
Oracle's PeopleTools PeopleBook

PeopleTools 8.52: PeopleSoft Search Technology

October 2011

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PeopleSoft Search Technology Preface

This preface provides a general overview of the contents discussed in PeopleSoft Search Technology and discusses PeopleBooks and the Online PeopleSoft Library.

PeopleSoft Search Technology

This document describes the administration of the Search Framework as well as the development tasks associated with enabling and implementing PeopleSoft Search features. These features are provided by PeopleTools and are designed to run against the Oracle Secure Enterprise Search server (SES).

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 PeopleSoft Search Technology

This chapter provides an overview of the contents of this book, and discusses the various technologies that comprise the PeopleSoft Search Framework.

PeopleSoft Search Technology Overview

The PeopleSoft Search Framework provides a standard, declarative method for creating, deploying, and maintaining search indexes for all of your PeopleSoft applications. Oracle Secure Enterprise Search is the search engine on which the PeopleSoft Search Framework relies.

To define your search object, which contains the content you want to make available to the search index, you use PeopleSoft Query and Connected Query. This provides a familiar and intuitive way to declare the fields relevant for searches.

With PeopleSoft Query you define your search meta data attributes. You use the Search Framework Designer to map query fields to meta data attributes, save the search definition to the database, and create search categories.

The Search Framework Administration interface enables you then to establish integration with Oracle Secure Enterprise Search (by way of Integration Broker), deploy the search definitions and search categories, build indexes, and manage crawling.

Note. The PeopleSoft Search Framework does not support the Verity search engine.

Implementing PeopleSoft Search Framework

The PeopleSoft Search Framework involves the proper configuration and use of the following systems, tools, and technology. To administer or develop applications using the PeopleSoft Search Framework, a working knowledge of these systems is recommended.

<i>Required Item</i>	<i>Documentation</i>
PeopleTools	PeopleTools 8.52 Installation for <your platform>
Oracle Secure Enterprise Search	Oracle Secure Enterprise Search installation and administration documentation

<i>Required Item</i>	<i>Documentation</i>
PeopleSoft Integration Broker	PeopleTools 8.52: PeopleSoft Integration Broker Administration
Feeds Publishing Framework	PeopleTools 8.52: Feeds Publishing Framework
PeopleSoft Query and Connected Query	PeopleTools 8.52: PeopleSoft Query
PeopleCode	PeopleTools 8.52: PeopleCode API Reference, "PeopleSoft Search Framework Classes"

Chapter 2

Understanding PeopleSoft Search Framework

This section discusses:

- PeopleSoft Search Framework features.
- Search Framework verses Verity.
- Search Framework definitions.
- Search documents.
- PeopleSoft Search Framework Architecture.
- Implementation process flow.
- PeopleSoft Search.

PeopleSoft Search Framework Features

In previous PeopleTools releases, search functionality was provided in a non-declarative fashion where search engine indexes were built using custom PeopleCode and Application Engine programs. Each PeopleSoft application used a unique method for creating and maintaining search artifacts like collections and indexes--all of which required search engine-specific calls, commands, syntax, and so on.

The PeopleSoft Search Framework enables application developers and implementation teams, to create search artifacts in a consistent, declarative manner and to deploy and maintain search indexes, using one standard interface, regardless of PeopleSoft application.

The PeopleSoft Search Framework consists of PeopleSoft components (pages and records provided by PeopleTools), which provide a centralized interface for configuring PeopleSoft integration with the search engine, creating search artifacts like search definitions, search categories, and building and maintaining search indexes.

Important! Currently the PeopleSoft Search Framework supports only Oracle Secure Enterprise Search (SES). If you intend to use Verity as your search engine, you cannot use the features of the PeopleSoft Search Framework.

Some of the key features are:

- Search Administration interface provides a familiar PeopleSoft browser interface enabling you to: configure search engine connectivity, deploy search definitions, schedule index creation and maintenance, and run incremental index updates.
- Search Designer interface, provides a familiar PeopleSoft browser interface enabling you to: create search definitions, create search categories, define title and summary result display (similar to Google search results).
- Flexible security: indexes can be created with source-level security, document-level security, or no security. Oracle SES allows for fully authenticated and authorized search queries.
- Search Query API enabling rich display options, such as filtering.

PeopleSoft Search Framework Verses Verity Search Engine

While PeopleSoft applications continue to support the use of the Verity search engine, the PeopleSoft Search Framework and any of the features based upon the PeopleSoft Search Framework are not available unless you have Oracle Secure Enterprise Search configured for use with PeopleSoft. If you elect not to implement the Search Framework, you may continue to use the Verity search features as they have been delivered and used in previous PeopleTools releases.

Search Framework Definitions

The Search Framework is based on these PeopleSoft definitions:

<i>Definition</i>	<i>Description</i>
Search Definition	<p>Created in the Search Framework designer interface, a search definition maps the PeopleSoft Query fields to searchable attributes in the SES search engine. The search definition also enables you to attach security attributes to restrict access to the search results. The search definition provides the information required by the framework to enable the system to create search results (search documents).</p> <p>Note. A search definition in the PeopleSoft Search Framework becomes a "source" on the SES server, and the system also creates a schedule on SES for that source.</p>
Search Category	<p>Also created in the Search Framework designer interface, search categories enable you to group search definitions logically. A search definition must belong to at least one search category. End users run searches against search categories, not individual search definitions. It is a requirement that at least one search category exists with exactly the same name as the search definition.</p> <p>Note. A search category in the PeopleSoft Search Framework becomes a "source group" on the SES server.</p>

Search Documents

Search documents describe the format of search results. In many cases, search documents are non-structured documents, such as a Microsoft Word document or the text in a website. In a PeopleSoft application, the majority of information is structured, (as in, a Purchase Order). PeopleSoft information resides in a relational database where the document attributes constituting the search document are well known, such as Employee Name, Customer Name, Product ID, and so on.

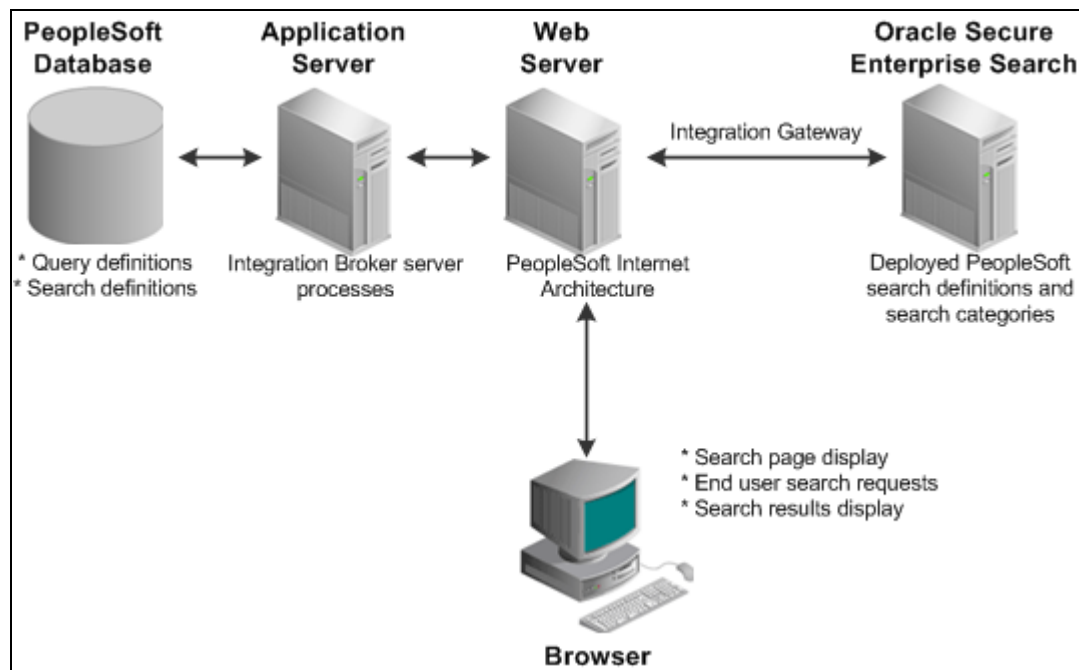
While most of the PeopleSoft information can be displayed in the form of structured documents, the system also stores unstructured data in the form of attachments. When a user runs a search based on a set of known attributes, the search returns "hits" in the form of search documents, or search results. The user then analyzes the content of the search result to determine relevancy and uses the associated URL to navigate to the desired application page.

The main elements of a PeopleSoft search document are:

- URL
- Title
- Summary

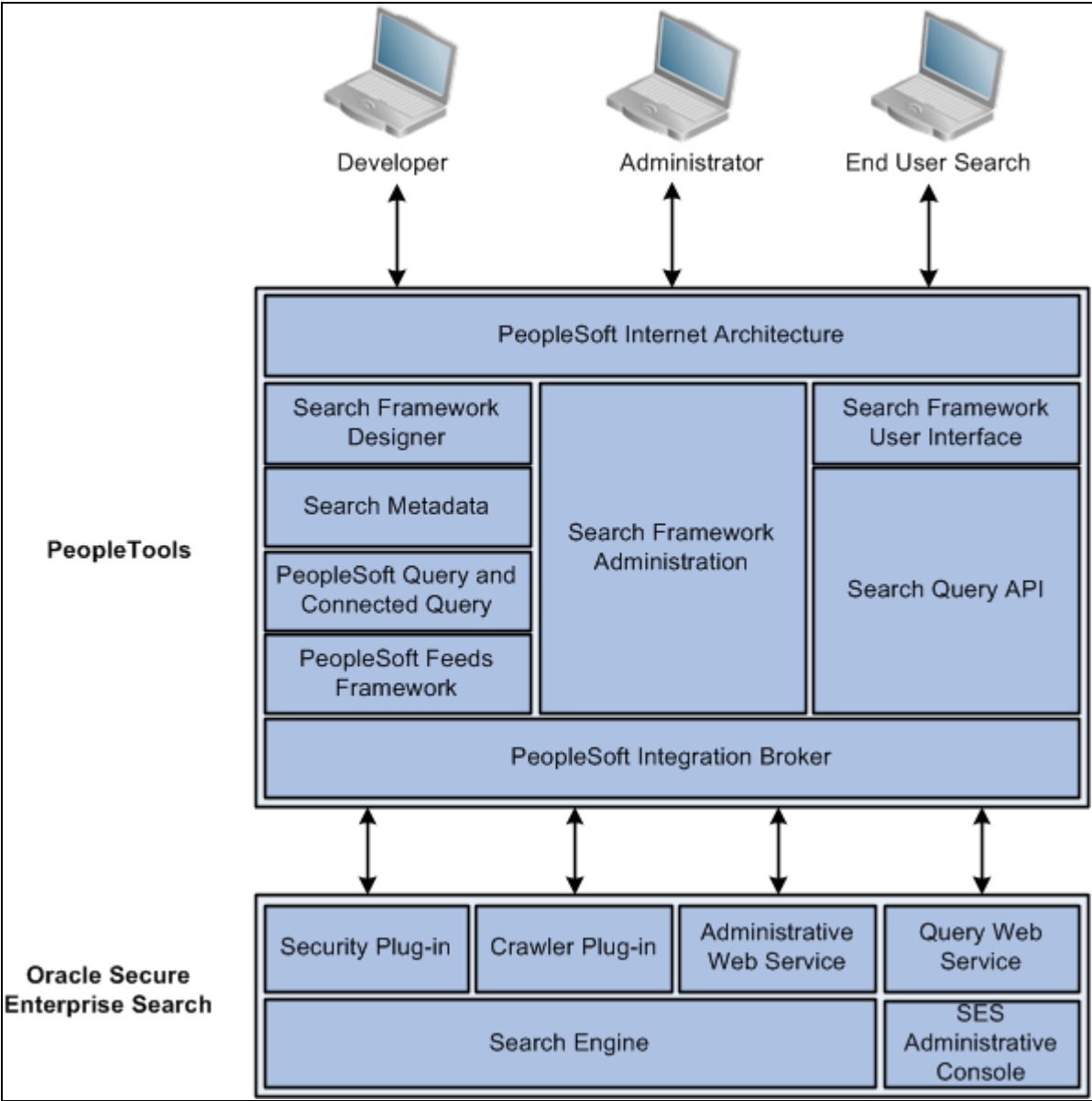
PeopleSoft Search Framework Architecture

The server topology uses the essential elements of the PeopleSoft Internet Architecture, with the addition of SES server.



PeopleSoft server architecture connected to Oracle Secure Enterprise Search using Integration Broker

The web server and application server (the PeopleSoft Internet Architecture) provide the interface for the designer, administrative, and application user. The PeopleSoft database stores the PeopleSoft queries that define the search data as well as the search definition meta data. Oracle Secure Enterprise Search stores the deployed search definitions and performs the typical search engine tasks, such as building indexes, crawling for updates, maintaining indexes, and servicing end-user search requests. The following diagram depicts the relationships between all of the separate elements that are involved with the PeopleSoft Search Framework.



PeopleTools elements interacting with Oracle SES server elements

The following table describes the PeopleTools elements.

PeopleTools Element	Description
PeopleSoft Internet Architecture	Enables access to all aspects of the PeopleSoft Search Framework, including development, administrative, and end user interfaces.

PeopleTools Element	Description
Search Framework Designer	Enables application developers and implementation teams to perform design-time tasks, such as map query fields to search metadata, define search attributes, create search definitions, and create search categories.
Search Metadata	The metadata defined with both PeopleSoft Query and the Search Designer to describe the data that end users will run searches against.
PeopleSoft Query Connected Query	Provides familiar interface for creating SQL queries that declare exactly the data against which end users will run searches, and takes advantage of Query security.
PeopleSoft Feeds Framework	Enables the incremental updates of indexes by transmitting new and updated search data by way of feeds technology.
Search Framework Administration	Provides the interface for system administrators to perform tasks, such as creating a search instance, deploying search objects, and scheduling search index builds.
Search Framework User Interface	Provides the end user of a PeopleSoft application the appropriate prompts and fields by which they can submit a search request and review results.
Search Query API	A PeopleCode API that enables application developers to form a valid search request from user input.
PeopleSoft Integration Broker	Facilitates the integration between PeopleTools elements and the search engine (SES).

