

Oracle's PeopleTools PeopleBook

PeopleTools 8.52: PeopleSoft Query

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Contents

Preface	
PeopleSoft Query Preface	. ix
PeopleSoft Query	. ix
PeopleBooks and the PeopleSoft Online Library	
Chapter 1	
Getting Started with PeopleSoft Query	. 1
PeopleSoft Query Overview	1
PeopleSoft Query Business Processes	
Other Sources of Information	. 3
PeopleSoft Query Implementation	3
Chapter 2	
Creating and Running Simple Queries	5
Understanding Query Types	. 5
Understanding Dirty Reads in PeopleSoft Query	8
Common Elements in This Chapter	. 8
Creating New Queries	10
Pages Used to Create a Query	11
Specifying Query Preferences	13
Selecting Records	14
Adding Fields to Query Content	16
Viewing Fields Selected for Output	17
Changing the Column and Sort Order for Multiple Fields	19
Editing Field Properties	20
Viewing and Editing Query Properties	22
Viewing Underlying SQL Code	24
Previewing Query Results Prior to Saving	25
Saving Queries	27
Running Queries	28
Adding Queries to the Internet Explorer Favorites List	30
Downloading Queries	30

Printing Query Results	
Using Query Viewer	
Chapter 3	
Defining Selection Criteria	
Choosing Selection Criteria	
Defining Criteria	
Pages Used to Define Criteria	
Viewing and Editing Selection Criteria	
Editing Criteria Properties	
Selecting Condition Types	
Entering Comparison Values	
Specifying Effective Date Criteria	
Relating Multiple Criteria	54
Defining Prompts	57
Understanding Prompts	57
Pages Used to Define Prompts	58
Viewing and Editing Prompts	58
Editing Prompt Properties	
Defining HAVING Criteria	60
Pages Used to Define HAVING Criteria	61
Viewing and Editing Having Criteria	61
Editing Having Criteria Properties	61
Defining Expressions	
Understanding Expressions	62
Pages Used to Define Expressions	63
Viewing and Editing Expressions	63
Editing Expression Properties	63
Drilling URL in PeopleSoft Query	65
Understanding Drilling URLs	66
Common Terminology Used in This Section	66
Pages Used to Define Drilling URLs	66
Viewing and Editing Expression Properties	
Defining Query URL Widgets	
Defining Component URL Widgets	79
Defining External URL Widgets	87
Defining Attachment URL Widgets	92
Defining Free Form URL Widgets	96
Viewing Query Results with Drilling URLs	
Scheduling Queries with Drilling URLs	100

Chapter 4

Modifying, Scheduling, and Organizing Queries	103
Modifying Queries	103
Opening Existing Queries	. 103
Renaming Queries	105
Deleting Queries	106
Updating Existing Queries	. 107
Repairing Existing Queries Automatically	. 107
Scheduling Queries	108
Submitting Process Requests	. 109
Selecting Process Requests	. 111
Using Process Monitor	115
Viewing Output in Report Manager	117
Specifying a User's Language	. 118
Organizing Queries	. 118
Adding Queries to the My Favorite Queries List	118
Copying a Query to Another User's List of Queries	. 119
Moving a Query to a Folder	. 119
Chapter 5 Working with Advanced Query Options	121
Working with Aggregate Functions	
Understanding Aggregate Functions	
Applying an Aggregate Function to a Field	
Working with Subqueries	
Working with Unions	
Joining Records	
Creating Record Hierarchy Joins	
Creating Related Record Joins	
Creating Any Record Joins	
Creating Outer Joins	
Creating Left Outer Joins	
Creating Left Outer Joins	. 12)
Chapter 6	
Chapter 6 Using Connected Query	133
•	

Connected Query Example	135
Security for Connected Query	136
Using Connected Query Quick Start	136
Understanding Connected Query Quick Start	136
Pages Used in Connected Query Quick Start Wizard	137
Step 1: Enter a Name and Descriptive Information	138
Step 2: Select a Parent Query	140
Step 3: Select a Child Query	141
Step 4: Map Child Query Fields to Parent Query for Filtering	142
Step 5: Preview a Connected Query	144
Using Connected Query Manager	146
Understanding Connected Query Manager	146
Pages Used to Create and Maintain a Connected Query	147
Creating a Connected Query	149
Editing a Connected Query	155
Copying a Connected Query	155
Deleting a Connected Query	156
Opening a PeopleSoft Query Using Connected Query Manager	157
Using Connected Query Viewer	158
Using Connected Query Scheduler	160
Appendix A Creating Workflow Queries	163
Creating Workhow Queries	10.
Understanding Workflow Queries	163
Defining Workflow Queries	163
Appendix B	
PeopleSoft Query Security	165
Using Query Access Group Trees	165
Understanding Query Access Group Trees	165
Creating Query Trees	165
Granting and Restricting Access to Groups	167
Enabling the Query Access List Cache	167
Using Row-Level Security and Query Security Record Definitions	
Enforcing Row-Level Security	169
Using Query Security Record Definitions	171
Using Query Profiles	171

Appendix C

Query Administration	175
Understanding Query Administration	175
Using Query Administration	175
Pages Used for Query Administration	176
Administering Queries	176
Managing Currently Running Queries	178
Setting Additional Options	181
Index	183

PeopleSoft Query Preface

This book discusses PeopleSoft Query, a tool that you use to retrieve selected data from the database.

PeopleSoft Query

PeopleSoft Query is an end user reporting tool. This book explains the basic concepts of selecting data, designing simple and complex queries, and sending query results to other reporting tools.

To take full advantage of the information covered in this book, you should be comfortable using Microsoft Windows and should have a basic familiarity with relational database concepts and SQL. In addition, this book assumes that you have a basic understanding of how to use PeopleSoft applications and are familiar with PeopleTools.

PeopleBooks and the PeopleSoft Online Library

A companion PeopleBook called *PeopleBooks and the PeopleSoft Online Library* contains general information, including:

- Understanding the PeopleSoft online library and related documentation.
- How to send PeopleSoft documentation comments and suggestions to Oracle.
- How to access hosted PeopleBooks, downloadable HTML PeopleBooks, and downloadable PDF PeopleBooks as well as documentation updates.
- Understanding PeopleBook structure.
- Typographical conventions and visual cues used in PeopleBooks.
- ISO country codes and currency codes.
- PeopleBooks that are common across multiple applications.
- Common elements used in PeopleBooks.
- Navigating the PeopleBooks interface and searching the PeopleSoft online library.
- Displaying and printing screen shots and graphics in PeopleBooks.
- How to manage the locally installed PeopleSoft online library, including web site folders.
- Understanding documentation integration and how to integrate customized documentation into the library.
- Application abbreviations found in application fields.

You can find *PeopleBooks and the PeopleSoft Online Library* in the online PeopleBooks Library for your PeopleTools release.

Chapter 1

Getting Started with PeopleSoft Query

This chapter provides an overview of PeopleSoft Query and discusses:

- PeopleSoft Query business processes.
- PeopleSoft Query implementation.
- Other sources of information.

PeopleSoft Query Overview

With PeopleSoft Query, you can extract the precise information that you are looking for by using visual representations of your PeopleSoft database, without writing SQL statements. The queries that you write can be as simple or as complex as necessary; they can be one-time queries or queries that you use repeatedly.

You can use PeopleSoft Query in the following ways:

• To display data in a grid (on the Run page).

You can preview queries within Query Manager, displaying the result set in a grid for review. This option is useful as you refine your queries.

To run queries as a separate process.

You can run queries as a separate process and have results sent to a separate browser window by clicking the HTML link from Query Manager or Query Viewer.

Note. Query Viewer is a read-only version of Query Manager. See "Creating and Running Simple Queries," Using Query Viewer for additional details.

To schedule a query.

You can schedule queries to run at predefined times or on recurring schedules. The results of scheduled queries are routed to PeopleSoft Report Manager.

• To download query results to a Microsoft Excel spreadsheet and XML.

You can have the data downloaded and formatted as a Microsoft Excel spreadsheet and XML. These options are available in your query search results, or after you run or schedule a query.

• To serve as a data source for Crystal Reports.

With Crystal Reports, you can apply advanced formatting to the output of your queries. If you have access to the Windows version of Query Designer, you can run improvised or predefined queries directly to Crystal Reports 2008. If you do not have the Windows client installed, you can schedule a predefined Crystal Report to run on a Process Scheduler server, and have the results routed to PeopleSoft Report Manager.

See *PeopleTools 8.52: Crystal Reports for PeopleSoft*, "Using Crystal Reports 2008," Launching Crystal Reports 2008 with Microsoft Windows-based PeopleSoft Query and *PeopleTools 8.52: Crystal Reports for PeopleSoft*, "Using Crystal Reports 2008."

To determine to whom to forward information.

You can write queries that PeopleSoft Workflow uses to determine to whom to send emails, forms, or worklist entries. This type of query is called a *role query*.

See PeopleTools 8.52: Workflow Technology, "Understanding PeopleSoft Workflow."

• To create a data source for PeopleSoft nVision reports.

PeopleSoft nVision can use queries as a data source.

See *PeopleTools 8.52: PS/nVision*, "Understanding PS/nVision."

• To serve as a data source for defining online analytical processing (OLAP) Cube Builder dimensions and facts.

Queries are a primary data source for PeopleSoft Cube Builder, which you can use to build OLAP cubes.

See PeopleTools 8.52: PeopleSoft Cube Builder, "PeopleSoft Cube Builder Preface."

 To serve as a data source of the same name for Oracle BI Publisher (formally PeopleSoft XML Publisher).

With BI Publisher, you can apply advanced formatting to the output of your queries and streamline report and form generation.

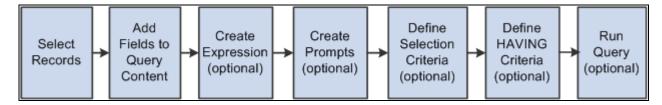
Queries that are used as data sources for BI Publisher need to be run through Reporting Tools, BI Publisher to see BI Publisher-related formatting.

See PeopleTools 8.52: BI Publisher for PeopleSoft, "Getting Started with BI Publisher."

Note. Because PSQUERY is confined by the query limitations that are imposed by the platform on which PSQUERY runs, invalid queries that result in database errors will also result in errors when constructed and run through PSQUERY.

PeopleSoft Query Business Processes

This process flow illustrates the PeopleSoft Query business processes:



PeopleSoft Query business process flow

Other Sources of Information

This section provides information to consider before you begin to use PeopleSoft Query.

In addition to implementation considerations presented in this chapter, take advantage of all PeopleSoft sources of information, including the installation guides, release notes, PeopleBooks, red papers, the Updates + Fixes area of My Oracle Support, and PeopleSoft's curriculum courses.

See Also

PeopleTools 8.52: Getting Started with PeopleTools

PeopleSoft Query Implementation

PeopleSoft Query is automatically installed with your Oracle's PeopleTools installation.

Before using PeopleSoft Query, you must set up query security:

Step	Reference
1. Define query profiles.	See <i>PeopleTools 8.52: Security Administration</i> , "Implementing Query Security," Defining Query Profiles.
2. Build query access group trees.	See <i>PeopleTools 8.52: Security Administration</i> , "Implementing Query Security," Building Query Access Group Trees.
3. Work with query trees.	See <i>PeopleTools 8.52: Security Administration</i> , "Implementing Query Security," Working with Query Trees.
4. Define row-level security and query security records.	See <i>PeopleTools 8.52: Security Administration</i> , "Implementing Query Security," Defining Row-Level Security and Query Security Records.

Chapter 2

Creating and Running Simple Queries

This chapter provides an overview of query types and Dirty Reads in PeopleSoft Query, lists common elements, and discusses how to:

- Create new queries.
- Save queries.
- Run queries.
- Add queries to the Internet Explorer Favorites list.
- Download queries.
- Perform lookups.
- Print query results.
- Use Query Viewer.

Understanding Query Types

PeopleSoft Query provides the following different types of queries:

User query

User queries retrieve data from the database directly from Windows-based Query Designer or the web-based Query Manager/Query Viewer applications.

Note. Because of the range of possible circumstances in which you might run an ad hoc query, there are no special considerations or requirements that apply to all of them.

Reporting query

Reporting queries are essentially the same as user queries, except that they are designed to be used by another reporting tool. Reporting queries can be used as data sources for ad hoc queries, scheduled queries, Crystal Reports, PS/nVision, Cube Manager, or BI Publisher.

When you define a custom report, you often include runtime variables that users specify when they run the report. For example, you might want users to be able to say which business unit, location, or time period to report on. Therefore, your reporting query may include one or more runtime prompt variables.

If your query requires input parameters, you must decide how users should enter them. If they run the report from any of the PeopleSoft Query applications, they can enter values into the page that appears in Query Manager, Query Viewer, or Scheduled Query.

When reporting queries are used as a data source to another third party reporting product, you may need to:

- Create or modify a page to collect the necessary input parameters.
- Create or modify a record definition, based on the input parameters.
- Add a process definition to PeopleSoft Process Scheduler.

See <u>Chapter 3, "Defining Selection Criteria," page 37</u> and *PeopleTools 8.52: PeopleSoft Process Scheduler*, "Defining PeopleSoft Process Scheduler Support Information," Adding New Process Definitions.

Process query

Process queries are queries that you intend to run periodically using a batch process. Create these automated batch processes using PeopleSoft Application Engine and the Query API. For example, you could write a query that returns any overdue receivables and schedule a batch process to run the query once a week.

Note. Process and role queries override the automatic row-level query security logic that is applied to all other types of queries. For this reason, you should restrict access to creating these types of queries to administrative roles and not include any sensitive data columns in the select list for these types of queries. You can restrict access to creating/modifying these queries based on Query Profile settings assigned to a Permission List. Also note that Workflow queries also override the row-level security logic.

Role query

PeopleSoft Workflow uses role queries to determine to whom to send an email, form, or worklist entry. A role query needs to return one or more role IDs based on the data that has been saved on the page that is triggering the routing.

Because a role query returns a list of role users, the record definition that you want is either PSROLEUSER (which lists role users and the roles to which they are assigned) or ROLEXLATOPR (which lists role users and their IDs).

The only field that you select in your query is ROLEUSER. Of course, you use other fields and join to other record definitions to specify the criteria that role users can select. But no matter how complex the query is—how many joins or selection criteria it has—it must return ROLEUSER and nothing more.

Define a role as a query because you want to route items differently based on the context of the transaction that the users are performing. Thus, every role query contains at least one bind variable whose value gets set at runtime. The bind variable or variables correspond to the data on which you want to base the routing decision. At runtime, the system sets the values of the bind variables based on data from the page that triggers the event.

Save your role queries with names that begin with [ROLE] so that you can identify them as role queries.

Note. Process and role queries override the automatic row-level query security logic that is applied to all other types of queries. For this reason, you should restrict access to creating these types of queries to administrative roles and not include any sensitive data columns in the select list for these types of queries. You can restrict access to creating/modifying these queries based on Query Profile settings that are assigned to a Permission List. Note that Workflow queries also override the row-level security logic.

See *PeopleTools 8.52: Workflow Technology*, "Understanding PeopleSoft Workflow."

Archive query

You can save a query as an archive query if you have access to workflow queries that include *Archive Query*, *Role Query*, and *Process Query*. These queries are generally only used by the PeopleSoft Data Archive Manager.

See *PeopleTools 8.52: Data Management*, "Using PeopleSoft Data Archive Manager."

Note. You can only create and save archive queries as *public*.

PS/nVision query

Use PeopleSoft Query to create a query in order to specify the data source for a PS/nVision report layout. However, if you want to use your query in a PS/nVision matrix layout, you must apply aggregate functions to at least one column.

Queries used with PS/nVision tabular layouts do not have the same restrictions as matrix layout queries; they are like other reporting queries and do not require an aggregate column.

See <u>Chapter 5</u>, "Working with Advanced Query Options," page 121 and *PeopleTools 8.52: PS/nVision*, "Using Layouts," Understanding Layouts.

Understanding Dirty Reads in PeopleSoft Query

Dirty Reads mode—also called Read Only mode—enables you to configure your servers to avoid table locking while running PeopleSoft queries. When Dirty Read mode is enabled for PeopleSoft Query, the performance is increased as queries do not lock on other INSERT and UPDATE operations.

Dirty Read mode is set in configuration files for PeopleSoft Application server and PeopleSoft Process Scheduler server:

- In PeopleSoft Application server, under section [PSQRYSRV], the setting 'Use dirty-read' controls behavior for PSAPPSRV, PSQCKSRV, and PSQRYSRV.
- In PeopleSoft Process Scheduler server, under section [PSAESRV], the setting 'scheduledquery-dirtyread' controls behavior for scheduled query process executing under PSAESRV process.

See Also

PeopleTools 8.52 : Application Engine, "Oracle's PeopleSoft Application Engine Preface," Application Engine

PeopleTools 8.52: System and Server Administration, "Setting Application Server Domain Parameters," Use Dirty-Read

PeopleTools 8.52: PeopleSoft Process Scheduler, "Managing PeopleSoft Process Scheduler," Setting Parameters for the Application Engine Server

Common Elements in This Chapter

Add Record Click this link to access the Query page, where you can add fields to the

query content or add additional records.

Show Fields Click this link to display the fields included in the record.

Col (column) Displays the current column number for each field listed.

Query Name New Unsaved Query appears in this read-only field until you change it on

the Properties page. This field appears on all of the Create New Query

pages.

Record.Fieldname Displays the record alias and name for each field listed.

Indicates key fields.

Click the Delete button to delete the row.

A confirmation message appears. Click the Yes button to proceed with the

deletion. Click the No button to cancel the deletion.

Click the Use as Criteria or Add Criteria button to open the Edit Criteria Properties page, where you can determine how this field will be used as a

criterion for the current query.

From the Query tab, click the Folder button to view the fields for the chosen record, if they are not already displayed. Query Manager expands the record so that you can see the fields and make sure that this record has the content that you want.

Click the Folder button again to hide the fields for a record.

A key is displayed to the left of key fields.

Hover over to view the feeds of this query.

See PeopleTools 8.52: Feed Publishing Framework, "Creating and Using

Query Feeds."

Click to save a query at any time after you have selected one record and at

least one field for it.

See <u>Chapter 2</u>, "<u>Creating and Running Simple Queries</u>," <u>Saving Queries</u>, page 27 and <u>Chapter 4</u>, "<u>Modifying</u>, <u>Scheduling</u>, and <u>Organizing Queries</u>,"

Updating Existing Queries, page 107.

Save As Click to access the Query Properties page where you can enter basic

information about the query and save it.

See <u>Chapter 2</u>, "<u>Creating and Running Simple Queries</u>," <u>Saving Queries</u>, <u>page 27</u> and <u>Chapter 4</u>, "<u>Modifying</u>, <u>Scheduling</u>, and <u>Organizing Queries</u>."

Updating Existing Queries, page 107.

New QueryClick to access the PeopleSoft Query Manager where you can start creating

a new query.

See Chapter 2, "Creating and Running Simple Queries," Creating New

Queries, page 10.

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Preference Click to access the Preference page where you can specify query

preferences.

See Chapter 2, "Creating and Running Simple Queries," Specifying Query

Preferences, page 13.

Properties Click to access the Query Properties page where you can view and edit data

about the current query, such as the query name and description. You can also record information about your query so that you can use it again in the

future.

See Chapter 2, "Creating and Running Simple Queries," Viewing and

Editing Query Properties, page 22.

Public As Feed This link is available only when query was not published as feed.

Click to access the PSQuery Data Type - Publish Feed Definition page where you can define feed properties such as the feed title, security, and

other options.

See PeopleTools 8.52: Feed Publishing Framework, "Creating and Using

Query Feeds."

Manage Feed This link is available only when query was published as feed.

Click to access the PSQuery Data Type - Publish as Feed page where you can define feed properties such as the feed title, security, and other options.

See PeopleTools 8.52: Feed Publishing Framework, "Creating and Using

Query Feeds."

New Union This link is available only when query does not have union.

Click to create an union of multiple queries.

See Chapter 5, "Working with Advanced Query Options," Working with

Unions, page 124.

Delete Union This link is available only when query have an union attached.

Click to delete an existing union of multiple queries.

See Chapter 5, "Working with Advanced Query Options," Working with

Unions, page 124.

Return to Search Click to return to the Query Manager search page where you can create new

queries, modify existing queries, schedule queries, and organize queries.

See Chapter 4, "Modifying, Scheduling, and Organizing Queries," page 103.

Creating New Queries

This section discusses how to:

- Specify query preferences.
- Select records.
- Add fields to query content.
- View fields selected for output.
- Change the column and sort order for multiple fields.
- Edit field properties.
- View and edit query properties.
- View underlying SQL code.
- Preview query results prior to saving.

Pages Used to Create a Query

Page Name	Definition Name	Navigation	Usage
Query Preferences	QRY_PREFERENCES	Reporting Tools, Query, Query Manager.	Specify query preferences.
		Create a new query or search for an existing one.	
		Click the Preferences link on any page of the Query Manager component except the Run page.	
Records	QRY_RECORDS	Reporting Tools, Query, Query Manager.	Select the records upon which to base the new
		Click the Create New Query link.	query.
		Click the Search button to find an existing record.	
Query	QRY_QUERY	Reporting Tools, Query, Query Manager.	Add fields to the query content. You can also add
		Click the Create New Query link.	additional records by performing joins.
		Click the Search button to find an existing record.	When you first access this page, if you have selected the record for an effective-
		Click the Add Record link for the desired record.	dated table, a page informs you that an effective date criteria has been automatically added for this record. Click the OK button to close the page.

Page Name	Definition Name	Navigation	Usage
Fields	QRY_FIELDS	Reporting Tools, Query, Query Manager.	View how fields are selected for output; view the
		Click the Create New Query link.	properties of each field; and change headings, order-by numbers, and aggregate
		Click the Search button to find an existing record.	values.
		Click the Add Record link for the desired record.	
		Select the desired fields, and select the Fields tab.	
Edit Field Ordering	QRY_FIELDS_ORDER	Reporting Tools, Query, Query Manager.	Use to change the column and sort order for multiple
		Create a new query or search for an existing one.	fields.
		From the Fields page, click the Reorder/Sort button.	
Edit Field Properties	QRY_FIELDS_SEC	Reporting Tools, Query, Query Manager.	Use to format the query output; for example, to
		Create a new query or search for an existing one.	change column headings or display translate table values in place of codes.
		From the Fields page, click the Edit button to the right of the desired field.	values in place of codes.
Query Properties	QRY_PROPERTIES	Reporting Tools, Query, Query Manager.	View and edit data about the current query, such as
		Create a new query or search for an existing one.	the query name and description.
		With a query open, click the Properties link at the bottom of the page (this link appears on all pages but the Run page).	Also use to record information about your query so that you can use it again in the future.
View SQL	QRY_SQL	Reporting Tools, Query, Query Manager.	View the underlying SQL code that Query Manager
		Create a new query or search for an existing one.	generates based on your query definition.
		With a query opens, select the View SQL tab.	You cannot modify SQL on this page.

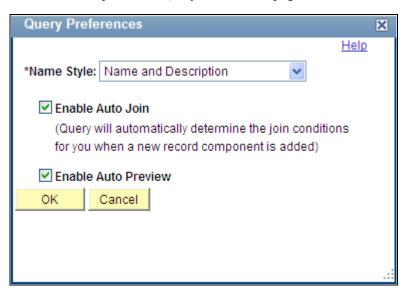
Page Name	Definition Name	Navigation	Usage
Run	QUERY_VIEWER	Reporting Tools, Query, Query Manager. Create a new query or search for an existing one. With a query opens, select the Run tab.	View the results of your query prior to saving in order to verify that your query yields the results that you need. Continue to adjust and preview your query as necessary.

Specifying Query Preferences

To specify query preferences:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Create a new query or search for an existing one.
- 3. Access the Query Preferences page by clicking the Preferences link on any page of the Query Manager component (except the Run page).

This is an example of the Query Preferences page:



Query Preferences page

Name Style

Specify how record and field names are displayed. Select one of the following:

- Description only
- Name and Description

This is used mostly for global users where the record and field names are in English but the descriptions are in another language.

Enable Auto Join Select to indicate that your query should automatically determine the join

conditions when a new record component is added.

Enable Auto Preview Select to indicate that your query preview should automatically rerun each

time you access the Run page of the Query Manager component.

This option is selected by default.

See Also

Chapter 2, "Creating and Running Simple Queries," Selecting Records, page 14

Chapter 2, "Creating and Running Simple Queries," Adding Fields to Query Content, page 16

Chapter 2, "Creating and Running Simple Queries," Previewing Query Results Prior to Saving, page 25

PeopleTools 8.52: Security Administration, "Managing PeopleSoft Personalizations," Understanding Internally Controlled Options

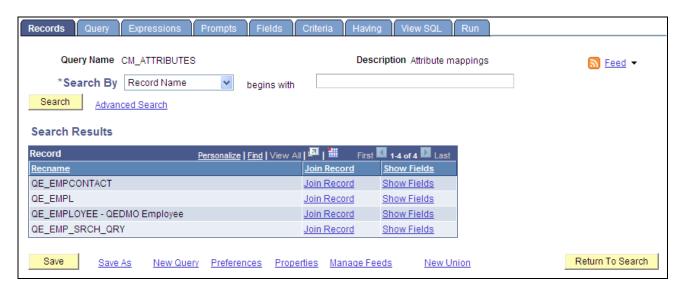
Selecting Records

Use these steps to access the Records page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link.
- 3. Click the Search button.

The Records page appears.

This is an example of the Records page:



Records page

Note. In your PeopleSoft database, tables are represented as record definitions. In PeopleSoft Query, we refer to the record definitions as *records*.

To select a record in the Records page:

- 1. Find the record upon which to base the query.
 - If you know the entire record name, description, access group name, or field name included in the record, select the appropriate item in the Search By drop-down list box.
 - Enter the name in the field (or click the Look Up button if searching by access group name). Then click the Search button to display a list of records that match your search criteria.
 - You can perform a partial search by entering part of the name in the Search By field.

Note. Enter as much of the name as possible to find the correct record.

You can perform an advanced search by clicking the Advanced Search link.

You can perform a progressively narrower search by selecting conditions for the record name, record description, or field name contained in the record, and then entering an appropriate search string in the fields that correspond to your selections. For access group name, select a condition, click the Lookup Name button, and then select the access group name from the list of access group trees that appears.

• If you want to view a list of available records, leave the field blank and click the Search button to display a list of up to 300 records.

By default, only the first 20 records appear on the page. To see more records from the list, use the navigation buttons and links located on the header bar. To display 100 records, select the View 100 link, and use the scroll-bar to go through the rest of the list.

2. If you want to view a record's fields, click the Show Fields link next to the record in question.

A page displays the record's fields. You can use this information to verify whether you want to base the query upon this record.

- 3. After viewing the fields, click the Return button to return to the Records page.
- 4. Click the Add Record link next to the record that you want to add to the query.

The Query page appears enabling you to select the fields from the selected record to add to the query.

Note. In most cases, you select only one base record from this page. If you navigate back and select a second base record, you are creating an *any join* for the two records.

See Also

Chapter 5, "Working with Advanced Query Options," Creating Any Record Joins, page 127

Adding Fields to Query Content

Use these steps to access the Query page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link.
- 3. Click the Search button to find an existing record.
- 4. Click the Add Record link for the desired record.

The Query page appears.

This is an example of the Query page:



Query page

₽ø

Click the Sort button once to list fields in alphabetical order. Click the button again to return to the original sort.

Alias The alias name that the system automatically assigns to the chosen records.

Hierarchy Join Click this link to join a child table to its parent table.

Check All Fields Click this button to check all fields in the record. After you select a field,

the system automatically adds it to the query and you can view it on the

Fields page.

This button does not appear when the field names are hidden.

Uncheck All Fields Click this button to clear all fields in the record.

Fields Select the check box to the left of each field that you want to add to your

query content.

Related Record JoinClick such links to join two records that are based on a shared field.

For example, in the above example, the QE DEPT TBL record is related to

the QE EMPLOYEE record by the DEPTID field.

Expand All Records Click this button to view all fields in the records

This button appears only when there is more than one record listed.

Collapse All Records Click this button to hide all fields in the records.

This button appears only when there is more than one record listed.

In the Query page, to add fields to your query:

1. Select the fields to add to the query either by clicking their Fields check boxes or by clicking the Check All Fields button.

2. When you have selected the desired fields, select the Fields tab.

See Also

Chapter 5, "Working with Advanced Query Options," Joining Records, page 125

Viewing Fields Selected for Output

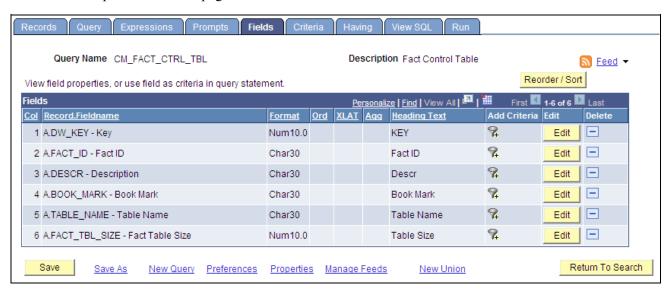
Use these steps to access the Fields page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link.
- 3. Click the Search button to find an existing record.
- 4. Click the Add Record link for the desired record.

5. Select the desired fields, and then select the Fields tab.

The Fields page appears.

This is an example of the Fields page:



Fields page

Format

Field type and length for each field listed.

Ord (order)

Shows one or more fields selected to sort your query output.

If the field is the first sort field, a *1* appears, and the system sorts rows that are based on this field first. The second sort field that is selected is numbered *2*, and so on.

You can also specify a descending sort order. The letter *D* appears if you are sorting fields in descending order.

XLAT(translate)

Specifies the translate value that you want to appear in the guery results: N (none), S (short), or L (long).

The table you're querying may include fields that use the Translate table. If so, the field itself contains a short code of some kind, for which the Translate table provides a set of corresponding values. For example, if the table includes an EFF STATUS field, the value is A or I, which the Translate table translates into Active and Inactive. If a field has values on the Translate table, a letter appears in the XLAT column for that field.

In your query results, you might want to display the translated value rather than the code (for example, Active instead of A). To instruct PeopleSoft Query to make this substitution, specify L as the translate value.

Translate tables are effective-dated, so you must select which effective date to use for them. For most tables, PeopleSoft Query defaults to the current date, meaning that it uses the currently active list of Translate table values. However, if the table you're querying is also effective-dated, PeopleSoft Query uses the value in the EFFDT field for a row. That is, for each row the query returns, PeopleSoft Query uses the Translate table values that were active as of that row's effective date.

If neither of these effective date options are what you want, you have two more options:

If the table you're querying includes another date field, you can use the value in that field as the effective date for Translate table values.

Click the Edit button, select the Field option, and then select the field name from the drop-down list box.

Use an expression to set the effective date for the Translate table.

For example, enter a fixed effective date or prompt the user for a fixed effective date

Agg (aggregate)

Aggregate function for each field listed.

Heading Text

The heading assigned to appear at the top of the column for the query output for each field listed.

Edit

Click this button to display the Edit Field Properties page.

See Chapter 2, "Creating and Running Simple Queries," Viewing and

Editing Query Properties, page 22.

Reorder/Sort

Click this button to display the Edit Field Ordering page, which enables you to change the column order and/or sort order for multiple fields.

Changing the Column and Sort Order for Multiple Fields

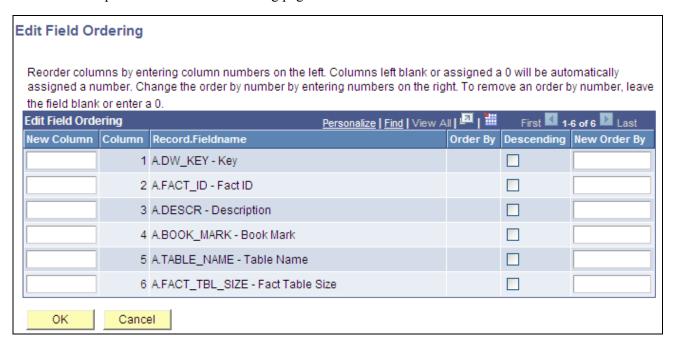
Use these steps to access the Edit Field Ordering page:

1. Select Reporting Tools, Query, Query Manager.

- 2. Create a new query or search for an existing one.
- 3. Select the Fields tab, and click the Reorder/Sort button.

