull up records that begin with "**JOB**."



*Partial search criteria can be used to locate record names. Searches are **not** case-sensitive.*

3. Click **Search.** A list of records that match the search string will display. The list may vary based upon individual access rights.

This is a partial list of records that begin with JOB (the record list could vary based on your access or security).

Search Results

Record

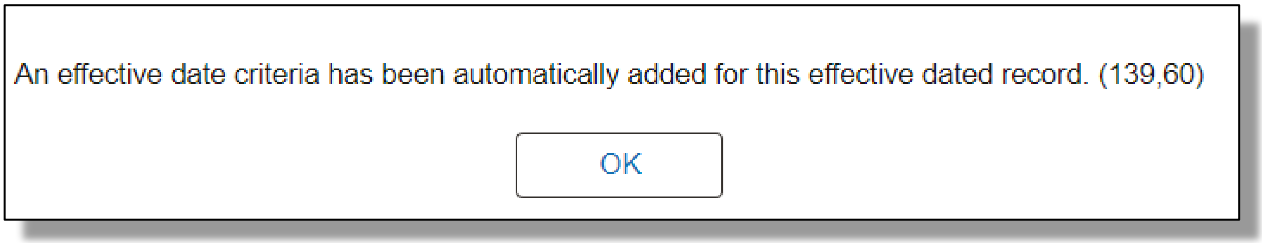
1-20 of 42 | View All

Recname	Add Record	Show Fields
JOB - EE Job History	Add Record	Show Fields
JOBCDTRN_CAREER - Job Codes - Career Planning	Add Record	Show Fields
JOBCD_COMP_RATE - Job Code Comp Rate Table	Add Record	Show Fields
JOBCD_GRADE_LNG - Job Evaluations by Grade Lvl	Add Record	Show Fields

4. Click the <u>Add Record</u> hyperlink for the **JOB** table to add the record to the query definition.

4. Effective Dated Records

JOB is an effective-dated record. When you click the Add Record hyperlink, the message below appears. Click **OK** to add the effective-dated criteria and close the message box.



Many of the records that you use to create queries are effective dated. This allows the database to contain current, future, and historical data.

When you use an effective-dated record in Query, you can specify a time frame. For example, if you are interested only in current information, you can avoid extracting all the historical and future data from the database.

The following table lists the Effective Date options that are most used and the results for that option:

Option	**Result**
Effective Date <=	Returns a single row that is less than or equal to the specified date. When combined with Current Date, this is referred to as the Current Row**.** This is the most frequently selected option. The Current Row is a single row that is closest (or equal to) but not greater than the current date and has the highest sequence number on that date.
Additional Effective Date Options	
Effective Date >=	Returns the row for each item that is greater than or equal to the specified date.
Effective Date <	Returns the row for each item that is less than the specified date.
Effective Date >	Returns the row for each item that is greater than the specified date.
First Effective Date	Returns the first (or oldest) row of data for each item.
Last Effective Date	Returns the last row of data for each item. This could be a future dated row.

No Effective Date Option	Returns all rows for each item.
Equal to	Returns rows only if the EMPLID has an effective dated row for the date inputted.
Other condition types	The rows returned are based on the condition type chosen.

If you select one of the first four options, you must also indicate which date to use in the **Choose Expression 2 Type** dialog box.

The following table lists each option and the results it returns:

Option	Result
Field	Uses the date in a specified field.
Expression	Uses a date based on the expression written.
Constant	Uses a date that you specify as a constant.
Current Date	Uses the current system date. This is the most frequently used option.

Effective Sequence

The **JOB** record includes an Effective Sequence number in addition to an Effective Date. Sequence numbers are important when more than one transaction occurs on the same date for the same employee. The first or lowest sequence number is 0. If a second transaction is entered for the same employee, with the same effective date, that transaction is assigned a sequence number of 1, etc.

The following table lists each option and the results it returns:

Option	Result
First	Returns the first sequence number entered for a specified date.
Last	Returns the last sequence number entered for a specific date. This is the most frequently used option.
All	Returns all sequence numbers for a specific date.

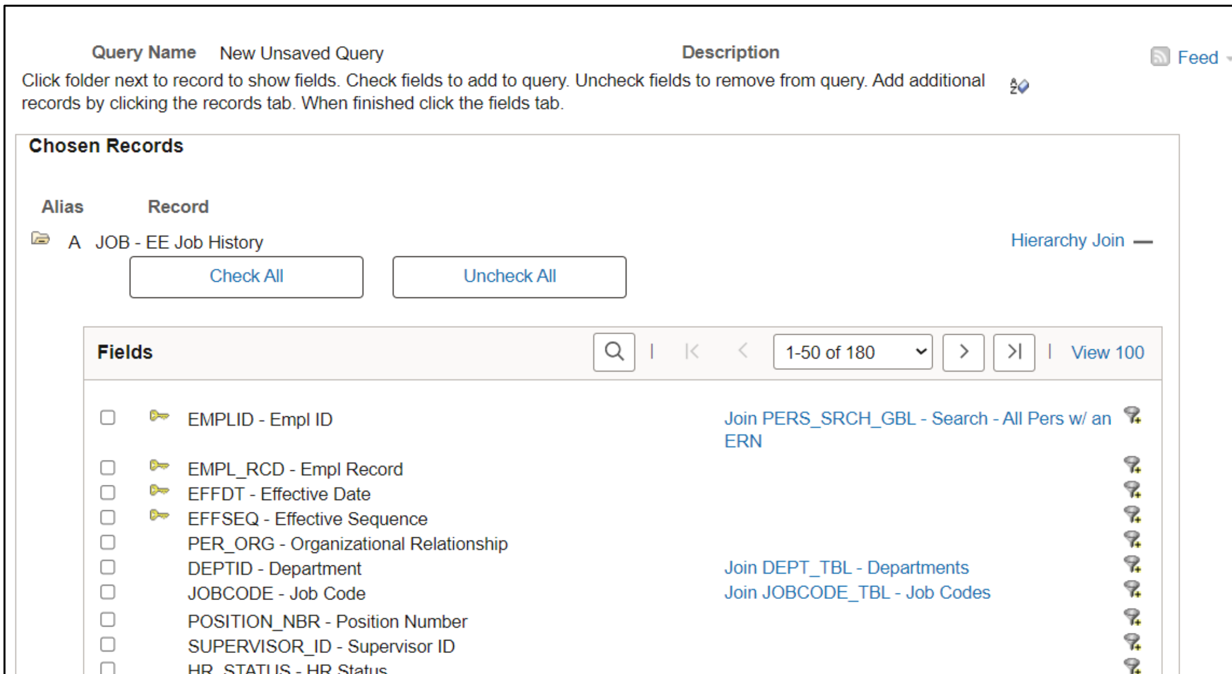
The Query Tab

The *Query* page appears with the available fields from the JOB record once you click the **OK** button in the **Effective Date** message box. The *Query* page enables you to add fields and/or criteria to the query. All the fields in the selected record will be displayed on the *Query* page.

5. Adding Fields and Criteria

Click the checkboxes on the fields shown below; these fields will be included in the results. The selection order is not important at this point. The most used fields are on the first and last pages of the field list. Some field names begin with "*NY_*"; these are customized fields for the PayServ application and are generally on the last page of the field list. If you cannot find the field you're looking for, click to alphabetize the list, this may make it easier to locate. Another way to find the field you are looking for is to use the Find hyperlink.

This screen print only shows a portion of the available fields.



Scroll through the list of fields in the **JOB** record. Some of the fields are not used in PayServ. Fields not being used appear because PayServ is based on an Oracle application which offers the option of linking PayServ to other Oracle applications. In addition, the underlying Oracle application is used by a large number of other organizations, some of which use those fields.

If a field is not listed, it may be in another record. This query will be modified later to add additional records.

This screen print only shows a portion of the fields captured and only a portion of the information/actions regarding the fields. Scroll bars enable more information to be displayed.

Query Name New Unsaved Query Description Feed

View field properties, or use field as criteria in query statement. Reorder / Sort

Fields

Col	Record.Fieldname	Format	Ord	XLAT	Agg	Heading Text	Add Criteria
1	A.EMPLID - Empl ID	Char11				ID	
2	A.EMPL_RCD - Empl Record	Num3.0				Empl Record	
3	A.EFFDT - Effective Date	Date				Eff Date	
4	A.EFFSEQ - Effective Sequence	Num3.0				Sequence	
5	A.DEPTID - Department	Char10				Dept ID	
6	A.EMPL_STATUS - Payroll Status	Char1		N		Pay Status	
7	A.GRADE - Salary Grade	Char3				Grade	

Each selected field will be included as a separate column in the output as seen below.

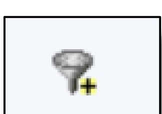
View All | Rerun Query | Download to Excel | Download to XML First 1-100 of 128001 Last

Row	ID	Empl Record	Eff Date	Sequence	Dept ID	Pay Status	Grade
1	[redacted]	0	11/12/2009	0	01020	R	025
2	[redacted]	0	05/01/2003	0	01020	R	024
3	[redacted]	0	10/31/2002	0	01020	R	021
4	[redacted]	0	04/08/2004	1	01020	R	024

The Fields Tab

Click the **Fields** tab. This page enables you to view the fields that have been selected for the query output. Users can view the properties of each field and make changes to headings, sort order and aggregate values by clicking edit.

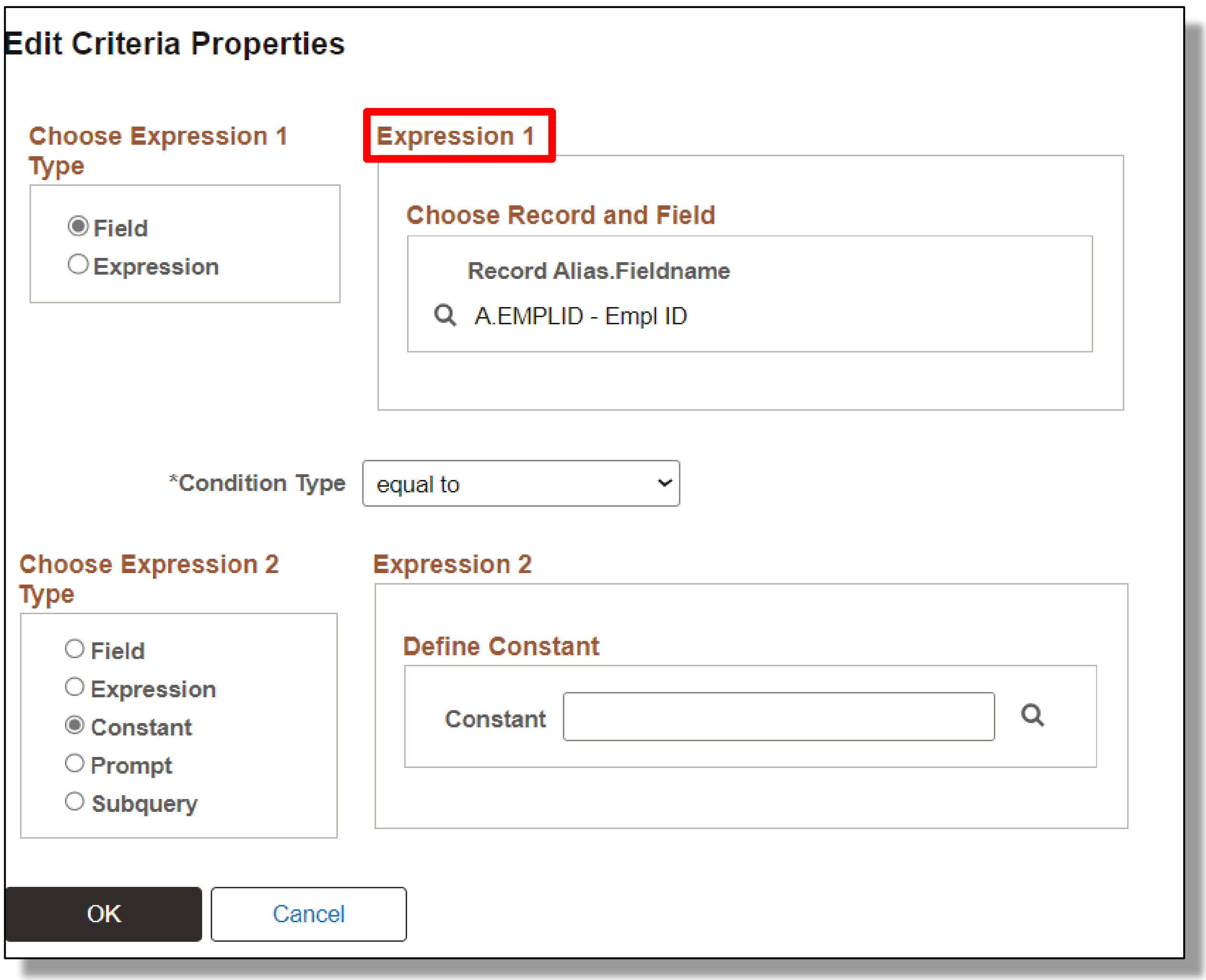
Users add criteria based on the fields by clicking the funnel icon:



Add Criteria for a Field

1. Locate the **EMPLID** field.
2. Click the funnel on the **EMPLID** field row to add a criteria row based on that field.

The *Edit Criteria Properties* window appears with the selected field displayed in the **Expression 1** section.



The *Edit Criteria Properties* page has three sections:

- The **Expression 1** section, at the top, identifies the alias for the record name and field name. In this example, the Expression 1 is A. EMPLID. (“A” is the record alias for the **JOB** record.)

- The **Condition Type** defines the relationship between Expression 1 and Expression 2. The default **Condition Type** in this example is “equal to.” Other **Condition Types** can be selected from the drop-down list.

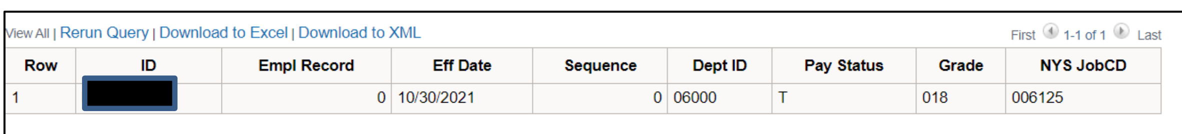
- The **Expression 2** section, at the bottom of the window, includes radio buttons with several options. In this example, the **Constant** radio button is selected and the heading in the right box is **Define Constant**. Other headings will display when different radio buttons are selected.

3. Enter your NYS Empl ID in the **Define Constant** edit box (**Expression 2**).
4. Click **OK**. The *Fields* page re-displays.
5. Click the **Criteria** tab to review your criteria.

Run the Query

It is not necessary to save a query before running it. Click the **Run** tab located on the top right of the page to display the results of the query.

There should only be one row of data. The number of columns will vary based on the number of fields that were checked (selected).



View All | Rerun Query | Download to Excel | Download to XML   First 1-1 of 1 Last

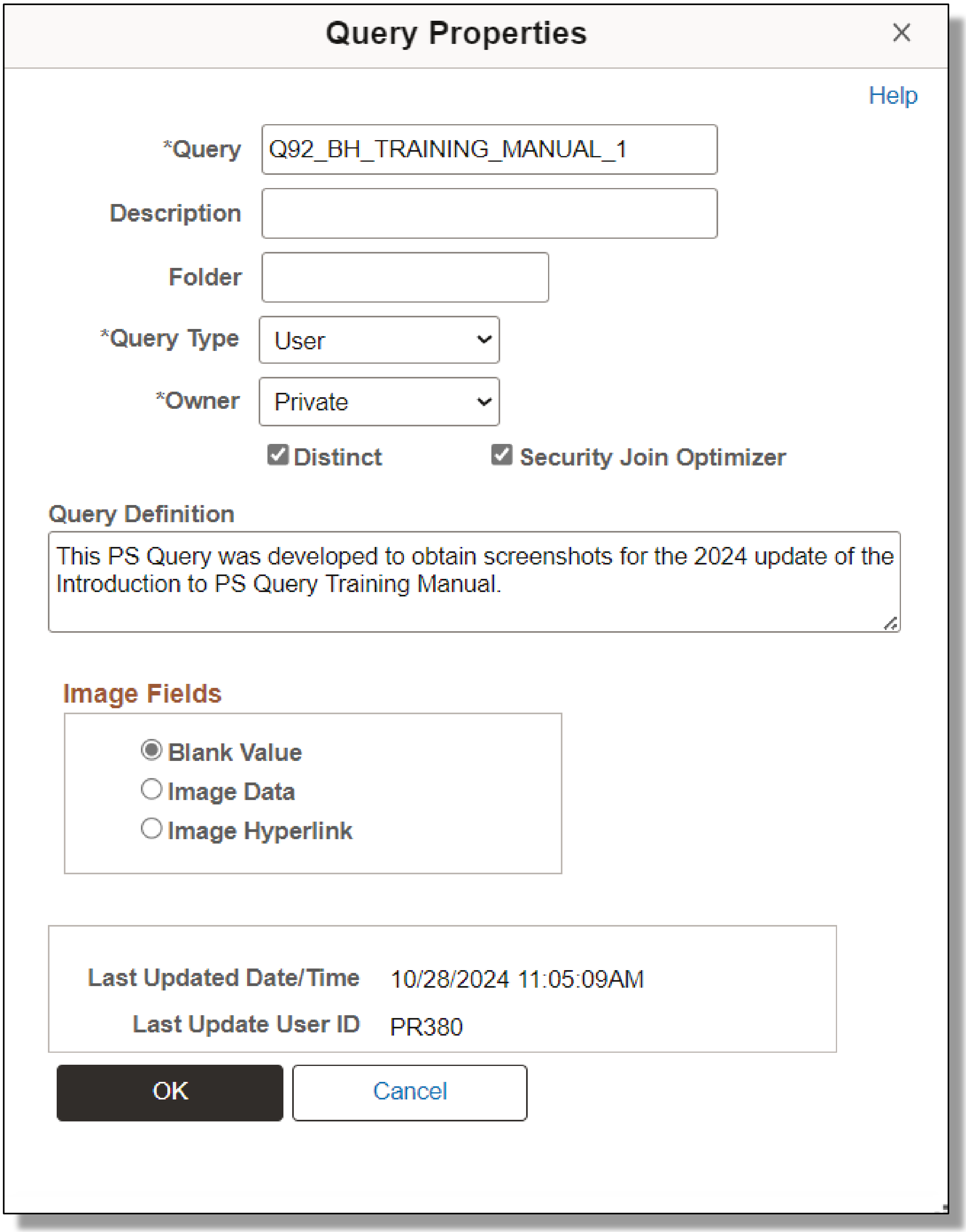
Row	ID	Empl Record	Eff Date	Sequence	Dept ID	Pay Status	Grade	NYS JobCD
1	[redacted]	0	10/30/2021	0	06000	T	018	006125

Save the Query

While it is not necessary to save the query definition, saving will make it possible to use the query again in the future.