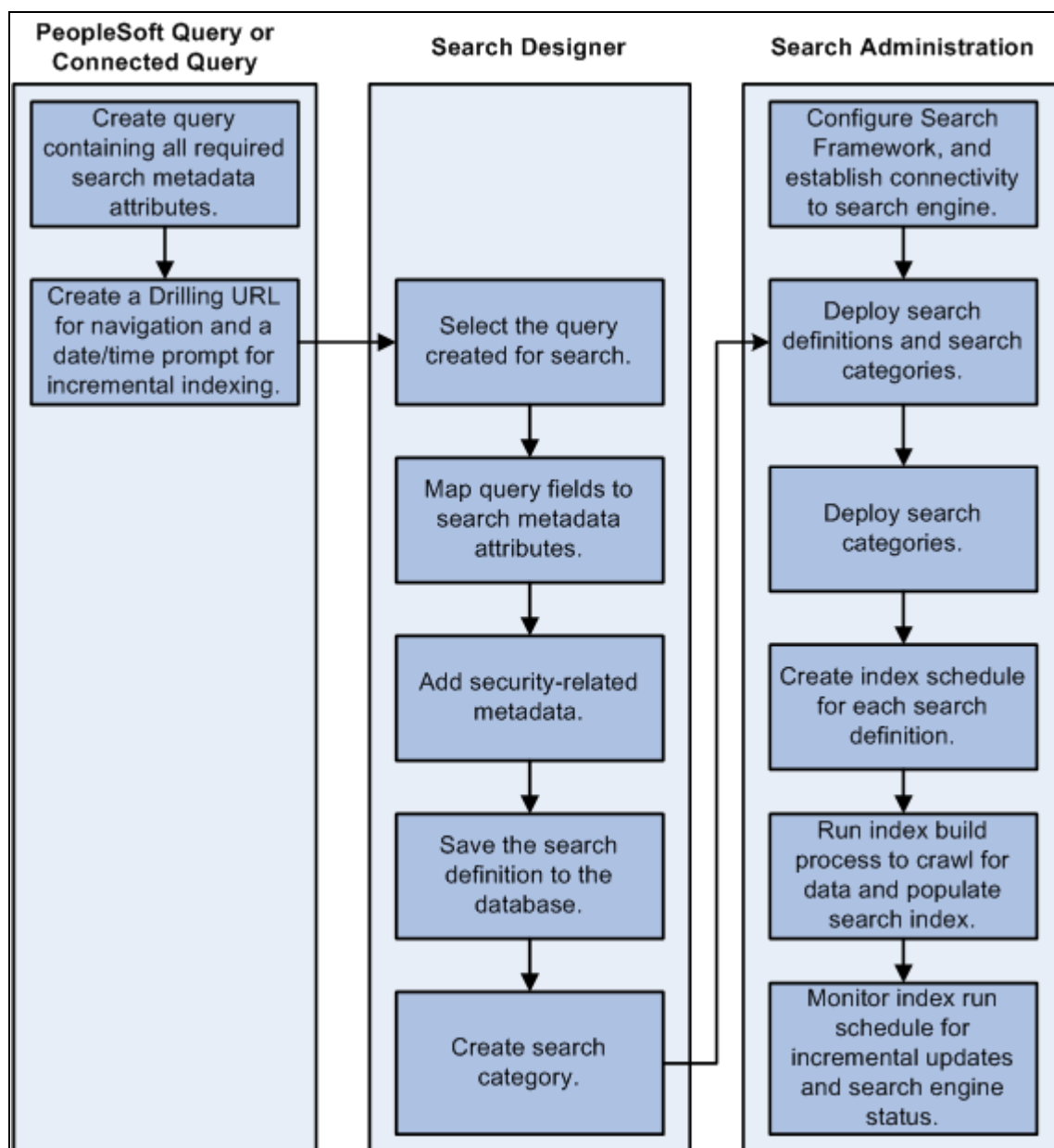
The following table describes the Oracle SES elements.

SES Element	Description
Security Plug-in	<p>This module gets invoked from Search Engine side for a user who initiates a search from an application. Search security framework is responsible for authentication, search user validation and authorization of search query request. Search Engine passes user credentials to PeopleSoft Security Service (Web service) which authorizes the users and get security attribute for that user. Search Results are filtered based on this security attribute. Security Plug-In a part of SES Search Engine and is written in Java. SES comes with built-in plug-ins specifically for PeopleSoft.</p> <p>There are two security plug-ins: PeopleSoft Identity Plug-in and PeopleSoft Authorization Plug-in. PeopleSoft Identity plug-in is responsible for authenticating search users. PeopleSoft Authorization Plug-in is responsible for getting security attributes for search users and filtering search results based on them.</p>

SES Element	Description
Crawler Plug-in	Crawler plug-in is part of SES search engine. The Crawler plug-in is responsible for extracting documents for a source and indexing them. The PeopleSoft crawler-plug-in extracts documents from PSQUERY (each returned row is a document). The Crawler plug-in indexes document search attributes like Title, Summary, search fields (fields to index), and so on. It can also index document-level security attributes if document-level security is being used.
Administrative Web Service API	Exposes various SES configuration settings and administrative commands to the PeopleSoft system.
Query Web Service API	Query Plug-in works in conjunction with the PeopleCode Search API for application developers to compose search queries and execute them. Query Plug-in exposes various search features like filtering, sorting, grouping, restricting search scope, pagination, and so on.
Search Engine	Search Framework works with Oracle Secure Search Enterprise, Oracle's search engine software. SES runs against an Oracle database and is installed into Oracle Middleware. The PeopleSoft Application Server integrates with SES using the PeopleSoft Search Framework.

Implementation Process Flow

The following diagram illustrates the general process flow when implementing the PeopleSoft Search Framework and deploying search definitions. You first identify the business data you want to expose to text searches and create queries using PeopleSoft Query that select the appropriate data from your transaction tables. In the Search Designer you map the query fields to the search metadata attributes and map the search definition to a search category. In the Search Administration interface you deploy the search definitions and categories, schedule index builds, and schedule index crawling so that the index can be updated as needed to reflect the current business data.



Search Framework implementation, beginning with PeopleSoft Query and Connected Query, moving to the Search Designer for creating search definitions and categories, then moving to Search Administration for deploying search definitions and defining index builds.

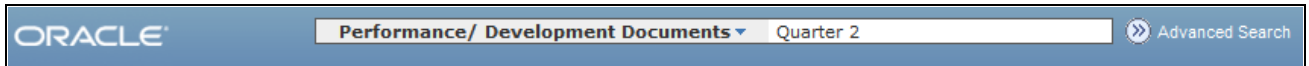
PeopleSoft Search Features

Once Search Framework is configured and search definitions have been deployed and tested, you can enable these PeopleSoft Search features for your end users:

- Application Search.
- Search Pages.

Application Search

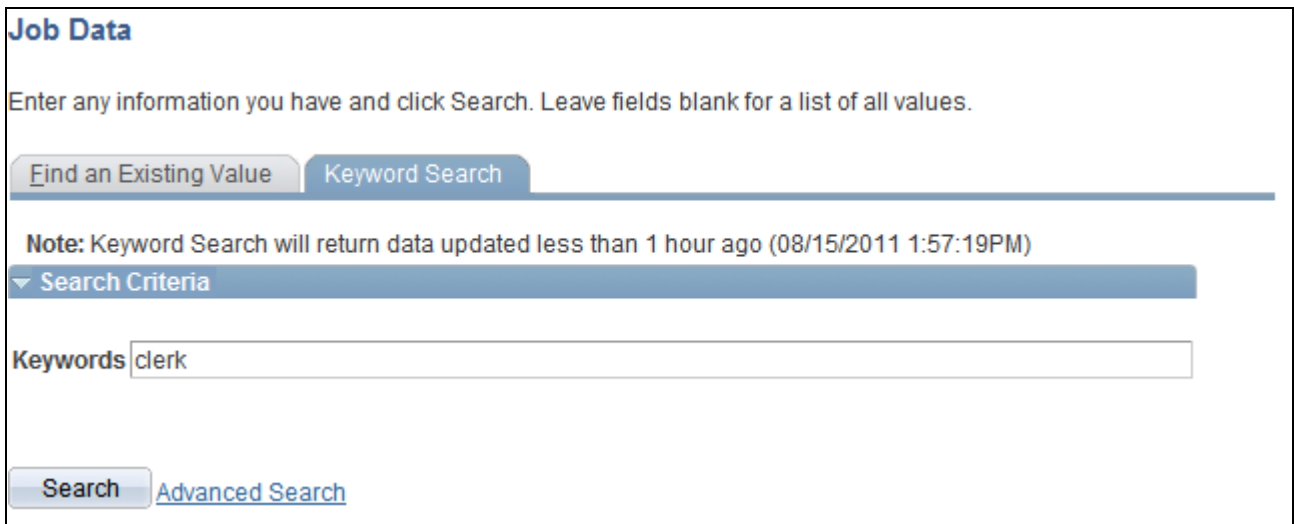
With Application Search enabled, the Application Search bar displays in the header of the application. Beside the keyword edit box, the Application Search bar provides a dropdown list for selecting a specific search category against which to run a search.



Application Search menu bar

Search Pages

If you've enabled the Search Pages features for Search Framework by mapping a component to a search definition, the Keyword Search tab appears amongst the search pages the end user encounters when navigating into a component. The Keyword Search page enables users to execute a deeper, more free-form search to access application data. For example, the Find an Existing Value tab is limited to level 0 data, where the Keyword Search tab lets the users enter custom keywords and the system will search indexed data from level 0-3.



Keyword Search page

Note. The Find and Existing Value search page is equivalent to the component search pages in previous versions of PeopleSoft applications.

Chapter 3

Defining Search Definition Queries

This section contains an overview and describes:

- Defining search definition queries with PeopleSoft Query.
- Defining search definition queries with Connected Query.
- Defining a deletion query.
- Working with attachments.

Understanding Search Definition Queries

To define the data that end users can run their searches against, you use these standard PeopleSoft query design tools:

- PeopleSoft Query
- Connected Query

Using these tools provides a familiar interface for PeopleSoft implementation teams and a standard means of defining searchable data amongst all PeopleSoft applications. You will also need to make sure that the data you want to expose to Query is authorized by way of the Query Security Manager.

You do not need to create new queries solely for creating search definitions. You can re-purpose existing queries in PeopleSoft Query or connect multiple existing queries using Connected Query. Except for a handful of requirements for the Search Framework, queries used for creating search definitions are created exactly as you would any other query.

Queries need the following items defined for use with the Search Framework:

- List of fields to index from authorized records.
- Last Updated" record field
- Drilling URL
- Prompt against the "Last Updated" field.
- Criteria for the "Last Updated" field.

This section describes the requirements and guidelines to follow when defining queries for use with the Search Framework. The PeopleSoft Query and Connected Query documentation is not duplicated within this guide. It is assumed that you have a working knowledge of those products.

See Also

PeopleTools 8.52 PeopleBook: PeopleSoft Query

Defining Search Definition Queries with PeopleSoft Query

This section discusses:

- Specifying a list of fields to index.
- Inserting a "Last Updated" Field.
- Creating a Drilling URL.
- Creating a Prompt for the "Last Updated" Field.
- Defining Prompt Criteria.
- Testing the query.

Specifying a List of Fields to Index

The query defines which fields will comprise the index for a search definition. When working in the query, use the Fields tab to determine if your list is complete. Keep in mind that fields in the index can be used for different purposes. While some fields are the ideal field against which end users would intuitively search (Customer Number, Order Date, and so on), others can be included for different reasons.

For example, some fields are used as metadata to help describe the data contained in the row (resume, invoice, sales order, and so on). Other fields are useful for security in restricting the viewing of the data only to users that have access to a certain type or level of data.

Note. All search keys and alternate search keys must be indexed. Select additional fields to be indexed as required by your business processes. Also keep in mind that some fields are codes and might need to be translated to their description for searching.

Important! When saving the query, make sure it is of type *Public*.

Inserting a "Last Updated" Field

The SQL table that the application data resides in must have a column that tracks the update history of a row of data. Likewise, the query must also contain the corresponding query field in the fields list. The "last updated" field is instrumental for enabling incremental index updates. An example of this field is the LASTUPDTM field.

Important! The Last Updated field *must* be of the type datetime.

Once the system creates the full index, only those rows that have been updated or added need to be included in the next incremental index update. Using incremental index updates improves performance and decreases system overhead.

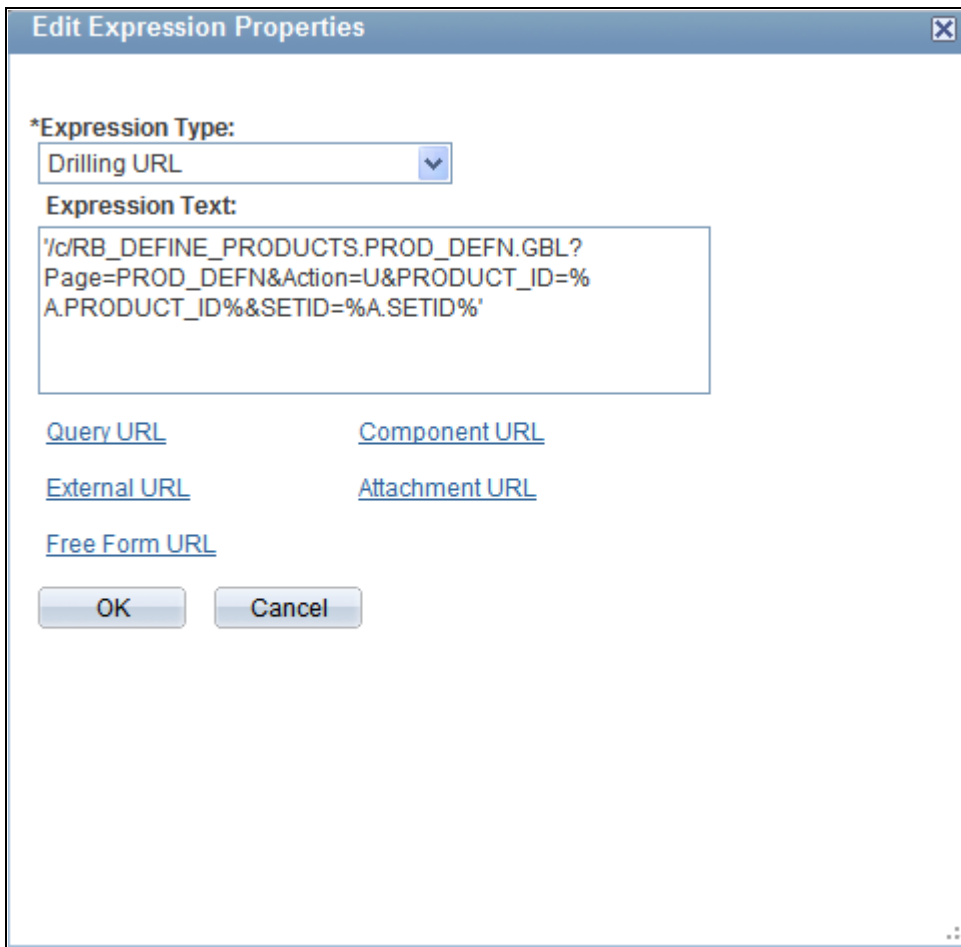
Note. For upgrade purposes, all PeopleSoft application tables come with a LASTUPDTM field. For any custom tables, you need to ensure the field exists in the record.

Creating a Drilling URL

A drilling URL is required to create the URL in the search result document. The drilling URL enables the end user to click the URL in the search result document to display the appropriate PeopleSoft application page, with the appropriate data populated in the page.

To create a drilling URL for Search Framework:

1. In PeopleSoft Query Manager, select the Expressions tab.
2. Click Add Expression.
3. On the Edit Expressions Properties dialog box, select Drilling URL from the Expression Type drop-down list.
4. Click the Component URL link.
5. On the Select a Component dialog box, provide the navigation to the appropriate page.
6. Click OK.
7. Click the Use as Field button to associate the Drilling URL as a field in the Query.