The Edit Field Ordering page appears.

This is an example of the Edit Field Ordering page:



Edit Field Ordering page

New Column Enter the new column number to reorder the columns. Columns that are left blank or assigned a zero are automatically assigned a number.

Current sort order. Order By

Select this check box to sort fields in descending order. **Descending**

New Order By Enter the new sort order number to change the sort order. Enter zero to

> remove a sort order. If the field is the first sort field, enter 1, and the system sorts rows based on this field first. To designate the second sort field, enter

2, and so on.

Editing Field Properties

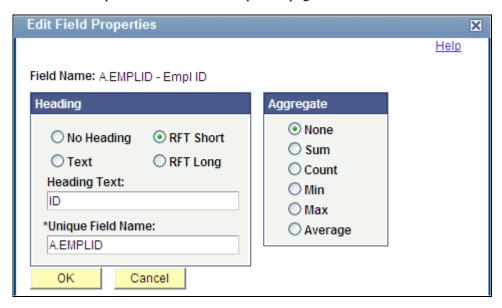
Use these steps to access the Edit Field Properties page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Create a new query or search for an existing one.

3. Select the Fields tab, and then click an appropriate Edit button.

The Edit Field Properties page appears.

This is an example of the Edit Field Properties page:



Edit Field Properties page

Field Name

The name of the field for which you are editing properties.

Column Number

By default, the fields appear in the same order as they are listed in the record on the Query page. To change the order for the selected field, enter the new column number. When you close the Field Properties page, the columns reorder.

Heading

Select a column heading from the following options:

- *No Heading:* The column does not have a heading.
- *Text*: The column heading is the text that you have entered in the text box.
- *RFT Short:* The column heading is the short name from the record definition.
- *RFT Long:* The column heading is the long name from the record definition.

Unique Field Name

Used for translations. There is no need to change the default value, which is a single-letter alias for the record followed by the record field name (for example, A.NAME or B.EMPLID).

Aggregate If you are using aggregate values, select the aggregate function value for

this field.

An aggregate function is a special type of operator that returns a single value based on multiple rows of data. When your query includes one or more aggregate functions, PeopleSoft Query collects related rows and

displays a single row that summarizes their contents.

None Will not use aggregate functions.

Sum Adds the values from each row and displays the total.

Count Counts the number of rows.

Min (minimum) Checks the value from each row and returns the lowest one.

Max (maximum) Checks the value from each row and returns the highest one.

Average Adds the values from each row and divides the result by the number of

rows.

See Also

Chapter 5, "Working with Advanced Query Options," Working with Aggregate Functions, page 121

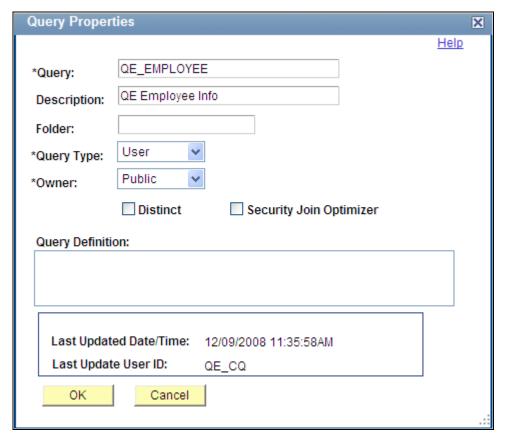
Viewing and Editing Query Properties

Use these steps to access the Query Properties page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Create a new query or search for an existing one.
- 3. Click the Properties link on any page of the Query Manager component except the Run page.

The Query Properties page appears.

This is an example of the Query Properties page:



Query Properties page

Query Use this field to edit the name of the query.

Description Edit the description of the query.

Folder Enter the name of the folder in which you would like the query to reside.

To create a new folder, enter the name of the new folder.

Query Type Select *Archive, Process, Role* or *User.*

Workflow queries are either *Process* or *Role*.

See Chapter 2, "Creating and Running Simple Queries," Understanding

Query Types, page 5.

Owner Select from the following options:

• *Private*: If you select this option, only the user ID that created the query can open, run, modify, or delete the query.

• *Public:* If you select this option, any user with access to the records used by the query can run, modify, or delete the query (if he or she has access to public queries).

Distinct

Select this option to eliminate duplicate rows in a query result.

Some queries return the same row more than once because it satisfies the query in more than one case. For example, if you query the JOB record to return all JOBCODES, you receive multiple rows that look identical because some employees have the same JOBCODE. If you select the Distinct check box, you receive each JOBCODE once.

This option is not visible for union selections because unions are automatically distinct.

Note. In Oracle databases, PeopleSoft LongCharacter fields use the CLOB datatype when their length definition exceeds 1333. Since CLOBS and other binary datatypes are not valid columns for all operators, all queries including columns with LongCharacter field length definition that exceeds 1333 should not include the DISTINCT operator.

Security Join Optimizer

If this query contains multiple joins to the same query security record, define whether it should be run optimized:

• Select to enable this query to join once to the first security record.

If this is a non-self join (same security tables) or a self join, the query joins security table once.

If this is a non-self join with different security tables, the query joins security table multiple times using the Inner Join logic and the Security Join Optimizer option is not used.

• Clear to enable this query to join multiple times to the security record.

If this is a non-self join with same security tables or a self join, the query joins security table multiple times using the Inner Join logic.

If this is a non-self join with different security tables, the query joins security table multiple times using the Inner Join logic and the Security Join Optimizer option is not used.

Note. The concepts of Security Join Optimizer are also applied when you perform Left Outer Joins with security records.

Query Definition

Free text area that you can use to further describe your query.

See Also

Appendix A, "Creating Workflow Queries," page 163

Appendix B, "PeopleSoft Query Security," page 165

Viewing Underlying SQL Code

Use these steps to access the View SQL page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Create a new query or search for an existing one.
- 3. From the Fields page, select the SQL tab.

The View SQL page appears.

This is an example of the View SQL page:



View SQL page

Query SQL

Displays the underlying SQL code that Query Manager generates based on your query definition. To copy the SQL statement, highlight the text of the statement and copy it using your browser's copy command. Paste it into another application, if desired.

Previewing Query Results Prior to Saving

Use these steps to access the Run page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Create a new query or search for an existing one.
- 3. From the Fields page, select the Run tab.

The Run page appears.

This is an example of the Run page:



Run page

Note. Because PeopleSoft Query 8.52 partly supports iOS (Apple's mobile operating system), iPad users can view query results or rerun query from the Run page, but they cannot download query results using the Download to Excel or Download to XML link.

View All

Click this link to view all rows and use scroll bar to navigate.

Rerun Query

Click this link to rerun your query preview. If you have made changes to your query since the last preview, you must rerun the query to see the effect of your changes.

Note. If you do not want to rerun the query every time you want to preview it, *deactivate* the Enable Auto Preview feature. When this feature is active, your query automatically runs each time you select the Run tab. To *activate* Enable Auto Preview, click the Preferences link and then select Enable Auto Preview. (The Preferences link is available on every page except the Run page.)

See <u>Chapter 2</u>, "<u>Creating and Running Simple Queries</u>," <u>Specifying Query Preferences</u>, page 13.

Download to Excel

Click this link to download your query to Microsoft Excel.

Note. To grant users access to download your query to Microsoft Excel, you must make sure that their permission lists include the WEBLIB QUERY web library with full access.

Download to XML

Click this link to download your query result as XML format to another browser window.

Note. To grant users access to download your query to XML, you must make sure that their permission lists include the WEBLIB_QUERY web library with full access.

Query Results in Double-Byte Characters

In the Run page, the width of rows are automatically adjusted to show the query results. If the query results are in double-byte characters (for example, Japanese), rows may wrap vertically.

To view the row horizontal with no line break:

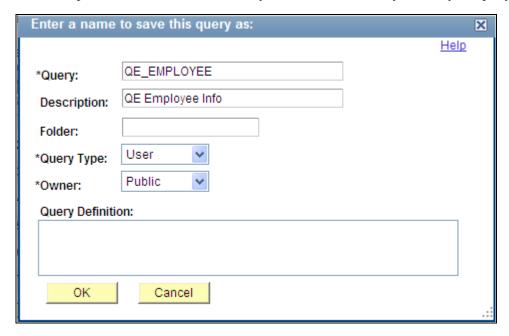
- 1. In PeopleSoft Application Designer, open the PTQUERYSTYLESUB definition.
- 2. Open the PSQRYRESULTSHDR style class properties.
- 3. In the Spacing/Alignment tab, select the *Nowrap* option from the White Space drop-down list box.

See PeopleTools 8.52: PeopleSoft Application Designer Developer's Guide, "Creating Style Sheet Definitions," Setting Style Class Attributes and PeopleTools 8.52: PeopleSoft Application Designer Developer's Guide, "Creating Style Sheet Definitions," Specifying Spacing and Alignment.

Saving Queries

You can save a query at any time after you have selected one record and at least one field for it. Save queries from any Query Manager page (except for the Run page) by clicking either the Save button or the Save As link. You must enter some basic information about the query before the system allows you to save it for the first time.

This example shows the information that you must define when you save your query for the first time:



Saving a query

To save a query for the first time:

1. After you make your changes in Query Manager (Reporting Tools, Query, Query Manager), click the Save button.

- 2. In the Query field, enter a short name for the guery.
- 3. In the Description field, enter an appropriate description for the query.

This information will help you identify the query later.

4. In the Folder field, enter the name of the folder into which you would like to save the query.

To create a new folder, enter the name of the new folder.

Note. The folder that you create does not reside on your local drive. You create a folder for the purpose of describing the query and to facilitate grouping and sorting.

5. Select a query type.

Standard queries are designated as *User* queries. If you have access to workflow queries, your list of types will also expand to include role, process, and archive.

- 6. In the Owner field, select whether your query is *Public* or *Private*.
 - *Private*: Only the user ID that created the query can open, run, modify, or delete the query.
 - *Public*: Any user with access to the records used by the query can run, modify, or delete the query.
- 7. Enter the query definition.
- 8. Click the OK button to save the query.

Note. Using the Save As link creates another instance of the query that you can modify and save under a different name. When you click the Save As link, the page you just saw appears enabling you to change the name, description, and owner of the new query.

Running Queries

You can run a predefined query from your browser and view it online. When you click the Run button on the Query Manager search page, PeopleSoft Query displays the results in a new browser window. This Run option is useful if you want to run multiple queries or run the same query multiple times with different runtime prompt values and compare the results of the queries.

If you want to run queries that you haven't saved, you can use the Run page in the Query Manager.

To run a query:

1. Select Reporting Tools, Query, Query Manager.

The Query Manager Search page appears.

2. Search for a query using the basic or advanced search function.

Both search types enable you to use the following *search by* criteria: access group name, description, folder name, owner, query name, type, uses field name, and uses record name. The basic search allows you to search using the *begins with* condition. The advanced search enables you to perform a progressively narrower search by using one or more *search by* criteria and selecting from a broad choice of conditions. These are instructions on using *search by* criteria:

• If you know the entire name of the query that you want to run, select Query Name from the Search By drop-down list box, and then enter the query name in the Search By field.

If you do not know the name of the query and want to search through a list of queries, leave the Search By field blank and click the Search button to display a list of up to 300 queries.

Perform a partial search by entering part of the search string in the Search By field.

- To search using any other *search by* criteria, select the appropriate item from the Search By drop-down list box, and then enter the search string in the field.
- 3. To perform an advanced search, click the Advanced Search link on the Query Manager Search page.

On the Advanced Search page, select the appropriate *search by* criteria and conditions, and then enter a search string in each of the corresponding fields.

4. Click the Search button to display a list of queries that match your search criteria.

The Search Results page appears. The results list all the queries that match the search criteria. The following information appears:

- Query name.
- Query description.
- Owner (public or private).
- Folder.
- 5. Scroll to the name of the query that you want to run.

By default, only the first 30 queries appear on the page. To see more of the list, click the navigation buttons and links located on the header bar.

To display 100 of the queries, select View 100 and use the scroll-bar to view the remainder of the list.

- 6. To run a query, use the following links on the row of the query:
 - HTML: Click to generate an HTML version of the query.
 - Excel: Click to download the query to a Microsoft Excel spreadsheet.
 - Schedule: Click to schedule a time for the query to run.
 - XML: Click to download query result to browser as webrowset format. There are options that enable you to open, save, or cancel the downloaded file.

Note. If a Query—that is used as a data source for BI Publisher— is run through *Reporting Tools, Query, Query Manager*, the BI Publisher-related prompts do not appear. The normal basic table-formatted query results are generated.

See Chapter 4, "Modifying, Scheduling, and Organizing Queries," Scheduling Queries, page 108.

See Also

PeopleTools 8.52: BI Publisher for PeopleSoft, "Running, Locating, and Viewing BI Publisher Reports," Running BI Publisher PeopleSoft Query Reports

PeopleTools 8.52: Security Administration, "Understanding PeopleSoft Security," Security Basics

Adding Queries to the Internet Explorer Favorites List

To add a query to the Favorites list on the Internet Explorer menu:

- Select Reporting Tools, Query, Query Manager.
 Alternatively, select Reporting Tools, Query, Query Viewer.
- 2. Click Search, and then right-click the HTML link on the Query Manager or Query Viewer search page.
- 3. Click the Add to Favorites option on the Internet Explorer menu.

The Add Favorite page appears.

- 4. Change the text in the Name box to the name of your query.
- 5. Click the OK button.

Internet Explorer adds the query to your Internet Explorer Favorites list.

Downloading Queries

You can download your query to a Microsoft Excel spreadsheet or CSV text file.

After you have downloaded the query to Microsoft Excel, the first row in the spreadsheet displays the total number of rows of your query that are included in the spreadsheet.

Note. Because PeopleSoft Query 8.52 partly supports iOS (Apple's mobile operating system), iPad users can edit or schedule queries from the Query Manager page or Query Viewer page, but they cannot download query results using the HTML, Excel, or XML link.

A Microsoft Excel spreadsheet can contain a maximum number of 65,536 rows. If the spreadsheet cannot include all of the rows in your query, the first row displays—in a red font—the total number of rows returned by the query. If this number is greater than 65,536, Microsoft Excel spreadsheet does not include the remaining rows.

If you download your query from the Run page, the query has a different default filename than if you download your query after clicking the HTML or Excel links. These default filenames are different because: (a) using the Run page to run queries, queries are run using the application server, and (b) using the HTML or Excel links, queries are run using a query service.

To download your query results, select one of the following options:

- HTML: Click this link on the Query Manager or Query Viewer search results page.
- Excel: Click this link on the Query Manager or Query Viewer search results page.

After you click the Excel link, there are options that enable you to save, open, or cancel downloading query results to Microsoft Excel.

Note. If you have Office 2007 installed, then when doing a download-to-Excel, you might encounter a Microsoft Office Excel warning message suggesting that you verify that the file is not corrupted and that it is from a trusted source before opening it. You should click the Yes button in this situation.

The CacheBaseDir= setting in the psappsrv.cfg file specifies the location of temp files that are created by the Query to Excel execution. Those temp files are removed automatically after the run. If the CacheBaseDir is not set in the psappsrv.cfg file, all temp files are located under %PS_SERVDIR%.

See <u>Appendix B, "PeopleSoft Query Security," Enabling the Query Access List Cache, page 167</u> and *PeopleTools 8.52: System and Server Administration*, "Setting Application Server Domain Parameters," CacheBaseDir.

XML: Click this link on the Query Manager or Query Viewer search results page.

After you click the XML link, query result will be downloaded to browser as XMLP format and there are options that enable you to open, save, or cancel the downloaded file. If you click the Open button, XML formatted query result is downloaded to browser. You can also select the *XML* option as the format of your query results in the Schedule Query page when schedule to run a query.

• Download to Excel: Click this link on the Query Manager or Query Viewer Run page.

• Excel SpreadSheet: This option is available after you have clicked the HTML link on the Query Manager or Query Viewer search results page. However, you can also click the Download to Excel or Excel links without downloading the query to HTML.

Microsoft Excel 2000 or later is preferred. If you're using Microsoft Excel 97, click the CSV Text File link when you need to download large result sets.

You can configure your environment to open the Microsoft Excel file in a separate window or save it as a file on your local hard drive by modifying the File Type Option settings for Microsoft Excel Worksheets.

Note. Downloaded data such as numbers and dates are formatted in the Microsoft Excel spreadsheet according to the regional settings on the user's machine.

If you use the Windows or Macintosh operating systems, you can set your downloaded queries to open in browser windows instead of in the Microsoft Excel application. To set this option in Windows, select the XLS file type in your folder options and select the Browse in same window check box. When this check box is cleared, downloaded queries open in the Microsoft Excel application.

• CSV Text File: This option is available after you have clicked the HTML link. If you click this option, the File Download page appears, at which point you can open the file in your browser or save it to disk.

Note. The output has no formatting and does not support UTF-8 encoded data.

Because Microsoft Excel does not support UTF-8 encoding, the CSV file is written in binary mode with UCS-2 encoded data. Moreover, Excel does not automatically recognize Unicode-encoded, commadelimited files even if they have a .csv extension. Therefore, the user receiving the file will not be able to open it by double-clicking. Instead, he or she must open it with Excel's File, Open menu and choose the comma delimiter.

• XML File: This option is available after you have click the HTML link. If you click this option, the File Download page appears, at which point you can open the XML formatted query result in your browser or save it to your local machine.

To modify the File Type Option settings for Microsoft Excel Worksheets when using Microsoft Windows 2000:

- 1. Open Windows Explorer (right-click Start, Explore).
- 2. Select Tools, Folder Options, File Types.
- 3. Select the *XLS* extension (Microsoft Excel Worksheet).
- 4. Click the Advanced button, and select or clear the Browse in same window check box.

Applying a Formula to a Newly Inserted Column

When working in Microsoft Excel on a query that you have downloaded, adhere to the following guidelines in order to insert a new column into the spreadsheet, and then add a formula to that column.

When you insert a new column in Microsoft Excel, the new column's cells assume the default format from one of the adjacent columns—typically the left column. For example, if you insert a column between columns B and C, the new column takes on the format of column B. If column B is formatted as *Text*, you cannot apply a formula to the newly inserted column.

Note. If the columns adjacent to the newly inserted column have a format of *General*, you should be able to apply a formula without performing the following procedure.

In Microsoft Excel, to apply a formula to a newly inserted column of a query that you have downloaded:

- 1. Highlight the newly inserted column.
- 2. Change the column's format from text to general by selecting *Format, Cells*, and then selecting *General* from the list of categories on the Number tab.
- 3. Insert the formula into the column.

Performing Lookups

Some queries are designed to prompt you for information when you run them. This approach narrows the query results to match the information that you entered. To help you enter the correct information, you can perform a search using the Look Up button that appears on the page.

For example, the ADDRESSLIST query prompts you for a specific employee ID. You might know an employee's last name, but not have the employee ID handy. Using the Look Up button, you use the information that you *do* have to find the required information.

In this example, we perform a basic lookup using ADDRESSLIST:



ADDRESSLIST page

To perform a lookup:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Search for an existing one.
- 3. Click the HTML link from the Query Manager search page for the ADDRESSLIST query name from the query list.
- 4. If you know the employee ID for the address that you are looking up, enter it in the *EmplID* (employee ID) field; if you need to search for the employee ID, click the Look Up button.
- 5. On the Look Up page, click the drop-down arrow to find more search values.

In this example, you can select *EmplID*, *Name*, or *Last Name*. To find all values for this field, leave the search field blank and click the Look Up button. You can also display all of the search fields at once by clicking the Advanced Lookup link.

6. Select the value to search by, and then click the Look Up button.

In this example, we know the employee's last name, but not his employee ID.

Your lookup information appears on the page.

7. Click the link in the result field.

The Query page appears with the required value already complete.

8. Click the View Results button.

The query results appear on the page.

Printing Query Results

Before you can print query results, you must run the query.

To print query results on your default printer:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Search button, and then click either the HTML or Excel links.
- 3. Click the Print button or select File, Print.

If you download the query to Microsoft Excel, you can print the query using Microsoft Excel's print function

If you download the query as a CSV text file, you can print it using the print functions of the applications you use to work with it.

Note. Because PeopleSoft Query 8.52 partly supports iOS (Apple's mobile operating system), iPad users can edit or schedule queries from the Query Manager page or Query Viewer page, but they cannot download query results using the HTML, Excel, or XML link.

To grant users access to download your query to Microsoft Excel, you must make sure that their permission lists include the WEBLIB_QUERY web library with full access.

See *PeopleTools 8.52: Security Administration*, "Setting Up Permission Lists," Setting Query Permissions.

Using Query Viewer

Query Viewer is a read-only version of Query Manager. It enables security administrators to limit some users to read-only access for all queries, so they can only view or print queries.

This example shows the Query Viewer page:



Query Viewer page

Query Viewer enables you to:

• Search for a query using the basic or advanced search functions.

Both search types allow you to select the following *search by* criteria: access group name, description, folder name, owner, query name, type, uses field name, and uses record name. The basic search enables you to search using only the *begins with* condition. The advanced search enables you to perform a progressively narrower search by using one or more *search by* criteria and selecting from a choice of conditions for each *search by* criterion.

Run a query (which displays results in a new browser window).

To run a query, click the HTML, Excel, or XML link to the right of the query on the Search Results page.

Note. After you click the HTML link, you have an option to view the XMLP formatted result in a new browser by clicking the Download to XML File link on the HTML result page.

- View a query in XMLP formatted result by clicking the XML link.
- Download the results to a Microsoft Excel spreadsheet or a CSV Text file.

To download the results, first click the HTML link associated with the query on the Search Results page. Then, to download the results to a CSV text file, click the CSV Text File link on the HTML results of the query.

To download the results to a Microsoft Excel file, click the Excel Spreadsheet link on the HTML results page.

• Print a query.

See Chapter 2, "Creating and Running Simple Queries," Printing Query Results, page 34.

• Schedule a query.

From the Search results page, click the Schedule link associated with the query. Query Viewer interacts with PeopleSoft Process Scheduler to enable you to schedule queries. You can submit requests to schedule a query, check the status of your request using Process Monitor, and view your output using Report Manager.

See *PeopleTools 8.52: PeopleSoft Process Scheduler*, "Using Process Monitor" and *PeopleTools 8.52: PeopleSoft Process Scheduler*, "Using Report Manager."

Note. Because PeopleSoft Query 8.52 partly supports iOS (Apple's mobile operating system), iPad users can edit or schedule queries from the Query Manager page or Query Viewer page, but they cannot download query results using the HTML, Excel, or XML link.

Online viewing of Query-based BI Publisher reports is available by selecting Reporting Tools, BI Publisher, Query Report Viewer.

See Also

Chapter 2, "Creating and Running Simple Queries," Previewing Query Results Prior to Saving, page 25

Chapter 2, "Creating and Running Simple Queries," Running Queries, page 28

Chapter 4, "Modifying, Scheduling, and Organizing Queries," Scheduling Queries, page 108

PeopleTools 8.52: BI Publisher for PeopleSoft, "Running, Locating, and Viewing BI Publisher Reports," Running Reports in Query Report Viewer

Chapter 3

Defining Selection Criteria

You define *selection criteria* to selectively retrieve the data that you want. Selection criteria refine your query by specifying conditions that the retrieved data must meet. For example, you can specify that the system retrieve only those phone numbers with a certain area code instead of all phone numbers.

This chapter discusses how to:

- Choose selection criteria.
- Define criteria.
- Define prompts.
- Define HAVING criteria.
- Define expressions.
- Drill URL in PeopleSoft Query.

Choosing Selection Criteria

Because your PeopleSoft database stores data in tables, you can identify every individual piece of data by saying what *column* (field) and *row* (record) it is in. When you create a query, select the data that you want by specifying which columns and rows you want the system to retrieve.

If you run the query after selecting the fields, the system retrieves *all* the data in those columns; that is, it retrieves the data from every row in the table or tables. This might be much more data than you want or need. You select which rows of data you want by adding selection criteria to the query.

The selection criteria serves as a test that the system applies to each row of data in the tables that you are querying. If the row passes the test, the system retrieves it; if the row does not pass, the system does not retrieve it. For example, suppose that you needed the names of all PeopleStore customers who were not PeopleSoft employees. You would start by creating a query that retrieved the Name and Company fields from the Customer table. You could then add a selection criterion that enables PeopleSoft Query to scan for rows where the company name is not *PeopleSoft*.

In most cases, a selection criterion compares the value in one of a row's fields to a reference value. In the preceding example, you would compare the value in the Company field to the constant value *PeopleSoft*. In other situations, you might compare the value to the value in another record field or to a value that the user enters when running the query.

Defining Criteria

This section discusses how to:

- View and edit selection criteria.
- Edit criteria properties.
- Select condition types.
- Enter comparison values.
- Specify effective date criteria.
- Relate multiple criteria.

Pages Used to Define Criteria

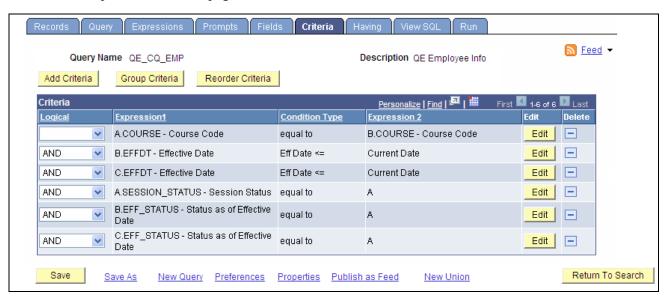
Page Name	Definition Name	Navigation	Usage
Query	QRY_QUERY	Reporting Tools, Query, Query Manager	Select a record for the query criteria.
		Click the Create New Query link on the Query Manager search page.	
		Click the Search button.	
		Click the Add Record link to select a record for the query.	
Fields	QRY_FIELDS	Reporting Tools, Query, Query Manager, Fields	Select the fields to be used as criteria for the query.
		Select each field that you want to use in the query, and then click the Add Criteria icon, or click the Check All button to select all the fields associated with the record as criteria.	
Criteria	QRY_CRITERIA	Reporting Tools, Query, Query Manager, Criteria	View and edit selection criteria for your query statement.

Page Name	Definition Name	Navigation	Usage
Edit Criteria Properties	QRY_CRITERIA_SEC	Reporting Tools, Query, Query Manager, Criteria Click the Add Criteria button on the Criteria page or click the Use As Criteria link on the Fields page.	Edit selection criteria properties for your query statement.

Viewing and Editing Selection Criteria

Access the Criteria page by selecting Reporting Tools, Query, Query Manager, Criteria.

This is an example of the Criteria page:



Criteria page

Any rows after the first row must include either an *AND* or *OR* logical value in the Logical column to specify whether you want the rows to meet this criterion in addition to other criteria that you have defined or as an alternative criterion. The first criterion that you define does not have a value in this column. The default for subsequent criteria is *AND*.

To reorder the criteria for your query, click the Reorder Criteria button, enter the new positions for the criteria on the Edit Criteria Ordering page, and click OK. You can also click the Add Criteria button from this Criteria page to add additional criteria, and you can click the Group Criteria button to group your criteria logically.

Editing Criteria Properties

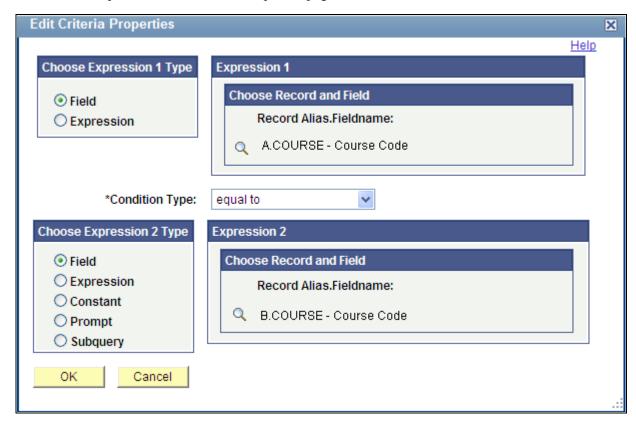
Use these steps to access the Edit Criteria Properties page:

1. Select Reporting Tools, Query, Query Manager.

- 2. Create a new query or search for an existing one.
- 3. Access the Criteria page, and click the Add Criteria button.

Alternatively, access the Fields page and click the Use As Criteria link.

This is an example of the Edit Criteria Properties page:



Edit Criteria Properties page

Field

Select this option if you want to base the selection criterion on another field's value, usually a field in another record component. To compare the values from fields in two records, you must join the record components.

When you select this option, you must then select a condition type.

See <u>Chapter 3</u>, "<u>Defining Selection Criteria</u>," <u>Selecting Condition Types</u>, <u>page 41</u>.

Select the appropriate comparison operator from the Condition Type drop-down list box.

Expression

Select this option if you want PeopleSoft Query to evaluate an expression that you enter before comparing the result to the value in the selected field.

When you select this option and click the New Expression link to create a new expression, you must then select an expression type. If you are entering an aggregate value, select the Aggregate Function check box. You can also enter parameters for length and decimal positions.

Also enter the expression in the text box. Query Manager inserts this expression into the SQL.

Creating Criteria Based on a Field

To create criteria based on a field:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Create a new query or search for an existing one.
- 3. Access the Criteria page, and click the Add Criteria button.

Alternatively, access the Fields page and click the Use As Criteria link.

If you accessed the page by clicking the Use As Criteria link on the Fields page, Query Manager displays the Edit Criteria Properties page with the selected field populated in the Expression 1 field.

4. In the Edit Criteria Properties page, specify the criteria for the field, and click the OK button to return to the Fields or Criteria page.

You can also use a field from a record as criteria even if you have not chosen that field for query output.

Creating Criteria Not Based on a Field

To create criteria that is not based on a field:

- 1. Access the Edit Criteria Properties page by clicking the Add Criteria button on the Criteria page.
 - The Edit Criteria Properties page appears enabling you to edit Expression 1 and Expression 2 fields.
- 2. In the Choose Expression 1 Type group box, select the Field or Expression option.
- 3. Edit the second (right-hand) Expression column to enter comparison values.
- 4. Save your query.

Selecting Condition Types

The condition type determines how Query Manager compares the values of the first (left-hand) expression to the second (right-hand) expression.

Query Manager also offers a *not* option that reverses the effect of each condition type. For example, *not equal to* returns all rows that *equal to* would not return.

Note. You should use the *not* version of an operator rather than the NOT operator on the entire criterion. When you use NOT, PeopleSoft Query cannot use SQL indexes to speed up the data search. When you use the *not* version of an operator, PeopleSoft Query can translate it into a SQL expression that enables it to use the indexes.

This table describes the available condition types:

Condition Types	Return Values
between	The value in the selected record field falls between two comparison values. The range is inclusive.
equal to	The value in the selected record field exactly matches the comparison value.
exists	This operator is different from the others, in that it does not compare a record field to the comparison value. The comparison value is a subquery. If the subquery returns any data, PeopleSoft Query returns the corresponding row.
greater than	The value in the record field is greater than the comparison value.
in list	The value in the selected record field matches one of the comparison values in a list.
in tree	The value in the selected record field appears as a node in a tree created with PeopleSoft Tree Manager. The comparison value for this operator is a tree or branch of a tree that you want PeopleSoft Query to search. Note. PeopleSoft Query should not use trees that contain a combination of dynamic details and range details. The results returned from trees with this combination of details may be inaccurate. See PeopleTools 8.52: PeopleSoft Tree Manager, "Using PeopleSoft Tree Manager."
is null	The selected record field does not have a value in it. You do not specify a comparison value for this operator. Key fields, required fields, character fields, and numeric fields do not allow null values.
less than	The value in the record field is less than the comparison value.