The query definition cannot be saved from the results page.

1. Click any other tab.
2. Click the **Properties** hyperlink to name your query.


Query Properties
Help
*Query
Q92_BH_TRAINING_MANUAL_1
Description
Folder
*Query Type
User
*Owner
Private
Distinct
Security Join Optimizer
Query Definition
This PS Query was developed to obtain screenshots for the 2024 update of the Introduction to PS Query Training Manual.
Image Fields
Blank Value
Image Data
Image Hyperlink
Last Updated Date/Time
10/28/2024 11:05:09AM
Last Update User ID
PR380
OK
Cancel

Query Naming Convention

Query names can contain letters and numbers, but the only special character allowed is the underscore – “_”. No hyphens, slashes, spaces, etc., can be used when naming queries.

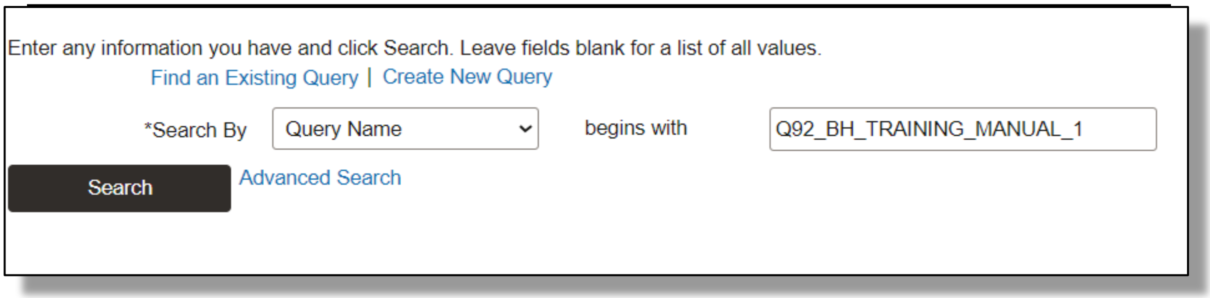
*Completion of the **Description** and **Query Definition** fields in the **Save As** dialog box is not required but is strongly recommended to maintain proper documentation of the query.*

**The prefix LQ is reserved only for Locked Queries created by OSC. Agencies should not name or rename any queries beginning with the letters LQ. If a Locked Query needs to be modified for a user’s particular needs, use the ‘Save As’ process. The modified Locked Query should be renamed beginning with the characters Q92 and should be removed from the ‘LOCKED’ folder location. Q92 refers to PS Queries that were developed using PayServ 9.2 functionality.*

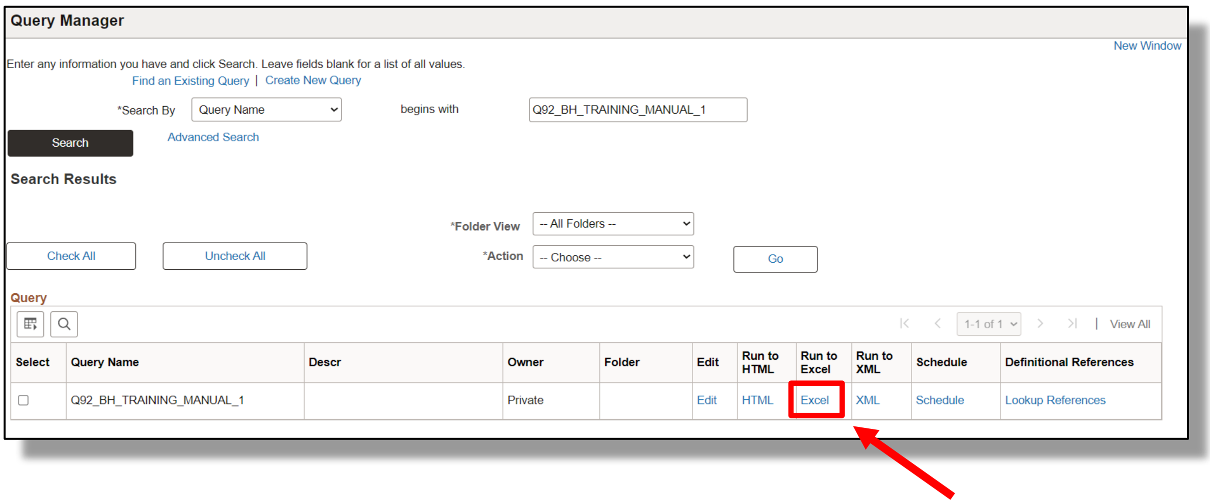
1. Enter the query name in the ***Query** field. For this class, begin all query names with your initials. Enter your initials followed by **“_IND_JOB_RECORD”**.
2. Type **“Individual Current Row”** in the **Description** field. This field can be up to 30 characters.
3. Leave the **Query Type** dropdown menu defaulted to “User.”
4. Leave the **Owner** dropdown menu defaulted to “Private.” A Private query is available only to the user who saved the query.
5. Click the **Distinct** check box so only distinct rows will be returned.
6. Click the **Security Join Optimizer** check box to optimize the record joins.
7. Enter a more detailed description of the query in the **Query Definition** field. Use this section for notations, creation dates or other reminders pertinent to this query.
8. Click **OK**. This will close the Save dialog box and return you to the previous page.
9. Click the **Save** button to save your query.
10. If you plan on running the query now, copy the name of the query.

Saving Query Results to Excel

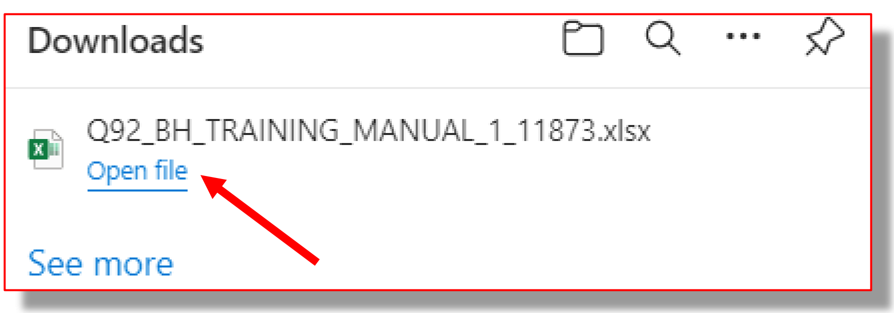
1. Paste the query name in the Query Manager window, searching by Query Name begins with “Query Name”



2. Select **Search**
3. Select **Run to Excel**



4. When the Excel report is ready to be opened, it will appear as the first item listed in a popup window in the upper right portion of the screen. When the file is ready to be opened, the “Open file” link will appear. Click on “Open file.”



5. The Excel file will be returned.

	A	B	C	D	E	F	G	H
1	Q92_BH_TRAINING_MANUAL_1	1						
2	ID	Empl Record	Eff Date	Sequence	Dept ID	Pay Status	Grade	NYS JobCD
3	[redacted]	0	10/30/2021	0	06000	T	018	006125
4								

Reminder: You may be saving confidential payroll information. While this Excel document can be saved to any drive to which you have access, this information must be secured and should not be saved on workstation hard drives (C: Drives), CD's or flash drives.

6. Close the Excel spreadsheet after your query results have been saved.

YOU HAVE SUCCESSFULLY CREATED, SAVED AND RUN A NEW QUERY!

7. Click any other tab and then click the **Return to Search** button to return to the Query Manager *Search* page.

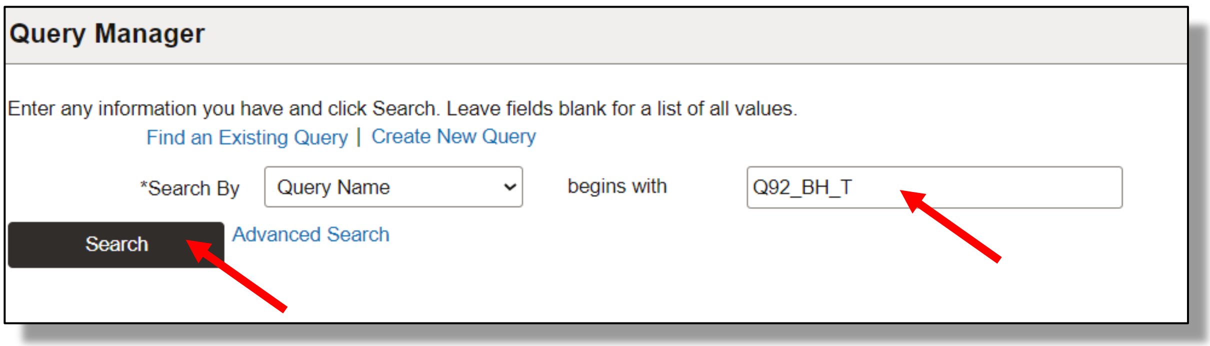
6. Finding and Renaming an Existing Query

Why might you want to find an existing query?

Find an Existing Query

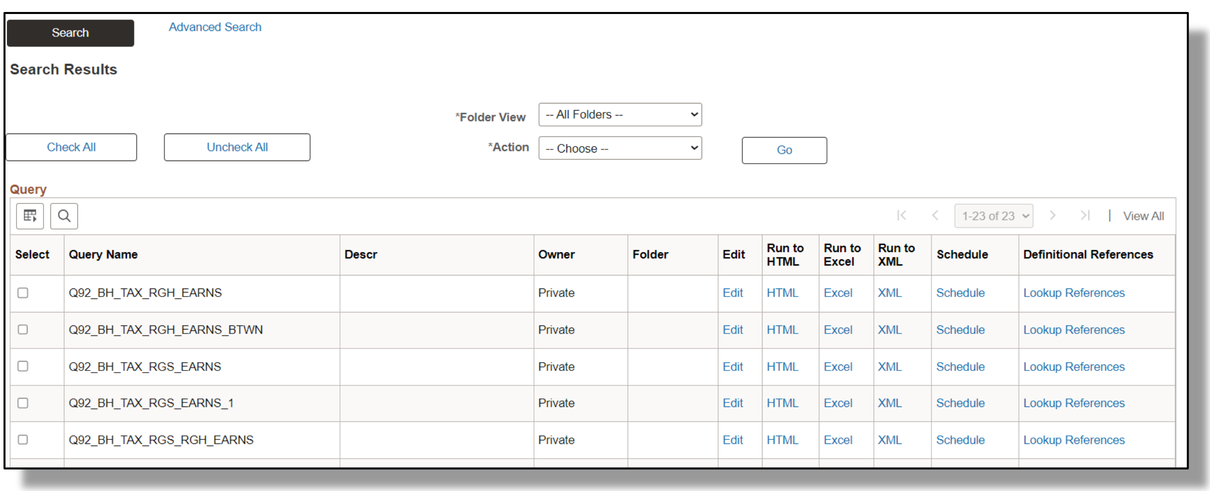
First, search for the query you just created (named "_Ind_Job_Record") using your initials.

Enter your initials (or the beginning of the query name) in the **begins with** field.

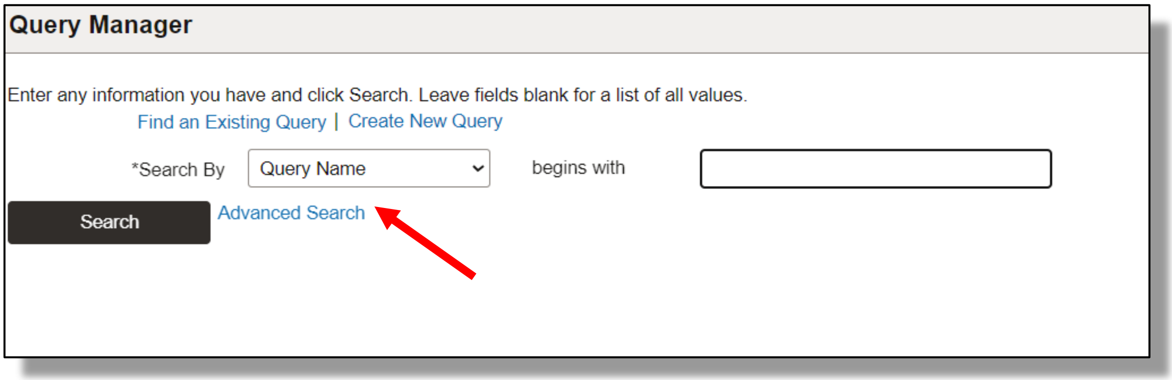


Click the **Search** button.

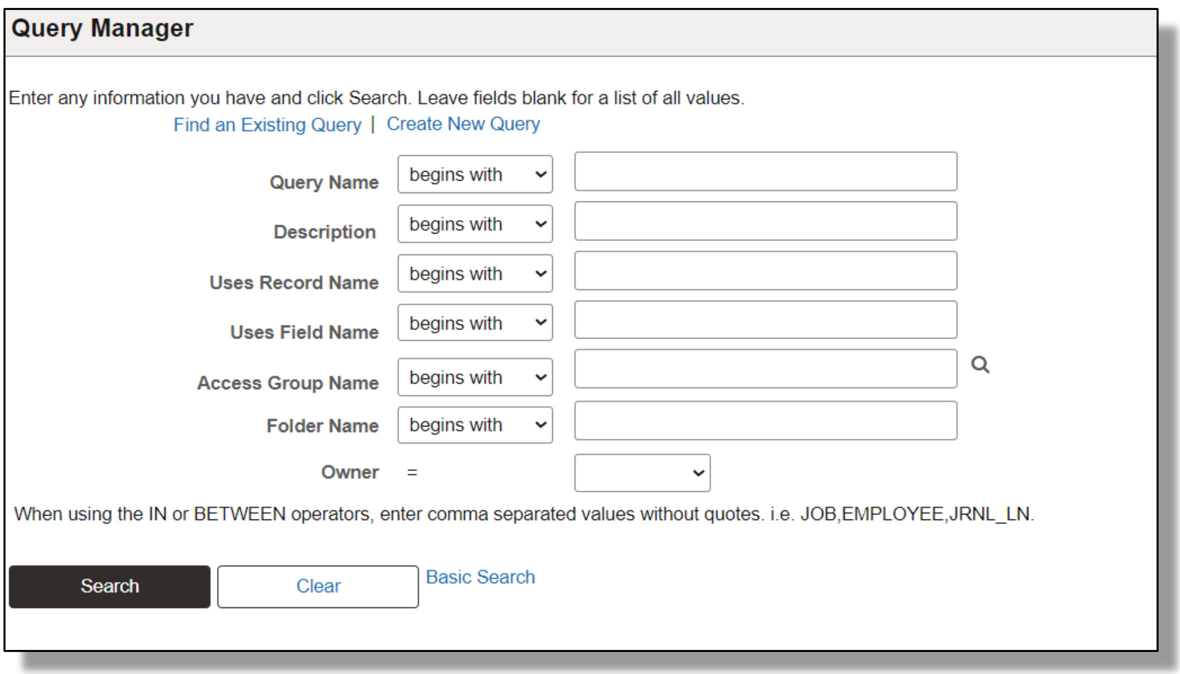
A partial list of query names that begin with your initials will open. Private queries are listed before Public queries.