The dialog box is titled "Edit Expression Properties". It contains a dropdown menu for "Expression Type" with "Drilling URL" selected. Below it is a text area for "Expression Text" containing the URL: `'/c/RB_DEFINE_PRODUCTS.PROD_DEFN.GBL?Page=PROD_DEFN&Action=U&PRODUCT_ID=%A.PRODUCT_ID%&SETID=%A.SETID%'`. There are five underlined links: "Query URL", "Component URL", "External URL", "Attachment URL", and "Free Form URL". At the bottom are "OK" and "Cancel" buttons.

Edit Expression Properties dialog box

When your expression is complete, click the Use as Field link in the Drilling URL grid on the Expressions tab. You should also name the field with a valid field name, such as *DRILL_URL*.

Creating a Prompt for the Last Modified Field

You need to create a prompt for your query so that the system can use the last update date and time for enabling incremental index updates. This is required by the Search Framework even if you do not intend to implement incremental index updates. The Application Engine program performing incremental index updates passes the appropriate prompt data to the query. Use the prompt tab in Query Manager to create your prompt. On the Edit Prompt Properties dialog box, select the field you are using to detect record modifications from the Field Name drop-down list.

Edit Prompt Properties

Field Name:

ROW_LASTMANT_DTTM

*Type:

Datetime

*Format:

None

Length:

26

Decimals:

*Edit Type:

No Table Edit

*Heading Type:

RFT Short

Heading Text:

Last Modified

*Unique Prompt Name:

BIND1

Prompt Table:

OK

Cancel

Edit Prompt Properties dialog box

Defining Prompt Criteria

So that the prompt identifies the correct rows for incremental updates, you must also add query criteria based on the "last updated" field. Use the Criteria tab in Query Manager, and click Add Criteria. Set the criteria as:

Item	Value Selected
Expression 1	<ul style="list-style-type: none">Field.Your "last updated" field.
Condition Type	<ul style="list-style-type: none"><i>not less than</i>(recommended)greater than
Expression 2	<ul style="list-style-type: none">PromptYour prompt

For example:

Edit Criteria Properties dialog box

Defining Search Definition Queries with Connected Query

You can also use Connected Query to develop your queries for Search Framework. Connected Query enables you to connect multiple queries together in a parent-child relationship, where the child queries filter results for the parent queries. Using Connected Query lets you connect numerous simpler queries, rather than writing one more complicated query. The smaller more modular queries can be reused in different queries.

When using Connected Query, only the top-level (or root) parent query needs to have the requirements described in this chapter. The child queries do not require these elements. For example, only the parent query requires a Drilling URL defined.

Defining a Deletion Query

In many cases, you may want to consider also writing a deletion, or pruning, query to keep the index and the transactional tables in sync with regard to rows that have been deleted from the transactional tables.

For example, assume a row exists in the transactional table for Big Company, and that row has been included in the search query criteria and indexed by the Search Framework crawler. Now, suppose that row gets deleted from the transactional table because Big Company went out of business and no longer exists. Because the row no longer exists in the transactional table, you do not want the previously indexed data to appear in a user's search results. In a search definition, you associate a deletion query for an index on the Advanced tab in the Define Query to Delete SBO section. There you specify the query name and the Drilling URL field for the deletion query.

The Delete query generates a feed containing only the records that need to be deleted from the index or those documents/records that are marked for deletion from the index. One method of capturing the deleted rows is to create an audit record on the transactional table in which a record of all deleted rows gets inserted into the audit table. The delete query would then capture the rows in the audit table and remove from the index the document entries matching those rows. The delete query also needs a datetime prompt which returns rows deleted after that datetime value.

Working with Attachments

An attachment is a special type of Drilling URL, which is also specified in the query as an expression. You associate the Attachment URL with a URL Identifier which will tell SES where to look for the data. You must have previously set up a URL pointing to the location of the data, which could be a record with the database or a secure file location such as an FTP site.

Edit Expression Properties

*Expression Type
 Drilling URL

Expression Text
 '%URLID:CS_FTP_ATTACH%%A.SERVER_PATH%/%A.ATTACHSYSFILENAME%'

[Query URL](#) [Component URL](#)
[External URL](#) [Attachment URL](#)
[Free Form URL](#)

OK Cancel

Edit Expression Properties dialog for attachments

To create an attachment URL for Search Framework:

1. In PeopleSoft Query Manager, select the Expressions tab.
2. Click Add Expression.

3. On the Edit Expressions Properties dialog box, select Drilling URL from the Expression Type drop-down list.
4. Click the Attachment URL link.
5. On the Enter an Attachment URL dialog box, provide the previously created PeopleTools URL and identify a field within the Query which designate the correct attachment file.
6. Click OK.
7. Click the Use as Field button to associate the Attachment URL as a field in the Query.

See Also

PeopleTools 8.52: System and Server Administration, "Using PeopleTools Utilities," URL Maintenance

Testing Your Search Definition Query

After you have defined your query in Query Manager with all the correct fields included along with the Search Framework requirements, you can test the query using the Run tab. This runs the query outside of the Search Framework. That is, you do not need to deploy the search definitions to perform this initial test.

This enables you to determine if:

- The correct rows are being returned by your query.
- The Drilling URL displays the appropriate page when clicked.
- You can open an attachment (if you can't open it from the test results, then neither can SES).

To test your query with the Run tab:

1. In Query Manager, with your query open, click the Run tab.
2. At the prompt, enter a valid value to run against the Last Modified field.

For example:

01/01/1900 0:0

- 3. View the results and click the Drilling URL and/or attachment links.

RecordsQueryExpressionsPromptsFieldsCriteriaHavingView SQLRun

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

First1-100 of 386Last

	ID	Eff Date	Name	First	Last	SSN	JobCode	DeptID	Drilling URL
1	7705	06/15/1996	Holt,Susan	SUSAN	HOLT	342564859	G061	10200	http://rtdc79623vmc.dsi-inet.peoplesoft.com/ps/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_EMPLOYEE_GBL?Page=QE_EMPLOYEE&Action=U&EMPLID=7705
2	8001	09/01/1996	Schumacher,Simon	ASD	ASD	549693847	1001	10100	http://rtdc79623vmc.dsi-inet.peoplesoft.com/ps/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_EMPLOYEE_GBL?Page=QE_EMPLOYEE&Action=U&EMPLID=8001
3	8001	05/05/1997	Schumacher,Simon	ASD	ASD	549693847	6001	10200	http://rtdc79623vmc.dsi-inet.peoplesoft.com/ps/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_EMPLOYEE_GBL?Page=QE_EMPLOYEE&Action=U&EMPLID=8001
4	8052	05/05/1997	Avery,Joan	JOAN	AVERY	111111111	6001	10200	http://rtdc79623vmc.dsi-inet.peoplesoft.com/ps/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_EMPLOYEE_GBL?Page=QE_EMPLOYEE&Action=U&EMPLID=8052
5	8101	06/27/1991	Penrose,Steven	STEVEN	PENROSE	302467012	1211	10500	http://rtdc79623vmc.dsi-inet.peoplesoft.com/ps/ps/EMPLOYEE/QE_LOCAL/c/QE_SAMPLE_APPS.QE_EMPLOYEE_GBL?Page=QE_EMPLOYEE&Action=U&EMPLID=8101

Query Manager Run tab

- 4. Confirm that you arrive at the desired page with the appropriate data loaded as expected.

Empl ID: 7705

Find | View All First 1 of 1 Last

*Effective Date:

06/15/1996

Employee Name:

Holt,Susan

Last Name:

HOLT

First Name:

SUSAN

*Department:

10200

*JobCode:

G061

Social Security Number:

342-56-4859

PeopleSoft application page (Drilling URL target)

Chapter 4

Creating Search Definitions

This section discusses:

- Specifying general settings.
- Mapping search attributes.
- Managing search definition security.
- Working with advanced settings.
- Mapping components to search definitions.

Specifying General Settings

Access the General page, by selecting PeopleTools, Search Framework, Designer, Search Definition.

GeneralMap Search AttributesSecurityAdvancedComponent Mapping

Search Definition

QE_CUSTOMERS

*Description

QE_CUSTOMERS

Source Information

*Source Type

Connected Query

*Source Name

CUSTOMERS

Search Result Field Mapping

*Last Modified Date Time

LASTMAINT_DTTM

*URL Link

DRILLING_URL

*Title

%QUERYFIELD:CT_CUSTOMER:A.CUST_ID% - %
QUERYFIELD:CT_CUSTOMER:A.NAME1% - %QUERYFIELD:CT_CUSTOMER:A.SETID%

*Title

*Summary

%QUERYFIELD:CT_CUSTOMER:A.NAMESHORT% - %
QUERYFIELD:CT_CUSTOMER:A.NAME1% - Customer since: %
QUERYFIELD:CT_CUSTOMER:A.SINCE_DT%

*Summary

Save

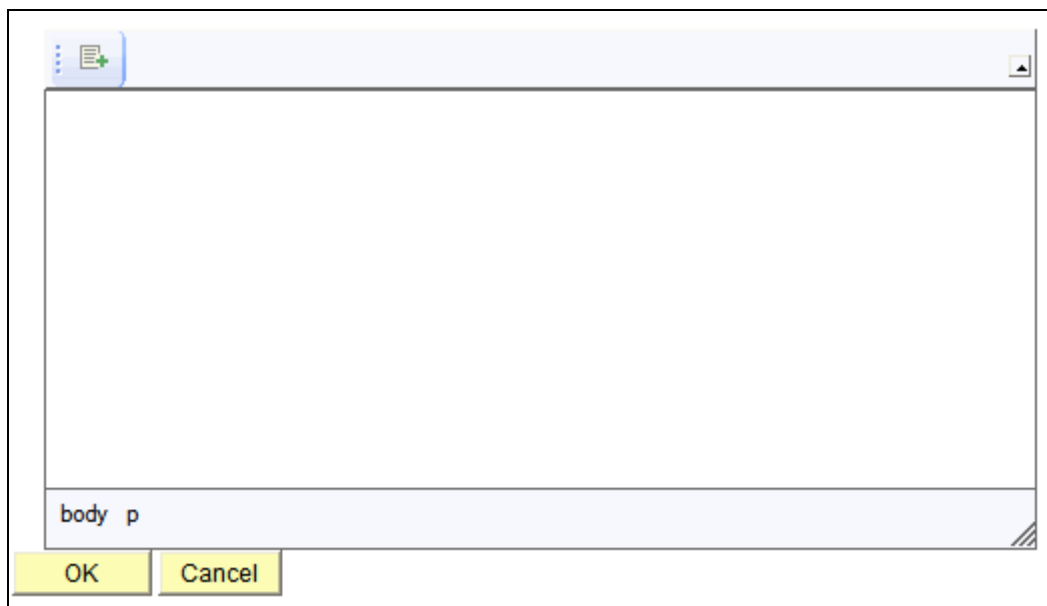
General page

Search Definition	Displays the search definitions name as specified when adding a new value. <div>Note. At least one search definition must use the same name as the search category to which it belongs.</div>
Description	Provide any additional information to distinguish the search definition.
Source Type	Select the type of query used to define the searchable data. Options are: Query or Connected Query.

Source Name	Select the name of the base Query or Connected Query.
Last Modified Date Time	Select the field specified in the query that determines the underlying record's update date and time. For example, LASTUPDDTTM.
URL Link	Select the query field containing the drilling URL defined for the query.
Title	<p>Define the title of the search result document. This is the bold, first line of the search result.</p> <p>You can add text and bind variables to the title by clicking the *Title button. You cannot add text to the edit box directly.</p>
Summary	<p>Define the summary, or body, of the search result text. This is the text that appears below the title in a search result document.</p> <p>You can add text and bind variables to the summary by clicking the *Summary button. You cannot add text to the edit box directly.</p>

Adding Text for the Title and Summary

In the Title\Summary dialog box you can insert custom text and bind variables, or a combination of the text and bind variables to accurately express the content of the search result document.



Title and Summary edit box

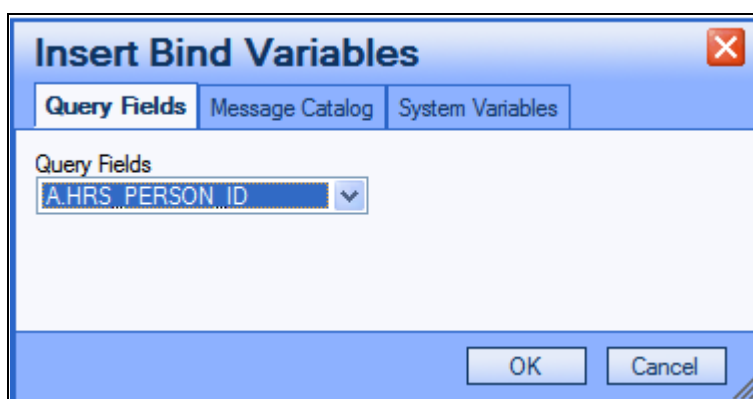
Insert Bind Variables

Click to launch the Insert Bind Variables dialog box and insert bind variables of the following types:

- Query fields
- Message catalog entries
- System variables

Inserting Bind Variables into Title\Summary Text

When inserting bind variables into the title or summary text, you use the icon at the top left corner to open the Insert Bind Variables dialog box, enabling you to select the bind variable type and the specific bind variable. You can insert multiple bind variables and bind variable types within the title\summary text, as needed.



Insert Bind Variables dialog box

Query Fields

Use the Query Fields dropdown list to select the desired fields from the underlying query of the search definition.

Message Catalog

Specify the Message Set and Message Number to identify the specific message to display. To determine the text that displays use these options:

- Message Catalog Text: Displays the Message Text edit box of the message catalog entry.
- Message Catalog Explanation: Displays the Description edit box of the message catalog entry.

System Variables

Use the System Variables dropdown list to select the desired variable to display.

Mapping Search Attributes

Access the Map Search Attributes page, by selecting PeopleTools, Search Framework, Designer, Search Definition and selecting the Map Search Attributes tab.

The Map Search Attributes page displays all of the query fields of the query or connected query associated with the search definition.

GeneralMap Search AttributesSecurityAdvancedComponent Mapping

Search Definition: QE_CUSTOMERS
Description: QE_CUSTOMERS

Reload

Fields Included in the Index

Query Name	Query Field Name	Field to Index	Attribute Name	Attribute Display Name	Attachment Field	Is Faceted	Define Hierarchy	Hierarchy Path
1 CT_CUSTOMER	A.SETID	<input checked="" type="checkbox"/>	SETID	SetID	<input type="checkbox"/>	<input type="checkbox"/>		
2 CT_CUSTOMER	A.CUST_ID	<input checked="" type="checkbox"/>	CUST_ID	Customer ID	<input type="checkbox"/>	<input type="checkbox"/>		
3 CT_CUSTOMER	A.CUST_STATUS	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
4 CT_CUSTOMER	DRILLING_URL	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
5 CT_CUSTOMER	LASTMAINT_DTTM	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
6 CT_CUSTOMER	A.CUST_STATUS_DT	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
7 CT_CUSTOMER	A.CUSTOMER_TYPE	<input checked="" type="checkbox"/>	CUSTOMER_TYPE		<input type="checkbox"/>	<input type="checkbox"/>		
8 CT_CUSTOMER	A.SINCE_DT	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
9 CT_CUSTOMER	A.ADD_DT	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
10 CT_CUSTOMER	A.NAME1	<input checked="" type="checkbox"/>	NAME1	Name 1	<input type="checkbox"/>	<input type="checkbox"/>		
11 CT_CUSTOMER	A.NAMESHORT	<input checked="" type="checkbox"/>	NAMESHORT	Short Name	<input type="checkbox"/>	<input type="checkbox"/>		
12 CT_CUSTOMER	A.NAME2	<input checked="" type="checkbox"/>	NAME2		<input type="checkbox"/>	<input type="checkbox"/>		

Map Search Attributes page

Field to Index

Select the fields that you want to be indexed by the search engine. These fields would be those that you intend the end users would include in search queries intuitively. Fields that you do not select are not indexed. The remaining columns in the grid become enabled only after selecting the Field to Index check box for a particular row.