Condition Types	Return Values
like	The value in the selected field matches a specified string pattern. The comparison value may be a string that contains wildcard characters. The wildcard characters that PeopleSoft Query recognizes are % and
	% matches any string of zero or more characters. For example, <i>C</i> % matches any string starting with <i>C</i> , including <i>C</i> alone.
	_ matches any single character. For example, _ones matches any five-character string ending with ones, such as Jones or Cones.
	PeopleSoft Query also recognizes any wild-card characters that your database software supports. See your the documentation for your database management system for details.
	To use one of the wild-card characters as a literal character (for example, to include a % in your string), precede the character with a \ (for example, percent\%).

Note. If you have selected the EFFDT field on an effective-dated table, PeopleSoft Query also offers special effective date operators.

Entering Comparison Values

This section provides an overview of comparison values and discusses how to:

- Select a constant value.
- Build a list of values.
- Add prompts to an expression list.
- Add comparison values to an expression list.

The procedure for entering comparison values differs depending on what kind of value you are entering. If you are comparing one field to another, select the second record field; if you are comparing the rows to a constant value, enter the constant.

The following table describes all the available value types, the pages that appear based on each comparison type, and the fields that you must complete in those pages.

Value Type	Action
Field	The value in the selected field is compared to the value in another field, usually a field in another record component. When you select <i>Field</i> as the comparison value, the Choose Record and Field page appears. The Record Alias field lists all the records that are part of the current query. Select the record and the field. The selected field name appears in the second Expression column of that field's row.
Expression	The value in the selected field is compared to an expression that you enter, which PeopleSoft Query evaluates once for each row before comparing the result to the value in the selected field. When you select <i>Expression</i> as the comparison value, the Define Expression page appears. In the text box, enter a valid SQL expression. To add a field or user prompt to the expression, click the Add Field or Add Prompt link, respectively. These links display the same pages that you see when adding a field or prompt as a comparison value: Add Prompt displays the Run-time Prompt page; Add Field displays the Select a Field page. The only difference is that PeopleSoft Query adds the field or prompt to your expression rather than using it directly as the comparison value.
Constant	The value in the selected field is compared to a single fixed value. When you select <i>Constant</i> as the comparison value, the Define Constant page appears. In the text box, enter the value that you want to compare the first expression to. To add a value by selecting it from a list, click the Look Up button to display the Select a Constant page. Note. A list of constants is available only for fields that have translate values or an assigned prompt table.
Prompt	The value in the selected field is compared to a value that you enter when running the query. When you select <i>Prompt</i> as the comparison value, the Define Prompt page appears. Click the New Prompt link to move to the Edit Prompt Properties page. To modify an existing prompt, click the Edit Prompt link. See Chapter 3, "Defining Selection Criteria," Defining Prompts, page 57.

Value Type	Action
Subquery	The value in the selected field is compared to the data that is returned by a subquery. When you select Subquery as the comparison value, the Define Subquery page appears. Click the Define/Edit
	Subquery link to move to the Records tab to start a new query. See Chapter 5, "Working with Advanced Query
	Options," Working with Subqueries, page 123.
In List	The value in the selected field is compared to a list of values that you enter. This value type is available only when the selected operator is <i>in list</i> or <i>not in list</i> .
	When you select <i>in list</i> as your comparison value, the Edit List page appears. Use the Look Up button to display the Edit List page and search for the desired values.
	Note. Values will appear here only if you have entered them previously.
Current Date	The value in the selected field is compared to the current date on the database server.
Tree Option	The value in the selected field is compared to a selected set of tree nodes. This value type is available only when the selected operator is <i>in tree</i> or <i>not in tree</i> .
	When you select <i>Tree Option</i> as the comparison value, the Select Tree Node List page appears. Use this page to create a list of values for PeopleSoft Query to compare to the value from the first expression.
Tree Prompt Option	The value in the selected field enables you to select a tree value as a tree prompt, when the query is run. This value type is available only when the selected operator is in tree or not in tree.
	When you select the Tree Prompt Option as the comparison value, all options to select tree values at design time are not available. However, you are able to select tree values as tree prompts when you run the query.
Effective Seq (effective sequence)	Used on some effective-dated records, the effective sequence is a sequencing number that is provided to further refine the effective date.

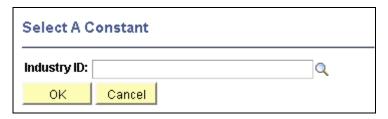
Note. Not all value types are available for all operators. For example, when you select the *exists* operator, *Subquery* is the only available value type. After you select an operator, PeopleSoft Query displays only the value types that are available for that operator.

Selecting a Constant Value

When you select *Constant* as your comparison value, the Define Constant page appears. In the text box, enter the value to which you want to compare the first expression. To add a value by selecting it from a list, click the Look Up button to display the Select a Constant page.

Note. A list of constants is available only for fields that have translate values or an assigned prompt table.

This is an example of the Select A Constant page:



Select A Constant page

To select a constant:

- 1. Click the Look Up button on the Select A Constant page.
- 2. Select the value that you want from the result list by clicking its associated link.

The Select A Constant page appears again with the selected value in the field. If you are working with a date field, you can select a date/constant from a calendar.

- 3. If more than one field exists on the Select A Constant page, you must repeat steps 1 and 2 for each field to further narrow your search for the constant.
- 4. Click the OK button.

The Edit Criteria Properties page appears with the selected value in the Define Constant page.

Another example of the Select A Constant page:



Select a Constant page

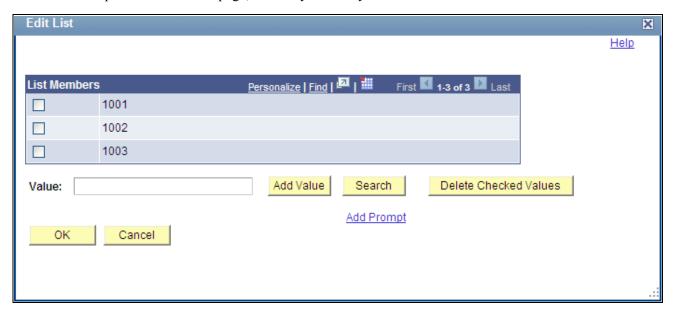
If this example, to select a constant, click a Select Constant link and the Edit Criteria Properties page reappears with the selected value in the Define Constant section.

Building a List of Values

When you select *In List* as your comparison value, the Edit List page appears. Use the Edit List page to build a list of values for PeopleSoft Query to compare to the value from the first expression. (After you have created such a list, you can also use this page to select from the list.)

To add a comparison value to the list, click the Look Up button on the Edit List page.

This is an example of the Edit List page, which dynamically reflects which record is used:



Edit List page

List Members

Lists the values that have been selected using the Add Value button.

Note. The grid, containing the selected value, appears when a value is selected.

To delete a value, select the check box to the left of the appropriate List Members value, and click the Delete Checked Values button.

Value

To add a value, enter it into the Value text box and click the Add Value button. The value appears in the List Members grid.

To select from a list of values, click the Search button to display the Select a Constant page. Click the Look Up button to display the Look Up page. Enter part of a value in the text box. (The system automatically adds a wild card to the end of the entry, which enables you to do a partial search. For example, if you enter a value of 10, the system returns all values, (up to a total of 300), that begin with 10, such as 10,100, and 10069.) Click the Look Up button to display the list of values that corresponds to the search criteria.

Select the desired value from the list by clicking its associated link. When the Select a Constant page appears again, click the OK button, and the selected value appears in the List Members grid.

Add Prompt

Click to add one or more prompts to the list so that users can enter the comparison values when they run the query.

Note. The prompts must be defined before you can select them. If no prompts have been defined, you will receive an error message.

OK

Click to accept the values that are listed in the List Members grid.

You will return to the Edit Criteria Properties page, where the selected

values are displayed in the Edit List page.

Cancel

Click to return to the Edit Criteria Properties page without saving selections.

Adding Prompts to an Expression List

You can add one or more prompts to the expression list so that users can enter comparison values when they run a query.

Note. You must have defined the prompts before you can add them to your expression list.

To add prompts to an expression list:

1. With the expression list open, click the Add Prompt link in the Edit List page to access the Select a Prompt page.

2. Click the required prompt.

The prompt appears on the Edit List page.

If you selected the *in list* operator, you may want to add more than one prompt so that your users can enter more than one value to search for.

3. To add another prompt, click the Add Prompt link again and select a different prompt.

Because you already have a prompt in place, a different page appears showing the prompt that you have already added.

4. To add the next prompt, click the New button and complete the Run-time Prompt page.

The settings for this second prompt are the same as those that are used with the first prompt. If you want a different label for this prompt, enter that label in the Heading Text text box.

When you click the OK button, the second prompt appears in the Available Prompts list.

5. Highlight the second prompt, and click the Select button to add it to the list of comparison values.

The prompt then appears in the Edit List page.

6. Repeat this process for each prompt that you want to add.

When you finish adding prompts, click the OK button to close the Edit List page.

Adding Comparison Values to an Expression List

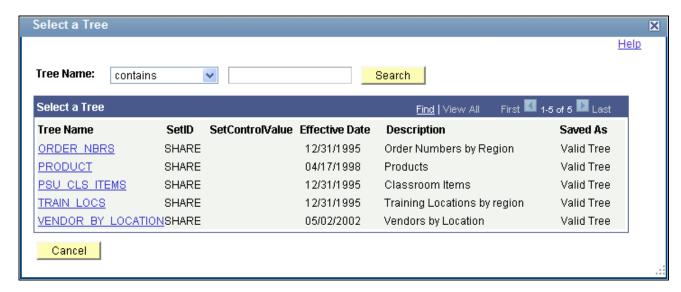
When you select the Tree option as the comparison value (available if you select the *in tree* or *not in tree* condition type), the Select Tree Node List page appears. Use this page to create a list of values for PeopleSoft Query to compare to the value from the first expression. Click the New Node List link to display the Select Tree page.

If the Selected Nodes List has been previously populated, you can either:

- Change the tree by clicking the New Nodes List link.
- Open the previously selected tree, bypassing the Tree Selection page, by clicking the Edit Node List link.

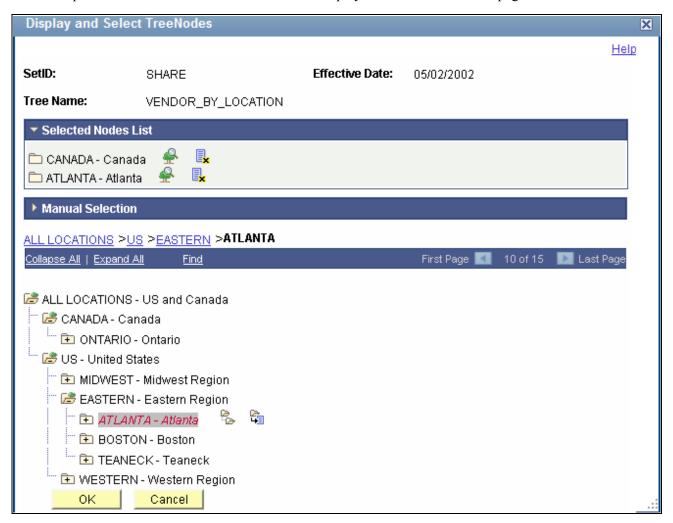
Click the name of the tree that you want to display the Display and Select TreeNodes page, which you can use to select which element of the tree PeopleSoft Query will check. If no nodes have been previously selected, the Selected Nodes List grid is collapsed. If you do not know the name of the tree, you can perform a search for the tree.

This is an example of the Select a Tree page:



Select a Tree page

This example shows how to select tree nodes in the Display and Select TreeNodes page:



Display and Select TreeNodes page

To select tree nodes:

1. In the Display and Select TreeNodes page, highlight the desired tree node, and click the Add Node icon.

2. If you know the name of the node that you want, enter the name of the node in the Manual Selection list box.

Alternatively, click the Look Up button to select the desired node from a list of available nodes. When you find the node that you're looking for, click the Add to List button to add it to the list. The nodes that you enter or select from the list appear in the Selected Nodes list box.

- 3. Remove nodes from the list by clicking the Remove from List icon corresponding to the node to be deleted.
- 4. Display the selected tree branch by clicking the corresponding icon.
- 5. When you are done selecting nodes, click OK.

The selected tree setID, tree name, effective date, and nodes appear in the Select Tree Node List page.

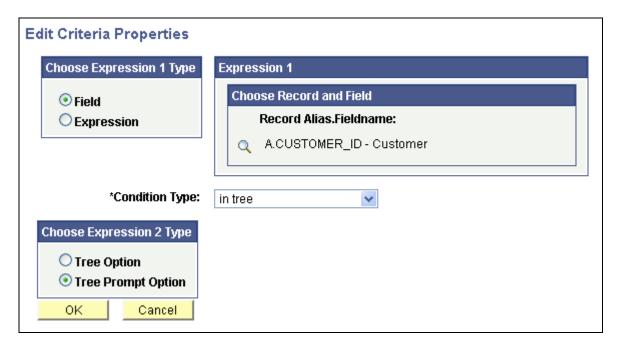
Defining a Criteria with Tree Prompt in PeopleSoft Query

In addition to the option of selecting the tree value at design time for a criteria, Tree Prompts option will allow the user an option to select the tree and node value at run time. This allows the user to reuse the same query to get various organizational reports.

Note. In both web-based Query Manager and Windows client [psqed.exe], while creating a query you have the option of selecting to enter the tree details either at the design time or at the runtime. There is a Tree Prompt Option (an expression type) and a Tree Option when you select the condition type as In Tree or Not In Tree. Based on your selection, the tree option is handled to execute the query accordingly in the specified modules

When you select the Tree Prompt Option as the comparison value, all options to select tree values at design time are not available. However, you are able to select tree values as criteria prompts when you run query.

This is an example of the Edit Criteria Properties with the Tree Prompt Option is selected:



Edit Criteria Properties page with the Tree Prompt Option is selected

After the Tree Prompt Option is selected:

- The Criteria page has a same criteria prompt entry.
- The View SQL page displays the viewable SQL for the in tree prompt.

Note. Since tree information at query design time is not known yet, the SQL in the View SQL page is different from the SQL that actually runs in the database. When query is finally executed, based on the user's selection of tree and nodes when prompted, the SQL is modified accordingly with tree info in order to fetch rows of data.

 When you access the Run page, you are prompted for selecting the tree for the specified field and its node list.

Based on the tree node list that you selected, and after collecting the other prompt values, if any, the results are displayed on the Run page.

Note. Query that has a criteria with tree prompts cannot be run as part of any process, either via Process Scheduler or from command line. For example, a crystal process which might need a query that has tree prompt to be executed to fetch data is not allowed (either by scheduling a process in Process Scheduler or using psccrun.exe at the command line). Although, you can execute the query with tree prompts from schedule query.

Specifying Effective Date Criteria

Effective-dated tables have record definitions that include the Effective Date (EFFDT) field. This field, used throughout the PeopleSoft applications, provides a historical perspective enabling you to see how the data has changed over time. Whenever users add a row of data to the table, they specify the date on which that data becomes effective; whenever users change a row of data, they specify a new effective date and the system retains the previous version of the row as history.

When you use a PeopleSoft application for day-to-day processing, you usually want the system to give you the *currently effective* rows of data—the rows where the effective date is less than or equal to today's date. You do not want to see the history rows, which are no longer accurate, nor do you want to see future-dated rows, which are not yet in effect.

When you query an effective-dated table, however, you may want to see some rows that are not currently in effect. You might want to see all the rows, regardless of their effective dates. Or you might want to see the rows that were effective as of some date in the past.

To specify effective date criteria:

1. When you choose the record that has EFFDT as a key field, Query Manager automatically creates default criteria and adds that criteria to the Criteria page.

This criteria is used to specify which row of data PeopleSoft Query retrieves for each item in the table. The default is the currently effective row. Defaults are:

Expression 1 Record Alias.EFFDT

Condition Type EffDt <=

Expression 2 Current Date

Effective Sequence Last

2. If you select one of the comparison options, choose to compare each row's effective date against today's date or a date other than today.

- Select *Current Date* to compare each row's effective date against today's date.
- Select *Constant* to display the Define Constant box so that you can enter a date.
 - Select this option when you want to see the rows that were effective as of a past date or that will be effective on some future date.
- Select *Expression* to display the Define Expression page so that you can enter a SQL expression that evaluates to a date.
 - Select this option if you want to prompt users for an effective date when they run the query. You can add a prompt to the expression that you define in the Define Expression page.
- Select *Field* to display the Select Field box so that you can select the record field that holds the date to which you want to compare effective dates.
 - Select this option when you want to see the rows that were effective at the same time as some other record. For example, if you're reviewing the list of products on a customer order, you will want to see the products that were effective on the date of the order.
- Select *First Effective Date* to return the row with the oldest effective date, usually the first row that is entered for an item.
- Select *Last Effective Date* to return the row with the latest effective date, even if that date is still in the future
- Removing the *Effective Date* criterion is equivalent to selecting *No Effective Date*. The query returns all rows, regardless of their effective dates.

Note. All options (except *No Effective Date*) return a single row for each item on the table. If you want a subset of the rows (for example, all future-dated rows or all history rows), enter a selection criterion in the Effective Date field. Use the standard comparison operators rather than the Effective Date comparison operators.

Remember that the effective date operators work differently than the standard comparison operators: they always return a single effective-dated row. For example, *Eff Date* <= returns the one row for which the EFFDT value is most recent, whereas not greater than would return the currently active row *and* all history rows.

See Also

PeopleTools 8.52: PeopleSoft Applications User's Guide, "Using PeopleSoft Application Pages," Using Effective Dates

Relating Multiple Criteria

Using PeopleSoft Query, you can relate multiple criteria in specific ways that you define using the AND, AND NOT, OR, and OR NOT operators. You can also group criteria using parentheses.

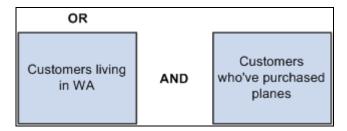
This section discusses how to:

- Use AND and OR logical operators.
- Group criteria with parentheses.

Using AND and OR Logical Operators

When you specify two or more selection criteria for a query, you must tell PeopleSoft Query how to coordinate the different criteria. For example, suppose you are querying your list of customers and you have defined two criteria: one selects customers from the state of Washington and another selects customers who have purchased airplanes. You may want PeopleSoft Query to return only those rows that meet *both* conditions (customers in Washington who have purchased airplanes), or you may want the rows that meet *either one* of the conditions (*all* Washington customers plus *all* customers who have purchased airplanes).

This diagram illustrates the rows that are returned by AND and OR:



Rows returned by AND and OR

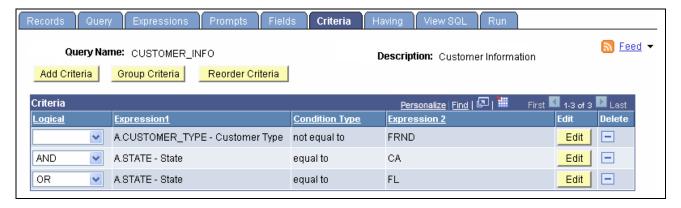
When your query includes multiple criteria, link them using either AND, AND NOT, OR, or OR NOT. When you link two criteria with AND, a row must meet the first *and* the second criterion for PeopleSoft Query to return it. When you link two criteria with OR, a row must meet the first *or* the second criterion, but not necessarily both.

By default, PeopleSoft Query assumes that you want rows that meet all of the criteria that you specify. When you add a new criterion, PeopleSoft Query displays *AND* in the Logical column on the Criteria tab. To link the criterion using one of the other options instead, select the required option from the drop-down list box.

Grouping Criteria with Parentheses

When your query includes multiple criteria, PeopleSoft Query checks the criteria according to the rules of logic: it evaluates criteria that are linked by ANDs before those that are linked by ORs. When all the criteria are linked by ANDs, this order always returns the correct results. When you include one or more ORs, however, this is not always what you want.

For example, suppose you want a list of customers who are not friends and reside in either California (CA) or Florida (FL), you would enter the following criteria:

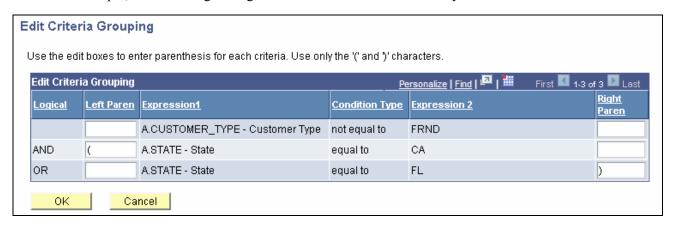


Criteria page, example of criteria that returns an incorrect result

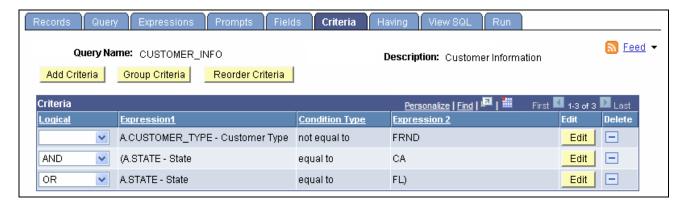
The set of criteria that was entered in the previous sample page returns a list of customers in California (except for those who are friends) and *all* customers in Florida (including those who are friends). This list results because PeopleSoft Query evaluates criteria in the order of appearance. It looks for rows where the customer is not friend *and* where the state is California *or* rows where the state is Florida.

What you really want PeopleSoft Query to search for are rows where the state is California *or* Florida, *and* where the customer type is not friend. That is, you want PeopleSoft Query to evaluate the OR before the AND. To accomplish this task, add parentheses to the list of criteria. When a list of criteria includes parentheses, PeopleSoft Query evaluates the criteria inside the parentheses before the criteria outside the parentheses.

Using the Group Criteria button on the Criteria page to access the Edit Criteria Grouping page where you can insert the opening parenthesis just before the field name and the closing parenthesis just after the comparison value. For example, the following settings of criteria return the results that you want:



Edit Criteria Grouping page, adding parentheses around the last two criteria



Criteria page, parentheses around the last two criteria

To group criteria:

1. Click the Group Criteria button on the Criteria tab.

The Edit Criteria Grouping page appears.

2. Use the edit boxes to enter parentheses for the criteria as needed.

A parenthesis appears at the beginning of the Expression1 column for the first row that you selected and at the end of the Expression2 column for the last row that you selected. In the previous example, notice that the *AND* operator *precedes* the parentheses, while the *OR* operator is located *within* the parentheses.

You can add as many parentheses as needed.

Defining Prompts

This section provides an overview of prompts and discusses how to edit prompt properties.

Understanding Prompts

Adding a prompt lets you further refine a query when you run it. For example, suppose that you want to change a query so that you could prompt the user to enter a value for the duration of a vacation. Before you add the prompt, the query always retrieves rows for employees who had taken vacation based on a defined constant value on which to make a comparison. Adding a prompt to the query enables the user to enter any duration, and then the query can return employees based on the value provided when running the query.

When you run a query with a prompt, a prompt page requests the required value. All date, time, and datetime prompt fields are required fields when running Query. Enter the value into the field. The query uses the value that you enter as the comparison value for the criterion that included the prompt.

If the field for which you are prompting has an associated prompt table (even if it is the Translate table), the Edit Table drop-down list box shows its name.

Pages Used to Define Prompts

Page Name	Definition Name	Navigation	Usage
Prompts	QRY_PROMPT	Reporting Tools, Query, Query Manager, Prompts	Add or edit a prompt.
Edit Prompt Properties	QRY_PROMPT_SEC	Reporting Tools, Query, Query Manager, Prompts	Edit the prompt properties.
		Click the Add Prompt button or the Edit button on the Prompts page.	

Viewing and Editing Prompts

Access the Prompts page by selecting Reporting Tools, Query, Query Manager, Prompts.

This is an example of the Prompts page:



Prompts page

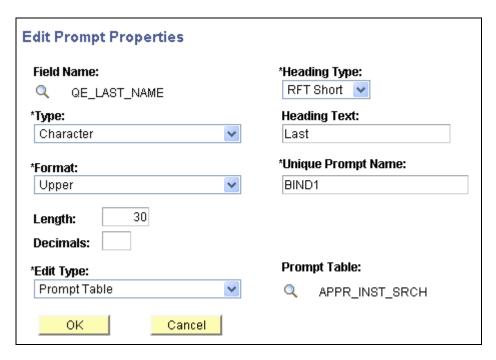
Editing Prompt Properties

Use these steps to access the Edit Prompt Properties page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Add a new query or search for an existing one.
- 3. Access the Prompts page.
- 4. Click the Add Prompt button or the Edit button on the Prompts page.

The Edit Prompt Properties page appears.

This is an example of the Edit Prompt Properties page:



Edit Prompt Properties page

To define prompts:

1. From the Prompts page, click the Add Prompt button to add a new prompt, or click the appropriate Edit button to edit an existing prompt.

The Edit Prompt Properties page appears.

2. Click the Look Up button next to the Field Name field to select a prompt field.

After you select a prompt field, the name of the field appears. PeopleSoft Query looks to the record definition for information about this field and completes the rest of the page based on its properties.

Type Indicates the type of the field.

Format Specifies the field format. Over a dozen formats are available, including

Name, Phone, Social Security Number, and Zip Code.

Length Indicates the field length.

Decimals Defines the number of decimals that are allowed.

Edit Type Defines the type of field edit for the specified field. *No Table Edit* is the

default value. In general, you should use the same edit type that is used in the field record definition so that this edit type is consistent throughout

Oracle's PeopleTools.

Heading Type

Select a heading type for the prompt from the following values:

- *Text*: The prompt heading is the free text that you have entered in the text box.
- *RFT Short:* The prompt heading is the short name from the record definition.
- *RFT Long:* The prompt heading is the long name from the record definition.

Heading Text

Displays the label for the text box where you enter the comparison value. To change the text, select *Text* from the Heading Type drop-down list box, and then enter the new label in the Heading Text text box.

Unique Prompt Name

A default value that Query Manager generates for globalization. Only base language users can set this value to uniquely identify a query prompt parameter.

Prompt Table

If the edit type is *Prompt Table*, you can select a prompt table to use. If the edit type is *Translate Table*, the value in the drop-down list box determines the values used. PeopleSoft Query assumes that the specified field has translate table values associated with it, and that the field is identified as a translate table field in its record definition.

See Appendix B, "PeopleSoft Query Security," page 165.

Note. When using a prompt table on a field from a record definition with multiple keys, you must prompt for all higher-level keys before lower-level keys. PeopleSoft Query needs values for the higher-level keys to generate the correct prompt list. Because of this complication, you should not use multikey prompt tables.

See Also

Chapter 2, "Creating and Running Simple Queries," Adding Fields to Query Content, page 16

Defining HAVING Criteria

SQL does not support the use of aggregate functions in WHERE clauses. Therefore, after you have applied an aggregate function to a field, you cannot use that field in your selection criteria, which corresponds to a SQL WHERE clause. When you want to select rows based on the results of an aggregate function, Query Manager enables you to create *HAVING criteria*. You might use such criteria, for example, when you want a list of the departments whose minimum salary is greater than 100,000.00 USD.

In SQL, a HAVING clause is similar to a WHERE clause for rows of data that have been aggregated into a single row of output. The system evaluates WHERE clauses by looking at the individual table rows *before* they are grouped by the aggregate function, and then it evaluates HAVING clauses *after* applying the function. So if you want to check the value that is returned by the function, you must define a HAVING criterion.

When you click the Add Criteria icon from the Fields or Query pages for an aggregate field, new criteria is added to the Having page instead of the Criteria page. Add selection criteria using the Having page in the same way that you add selection criteria using the Criteria page.

Keep in mind that PeopleSoft Query compares the result of applying the aggregate function to the comparison value.

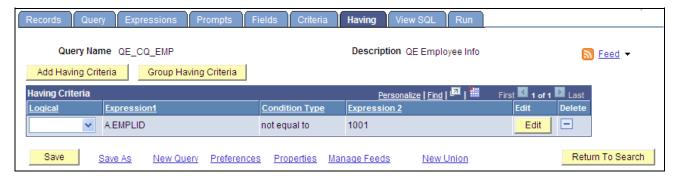
Pages Used to Define HAVING Criteria

Page Name	Definition Name	Navigation	Usage
Having	QRY_HAVING	Reporting Tools, Query, Query Manager, Having	Add or edit a having criteria.
Edit Having Criteria Properties	QRY_CRITERIA_SEC	Reporting Tools, Query, Query Manager, Having Click the Add Having Criteria button or the Edit button on the Having page.	Edit the having criteria properties.

Viewing and Editing Having Criteria

Access the Having page by selecting Reporting Tools, Query, Query Manager, Having.

This is an example of the Having page:



Having page

Editing Having Criteria Properties

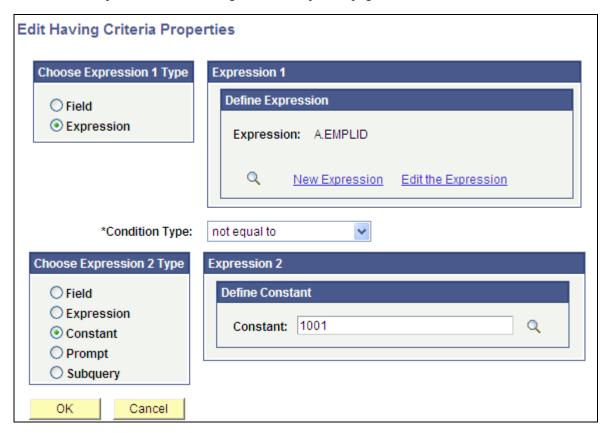
Use these steps to access the Edit Prompt Properties page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Add a new query or search for an existing one.

- 3. Access the Having page.
- 4. Click the Add Having Criteria button or the Edit button on the Having page.

The Edit Having Criteria Properties page appears.

This is an example of the Edit Having Criteria Properties page:



Edit Having Criteria Properties page

Defining Expressions

This section provides an overview of expressions and discusses how edit expression properties.

Understanding Expressions

Expressions are calculations that PeopleSoft Query performs as part of a query. Use them when you must calculate a value that PeopleSoft Query does not provide by default—for example, to add the values from two fields together or to multiply a field value by a constant.

You can work with an expression as if it were a field in the query: select it for output, change its column heading, or choose it as an "order by" column.

In Query Manager, you can use expressions in two ways:

- As comparison values in selection criteria.
- As columns in the query output.

Pages Used to Define Expressions

Page Name	Definition Name	Navigation	Usage
Expressions	QRY_EXPRESSIONS	Reporting Tools, Query, Query Manager, Expressions	Add or edit an expression.
Edit Expression Properties	QRY_EXPR_SEC	Reporting Tools, Query, Query Manager, Expressions Click the Add Expression button or the Edit button on the Expressions page.	Edit the expression properties.

Viewing and Editing Expressions

Access the Expressions page by selecting Reporting Tools, Query, Query Manager, Expressions.

This is an example of the Expressions page:



Expressions page

Editing Expression Properties

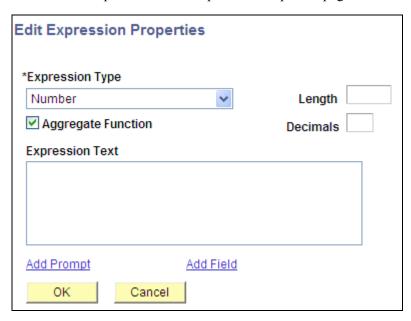
Use these steps to access the Edit Expression Properties page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Add a new query or search for an existing one.
- 3. Access the Expressions page.

4. Click the Add Expression button or the Edit button.

The Edit Expression Properties page appears.

This is an example of the Edit Expression Properties page:



Edit Expression Properties page

To add or edit expressions for queries:

- 1. Select Reporting Tools, Query, Query Manager, then click the Create New Query link, and then select the Expressions tab to open the Expressions page.
- 2. The guery name appears in the Query Name field.

The default for this field is New Unsaved Query until you change it on the Properties page.

- 3. Click the Add Expression button to open the Edit Expression Properties page, where you can select expression types.
- 4. Select an option from the Expression Type drop-down list box.

If you select *Character*, enter the maximum length of the expression result in the Length field.

If you select *Number* or *Signed Number*, enter the total number of digits in the Length field and the number of digits after the decimal point in the Decimal field.

Note. For *Number* and *Signed Number*, expression types, the Length field defines the total length of the number (integer portion + decimals portion). For example, if Length = 10 and Decimals = 3, then this means that the integer portion = 7 (Length - Decimals = Integer).