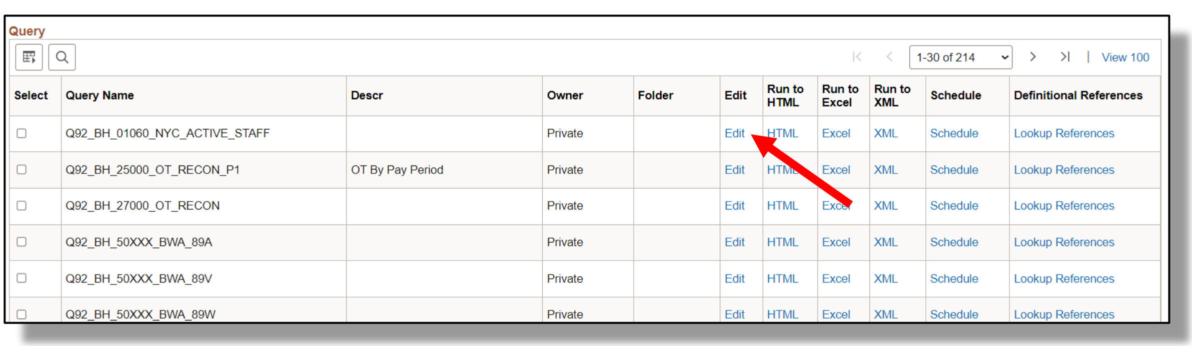
If you do not know the beginning of the query name you are looking for, click the Advanced Search hyperlink to choose a different search option.



From here, you can search for a query by what the query name contains. Enter the information you know, such as your agency code (02000), LOC, “Locked,” etc., into the appropriate search box on the right.



When you find the query you want to modify, click the <u>Edit</u> link.

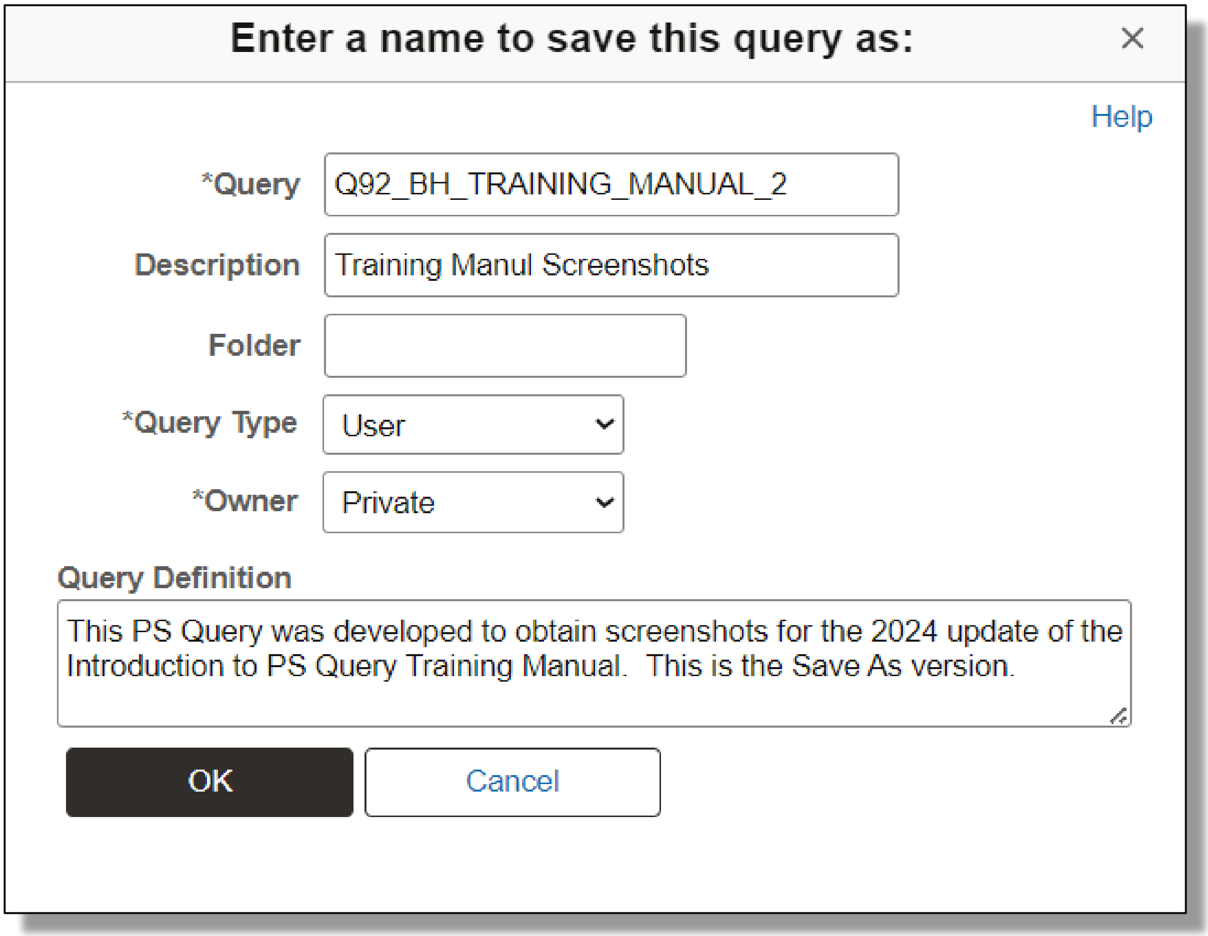


Select	Query Name	Descr	Owner	Folder	Edit	Run to HTML	Run to Excel	Run to XML	Schedule	Definitional References
☐	Q92_BH_01060_NYC_ACTIVE_STAFF		Private		Edit	HTML	Excel	XML	Schedule	Lookup References
☐	Q92_BH_25000_OT_RECON_P1	OT By Pay Period	Private		Edit	HTML	Excel	XML	Schedule	Lookup References
☐	Q92_BH_27000_OT_RECON		Private		Edit	HTML	Excel	XML	Schedule	Lookup References
☐	Q92_BH_50XXX_BWA_89A		Private		Edit	HTML	Excel	XML	Schedule	Lookup References
☐	Q92_BH_50XXX_BWA_89V		Private		Edit	HTML	Excel	XML	Schedule	Lookup References
☐	Q92_BH_50XXX_BWA_89W		Private		Edit	HTML	Excel	XML	Schedule	Lookup References

Save Existing Query with a New Name

Saving the query with a new name is a good practice. This ensures that the original query will be available in case problems arise during the modification process.

1. Click **Save As** at the bottom of the page to display the **Save As** dialog box.



2. Enter a new name for the query. Modify the original name by replacing 1 with 2 to indicate second version - **"MANUAL_2"**
3. Modify the **Description** field, the **Owner** (Public or Private) drop down menu, and the **Query Definition** section as needed. It is a good practice to add notes to the **Query Definition** section to remind you of what changes you made and why.
4. Click **OK**. You will see the newly saved name just after the **Query Name** label on the upper left-hand corner of the screen.

Do you know another way to rename a query? *You should never rename someone else's query; you should always execute a "Save As".*

7. Modifying an Existing Query

A query design is rarely fixed. There are usually at least some minor adjustments and sometimes major re-design involved in query development.

Here are a few of the things you'll want to consider when planning for query development:

- What are some possible changes to the previous query?
- Are there any other fields to be added? Are these fields available from the current record or do we need to add another record?
- Are there existing fields that could be removed?
- Are additional criteria needed? Can the current criteria be modified?
- How should the data in the report be sorted?
- Should the column layout be modified? Are the column headings okay?
- Will the values in each column be understood by others viewing this report?

Adding a New Field from another Record

The current query contains the **EMPLID** field but does not include the employee's name. The **Name** field is not included in the **JOB** record; it is in the **PERSONAL_DATA** record.

Refer to the additional reference materials at the end of this manual for frequently used records and field definitions.

Joining Records

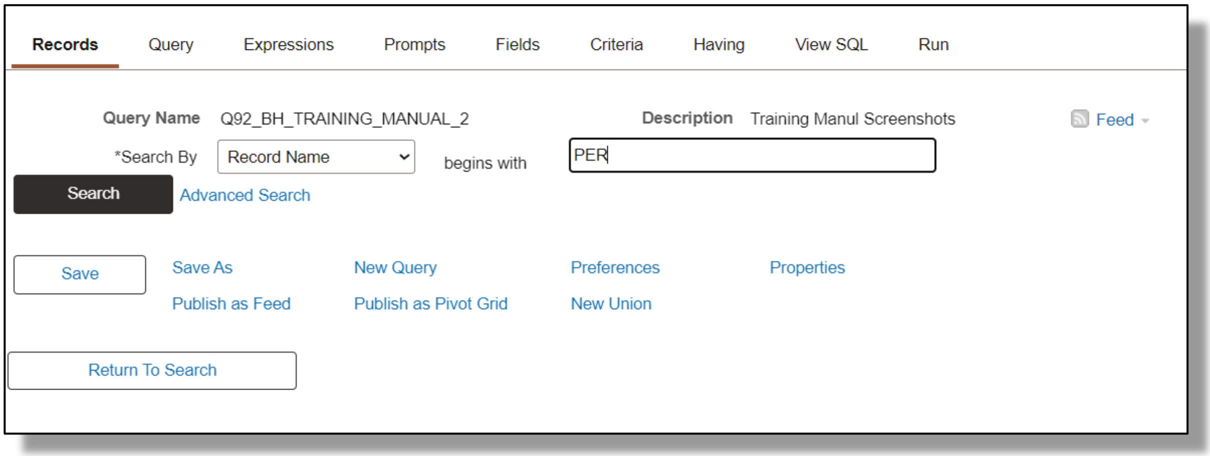
A **Join** in a query is defined by locating a field or set of fields that are common to both records. The join adds criteria to the query definition, linking the data together based on shared values in these field(s).

For example, the **Job** and **Personal Data** records both contain the **EMPLID** field. PS Query includes *Auto-Join* functionality that, in many cases, will automatically add the appropriate criteria to join two records.

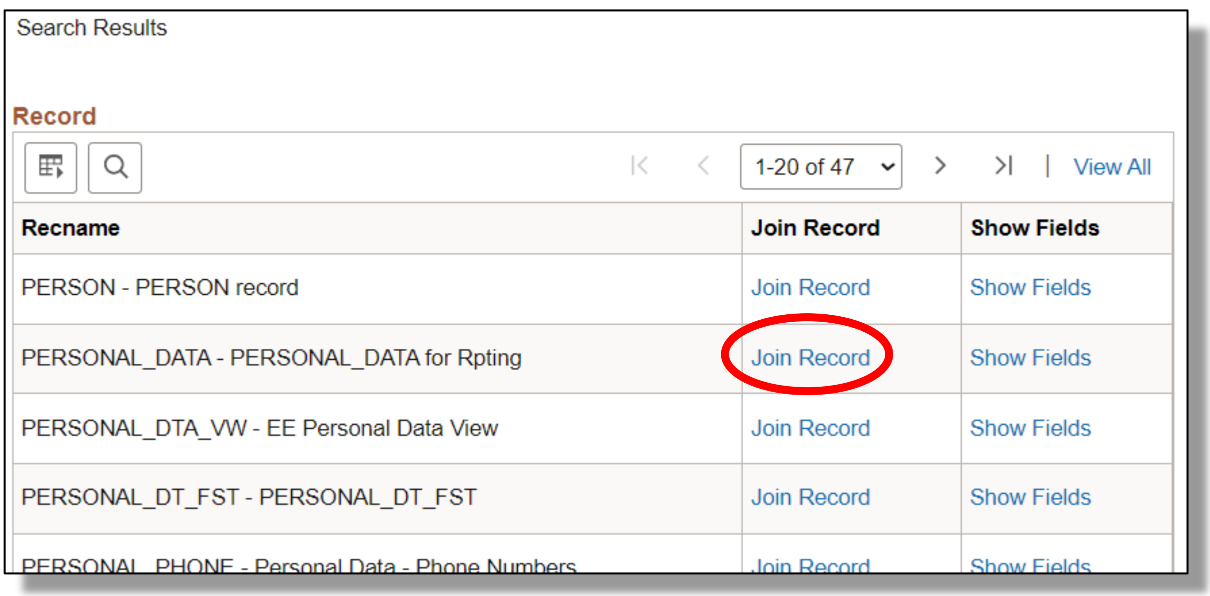
In this example, we need to add the **PERSONAL_DATA** record to the query definition.

1. Click the **Records** tab.

2. Enter “PER” in the **Search by: Record Name begins with** field.

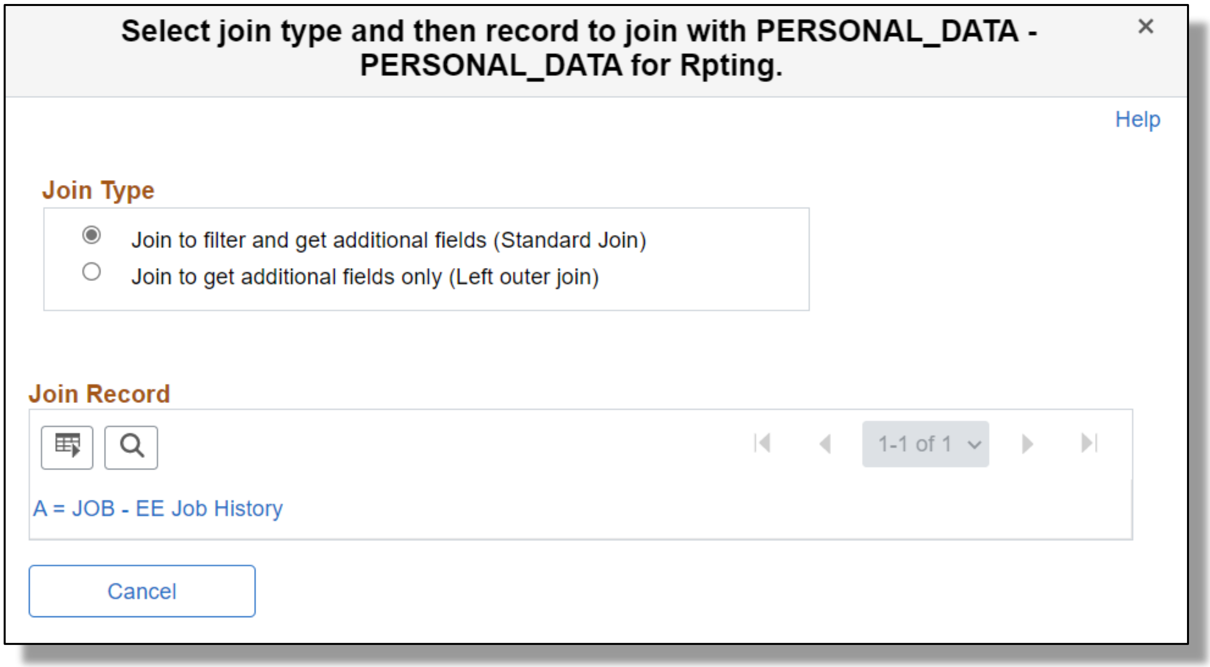


3. Click **Search** to return a partial list of records that begin with “PER.” (The record list could vary based on your access or security)



4. Click the Join Record hyperlink on the **PERSONAL_DATA** record row.

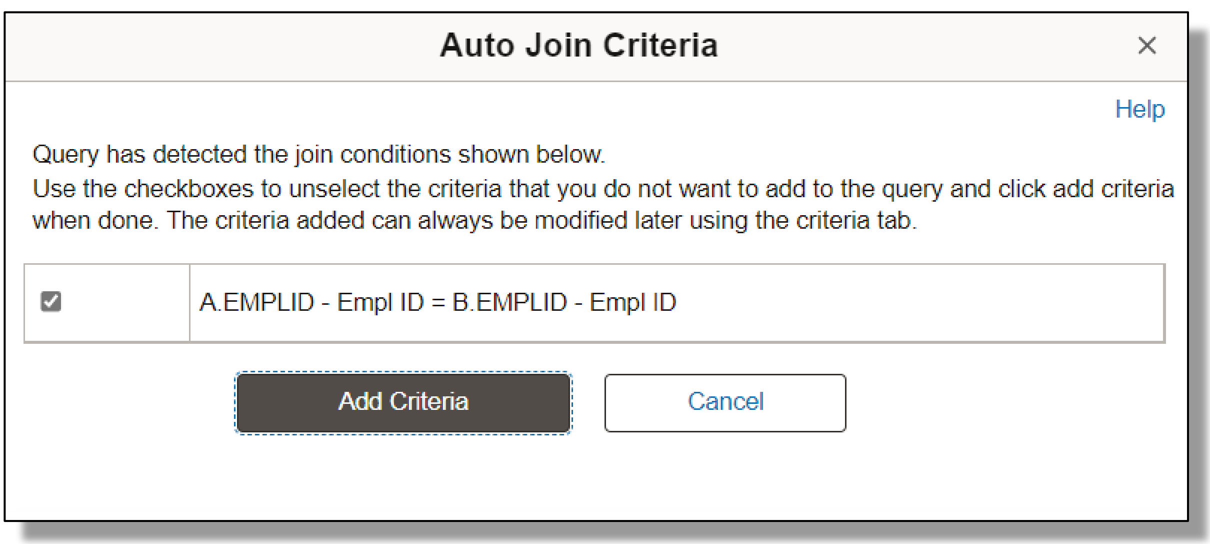
Auto Joins



The **Standard Join** option is selected by default. In very rare circumstances you will change to the **Left outer join**.