When selecting fields also consider fields that may help to group results or help distinguish security access.

Attribute Name

Displays the pre-defined attribute name that identifies the query field in the SES system.

Attribute Display Name

Determines how the attribute will display to the end user in the search results.

Note.

The display name comes from the field labels associated with the Query Field Name. It cannot be entered manually. If the wording of the display name is not appropriate, you need to add a new field label. If you select a field that is not the default field label, the Attribute Name will change to reflect your choice.

Attachment Field

If the field contains an attachment URL, select this check box.

Is Faceted

Select to make this field a facet field, meaning that this field can be used to categorize and narrow down search results based on its value.

Defining a field as a facet requires some consideration. Facets cannot be blank, so if a field is not required, then the query needs to be structured so that there are not any blank values. You can use defaults on the record, or build COALESCE statements on a view to populate a field with a default (such as 'None', "NA" or "Blank") if it contains a blank value.

Only string-type attributes can become facets. Number or date data types are not supported for facets.

Note. Currently, SES does not allow dates to be facets.

Note. Facets based on XLAT fields should be changed to use XLAT Long/Short in the query.

Note. SES has a data size limit of 2000 characters for faceted fields. The system truncates anything beyond 2000 characters.

Define Hierarchy

(Appears only for Connected Query.) Allows you to concatenate multiple fields into one SES attribute. If the attribute has hierarchical data, specify the hierarchy accordingly using the Define Hierarchy icon. When this icon is selected, you will see a Hierarchy Path subpage.

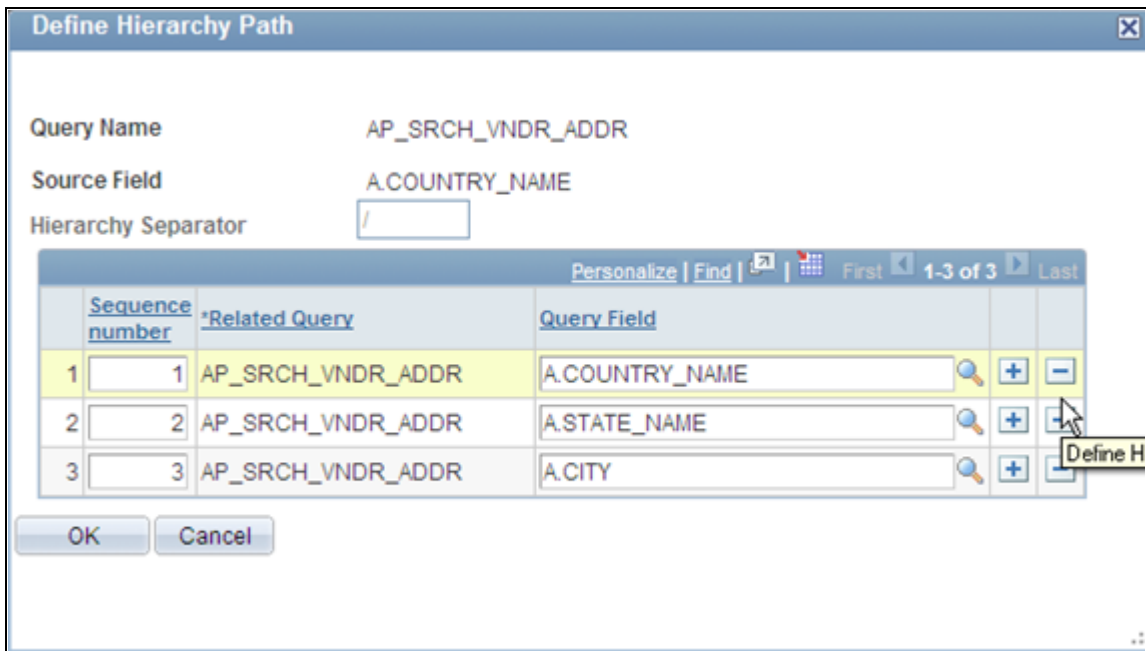
Hierarchy Path

(Appears only for Connected Query.) Displays the hierarchy path for a Connected Query, indicating where in the hierarchy of connected queries a particular query field resides. When defining a hierarchy, you start with the highest level (most general) field at the top and sequentially list more granular fields, with the most granular being at the bottom.

Note. This is mainly used for hierarchical facets. The label in the user interface is determined by the field on which the hierarchy is defined.

Example: Define Hierarchy Path

This is an example of defining a hierarchy path.



Define Hierarchy Path

Query Name: AP_SRCH_VNDR_ADDR

Source Field: A.COUNTRY_NAME

Hierarchy Separator: /

Sequence number	Related Query	Query Field
1	AP_SRCH_VNDR_ADDR	A.COUNTRY_NAME
2	AP_SRCH_VNDR_ADDR	A.STATE_NAME
3	AP_SRCH_VNDR_ADDR	A.CITY

OK Cancel

Define Hierarchy Path page

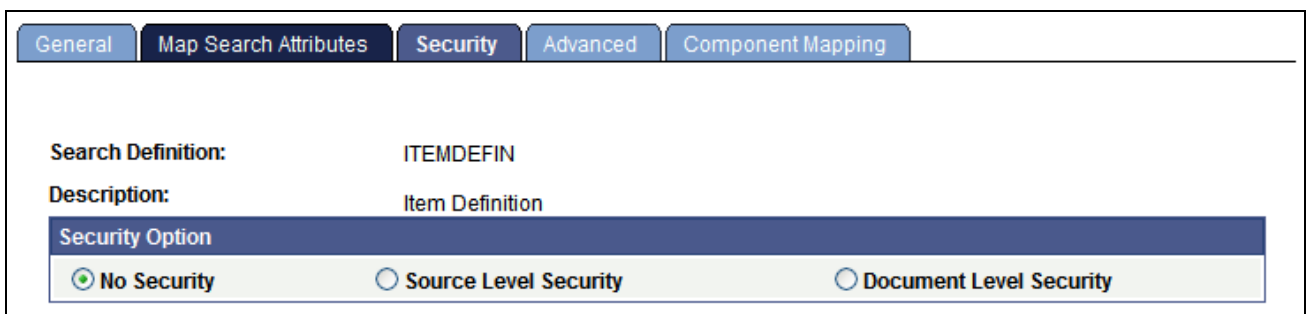
This definition is then displayed in the Hierarchy Path column of the Fields Included in the Index grid.

A.COUNTRY_NAME/A.STATE_NAME/A.CITY

Example: Hierarchy Path

Managing Search Definition Security

Access the Security page by selecting PeopleTools, Search Framework, Designer, Search Definition and selecting the Security tab.



General | Map Search Attributes | **Security** | Advanced | Component Mapping

Search Definition: ITEMDEFIN

Description: Item Definition

Security Option

☒ No Security ☐ Source Level Security ☐ Document Level Security

Security page

The Security page enables you to restrict access to search results generated by a search definition. Depending on the sensitivity of the search results, you can set these degrees of security:

No Security

Select to define no security restriction for a search definition's search results. Anyone with access to the application can view the search results for a search definition set to No Security. That is, the search results are public to all users.

Source Level Security

Select to allow or restrict access to the entire search definition as per the specified user or role. That is, only specified users and roles are able to view search results for that search definition.

Document Level Security

Select to restrict access to specific search results (documents) generated by a search definition. That is, with document level security, users can view search results generated by that search definition, but only the documents to which they have access.

Note. This is generally referred to as row-level security in PeopleSoft applications.

Setting Source Level Security

Access the source-level security settings by selecting the Source Level Security radio button.

The screenshot shows the 'Security' tab of a search definition configuration page. The search definition is 'ITEMDEFIN' with description 'Item Definition'. Under 'Security Option', 'Source Level Security' is selected. Below, the 'Source Level' section contains a table with two entries:

	*Type	Name	*Privilege		
1	Role	QE_CECLRK_ROLE	Allow	+	-
2	User	QETSTR	Allow	+	-

Security page: Source Level Security options

Type

Select *Role* or *User* depending on the scope of your intended access restriction.

Selecting *Role* restricts access to a specific PeopleSoft role.

Selecting *User* restricts access to a specific PeopleSoft user.

Name

Select the user or role name.

Privilege

Define the access privilege or restriction.

- Allow. The specified role or user is allowed to view search results for this search definition.
- Deny. The specified role or user is not allowed to view search results for this search definition.

Note. Source-level security applies to every document within that search definition (SES data source).

Setting Document Level Security

Access the document-level security settings by selecting the Document Level Security radio button. Document-level security can also be thought of as attribute-based security.

With document-level security, one or more PeopleSoft Query columns act as the security attribute. You can then specify an application class (AppClass) that returns a list of values for the selected security attributes. When the user submits the search request, SES compiles a list of values returned from the application class associated with that specific user to build the security filter.

The screenshot shows the 'Security' tab of a configuration window for a search definition named 'HC_HR_CAREER_PLAN' with the description 'Career Planning'. Under 'Security Option', the 'Document Level Security' radio button is selected. Below this, the 'Document Level' section contains a table with one entry: '1 HR_SRCH_CP' with source field 'A.EMPLID' and attribute 'EMPLID', set to 'Allow' privilege. At the bottom, the 'Document Filter App Class' section has fields for 'Package Name' (HR_SRCH_DIRECT_REPORTS), 'Path' (empty), and 'Class ID' (IndirectReports).

Query Name	Source Field	Attribute Name	*Privilege
1 HR_SRCH_CP	A.EMPLID	EMPLID	Allow

Document Filter App Class

Package Name: HR_SRCH_DIRECT_REPORTS

Path: :

Class ID: IndirectReports

Security page: Document Level Security options

Document Level

Query Name

Select the name of the query or connected query containing the fields you want to use to restrict access.

Source Field

Select the field which will identify security values which will determine access.

The source field(s) selected becomes the security attribute having the specified privilege. At indexing time, when the crawler inserts application data into the index, the values populating the selected source field(s) will carry the specified privilege.

Privilege

Define the access privilege or restriction.

- **Allow.** The value specified in the Source Field is allowed access to the data for this row in the search results.
- **Deny.** The value specified in the Source field cannot see the data for this row in the search results.

Note. The privilege of Deny is useful in situations where there are too many values for the security attribute if Allow were selected. For example, rather than enabling access to nine out of ten field values, it is more efficient to deny access only to the one you want to restrict.

Note. If multiple attributes appear in the grid the system effectively inserts an AND clause between the items in the grid.

Document Filter App Class

The application class specified in the Document Filter App Class section creates a list of values for the security attribute at query time. The application class enables you to define and run additional filters and logic against the application data contained in the indexed source fields.

As needed, PeopleSoft applications will provide filtering App Classes for delivered search definitions. For any custom search definitions, or additional filtering requirements, you will need to create or modify the filtering App Classes.

Package Name

Select the name of the appropriate App Package.

Path

Select the path pointing to the App Class.

Class ID

Select the class ID for the App Class.

For example, assume you want to compile a list of valid SETIDs to which the user may have access. You define an application package that would contain a method called evaluateAttrValues. This passes the search definition name (sboName), the name of the security attribute field that was identified in the search definition, and the user who will access the data. The application method would then build a list of valid values for that user and return it to SES for comparison against the data to see if the attribute value on the data matches.

```

method evaluateAttrValues
    /+ &sboName as String, +/
    /+ &secAttr as String, +/
    /+ &srchUser as String +/
    /+ Returns Array of String +/
    /+ Extends/implements PTSF_SECURITY:SearchAuthnQueryFilter.evaluateAttrValues +/
    Local array of string &secValues;
    Local string &Role, &userPref, &csFullAccess, &csAdminAccess, &OnBehalfOf,
    &docOwner, &BU_Security, &Security_Type, &SID_Security, &PermList;
    Local SQL &sqlRoles, &sqlUserPrefs, &sqlDocOwners;

    &secValues = CreateArrayRept("", 0);

    /*&BU_Security, &Security_Type, &SID_Security*/
    SQLExec("Select SETID_SECURITY, SECURITY_TYPE
    from PS_INSTALLATION_FS ", &SID_Security,
    &Security_Type);
    If &SID_Security = "N" Then
        &secValues.Push("A:ALL");
    Else
        Evaluate &Security_Type
        When "N"
            &secValues.Push("A:ALL");
        When "O"
            &secValues.Push("U:" | &srchUser);
        When "C"
            SQLExec("Select OPRCLASS from PSOPRDEFN where OPRID = :1",
            &srchUser, &PermList);
            &secValues.Push("P:" | &PermList);
        End-Evaluate;
    End-If;
End-method;

```

Note. Concatenating multiple attribute values using a separator, you can achieve an OR clause between attributes. For example, in the this sample "A:ALL" and "U:" | &srchUser are two different attributes merged into a single attribute to achieve the OR clause.

Note. To achieve improved performance, the security attribute should be chosen in such a way that no more than 50 values are returned per user per attribute.

Working With Advanced Settings

Access the Advanced page by selecting PeopleTools, Search Framework, Designer, Search Definition and selecting the Advanced tab.

General

Map Search Attributes

Security

Advanced

Component Mapping

Search Definition

ITEMDEFIN

Description

Item Definition

Define Query to Delete SBO

Query Name

URL Link Field

Pre Processing AE Library

AE Library

AE Section

Post Processing AE Library

AE Library

AE Section

Alternate search keywords

Advanced page

Define Query to Delete SBO

Query Name

Select the query that you've defined to remove orphaned search documents. This is your deletion query.

For example, for rows of data that have been deleted from the database, you would want to ensure that those rows of data (or search result documents) no longer appear in the search index.

Note. Even though this query is defined the same way as the source type query is defined, the difference is that the result of the query is used for deleting the already indexed documents from SES. The Drilling URL field acts as the primary identifier to locate the documents to be deleted. This means the drilling URL must be identical to the drilling URL built for the original query.

Delete SBO Query will not be executed during the first index build of a search definition. It only becomes active after the initial index is populated.

See [Chapter 3, "Defining Search Definition Queries," Defining a Deletion Query, page 16.](#)

URL Link Field

Select the drilling URL field for the query selected.