5. If you are entering an aggregate value, such as SUM, AVG, or COUNT, select the Aggregate Expression check box.

6. In the Expression Text field, enter the expression (for example, A. Total * .1, where A represents the first record.)

Query Manager inserts the expression into the SQL for you. You can include Oracle hints in PeopleSoft Query expressions as long as you adhere to the following rules:

- Expressions containing a hint must begin with /*+.
- Expressions can contain only one hint.

For example, only one set of /*+ */ is allowed.

Expressions must contain a complete hint.

For example, an expression can't have only /*+ or */. Both must be in the same expression.

7. Click the Add Prompt button to add prompt properties for this expression; click the Add Field button to add another field to this expression.

Note. You must define a prompt, as described in the next section, before you can add it to your expression.

Using MetaSQL in Expressions

MetaSQL enables you to enter an expression that can be used across any supported database. For example, to concatenate strings, use the *MetaSQL %CONCAT*, and Oracle's PeopleTools will convert it to the appropriate database string concatenation function. To create a substring, use *%SUBSTRING*.

Note. You need to make sure that the expression type and length are set correctly for the data that is going to be returned. Only the MetaSQL functions that are valid for *dynamic views* will work with PeopleSoft Query.

See Also

PeopleTools 8.52: PeopleCode Language Reference, "Meta-SQL Elements," Understanding Meta-SQL

Drilling URL in PeopleSoft Query

This section provides an overview of drilling URL in PeopleSoft Query, lists common terminology used in this section, and discusses how to:

- View and edit expression properties.
- Define Query URL widgets.
- Define Component URL widgets.
- Define External URL widgets.
- Define Attachment URL Widgets.
- Define Free Form URL widgets.

- View query results with drilling URLs.
- Schedule queries with drilling URLs.

Understanding Drilling URLs

Drilling URLs are the URLs that you define by selecting the menu, component, page, portal object, or URL of choice.

When you build a query using Query Manager, you can define drilling URLs that are associated with this query. These settings are saved into the database, along with prompt, criteria, and so on, as part of the metadata for this query. When you execute this query through Query Manager or Query Viewer, the query results page shows results as links, which you can click to be redirected to a different page in a new browser. Depending on how drilling URLs are defined, the new browser is either a PeopleSoft Pure Internet Architecture page, another query result page, or an external page.

Note. Drilling URLs that were created in earlier PeopleTools releases will work properly in PeopleTools 8.52.

Common Terminology Used in This Section

Source Query A query that defines a Drilling URL.

Destination Query A query that was defined as a Drilling URL.

Destination Component A component that was defined as a Drilling URL.

Pages Used to Define Drilling URLs

Page Name	Definition Name	Navigation	Usage
Edit Expression Properties	QRY_QRYURL_SELECT	Reporting Tools, Query, Query Manager	Edit expression properties for your query statement.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one. If you create a new query,	
		click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	

Page Name	Definition Name	Navigation	Usage
Select a Query	QRY_FIELDS	Reporting Tools, Query, Query Manager	Select a query to build drilling URLs in a query URL format.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the Query URL link.	
Query Search Page	QUERY_URL_SRCH_SPG	Reporting Tools, Query, Query Manager	Searching for a prompt criteria of the query to build URLs.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the Query URL link.	
		Click the Prompt Key button next to the Query Name field.	

Page Name	Definition Name	Navigation	Usage
Select a Component	QRY_COMPURL_SELECT	Reporting Tools, Query, Query Manager	Select a component to build drilling URLs in a component URL format.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the Component URL link.	
Select a Content Reference or Content Reference Link	QRY_CREFURL_SELECT	Reporting Tools, Query, Query Manager	Select a content reference or content reference link.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the Component URL link.	

Page Name	Definition Name	Navigation	Usage
Enter an External URL	QRY_URL_SELECT	Reporting Tools, Query, Query Manager	Enter an external URL to build drilling URLs in external URL format.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the External URL link.	
Enter an Attachment URL	QRY_ATTURL_SELECT	Reporting Tools, Query, Query Manager	Enter an attachment URL to build drilling URLs in attachment URL format.
		Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
		Select the Expressions tab, and click the Add Expression button.	
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the Attachment URL link.	

Page Name	Definition Name	Navigation	Usage
Define a Free Form URL	QRY_FREEURL_SELECT	Reporting Tools, Query, Query Manager Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.	Manually enter URLs that will be used to build drilling URLs in report results.
		If you create a new query, click the Search button and click the Add Record link to select a record for the query.	
	Select the Expressions tab, and click the Add Expression button.		
		Select the <i>Drilling URL</i> option from the Expression Type list, and click the Free Form URL link.	

Viewing and Editing Expression Properties

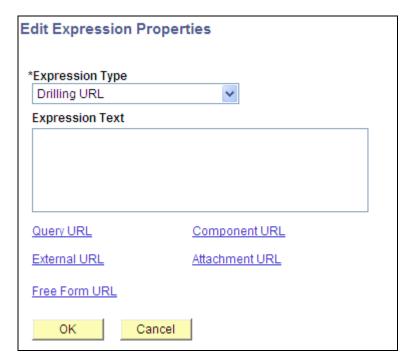
Drilling URLs are a special type of expression that you can define using the Edit Expression Properties page in Query Manager.

To access the Edit Expression Properties page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.
- 3. If you create a new query, click the Search button and click the Add Record link to select a record for the query.
- 4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

This is an example of the Edit Expression Properties page:



Edit Expression Properties page with the Expression type as Drilling URL

Expression type To define drilling URLs, you must select the *Drilling URL* option from the

Expression type list.

Expression text Optionally, type the URL in the Expression text text box.

Note. You have two options: type the URL in this Expression Text box or click the Query URL, Component URL, or External URL links to allow the appropriate system building URLs. If you type the URL directly into the Expression text box, the system does not validate against a value for the

correct format.

Query URL Click to access the Query URL definition widget, where you can select a

query to build URLs in a query URL format.

Component URL Click to access the Component URL definition widget, where you can

select a component to build URLs in a component URL format.

External URL Click to access the External URL definition widget, where you can enter

external URL to build URLs in an external URL format.

Attachment URL Click to access the Attachment URL definition widget, where you can enter

attachment URL to build URLs in an attachment URL format.

Free Form URL Click to access the Free Form URL definition widget, where you can

manually enter URLs that will be used to build drilling URLs in report

results.

Note. Drilling URLs are saved into database as an expression, so you can access the Expressions page and add the defined drilling URLs as fields. However, you cannot add drilling URLs as criteria because drilling URLs are special type of expressions. You can add drilling URLs as query fields or columns, and then on the query results page, values in that fields or columns will be expanded to fully qualified URLs, which you can click to either run query, access a PeopleSoft Pure Internet Architecture page, or access an external URL.

See Chapter 3, "Defining Selection Criteria," Defining Expressions, page 62.

Defining Query URL Widgets

The Query URL widget enables you to use the Select a Query page to build drilling URLs in a query URL format. You can click the Query URL link in the Edit Expression Properties page to access the Select a Query page.

To access the Select a Query page:

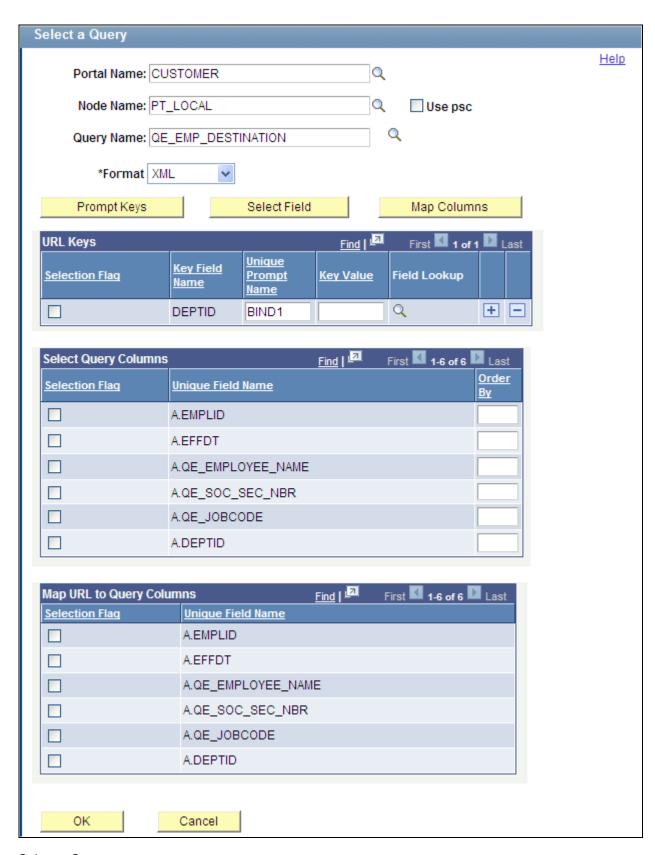
- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.
- 3. If you create a new query, click the Search button and click the Add Record link to select a record for the query.
- 4. Select the Expressions tab and click the Add Expression button.

The Edit Expression Properties page appears.

- 5. Select the *Drilling URL*option from the Expression Type list.
- 6. Click the Query URL link.

The Select a Query page appears.

This is an example of the Select a Query page:



Select a Query page

Portal Name

Optionally, enter or select a portal that is used to build drilling URLs at the report runtime.

Note. If the Portal Name field has no value, PeopleSoft Query uses value *%PORTAL* to form a drilling URL at the report runtime.

Node Name

Optionally, enter or select a node that is used to build drilling URLs at the report runtime.

If the Node Name field has no value, PeopleSoft Query uses value *%NODE* to form a drilling URL at the report runtime.

Use psc (content servlet)

Used to define the content type that is used to build drilling URLs.

- Deselect this option to use the portal service (psp) type.
 By default, this option is deselected.
- Select this option to use the content servlet (psc) type.

Query Name

Type a query name in the text box or click the query lookup icon to search for an existing query.

Format

Used to select the format of report results that will be generated from the drilling URLs. Available options are:

XML (XMLP Format)

If you select the *XML* option, drilling URL in the Expression Text field includes the *ICQryNameXMLURL* value.

HTM

If you select the *HTM* option, drilling URL in the Expression Text field includes the *ICQryNameURL* value.

XLS

If you select the *XLS* option, drilling URL in the Expression Text field includes the *ICQryNameExcelURL* value.

Prompt Keys

Click to access the Query Search Page where you can search for the prompt criteria of the query that you entered in the Query Name field. If the entered query has prompt criteria, a list of those fields appears in the URL Keys section. If the entered query has no prompt criteria, a message appears saying "Query does not contain any prompt key(s)".

Note. This step is optional. If you do not map any prompt keys to the source query column field, then when you click a drilling URL link in query result column page, you will be directed to the Prompt page, where you can enter prompt key values before retrieving query result.

Select Field

Click to access the Select Query Column section.

See Chapter 3, "Defining Selection Criteria," Selecting Query Columns for Existing Drilling URLs, page 76.

Map Columns

Click to display the Map URL to Query Columns section.

Note. This step is required for the drilling URLs to be available in a query results page.

You can define multiple drilling URLs in a query, but each query result column can only bind with one URL. Therefore, when you click the Column Mapping button, only those fields that have no bond with any URL appear in the Map URL to Query Columns section. If all query columns have bonds with other tracking URLs, then a message appears saying "All columns have already been mapped to other drilling URLs."

URL Keys

The URL Keys section is available only after you define the Query field and click the Prompt Keys button.

In this URL Keys section, you define value mapping between Drilling URL destination query prompt fields and Drilling URL source query result column fields.

To map these fields, select the key field by selecting the check box adjacent to a prompt key field, and then click the lookup icon to select the source query column field to map to it.

Note. This step is optional. If you do not map any prompt keys to a source guery column field, then when you click a drilling URL link on the guery result column page, you will be directed to the Prompt page, where you can enter prompt key values before you retrieve query results.

Select Query Column

Select query result columns to form field name and value pairs and to define the order of the appended value pair in the URL.

Note. The Select Query Column section is available after you click the Select Field button.

See Chapter 3, "Defining Selection Criteria," Selecting Query Columns for Existing Drilling URLs, page 76.

Map URL to Query Columns The Map URL to Query Columns section is available only after you define the component values and click the Map Columns button.

> **Note.** This step is required for the drilling URLs to be available in the query results page.

Use the Map Columns button for binding source query result column fields with Drilling URL. You must map URL to query result columns in order for the drilling URLs to be available as links in column fields of the source query results. You can define column mapping by selecting the appropriate check box in the Map URL to Query Columns section.

OK

Click to finish defining the Query URL widget and return to the Edit Expression Properties page.

Searching for Query

Access the Query Search page (from the Select a Query page, click the Prompt Keys button).



Query Search page

Use this page to search for the prompt criteria of the query that you entered in the Query Name field of the Select a Query page. If the entered query has prompt criteria, a list of those fields appears in the URL Keys section. If the entered query has no prompt criteria, a message appears saying "Query does not contain any prompt key(s)".

Selecting Query Columns for Existing Drilling URLs

Using the Select Query Column section, you can append field name and value pairs to the end of existing Drilling URL types. The format of the appended field name and value pair is &FIELDNAME=VALUE.

For example:

• '/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=%A.DEPTID%&SETID= %A.SETID%EMPLID=00001:A.SETID'

In this example, the appended field name and value is formed using a static field name, EMPLID, and the static value 00001. At runtime, the drilling URL is expanded as:

http://rtdc79579vmc:8080/psp/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_DEPT_TBL.G BL? Action=U&DEPTID=10300&SETID=QEDMOEMPLID=00001

• '/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=%A.DEPTID%&SETID= %A.SETID%&A.SETID=%A.SETID*&A.DEPTID=%A.DEPTID*:A.SETID'

In this example, the appended field name and value pairs are from two query result columns, A.SETID and A.DEPTID. At runtime, the actual values that are returned in the query results for the A.SETID and A.DEPTID columns replace the %A.SETID% and %A.DEPTID%, as in this URL:

http://rtdc79579vmc:8080/psp/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=10300&SETID=QEDMO&A.SETID=QEDMO&A.DEPTID=10300

Note. The Expression Text field in the Edit Expression Properties page is not editable. You can modify existing drilling URLs or define new drilling URLs using available drilling URL widgets.

Processing Existing Drilling URLs at Runtime

At runtime, the query drilling URL feature is able to process all drilling URLs that are created in PeopleTools releases later than 8.50. For example, when you define the same drilling URL:

PeopleTools 8.50 forms the drilling URL as

```
'/q/?ICAction=ICQryNameURL=PUBLIC.QE_EMP_DESTINATION&BIND1=A.DEPTID:A.DEPTID'
'/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=A.DEPTID&SETID=A.SETID:A.SETID'
```

PeopleTools 8.51 forms the drilling URL as

```
'/q/?ICAction=ICQryNameURL=PUBLIC.QE_EMP_DESTINATION&BIND1=%A.DEPTID%:A.DEPTID''/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=%A.DEPTID%&SETID=%A.SETID%:A.SETID'
```

PeopleTools 8.52 forms the drilling URL as

```
'psp/EMPLOYEE/QE_LOCAL/q/?ICAction=ICQryNameURL=PUBLIC.QE_EMP_DESTINATION&BIND1= %A.DEPTID%: A.DEPTID'
'psp/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID= %A.DEPTID%&SETID=%A.SETID%:A.SETID'
```

Note. Oracle PeopleSoft introduced query drilling URL in PeopleTools 8.50 and added more features in later releases, so drilling URLs created in different releases will look slightly different. However, runtime processing is backward compatible and drilling URLs that have been defined in previous release will be expanded correctly in newer release without the user's need to redefine them.

In PeopleTools 8.50, drilling URLs must be expanded correctly. When you modify a drilling URL that was created in PeopleTools 8.51 or later and then save it in PeopleTools 8.50, the system uses new format and syntax to form the URL. In PeopleTools 8.51 or later, when you run a query with the drilling URLs that were directly upgraded from PeopleTools 8.50, the runtime converts the format differences between the different releases.

Steps Used to Select a Query to Build Drilling URLs

To select a query to build drilling URLs:

1. Select Reporting Tools, Query, Query Manager.

The Query Manager search page appears.

- 2. Click the Create New Query link on the Query Manager search page to create a source query, or click the Search button and open an existing one.
- 3. If you create a new source query, click the Search button and click the Add Record link to select a record for the query.

The Fields page appears.

4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

- 5. Select the *Drilling URL* option from the Expression Type list.
- 6. Click the Query URL link to define drilling URL for the source query that you just created.

The Select a Query page appears.

- 7. Optionally, define the portal name, node name, or content type.
- 8. Type a query name in the Query Name text box, or click the lookup icon to search for one from existing queries.
- 9. Select the format of report results that will be generated from the drilling URLs.
- 10. Optionally, define value mapping in the URL Keys section.
 - a. Click the Prompt Keys button to bind the prompt keys of the destination query with the columns of the source query.

Note. If the destination query has prompt criteria, the URL Keys section appears with a list of key fields.

- b. Define value mapping in the URL Keys section by selecting the check box adjacent to a prompt key field, and then clicking the lookup icon to select a source query column field to map to it.
- 11. Optionally, define query result columns for existing drilling URLs:
 - a. Click the Select Field button to display the Select Query Column section.
 - b. Select query result columns to form fieldname and value pairs and to define the order of the appended value pair in the URL.
- 12. Optionally, define the column mapping in the Map URL to Query Columns section:
 - a. Click the Map Columns button to map the drilling URL to a source query selected column.
 - b. Select appropriate values from the Map URL to Query Columns section.

13. Click the OK button.

The Edit Expression Properties reappears with query drilling URLs in the Expression Text field.

This is an example of a drilling URL with the Use psc option is not selected, and the Portal Name and Node Name fields have no values. Notice that, *%PORTAL* and *%NODE* values will be used to build URLs at the report runtime:

'psp///q/?ICAction=ICQryNameURL=PUBLIC.DESTINATION&BIND1=A.DEPTID:A.DEPTID'

In this example, 'psc// is your selected portal name, node name, and content type; the standard query URL format is /q/?ICAction=ICQryNameURL=PUBLIC.DESTINATION&BIND1=A.DEPTID, and the binding column is A.DEPTID. Thus, this drilling URL is binding with column A.DEPTID.

This is an example of a drilling URL with the Use psc option is selected, portal CUSTOMER, and node QE LOCAL:

'psc/EMPLOYEE/QE_LOCAL/q/?ICAction=ICQryNameURL=PUBLIC.QE_EMP_DESTINATION:A.QE_EMPLOYEE_NAME'

In this example, 'psc/EMPLOYEE/QE_LOCAL is your selected portal name, node name, and content type.

Note that, a query drilling URL:

- Always includes /q/.
- Is saved as part of expression metadata for the query.
- Contains two parts: query URL format and query result columns binding with the Drilling URL.
- 14. Save your query.
- 15. Select Reporting Tools, Query, Query Manager.

Alternatively, select Reporting Tools, Query, Query Viewer.

16. Click the HTML link or the Download to Excel link.

The query results page displays results as links. When you click these links, the destination query is run using prompt key values that are defined using the source query.

Defining Component URL Widgets

The Component URL widget enables you to use the Select a Component page to build drilling URLs in component URL format. When you click the Component URL link in the Edit Expression Properties page to access the Select a Component page, a PeopleSoft Pure Internet Architecture page is launched.

Note. The Component URL widget is only used for pages that have the Action field set to Update/Display.

To access the Select a Component page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.

3. If you create a new query, click the Search button and click the Add Record link to select a record for the query.

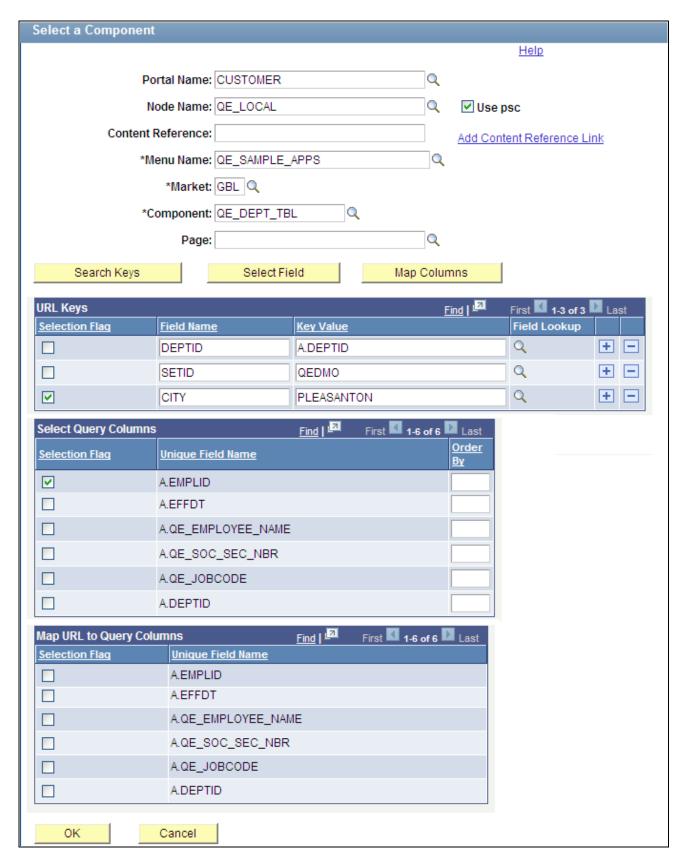
- 4. Select the Expressions tab.
- 5. Click the Add Expression button.

The Edit Expression Properties page appears.

- 6. Select the *Drilling URL* option from the Expression Type list.
- 7. Click the Component URL link.

The Select a Component page appears.

This is an example of the Select a Component page:



Select a Component page

Portal Name

Optionally, enter or select a portal that is used to build drilling URLs at the report runtime.

Note. If the Portal Name field has no value, PeopleSoft Query uses the value %*PORTAL* to form a drilling URL at the report runtime.

Node Name

Optionally, enter or select a node that is used to build drilling URLs at the report runtime.

If the Node Name field has no value, PeopleSoft Query uses the value *%NODE* to form a drilling URL at the report runtime.

Use psc (content servlet)

Used to define the content type that is used to build drilling URLs.

- Deselect this option to use the portal service (psp) type.
- Select this option to use the content servlet (psc) type.

By default, this option is deselected.

Content Reference

Enter the name of a content reference or use the Add Content Reference Link link to select a content reference from an existing list.

See *PeopleTools 8.52: PeopleTools Portal Technologies*, "Administering Portals," Administering Content References.

Add Content Reference Link

Click to access the Select a Content Reference or Content Reference Link page, where you can select a content reference or content reference link.

Note. The values of the Menu Name, Market, and Component fields are populated if you select a content reference or content reference link using the Add Content Reference Link link.

Menu Name

Enter a menu name or click the lookup icon and select one menu name from an existing list. Otherwise, the menu name value is populated if you select a content reference or content reference link using the Add Content Reference Link link.

Market

Enter a market code or click the lookup icon and select one market code from an existing list. The market code is populated automatically if you select a content reference or content reference link using the Add Content Reference Link link.

Component

Enter a component name or click the lookup icon and select one component name from an existing list. Otherwise, the component name value is populated if you select a content reference or content reference link using the Add Content Reference Link link.

Search Keys

Click to select mapping between component search keys and source query result columns.

If the entered component has a search key, a list of those search keys appears in the URL Keys section. If the entered component has no search key, a message appears saying "Component does not contain any search keys".

Note. This step is optional. If you do not map any search keys to the source component, then when you click a drilling URL link in the query result column page, you will be directed to a component search page, where you can select search key values.

Select Field

Click to display the Select Query Column section.

See <u>Chapter 3</u>, "<u>Defining Selection Criteria</u>," <u>Selecting Query Columns for Existing Drilling URLs</u>, page 76.

Map Columns

Click to display the Map URL to Query Columns section.

Note. This step is required for the drilling URLs to be available in query results page.

You can define multiple drilling URLs in a query, but each query result column can only bind with one URL. When you click the Map Columns button, only those fields that have no bond with any URL appear in the Map URL to Query Columns section. If all query columns have bonds with other tracking URLs, then a message appears saying "All columns have already been mapped to other drilling URLs."

URL Keys

The URL Keys section is available only after you define the component and click the Search Keys button.

In this URL Keys section, you define value mapping between Drilling URL destination component search keys and Drilling URL source query result column fields.

To map these fields, you can either select the key field and then click the lookup icon to select source query column field to map to it, or enter static values as mapping value directly into the Field Value field. Similarly, in the Key Value field, you can either manually enter the key name or search for existing keys from the component. You can also add or delete key values using the Add or Delete button.

Note. This step is optional. If you do not map any search keys to the source component, then when you click a drilling URL link in query result column page, you will be directed to a component search page, where you can enter search key values before you launch the component.

Select Query Column

Select query result columns to form fieldname and value pairs and to define the order of the appended value pair in the URL.

See <u>Chapter 3</u>, "<u>Defining Selection Criteria</u>," <u>Processing Existing Drilling URLs at Runtime</u>, page 77.

Map URL to Query Columns The Map URL to Query Columns section is available only after you define the component values and click the Map Columns button.

> **Note.** This step is required for the drilling URLs to be available in the query results page.

> Use the Map Columns button for binding source query result column fields with a Drilling URL. You must map URLs to query result columns in order for the drilling URLs to be available as links in column fields of the source query results. You can define column mapping by selecting the appropriate check box in this Map URL to Query Columns section.

OK

Click to finish defining a Component URL widget and return to the Edit Expression Properties page.

Selecting a Content Reference or Content Reference Link

Access the Select a Content Reference or Content Reference Link page (from the Select a Component page, click the Add Content Reference Link link).

Select a Content Reference or Content Reference Link

Click the registry name and pick a content reference or content reference link.

Click "Return" to exit and not create a link.

Left Right



- Administer Procurement
- Control Inventory
- Define Business Rules
- Maintain Items
- Manage Production
- Manage Sales Activities
- Manage Treasury
- My Favorites
- PeopleTools Quality
- Plan Production
- Portal Objects
- Process Financial Information
- Schedule Resources
- Self Service
- Structure Manufacturing
- ₱ PeopleTools SDK
- Manage Assets
- Worklist
- Application Diagnostics
- Tree Manager
- Reporting Tools
- Tools Hidden
- [Change My Password]
- [My Personalizations]
- My System Profile
- [My Dictionary]
- [My Feeds]

Select a Content Reference or Content Reference Link page

Use this page to select a content reference or content reference link.

Steps Used to Select a Component to Build Drilling URLs

To select a component to build drilling URLs:

1. Select Reporting Tools, Query, Query Manager.

The Query Manager search page appears.

2. Click the Create New Query link on the Query Manager search page to create a source query, or click the Search button and open an existing one.

3. If you create a new source query, click the Search button and click the Add Record link to select a record for the query.

The Fields page appears.

4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

- 5. Select the *Drilling URL* option from the Expression Type list.
- 6. Click the Component URL link to define a drilling URL for the source query that you just created.

The Select a Component page appears.

- 7. Optionally, define the portal name, node name, or content type.
- 8. Type a content reference in the text box or click the Add Content Reference Link link to select one from existing components.
- 9. If needed, define the values for the Menu Name, Market, and Component fields.
- 10. Optionally, define value mapping in the URL Keys section.

In the Field Value and Key Name fields, either use the lookup icon to select a source query column field to map to it, or enter static values as mapping value directly into the fields.

Note. If the selected component has a search key, the URL Keys section appears with a list of search key fields after you click the lookup icon.

- 11. Optionally, define query result columns for existing drilling URLs:
 - a. Click the Select Field button to display the Select Query Column section.
 - b. Select query result columns to form fieldname and value pairs and to define the order of the appended value pair in the URL.
- 12. Optionally, define the map columns in the Map URL to Query Columns section.
 - a. Click the Map Columns button to map the drilling URL to a source query selected column.
 - b. Select appropriate values from the Map URL to Query Columns section.

86

13. Click the OK button.

The Edit Expression Properties page appears with a component drilling URL in the Expression Text field.

This is an example of a component drilling URL with the Use psc option is not selected, and the Portal Name and Node Name fields have no values. Notice that, *%PORTAL* and *%NODE* values will be used to build URLs at the report runtime:

```
'psp///c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=%A.DEPTID%&SETID=PLEASANTON:A.EMPLID'
```

This is an example of a component drilling URL with the Use psc option is selected, portal CUSTOMER, and node QE LOCAL:

```
'psc/CUSTOMER/QE_LOCAL/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=%A.DEPTID%&CITY=PLEASANTON:A.EMPLID'
```

In this example, 'psc/CUSTOMER/QE_LOCAL is your selected portal name, node name, and content type; &DEPTID=%A.DEPTID is your static value as key value; and &CITY=PLEASANTON is your entered key name and key value.

Note that, a component drilling URL:

- Always includes /c/.
- Is saved as part of expression metadata for the query.
- Contains two parts: component URL format and query result columns binding with the drilling URL.
- 14. Save your query.
- 15. Select Reporting Tools, Query, Query Manager.

Alternatively, select Reporting Tools, Query, Query Viewer.

16. Click the HTML link or the Download to Excel link.

The query results page displays results as links. When you click these links, destination query is run using the prompt key value that is defined using the source query.

Defining External URL Widgets

The External URL widget enables you to use the Enter an External URL page to build drilling URLs in an external URL format; when you click the External URL link in the Edit Expression Properties page to access the Enter an External URL page, you are directed to an external page.

To access the Enter an External URL page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.
- 3. If you create a new query, click the Search button and click the Add Record link to select a record for the query.
- 4. Select the Expressions tab.

5. Click the Add Expression button.

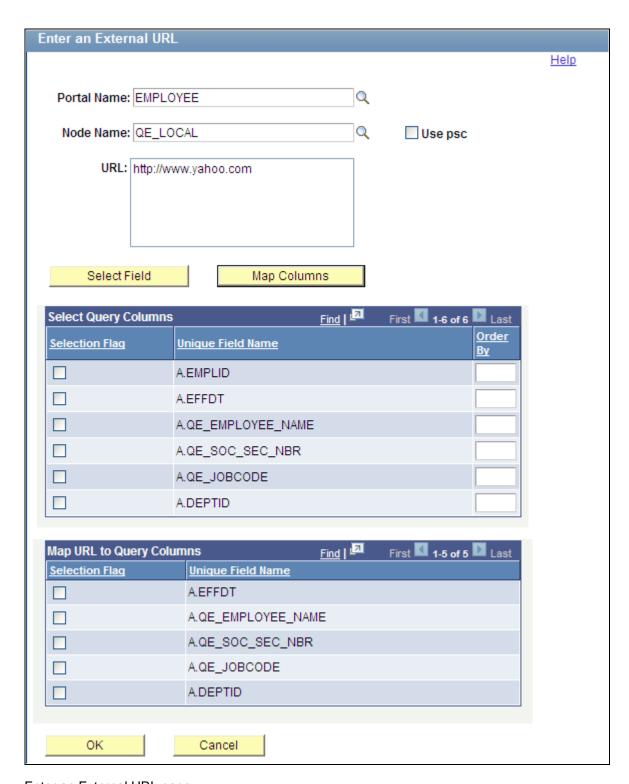
The Edit Expression Properties page appears.

6. Select the *Drilling URL* option from the Expression Type list.

7. Click the External URL link.

The Enter an External URL page appears.

This is an example of the Enter an External URL page:



Enter an External URL page

Note. Query URL and component URL have a certain format for key list values in the URL. However, external URL has no key mapping widget because external URL is free-format URL.

Portal Name

Optionally, enter or select a portal that is used to build drilling URLs at the report runtime.

Note. If the Portal Name field has no value, PeopleSoft Query uses the value %*PORTAL* to form a drilling URL at the report runtime.

Node Name

Optionally, enter or select a node that is used to build drilling URLs at the report runtime.

If the Node Name field has no value, PeopleSoft Query uses the value *%NODE* to form a drilling URL at the report runtime.

Use psc (content servlet)

Used to define the content type that is used to build drilling URLs.

- Deselect this option to use the portal service (psp) type.
 By default, this option is deselected.
- Select this option to use the content servlet (psc) type.

URL

Enter the value of the external URL.