1. Click the JOB record (A = JOB – EE Job History). The letter **"A"** is an alias name for the **JOB** record or reference to the record name.

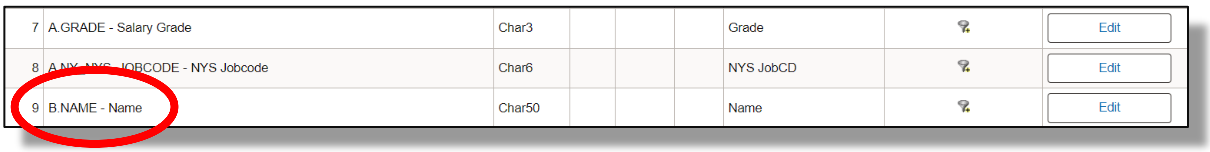
2. Click the **Add Criteria** button in the **Auto Join** window. In this query the A.Emplid is from the **JOB** record and must equal the B.Emplid from the **Personal Data** record.



***Auto Join locates the key field or fields that are common to both records** and identifies the appropriate criteria that should be added to join the records.*

3. Click the checkbox on the **Name** field from the **Personal_Data** record.

3. Click the **Fields** tab. Verify that the **Name** field has been added to the query definition.



7	A.GRADE - Salary Grade	Char3				Grade		Edit
8	A.NY_NYS_JOBCODE - NYS Jobcode	Char6				NYS JobCD		Edit
9	B.NAME - Name	Char50				Name		Edit

Aliases- *The letters "A" and "B" that precede the field names are aliases. An alias is a reference letter that is used as a substitute for the full record name. In this query, the "A" is an alias for the JOB record and the "B" is an alias for the PERSONAL_DATA record.*

5. Click **Save** to save the changes. It is a good practice to save frequently to avoid losing your work if the system crashes or times out.

6. Click the **Run** tab to see the results. If you used your own EMPLID, you should see your name in the results.

7. Click on any other tab to exit your results.

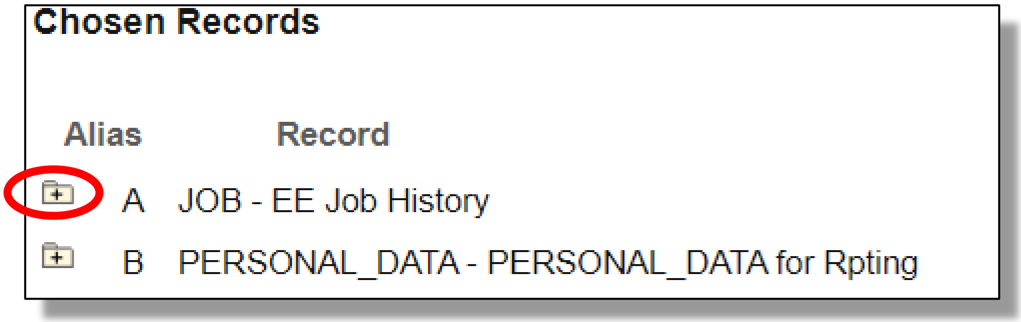
Related Record Joins

A **Related Record Join** is another type of join in PS Query. It automatically joins two records, based on a relationship that has been predefined in the Payroll System. It is used to retrieve more detailed information about a field, such as the agency name associated with a DEPTID, or the job title associated with a NY_NYS_JOBCODE.

In many cases, a report should include the description of a coded value such as the NY_NYS_JOBCODE. This is optional but is a commonly used field when you want to include the employee's title in the report.

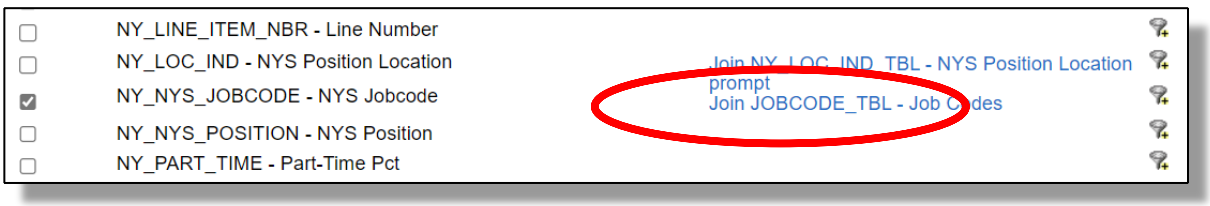
1. Click the **Query** tab to display the records selected for the query.

2. Click the **Plus** sign to expand the **JOB** record, if necessary.

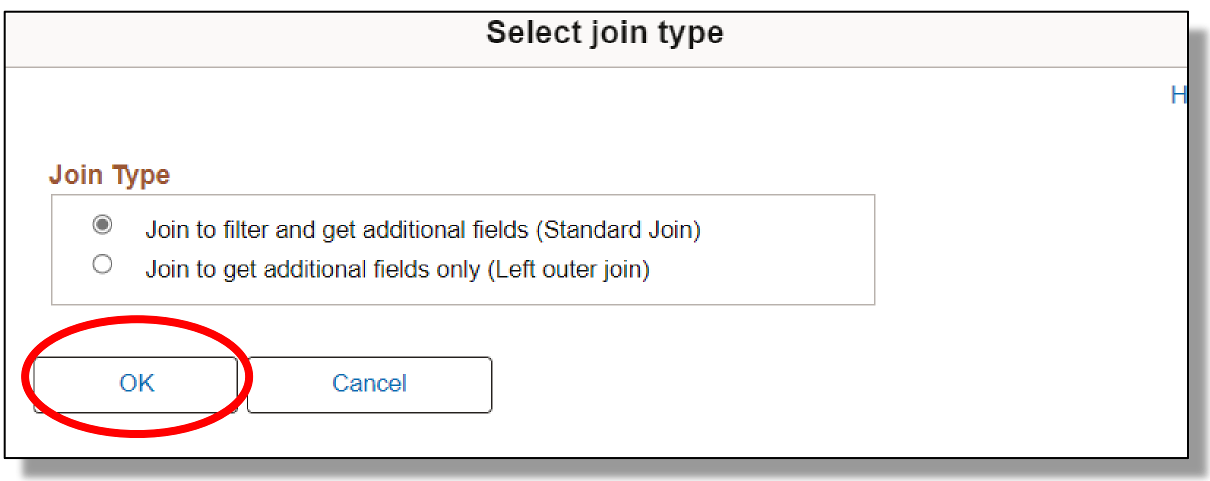


3. Scroll to locate the **NY_NYS_JOBCODE** field in the **JOB** record.

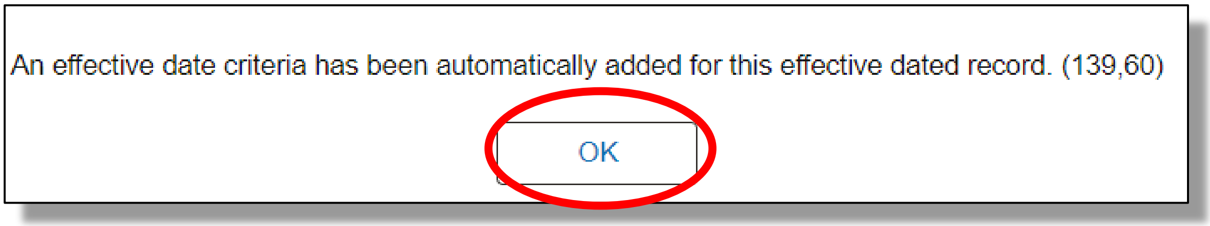
4. Click the Join JOBCODE_TBL- Job Codes hyperlink on the **NY_NYS_JOBCODE** row. A Related Record Join is available to retrieve the JOBCODE description.



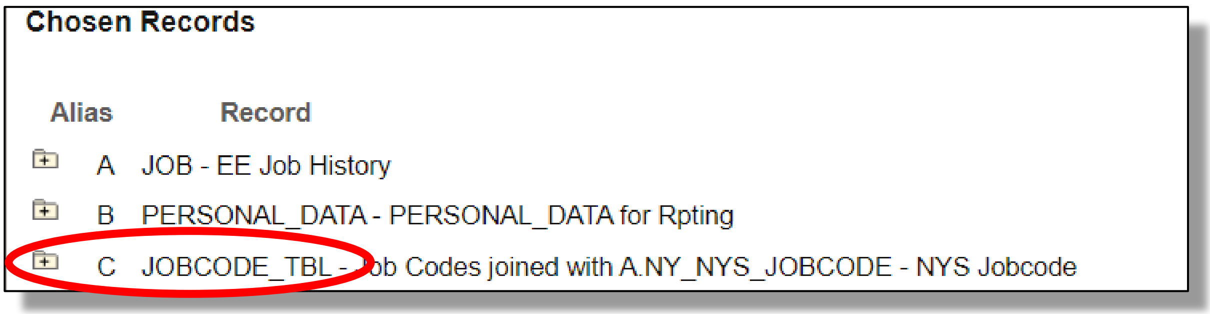
5. Click **OK** to accept the default join type.



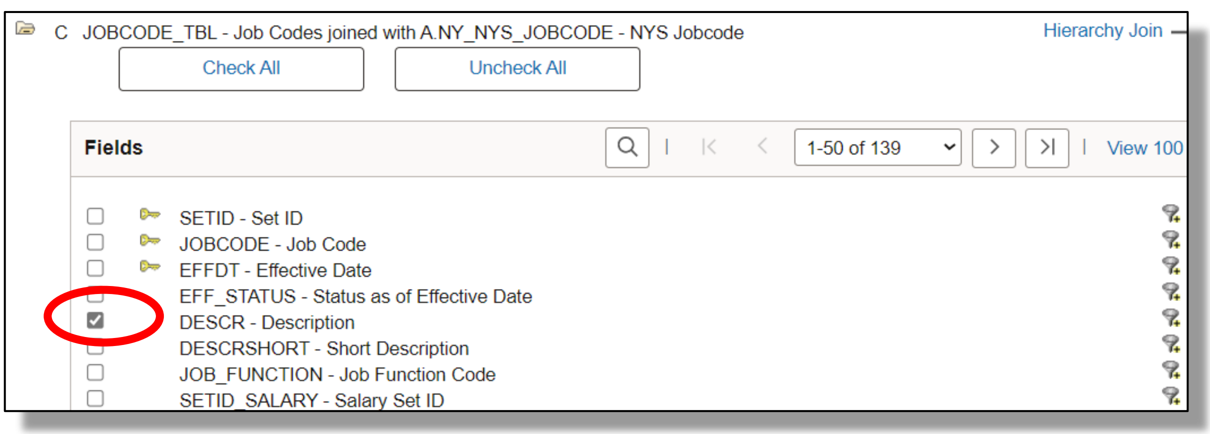
6. Click **OK** to accept the Effective Date criteria message. The **JobCode_Tbl** record is effective dated. This criterion selects the current description of the JobCode.



The *Query* page opens and the **JOBCODE_TBL** has been added to the query. It has an alias of **"C"**.



7. Click the checkbox on the ***DESCR - Description*** field in the **JOBCODE_TBL** record. This will add the description of the Job Code to the output. This is the recommended method to include the employee's title in the report.



8. Click the **Fields** tab to verify that all new fields have been added to the query. Based on the fields you have chosen; your list could be different from this screen print.

Fields

1-9 of 9 | View All

Col	Record.Fieldname	Format	Ord	XLAT	Agg	Heading Text	Add Criteria	Edit	Delete
1	A.EMPLID - Empl ID	Char11				ID		Edit	—
2	A.EMPL_RCD - Empl Record	Num3.0				Empl Record		Edit	—
3	A.EFFDT - Effective Date	Date				Eff Date		Edit	—
4	A.EFFSEQ - Effective Sequence	Num3.0				Sequence		Edit	—
5	A.DEPTID - Department	Char10				Dept ID		Edit	—
6	A.EMPL_STATUS - Payroll Status	Char1		N		Pay Status		Edit	—
7	A.GRADE - Salary Grade	Char3				Grade		Edit	—
8	A.NY_NYS_JOBCODE - NYS Jobcode	Char6				NYS JobCD		Edit	—
9	C.DESCR - Description	Char30				Descr		Edit	—

9. Click the **Criteria** tab to verify all criteria are accurate.

10. Click the **Run** tab to see the results. You should see the *Name* and *Title* for the EMPLID chosen.

View All | Rerun Query | Download to Excel | Download to XML

First 1-1 of 1 Last

Row	ID	Empl Record	Eff Date	Sequence	Dept ID	Pay Status	Grade	NYS JobCD	Name	Descr
1	[redacted]	0	10/30/2021	0	06000	T	018	006125	[redacted]	FOOD INSPECTOR 1

11. Click on any other tab to get out of your results.

12. Click **Save** to save the changes.

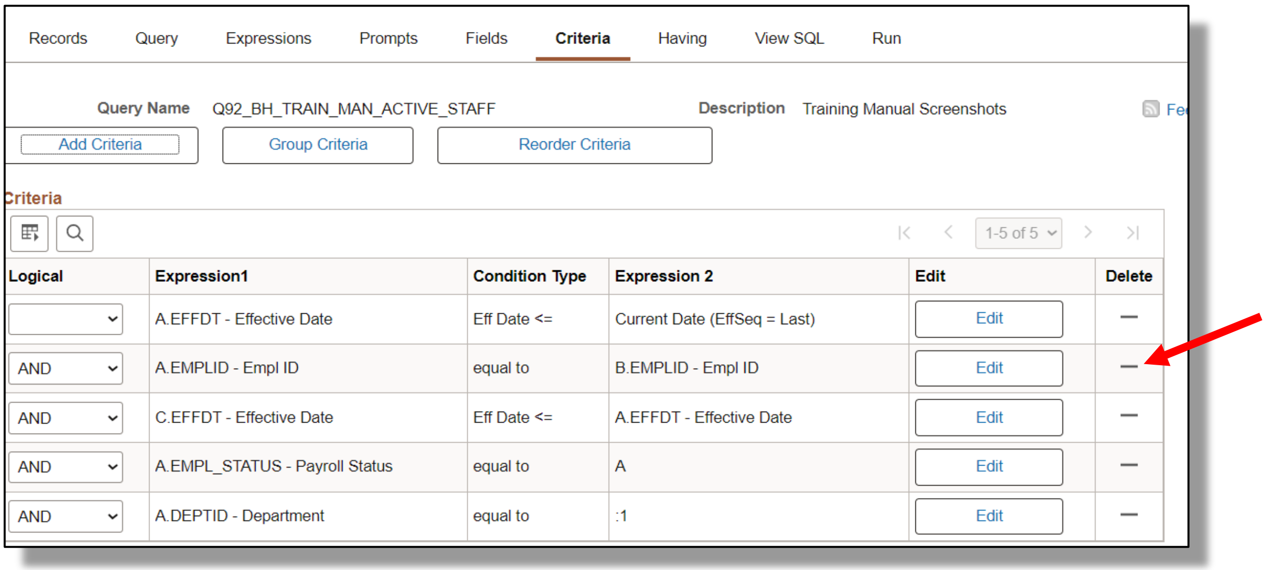
Save the Query with a New Name

1. Click the Save-As hyperlink and save the query with a new name. Type your initials, followed by an underscore **"_ACTIVE_STAFF"** and change the description to also say "Active Staff".