Pre Processing AE Library

Before an index build is run, data can be manipulated to perform additional tasks. For example, it may be required to search through subqueries to determine if one or more subquery might have changed and to update the last updated datetime value on the parent so that the change is recognized. Another use might be to calculate or summarize a value to be indexed. Another common case for pre processing occurs when a query is created based on staging tables. In this case the pre processing Application Engine program can be used to populate the staging tables. This is useful when the data cannot be retrieved using simple query (such as hierarchal or computed data).

You can define an Application Engine routine to perform these tasks.

Note. Pre and post processing adds to the overall indexing time, and it is recommended not to use this in scenarios where it can be avoided.

Note. Application Engine programs used for pre or post processing should be defined as type Library.

AE Library

To call additional processing logic from Application Engine, specify the correct AE Library (Application Engine program) to run.

AE Section

Specify the Application Engine program section to run.

Post Processing AE Library

After an index is built, certain clean-up functions might need to be performed, such as removing the records in your delete query, or cleaning up staging tables. Use the post processing Application Engine routine to perform these functions.

AE Library	To call additional processing logic from Application Engine, specify the correct AE Library (Application Engine program) to run.
AE Section	Specify the Application Engine program section to run.

Alternate Search Keywords

Alternate search keywords	Enter any alternate search keywords that users are likely to submit when running search requests. For example, rather than submitting the more official "purchase order" phrase, a user may be more likely to search on "PO" instead. This field is translatable. If supporting multiple languages, the keywords need to be translated.
----------------------------------	--

Mapping Components to Search Definitions

Access the Component Mapping page by selecting PeopleTools, Search Framework, Designer, Search Definition and selecting the Component Mapping tab. The Component Mapping page enables you to map a component to a specific search definition to enable SES integration with Search Pages.

Mapping a component to a search definition effectively assigns component level security to the search definition. For this reason, if the Search Definition is assigned to a component, document level security is turned on by default.

Note. Multiple components can be mapped to the same search definition. When a component is mapped, the security type is changed to document level security, and a user having access to any one of the components will be able to search inside the search index. The security type cannot be changed, but you can add more security attributes to extend the security.

Important! Search definitions mapped to a component must use document level security.

General

Map Search Attributes

Security

Advanced

Component Mapping

Search Definition

ITEMDEFIN

Description

Item Definition

Personalize

Find

View All

First

1 of 1

Last

	*Market	*Component Name	Description	Search Criteria		
1	Global	MERCHANTCATTBL			+	-

Component Mapping page

Market	Select the Market for the component.
Component Name	Select the component.
Search Criteria	Enter any additional custom search criteria to be added automatically to the SES search query during a Search Pages keyword search.

Note. The system appends additional search criteria as is to the search query. The Search Criteria field is "free text". The Search Framework performs no validation or parsing during design time or run time.

Viewing Search Attributes

Access the Search Attributes page by selecting PeopleTools, Search Framework, Designer, View Search Attributes and selecting the Display Fields tab. Search attributes are used for creating aliases of the actual search query fields from PeopleSoft Query or Connected Query in the Oracle RSS feeds.

SES supports only three data types:

- String
- Number
- Date

PeopleTools maps the PeopleSoft data types to SES data types. The Search Attributes page displays a search attributes mapped SES data type.

Search Attributes			
Personalize Find View 100 First 1-7 of 294 Last			
	Search Attribute	Field Name	Attribute Display Name
1	ABSENCE_REASON	ABSENCE_REASON	Absence Reason
2	ABSENCE_REASON_REASON	ABSENCE_REASON	Reason
3	ABSENCE_TYPE	ABSENCE_TYPE	Absence Type
4	ACTION	ACTION	Action
5	ACTION_DESCRSHORT	ACTION_DESCRSHORT	Short Description
6	ACTION_DESCRSHORT_DSPLBL	ACTION_DESCRSHORT	Action
7	ACTION_DTTM	ACTION_DTTM	Override Date Time
			Data Type
			String
			String
			String
			String
			String
			String
			Date

Search Attributes page

The search attributes page is read-only and provides a quick view of all attributes currently authorized for sending to SES. Every time a field is mapped in a Search Definition, the system adds an entry to this grid for the field. Because a field can exist on more than one search definition, it is not generally removed from this grid.

Search attributes are retained separately from a search definition and this enables:

- **Reusability.** You can reuse the same search attributes amongst multiple search definitions.
- **Increased usability.** Search attributes enable you to modify the attribute name or query field name from the end user, who will see the attribute display name. For example, adding the display value of "Employee ID" is more readable and understandable than displaying the field name EMPLID.
- **Quick Access.** You can view and sort all search attributes in the system and check their datatypes without having to open SES or Application Designer.

Chapter 5

Creating Search Categories

This section contains an overview, and discusses:

- Specifying general search category settings.
- Selecting advanced search field settings.
- Selecting facet settings.
- Identifying custom search pages.
- Working with display fields.

Understanding Search Categories

Search Categories are essential for the Search Framework. Search categories:

- Organize search definitions into manageable, logical groups of data.
- Are required for searches. Search queries run only against search categories, not search definitions. A search definition must be a member of a search category before it can be searched.
- Enables users to focus searches to help refine results and restrict searches to a particular set of search indexes. For example, users can run searches against categories like Customers, Purchase Orders, or Products, rather than running a search against all indexes in the search engine.
- Allow users to search across several different groups of data simultaneously. For example if you were looking for a particular Item ID, with a Search category containing multiple Search Definitions, you can search across purchase order, sales orders and inventory at one time.
- Provide improved search performance and results by limiting the number of indexes searched.

Note. Search queries cannot be run directly against search definitions. Search queries can only be run against search categories.

Specifying General Search Category Settings

Access the General page by selecting PeopleTools, Search Framework, Designer, Search Categories.

General

Advanced Search Fields

Facets

Custom Search Page

Display Fields

Search Category Name

HC_HR_CAREER_PLAN

*Description

Career Plan

☒ Search Group

PersonalizeFind

First	1 of 1	Last
-------	--------	------

*Search Definition	Description		
HC_HR_CAREER_PLA	Career Planning	+	-

General page

Search Category Name	Displays the search category name. <div><div>Important! Though any number of search definitions can be mapped to a search category, for each and every search definition, a search category of the <i>same</i> name must exist, and the search definition must belong to that search category. You can create search categories of a different name that are not associated with a single search definition. A search definition may belong to more than one search category, but it <i>must</i> belong to one with the same name.</div></div>
Description	<div>Add any additional information to distinguish search categories.</div> <div><div>Note. If this search category becomes exposed through Application Search, then the description you enter may appear in the Application Search Bar. The description must be appropriate for end user viewing. Make the description as informative, concise, and intuitive as possible.</div><div>Note. The description is translatable.</div></div>
Search Group	Select to enable this search category to be available for context searching within Application Search.
Search Definition	Add all search definitions that belong to this search category.

Selecting Advanced Search Field Settings

Access the Advanced Search Fields page by selecting PeopleTools, Search Framework, Designer, Search Categories and selecting the Advanced Search Fields tab.

The Advanced Search Fields page enables you to view and modify attributes to show on the advanced search page during end user searches to add more criteria to the basic search mode.

When working with the advanced search page attributes, keep these items in mind:

- This configured list can be programmatically retrieved from the SearchCategory App Class in the PT_SEARCH Application Package using method GetConfiguredFilterAttributes.
- All the attributes associated with this category can be retrieved using the same App Class with the method GetAllAttributes.
- Attributes not appearing on the Advanced Search Fields page can be retrieved using GetNonConfiguredFilterAttributes. This method will provide a list of attributes defined in the related search definitions which have not been configured here.

General
Advanced Search Fields
Facets
Custom Search Page
Display Fields

Search Category Name HC_HR_CAREER_PLAN
Description Career Plan
☒ Auto detect common fields

Sequence	Search Attribute	Description
1	EMPLID	Empl ID
2	FIRST_NAME	First Name
3	GVT_CARPLAN_RSN	Reason Career Plan Initiated
4	BUSINESS_UNIT	Business Unit
5	LOCATION	Location Code
6	POSITION_NBR	Position Number
7	DESCR_DEPTID	Department
8	DESCR_JOBTITLE	Job Title
9	NAME_DISPLAY	Display Name
10	RISK_OF_LEAVING	Risk of Leaving

Advanced Search Fields page

Auto detect common fields

When selected, this flag will gather all fields which are common to all search definitions listed on the General page. This will allow for searching across all search definitions in the category.

Select to avoid manually listing the common fields from the joined records. (default)

Deselect to delete some or to add additional attributes which are not common to all search definitions.

Note. When you select the Auto Detect flag, you must save the search category before the common fields will be properly displayed in the grid.

Sequence

Control the sequence in which the search attributes appear in the advanced search interface.

Selecting Facet Settings

Access the Facets page by selecting PeopleTools, Search Framework, Designer, Search Categories and selecting the Facets tab.

General Advanced Search Fields **Facets** Custom Search Page Display Fields

Search Category Name HC_HR_CAREER_PLAN

Description Career Plan

☒ Auto detect facets

Sequence	Facet Name	Description
1	BUSINESS_UNIT	Business Unit
2	DESCR_DEPTID	Department
3	DESCR_JOBTITLE	Job Title
4	IMPACT_OF_LOSS	Impact of Loss
5	LOCATION_DESCR_LOCATION	Location

Personalize | Find | View All | First 1-5 of 6 Last

Facets page

Auto detect facets

Select to detect common facets for all the search definitions belonging to the search category. When you save the search category, any facets that are common to all search definitions are displayed. This saves you from needing to discover which facets can be used to filter across all search definitions.

Deselect this option if you wish to remove some facets or add ones that are not common to all search definitions (not recommended as this may distort facet counts).

Sequence

Control the sequence in which the faceted fields display for narrowing search results in an intuitive fashion for users.

For example, perhaps you might want to ensure that these faceted fields display in this order: Country, State, County, City.

Keep in mind that this configured list of facets can be programmatically retrieved using the `GetFacetFilters` method in the `SearchCategory App Class` in the `PT_SEARCH Application Package`. The result, which is an array of `PT_SEARCH:FacetFilter` can be passed to the `PT_SEARCH:SearchQuery` class to get facet nodes in the search results.

Identifying Custom Search Pages

Oracle provides default search pages to use with most application purposes. If you need to do something more than this, then you must create custom search pages for custom applications or to provide additional search features.

To indicate for the system to use these custom pages when doing an Application Search, then you should specify that search page, as well as any custom search result or advanced search pages.

Note. This functionality is only available for Application Search, not keyword component-level search.

Access the Custom Search Page page by selecting PeopleTools, Search Framework, Designer, Search Categories and selecting the Custom Search Page tab.

The screenshot shows a web interface for configuring a search category. At the top, there are five tabs: 'General', 'Advanced Search Fields', 'Facets', 'Custom Search Page' (which is selected), and 'Display Fields'. Below the tabs, the 'Search Category Name' is 'QE_CUSTOMERS' and the 'Description' is 'test - customers'. A section titled 'Custom search page' contains five fields: 'Menu Name' (text input), 'Component Name' (text input), 'Market' (dropdown menu with 'Global' selected), 'Search results page' (text input), and 'Advanced search page' (text input). Each text input field has a magnifying glass icon to its right, indicating a search or selection function.

Custom Search Page page

Menu Name	Select the menu to which the search page belongs.
Component Name	Select the search page's component name.
Market	Select the appropriate market.
Search results page	Select the search results page to use.
Advanced search page	Select the advanced search page to use.

Working With Display Fields

Access the Display Fields page by selecting PeopleTools, Search Framework, Designer, Search Categories and selecting the Display Fields tab.

GeneralAdvanced Search FieldsFacetsCustom Search PageDisplay Fields

Search Category Name

QE_CUSTOMERS

Description

test - customers

PersonalizeFindView All1 of 1FirstLast

	Sequence	*Search Attribute	Description		
1				+	-

Display Fields page

Sequence

Use the Sequence edit box to specify the order in which the display fields appear.

Search Attribute

Select the search attribute from the dropdown list.

Chapter 6

Administering PeopleSoft Search Framework

This chapter provides an overview and discusses:

- Working with Search Instances.
- Administering Search Definitions and Search Categories.
- Managing Search Context.
- Importing Remote Search Groups.
- Working with Search Indexes.
- Working with Search Framework Definitions During Upgrades.

Understanding PeopleSoft Search Framework Administration

While the system administration related to the Search Framework architecture can include tasks involving SES, Integration Broker, application server domains, and so on, this section focuses only on the administration tasks that are included in the Search Framework administration interface, specifically under the menu, PeopleTools, Search Framework, Administration.

Working With Search Instances

A search instance in the PeopleSoft Search Framework represents a single instance of the search engine. The search instance(s) created using the PeopleSoft Search Framework define the instances that will be used by the PeopleSoft applications to provide end user search.

The search instance definition specifies connectivity and other administration settings required for:

- running queries against the search server.
- administrative tasks.

Creating Search Instances

To define a search instance, access the Search Instance Properties page by selecting PeopleTools, Search Framework, Administration, Search Instance.

Search Instance Properties

Search Engine Details

*SSL Option: Disable (dropdown menu)

*Host Name: rno207065.us.oracle.com

*Port: 7777 (input field) [Ping button]

Admin Service Credentials

*User Name: eqsys

*Password: [masked]

*Confirm Password: [masked] [Test Login button]

Query Service Credentials

*Proxy Name: people

*Password: [masked]

*Confirm Password: [masked]

Call Back Properties

*URL: http://10.244.1.70:8000/PSIGW/PeopleSoftServiceListeningConnector/PSFT_HR

*User Name: ftpuser

*Password: [masked]

*Confirm Password: [masked]

[Update deployed definitions](#)

Search Instance Properties page

Search Engine Details

To enable connectivity between your PeopleSoft system and SES, you need to provide these search engine values.

SSL Option

Select one of these options for SSL:

- **DISABLE.** Select if you do not have SSL configured between SES and your PeopleSoft system.
- **ENABLE.** Select if you do have SSL configured between SES and your PeopleSoft system and you want all communication between the servers SSL secured.

Host Name	<p>Enter the server name of the host where SES is running, including the domain. The host name value can be a DNS name or an IP address.</p> <p>For example:</p> <p><i>server1.mycompany.com</i></p> <p>or</p> <p><i>123.111.4.168.mycompany.com</i></p> <p>To specify the host, you may use the host name or an IP address.</p>
Port	Enter the port on which SES listens for requests.
Ping	<p>Click to make sure your host name and port are correct and that the SES server is available. A positive result displays the following message:</p> <p><i>Ping Test Result: Success. Oracle Secure Enterprise Search Admin Service Version 11.1.2.2.0 (262,613)</i></p>

Admin Service Credentials

Specify the SES administrative credentials so that your PeopleSoft system has the appropriate access to connect to the SES server and invoke searches and various administrative tasks, such as deploying search objects, building indexes, scheduling crawling, and so on.