Note. There is no format restriction.

Select Field

Click to display the Select Query Column section.

See <u>Chapter 3</u>, "<u>Defining Selection Criteria</u>," <u>Selecting Query Columns for Existing Drilling URLs</u>, page 76.

Map Columns

After you enter URL value, click this button to display the Map URL to Query Columns section.

Note. This step is required for the drilling URLs to be available in the query results page.

You can define multiple drilling URLs in a query, but each query result column can only bind with one URL. When you click the Map Column button, only those fields that have no bond with any URL appear in the Map URL to Query Columns section. If all query columns have bonds with other tracking URLs, then a message appears saying "All columns have already been mapped to other drilling URLs."

Select Query Column

Select query result columns to form fieldname and value pairs and to define the order of the appended value pair in the URL.

See <u>Chapter 3</u>, "<u>Defining Selection Criteria</u>," <u>Processing Existing Drilling URLs at Runtime</u>, page 77.

Map URL to Query Columns The Map URL to Query Columns section is available only after you define the component values and click the Map Columns button.

> **Note.** This step is required for the drilling URLs to be available in query results page.

Use the Map Columns button for binding source query result column fields with a Drilling URL. You must map URL to guery result columns in order for the drilling URLs to be available as links in column fields of source query results. You can define column mapping by selecting an appropriate check box in this Map URL to Query Columns section.

OK

Click to complete defining External URL widget and return to the Edit Expression Properties page.

Steps Used to Enter External URLs to Build Drilling URLs

To enter an external URL to build drilling URLs:

1. Select Reporting Tools, Query, Query Manager.

The Query Manager search page appears.

- 2. Click the Create New Query link on the Query Manager search page to create a source query, or click the Search button and open an existing one.
- 3. If you create a new source query, click the Search button and click the Add Record link to select a record for the query.

The Fields page appears.

4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

- 5. Select the *Drilling URL* option from the Expression Type list.
- 6. Click the External URL link to define drilling URL for the source query that you just created.

The Enter an External URL page appears.

- 7. Optionally, define the portal name, node name, or content type.
- 8. Type a valid URL in the External URL edit box.
- 9. Optionally, define query result columns for existing drilling URLs:
 - a. Click the Select Field button to display the Select Query Column section.
 - b. Select query result columns to form fieldname and value pairs and to define the order of the appended value pair in the URL.

- 10. Optionally, define the column mapping in the Map URL to Query Columns section.
 - a. Click the Map Columns button to map the drilling URL to source query selected column.
 - b. Select appropriate values from the Map URL to Query Columns section.
- 11. Click the OK button.

The Edit Expression Properties reappears with query drilling URLs in the Expression Text field.

This is an example of an external drilling URL with the Use psc option is not selected, and the Portal Name and Node Name fields have no values. Notice that, %PORTAL and %NODE values will be used to build URLs at the report runtime: 'psp///e/?url=[http://www.yahoo.com]:A.DEPTID'.

This is an example of an external drilling URL with the Use psc option is selected, portal EMPLOYEE, and node QE LOCAL:

'psp/EMPLOYEE/QE_LOCAL/e/?url=[http://www.yahoo.com]:A.DEPTID'. In this example, 'psc/EMPLOYEE/QE_LOCAL is your selected portal name, node name, and content type

Note. An external drilling URL always includes /e/.

- 12. Save your query.
- 13. Select Reporting Tools, Query, Query Manager.

Alternatively, select Reporting Tools, Query, Query Viewer.

14. Click the HTML link or the Download to Excel link.

The query results page displays results as links. When you click these links, destination query is run using prompt key value that is defined using the source query.

Defining Attachment URL Widgets

The Attachment URL widget enables you to use the Enter an Attachment URL page to build drilling URLs in an attachment URL format.

Note. Currently, PeopleTools supports attachment drilling URLs for SES (Security Enterprise Search). If you use SEC and belong to the *HTTP File View* role, you can view the attachment URL file. Otherwise, a message appears that says you are not authorized for viewing attachments from database using HTTP.

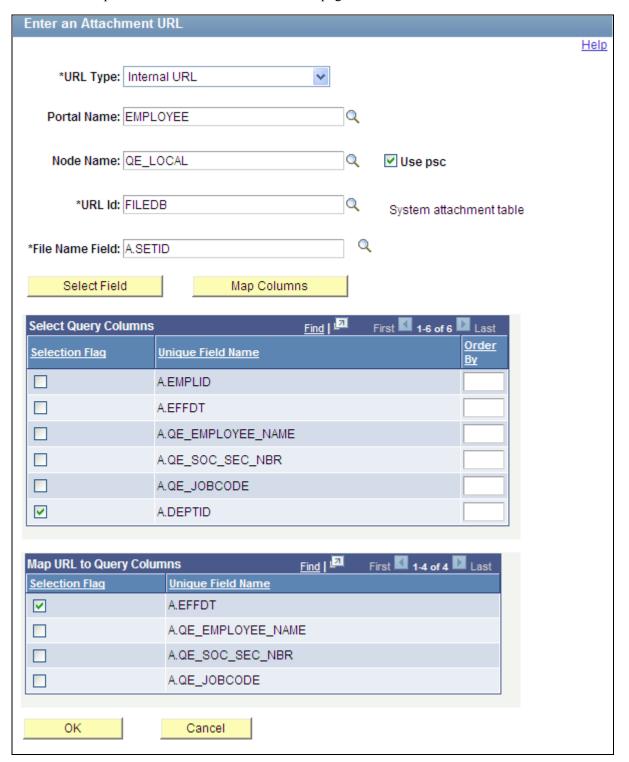
To access the Enter an Attachment URL page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.
- 3. If you create a new query, click the Search button and click the Add Record link to select a record for the query.
- 4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

5. Select the *Drilling URL* option from the Expression Type list, and click the Attachment URL link. The Enter an Attachment URL page appears.

This is an example of the Enter an Attachment URL page:



Enter an Attachment URL page

URL Type

Available options are *Internal URL* and *External URL*.

Portal Name

If the attachment URL is internal, optionally enter or select a portal that is used to build drilling URLs at the report runtime.

Note. If the Portal Name field has no value, PeopleSoft Query uses the value %*PORTAL* to form a drilling URL at the report runtime.

Node Name

If the attachment URL is internal, optionally enter or select a node that is used to build drilling URLs at the report runtime.

If the Node Name field has no value, PeopleSoft Query uses the value *%NODE* to form a drilling URL at the report runtime.

Use psc (content servlet)

If the attachment URL is internal, define the content type that is used to build drilling URLs.

- Deselect this option to use the portal service (psp) type.
 - By default, this option is deselected.
- Select this option to use the content servlet (psc) type.

URL ID

Select a query field that will be used for attachment file name.

Note. The URL IDs are set in this folder: PeopleTools\Utilities\Administration\URLs.

Select Field

Click to display the Select Query Column section.

Map Columns

After you enter URL value, click this button to display the Map URL to Query Columns section.

Note. This step is required for the drilling URLs to be available in the query results page.

You can define multiple drilling URLs in a query, but each query result column can only bind with one URL. When you click the Map Column button, only those fields that have no bond with any URL appear in the Map URL to Query Columns section. If all query columns have bonds with other tracking URLs, then a message appears saying "All columns have already been mapped to other drilling URLs."

Select Query Column

Select query result columns to form field name and value pairs and to define the order of the appended value pair in the URL.

Map URL to Ouery Columns This section is available only after you define the component values and click the Map Columns button.

> **Note.** This step is required for the drilling URLs to be available in query results page.

Use the Map Columns button for binding source query result column fields with a Drilling URL. You must map URL to guery result columns in order for the drilling URLs to be available as links in column fields of source query results. You can define column mapping by selecting an appropriate check box in this Map URL to Query Columns section.

OK

Click to complete defining External URL widget and return to the Edit Expression Properties page.

Steps Used to Enter Attachment URLs to Build Drilling URLs

To enter an attachment URL to build drilling URLs:

1. Select Reporting Tools, Query, Query Manager.

The Query Manager search page appears.

- 2. Click the Create New Query link on the Query Manager search page to create a source query, or click the Search button and open an existing one.
- 3. If you create a new source query, click the Search button and click the Add Record link to select a record for the query.

The Fields page appears.

4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

- 5. Select the *Drilling URL* option from the Expression Type list.
- 6. Click the Attachment URL link to define drilling URL for the source query that you just created.

The Enter an Attachment URL page appears.

7. Select an URL type.

Note. The Portal Name field, Node Name field, and Use psc option are not active if the URL type is set to External URL.

- 8. If the attachment URL is internal, optionally define the portal name, node name, or content type for internal URL.
- 9. Select an URL ID and a file name field.

- 10. Optionally, define query result columns for existing drilling URLs:
 - a. Click the Select Field button to display the Select Query Column section.
 - b. Select query result columns to form fieldname and value pairs and to define the order of the appended value pair in the URL.
- 11. Optionally, define the column mapping in the Map URL to Query Columns section.
 - a. Click the Map Columns button to map the drilling URL to source query selected column.
 - b. Select appropriate values from the Map URL to Query Columns section.
- 12. Click the OK button.

The Edit Expression Properties reappears with query drilling URLs in the Expression Text field.

• If URL type is *external*, its attachment drilling URL always begins with '%URLID:. For example: '%URLID:FILEDB%%A.SETID%:A.EFFDT'.

At runtime, this external URL is expanded to record://PSFILE_ATTDET1.

Notice that drilling URL runtime replaces %A.SETID% with actual query field column value of 1. Drilling URL runtime also replace FILEDB with record://PSFILE_ATTDET. FILEDB is defined as record://PSFILE_ATTDET in the URL page that can be set using this navigation path: PeopleTools, Utilities, Administration, URLs.

• If URL type is *internal*, its attachment drilling URL always includes '/s/. For example: 'psc/EMPLOYEE/QE_LOCAL/s/WEBLIB_FILEHTTP.ISCRIPT1.FieldFormula.IScript_GetAttachment?urlid=FILEDB&filename=%A.SETID%:A.QE_JOBCODE'.

At runtime, this internal URL is expanded to:

http://buffy.us.oracle.com:8920/psc/QEDMO/EMPLOYEE/QE_LOCAL/s/WEBLIB_FILEHTTP.ISC RIPT1.FieldFormula.IScript GetAttachment?urlid=FILEDB&filename=%25A.SETID%25

Notice that drilling URL runtime replaces %A.SETID% with actual query field column value 25.

13. Save your query.

Defining Free Form URL Widgets

The Free Form URL widget enables you to use the Define a Free Form Drilling URL page to build drilling URLs using the values that you manually enter into the URL field.

To access the Define a Free Form Drilling URL page:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Create New Query link on the Query Manager search page, or click the Search button and open an existing one.
- 3. If you create a new query, click the Search button and click the Add Record link to select a record for the query.

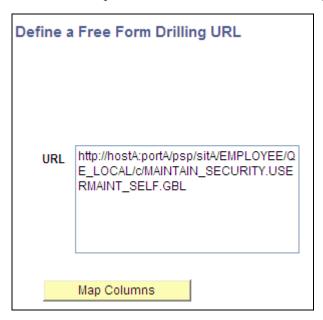
4. Select the Expressions tab, and click the Add Expression button.

The Edit Expression Properties page appears.

5. Select the *Drilling URL* option from the Expression Type list, and click the Free Form URL link.

The Define a Free Form Drilling URL page appears.

This is an example of the Define a Free Form Drilling URL page:



Define a Free Form Drilling URL page

You can define free-form drilling URLs using the following elements:

- Static text; for example, http://www.yahoo.com.
- Query result columns; for example, %A.EMPLID%, %B.DEPID%.

Portal system variable.

Note. Application engine program may not recognize portal system variable if query API is called from an undetermined context.

Portal system variables is case-sensitive.

This table lists the portal system variables that PeopleSoft Query supports:

%AuthenticationToken	%ClientDate	%ClientTimeZone
%ContentID	%ContentType	%Copyright
%Currency	%Date	%DateTime
%DbName	%DbServerName	%DbType
%EmailAddress	%EmployeeId	%HPTabName
%IsMultiLanguageEnabled	%Language	%Language_Base
%LocalNode	%Market	%MaxMessageSize
%NavigatorHomePermissionList	%Node	%PasswordExpired
%Portal	%PrimaryPermissionList	%ProcessProfilePermissionList
%RowSecurityPermissionList	%RunningInPortal	%ServerTimeZone
%Time	%UserDescription	%UserId

Note. Unlike other type of drilling URLs, PeopleSoft Query uses portal service (psp) to construct free-form drilling URLs during the report runtime. PeopleSoft recommends you to include the portal name and the node name as part of the URL. At the report runtime, query processing manager (QPM) uses current running context to determine protocol, host, and port, and then concatenates those values with drilling URL itself to form a full URL.

Viewing Query Results with Drilling URLs

When you access the Run page of a query that has a Drilling URL defined, its query results are shown as links. Clicking these result links either:

- Runs the destination query with prompt key values if the source query has prompt criteria defined and prompt keys are mapped to source query result columns.
- Launches the component with the search key values if the source query has search keys defined and search keys are mapped to source query result columns.
- Redirects the external URL.

This is an example of the Run page with query results as links:

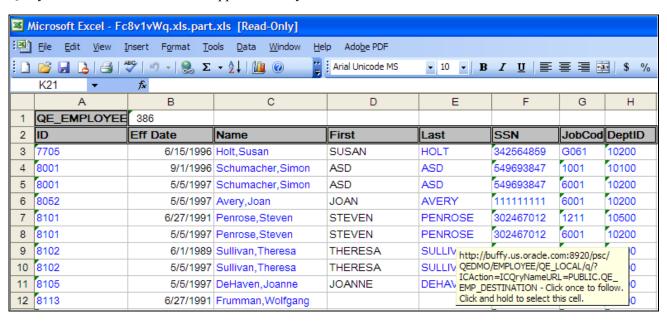
Chapter 3 Defining Selection Criteria



Example of the Run page with query results as links

On the Run page, when you click the Download to Excel link to download query results to a Microsoft Excel spreadsheet, an Excel spreadsheet is launched with links to respective cells. When you click the Excel link from Query Manager or the Query Viewer search results page, you get similar query results.

This is an example of query results in Microsoft Excel when you click the Excel link in Query Manager or Query Viewer. Note that the URL appears when you hover the mouse over a cell:



Example of query results as links in Microsoft Excel

You can also view the query results of a query that has drilling URL defined using the HTML links in Query Manager or Query Viewer.

This is an example of query results as links when you click the HTML links in Query Manager or Query Viewer:

Defining Selection Criteria Chapter 3



Example of query results after clicking an HTML link

In this query result page:

• You can click the Excel Spreadsheet link to download query results to Microsoft Excel.

Note. The Excel Spreadsheet link in this query result page has the same usage as the Excel link in Query Manager or the Query Viewer search result page.

You can click the CSV Text File link to download query results into a CSV format file.

Note. Because CSV file is opened using a text editor such as Notepad and links do not apply to text editors, unlike HTML and Excel, no links exist in the CSV format file. However, if you select drilling URL as query selected field, then the drilling URL appears in a fully expanded version.

This is an example of CSV file content:

"QEDM1","10900","10900","http://buffy-lap1.peoplesoft.com:8080/psp/ps_2/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=10900&SETID=QEDM1"

Scheduling Queries with Drilling URLs

The Schedule Query page has five different output types: *HTM*, *PDF*, *TXT*, *XLS*, and *XML*. Result files from a successful schedule query run contain links for respective columns using *HTM*, *PDF*, and *XLS* formats.

This is an example of query results in PDF format. Note that the URL appears when you hover the mouse over a cell:

Chapter 3 Defining Selection Criteria

					Query for Drilling URL all	
	SetID	DeptID	Eff Date	Descr	Drilling URL	
1	QEDM1	00001	06/15/1996	Corporate Headquarters	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
2	QEDM1	10000	01/01/1985	Administration Division	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
3	QEDM1	10100	01/01/1960	Office of the President	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
4	QEDM1	10200	01/01/1980	Human Resources	http://lap2:8050/psp/ps/EMPLOYEE/QE_LO	
5	QEDM1	10300	01/01/1960	Controllers	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
6	QEDM1	10400	01/01/1960	Retail Services	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
7	QEDM1	10500	01/01/1960	Business Services	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC/	
8	QEDM1	10600	01/01/1960	Branch Office Administration	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
9	QEDM1	10700	01/01/1960	Walnut Creek Office	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC	
10	QEDM1	10800	01/01/1980	Lafayette Office	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOC/	
	http://lap2:8050/psp/ps/EMPLOYEE/QE_LOCAL/q/?IC Action=ICQryNameURL=PUBLIC.QE_EMP_DESTINATION&BIN D1=10800					

Example of query results in PDF format

If drilling URL is defined in the query, then no links exist in the result file for TXT and XML formats. However, if you select drilling URLs as a query selected field, drilling URLs are shown in a fully expanded version.

This is an example of TXT file content:

"QEDM1","10900","10900","http://buffy-lap1.peoplesoft.com:8080/psp/ps_2/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_DEPT_TBL.GBL?Action=U&DEPTID=10900&SETID=QEDM1"

Note. Theoretically, one query can have multiple drilling URLs defined; however, the number of URLs for each query should be limited to enhance performance. For queries that return a large number of results, having multiple URLs defined would slow query execution time.

Chapter 4

Modifying, Scheduling, and Organizing Queries

This chapter discusses how to:

- · Modify queries.
- Schedule queries.
- Organize queries

Modifying Queries

This section discusses how to:

- Open existing queries.
- Rename queries.
- Delete queries.
- Update existing queries.
- Repair existing queries automatically.

Opening Existing Queries

Use Query Manager component to open and view queries.

This is an example of the Query Manager component:



Query Manager Search Results page

To open an existing query from your browser:

1. Select Reporting Tools, Query, Query Manager.

The Query Manager Search Results page appears.

2. Search for a query using the basic or advanced search functions.

Both search types enable you to select from the following *search by* criteria: access group name, description, folder name, owner, query name, type, uses field name, and uses record name. The basic search enables you to search using the *begins with* condition. The advanced search enables you to perform a progressively narrower search using one or more *search by* criteria and selecting from a choice of conditions for each *search by* criterion.

The following list provides instructions on using *search by* criteria:

• To perform a basic search by name, enter the name of the query in the Search By field and click the Search button.

If you do not know the name of the query and want to search through a list of queries, leave the Search For field blank and click the Search button to display a list of up to 300 queries.

Perform a partial search by entering part of a query name or description in the Search By field. Use the drop-down list box to search queries by either name or description, and then click the Search button to display a list of queries that match your search criteria.

The Search Results page appears and lists all the queries that match the search criteria. The following information appears: query name, query description, and ownership (public or private).

- If you know the name of the query that you want, enter it in the Search By field and click the Search button
- To perform an advanced search, click the Advanced Search link.

On the advanced search page, select the appropriate *search by* criteria and conditions and enter a search string in each of the corresponding fields. Then click the Search button to display a list of queries that match your search criteria. The Search Results page appears listing the query name, description, owner, and folder for all the queries that match the search criteria.

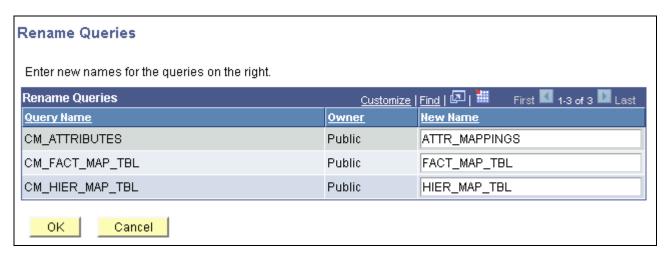
3. Click the Edit link on the row of the query that you want to modify.

See Also

PeopleTools 8.52: PeopleCode Language Reference, "Meta-SQL Elements"

Renaming Queries

You can rename existing queries using the Rename Queries page, as shown:



Rename Queries page

To rename a query:

- 1. Select PeopleTools, Utilities, Administration, Query Administration.
- 2. On the Admin (Administration) page, select a predefined search or a manual search by clicking the respective Search button.
- 3. Select the queries from the Query List.
- 4. Click the Rename button.

The Rename Queries page appears, listing the current query names and query owners.

- 5. Enter new names for the queries in the New Name field.
- 6. Click the OK button to save your changes.

Note. Alternatively, you can use the Query Manager search page (Reporting Tools, Query, Query Manager) to rename a query. You must first select a query that you want to rename, and then select *Rename Selected* from the Action drop-down list box.

Deleting Queries

You can delete any public query that you have access to as well as any private query that you have created.

To delete a query:

- 1. Select PeopleTools, Utilities, Administration, Query Administration.
- 2. On the Admin (Administration) page, select a predefined search or a manual search by clicking the respective Search button.
- 3. Click the Delete button.

The Query Delete Verification page appears.

4. Click the Yes button to confirm the deletion or click the No button to avoid deletion.

Note. Alternatively, you can use the Query Manager search page (Reporting Tools, Query, Query Manager) to delete a query. You must first select a query that you want to delete, and then select *Delete Selected* from the Action drop-down list box.

Updating Existing Queries

At times, you might want to update a query to reflect new conditions or copy an existing query and modify it for other uses. You can open a query, examine it to determine whether it is suitable, and then use the Save As function to save it with a new name.

To update an existing query:

- 1. Select Reporting Tools, Query, Query Manager.
- On the Query Manager Search Results page, find the query that you want to modify and click its Edit link.The Fields page appears.
- 3. Access the tab that you want to modify the information—except the Run tab.
- 4. Enter the new information.
- 5. Click either the Save button to update the existing query, or the Save As link to save a different instance of the query under a new name.

Note. When using Microsoft Windows-based Query Designer, any modification to a previously saved query must be saved before downloading query results to Microsoft Excel or to Crystal Reports 2008. A message will appear reminding you to save your work. This is to ensure that accurate data are displayed. New ad hoc queries that have never been saved before in the database can be downloaded to Microsoft Excel and to Crystal Reports 2008 without having to save after every modification.

Repairing Existing Queries Automatically

A record definition that is used in a query may change. When this occurs, PeopleSoft Query automatically repairs the query when it is opened. A warning message informs you about the problem and what actions were taken.

This table lists the problems and their corresponding actions:

Problem	Action
Field deleted from the record definition is a selected field.	The field is removed from the selected list. If the field is the only field selected, the query cannot be saved.

Problem	Action
Field deleted from the record definition is used in a prompt.	No action taken. This does not affect the prompt unless the field has been completely removed from the database, and the prompt label is either a short or long translate.
Field deleted from the record definition is used in an expression.	The field is removed from the expression. This may result in an invalid expression, but the query can be saved.
Field deleted from the record definition is used in a criterion.	The criterion is removed. If criterion is a subquery criterion, all lower subqueries are deleted.
Record deleted is the first record in the query.	Error returned. The query cannot be repaired.
Record deleted is not the first record in the query.	The record and all fields are removed. Note. The actions specified previously for deleted fields apply.
Record deleted contains hierarchy joins below it.	Record and all records joined below are removed. Note. The actions specified previously for deleted fields apply.

Note. If a record has been deleted, the query no longer appears in the list of queries because you no longer have access to all of the records in that query. To open such a query, you need to use Query API.

See Also

PeopleTools 8.52: Security Administration, "Setting Up Permission Lists," Setting Query Permissions

Scheduling Queries

Query Manager interacts with PeopleSoft Process Scheduler to enable you to schedule queries.

This section discusses how to:

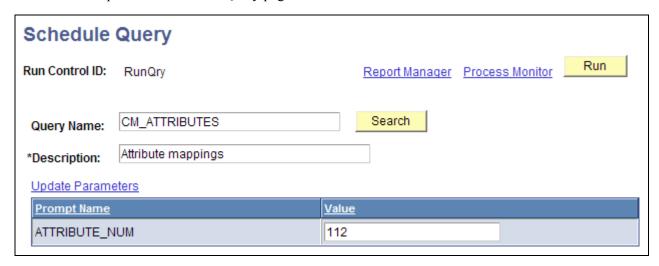
- Submit process requests.
- Select process requests.
- Use Process Monitor.

- View output in Report Manager.
- Specify a user's language.

Submitting Process Requests

A process request enables you to submit a job or process to run. The Schedule Query page submits a process request and brings up the Process Request page, which enables you to specify such variables as where to run the process and in what format to generate the output based on a run control ID.

This is an example of the Schedule Query page:



Schedule Query page

To submit a process request:

- 1. Select Reporting Tools, Query, Schedule Query.
- 2. Search for and select an existing run control ID, or select the Add New Value tab to enter a new ID.
- 3. Select the query for which you want to schedule and update any prompt parameters.

Use the Update Parameters link to select or change the value that is required for each available prompt. When values have been selected, they appear in the Prompt Name and Value fields.

Note. If the query does not have any prompt, the Update Parameters link does not appear.

If you have one or more Asian languages installed, select the language that you want from the Asian Font drop-down list box. This drop-down list box appears *only* if you have one or more Asian languages installed.

You are unable to open or schedule a query that has been disabled.

- 4. Click the Save button to save changes and remain on the Schedule Query page.
- 5. Click the Run button to submit the query process request and display the Process Scheduler Request page.

When you are scheduling queries from Query Manager or Query Viewer, the Run button is replaced with an OK button.

6. Click the Process Monitor link to view the status of your request; click the Report Manager link to view the output of your request.

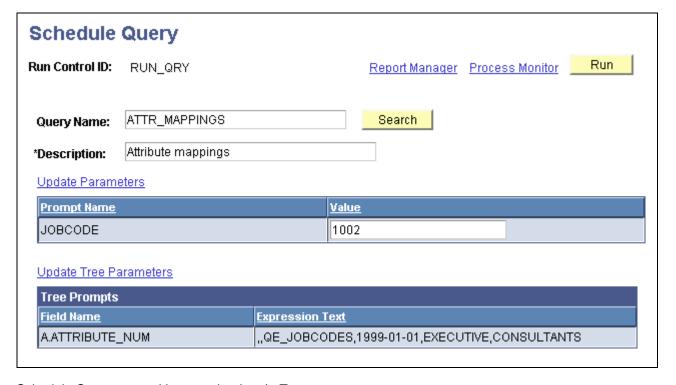
Note. If a query that is used as a data source for BI Publisher is run through Reporting Tools, Query, Schedule Query, the BI Publisher-related prompts do not appear. The normal basic table-formatted query results will be generated.

See *PeopleTools 8.52: PeopleSoft Process Scheduler*, "Submitting and Scheduling Process Requests" and *PeopleTools 8.52: BI Publisher for PeopleSoft*, "Running, Locating, and Viewing BI Publisher Reports," Scheduling Reports in Query Report Scheduler.

Schedule Query with Tree Prompt

You can schedule queries that have tree prompts using the Schedule Query component or using the Schedule links in the Query Manager and Query Viewer. While scheduling these queries, you are prompted for selecting the tree for the specified field and its node list. After the successful selection of values for the tree prompts, other prompts are available for your input. These queries can either be saved and used in the future or can be scheduled and run immediately by clicking the Run button.

This is an example of the Schedule Query page when you run a query that has a criteria with tree prompt:



Schedule Query page with query that has In Tree prompts

Update Tree Parameters

The Update Tree Parameters link is available if you are running queries that have tree prompts.

Click this link to access the Select a Tree page and the Select Tree Node page, where you can select a tree and its node list.

Tree Prompts

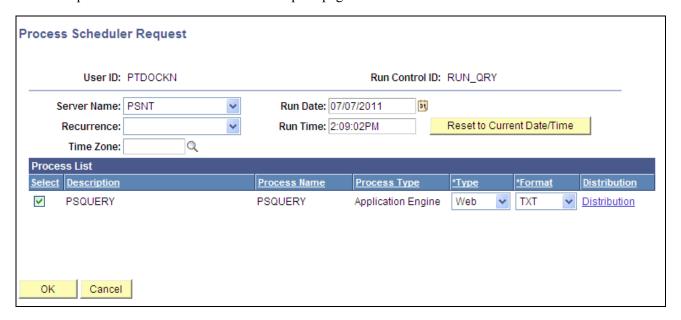
The Tree Prompts section displays the field names and expression texts, which will be used in forming the SQL before running the query.

Note. In Windows query application psqed.exe, you also can create tree prompts and use that prompts to enter input at runtime. Execution of the query is similar to PIA Query Manager, where you select the tree node to run the query.

Selecting Process Requests

The Process Scheduler Request page enables you to set the server, run date and time, how often the process runs (the recurrence of the process), output type, and format.

This example shows the Process Scheduler Request page:



Process Scheduler Request page

To select a process request:

- 1. Select Reporting Tools, Query, Schedule Query.
- 2. Select a run control ID, and click the Run button.

The Process Scheduler Request page appears.

3. Complete the fields on the Process Scheduler Request page.

Server Name Select the name of the server on which you want the process to run.

Recurrence Select the recurring time intervals for the process to run.

For example, to run a process every weekday at 5:00 p.m., select the

predefined recurrence definition *M-F* at 5pm.

Time Zone Select the time zone in which the process will run.

For example, you might be in Eastern Standard Time (EST) and schedule

a process to run in Pacific Standard Time (PST).

Run Date Select the date on which you want the process to run.

Run Time Select the time at which you want the process to run.

Reset to Current Date/Time Click to reset the run date and time to the present date and time.

Select Select a job or process to run.

You can select multiple jobs and processes.

Description Identifies a process or job.

Jobs are listed as links. Click the link to display the Job Detail page, which shows all of the individual processes and jobs that are associated

with the selected main job.

Process Name and Process

Type

Identifies the name and type (such as COBOL or Crystal) of the process

as it appears in the process or job definition.

Type

Select the output type for this job or process.

An output type that is selected for a process at the process definition level overwrites the output type and the output type drop-down list box becomes unavailable. An output type that is selected for a job at the main job level carries through to the job items. An output type that is selected for individual job items overwrites the output type that is entered for the parent job. Values are:

• *File:* Writes the output to the file that you indicate in the Output Destination field.

Note. If you set Type value to *File* or *Printer*, you must enter the name of the directory in the Output Destination field.

- *Printer:* Sends the output to a printer. You can enter a custom printer location in the Output Destination field if you have the appropriate security access. If the Output Destination field is left blank, the printer that is defined on the Process Profile Permissions page is used. If that printer is undefined, the default printer that is defined for the process scheduler is used.
- *Email:* Sends the output through an email. To distribute a report to an email list, enter the appropriate information on the Distribution Detail page by clicking the Distribution link. By default, the output is sent through email to the person running the process. This option is available for Structured Query Reports (SQR), PS/nVision, and Crystal reports.

Note. Using Scheduled Query, you can schedule queries to run and have the results email directly to recipients as an attachment. If a report fails to run, no email is sent. If a query result includes a file without data, the report headers or other text are sent in email that indicates that the report was empty. If no file is found, the email will contain a meaningful message to inform recipients. If sending email is successful, process status is be marked as success; otherwise, it ends in error. If the generated output file is too large, the email is returned to the sender with information to indicate any attachment size limitations.

• Feed: Sends query results as feeds.

You have to enter query prompts values, select the Format as *Atom*, and select a feed definition which matches the query prompts values. If there are no existing feeds with matching prompt values, all the scheduled feeds appear. You can select any scheduled feed to make a copy of that feed and later also change the title of the new cloned feed.

See *PeopleTools 8.52: Feed Publishing Framework*, "Creating and Using Query Feeds."

- Web: Sends all output of the process to the report repository, including log and trace files. The format of the report is specified by the format list.
- Window: Sends the output to a new browser window. The status of the process now appears in the new browser window before the results are displayed. The different statuses are Queued, Initiated, Processing, Success, Error, or Warning. All output for the process is also sent to the report repository, including log and trace files. The format of the report is specified by the format list.

When multiple processes are requested, a new browser window is opened for each request.

Note. This output type is not available if the user does not have REN Server *Report Window* permission, or if no active REN Server cluster is available for Reporting.

To grant access to the new browser window, the permission lists of the users must include full access for the Realtime Event Notification for Reporting Window and the WEBLIB_RPT web library with full access.

Format

Select the output format for this job or process.

When an output format is selected for a process at the process definition level, it cannot be changed. Therefore, the output format drop-down list box becomes unavailable.