2. Click **OK**.

8. Modify Criteria

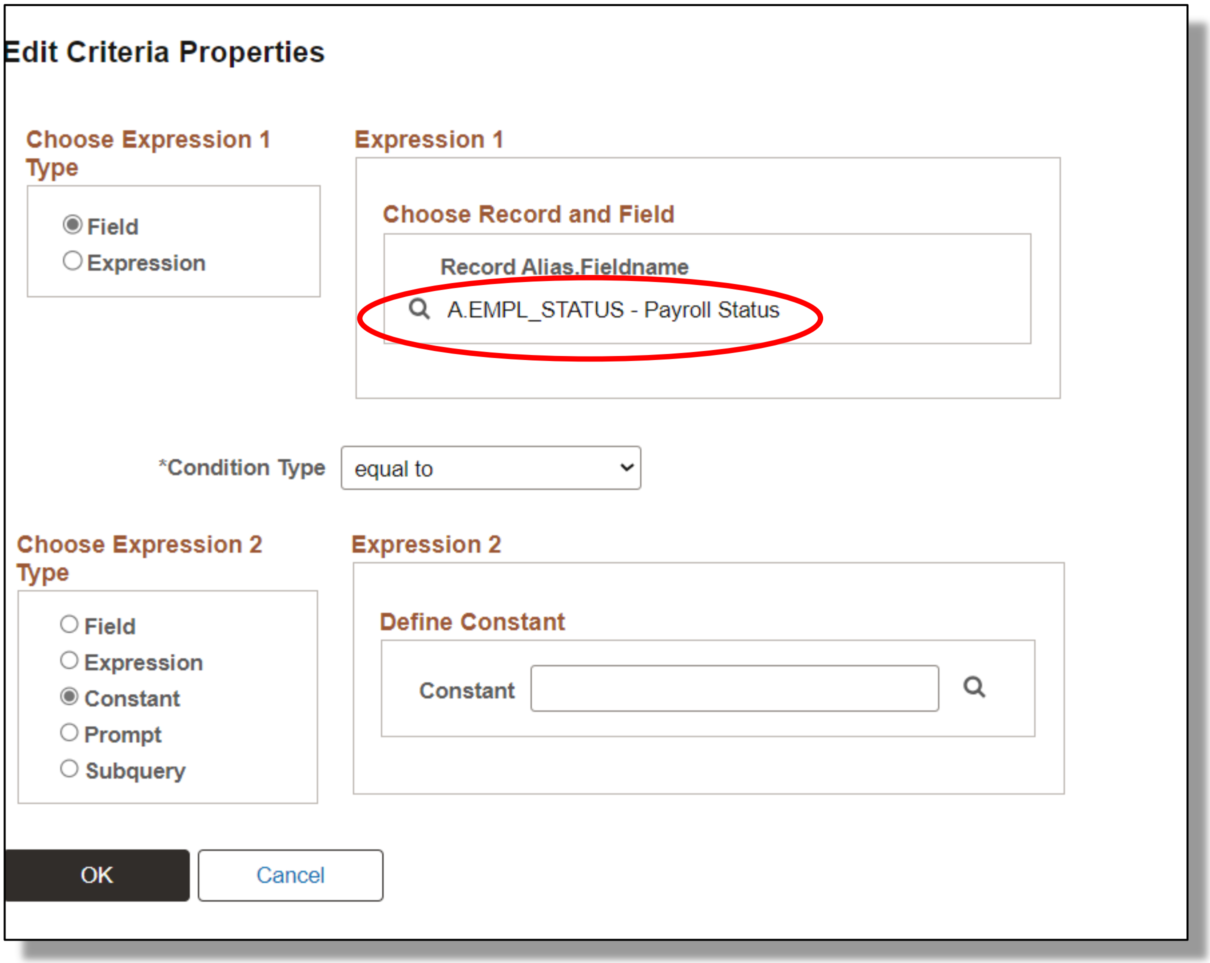
1. Click the **Criteria** tab to view existing criteria.
2. Click the **Minus** sign on the ***EMPLID*** criteria row to remove the criteria. The new query would retrieve all active staff in your agency, if these criteria remained in the query, the results would only include one employee.



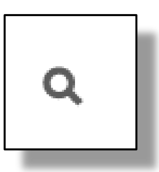
3. Click the **Fields** tab.

4. Locate the ***EMPL_STATUS*** field. Click the  icon on that row to add a criteria row based on that field.

The *Edit Criteria Properties* window appears with the selected field displayed in the **Expression 1** section.



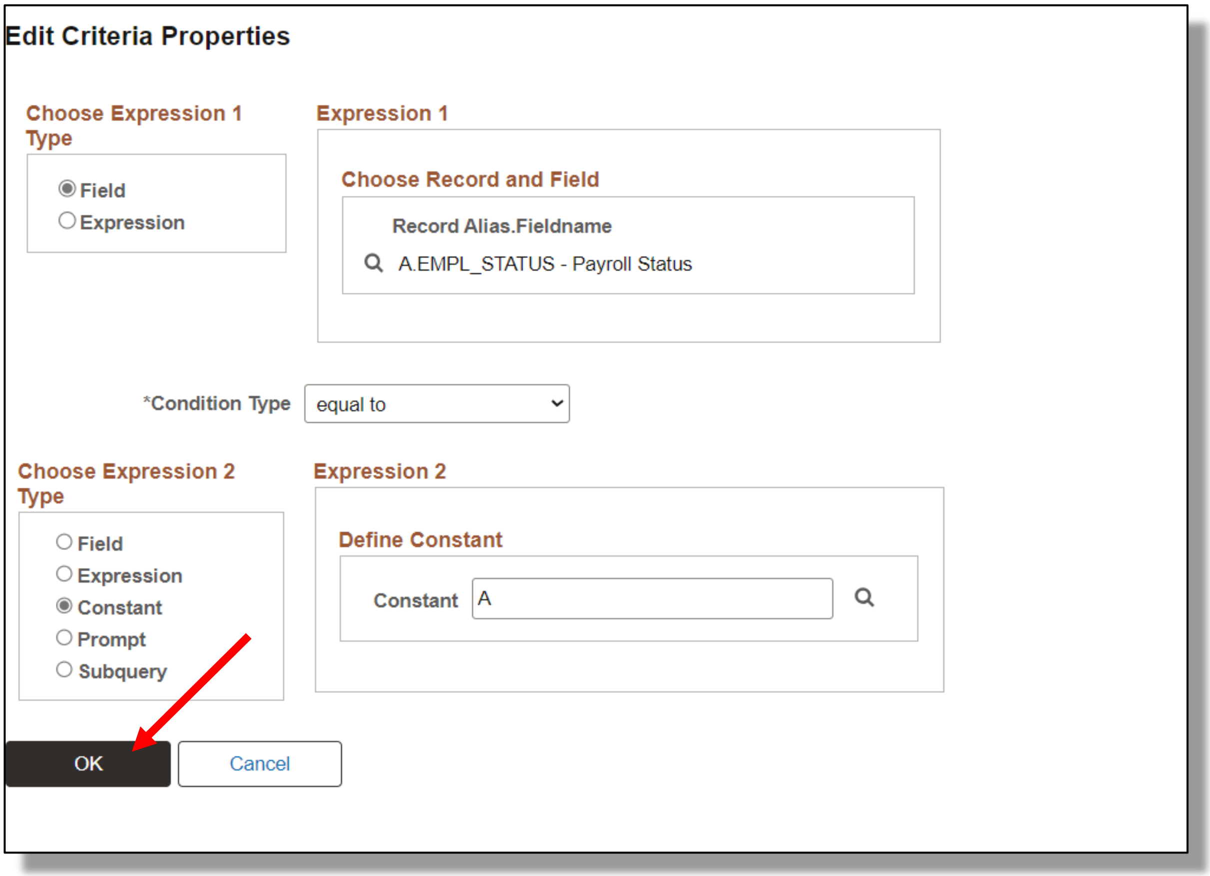
5. Click the <u>Lookup</u> hyperlink in the **Expression 2** section to display a list of valid values for this field:



6. **Click Select Constant** on the Field Value row for “**A**" to retrieve only active employees. An alternate method is to enter the letter “A” in the **Define Constant** section. Once the value is selected, you are returned to the *Edit Criteria Properties* page.

Field Value	Translate Long Name	Translate Short Name	Select Constant
D	Deceased	Deceased	Select Constant
L	Leave of Absence	Leave	Select Constant
P	Leave With Pay	Leave W/Py	Select Constant
Q	Retired With Pay	Ret w/Pay	Select Constant
R	Retired	Retired	Select Constant
S	Suspended	Suspended	Select Constant
T	Terminated	Terminated	Select Constant
U	Terminated With Pay	Term w/Pay	Select Constant
V	Terminated Pension Pay Out	Term w/Pen	Select Constant
W	Short Work Break	Work Break	Select Constant
X	Retired-Pension Administration	Ret - PAdm	Select Constant
A	Active	Active	Select Constant

8. Click **OK**. The *Fields* page re-displays.



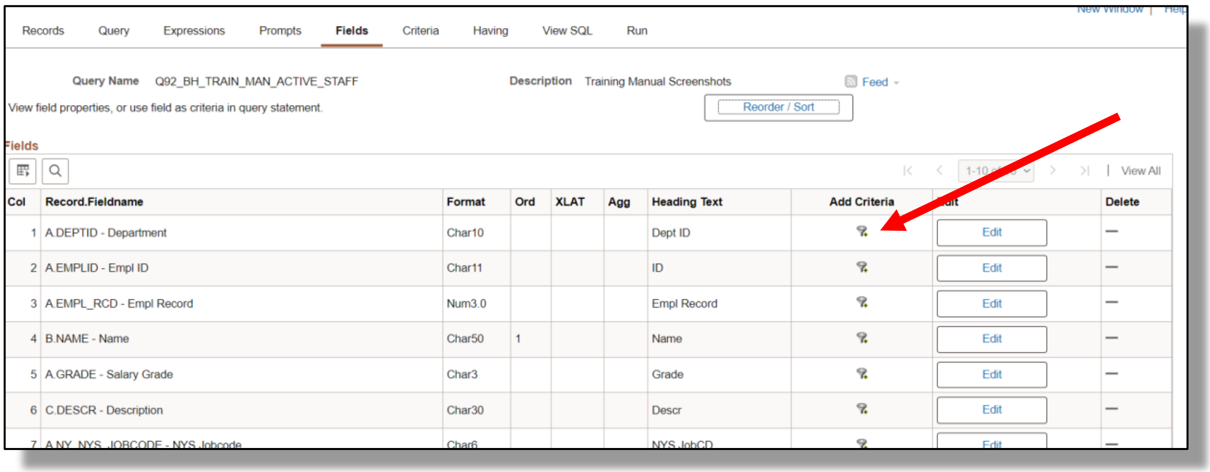
9. Click the **Criteria** tab to view existing criteria.
10. **Save** the query.

Adding a Prompt

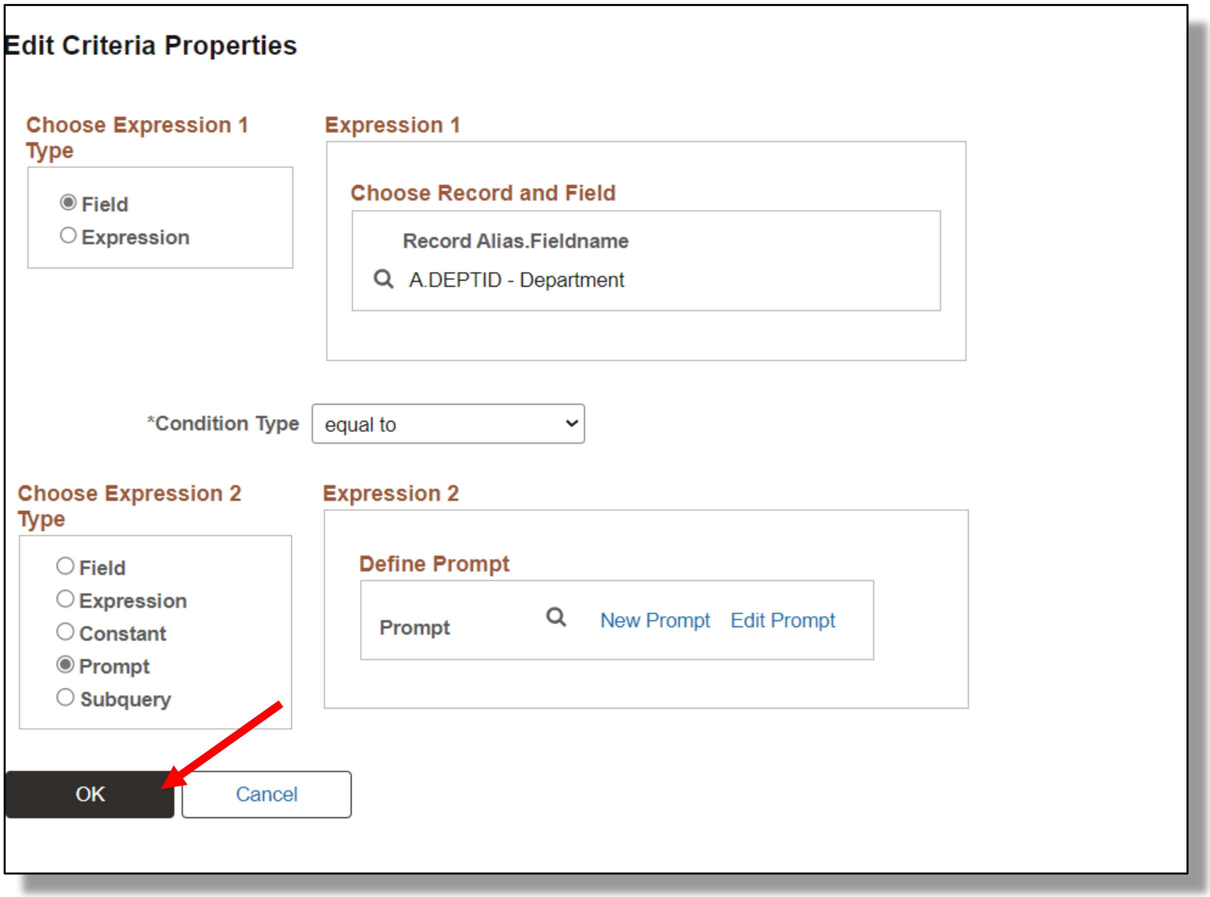
A criteria prompt makes the query more flexible because the user can filter the results at run-time by entering a value in a prompt box.

1. Click the **Fields** tab.

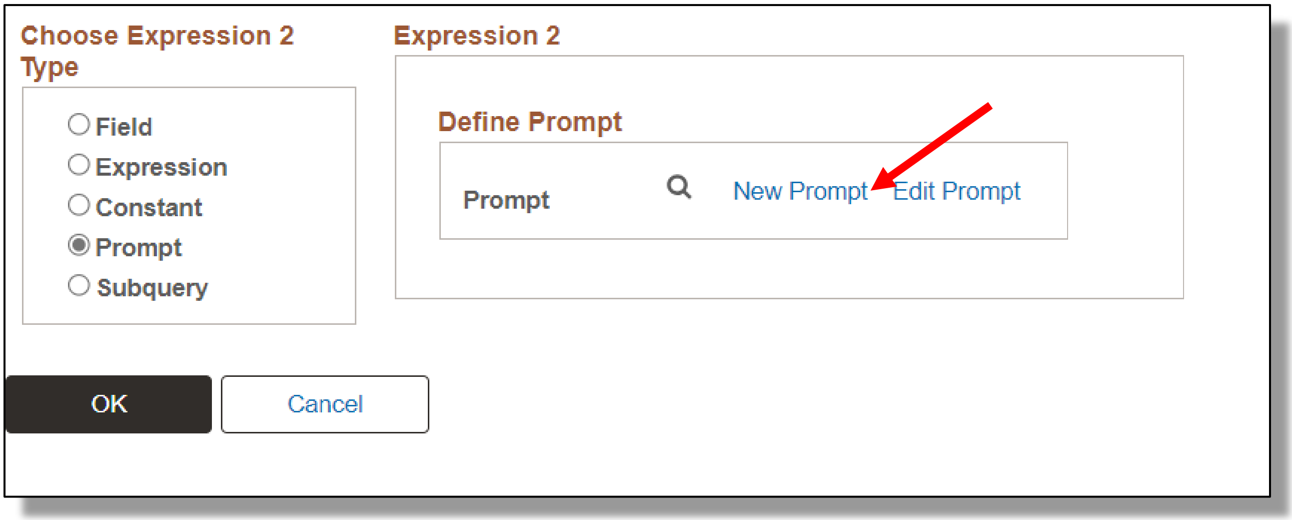
2. Click the **Add Criteria** icon on the ***DEPTID*** field to open the Edit Criteria Properties window.