User Name	Enter the user name for logging into the Secure Enterprise Search Administration GUI.
Password\Confirm Password	Enter the password associated with the administrative user name, and confirm it in the edit box below.
Test Login	<p>Click to test the credentials you have specified against the selected SES server. A positive result displays the following message:</p> <p><i>Login Success. (262, 615)</i></p>

Query Service Credentials

Proxy Name	<p>Enter a trusted entity from the list on the Federation Trusted Entities page in the SES Administration interface. (Global Settings, Federation Trusted Entities)</p> <p>This enables the PeopleSoft system to log into SES using a proxy identity to run a query. In SES, this proxy account is a Trusted Entity. You may need to contact your SES administrator to obtain Trusted Entity credentials or to have those credentials created for the Search Framework query service.</p> <hr/> <p>Important! Even though the Search Framework is authenticated by SES as the Trusted Entity, SES uses the identity of the currently signed on PeopleSoft user for query authorization.</p> <hr/>
-------------------	--

Password\Confirm Password Enter and confirm the password associated with the trusted entity.

Call Back Properties

At times, SES will need to call back to the PeopleSoft system to access services, such as authentication services, so you need to provide the URL and password for this access.

URL Enter the URL for the PeopleSoft system listening connector, using the following syntax:
`http://<server>:<port>/PSIGW/PeopleSoftServiceListeningConnector/<node>`

User Name Enter the PeopleSoft user name granted the permission list PTPT3300 with the role Search Server.

Note. This user name must exist as an active user profile on the PeopleSoft system listed in the URL specified. This is generally a system user as opposed to an interactive user. In addition, if you have attachments on an FTP server that will be accessed by SES, this user must also be authorized to access the FTP site.

Password\Confirm Password Enter and confirm the password associated with the PeopleSoft user name.

Update deployed definitions Click this link to invoke a bulk update for all definitions currently deployed to the SES server.

If you have changed any of the callback properties (URL, user name, or password), all currently deployed search definitions need to be updated with the new callback values to continue successful interaction with the Search Framework.

See Also

PeopleTools 8.52 Installation for <your platform>: "Configuring Integration Between PeopleSoft PeopleTools and Oracle SES"

Modifying Search Instances

You can modify any of the search instance values if the information changes for the specified server. That is, if the server receives a new IP address or a new DNS name, if the port for the search services changes, or if any credentials change, then the values can be updated as needed.

Important! You may not reuse a search instance entry for an entirely new instance of a search server. For example, if an existing search instance is no longer available, do not reuse the same PeopleSoft Search Instance entry for a new server. This causes unintended and undesired results.

Deleting Search Instances

Deleting a saved search instance is not supported.

Administering Search Definitions and Search Categories

This section contains an overview and discusses:

- Working with search definitions.
- Working with search categories.

Understanding Search Definition Administration

You create search definitions using the Search Framework Designer interface after the data is identified using PeopleSoft Query and Connected Query. You use the Search Framework Administration interface to deploy the search definitions and manage the search definitions on the SES server.

Before end users can run searches against the search indexes, the search definitions need to be deployed to the SES search engine so that SES can create the structure of the search index based on the search definition, crawl the defined search criteria, and populate the index with the results of the search definition query. When your search definitions are deployed on SES, they become an SES source that you can view under the Sources tab in the SES administrative interface.

Once the search definitions are deployed to SES, you use the Search Framework administration interface to manage them by sorting them in search categories, updating them, undeploying them, or deleting them as needed.

Working with Search Definitions

To manage search definitions, access the Search Definitions page by selecting PeopleTools, Search Framework, Administration, Deploy\Delete Object.

Deploy Search Definition
Deploy Search Category

Deploy Search Definition

Deploy definition to search server

Search Category Name

Filter by name

Deploy Search Definition				
	Definition	Description	Deploy Status	Update Status
<input checked="" type="checkbox"/>	1 HC_HR_JOB_DATA	Job Data	Deployed	No update required for the definition.

Deploy Search Definition page

Search Category Name Use to display only those search definitions associated with a particular search category.

Filter by name Use to enter full or partial definition names to reduce the list of search definitions appearing in the grid.

Note. The values are case-sensitive.

Deploy Search Definition (grid) Displays all existing search definitions defined in the Search Framework. Columns in the grid are:

- **Deployable Definition Name.** Displays the name of the search definitions you've created. Deployable search definitions are having a data source created in Query or Connected Query, as well as being defined in the Search Framework Designer interface.
- **Description.** Displays your search definition description.
- **Status.** Displays the state of search definition deployment: A search Definition is either Deployed or Undeployed.
- **Update Status.** After running the Report Sync Issues audit, the results appear in this column indicating any required updates.

Select All Click to select all the rows within the grid.

Note. If all rows in the grid have been selected, the button title changes to Deselect All.

Report Sync Issues

Runs an audit checking routine which reports where properties for a search definition differ between PeopleSoft and SES. If you have updated a deployed search definition it will no longer be synchronized with the representation on SES. Results of this check appear in the Update Status column (which, in the case of differences between the corresponding definitions becomes the View Report column). This applies only to deployed definitions.

Deploy

Deploy the PeopleSoft search definitions selected to the search engine (SES), where it becomes a searchable data source.

Note. You can deploy multiple search definitions at a time by selecting the corresponding check box in the first column of the grid and then choosing Deploy.

Note. When you deploy a search definition, the search category of the same name is automatically deployed.

Undeploy

Click to remove the representation of the selected search definitions from the search engine (SES).

Note. You can undeploy multiple search definitions at a time by selecting the corresponding check box in the first column of the grid and then choosing undeploy.

Note. When you undeploy a search definition, the search category of the same name is automatically undeployed.

Note. The undeployed search definition will be removed from SES but it will still exist within the PeopleSoft system.

Note. For large indexes, it is recommended to undeploy them during the non-peak hours for performance reasons. While the status displays undeployed, the actual deletion occurs on SES asynchronously, and undeploying a larger index requires additional time on SES.

Update

Click to update the representation of the search definition on SES. If you have modified a deployed search definition, the PeopleSoft version and the version on SES will no longer match. Definitions that need to be updated will appear in the synchronization report. Clicking Update synchronizes the SES representation of the definition to match the PeopleSoft version.

Delete

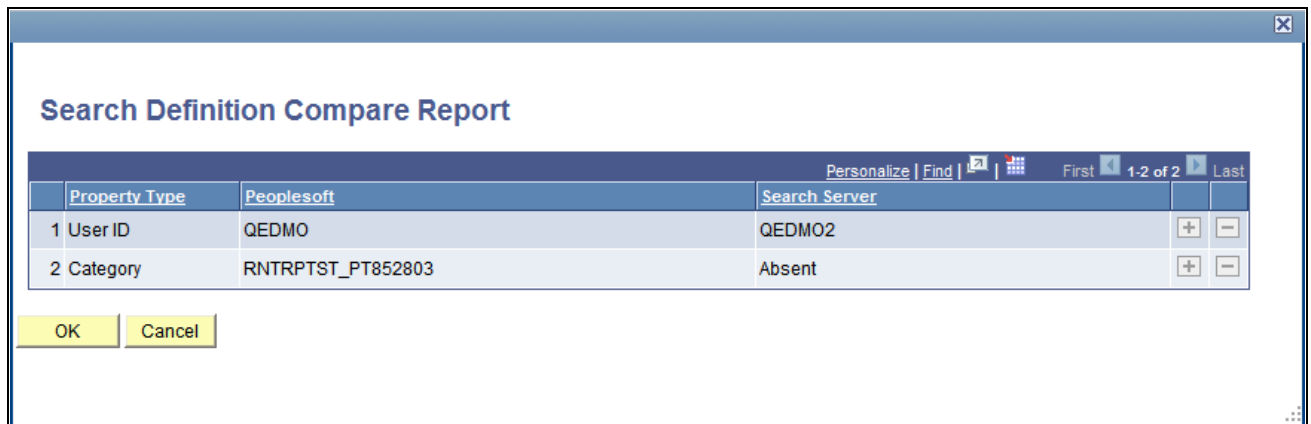
Deletes the search definition from the Search Framework. This removes the search definition from the search definition list and from the search categories to which it is mapped. The underlying query and connected query are unaffected.

Running the Synchronization Report Process

In the event of differences found between the two systems, Search Framework prepares a Search Definition Compare Report, which you access by clicking the View Report link in the View Report column. Depending on the status of your search definitions in both the PeopleSoft system and the SES system, the results of the synchronization report will vary. This table describes some likely scenarios and the recommended action.

Update Status	Recommended Action
No update required for the definition.	No action is required. The definitions are identical between the two systems.
Update required definition out of sync.	Click the View Report link in the View Report column, and examine the reported differences. Resolve the differences as needed between the two systems, or click Update.
Definition unavailable in server.	Click the Reset Definition for Deploy link in the View Report column. This removes the previous definition on SES or any remaining settings related to it, making it available to be deployed again.
Undeployed definition. Choose a deployed definition.	Ignore the report if the definition is purposely undeployed, or deploy the definition.

When you select View Report, you may see a screen similar to this:



Search Definition Compare Report page

Property Type

Displays properties that have found to differ between the two systems. The values appearing in this column can be numerous, representing all the possible settings for a search definition, such as user ID, category, call back URL, and so on.

PeopleSoft

Displays the value defined for the search definition within the PeopleSoft system.

Search Server

Displays the value stored for the property on the search server.

OK

Click OK to leave the report and return to the previous page.

Updating Definitions

In the event of updates being required, clicking Update makes the version of the search definition on the search server match the properties for that definition stored within the PeopleSoft system. After the process runs, you should see in the Update Status column the following message:

Updated definition <definition name>

Working with Search Categories

Search categories enable you to group search definitions within logical, manageable groups. You define search categories within the Search Framework Designer interface.

To manage search categories, access the Deploy Search Categories page by selecting PeopleTools, Search Framework, Administration, Deploy\Delete Object, Deploy Search Category.

Deploy Search Definition

Deploy Search Category

Deploy Search Category

Deploy category to search server

Filter by name

Deploy Search Category				Personalize	Find			First	1-7 of 7	Last
	Select	Definition	Description	Search Instance	Deploy Related Definition	Deploy Status	Update Status			
1	<input checked="" type="checkbox"/>	EMPLOYEE2_GSAWYER_852803	Employee Information	SES-GSAWYER-852803	Deploy Related Definition	Auto Deployed				
2	<input type="checkbox"/>	EMPLOYEE_GSAW_852803	InfoDev_Testing_GSawyer	SES-GSAWYER-852803	Deploy Related Definition	Undeployed				
3	<input checked="" type="checkbox"/>	PTPORTALREGISTRY	Menu	SES-GSAWYER-852803	Deploy Related Definition	Auto Deployed				
4	<input type="checkbox"/>	QE_CUSTOMERS	test - customers	SES-GSAWYER-852803	Deploy Related Definition	Undeployed				
5	<input type="checkbox"/>	QE_ITEMDEFIN	test - items	SES-GSAWYER-852803	Deploy Related Definition	Undeployed				
6	<input type="checkbox"/>	QE_PO	my POs	SES-GSAWYER-852803	Deploy Related Definition	Undeployed				
7	<input checked="" type="checkbox"/>	RNTRPTST	RNTRPTST	SES-GSAWYER-852803	Deploy Related Definition	Auto Deployed				

Select All

Deploy Search Category page

Filter by name

Use to enter full or partial definition names to reduce the list of search categories appearing in the grid.

Deploy Search Category (grid)

Displays all existing search categories defined in the Search Framework. Columns in the grid are:

- **Deployable Definition Name.** Displays the name of the search categories you've created. Deployable search categories are those having been defined in the Search Framework Designer interface.
- **Description.** Displays your search category description.
- **Search Instance Name.** Displays the search instance to which a search category is deployed.
- **Deploy Related Search Definition.** Click to display the Deploy Search Definition page with the grid populated only with search definitions within the selected search category.
- **Status.** Displays these states of search object deployment: Deployed, Undeployed or Auto Deployed. Search categories will be automatically deployed (Auto Deployed) if a search definition with the same name is deployed. You need to deploy search categories covering multiple search definitions manually.
- **Update Status.** If you run a Report Sync Issues process from the Deploy Search Definition page, the process populates this column too if there are any differences between search categories on the two systems (PeopleSoft and SES).

Select All

Click to select all the rows within the grid.

Note. If all rows in the grid have been selected, the button label changes to Deselect All.

Deploy

Deploy the PeopleSoft search category to the search engine.

Note. You can deploy multiple search categories at a time by selecting the corresponding check box in the first column of the grid and then choosing Deploy.

Important! You must first deploy all the search definitions within a search category before deploying a search category. A search category cannot be empty on the search engine.

Undeploy

Click to remove the search category from the search engine.

Note. The search category will be removed from SES, but it will still exist within the PeopleSoft system.

Note. This does not undeploy the search definitions associated with a search category.

Delete

Deletes the search category from the Search Framework.

Note. This does not delete the search definitions associated with a search category.

Managing Search Context

This section provides an overview and discusses:

- Defining Search Context
- Viewing Search Contexts

Understanding Search Contexts

Use search contexts to define which search groups appear in the search group drop-down Application Search Bar, depending on the context of the user. That is, depending on where users are in the interface, which determines their context, you can control what appears in the drop-down.

A search group is a search categories that you enable for the purpose of setting up search contexts. Search groups can fall into these three search contexts:

- Home Page: These are set of search groups available to select when the user is viewing the home page.
- Portal Node: These are the search groups available if the user is accessing content from a particular node. There can be more than one search group for the same node.
- Work Center: These are the search groups available when the user is accessing content that is part of a WorkCenter template. When in a WorkCenter template, search groups associated with the underlying node will not be part of the search group drop down.

At each of these levels, a default search group can be selected. It is not required to have a default search group for any level.

Defining Search Contexts

Access the Define Search Context page by selecting PeopleTools, Search Framework, Administration, Define Search Context and choosing the appropriate context type (homepage, portal node, or work center).

Define Search Context

Add search groups which can be displayed for this context.

Context Type Portal Node

Node Name QE_LOCAL QE_LOCAL

Personalize Find View All						First	1-2 of 2	Last
	Default	Sequence	*Search Category Name					
1	<input type="checkbox"/>	1	PTPORTALREGISTRY	Menu		+	-	
2	<input type="checkbox"/>	2	EMPLOYEE2_GSAWYER_852	Employee Information		+	-	

Save

Define Search Context page

Use the plus and minus buttons to add and remove the search categories to and from the search context.

Default

Select for the category that should be the default if the end user does not select a particular category.

Only one default search category can be selected for a search context.

Note. If no categories are added to the grid, then "all" will be the default, which means users can search across all search groups to which they have access.

Sequence

Specify a numerical sequence to define the order in which the search categories will appear in the Application Search Bar drop-down list.

Search Category Name

Select the search category to include for this search context.

Viewing Search Contexts

To view your defined search contexts, access the View Search Contexts page by selecting PeopleTools, Search Framework, Administration, View Search Contexts.

View Search Context

List of all the search contexts defined for this system.

Filter Contexts

Context Type

Node Name\Workcenter ID

Search Contexts

Context Type Home Page [Edit Context](#)

Default	Sequence	Search Category Name	Description
<input type="checkbox"/>	1	EMPLOYEE2_GSAWYER_852803	

Context Type Portal Node [Edit Context](#)

Node Name QE_LOCAL

Default	Sequence	Search Category Name	Description
<input type="checkbox"/>	1	PTPORTALREGISTRY	
<input type="checkbox"/>	2	EMPLOYEE2_GSAWYER_852803	

View Search Context page

Filter Contexts

Use the Filter Context controls to customize and narrow the contexts displayed.