Note. An output format that is selected for a job at the main job level carries through to the job items. The format that is selected for individual processes or jobs that are attached to a job overrides the format that is entered for the parent job.

To get text-wrapping support for very long text fields, use HTML format.

PDF format has a maximum page width size of approximately 353 cm and it does not support text-wrapping. All output columns must fit within this limit. A column's size will be as wide as the longest text it has to accommodate. If a text field's length needs more than 353 cm of space, the text may go beyond its column border and successive columns will not print.

XML format is for producing webrowset XML format result. XMLP format is producing XMLP format result.

Distribution

Click to access the Distribution Detail page, where you enter additional distribution information when the output type is *Web*, Window, or *Email*. Also use this page to select a folder name to which the output should be distributed when the output type is *Web* or *Window*.

Output Destination

Enter the file directory path or printer destination for the output. For example, *C:\Documents and*

 $Settings \land admin \land psft \land t \land s. \land appserv \land prcs \land QEDMO \land log_output.$

Note. This field is available only when the output type that you select is *File* or *Printer*. If you select an output destination (OutDest) for a process at the process definition level, this field is populated with that output destination.

See *PeopleTools 8.52: PeopleCode API Reference*, "Quick Reference for PeopleCode Classes," ProcessRequest Properties.

4. Click the OK button to run the query.

The system displays the Schedule Query page. The process instance number appears below the Run button.

5. Click the Process Monitor link to view the status of your request.

The Process List page appears. The Run Status field reveals the status of your scheduled or running process.

Using Process Monitor

The Process Monitor can be used to view the status of your process requests.

You can access the Process Monitor by clicking the Process Monitor link on the Schedule Query page or by selecting PeopleTools, Process Scheduler, Process Monitor.

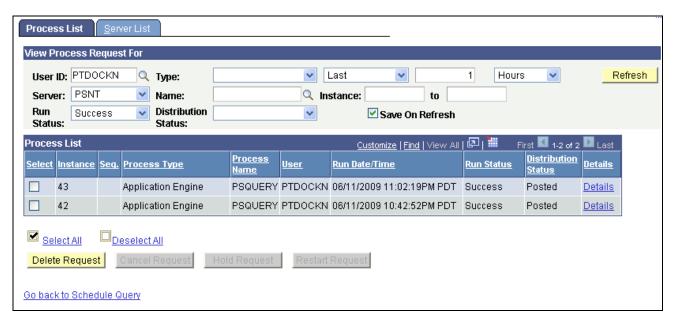
Process Monitor consists of two pages: the Process List page and the Server List page.

• The Process List page enables you to monitor the process requests that you have submitted.

You can select filtering options—for example, process type and run status—to view only selected process requests. And you can click the Details link to view details that are associated with particular process requests.

• The Server List page enables you to monitor the PeopleSoft Process Scheduler server agents within your system.

This example shows the Process Monitor - Process List page:



Process Monitor - Process List page

User ID View the processes that were submitted by a particular user ID.

Usually, you view by your own user ID.

Type View by a particular process type—for example, *Application Engine*.

Last Specify an interval of time by which to limit the process requests that

appear in the list.

Enter a numerical value in the edit box preceding the drop-down list box, and then select a unit type from the drop-down list box. Values are *Days*,

Hours, and *Minutes*.

Refresh Click to check the current status of a process.

This button refreshes the list.

Server Select to view processes that run on a particular server.

Name View processes by a process name.

Instance Specify a range of instances by which to limit the process requests that

appear in the list.

To limit the view to a single request, enter the required instance ID in the

first text field.

Run Status Select if you want to view processes by a specific status, such as *Success* or

Error.

Distribution Status Displays the distribution status for each individual job and process.

Valid statuses are N/A, None, Generated (OS390), Not Posted, Posting, and

Posted.

Save On Refresh Select to save filter criteria changes when you click the Refresh button.

Instance Displays the process instance, that is, the order in which the process appears

in the queue. This number is automatically generated.

Seq (sequence) This field is blank; it is not used for query processes.

User The ID of the user who submitted the process.

Details Click to open the Process Detail page.

Viewing Output in Report Manager

Report Manager is like your own personal in-box of reports and process output. It provides a secure way to view report content, check the posting status of your output, and see content detail messages.

You can view all of your reports by opening your Report List in your browser.

To access the Report Manager, select Reporting Tools, Report Manager, or click the Report Manager link on the Schedule Query page.

This is an example of the Report Manager - List page:



Report Manager - List page

Note. BI Publisher reports can also be viewed by navigating to Reporting Tools, BI Publisher, BIP Report Search.

See Also

PeopleTools 8.52: PeopleSoft Process Scheduler, "Using Process Monitor"

PeopleTools 8.52: PeopleSoft Applications User's Guide, "Working With Processes and Reports"

PeopleTools 8.52: BI Publisher for PeopleSoft, "Running, Locating, and Viewing BI Publisher Reports," Searching the BI Publisher Report Repository

Specifying a User's Language

For scheduled queries, the system uses the language that is specified in the user's profile, not the language that is selected during sign-in. The system also uses the international and regional settings that the user has specified using My Personalizations. If you have not specified personal settings, the system uses the default installation international settings.

Note. Most PeopleSoft components can use the international settings from the browser by default if the user has not set any user specific settings. However, this is *not* available for scheduled queries or any PeopleSoft Process Scheduler processes.

See Also

PeopleTools 8.52: Security Administration, "Administering User Profiles"

Organizing Queries

This section discusses how to:

- Add queries to the My Favorite Queries list.
- Copy a query to another user's list of queries.
- Move a query to a folder.

Adding Queries to the My Favorite Queries List

The Query Manager and Query Viewer search pages can include a list of queries called *My Favorite Queries*. If you use certain queries often, you can put the queries in this list for easy access.

Note. Although you can view a list of favorites, you can't create a list of favorites in the Query Viewer.

To add a query to the My Favorite Queries list:

1. Select Reporting Tools, Query, Query Manager.

- 2. On the Query Manager Search Results page, select the query that you want to add to the My Favorite Oueries list.
- 3. Select the *Add to Favorites* option from the Action drop-down list box.
- 4. Click the Go button.

The query appears in the My Favorite Queries list group box.

Note. You can add multiple queries to the My Favorite Queries list at once by selecting several queries before selecting *Add to Favorites* and clicking the Go button.

Copying a Query to Another User's List of Queries

The Query Manager enables you to copy a query from your list of queries to another user's list of queries.

Note. You can copy only nonpublic queries to another user's list of queries.

If the target user does not have permission to access all of the records in a copied query, that query does not appear in the target user's list of queries. When permission has been granted, the query appears in the list.

To copy a query to another user's list of queries:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. On the Query Manager search results page, select the query or queries that you want to copy.
- 3. Select the *Copy to User* option from the Action drop-down list box.
- 4. Click the Go button.

The Enter User ID page appears.

- 5. Enter the user ID of the user to whom you want to copy the query.
- 6. Click the OK button.

Moving a Query to a Folder

Organizing queries in folders can help you more easily access the queries.

To move a query to a folder:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. On the Query Manager search results page, select the query or queries that you want to move to an organization folder.
- 3. Select the *Move to Folder* option from the Action drop-down list box.
- 4. Click the Go button.

The Move to Folder page appears.

- 5. Select one of the following:
 - Select an existing folder to move to: From the drop-down list box, select the folder to which you want to move the queries.
 - *OR enter a folder name to move to:* Enter the name for a new folder to which you want to move the queries.
- 6. Click the OK button.

Chapter 5

Working with Advanced Query Options

This chapter discusses how to:

- Work with aggregate functions.
- Work with subqueries.
- Work with unions.
- Join records.

Note. Familiarity with SQL is helpful when writing more advanced queries.

Working with Aggregate Functions

This section provides an overview of aggregate functions and discusses how to apply an aggregate function to a field.

Understanding Aggregate Functions

In a standard query, each row in the result set corresponds to an individual row in the table that you are querying. Sometimes, however, you instead want a summary of the information in multiple rows. For example, you might want to know how many customers you have in each state. You can query for this kind of summary information using *aggregate functions*.

An aggregate function is a special type of operator that returns a single value based on multiple rows of data. When your query includes one or more aggregate functions, PeopleSoft Query collects related rows and displays a single row that summarizes their contents.

For example, suppose that your Order table includes (among other fields) a customer ID and an amount for each item that was ordered. You want to determine how much each customer has ordered, so you create a query that selects the customer ID and amount fields. Without any aggregate functions, this query would return the same number of rows as are in the table. If Stuart Schumacher ordered 10 items, you would see 10 rows with his ID in the customer ID column. On the other hand, if you apply the aggregate function Sum to the amount field, you will get just one row for each customer ID. PeopleSoft Query collapses all the rows with the same value in the non-aggregated column (customer ID) into a single row. The value of the amount field in Stuart Schumacher's row would be the sum of the values from the 10 rows.

The following table lists the aggregate functions that you can apply to a field using PeopleSoft Query:

Aggregate Function	Action
Sum	Adds the values from each row and displays the total.
Count	Counts the number of rows.
Min (Minimum)	Checks the value from each row and returns the lowest one.
Max (Maximum)	Checks the value from each row and returns the highest one.
Average	Adds the values from each row and divides the result by the number of rows.

Applying an Aggregate Function to a Field

When you apply an aggregate function to a field, you are redefining how PeopleSoft Query uses the field throughout the query. Essentially, PeopleSoft Query replaces the field, wherever it occurs, with the results of the function. If you select the field as a display column, PeopleSoft Query displays the aggregate values; if you use the field as an order by column, PeopleSoft Query orders the results based on the aggregate values.

Note. If you do not want PeopleSoft Query to redefine the field in this way—for example, if you want to display both the individual row values *and* the results of the aggregate function—create an expression that includes the aggregate function rather than applying the function directly to the field.

To apply an aggregate function to a field:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. In Query Manager, select the Fields tab.
- 3. Click the Edit button that is associated with the appropriate field.

The Edit Field Properties page appears.

4. Select the aggregate function that you want to use for this field, and click the OK button.

The abbreviation for the selected function appears in the Agg (Aggregate) column. If a function is not available for the field that you have selected, the Edit Field Properties page does not close. For example, you cannot use *Sum* with a character field, but you can use *Count*, *Min*, and *Max*.

Note. In addition to the previously listed aggregate functions, you can use any aggregate function that is supported by the underlying database by creating an expression component.

See Also

Chapter 3, "Defining Selection Criteria," Defining Expressions, page 62

Working with Subqueries

A *subquery*, sometimes called a *sub-SELECT*, is a query whose results are used by another query. The main query uses the subquery's result set as a comparison value for a selection criterion.

You create a subquery when you need to compare a field value to the results of a second query. Suppose, for example, that you want a list of employees who are not members of any professional organizations. For each employee in the PERSONAL_DATA table, you must determine whether his or her employee ID is in the MEMBERSHIP table. That is, you must compare the value in the PERSONAL_DATA.EMPLID field to the results of a subquery that selects the EMPLID values from the MEMBERSHIP table.

The following example show the Criteria page when you are using a subquery:



Criteria page when you are using a subquery

The following example shows the Query page when you are creating a subquery:



Query page when you are creating a subquery

To create subqueries:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. Click the Use As Criteria link on the Query page, or click the Add Criteria button on the Criteria page.
- 3. On the Edit Criteria Properties page, select *Subquery* as the comparison value.

PeopleSoft Query displays a special Query Manager view where you can select a record. See the example of the Query page with subquery above.

4. On the Query - Subquery page, select the required field.

Note. A subquery can have only one field. However, you can create multiple subqueries.

When you have defined subqueries and unions, a Subquery/Union Navigation link appears at the top of each page of the main query and the subqueries.

5. Click the Subquery/Union Navigation link to display a hierarchical view of the main query and all subqueries and unions.

Use the hierarchy to navigate between the main query, subqueries, and unions.

Working with Unions

Unions enable you to get the results from two or more separate queries at the same time. You can create an union of multiple queries only when the queries have the following common elements:

- The same number of selected fields.
- The same data types for all fields.
- The same display order for the columns.

Note. Translate values, both the long and short descriptions, cannot be displayed in a union query. Only the code for the field can be selected for output display.

Similarly, values from the related language record are not retrieved for union queries.

You must understand SQL to ensure that you create logical union queries.

In Oracle databases, PeopleSoft LongCharacter fields use the CLOB datatype when their length definition exceeds 1333. Since CLOBS (and other binary datatypes) are not valid columns for all operators, all queries including columns with LongCharacter field length definition that exceeds 1333 should not include the UNION operator.

To create a union:

1. Click the New Union link, which is available on the bottom of each Query Manager page except for the Run page.

PeopleSoft Query automatically switches to the Records tab so that you can start defining the second query. Define that query in the same way that you define other queries.

When you're working on a union, each individual selection looks like an independent query, and for the most part they *are* independent. However, the first selection in the union—the one that you started before clicking the New Union link—has a special status. PeopleSoft Query determines the ordering of the rows and columns based on what you specify for the first selection. It also uses the column headings that you defined for the first selection.

2. Navigate between the main query, subqueries, and unions using the Subquery/Union Navigation link.

Joining Records

Query Manager enables you to create queries that include multiple-table *joins*. Joins retrieve data from more than one table, presenting the data as if it came from one table. PeopleSoft Query links the tables, based on common columns, and links the rows on the two tables by common values in the shared columns.

Joins are what make relational databases relational. Using joins, you define relationships among fields when you query the records, not when you create the records. Because PeopleSoft records are highly normalized (they each describe one kind of entity), you can easily use Query Manager to create joins.

The procedure for joining tables differs depending on how the tables that are being joined are related to each other. Query Manager recognizes three types of joins: record hierarchy, related record, and any record.

This section discusses how to:

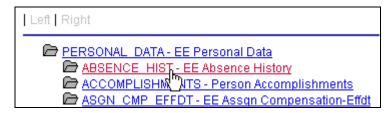
- Create record hierarchy joins.
- Create related record joins.
- Create any record joins.
- Create outer joins.
- Create left outer joins.

Creating Record Hierarchy Joins

A record hierarchy join joins a parent table to a child table. (A *child table* is a table that uses all the same key fields as its parent, plus one or more additional keys.)

Note. You can specify the parent/child relationship using the Parent Record Name option in PeopleSoft Application Designer.

This example shows how to perform hierarchy joins with the ABSENCE HIST record is selected:



Selecting the second record

To create a record hierarchy join:

- 1. In Query Manager (Reporting Tools, Query, Query Manager), select the base record for your query.
- 2. Select the appropriate fields and criteria.
- 3. From the Query page, click the Hierarchy Join link.

All of the records that have a parent/child relationship with your selected record appear.

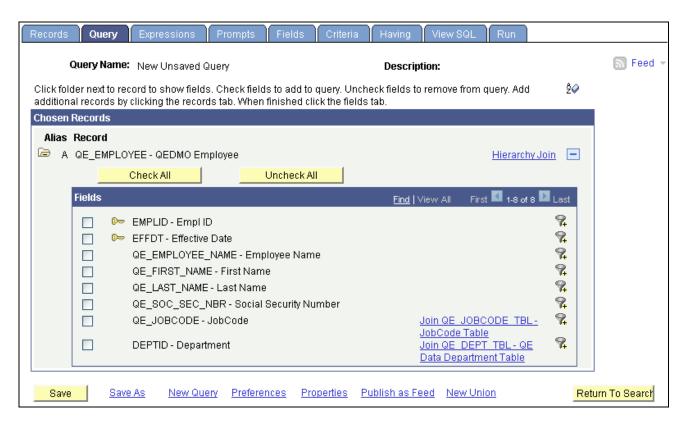
4. Select the second record for the join.

The join is reflected on the Query page.

Creating Related Record Joins

In a related record join, you can automatically join two records based on a relationship that has been predefined in the record designer. For example, if a field has a prompt table defined for it, PeopleSoft Query displays a join link to the right of the shared field.

The following example shows that you can join the QEDMO Employee record to the JobCode record by using the QE_JOBCODE field, or you can join the QEDMO Employee record to the Data Department Table by using the DEPTID field:



Query page showing related record join links

To create a related record join:

- 1. In Query Manager (Reporting Tools, Query, Query Manager), select the base record for your query.
- 2. Select the appropriate fields and criteria.
- 3. From the Query page, click the Related Record Join link.
- 4. From the Select Join Type page, select the standard join option and click the OK button.

The join is reflected on the Query page.

Creating Any Record Joins

Using Query Manager, you can create a join between two records (any record join) by selecting your initial base record, defining its output fields and associated criteria, and then returning to the Records page to select the second record. When you return to the Records page, you see the link Join Record rather than Add Record to the right of all listed record names.

If you have the Enable Auto Join preference selected in the Query Preferences page, PeopleSoft Query automatically attempts to join the new record to the existing record by looking for matching columns on the two records.

To access the Query Preferences page, click the Preferences link on any page of Query Manager.

Creating Outer Joins

An outer join forces a row from one of the participating tables to appear in the result if no matching row exists.

Note. You can create an outer join using this method only if you have an Oracle database. If you use a platform other than Oracle database, you can create an outer join equivalent or create a left outer join using PeopleSoft Query's left outer join feature.

See Chapter 5, "Working with Advanced Query Options," Creating Left Outer Joins, page 129.

To create an outer join, you must include a plus sign in parentheses (+) after the key fields of the subordinate record in the criteria that link the records. To produce this syntax, you cannot use the predefined joins. You must perform an any record join and code an expression that contains the (+) instead of a field.

You can join only one child record to the same parent query when the child record is added using the Records page. If you join more than one child record to the same parent query, an error message appears that says: "Left Outer joins must be joined to the last record in the query". On the contrary, you can have multiple outer joins to the same parent table if those joins are added using the Hierarchy joins link in the Query page.

The following example shows the Define Expression section:



Define Expression section

Creating an Outer Join for Oracle Database

To create an outer join for Oracle database:

- 1. Access the Criteria page (Reporting Tools, Query, Query Manager, Criteria).
- 2. From the Criteria page, click the Edit button to the right of the required field from the primary record.
- 3. In the Condition Type drop-down list box, accept the default operator value of Equal To.
- 4. In the Expression 2 Type section, select the value of Expression.

The Define Expression text box appears.

- 5. Click the Add Field link.
- 6. Select the required field from the secondary record.
- 7. Manually enter (+) after the field name.

8. Click the OK button.

Creating an Outer Join Equivalent for non-Oracle Platforms

If you use a platform other than Oracle, use this method to achieve the same effect as an outer join.

Note. If you use a platform other than Oracle, you can also create a *left* outer join using PeopleSoft Query's left outer join feature.

See Chapter 5, "Working with Advanced Query Options," Creating Left Outer Joins, page 129.

For example, to retrieve a list of all students and any evaluation information on file, the first select must retrieve those students who have not completed an evaluation; the second select must retrieve those students who have completed an evaluation.

To perform an outer join equivalent for the previous example:

- 1. In Query Manager (Reporting Tools, Query, Query Manager), create a new query or updating an existing query using the Student Data record.
- 2. Select the *Customer_ID* and *Name* fields.

Because you will select two different fields from the Student_Eval record and you want them to have their own columns, you must create two dummy fields for your first record.

- 3. Create two different expressions and select them for output.
- 4. Save the query.
- 5. Create your subquery to find those students who have not completed an evaluation.

This completes your first select. If you run the query at this point, you see only those students who did not complete an evaluation.

- 6. To join in the students who did complete an evaluation, create a union.
- 7. Using the Student Data record, select *Customer_ID* and *Name* for output.
- 8. Join the Student Eval record using a record hierarchy join.
- 9. Select *Course* and *Course_Rt* for output.

Creating Left Outer Joins

PeopleSoft Query enables you to easily create a left outer join. In a left outer join, all rows of the first (left) record are present in the result set, even if no matches are in the joining record.

Note. This feature is not available for the Oracle platform.

To create a left outer join on a new query:

1. On the Query Manager search page (Reporting Tools, Query, Query Manager), click the Create New Query link.

- 2. On the Records page, search for the first (left) record for the left outer join.
- 3. Click the Add Record link on the same row as the record that you want to add.

The Query page appears.

- 4. Select the appropriate fields to add to the query.
- 5. Navigate to the Records page.
- 6. Find the joining record and then click the Join Record link on the same row as that record.
- 7. Select Join to get additional fields only (Left outer join).

Note. When you select Left outer join, you must select the last record that you previously added to the query. If you attempt to join to records other than the last record, an error message appears.

- 8. Complete the join.
 - If the Enable Auto Join preference is selected on the Query Preference page, click the record name to join with.
 - If the Enable Auto Join preference is not selected on the Query Preference page, click the OK button.
- 9. Define the join criteria.
 - If the Enable Auto Join preference is selected, the Auto Join Criteria page appears.
 - You can clear the criteria from the query. You can also click the Add Criteria button to add or edit criteria or conditions. If no common keys are between the two join records, a message appears instead of the Add Criteria page.
 - If the Enable Auto Join preference is not selected, the Auto Join Criteria page does *not* appear.
 - If you want, navigate to the Criteria page to add criteria to the ON clause of the outer join. The *This Criteria Belongs To* drop-down list box specifies where the criteria will appear. Select the alias that corresponds to this join record.
- 10. Define the effective date criteria.
 - For 2–3 tier client: If the joined record is an effective-dated record, the Effective Date Criteria page appears.

You can accept the defaults or change them as desired.

- For 4—tier PeopleSoft Pure Internet Architecture: If the joined record is an effective dated record, a message appears stating that an effective date criteria has been automatically added.
 - Optionally, you can navigate to the Criteria page to change the defaults for this criteria.
- 11. To ensure that the left outer join finished successfully, navigate to the Query page.

Text for the joined records confirms a successful left outer join.

12. (Optional) If the query has multiple joins to the same security record, which can be resource intensive and time consuming when it runs, select the Security Join Optimizer option to improve the performance of this query.

See Chapter 2, "Creating and Running Simple Queries," Viewing and Editing Query Properties, page 22.

If you use PeopleSoft Query with the DB2 UDB platform, the DB2 UDB platform does not allow you to have a subquery in the ON clause of a left outer join. For example:

```
SELECT A.ROLENAME, A.DESCR FROM

(PSROLEUSER B LEFT OUTER JOIN PSOPRDEFN C ON

B.ROLEUSER IN (SELECT F.OPRID FROM

PSOPRDEFN F WHERE F.OPRID IN ('AMA1','AMA2','AMA3')))
```

This code yields the following error message: "SQL0338N An ON clause associated with a JOIN operator or in a MERGE statement is not valid."

Note. Use the SELECT DISTINCT operation when you create a left outer join on two records with two separate security records. Using the SELECT operation in this case will cause the query to pull in too many records.

PeopleSoft Query automatically includes an OR IS NULL condition to make sure all relevant records are included.

Adding Left Outer Joins Criteria into the ON Clause

If you want to create criteria for the left outer joined record, you can add left outer joins criteria into the ON clause.

To create left outer joins criteria into the ON clause:

- 1. On the Criteria page (Reporting Tools, Query, Query Manager, Criteria), click the Edit button to access the Edit Criteria Properties page.
- 2. On the Edit Criteria Properties page, select *ON clause of outer join <Alias Name>* from the This Criteria Belongs To drop-down list box.
- 3. Click the OK button.

Chapter 6

Using Connected Query

This chapter provides an overview of Connected Query and discusses how to:

- Use Connected Query Quick Start
- Use Connected Query Manager
- Use Connected Query Viewer
- Use Connected Query Scheduler

Understanding Connected Query

Connected Query enables you to create a single XML file based on a set of queries with parent-child relationships.

A connected query is a hierarchical object built with existing PeopleSoft queries. A parent query can nest *n* levels of child queries and any child query can have *m* sibling queries within a hierarchy. No artificial limits exist for *n* and *m*, but typical use involves a single parent-child relationship or a few levels of nesting. Fields in a child query are mapped to related fields in the immediate parent query. A connected query returns a hierarchical data set in which data returned by child queries is filtered by the results of its immediate parent query.

Connected queries are used to analyze data, supply to other systems with PeopleSoft data using Web Services, and create BI Publisher reports that use connected query as a Data Source.

See *PeopleTools 8.52: BI Publisher for PeopleSoft*, "Creating and Registering Data Sources" and *PeopleTools 8.52: BI Publisher for PeopleSoft*, "Running, Locating, and Viewing BI Publisher Reports."

Connected queries are significantly useful:

- To simplify task for a business user.
 - User create a set of linked simple queries to collect data from multiple tables instead of creating a complicated query with multiple equal, outer joins, and grouping conditions.
- When two or more SQL statements are linked with left outer join to the same query.
 - Connected Query enables you to collect data similar to query performing left outer joins. In contrast to query, Connected Query enables you to link multiple queries to a single parent query.

Using Connected Query Chapter 6

• As a tool in the process of replacing Crystal reports (that use subreports) with BI Publisher reports.

Crystal reports can include the main reports and a set of subreports that could be combined in the same template. Using Connected Query, you can replace a Crystal reports having main reports and subreports with BI Publisher reports.

When outputs need to be in structured XML.

A simple query (including a query with multiple joins) creates a tabular plain layout. To have a hierarchical output, you need to use multiple grouping conditions that involve complicated logic and is not always straight forward. Connected Query processing creates a hierarchical output where a single row of data from parent query results in a set of rows in a child query. This data is processed row by row and produces structured data. It has similarity with SQR and Application Engine nested loops processing.

Instead of using Application Engine or SQR to collect data for file processing by BI Publisher, use Connected Query as the data collection tool because no conditional logic involves in this process. However, use SQR for processes with high volume of data or when high performance is required.

You can quickly create a single parent-child relationship using the Connected Query Quick Start component (CQ_WIZARD), and create complex connected queries using the Connected Query Manager (PSCONQRS).

Note. Queries with In-Tree prompt cannot be used in Connected Query.

Connected Query Terms

Parent Query	A parent query in a connected query is a query that has one or many child queries. The top level query in a connected query is the parent query.		
Child Query	A child query in a connected query is a query that has a single parent query. A child query can also serve as a parent query if it has one or more child queries in the Connected Query definition. A child query can have one or more sibling queries.		
Sibling Query	A sibling query in a connected query is a child query that shares a parent with another child query.		
Public Connected Query	Public connected query is a query that can be used by all users.		
	Note. Public connected queries cannot include any private query.		
Private Connected Query	Private connected query is a query that can be used only by its creator.		
	Note. Private connected queries include public queries and private queries that have been created by the same user.		
Mapping Query Fields	Mapping query fields establishes the filtering relationship between values of selected fields in a child query and the corresponding fields in the parent query.		

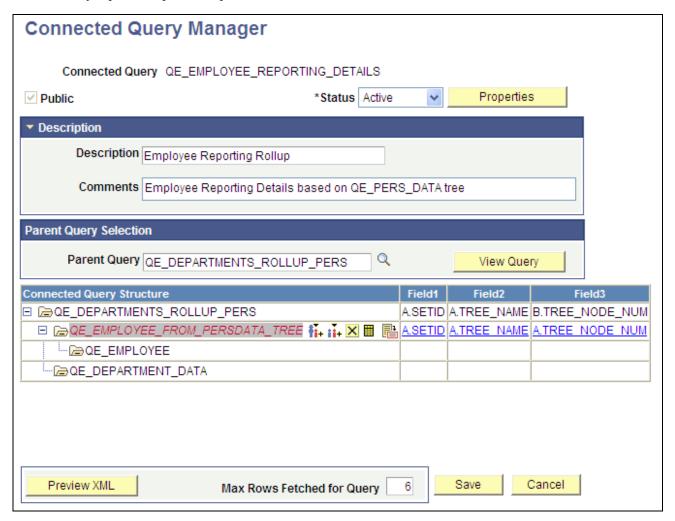


Use the Help icon to retrieve help for a specific topic.

Note. The Help icon is available only in Connected Query Quick Start.

Connected Query Example

This example shows the structure that Connected Query uses to collect data of each employee, who directly and indirectly reports to specific departments:



Example of Connected Query's structure

In this example:

• The first query (QE_DEPARTMENTS_ROLLUP_PERS) selects a list of departments that report to a specific department defined by user in the first query prompt.

• The second query (QE_EMPLOYEE_FROM_PERSDATA_TREE) selects lists of employee based on the departments returned from the parent query.

Query QE_EMPLOYEE displays detailed information of every employee that is selected by query QE_EMPLOYEE FROM PERSDATA_TREE.

• The last query (QE_DEPARTMENT_DATA) displays detailed information of each department that participated in the report.

Security for Connected Query

This table lists the delivered Connected Query permission lists and roles:

Permission List	Role	Description
PTPT2700	Connected Query Developer	Provides full access to Connected Query applications.
PTPT2800	Connected Query User	Provides access to run, preview results, and schedule a connected query. User will not be able to modify existing or create new Connected Queries

Using Connected Query Quick Start

This section provides an overview of Connected Query Quick Start and discusses how to:

- Enter a name and descriptive information.
- Select a parent query.
- Select a child query.
- Map child query fields to parent query for filtering.
- Preview the connected query.

Understanding Connected Query Quick Start

The Connected Query Quick Start is a wizard that walks you through creating a simple connected query with a single parent query and a single child query linked using a set of related fields.

Note. The parent and child queries must exist and be visible in Query Manager before you can use them to create a connected query.

Connected Query Quick Start is used only for creating new connected queries. You can edit existing connected queries using the Connected Query Manager page.

Connected query uses query security permissions for each of it member queries.

See Also

Chapter 2, "Creating and Running Simple Queries," Creating New Queries, page 10

Chapter 6, "Using Connected Query," Understanding Connected Query Manager, page 146

Pages Used in Connected Query Quick Start Wizard

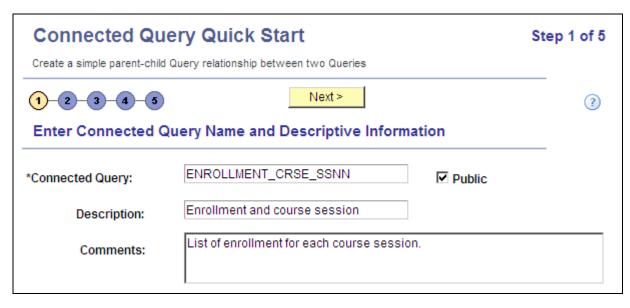
Page Name	Definition Name	Navigation	Usage
Connected Query Quick Start - Enter a Name and Descriptive Information	CQ_WZ_INFO	Reporting Tools, Connected Query, Connected Query Quick Start	Enter a connected query name and descriptive information, and define ownership of the connected query.
Connected Query Quick Start - Select a Parent Query	CQ_WZ_PARENT	Reporting Tools, Connected Query, Connected Query Quick Start Enter a connected query and descriptive information, and click the Next button.	Select an existing query to use as the parent query.
Connected Query Quick Start - Select a Child Query	CQ_WZ_CHILDQRY	Reporting Tools, Connected Query, Connected Query Quick Start Enter a connected query and descriptive information, and click the Next button. Select an existing query to use as the parent query, and click the Next button.	Select an existing query to use as the child query.

Page Name	Definition Name	Navigation	Usage
Connected Query Quick Start - Map Child Query Fields to Parent Query for Filtering	CQ_WZ_FLDMAP	Reporting Tools, Connected Query, Connected Query Quick Start Enter a connected query and descriptive information, and click the Next button. Select an existing query to	Map query fields from a child query to corresponding fields from a parent query.
		use as the parent query, and click the Next button.	
		Select an existing query to use as the child query, and click the Next button.	
Connected Query Quick Start - Preview	CQ_WZ_PREVIEW	Reporting Tools, Connected Query, Connected Query Quick Start	review a new connected query and preview the
		Enter a connected query and descriptive information, and click the Next button.	
		Select an existing query to use as the parent query, and click the Next button.	
		Select an existing query to use as the child query, and click the Next button.	
		Map query fields from a child query to corresponding fields from a parent query, and click the Next button.	

Step 1: Enter a Name and Descriptive Information

Access the Connected Query Quick Start - Enter a Name and Descriptive Information page by selecting Reporting Tools, Connected Query, Connected Query Quick Start.