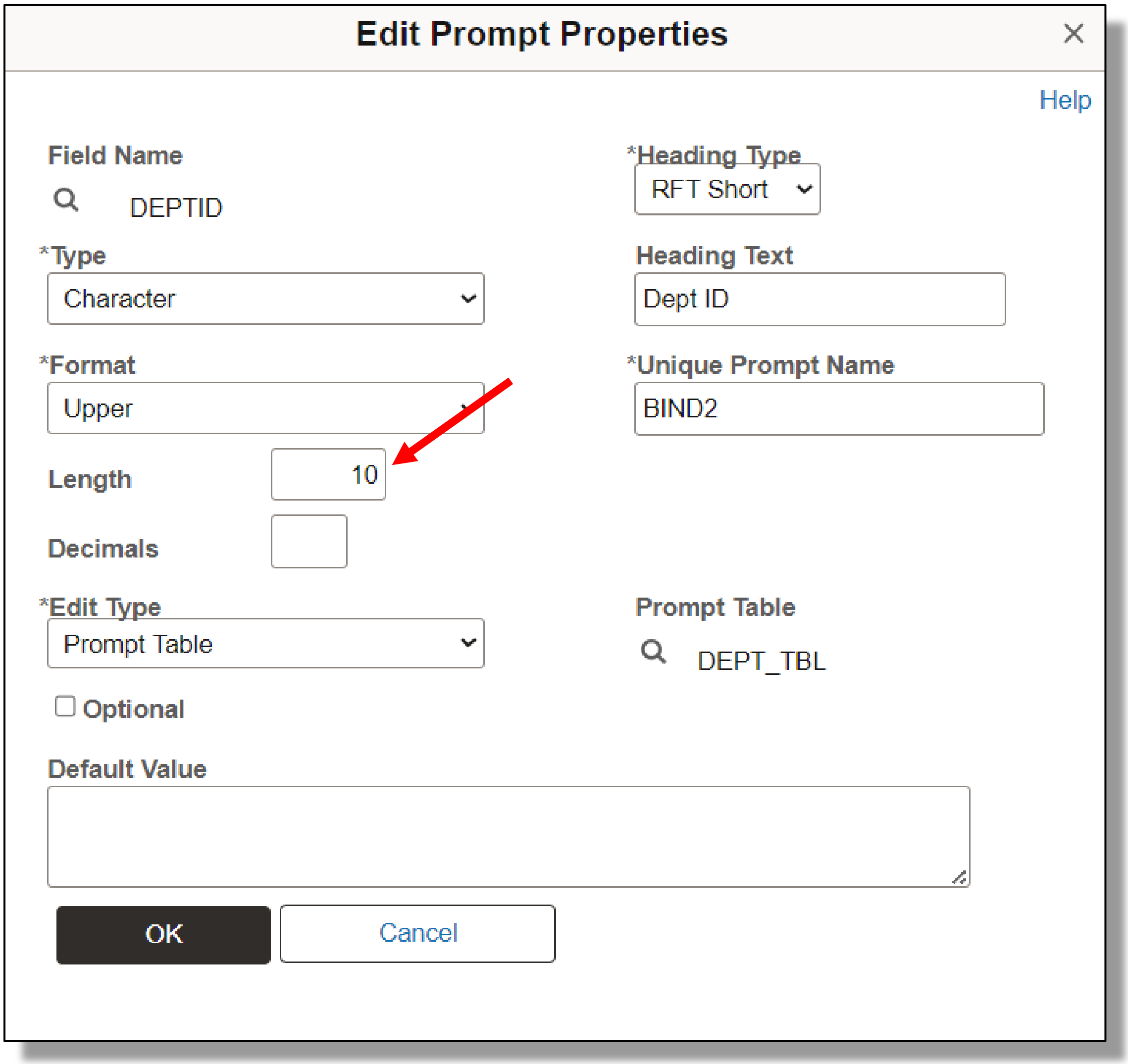
3. Click the **Prompt** radio button in the **Choose Expression 2 Type** section.



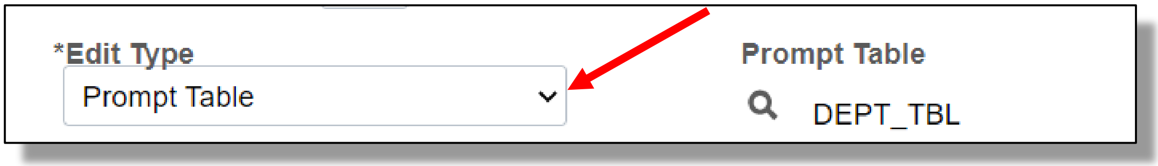
4. Click the New Prompt hyperlink in the **Define Prompt** section.



5. In most cases, the default options on the *Prompt Properties* page are acceptable. But, since the **DEPTID** field is 10-characters long, the *Prompt Properties* must be edited to accept a 5-character Department ID.

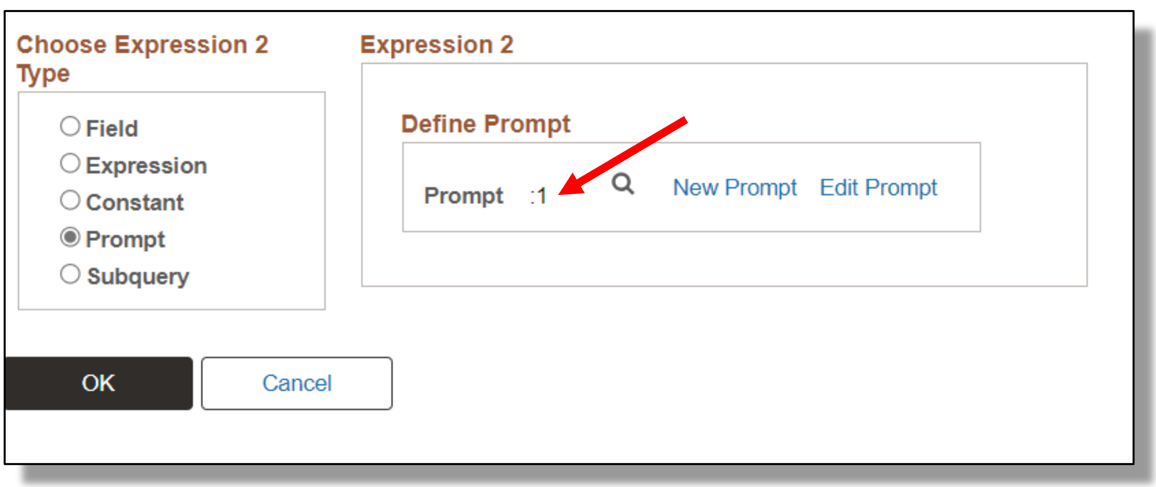


6. Click the down arrow in the **Edit Type** section. Change the default of ***Prompt Table*** to “No Table Edit.” In some cases, the **Edit Type** field will default to “No Table Edit”.



7. Click **OK** to accept this change and **OK** again to close the prompt properties window.

8. Review the criteria page and verify that the **Dept_ID** prompt is defined. The ***“:1”*** indicates that the prompt has been defined.

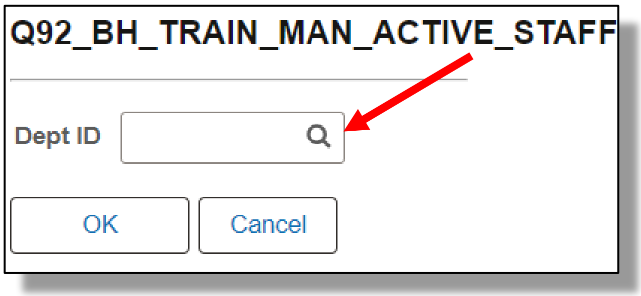


9. Make sure that there are no incomplete or blank criteria rows

10. Click the **Save** button.

11. Click the Run hyperlink.

12. Enter your DEPTID in the **DeptID** Prompt.



13. Click the **OK** button.

How many rows are in the results?

Why would you want to note the number of rows?

9. Troubleshooting

It is good practice to review your changes before running the query. Queries run with missing or badly designed criteria can use up limited resources. In some cases, running a poorly designed query can affect the performance of all other queries running at the same time.

REVIEWING CRITERIA IS ONE OF THE MOST IMPORTANT STEPS!

Click the Criteria Tab

Review each criteria row:

- Make sure that the values in **Expression 1** and **Expression 2** columns are correct.
- Verify that there are no blank criteria rows or incomplete sections of criteria rows.
- Make sure that the **Conditions** are what you expected them to be.
- Verify that the effective date criteria are present and correctly defined. *A missing Effective Date criteria can mean the difference between retrieving one row, or thousands of rows.*

Click the Fields Tab

Mistakes in the selection of fields are not as critical as errors on the Criteria page, but it can be very frustrating to wait for a query to run only to discover that a particular field was not selected for the output.

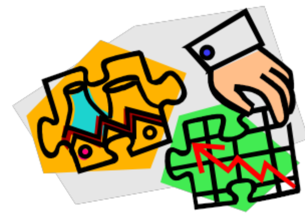
The next section of this manual reviews formatting options – defining sort order, column layout, etc. These settings can all be reviewed from the **Fields** tab.

After you are satisfied that the query is ready, click **Save** or **Save As** if you made any changes. Then click the **Run** tab or exit to the **Query Manager Search** page, search for the saved query, and select **Run to Excel**. Queries that require significant processing resources often run better using the **Run to Excel** option. It is still possible to make other changes but sometimes running a query and reviewing the results is the best way to see areas for improvement.

10. Formatting Results

Formatting the Report from the Fields Tab

The final step in query design is to format the output or report. These are some of the questions to ask when formatting a report layout.



- Which column headings should be changed?
- How should this report be sorted?
- Is the column layout okay or are changes needed?

Editing Field Properties

1. If not open, reopen the query named **"_ACTIVE_STAFF"** and proceed to the **Fields** tab.

2. Click **Edit** on the **Name** field.

Fields

1-12 of 12 View All

Col	Record.Fieldname	Format	Ord	XLAT	Agg	Heading Text	Add Criteria	Edit	Delete
1	A.EMPLID - Empl ID	Char11				ID		Edit	—
2	A.EFFDT - Effective Date	Date				Eff Date		Edit	—
3	A.NY_BARG_UNIT - Bargaining Unit	Char2				NY Barg U		Edit	—
4	A.NY_LOC_IND - NYS Position Location	Char4				Loc Ind		Edit	—
5	B.DESCR - Description	Char30				Descr		Edit	—
6	C.NAME - Name	Char50				Name		Edit	—
7	A.HR_STATUS - HR Status	Char1		N		HR Status		Edit	—
8	D.COMPRATE - Compensation Rate	Num12.6				Comp Rate		Edit	—
9	A.EMPL_RCD - Empl Record	Num3.0				Empl Record		Edit	—
10	A.DEPTID - Department	Char10				Dept ID		Edit	—
11	A.EMPL_STATUS - Payroll Status	Char1		N		Pay Status		Edit	—
12	A.GRADE - Salary Grade	Char3				Grade		Edit	—

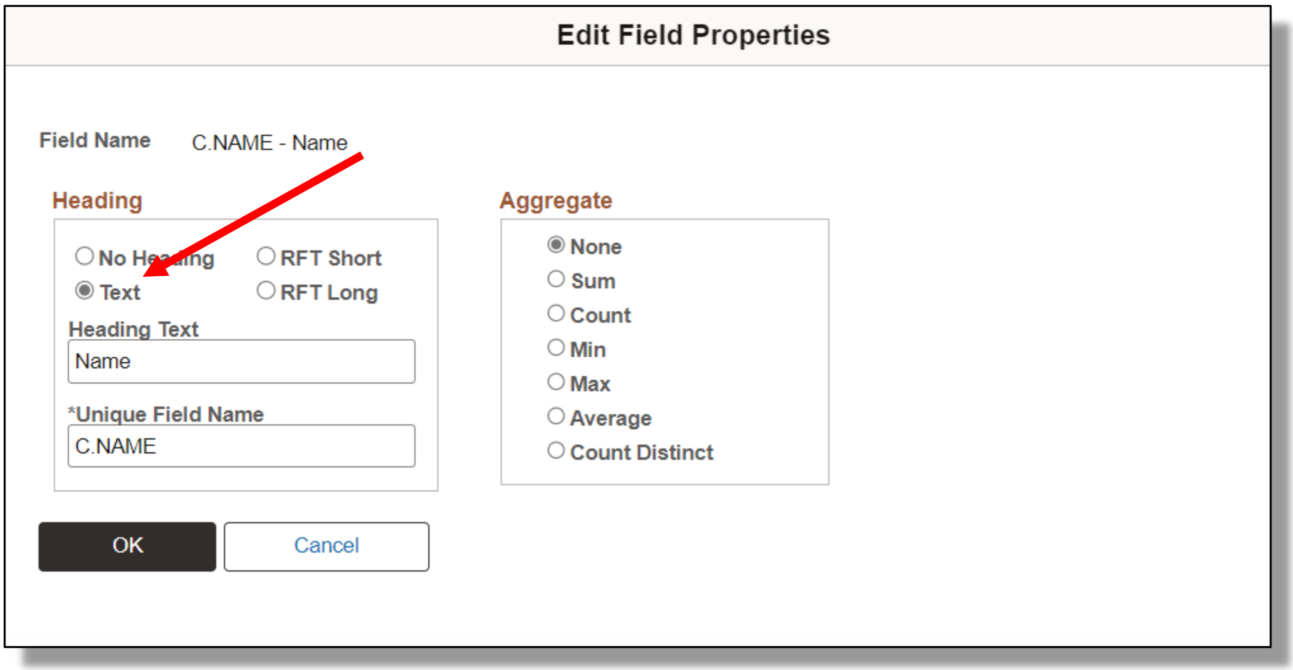
The *Fields Property* page is used to change column headings. The aggregate section is used when you need to sum or count results.

Change Column Headings

If it necessary to change the default column headings:

1. Click the **Text** radio button in the **Heading** section.

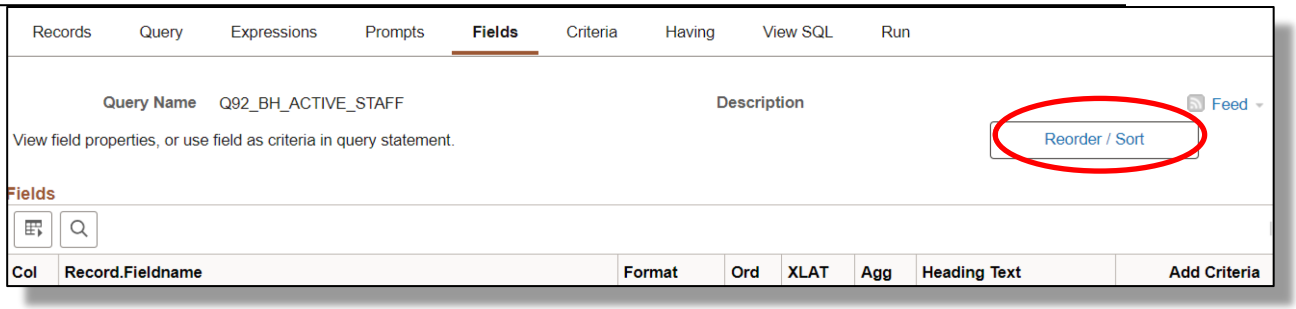
   This step cannot be skipped - *if the **Text** radio button is not selected the default database heading will be used.*



2. Type a new heading in the **Heading Text** section.
3. Click **OK**.
4. **Save** and **Run** the query.
5. Return to the **Fields** tab.

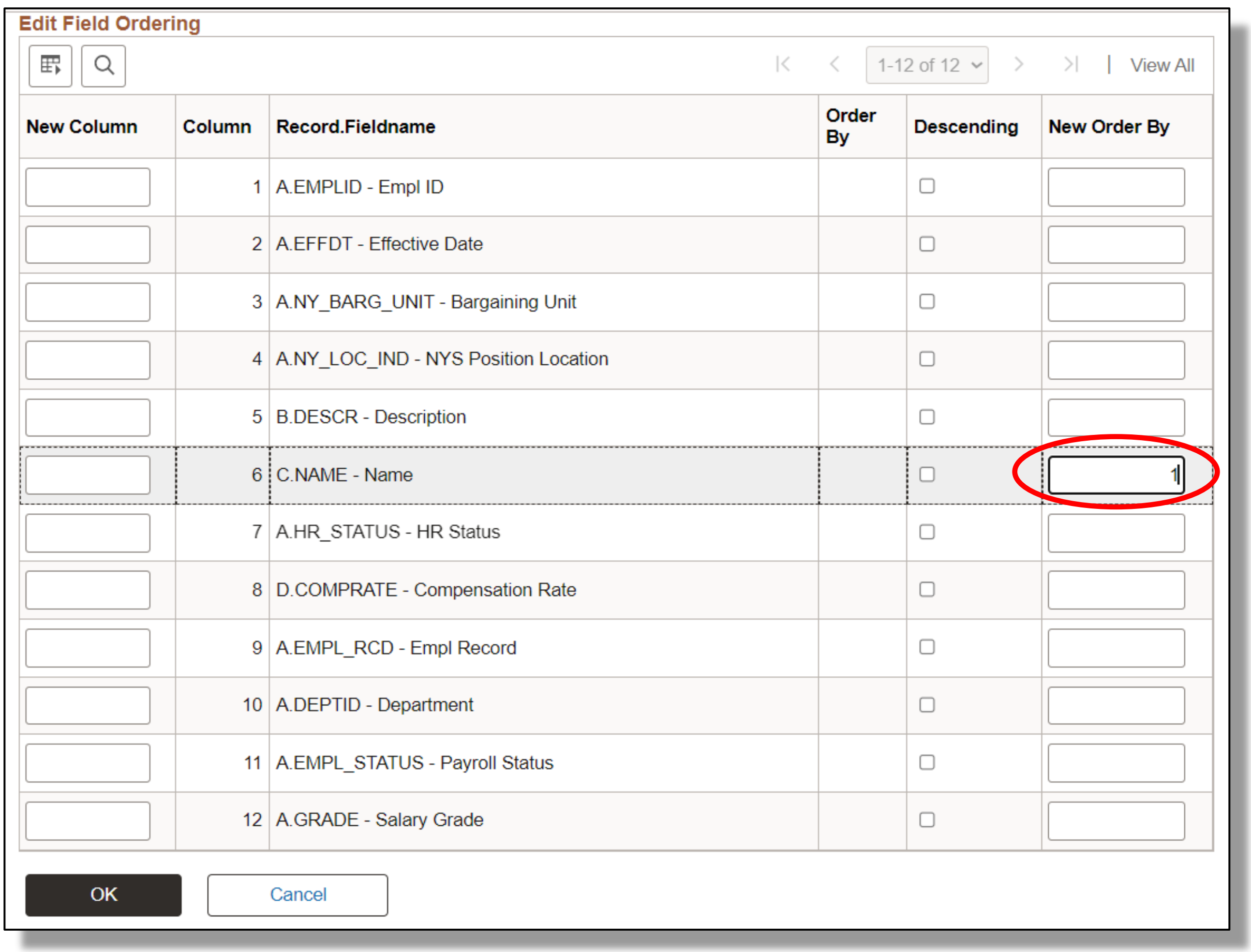
Reorder/Sort Options

You can modify the column order and sort order for all the fields in the query.