Context Type Select the context type you wish to view.

Node Name\Workcenter ID Enter a specific node name or work center.

Clear Click to clear the previous filter criteria.

Search Contexts

The Search Contexts section displays the search contexts that meet the criteria specified in the Filter Contexts section.

Edit Context Click to modify the search context definition. The link opens the Define Search Context page with the selected search context open.

Importing Remote Search Groups

You can share search groups between databases to enable seamless navigation between systems. However, the nodes and the search groups need to be known to all systems involved. The imported search groups are treated as local search groups, and need to be modified as such. For example, imported groups need to be included in the search contexts to become available.

When you import search groups, you import them from a remote node, as defined in your Integration Broker configuration. When importing search groups, keep the following items in mind:

- Both the local and remote systems need to point to the same SES server instance. That is, both systems need to have the same SES instance defined on the Search Instance Properties page.
- Both systems need to have unique Default Local Node names.
- Both systems need to have a unique database name.
- The remote node needs to be in the IB Network of the local system.
- The remote system needs to trust the local system. That is, single signon must be set up between the two systems, and they must share common PeopleSoft user profiles. If you need users to be able to search both indexes, the users must exist and be authorized in both systems.
- The remote node Portal URI Text and Content URI Text values need to be specified on the Portal tab of the node definition.

To import search groups from other systems, access the Remote Search Groups page by selecting PeopleTools, Search Framework, Administration, Remote Search Groups.

Note. Importing remote search groups retrieves all the search groups defined in that content system along with all related search categories, associated search definitions, and the list of faceted attributes.

Remote Search Groups

Import new search groups from IB in network remote nodes or remove existing search groups.

Import from remote node

Content Provider

Imported Search Groups			
Personalize Find View All			
	Search Category Name	Description	Message Node Name
1			Delete

Remote Search Groups

Content Provider

Select the remote node defined in your system from which you want to import search groups.

Content providers must be defined as nodes known to your system using Integration Broker.

Import

Click to invoke the import process. This will import all search groups from the selected node.

Delete

Click to remove any unnecessary or obsolete search groups from your system.

See Also

PeopleTools 8.52: PeopleSoft Integration Broker Administration, "Adding and Configuring Nodes"

PeopleTools 8.52: PeopleTools Portal Technologies, "Configuring the Portal Environment," Setting Portal Nodes

Working with Search Indexes

This section contains an overview and discusses:

- Building search indexes.
- Viewing index build process details.

Understanding the Index Build Process

Before end users can submit search requests against the Search Framework deployed objects, the search indexes must first be built on the search engine. Prior to the index being built, a deployed search definition is an empty shell, containing no searchable data. A search index needs to be built for each individual search definition.

An Application Engine program, PTSF_GENFEED, builds the search index and makes it available for SES.

Creating a search index with the Search Framework involves the following technologies:

- Search Framework
- Application Engine
- Process Scheduler
- Feeds Framework
- Integration Broker
- SES Crawler

Once you invoke a search index build from the Build Search Index page, the system automatically completes these general steps:

1. The Schedule Search Index page initiates the PTSF_GENFEED Application Engine program.
2. The Pre Processing Application Engine program defined for the search definition runs.
3. PTSF_GENFEED Application Engine program runs the query (PeopleSoft Query or Connected Query) associated with the search definition.
4. The output of the query becomes a data source for the Feeds Framework.
5. The Feeds Framework converts the query output to an Oracle RSS Schema format and writes the SES Feed to the Integration Broker queue, and the Deletion query defined for the Search Definition runs.

6. The Search Framework then creates an SES Schedule for the SES source associated with the search definition and sets the schedule disposition to "CRAWL immediately."
7. The Post Processing Application Engine program defined for the search definition runs.
8. The SES Crawler, using the URL of the Integration Broker queue where the SES Feed is located, initiates the crawling of the SES Feed.

Building Search Indexes

Access the Build Search Index page. (Select PeopleTools, Search Framework, Administration, Schedule Search Index.)

Build Search Index

Run Control ID TSawyer [Report Manager](#) [Process Monitor](#) **Run**

User ID QEDMO

*Search Definition

Indexing type

☐ Full index

☒ Incremental Index

Language Option

☒ Base Language

☐ All Languages

Build Search Index

To build a Search Framework search index:

1. Select PeopleTools, Search Framework, Administration, Schedule Search Index.
2. Enter a run control ID.

3. On the Build Search Index page, select the appropriate options.

Search Definition

Select the search definition for which you are building the search index.

Note. Each search definition needs its own index build scheduled individually. Once the Run Control is executed, the page becomes read-only. To change any parameters of the page, you need to create a new run control.

Indexing Type

Select one of the following:

- *Full index.* Crawls all transactional data specified by the query criteria and rebuilds the entire index. This option requires the most time. This option must be selected the first time an index is built.
- *Incremental index.* Updates the existing index and adds only documents associated with rows that have been added or updated since the last index build or update. The system determines the required updates based on a comparison between the timestamp of the index and the "last updated" field for the data row.

Note. It is recommended to create one run control for incremental indexing, scheduled to run very frequently, and create another run control for full index rebuilding set to run less frequently. For example, incremental indexing might run daily, where a full index rebuild may be set to run every six months.

Language Options

Select one of the following:

- *All Languages.* Builds an index for each language enabled on the database.
- *Base Language.* Builds an index only for the base language defined for the database.

Your selection depends on the languages enabled for your database and the languages through which you anticipate end users using to perform searches.

4. Click Run.
5. Use Process Monitor to verify program completion and success.

Note. Consider setting up separate run controls for full index builds and incremental index builds.

Note. Once the Run Control is executed, the page becomes read-only. To change any parameters of the page, you need to create a new run control.

Viewing Search Index Build Process Details

After the PTSF_GENFEED program begins to run, you can view the details regarding that program run, which display on the Build Search Index page for that run control ID.

Note. The Details section shows the results of the most *recent* feed generation for this Search Definition. It may not be the same run control ID as the one you selected. If the run control ID differs from the one you selected, it will be highlighted.

The screenshot shows a web interface titled "Previous schedule details". It contains the following information:

- Previous schedule status:** Success
- AE Status:** Schedule success
- Details section (expanded):**
 - Feed generation status:** Done
 - Process Instance:** 95 (with a [Message Log](#) link)
 - Run Control ID:** employee_3_full
 - User ID:** QEDMO
 - Indexing type:** Full index
 - Language Option:** Base Language
 - Generated segment count:** 1
 - Segments returned to crawler:** 1
 - Datetime prompt value:** 01/01/1900 12:00:00.000000AM
- Table at the bottom:**

Language Code	View data feed
English	View data feed

Previous schedule details

Previous schedule status	Displays the status of the most recently executed index build process.
AE Status	<p>Indicates whether the most recently executed PTSF_GENFEED Application Program ran to completion.</p> <p>If the index build fails, this field displays the step where the process failed.</p>
Resume Schedule	<p>Appears in the case where the index build failed. If the index build fails, review the Crawler Log Files in the SES administration console. After determining and fixing the root cause, you can set the index build to:</p> <ul style="list-style-type: none"> <i>Restart SES Crawl:</i> Re-starts the SES crawl process on the previously generated feed. <i>Rebuild Index:</i> Regenerates the search feed.

Feed generation status	Indicates whether the system successfully created the feed output, required to populate the index.
User ID	Displays the User ID who ran the run control, which may be a different user ID than the user who created the run control.
Language Option	Displays the language options selected for the index build process (All Languages or Base Language).
Indexing Type	Displays the index type (Full Index or Incremental Index).
Generated segment count	<p>A segment is a chunk of XML which is complete in and of itself. A segment size is determined by the PeopleTools Options setting "Maximum Message Size." The number of segments is roughly equivalent to the size of the data divided by the Maximum Message Size setting.</p> <p>See <i>PeopleTools 8.52: System and Server Administration</i>, "Using PeopleTools Utilities," PeopleTools Options.</p>
Segments returned to crawler	This is the number of segments sent to the crawler for indexing. This information may be useful in debugging issues where the feed generated does not equal the number of indexed segments.
Datetime prompt value	Displays the datetime prompt value for your underlying search query. If this is the first time running the process for a search index, the system uses 01/01/1900 to gather all possible data. For the incremental index, the data displayed represent the datetime that the last index was built. This date will be used for the next run to determine the incremental data that should be included.
View data feed	<p>Click to view the extracted data that has been applied to the search index on the SES system. The data is in XML format.</p> <p>A row appears in the grid for each language for which the system included in the index build. The link takes you to the Integration Broker Service Operations Monitor, Asynchronous Details page.</p> <hr/> <p>Note. To view the feed in the Integration Broker Monitor, you need security access to those pages.</p> <hr/>

Viewing Search Index Feed XML

You may need to view the source XML for the search index to ensure the system is capturing the data you want populating your index or for other troubleshooting tasks.

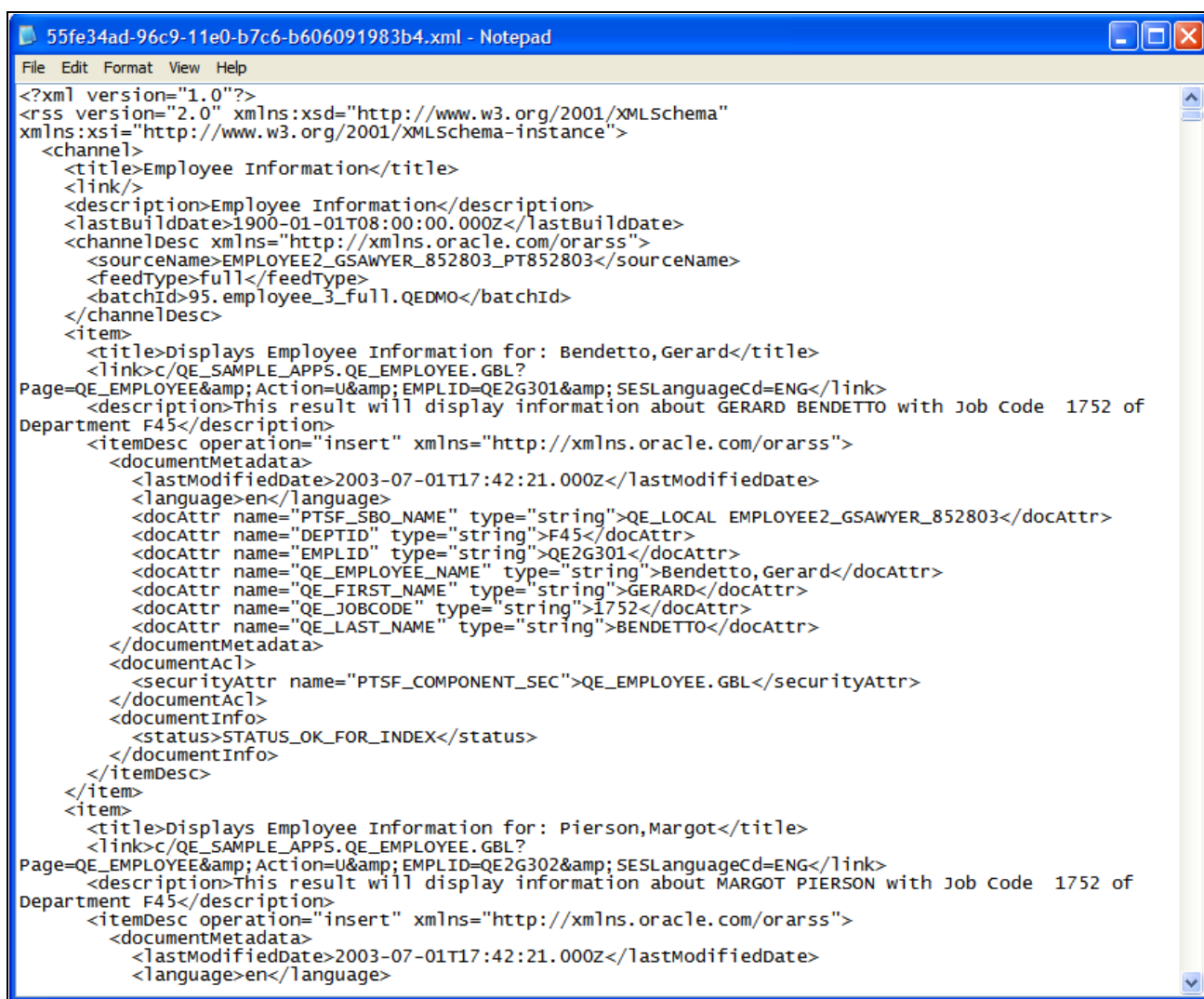
To view the source XML feed data:

1. Select PeopleTools, Search Framework, Administration, Schedule Search Index.
2. Enter the appropriate run control ID.
3. Expand the Details section for the search index build run.

4. Click the View data feed link in the Language Code grid.

This takes you to the Integration Broker Service Operations Monitor, Asynchronous Details page.

5. On the Asynchronous Details, click Download XML.



Source XML Feed data

Working with Search Framework Definitions During Upgrades

These Search Framework definitions are managed objects, meaning they can be upgraded, added to projects, compared, copied, and so on:

- search attributes
- search definitions
- search categories

- search contexts

Chapter 7

Working with PeopleSoft Search Framework Utilities

This chapter discusses these Search Framework tasks:

- Using the Search Test Page.
- Downloading search data.
- Running diagnostics.

Using the Search Test Page

This section contains an overview and discusses:

- Testing search categories.
- Testing custom search attributes.
- Testing filter settings.
- Testing Facet Requests.
- Testing Grouping and Sorting Options
- Testing Additional Parameters

Understanding the Search Test Page

The search test page enables you to test an index independent of any existing PeopleSoft application PeopleCode or additional APIs. Using the Search Test page, you can isolate various search features and view the behavior, without signing on to the PeopleSoft application or SES. Also, by observing the underlying PeopleCode, the Search Test page can be a useful tool when studying the use and behavior of the query API. If you do not enter any criteria on the Search Test page, and click Search, the system will return all documents indexed in the search engine. Using the criteria on this page, you can test how you anticipate search results to display for your application.

Access the Search Test page by selecting PeopleTools, Search Framework, Utilities, Search Test Page.

Search Test page

Search Text	Enter the free text search request string to test.
Search	Click to initiate the search request against SES.
Start Index	Enables you control which result document displays first. For example, if you set it to <i>10</i> , the system displays the 10th search result at the top of the search result list.
Docs Requested	Enables you to control the number of search results displayed on the Results tab.
Language	Select the language for which you want to test the search index. Select blank to run against all languages.
Duplicates	<p>Enables you to control how duplicates are displayed:</p> <ul style="list-style-type: none"> • <i>Remove</i>. Duplicates are not displayed. • <i>Mark</i>. Duplicates are displayed, but they are marked to indicate the duplicates.

Important! To emulate the current default PeopleSoft Search Framework behavior, clear both *Remove* and *Mark* in the Duplicates group box.

Testing Search Categories

The Search Category to Search in group box enables you to narrow the search only to a specific search category or set of search categories. Add search categories to the grid as needed to increase the scope of the search.