This is an example of the Connected Query Quick Start - Enter a Name and Descriptive Information page:



Connected Query Quick Start - Enter a Name and Descriptive Information page

Connected Query

This is a required field.

Enter a name for the connected query.

Note. The name of the connected query cannot be changed after you enter the name into the Select a Child Query page of a Connected Query Quick Start.

Because Connected Query uses node name as an XML node, query names used in a Connected Query must follow these naming rules:

• Query names can include letters, numbers, and other characters.

However, query names cannot include spaces.

• Query names can start with letters *xml* (or *XML*, *Xml*, and so on).

However, these names cannot consist of only three letters *XML*.

• Query names cannot start with a number nor a punctuation character.

If a query name starts with an alpha or underscore [_] character, the query node name in an XML file will be the same as the query name. Otherwise, the query node name will be the query name with the prefix *PS*_. For example:

- Query MyQuery123 is written to the output XML file as MyQuery123.
- Query _MyQueryA is written to the output XML file as _MyQueryA.
- Query 123MyQuery is written to the output XML file as PS_123MyQuery.

Public Indicate the query ownership.

If the Public check box is selected, this query will be a public query. If the Public check box is not selected, this connected query will be a private

query.

Note. The ownership of the connected query cannot be changed after you enter data into the Select a Child Query page of a Connected Query Quick

Start.

Description (Optional) Enter a description for the connected query.

Comments (Optional) Enter comments for the connected query.

Next Note. The Next button is available after you enter the name of the

connected query in the Connected Query field and move to any other field.

Click to advance the wizard to the next page.

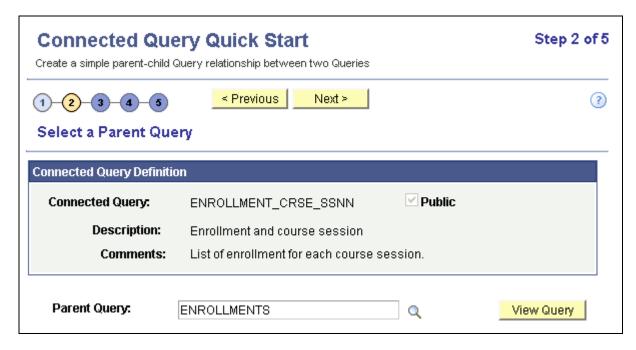
Step 2: Select a Parent Query

Use these steps to access the Connected Query Quick Start - Select a Parent Query page:

- 1. Select Reporting Tools, Connected Query, Connected Query Quick Start.
- 2. Enter a connected query and descriptive information, and click the Next button.

The Connected Query Quick Start - Select a Parent Query page appears.

This is an example of the Connected Query Quick Start - Select a Parent Query page:



Connected Query Quick Start - Select a Parent Query page

Parent Query	Click the query Lookup icon to select a parent query from a list of queries for which you have been granted access.		
	Note. You must use the query Lookup icon to select a parent query and be able to move to the next page.		
View Query	Click to open Query Manager component in read-only mode to view the query.		
Next	Note. This button becomes active after you select a parent query.		
	Click to advance the wizard to the next page.		

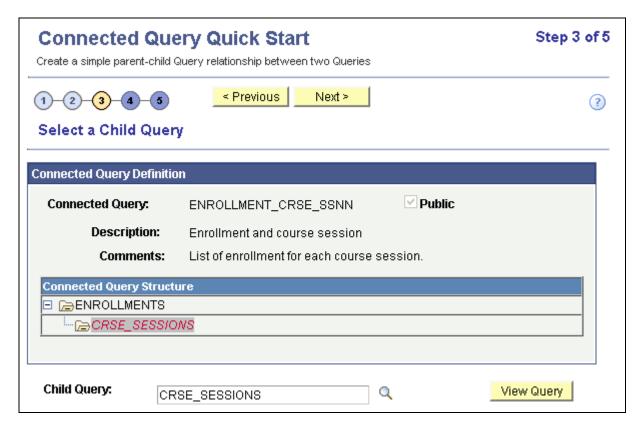
Step 3: Select a Child Query

Use these steps to access the Connected Query Quick Start - Select a Child Query page:

- 1. Select Reporting Tools, Connected Query, Connected Query Quick Start.
- 2. Enter a connected query and descriptive information, and click the Next button.
- 3. Select an existing query to use as the parent query, and click the Next button.

The Connected Query Quick Start - Select a Child Query page appears.

This is an example of the Connected Query Quick Start - Select a Child Query page:



Connected Query Quick Start - Select a Child Query page

Child Query	Click the query Lookup icon to select a child query from a list of queries for which you have been granted access.		
	After you select a child query, its name appears in the Connected Query Structure section.		
View Query	This button becomes active after you select a child query.		
	Click to open Query Manager component in read-only mode to view the query.		
Next	Note. This button becomes active after you select a child query using the lookup icon.		
	Click to advance the wizard to the next page.		

Step 4: Map Child Query Fields to Parent Query for Filtering

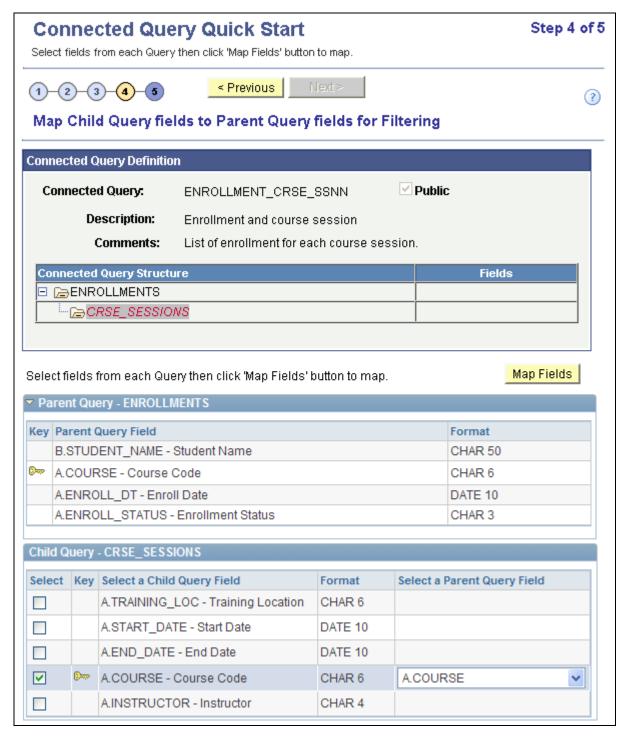
Use these steps to access the Connected Query Quick Start - Map Child Query Fields to Parent Query for Filtering page:

- 1. Select Reporting Tools, Connected Query, Connected Query Quick Start.
- 2. Enter a connected query and descriptive information, and click the Next button.

- 3. Select an existing query to use as the parent query, and click the Next button.
- 4. Select an existing query to use as the child query, and click the Next button.

The Connected Query Quick Start - Map Child Query Fields to Parent Query for Filtering page appears.

This is an example of the Connected Query Quick Start - Map Child Query Fields to Parent Query for Filtering page:



Connected Query Quick Start - Map Child Query Fields to Parent Query for Filtering page

This page displays two sets of fields coming from parent and child queries:

• The parent query section displays parent query fields and is for informational purposes only.

This section is collapsed by default and you have the option to expand it.

 The child query section displays child query fields and enables the report developer to select one or more fields for mapping.

For each child query field selection, a drop-down list box with possible parent query field lists appears. Those parent query field lists are filtered by compatible field data types. In some cases, Connected Query Manager uses *smart thinking* to map fields based on partial matching names but ultimate field matching is up to the user.

If parent and child queries are not linked with some fields, each row of data for a parent query will have *all* rows from a child query as no filtering from a parent to child will happen. For example, Project is a parent query and Project Description is a child query. The Project and Project Description queries are linked by the Project_ID field that will assume one-to-one relationship (assuming no EFFDT field exists in a second query). Therefore, if the Project query returns 100 rows, the Project Description query will return a single row for the Project query, and resulted data set will have 100 rows of data.

If no field is selected as a mapped field (Project_ID field), Connected Query returns $100 \times 100 = 10000$ rows. Sometimes mapped fields are not needed, in which case the system displays a warning message when you save the connected query (Connected Query design time).

Map Field	Click to update the Connected Query structure.		
	Note. The Fields column in the Connected Query Structure section displays the values that you just selected.		
Next	Click to advance the wizard to the next page.		
	Note. This button becomes active after you select the fields for mapping and click the Map Fields button.		

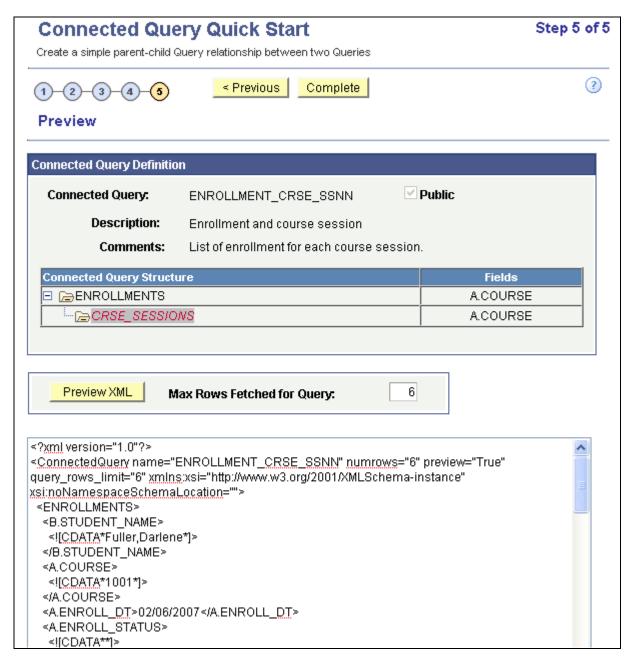
Step 5: Preview a Connected Query

Use these steps to access the Connected Query Quick Start - Preview page:

- 1. Select Reporting Tools, Connected Query, Connected Query Quick Start.
- 2. Enter a connected query and descriptive information, and click the Next button.
- 3. Select an existing query to use as the parent query, and click the Next button.
- 4. Select an existing query to use as the child query, and click the Next button.
- 5. Map query fields from a child query to corresponding fields from a parent query, and click the Next button.

The Connected Query Quick Start - Preview page appears.

This is an example of the Connected Query Quick Start - Preview page:



Connected Query Quick Start - Preview page

Preview XML Click to display the formatted XML output for this connected query.

XML output appears in a Preview mode, in the lower section of the Preview

page.

Max Rows Fetched For Ouerv

Enter the maximum number of rows to display in Preview mode.

Note. You should limit the number of rows that are being fetched. The default value is 6. If you enter 0 or clear this text box, no row limits will be imposed for a resulting XML, which can cause significant delay in getting results; and because the application runs in synchronized mode using the application server, you may get browser time-out or tuxedo time-out.

Complete

Click to transfer to Connected Query Manager page, where you can perform enhancements and save the connected query.

Note. While working with a Connected Query Quick Start, you can modify your previous selections at any step by clicking the step number (in yellow or gray) icons. Changes in your selection could change a connection query structure.

Note. In the Connected Query Quick Start - Preview page, when XML that contains CDATA sections is displayed at runtime, application users will see <! [CDATA* and *] > in places of <! [CDATA[and]]>.

Using Connected Query Manager

This section provides an overview of Connected Query Manager and discusses how to:

- Create a connected query.
- Edit a connected query.
- Copy a connected query.
- Delete a connected query
- Open a PeopleSoft query using Connected Query Manager.

Understanding Connected Query Manager

Connected Query Manager enables a report developer to create a new connected query, edit an existing connected query, copy existing connected queries, and delete a connected query object, as well as run connected queries in three modes:

- Preview XML
- Run to window
- Schedule

Note. Currently, Connected Query Manager supports only XML output format.

Connected Query structure consists of a set of PeopleSoft queries that are linked by related fields. No limits exist for the number of fields being linked between two queries.

Note. Parent and child pairs of queries can be linked together using sets of correlated fields, though those linkages are not required.

Each query being selected in a connected query structure has a set of image icons, which enables you to perform various actions:

Insert a new query as a child of the selected query.

Insert a new query as a sibling of the selected query.

Delete a selected query.

Open a related field selection section.

Open a selected query in Query Manager in read-only mode.

Note. While deciding which tool to use for reporting purposes, report developer should consider using a single query with joins and unions first. Using Connected Query could affect the performance of the reporting application.

The main contributing factor to the Connected Query performance is the number of nested levels. Application developer should try to minimize the depth of nesting in a Connected Query structure. Another contributing factor is the number of rows being returned from each query. To achieve a better performance, queries that are positioned higher in a Connected Query hierarchy should be limited in the number of rows being returned. This limitation could be achieved by means of using filtering in parent queries.

See Also

PeopleTools 8.52: PeopleSoft Application Designer Developer's Guide, "Working With Projects"

Pages Used to Create and Maintain a Connected Query

Page Name	Definition Name	Navigation	Usage
Connected Query Manager - Search	PSCONQRSSRCH	Reporting Tools, Connected Query, Connected Query Manager	Edit a connected query, copy an existing connected query, delete a connected query, preview results of a connected query, schedule a connected query to run immediately with results displayed in a separate window, and schedule a connected query to run at the preset time.

Page Name	Definition Name	Navigation	Usage	
Connected Query Manager	PSCONQRSBUILDER	Reporting Tools, Connected Query, Connected Query Manager Click the Edit link.	Create and maintain connected queries.	
Connected Query Properties	PSCONQRSPROP	Reporting Tools, Connected Query, Connected Query Manager Click the Edit link. On the Connected Query Manager page, click the Properties button.	Used by Report developers to associate a set of properties with a connected query definition, modify values of execution or output XML file based on user-selected properties, and ensure that user-selected properties (with PeopleTools projects) are compatible with PeopleTools 8.50 and later releases.	
Copy a Connected Query	PSCONQRSCOPY	Reporting Tools, Connected Query, Connected Query Manager Click the Copy link for the connected query to copy.	Copy a connected query.	
Connected Query Viewer	PSCONQRSSRCH	Reporting Tools, Connected Query, Connected Query Viewer	View the results of a running connected query: preview the XML, schedule a connected query to run immediately with results displayed in a separate window, or schedule the connected query to run at a later time.	
Schedule Connected Query	PSCONQRS_RUN_CNTRL	 Reporting Tools, Connected Query, Schedule Connected Query Alternatively, click the Schedule link from the Connected Query Manager page. Alternatively, click the Schedule link from the Connected Query Viewer page. 	Schedule a connected query to run in the PeopleSoft Process Scheduler.	

Creating a Connected Query

To access the Connected Query Manager page and create a new connected query:

- 1. Select Reporting Tools, Connected Query, Connected Query Manager.
- 2. Select the Add a New Value tab.

This is an example of the Connected Query Manager page:



Example of Connected Query Manager page

Connected Query Enter a name for the connected query.

Public Indicate the query ownership. Select to indicate that this is a public query.

Clear this check box to indicate that this is a private query.

Note. Public connected queries can be run by any user with adequate permissions. Private connected queries can be run and edited only by the owner.

Status

Select the status of the connected query. Values are:

- Active: Enables user to schedule a connected query.
- *In Progress:* Enables user to preview a connected query, but that connected query is not visible by other reporting tools—for example, BI Publisher.

Any connected query with an *In Progress* status can be previewed, but not scheduled.

• *Inactive:* Indicates a connected query that does not pass a validation routine.

Properties

Click to access the Connected Query Properties page.

Note. The Properties button is active only after you select a parent query.

See <u>Chapter 6</u>, "<u>Using Connected Query</u>," <u>Setting Connected Query</u> <u>Properties</u>, page 151.

Description

Enter a description for the connected query.

Comments

Enter comments for the connected query.

Parent Query Selection

Click the search icon to select a parent query from an existing list.

Note. You must use the search icon to search for and select a parent query. After you select a parent query, all buttons become active and the Connected Query Structure section appears with active icons, which enables you to continue building a connected query.

View Query

Click to open the selected query in read-only mode in the Query Manager component.

Query Manager opened from Connected Query is fully functional but does not allow you to save any changes.

Connected Query Structure

Note. This section appears after you select a parent query.

Displays the image icons that you can use to further develop the Connected Query structure.

Preview XML

Note. This button becomes active after you select a parent query.

Click at any time to preview the XML report in a separate window.

Save

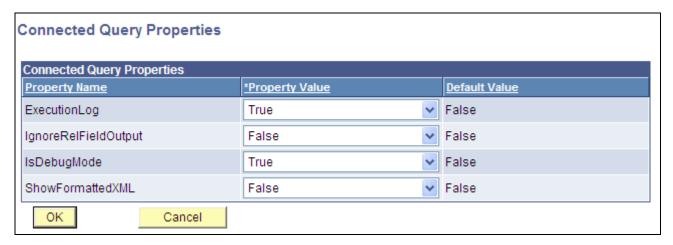
Note. The Save button becomes active after you select a parent query.

You can save the connected query as soon as you have added one parent query.

Click to save your connected query.

Setting Connected Query Properties

Access the Connected Query Properties page:



Connected Query Properties page

EXECUTIONLOG

Available options are *True* and *False*.

If EXECUTIONLOG is set to *True*, an execution log is recorded in an appropriate log file. Recording includes regular logging and output statistics section.

ISDEBUGMODE

Available options are *True* and *False*.

If ISDEBUGMODE is set to *True*, an execution log is recorded in an appropriate log file. Recording includes regular logging and output statistics section. In addition, if application server executes the connected query (for example, PreView XML), the *True* mode preserves a directory that contains temporary files after a connected query is executed. Log also contains SQL statement that is generated by each member query as well as values of related fields used to link parent query to its child.

IGNORERELFLDOUTPUT Available options are *True* and *False*.

If IGNORERELFLDOUTPUT is set to *True*, the output XML file will not repeat mapped field nodes that are associated with a child query. For example, if a parent query has a field DEPTID linked to the child query field DEPARTMENT, node DEPARTMENT will not appear in the XML output file.

SHOWFORMATTEDXML

Available options are *True* and *False*.

If SHOWFORMATTEDXML is set to *True*, an output XML file will contain node indentations used to format XML. This output is used for XML output shown in the Connected Query Quick Start.

You should set the SHOWFORMATTEDXML property to *True* if you want to use non-XML editors to work with output XML files. However, if you set the SHOWFORMATTEDXML property to *False* (default option), the output files will be smaller.

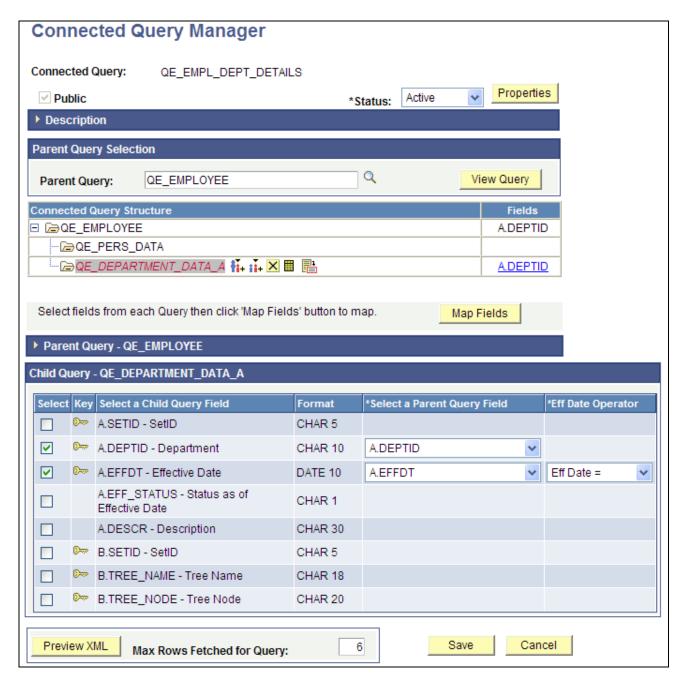
Note. You define all connected query properties as strings using the name-value pairs concept. These properties are stored in database-managed tables as a part of the connected query definition.

You can preview a connected query XML without storing its properties in the database.

Using Effective Date Operator in the Connected Query Manager Page

Effective date operator is available in the Connected Query Manager page as a part of the field mapping process. You can select an effective date operator for any of the member queries if a child query has an EFFDT value selected as a related field.

This example shows the Connected Query Manager page and the Eff Date Operator (effective date operator) list:



Example of the Connected Query Manager page and the Eff Date Operator list

Note that the effective date operator list:

- Is available only if a selected field has a format of *EFFDT*.
- Is available in the Connected Query Manager but not available in the Connected Query Quick Start.
- Has a default operator—an equal operator—like other fields.
- Need not be saved in the database before you preview the XML of a connected query.

Steps Used to Create a Connected Query

To create a connected query using Connected Query Manager:

- 1. Select Reporting Tools, Connected Query, Connected Query Manager.
- 2. Select the Add a New Value tab.

The Connected Query Manager page appears.

3. Enter a name in the Connected Query field.

The connected query name must be unique to all private and public queries.

4. Define query ownership using the Public check box.

By default, the Public check box is selected to indicate that this connected query is a public connected query. You can clear the Public check box if you want this connected query to be private.

5. Select the status of the connected query using the Status drop-down list box.

Note. The *Inactive* status indicates that a connected query does not pass a validation routine. When a connected query is not valid, this status is set automatically during the Save process.

- Select the *Active* option to enable the user to schedule a connected query.
- Select the *In Progress* option to indicate that this query can be previewed in Connected Query Manager, but can not be scheduled.

The *In Progress* status is useful when a connected query is not ready for end user to view using the Connected Query Viewer page.

6. Optionally, enter description and comments for the connected query using the Description and Comments fields.

If the Description field is blank, Connected Query populates the description using the connected query name.

7. In the Parent Query field, click the search icon to select a parent query from an existing list.

Note. You must use the search icon to search for and select a parent query. After you select a parent query, all buttons become active and the Connected Query Structure section appears with active icons, which enables you to continue building a connected query.

8. Optionally, click the View Query button to view the selected query.

Note. You can preview a connected query at any point without having previously saved it.

- 9. Optionally, continue building your connected query by adding child queries, linking fields between parent and child queries, and so on.
- 10. Save your connected query.

Because connected query can be created with one parent query presented, you can save your connected query and use it as a new connected query.

Editing a Connected Query

To edit existing connected queries:

1. Access the Connected Query Manager page by selecting Reporting Tools, Connected Query, Connected Query Manager.

- 2. Enter your search criteria and click the Search button.
- 3. In the Connected Query Manager search page, click the Edit link on the row with the connected query you want to edit.
- 4. Optionally, change the connected query structure, edit description fields, and change the connected query status.

This is an example of the Connected Query Manager search page:



Connected Query Manager search page

Copying a Connected Query

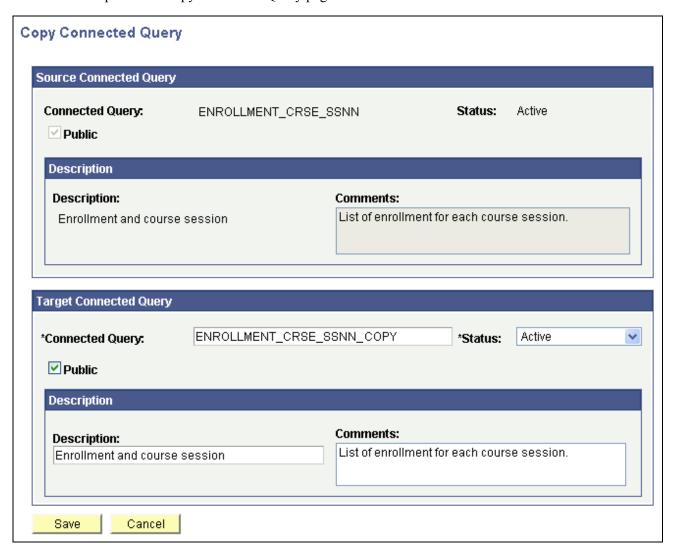
To copy a connected query:

- 1. Access the Copy Connected Query page by selecting Reporting Tools, Connected Query, Connected Query Manager.
- 2. Enter your selection criteria and click the Search button.

3. On the Connected Query Manager page, click the Copy link next to the connected query to copy.

The Copy Connected Query page appears.

This is an example of the Copy Connected Query page:



Copy Connected Query page

To save a copy of the connected query:

- 1. Change the connected query name in the Target section with a new unique name.
- 2. Optionally, change ownership, descriptions, or the status of the query.
- 3. Click the OK button.

Deleting a Connected Query

To delete a connected query:

1. Access the Connected Query Manager page by selecting Reporting Tools, Connected Query, Connected Query Manager.

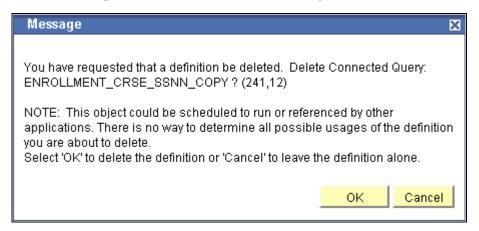
2. Click the Delete link next to the connected guery to delete.

A confirmation message appears asking if you want to delete the existing connected query.

3. Click the OK button to continue and delete the connected query.

Alternatively, click the Cancel button to cancel the deletion and return to the Connected Query Manager page.

This is an example of the delete confirmation message:

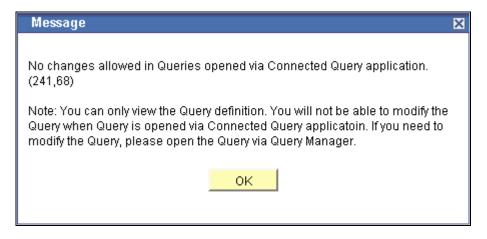


Example of the confirmation message

Opening a PeopleSoft Query Using Connected Query Manager

When you open a PeopleSoft query using the Connected Query Manager, the Query Manager component appears in a read-only mode along with a message informing you that no changes are allowed to the query that is opened. The Query Manager that is being opened through the Connected Query Manager is fully functional. It enables you to run a query, view SQL that is being generated by query, view the query structure, view query prompts, view query criteria, and so on, but it doesn't allow you to save any changes for the opened query.

This is an example of the message received when you open a PeopleSoft query in the Connected Query Manager:



Sample message received when you open a PeopleSoft query in the Connected Query Manager

Using Connected Query Viewer

Connected Query Viewer is a read-only version of Connected Query Manager. It enables security administrators to limit users with a role of Connected Query User (permission list PTPT2800) to search for and view connected queries that have a status of *Active*. Connected query users can view results of running connected queries using these three methods: Preview XML, Run to Window, and Schedule.

You can access the Connected Query Viewer page by selecting Reporting Tools, Connected Query, Connected Query Viewer.

This is an example of the Connected Query Viewer page:



Connected Query Viewer page

Search

Click to search for a connected query using the basic search function.

Combined with only the *begins with* condition, the basic search enables you to select the following *Search by* criteria: Connected Query Description, Connected Query Name, Connected Query Status, and Owner.

Advanced Search

Click the Advanced Search link to search for a connected query using the advanced search function.

The advanced search enables you to perform a narrower search by using one or more *Search by* criteria and selections of conditions for each *Search by* criterion. You can select the following *Search by* criteria: Connected Query name, Description, Status, Ownership Type, and Case Sensitive Search.

Preview - Max Rows For Ouery

Enter a number of rows to be returned from each query in a preview mode.

You should limit the number of rows that are being returned. The default value is 6. If you enter 0 or clear this text box, no row limits will be imposed for a resulted XML, which can cause a significant delay in getting results; and because the application runs in a synchronized mode using application server, you may get browser time-out or tuxedo time-out errors.

Preview XML

Click a Preview XML link for the selected connected query to view its results in a new browser window.

Note. The Preview XML action uses the Application Server to generate and configure XML data, thus you have to wait for XML data to be available. To keep working while system generates and configures XML data, use the Run to Window link, which does not limit number of rows returned from each query.

If the connected query has prompts, a prompt window appears after you click the Preview XML button.

Run to Windows

Click a Run To Windows link for the selected connected query to schedule that query to be run immediately using PeopleSoft Process Scheduler, and then view its XML results in a new browser window.

Schedule

From the Connected Query Viewer search results page, click the Schedule link that is associated with the connected query.

Connected Query Viewer interacts with PeopleSoft Process Scheduler to enable you to schedule connected queries. You can submit requests to schedule a connected query, check the status of your request using Process Monitor, and view connected query results using Report Manager.

See PeopleTools 8.52: PeopleSoft Process Scheduler, "Using Process Monitor" and PeopleTools 8.52: PeopleSoft Process Scheduler, "Using Report Manager."

See Also

PeopleTools 8.52: BI Publisher for PeopleSoft, "Running, Locating, and Viewing BI Publisher Reports," Running BI Publisher PeopleSoft Query Reports

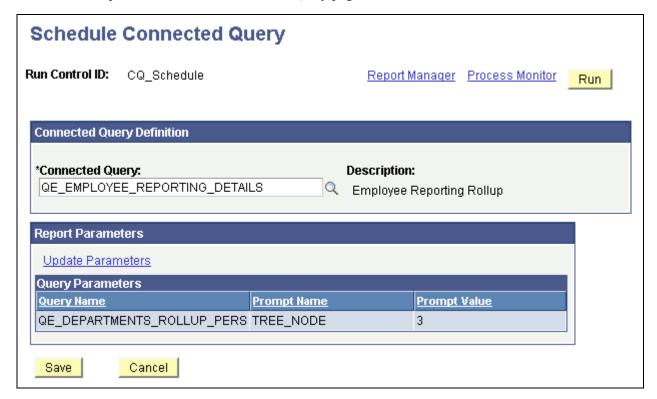
Using Connected Query Scheduler

You can schedule a connected query in three ways:

- Clicking the Run To Window link in the Connected Query Manager search page or the Connected Query Viewer search page.
- Clicking the Schedule link in the Connected Query Manager search page or the Connected Query Viewer search page.
- Selecting Reporting Tools, Connected Query, Connected Query Scheduler.

Connected Query interacts with Application Engine program PSCONQRS to enable you to schedule connected queries. You can search for an existing run control ID or create a new run control ID and schedule a connected query using the Schedule Connected Query page, check the status of your request using the Process Monitor link, and view your output using the Report Manager link.

This is an example of the Schedule Connected Query page:



Schedule Connected Query page

Report Manager Click to access the Report Manager page to view the report content after the

output file is posted and the output destination is set to Web or Window.

The final output file is posted to the Report Manager repository for web

access by authorized users.

See PeopleTools 8.52: PeopleSoft Process Scheduler, "Using Report

Manager."

Process Monitor Click to access the Process Monitor page and check the progress of your

request.

See PeopleTools 8.52: PeopleSoft Process Scheduler, "Using Process

Monitor."

Update Parameters Click to update the runtime prompt values of connected query.

See PeopleTools 8.52: PeopleSoft Process Scheduler, "Submitting and

Scheduling Process Requests."

Run Click to access the Process Scheduler Request page, where you can specify

variables, such as where a process runs and in what format the process output is generated. The values for output type and output format appear by default per the report definition and can be changed if the report definition

allows it.

Note. The Run button in the Schedule Connected Query page functions as

the Schedule link in the Connected Query Manager search page.

Connected Query Enter or search for a connected query.

Note. On the Schedule Connected Query page, you cannot modify the

connected query name after you save the Run Control ID.

See Also

Chapter 4, "Modifying, Scheduling, and Organizing Queries," Scheduling Queries, page 108

PeopleTools 8.52: PeopleSoft Process Scheduler, "Getting Started With PeopleSoft Process Scheduler"

PeopleTools 8.52: BI Publisher for PeopleSoft, "Running, Locating, and Viewing BI Publisher Reports"

Appendix A

Creating Workflow Queries

This appendix provides an overview of workflow queries and discusses how to define workflow queries.

Understanding Workflow Queries

Workflow queries—also called *role queries*—are queries that PeopleSoft Workflow uses as part of automated business processes to determine which users should receive work items.