Re-Order Fields in a Query

1. Click the **Fields** tab. This will display the current column layout and sort order information.
2. Click **Reorder/Sort**. This will display the *Edit Field Ordering* page.



New Column	Column	Record.Fieldname	Order By	Descending	New Order By
	1	A.EMPLID - Empl ID			
	2	A.EFFDT - Effective Date			
	3	A.NY_BARG_UNIT - Bargaining Unit			
	4	A.NY_LOC_IND - NYS Position Location			
	5	B.DESCR - Description			
	6	C.NAME - Name			1
	7	A.HR_STATUS - HR Status			
	8	D.COMPRATE - Compensation Rate			
	9	A.EMPL_RCD - Empl Record			
	10	A.DEPTID - Department			
	11	A.EMPL_STATUS - Payroll Status			
	12	A.GRADE - Salary Grade			

3. Enter numbers in the **New Column** sections to position the columns from left to right in the report. The column you want to appear first on the report should be 1, the next column should be 2, and so on.
4. Define the sort order (top to bottom) by typing a number in the **New Order By** boxes.

In the above example, the 1 in the **New Order By** section for the **NAME** field means the report will be sorted by Name. Secondary sorts can also be added. Check the **Descending** box to sort in descending order. This feature is used primarily with **Date** and **Number** fields.

5. Click **OK** when finished.

6. **Save** and **Run** the query.

7. Return to the **Fields** tab.

Translate Fields

Translate fields provide descriptions of values that are displayed as codes or truncated versions of the full value. There are several fields in the first query that have translated values available.

1. Locate the **EMPL_STATUS** field.

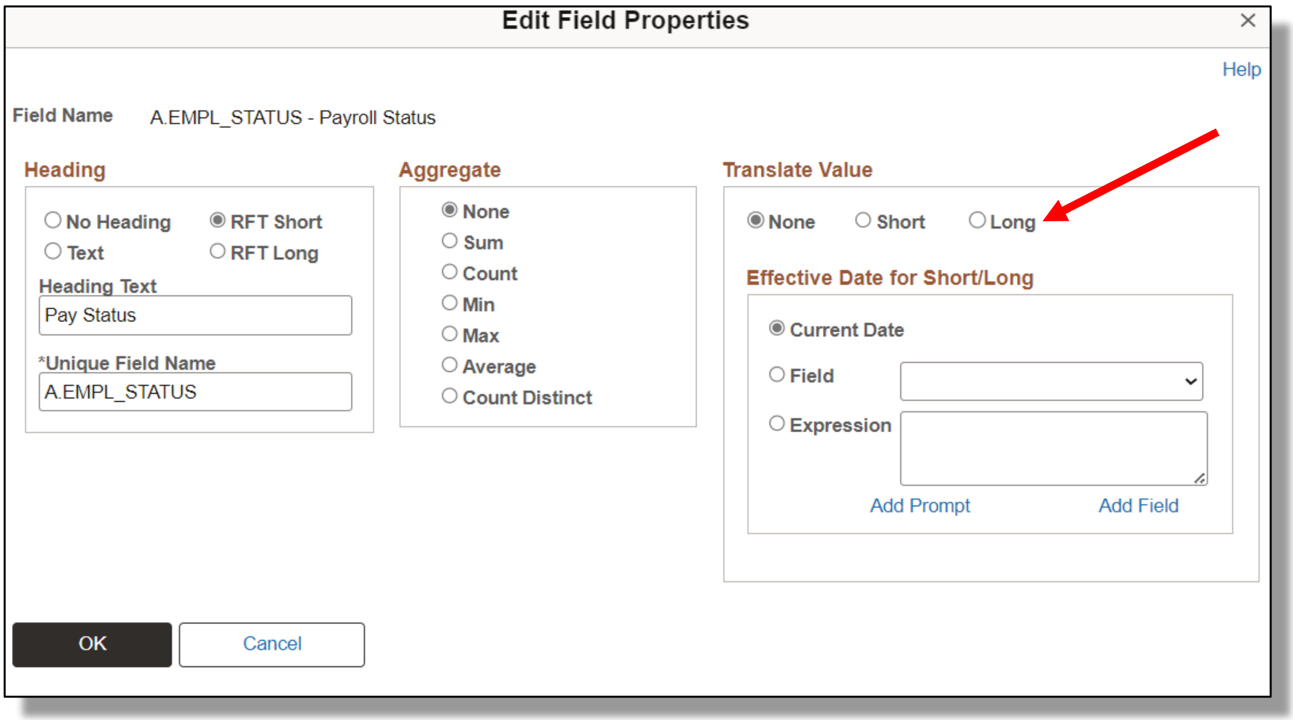
Fields

Col	Record.Fieldname	Format	Ord	XLAT	Agg	Heading Text	Add Criteria
1	A.EMPLID - Empl ID	Char11				ID	
2	A.EFFDT - Effective Date	Date				Eff Date	
3	A.NY_BARG_UNIT - Bargaining Unit	Char2				NY Barg U	
4	A.NY_LOC_IND - NYS Position Location	Char4				Loc Ind	
5	B.DESCR - Description	Char30				Descr	
6	C.NAME - Name	Char50	1			Name	
7	A.HR_STATUS - HR Status	Char1		N		HR Status	
8	D.COMPRATE - Compensation Rate	Num12.6				Comp Rate	
9	A.EMPL_RCD - Empl Record	Num3.0				Empl Record	
10	A.DEPTID - Department	Char10				Dept ID	
11	A.EMPL_STATUS - Payroll Status	Char1		N		Pay Status	
12	A.GRADE - Salary Grade	Char3				Grade	

The "N" under XLAT indicates that a translated value is available, but none has been selected.

The values for the **EMPL_STATUS** field are a single character (or “Char1” as shown in the **Format** column above). In the current query, the results for the **EMPL_STATUS** field will be returned as **A**.

2. Click the **Edit** button on the **EMPL_STATUS** row and the following will appear.



3. Click either the **Short** or **Long** radio button in the **Translate Value** section.
   In this case, the short or long descriptions are the same.
4. Click **OK**.
5. Verify that the value in the **XLAT** column has changed to from N (none) to either S or L, as appropriate.

Fields

Col	Record.Fieldname	Format	Ord	XLAT	Agg	Heading Text	Add Criteria
1	A.EMPLID - Empl ID	Char11				ID	
2	A.EFFDT - Effective Date	Date				Eff Date	
3	A.NY_BARG_UNIT - Bargaining Unit	Char2				NY Barg U	
4	A.NY_LOC_IND - NYS Position Location	Char4				Loc Ind	
5	B.DESCR - Description	Char30				Descr	
6	C.NAME - Name	Char50	1			Name	
7	A.HR_STATUS - HR Status	Char1		N		HR Status	
8	D.COMPRATE - Compensation Rate	Num12.6				Comp Rate	
9	A.EMPL_RCD - Empl Record	Num3.0				Empl Record	
10	A.DEPTID - Department	Char10				Dept ID	
11	A.EMPL_STATUS - Payroll Status	Char1		L		Pay Status	
12	A.GRADE - Salary Grade	Char3				Grade	

6. Repeat steps 1 – 4 for any other field where a fuller description would be useful. Translated values are only available if there is an “N” by default in the XLAT column.

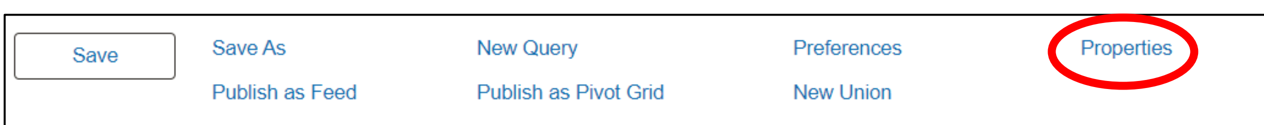
7. Click the **Save** button when finished.

8. Click the **Run** tab if you want to see the change in the results.

9. Click any other tab to review properties.

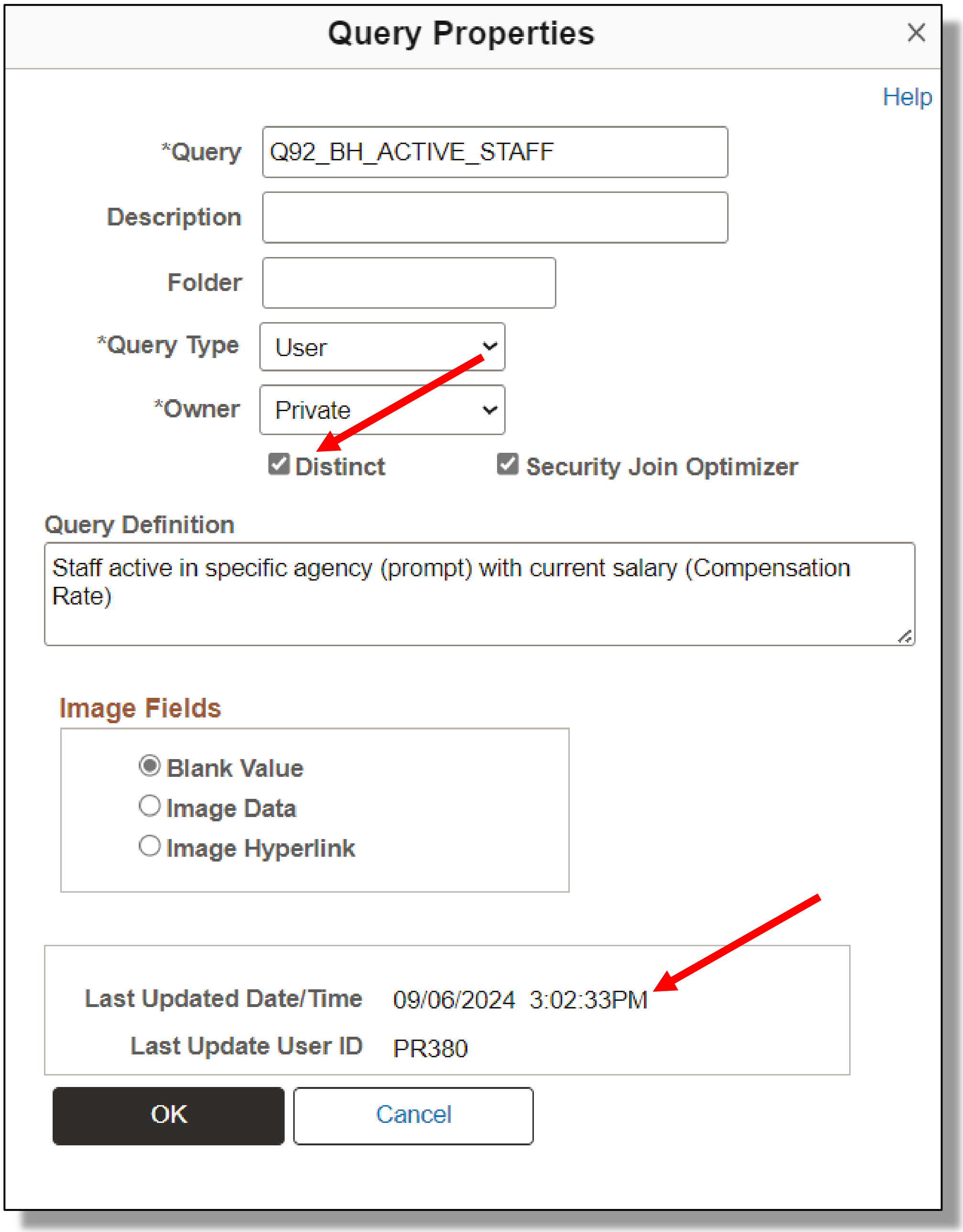
Query Properties

Click the Properties hyperlink on the bottom of the page to view the default properties.



The *Query Properties* page includes information on who last updated the query definition and when it was last updated. See page 13 of this manual for more information on this area.

When checked, the **Distinct** checkbox is used to eliminate duplicate records from the report.



Note the last time the query was updated and the User ID who updated it.

1. Click **Cancel** to avoid changing/updating the information.

Public versus Private

Queries can be saved as either a Public or a Private version. A Private query can only be viewed, modified or run by the creator of the query; a Public query can be viewed, modified or run by any user with security to access the query.

It is recommended that queries be saved as Private unless it will be necessary to share the query with other users.

Public and Private versions of queries must be saved with different names.

Where can I go to get help if I need it?

a. Send an email to QueryHelp@osc.ny.gov
b. Provide your name and phone number.
c. Give a brief explanation of what you are trying to do.
d. Provide a couple of examples that fit your criteria.
e. Make your PS Query Public and provide the name in your email.
f. Provide a time frame for when you need resolution to the problem.

11. Query Exercises

Query Exercise #1 – Let's do this one together.

Please provide a list of all employees' time entry records in your department for a specific pay period end date. The list of fields should include the Empl ID, Pay Period End Date, Earn Code and Earnings Begin and End Date. Name your PS Query starting with your initials followed by **"_Query_1"**.

Questions:

a. What pay period are we working on?
b. If I have multiple Department IDs in my profile, which one is needed?
c. What is the purpose of the PS Query? Why are the results needed?
d. Do I know of someone who fits the request? Always perform a Quality Assurance review of the PS Query results to help ensure that the query is returning expected information.

Record(s): ________________________
Field(s): _________________________
Criteria: _________________________
____

Query Exercise #2 -

Rename the PS Query you made in exercise #1 (do a "save as") starting with your initials followed by **"_Query_2"**.

Record(s): ________________________
Field(s): _________________________
Criteria: _________________________
____

Query Exercise #3 -

Rename **"_Query_2"** starting with your initials followed by **"_Query_3"**. Add Employee Name as an additional returned field. Save and run the query.

Record(s): ________________________
Field(s): _________________________
Criteria: _________________________
____

Query Exercise #4 -

Create a new PS Query and provide a list of all active employees in your department showing their Compensation, Union and Comp Rate Code. Name the query starting with your initials followed by **"_Query_4"**.

Record(s): ________________________
Field(s): _________________________
Criteria: _________________________
____

Note 1: Do not use the CompRate field from the JOB record in queries. Use the CompRate field from the Compensation record.

Note 2: Comp Rate Code was previously called the Pay Basis Code.

Query Exercise #5 -

Create a new PS Query and provide a list of employees who are receiving Location Pay. Include the Employee Name in the results. Name your query starting with your initials followed by **"_Query_5"**.

Record(s): ________________________
Field(s): _________________________
Criteria: _________________________
____

Query Exercise #6 -

Create a new PS Query and provide a list of all employees who received a paycheck last Pay Period End Date. Name your query starting with your initials followed by **"_Query_6"**.

Record(s): ________________________
Field(s): _________________________
Criteria: _________________________
____

Query Exercise #7 -

Create a new PS Query and provide a list of all Departments, with Department Name, Cycle and Pay Period type. Name your query starting with your initials followed by **"_Query_7"**.

Is there already an existing query out there for me to find this information?

Record(s): ________________________

Field(s): _________________________

Criteria: _________________________

____

Hint: LQ_DEP_ACTIVE_DEPT_CYCLE_TYPE

Remember:

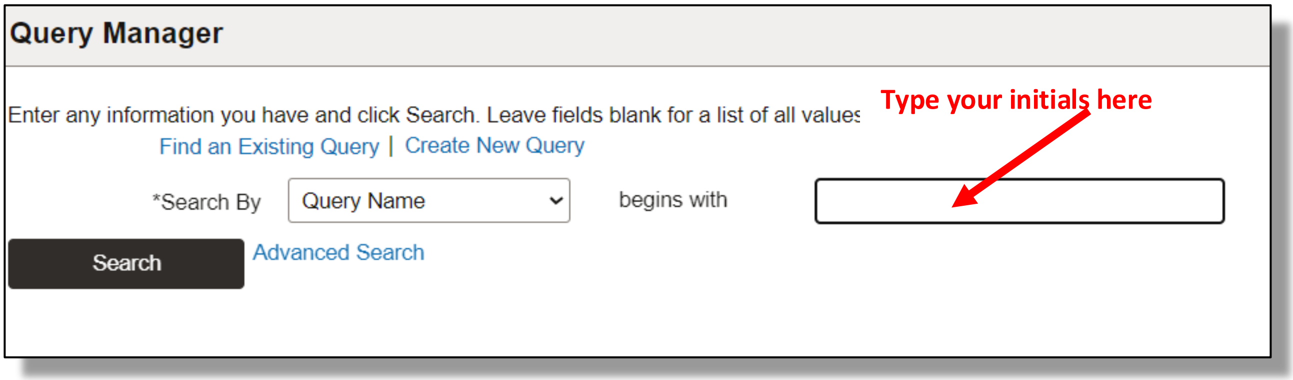
1. Agencies should not name or rename any queries beginning with the letters LQ. If a Locked Query needs to be modified for a user's particular needs, use the 'Save As' process. The modified Locked Query should be renamed beginning with the characters Q92 and should be removed from the 'LOCKED' folder location. Q92 refers to PS Queries that were developed using PayServ 9.2 functionality.

2. There may be multiple ways to obtain the information requested based on the questions you ask. What we just reviewed are examples of the many possible ways to obtain the information being requested.

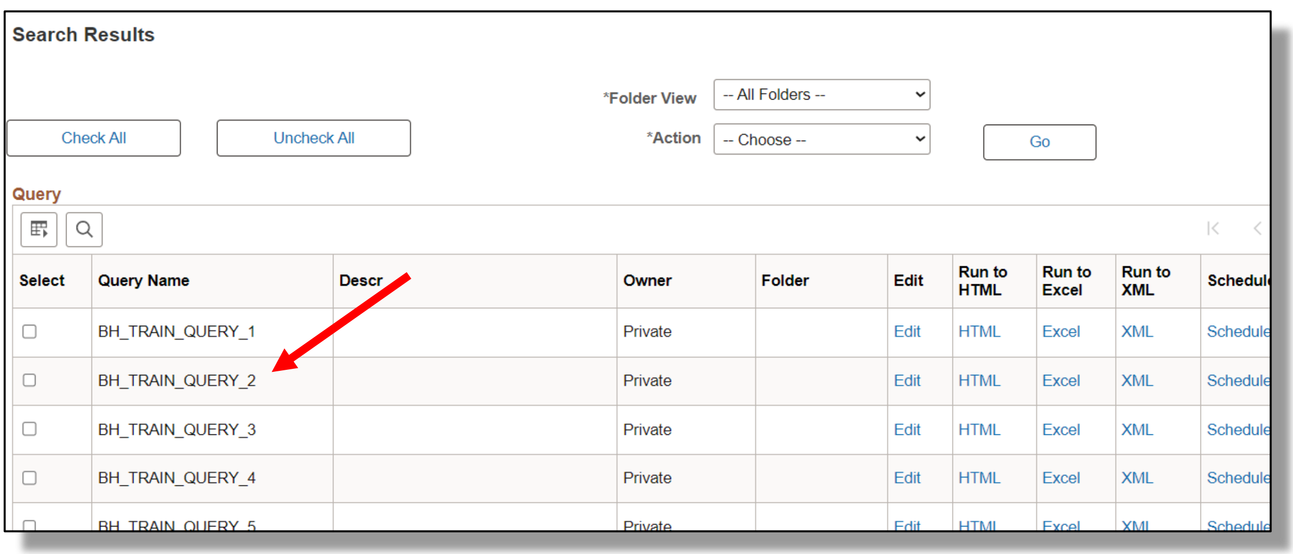
12. Deletion of Queries

PayServ queries that are no longer being used or were incorrectly created should be deleted. This ensures that only the PS Queries you are using are accessible and that incorrect PS Queries will not be used in error.

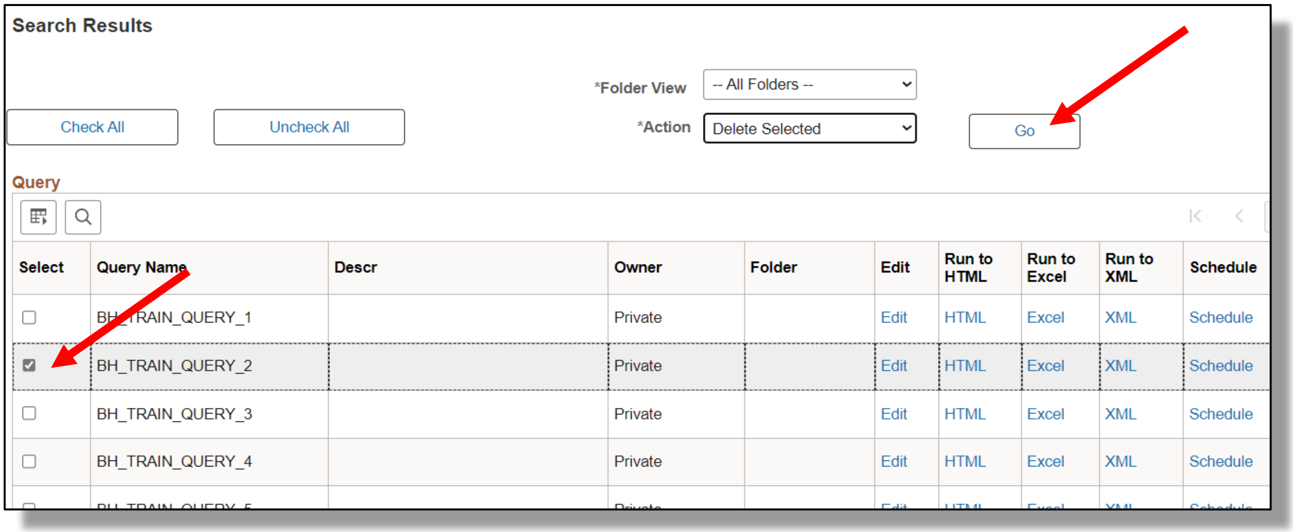
1. Return to the Query Manager *Search* page.



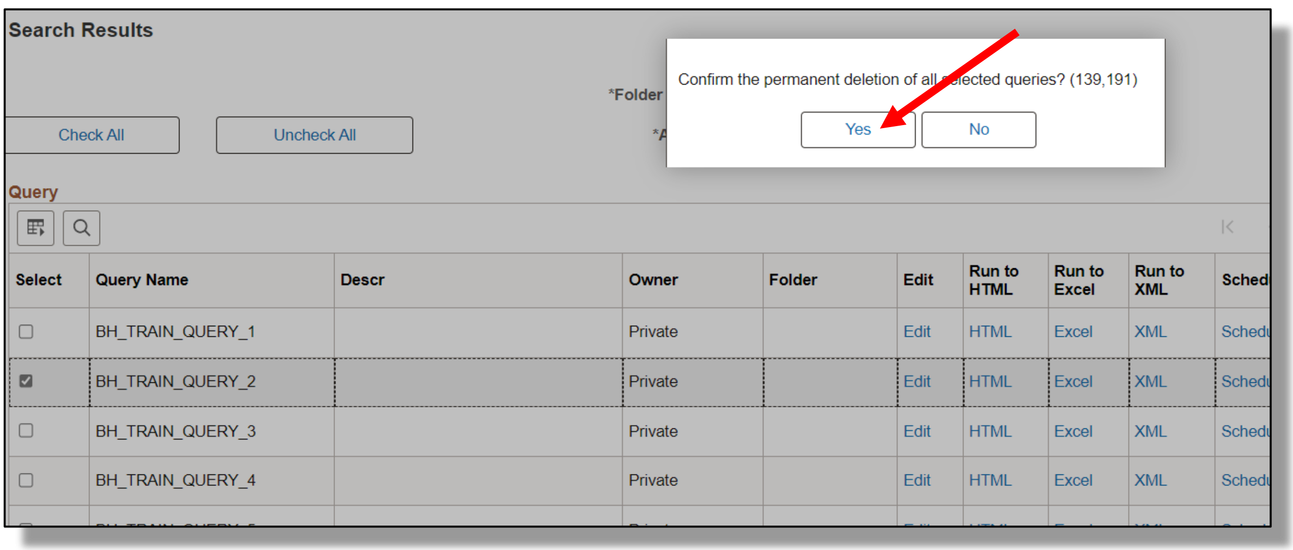
2. Enter your initials (or the beginning of the query name) in the **Search** box.
3. Click the **Search** button.
4. Look for the query named **"_query_2".**
5. Click the box to the left of the Query Name.



6. Change the **Action** drop down menu to "Delete Selected."



7. Click the **Go** button.
8. The following message appears.



9. Confirm the deletion of the queries selected by clicking **Yes**.
10. Your query is deleted.

13. Data Security

Handling Confidential Information

PaySery includes a complex data security component for all payroll applications to ensure that only authorized OSC and Agency staff have access to payroll information.

Query users are responsible for safeguarding confidential information by excluding personal data, such as the Empl ID, National ID (employee's SSN) and home address, from query definitions whenever possible.

PS Query Access

One element of the security profile identifies what type of access, if any, the user will have in PS Query. The Query Security Profile is independent of the PayServ Production Security Profile.

Run Only User – these users can run queries designed and saved by other staff but can only save private queries.

Design Access – these users can design/create new queries, modify existing queries, run queries, delete existing queries, and save queries as public versions for other users to run.

Other Access – Users can query against only the records they have access to in PayServ production

No Access – these users do not have access to PS Query. In some cases, an employee could have access to other payroll applications but not be able to open the PS Query application.

Record Access

Record or table access rights are the part of the security profile that defines which records will be available to a specific PS Query user. Record access determines if the user can include a record in a query design or run a particular query based on the records used in the query definition.

For example, most agency staff do not have access to audit records. Therefore, they cannot design or run queries that use these records.

Some Finance and HR office staff have access to position management records but do not have access to employee earnings information. They can design and run position management queries but cannot design or run queries that identify how much money an employee was paid.

These restrictions are based on the individual's job requirements and can be modified only by agreement between the Agency's Security Coordinator and the OSC Security Office.

Agency Access

In general, agency staff will only have access to the payroll information for employees who work in their agency. In some cases, employees may have access to multiple agencies, especially if they work in the central office of an agency that has remote facilities or offices.

A few control agencies have access to information for all agencies, but this statewide access is very limited. While most Bureau of State Payroll Services staff at OSC have statewide access, some Bureau users have access to all agencies except OSC.

Contact your agency's Security Coordinator with any questions about your access rights in PS Query.

Individual Responsibility for Data Security

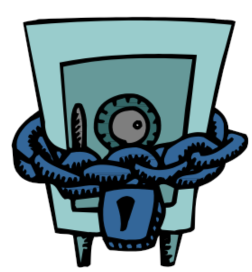
The increasing frequency of identity theft, data piracy and fraud has led to new and stronger data security requirements at all levels, but sometimes individuals do not recognize the key role they play in improving data security themselves. Every employee who has been granted access to a payroll application has a responsibility to safeguard the information found there. Employees **must not** share log- in IDs or passwords. They should maintain the confidentiality of the information to which they have been given access.

Secure vs. Non-Secure Environments

Understanding and complying with these security responsibilities is even more essential for PS Query users because the data they retrieve via query has essentially been moved from a secure environment to a less secure environment.

A secure environment requires that a user have an approved User ID and password, making it possible to identify the person who accessed the database. In addition, the information is saved behind a firewall that blocks unauthorized access.

But when data is retrieved in a query, it becomes portable; it can be downloaded into an Excel spreadsheet, and then saved on hard drives, thumb drives, shared network drives, the Cloud or other non-secure areas. It can be printed and stored in a filing cabinet or shared with employees who would not otherwise have access to the information. All of these environments are less secure than where the data was originally stored.



Because data retrieved in a query is so portable, it is the query designer's responsibility to exclude as much confidential information from the output as possible.

Tips for Handling Confidential Information

Always remember that you are working with confidential data. These are some of the security steps you should take when using PS Query:

- Develop a plan for storing the electronic results of queries.
  - ✓ Where is the most secure area to save electronic information in your workplace?
  - ✓ Where is the least secure area?
  - ✓ Who can use your PC when you are away from your desk?
- Carefully select the information that is essential to be included in a report.
  - ✓ Do you really need to include the Empl ID or National ID in the report?
  - ✓ What is the risk of including both the employee's name and their Empl ID or National ID in the same report?
- Develop a plan for handling paper copies of payroll reports.
  - ✓ Where are you storing paper copies of payroll reports?

    Is it sitting on your desk when you are out for lunch? Is it in a filing cabinet?
    - Is it locked?
    - Who has access during business hours?
    - Who has access after business hours?
  - ✓ Are you disposing of reports in the trash or shredding them?
  - ✓ Be careful making copies of confidential information.
  - ✓ Remember to remove originals from the copying machine.
- Does your agency have a data retention plan?
- Does your agency have a data security plan?

<u>Ask yourself:</u>

If this were confidential information about ***me***, would I feel secure about the way it's being handled? Take responsibility for the information you have been given access to - you have the keys!

Additional Reference Materials

1. Online Reference Tools and Query Support

The **PS Query Bulletin Board** displays query-related information, announcements and provides contact information for query help.

If you need help developing, modifying or running queries, or have general questions about PS Query, email QueryHelp@osc.ny.gov

The following resources can also be found on the PS Query Bulletin Board:

Query Data Dictionary
This document provides a list of commonly used fields with the field name and common name, the record (or table) that field is most commonly found in, a definition for the field and any special notes.

Locked Generic Queries
Locked Queries are designed to be run as is for common payroll situations. This document provides a list of locked queries, descriptions of each query, a complete list of fields returned in the query output and additional notes.

Payroll Services Web Page
This links to the **New York State Payroll** page on the Office of the State Comptroller's website. This page provides links to Payroll Bulletins, Payroll Calendars, Payroll Users Group information, and other Payroll forms and manuals.

PS Query Training
Introduction to PS Query Guide, this is the online version of this printed manual, a step-by-step guide for new query users.

Agency Query Request Form
Form used by agencies to request assistance with creating a query or tweaking a query for a specific purpose.

2. PayServ Data

There are hundreds of records and thousands of fields in the PayServ database. Fortunately, only a small percentage of these records are actually used in the majority of queries.

The data in the PS Query database is a **one-day-old copy** of the Production database; PS Query data is normally refreshed nightly. If a problem occurs with the refresh process a message will be displayed on the Query Bulletin Board. Information entered into Production will not be available to be included in query results until the next day.

The following is a list of commonly used records and the circumstances when they can be used in designing queries. This is not an inclusive or exhaustive list but can be used as a starting point for query design.

For Queries on <u>Employee Work History:</u>

> **JOB** – Information on employee work history: Dept ID (agency code), position number, line number, and other job information
>
> **PERSONAL_DATA** – Employee's name and address
>
> **COMPENSATION** – Compensation information: CompRate

For queries on <u>Position Management:</u>

> **POSITION_DATA** – Position numbers and attributes
>
> **POOL_TBL** – Position pool and funding information

For queries on <u>Earnings Information:</u>

> **NY_TIME_DTL** – Time entry data for miscellaneous payments
>
> **PAY_EARNINGS** – Contains the results of the initial payroll calculations which relate to an employee's regular earnings
>
> **PAY_OTH_EARNS** – Contains detailed information for other-than regular earnings; this is a child record to PAY_EARNINGS
>
> **PAY_CHECK** – Contains the confirmed data used to generate the employee's paycheck
>
> **PAY_CHECK_EARNS and PAY_ERN_DIST** – Detailed paycheck information includes a breakdown of the total earnings by earnings code and amount; these are child records of the parent record PAY_CHECK.

3. Problems when Running Queries

There are many things that can go wrong when running a query. There is no need to panic if the query does not run. Relax, and check your criteria, joins, prompts, expressions, etc., for errors. There are other factors, including problems with your equipment, access or even your internet browser that may cause your query not to run. And occasionally, there are times when a query will work today but not tomorrow.

Here are some of the things to do/questions to consider when troubleshooting the query issues you may encounter:

a. Delete your browser's cache.
b. Close and reopen your web browser.
c. Has your access changed recently?
    a. Are you using a shortcut?
d. Did you get a new computer?
    a. Check with your IT help desk
e. Did your agency download new programs?
    a. Check with your IT help desk
f. When was the last time this query was run? Was there a problem?
g. Can someone else in your agency run the query using their access on their computer?
h. Can you run the query using your access on another person's computer?
i. Can another user run the query on your computer using their access?
j. You get the message: "**Site name is not valid. Check your url syntax and try again**."
    a. Close and reopen your web browser. Up to seven queries can be run before having to close your web browser and reopen the payroll application.
k. Have there been recent upgrades to the payroll system?
l. When was the last time the query was changed/modified?
m. Rebuild the query.

If all the above have been tried and you still are having problems, send an email to Query Help at QueryHelp@osc.ny.gov

a. Provide your name and phone number.
b. Give a brief explanation of the problem and how you have attempted to solve it.
c. Make your query public and provide the name in your email.
d. Provide a time frame for when you need resolution to the problem.