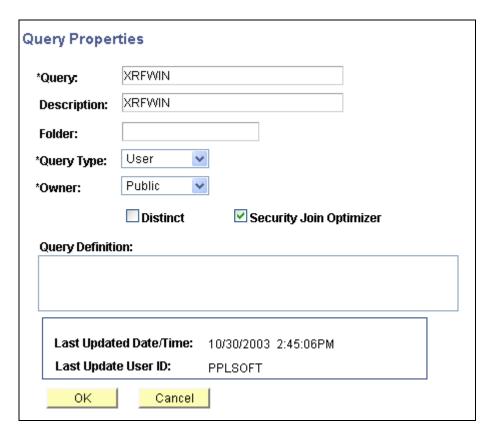
Because these queries are run by the system rather than by users, the PeopleSoft application does not run the same prequery security checks. In particular, the application does not check which access groups the user who is running a workflow query can access—because the user is a workflow agent. (For this reason, you may not want to allow all users to create workflow queries.)

Defining Workflow Queries

Use the Query Properties page to define a workflow query.

This is an example of the Query Properties page:

Creating Workflow Queries Appendix A



Query Properties page with the Security Join Optimizer option selected

To define a workflow query:

- 1. Select Reporting Tools, Query, Query Manager.
- 2. On a Query Manager page, click the Properties link.

The Query Properties page appears.

3. Select the query type of *Role*, and click the OK button.

Note. You should use a naming convention to distinguish the different types of queries.

The Role query option refers to the fact that role queries are named with names that begin with [ROLE].

See Also

Chapter 2, "Creating and Running Simple Queries," Understanding Query Types, page 5

Appendix B, "PeopleSoft Query Security," Using Query Profiles, page 171

Appendix B

PeopleSoft Query Security

With PeopleSoft Query security, you can control the query operations that users can perform and the data to which they have access.

This chapter discusses how to:

- Use query access group trees.
- Use row-level security and query security record definitions.
- Use query profiles.

Using Query Access Group Trees

This section provides an overview of query access group trees and discusses how to:

- Create query trees.
- Grant and restrict access to groups.
- Enable the query access list cache.

Understanding Query Access Group Trees

PeopleSoft Query uses *query access group trees* to control security of the tables in your PeopleSoft database. You define a hierarchy of record components, based on logical or functional groupings, and then give users access to one or more branches of the tree. Users can use PeopleSoft Query to retrieve information only from those tables whose record definitions they have access to.

Using PeopleSoft Query Access Manager, you can create, view, and update query access group trees.

Query access group trees contain two types of nodes: groups and records.

- Groups represent of a set of child groups or records.
- Records represent a PeopleSoft record definition.

Creating Query Trees

Access the Query Access Manager page (PSTREEMGRACC) (PeopleTools, Security, Query Security, Query Access Manager).

PeopleSoft Query Security Appendix B



Query Access Manager page - example of a query access group tree

Use the Query Access Manager page to create query trees or search for existing query trees.

PeopleSoft provides sample trees with all of its applications. You can configure these trees; however, because these trees may get replaced when you upgrade to subsequent application releases, you should create your own query trees based on your organization's needs.

In your query trees, include all record components that you want users to be able to query. Note that you do not have to put all record components in the same query tree. Instead, you can use the sample query trees to provide access to the standard PeopleSoft record definitions, but create additional query trees for record definitions that you want to add while adapting your system. This strategy enables you to take advantage of the sample trees but avoid overwriting your changes during future application upgrades.

Appendix B PeopleSoft Query Security

How you organize the contents of your query trees depends on the needs of your organization and users. For example, for nontechnical or casual users, you might want to create small trees that are not intimidating.

To simplify the trees, you can create separate trees that contain subcategories of each function. For example, you could create separate trees for human resources, general ledger, and projects record components so that users in each region can access only those record components that they use.

When creating your tree, you should also have an access group that includes all components of the tree. This enables you to give users access to all tables more easily—you need only to add one row on the Access Groups tab in Query Security.

Note. Consider adding record components to your query trees in a hierarchy that matches the parent/child relationship of records in your database. Although you do not have to organize records in this way—PeopleSoft Application Designer actually controls the parent/child hierarchy in your database—you will probably find it helpful to keep your query trees consistent with your database structure.

Granting and Restricting Access to Groups

After you have built a query tree, you must give users access to one or more of its access groups. They can then generate queries on any tables in the access groups that are accessible to them.

To create new queries, or even to run existing ones, users must have access rights to the record components that are used in the queries. After you have built your query trees, you must grant users access to them. You can grant and restrict access to entire query trees or portions of them through the Permission List Access Groups page (by selecting PeopleTools, Security, Permission & Roles, Permission Lists, Query, Access Group Permissions).

See Also

People Tools 8.52: Security Administration, "Setting Up Permission Lists," Setting Query Permissions

Enabling the Query Access List Cache

An optional batch process is available for users who work with Query Manager, Crystal Reports, and PS/nVision. The system can much more quickly retrieve the queries that match the designated search criteria if the query access list cache is enabled.

This example shows the Query Access List Cache page (RUN QRYACCLIST):

PeopleSoft Query Security Appendix B

Query Access List Cache

Run Control ID: PSQRYACCLIST Report Manager Process Monitor Run

Enable Access List Cache

When this radio button is selected, the query access list cache is enabled. Use the run button above to launch the application engine program to initially populate or to refresh the query access list cache table. This cache table must be refreshed anytime a change is made that affects the list of records a user may use in a query. Examples of changes that may affect the list of records a user may use in a query are: adding/removing records from a query access list tree, adding/removing a query access list tree from a permission list or a role

Disable Access List Cache

When this radio button is selected, the query access list cache table will be cleared if it is not empty and caching is disabled. Note that query performance may suffer if caching is disabled. To turn caching back on, select the enable cache radio button above and then the run button to populate the cache table. Note that caching will not be enabled if the application engine process to populate the cache does not complete properly.

Query Access List Cache page

To enable the query access list cache:

- 1. Select PeopleTools, Security, Query Security, Query Access List Cache.
- 2. Select the Enable Access List Cache option.
- 3. Click the Run button to run the process.

If the process does not finish, the cache will be disabled.

Note. When the Enable Access List Cache option is selected and roles of a user Profile or permission list of a role has been modified, which affect the Query Access List Cache, you must rerun the QRYACCLIST AE process to properly update the cache. Otherwise, the Query Access List Cache is not up-to-date and will be switched off automatically.

Rerun the process when changes have been made to Query Access Groups or Query Access Group settings on Roles or Permission Lists.

Using Row-Level Security and Query Security Record Definitions

This section discusses how to:

- Enforce row-level security.
- Use query security record definitions.

Appendix B PeopleSoft Query Security

Enforcing Row-Level Security

By default, when you give PeopleSoft Query users access to a record definition, they can access all the rows of data in the table that were built using the associated record definition. In some cases, though, you may want to restrict users from seeing some of those data rows. For example, you may not want your human resources staff to access compensation data for vice presidents or above. That is, you want to enforce the *row-level security* feature that is offered by many PeopleSoft applications.

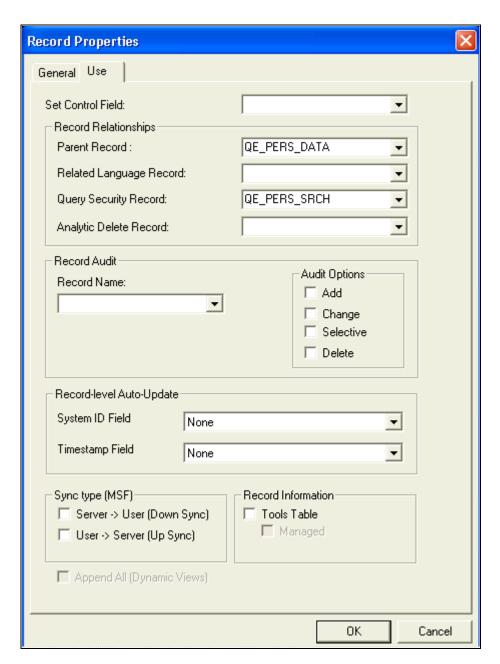
Row-level security enables users to access a table without accessing all rows on that table. This type of security is typically applied to tables that hold sensitive data. For example, you might want users to be able to review personal data for employees in their own departments but not for employees in other departments. To accomplish this, you would give everyone access to the PERSONAL_DATA table, but would enforce row-level security so that users could see only the rows where the DEPTID matches their own.

Note. PeopleSoft Query row-level security is enforced only when you are using PeopleSoft Query or Scheduled Query; it doesn't control runtime page access to table data.

PeopleSoft applications implement row-level security by using a query security record (typically a view) that is specified on the record definition that joins the data table with an authorization table. When a user searches for data in the data table, the system performs a related record join between the security record view and the base table (rather than searching the table directly). The view adds a security check to the search, based on the criteria that you have set up for row-level security. For example, to restrict users to seeing only data from their own departments, the view would select from the underlying table only those rows where the DEPTID matches the user's DEPTID. You can specify the query security record by selecting an appropriate view from the Query Security Record drop-down list box on the Record Properties dialog box for any record definition.

This is an example of the Record Properties dialog box with Query Security Record is set to QE PERS SRCH:

PeopleSoft Query Security Appendix B



Using QE_PERS_SRCH view as a Query Security Record view

Note. Process and role queries override the automatic row-level query security logic that is applied to all other types of queries. For this reason, you should restrict access to creating these types of queries to administrative types of roles and not include any sensitive data columns in the select list for these types of queries. You can restrict access to creating and modifying these queries based on query profile settings that are assigned to a permission list. Note that Workflow queries also override the row-level security logic.

Securing Data Through the Search Record

To secure data through the query security record view, create a query security record that has both of the following criteria:

• The same key field as the base record that you are securing.

Appendix B PeopleSoft Query Security

• One of the following three row-level security fields as a key field and not as a list box item:

- OPRID (User ID).
- OPRCLASS (Primary Permission List).
- ROWSECCLASS (Row Security Permission List).

When you add one of the preceding fields as a key field, Oracle's PeopleTools automatically adds a WHERE clause when it does a select through the record. This forces the value to be equal to the current user's value.

See Appendix B, "PeopleSoft Query Security," page 165.

Using Query Security Record Definitions

Implement row-level security by having PeopleSoft Query search for data using a *query security record definition*. The query security record definition adds a security check to the search.

Query security record definitions serve the same purpose as search record definitions do for pages. Just as a search record definition determines what data the user can display in the page, the query security record definition determines what data the user can display with PeopleSoft Query.

To get PeopleSoft Query to retrieve data by joining a security record definition to the base table, specify the appropriate query security record when you create the base table's record definition.

Note. The PeopleSoft row-level security views restrict users from seeing certain rows of data. If you specify a query security record for a given base record definition, PeopleSoft Query adds a qualifier to the WHERE clause of each query, instructing the system to retrieve only rows in organizational entities to which you have been granted access. If you perform a historical query—for example, a query asking for the employees in your department as of last year—you may not get the results that you expect. Because the system is enforcing row-level security, PeopleSoft Query returns only those employees who were in the department last year and who are currently in a department to which you have access.

Each PeopleSoft product line comes with a set of views for implementing its standard row-level security options.

Using Query Profiles

Use the Query Profile page to determine users' level of access when they work with PeopleSoft Query.

This example shows the Security - Query Profile page (SCRTY_QUERY_PROF) (PeopleTools, Security, Permissions and Roles, Permission Lists, Query tab):

PeopleSoft Query Security Appendix B

Permission List: Description:	PTPT1000 PeopleSoft User	
	run Queries n of Public Queries n of Role, Process and Archive Queries tched:	Advanced SQL Options Allow use of Distinct Allow use of 'Any Join' Allow use of Subquery/Exists Allow use of Union Allow use of Expressions Maximum Joins Allowed: 9 9 Unlimited) Maximum 'In Tree' Criteria: 9 (9 = Unlimited)
✓ Run ✓ Run to Excel		
OK Cancel		

Security - Query Profile page

To use query profiles:

- 1. Select PeopleTools, Security, Permissions & Roles, Permission Lists.
- 2. Select the Query tab.
- 3. Click the Query Profile link.

Query profiles specify the type of access that users have when they work with PeopleSoft Query. For example, you may want certain users to run only existing queries, not create new ones. You might also want to restrict the types of queries that users can create, limit the number of rows returned, or set the time that a query can run before it times out.

Note. If a user has more than one permission list, PeopleSoft Query uses the highest time-out value as defined in the Time-out Minutes section of the user's permission lists.

All time-outs are globally enabled and disabled in Query Administration.

When you select the Allow creation of Role, Process and Archive Queries check box, you also allow the user to create role, process, and archive queries.

See <u>Appendix C, "Query Administration," Understanding Query Administration, page 175</u> and *PeopleTools 8.52: Security Administration*, "Setting Up Permission Lists," Setting General Permissions.

You can also determine the output options that users have for generating their queries. The first level of security is access to PeopleSoft Query itself. If you don't give users access to PeopleSoft Query when you define their user IDs, they can't create or run queries. Not all users needs to create their own queries.

Appendix B PeopleSoft Query Security

PeopleSoft tests query profile settings across all of the permission lists to which a user has access. For example, each permission list that is granted to a user or role has the possibility to add capabilities. However, the Only Allowed to Run Queries option is unique because when you select this option, capabilities are removed. So if you want to prevent users from updating queries (and allow them only to run them), then you must ensure that *none* of the permission list settings grant the update capabilities by clearing the Only Allowed to Run Queries option.

By default, the query profile gives users access to all PeopleSoft Query features—assuming, of course, that you gave them access to PeopleSoft Query.

See Also

PeopleTools 8.52: Security Administration, "Implementing Query Security"

Appendix C

Query Administration

This appendix provides an overview of Query Administration and discusses how to use Query Administration.

Understanding Query Administration

System administrators can use Query Administration to monitor query performance and usage. Some of the conditions that you can monitor include average runtime, number of times run, and the dates last run. Using a predefined search, you can also select queries to review and report on.

Note. Workflow queries are excluded from the statistics because of the large volume that can be run as part of workflow processing. Therefore, you should take care that workflow queries are as efficient as possible.

Query Administration also enables you to cancel queries that are currently running in Query Manager and Query Viewer as well as enable and disable queries and logging.

Note. You cannot cancel currently running scheduled queries.

See Also

Appendix B, "PeopleSoft Query Security," Using Query Profiles, page 171

Using Query Administration

This section discusses how to:

- · Administer queries.
- Cancel currently running queries.
- Set additional options.

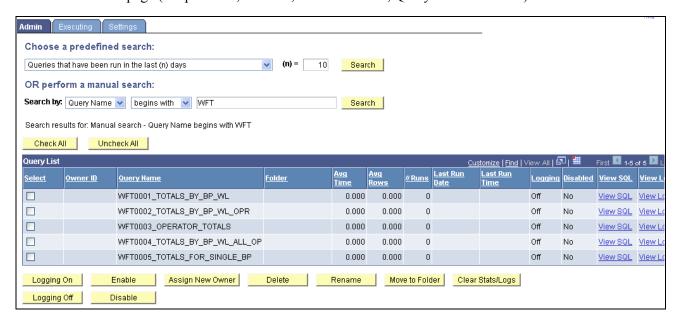
Query Administration Appendix C

Pages Used for Query Administration

Page Name	Definition Name	Navigation	Usage
Admin (Administration)	QRY_ADMIN	PeopleTools, Utilities, Administration, Query Administration	Administer queries.
Executing	QRY_KILL	PeopleTools, Utilities, Administration, Query Administration, Executing	Cancel currently running queries, and enable or disable queries and logging.
Settings	QRY_SETTINGS	PeopleTools, Utilities, Administration, Query Administration, Settings	Set additional options such as enabling the query time- out feature and running query statistics.

Administering Queries

Access the Admin page (PeopleTools, Utilities, Administration, Query Administration).



Admin page

To administer queries:

Appendix C Query Administration

1. Use either the predefined search or manual search option to restrict the list of queries that are displayed.

For a predefined search, enter the desired value for the selected search option in the (n)= field and select one of the following options:

- Queries that belong to locked out accounts.
- Queries that have been disabled.
- Queries that have been run in the last (n) days.
- Queries that have logging turned on.
- Queries that have never been run.
- Queries that have run but not in the last (n) days.
- *Top (n) queries by largest average number of rows.*
- Top (n) queries by longest run time.
- *Top (n) queries most frequently run.*

For a manual search, select to search queries by query name or owner ID.

You can define your search further by selecting either *begins with* or *contains* search type.

2. Click the Search button to display a list of queries that match your search criteria.

The Query List group box lists those queries that match your search criteria.

- 3. Review the following statistics for each query that is listed:
 - Owner ID.
 - Query name.
 - Folder.
 - Average time to run.
 - Average number of rows.
 - Number of times run.
 - Last run date and time.
 - Logging status.
 - Disabled status.

Note. If a query appears in the list as *<UNTITLED>*, a user has created and run one or more queries without saving them. Results from all unsaved queries appear as a single untitled row. You can clear statistics only for untitled queries. Attempting to perform any other action on untitled queries will result in an error message.

4. For the appropriate query, click the View Log link to view the log for that query.

A message appears if no logs are available.

Query Administration Appendix C

- 5. For the appropriate query, click the View SQL link to view the SQL for that query.
- 6. Select the check box for each query on which you want to perform an action.

You can also click the Check All button to select all queries, or click the Uncheck All button to clear all queries.

- 7. Perform an action by clicking one of the following buttons:
 - Logging On: Enables logging for the selected query.

When you enable the logging feature, detailed statistics will be logged on the query after every time it has run to completion. The statistics are stored in a separate Query Log table.

Note. The statistics log is updated with data only if the query runs to completion.

- Logging Off: Disables logging for the selected query.
- Enable: Enable the selected query to be run, previewed, or scheduled.
- Disable: Disables the selected query from being run, previewed, or scheduled.
- Assigns New Owner: Assign a new owner to the selected query.
- Delete: Deletes the selected query.
- Rename: Renames the selected query.
- Move to Folder: Moves the selected query to a folder.
- Clears Stats/Logs: Delete the statistics and logs for the selected query.
- 8. For the appropriate query, click the Logging button to enable logging for that query.

Note. Your changes are saved automatically. No Save button is available.

Managing Currently Running Queries

Access the Executing page (PeopleTools, Utilities, Administration, Query Administration, Executing).

Appendix C Query Administration



Executing page

The Executing page displays all of the currently running queries, allowing you to enable or disable queries, enable or disable logging, and cancel currently running queries. If an administrator needs to verify that a query has been canceled, he or she can look in the Appsrv.log and verify that the *PSMONITORSRV* service has canceled the selected query.

To manage currently running queries:

- 1. Use either the predefined search or manual search option to restrict the list of queries that are displayed.
 - For a predefined search, select one of the following options:
 - Queries that have been running longer than (n) minutes.
 - *Top (n) queries by longest run time.*
- 2. In the (n)= field, enter the value that you want for the search option.
 - For a manual search, select to search queries by query name or owner ID.
 - You can define your search further by selecting either the *begins with* or *contains* search type.
- 3. Click the Search button to display a list of queries that match your search criteria.
 - The Query List group box lists those queries that match your search criteria.

Query Administration Appendix C

- 4. Review the following statistics for each query that is listed:
 - User ID.
 - Owner ID.
 - Query name.
 - Domain ID.
 - Process identifier.
 - Host.
 - Machine name.
 - Status.
 - Time started.
 - Time-out end time.
 - Number of times killed.
 - Logging status.
 - Disabled status.
- 5. For the appropriate query, click the View Log link to view the log for that query.

A message appears if no logs are available.

- 6. For the appropriate query, click the View SQL link to view the SQL for that query.
- 7. Select the check box for each query on which you want to perform an action.

You can also click the Check All button to select all queries, or click the Uncheck All button to clear all queries.

- 8. Perform an action by clicking one of the following buttons:
 - Kill Selected Processes: Forces the selected query to stop running.
 - Logging On: Enables logging for the selected query.

When you enable logging, detailed statistics are logged on the query after every time it has run to completion. The statistics are stored in a separate Query Log table.

- Logging Off: Disables logging for the selected query.
- Enable: Enables the selected query to be run, previewed, or scheduled.
- Disable: Disables the selected query from being run, previewed, or scheduled.
- 9. For the appropriate query, select the Logging check box to enable logging for that query.

Appendix C Query Administration

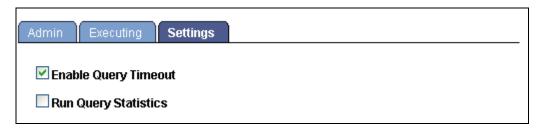
Note. Your changes are saved automatically. No Save button is available.

The kill (cancel) query/time-out mechanism represents each query that is run from Query Manager or Query Viewer as a row in the table PSQRYTRANS. Query Monitor, which implements the kill query/time-out functionality, has a mechanism that looks for orphan rows in PSQRYTRANS. Orphan rows are rows in PSQRYTRANS that do not have a query actively running. Orphan rows can be created because the server crashed while running a query, or other reasons.

Query Monitor looks for orphan rows only for the application server domain that it is running in. For this reason, orphan rows could be in PSQRYTRANS when no active domain exists. These rows are not seen by the online query monitoring facility, but could potentially exist in the database. Such rows are rare, and you can use the database query tool to clean them up. You can use the *machine* and *domain* fields to determine whether rows exist that should be cleaned up.

Setting Additional Options

Access the Settings page (PeopleTools, Utilities, Administration, Query Administration, Settings).



Settings page

Enable Query Timeout

Select or clear this check box to enable or disable the query time-out feature on a system-wide basis. The time-out values are stored in each permission list.

Note. The query time-out feature applies to queries that are run in Query Manager and Query Viewer. This feature does not apply to scheduled queries.

Run Query Statistics

Select or clear this check box to enable or disable the query statistics feature on a system-wide basis.

By default, the query statistics feature is *disabled*.

PeopleSoft recommends that you use the query statistics feature only for analysis, and that you do not leave it enabled on an ongoing basis. Enabling this feature may compromise the performance and the system may have an increased possibility of query time-outs or may return query results with zero values. This recommendation also applies to users of queries in reports.

Index

Λ	deleting 156
A	editing 155
	example 135
action 107	overview 133
add prompt 48	quick start 136
Admin page 176	security 136
advanced searching	steps used to create a connected query 154
for queries 29	terms 134
for records 15	connected query, quick start
	overview 136
aggregate 22	connected query manager
aggregate functions 121 applying to a field 122	opening a PeopleSoft query 157
	overview 146
average 122 count 122	Connected Query Quick Start
max 122	step 1: Enter a Name and Descriptive
min 122	Information 138
sum 122	Step 2: Select a Parent Query 140
	Step 3: Select a Child Query 141
understanding 121 alias 16	Step 4: Map Child Query Fields to Parent
	Query for Filtering 142
AND operator 55	Step 5: Preview a Connected Query 144
any record joins 127	connected query scheduler
Application Engine	using 160
See PeopleSoft Application Engine	connected query viewer
Appsrv.log 179	using 158
archive queries 7	Constant (comparison value) 44, 46
attachment url	Content Reference 84
link 93	Content Reference Link 84
Auto Preview	Copying a Connected Query 155
enabling and disabling 26	copying SQL 25
average (aggregate function) 122	count (aggregate function) 122
	Creating a Connected Query 149
_	criteria
В	AND/OR operators in 55
	based on a field 41
	choosing 37
batch processes, creating 6	comparison values in 43
between (condition type) 42	condition types in 41
BI Publisher	defining 38
data sources 2, 6, 30, 110	effective date 52
view query report 36, 117	entering 39
browser, downloading to 32	grouping 55
business processes 2	HAVING 60
	relating multiple 54
	Criteria page 39
C	
O	crystal reports 6 CSV, downloading to 30
	cube builder 2
Character (expression type) 64	
column and sort order, defining 19	Current Date (comparison value) 45
column headings, choosing 21	
column number 21	_
column order 20	D
comparison values 43, 49, 51	
component url	
link 80	DB2 UDB restrictions 131
component url widget 79	defaults
condition type 53	for criteria 53
condition types 41	for filenames of queries 31
connected query	Deleting a Connected Query 156
connected query manager 146	dirty read 8
copying 155	overview 8
creating 149	disabling Auto Preview 26
2.240116 1 12	

Display and Select TreeNodes page 51	link 88
Distinct check box 24 distribution	external url widget 87, 92
distribution detail page 114	
distribution link 114	F
distribution status 117	•
drilling url 72, 80, 88, 93, 97 query results 98	Favorites list 30
scheduling query 100	feed (output type) 113
drilling URL	Field (comparison value) 44
steps used to enter attachment url 95	fields
steps used to enter external url 91 steps used to select component 85	adding 16
steps used to select component of steps used to select query 78	changing column and sort order of 19 editing properties of 20
understanding 66	sorting 16
Drilling URL	translating 21
in PeopleSoft Query 65 drilling url, steps used to enter attachment url to	viewing 9, 17
build 95	Fields page 12, 17 File (output type) 113
drilling url, steps used to enter external url to	filtering process requests 115
build 91	folders, creating 120
drilling url, steps used to select a component to	formats
build 85 drilling url, steps used to select a query to build 78	selecting for output 114 formatting query output 19
drining dri, steps used to select a query to build 70	formulas, applying to Excel 32
	Free Form URL
E	link 97
_	Free Form URL widgets 96
edit criteria properties	
page 39	G
Edit Criteria Properties page 39	•
Edit Field Ordering page 19 Edit Field Properties page 12, 20	greater than (condition type) 42
Editing a Connected Query 155	grouping criteria 55
Edit List page 47	groups, granting access to 167
Edit Prompt Properties page 58	
edit type 59 EFFDT field 52	
effective date criteria 52	Н
Effective Seq (comparison value) 45	
effective sequence 53	HAVING criteria 60
Email (output type) 113 Enable Auto Join 127	heading text 19, 60
Enable Auto Preview 26	heading type 60 heading type, choosing 60
equal to (condition type) 42	hierarchy join 17
Excel	HTML, downloading to 30
applying formulas to 32 defining regional settings for 32	
downloading to 26, 30	•
modifying file type options for 32	
understanding restrictions with queries 31	
Executing page 176, 178 exists (condition type) 42	In List (comparison value)
Expression (comparison value) 44	building a list for 47 understanding 45
expression lists	in list (condition type) 42
adding comparison values to 49	instance 117
adding prompts to 48 expression properties 63	Internet Explorer menu, adding queries to 30
viewing and editing 70	in tree (condition type) 42
expressions	is null (condition type) 42
creating lists of 48	
creating with aggregate functions 122	_I
defining 62 understanding 62	•
using MetaSQL in 65	ioins
expressions page 63, 70	joins any record 127
external url	

hierarchy 17 left outer 129 outer 128	understanding 113	
record hierarchy 126 related record 126	P	
K	parenthesis, using 55 PeopleSoft Application Engine 6 PeopleSoft Process Scheduler 109 peoplesoft query	
keys, prompting for 60	overview 1 PeopleSoft Workflow 7	
L	permission lists 171 Printer (output type) 113 printing queries 34	
language, specifying for user 118	private queries, defining 23 Process List page 115	
Left Outer Join Security Join Optimizer 24	Process Monitor 115 process name 112	
left outer joins creating 129	process queries 6 process requests	
understanding restrictions for DB2 UDB 131 less than (condition type) 42	filtering 115 monitoring 115	
like (condition type) 43 list, building and editing a 47	scheduling 111 selecting output formats for 114	
list cache 167	selecting output types for 113 submitting 109	
logs	Process Scheduler	
Appsrv.log 179 deleting 178	See PeopleSoft Process Scheduler process type 112	
enabling and disabling 178 viewing 177	prompt runtime 49	
lookups, performing 33	Prompt (comparison value) 44 prompts	
M	adding to expression lists 48 defining 57 performing lookups for 33 understanding 57	
Map Column 75 max (aggregate function) 122	understanding reasons for 6 PS/nVision	
MetaSQL, using in expressions 65	report 2 PS/nVision queries 8	
min (aggregate function) 122 monitoring process requests 115	PSMONITORSRV service 179	
multiple queries, running 28 My Favorite Queries list 118	public queries, defining 23	
N	Q	
•	queries	
naming a query 23 new name 106	adding to Favorites list 30 adding to My Favorite Queries list 118	
nodes See tree nodes	advanced options for 121 aggregate functions in 121	
Number (expression type) 64 nVision queries See PS/nVision queries	AND/OR operators in 55 archive 7	
0	assigning a new owner for 178 cancelling 179	
	copying to another user 119 creating 5, 10	
ON clause 131 operators 55	creating unions of 124 default filenames of 31	
Oracle BI Publisher	defining as private or public 23 defining criteria in 37	
data sources 2 orphan rows, deleting 181	deleting 106	
outer joins 128	deleting logs for 178 deleting orphan rows in 181	
output types	downloading 30	

editing properties of 22	collapsing 17
eliminating duplicate rows in 24	expanding 17
enabling disabling time-out 181	finding 15
entering a description for 23	joining 125
finding existing 103	selecting 14
formatting output 19	Records page 11, 14
modifying 103	recurrence 112
moving to a folder 119	regional settings for Excel 32
naming 23	related record join 17
organizing 118	related record joins 126
performing lookups within 33	removing tree nodes 51
previewing results of 25 printing 34	repairing queries automatically 107 reporting queries 6
process 6	report manager 2
profiles for 171	Report Manager 117
PS/nVision 8	Report results
renaming 105	format 74
repairing 107	rerunning a query preview 26
reporting 6	role queries 7, 163, 175
rerunning 26	row-level security
role 7, 163, 175	enforcing 169
running 5, 28	restricting access to creating process queries
running statistics for 181	6
saving 27	restricting access to creating role queries 7
scheduling 108	understanding restrictions of 171
searching for 105	Run page 13, 25
subqueries in 123	Run to Excel 29
unions of 124	Run to HTML 29
untitled 177	
updating 107 user 5	•
viewing all rows in 26	S
viewing logs for 177	
viewing properties of 22	save 27
workflow 7, 163, 175	save as 27
query	saving queries 27
administration 175	Schedule 29
Query	scheduled queries, specifying languages for 118
searching 76	Schedule Query 110
query access group trees 165	scheduling
Query API, creating batch processes with 6	query with drilling url 100
query definition 24	searching
query manager	for queries (advanced) 29
search page 28	for queries (basic) 105
Query page 11, 16 query preferences 13	for records (advanced) 15
specify 13	for records (basic) 15 search record 170
Query Properties page 12, 22	security
guery SOL 25	defining 165
query timeout, enabling and disabling 181	for downloading to Excel 26
query trees 165	for downloading to XML 26
query type 23	for query profiles 171
query types	for tables in PeopleSoft database 165
understanding 5	granting access to groups 167
Query url	row-level 169
link 72	using query security record definitions 171
query url widget	Security Join Optimizer 24
defining 72	select a component page 79
Query Viewer 34	Select A Constant page 46
	select a query page 72
В	selecting tree nodes 51
R	Server List page 115
	Settings page 176, 181 Signed Number (expression type) 64
read-only queries 34	sorting
record definitions 171	in alphabetical order 16
record hierarchy joins 126	sort order 19
records	SQL, viewing 24

statistics, running for queries 181
step 1: Enter a Name and Descriptive Information 138
Step 2: Select a Parent Query 140
Step 3: Select a Child Query 141
Step 4: Map Child Query Fields to Parent Query for Filtering 142
Step 5: Preview a Connected Query 144
Steps Used to Create a Connected Query 154
sub-SELECT queries See subqueries subqueries 123
subquery 108
Subquery (comparison value) 45
sum (aggregate function) 122

T

timeout, enabling and disabling 181
translate values 19
translating fields 21
tree nodes, selecting 51
Tree Option (comparison value) 45
tree prompt
define a criteria 51
Tree Prompt 110
Tree Prompt Option (comparison value) 45
Tree Prompts 110

U

unions 124
unique field name 21
untitled queries 177
Update Tree Parameters 110
URL keys 75
use as criteria 9
Use psc 74
user queries 5
Using Connected Query Scheduler 160
using connected query viewer 158

V

view query results drilling url 98 View SQL page 12, 24

W

Web (output type) 114
WEBLIB_QUERY 26
WHERE clause, replacement for 60
Window (output type) 114
Workflow See PeopleSoft Workflow
workflow queries 7, 163, 175
defining 163



XML

downloading to 26