Testing Custom Search Attributes

The Custom Search Attributes group box enables you to identify specific search attributes and display the actual values for a search document in the search results. That is, in addition to the URL and summary in the search results, the results will also display the values for the fields you add to the Custom Search Attributes grid. The search attributes must be indexed fields in the search definition.

Testing Filter Settings

The Filter Settings group box enables you to search specific values of your attributes using the available operators.

If you have multiple attributes in the grid, use *Match Any* to return results that match any of the filters, and use *Match All* to display results that meet the criteria for all of the filters.

Testing Facet Requests

The Facet Request group box enables you to test and isolate specific facets. For example, you can find those that contain no search results in certain scenarios, or compare facet counts to attribute counts.

Minimum Doc Count	Enables you to control the facets that display based on their count. For example, you can display facets that contain zero results, or only those who contain at least 10.
Maximum Facet Children	This applies to all facet requests. This determines the maximum number of facet nodes (facet values) returned by the API. The default is -1 where in all the children will be displayed.
Facet Name	Select the name of the facet you want to test.
Facet Path	This applies to all facet requests. The results will be filtered by the facet values specified in the path. In the case of hierarchical facets, the path can have the hierarchy information. For example, United States/CA/Pleasanton
Return Count	Select to display the number of documents the facet contains.
Sort By	You can sort facets alphabetically or by count in ascending or descending order.

Testing Grouping and Sorting Options

The grouping and sorting options are not implemented in current release. These options are reserved for future use.

Testing Additional Parameters

The additional parameters options are not implemented in current release. These options are reserved for future use.

Downloading Search Data

If you need to share search definition information with Oracle Global Customer Support (GCS) related to search definitions you are troubleshooting, use the Download Search Data page. The output from this process is encrypted such that it can be decrypted only by internal GCS or development resources.

Download Search Data

Download search data
Download encrypted search feed data.

Run Control ID GSAW_SRCH_DATA_DWNLOAD [Report Manager](#) [Process Monitor](#) **Run**

***Search Definition** EMPLOYEE2_GSAWYER_85280

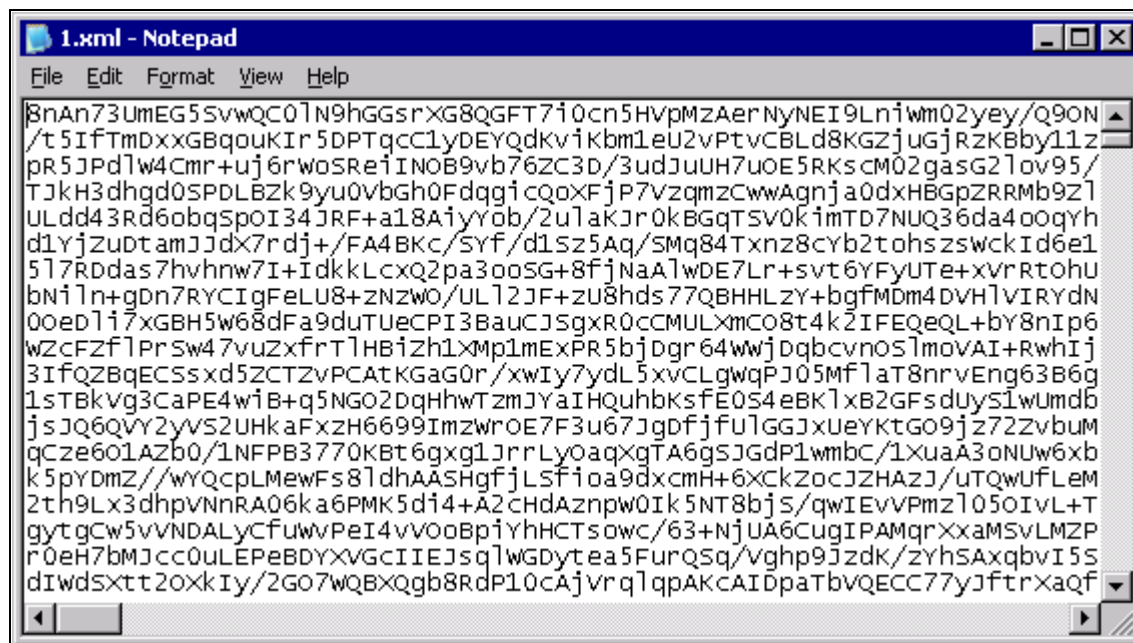
Download Search Data page

To download encrypted search data:

1. PeopleTools, Search Framework, Utilities, Download search data.
2. Enter a run control ID.
3. On the Download Search Data page, select the appropriate value from the Search Definition drop-down list.
4. Click Run.
5. Monitor the process using Process Monitor.

- Retrieve the encrypted output from PS_CFG_HOME\appserv\prcs\<Process Scheduler domain name>\files\sesfeeds\<search_definition_name_date_time>\<segment_number>.xml.

The encrypted file will appear similar to this example:



Encrypted search data

Running Diagnostics

This section discusses:

- Performing a round-trip test.
- Viewing event logs.

Performing a Round-Trip Test

Access the Round-Trip Test page by selecting PeopleTools, Search Framework, Utilities, Diagnostics, Round-Trip Test.

The round-trip test performs a set of diagnostic steps using a test search definition, delivered with PeopleTools named RNTRPTST. It provides end-to-end diagnostic tests to verify and troubleshoot the PeopleSoft and SES integration.

Search Instance

Test Steps

STEP 1: Ping Test STEP 2: Deploy STEP 3: Crawl STEP 4: Search [Cleanup](#)

Test Log

Undeploying. Cleaning up any data previous run
Undeploy completed

Deploying search definition
Deployment Complete

Starting Crawl
SES crawler status : Executing , time elapsed 11 sec, next check after 20 sec
SES crawler status : Executing , time elapsed 32 sec, next check after 40 sec
Crawl Completed.

Beginning Search
Search found 1 result(s)

Round-Trip Test page

Search Instance

Select the appropriate search instance defined for this PeopleSoft system.

Test Steps

The Test Steps grid contains a series of links that are ordered in a typical troubleshooting sequence. Only one link is active at a time, and each link becomes active only after the previous step has completed successfully.

1. Ping Test: Runs a ping test against the SES server instance defined for your system.
2. Deploy: Deploys the RNTRPTST search definition and associated category to the SES server.
3. Crawl: Runs a test crawl using the RNTRPTST definition.
4. Search: Runs a sample search based on the index populated by the RNTRPTST search definition.
5. Cleanup: Click to remove the deployment of the RNTRPTST search definition and run any related cleanup tasks.

Test Log

Indicates whether the system successfully created the feed output, required to populate the index.

Viewing Event Logs

View event logs on the Events Log page by selecting PeopleTools, Search Framework, Utilities, Diagnostics, Events Log.

Round-Trip Test

Events Log

Event Logs

View Search Framework Event Logs

Event Type

PeopleTools Search Framework

Event Severity

All

View Events

Time Period

From

06/20/2011

To

06/20/2011

From Time

12:00:01AM

To Time

11:59:59PM

Events

Personalize | Find | View All | | | First 1-8 of 8 Last

	Created	Event Type	Message Description	Severity
1	06/20/11 12:50:24.371531PM	PeopleTools Search Framework	Created encrypted segment file D:\PT_SERVER\8.52 lappserv\prcs\PT852803 files\sasfeeds\EMPLOYEE2_GSAWYER_852803_20 11-06-20-12.50.24.000000\1.xml.	Message
2	06/20/11 12:50:24.371093PM	PeopleTools Search Framework	Processing segment number 1. Message transaction id 5fb58e7b-9b70-11e0-b7c6- b606091983b4.	Message
3	06/20/11 12:24:32.493860PM	PeopleTools Search Framework	Created encrypted segment file D:\PT_SERVER\8.52 lappserv\prcs\PT852803 files\sasfeeds\EMPLOYEE2_GSAWYER_852803_20 11-06-20-12.24.29.000000\1.xml.	Message
4	06/20/11 12:24:29.494563PM	PeopleTools Search Framework	Processing segment number 1. Message transaction id 5fb58e7b-9b70-11e0-b7c6- b606091983b4.	Message

Events Log page

Event Type

Displays the status of the index build process just run.

Event Severity

Narrow the event display focus by selecting one of these severity levels:

- All: Displays all types of even logs (Error, Message, Warning).
- Error: Displays only error messages.
- Message: Displays the typical status messages the system records after each event.
- Warning: Displays only warning messages.

Time Period

Specify the specific time period for which you seek event log information.

View Events

Click to display the events meeting your criteria in the Events grid.

Chapter 8

Working with PeopleSoft Search Framework Security Features

This section contains an overview and discusses:

- Applying PeopleSoft Permissions.
- Setting up authentication and authorization.
- Configuring SSL between PeopleSoft and SES.
- Setting up role-based search group access.

Understanding Search Framework Security

By default, both the Search Framework and Oracle SES possess innate security features designed to protect all of the data and processes within the systems. This section describes security topics that pertain solely to the integration between Search Framework and SES.

Applying PeopleSoft Permissions

The implementation, maintenance, and use of the Search Framework involve these user types:

<i>Role</i>	<i>Description</i>	<i>Delivered PeopleTools Permission List</i>
Search Administrator	<p>Responsible for managing the deployment of search definitions and search categories, scheduling index builds, monitoring indexes, and establishing connectivity between Search Framework and SES.</p> <p>Note. This user needs to have access to all the queries (records) on which the search definition is based on in order to schedule the index generation.</p>	PTPT3100

Role	Description	Delivered PeopleTools Permission List
Search Developer	Responsible for creating search queries, search definitions and search categories.	PTPT3200
Search Server	<p>SES search instance requiring access to the Search Framework service operations.</p> <p>Note. This is the call back ID configured in the search instance page.</p> <p>This user ID needs to have access to all the queries (records) on all search definitions in order for SES to download data.</p> <p>The Search Server role is required to be able to download attachments.</p>	PTPT3300
End User	Runs search queries while using PeopleSoft applications, using Application Search or Search Pages.	None specific to Search Framework. Restrictions to search results can be implemented by user profile or role.

Note. Search Administrator, Search Developer, and Search Server are roles delivered by PeopleTools.

Working with Authentication and Authorization

Search Framework handles various security related tasks, including:

- Authenticating users (development, administration, and end users).
- Authenticating systems requesting access to service operations.
- Authorizing end user search requests.

When managing search requests with Search Framework, it is important to distinguish between *authentication* and *authorization*.

Authentication determines if a user is a legitimate user, who can access the system. Authentication is configured using PeopleSoft user profiles, roles, and permission lists.

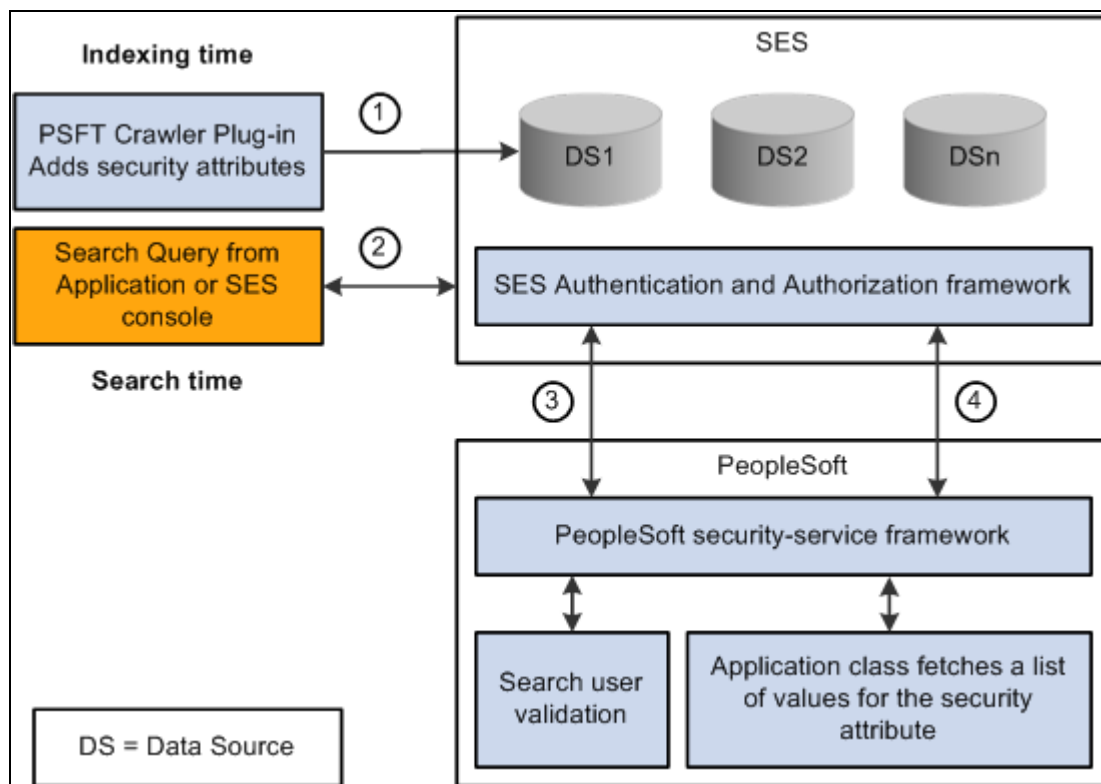
Authorization determines the access level for an authenticated user. Once a user is authenticated, the system invokes the authorization rules. You define authorization (access controls) per search definition on the Security tab. For some instances, applying No Security is a valid option. However, for other situations, you need to apply stricter control over what users can and cannot see. You can restrict access by the source (search definition) or by the document (search result).

Source-level security applies to all the documents in the data source. Setting source-level security is useful when you want to prevent global visibility of data source content. When defining a source-level security you specify the users and roles that can view the search results for that search definition. When a user searches the associated index, the system verifies the user's access level prior to displaying any search results.

Document-level security restricts access to specific search results. The document-level authorization using SES uses security attributes. The attributes are defined using PeopleSoft Query or Connected Query during design time and are used to evaluate access during runtime. While defining a search definition, some of the fields chosen for the query may not be used necessarily for searching, but mainly as security attributes. For example, Department ID or Business Unit are examples of attributes that users may not necessarily search on, but their values can be used in the authorization process to evaluate if a user can view search results for a specific Department ID or Business Unit.

If applying any level of security, you should define an application class for every search definition. The application class is responsible for fetching a list of runtime values based on the security attributes. You associate the application class with a search definition on the Security tab of the search definition.

The following diagram illustrates the elements involved with authorization and authentication and the interaction between them.



PeopleTools and SES interacting to authenticate users and authorize user access to search results

Step	Description
1	During the index build, the crawler collects the defined security attributes and access restriction options associated with search definitions. The crawler applies those security attributes to the data sources (indexes).
2	An application end user runs a search query.

Step	Description
3	SES security framework invokes the PeopleSoft security service for user authentication.
4	Based on the authenticated user, SES performs either a source-level or a document-level authorization. For document level authorization PeopleSoft invokes the Application class defined for the Data Source. This would fetch a list of values for the security attribute which then SES would use for filtering the search results.

Configuring SSL between PeopleSoft and SES

You can configure SSL connections between your PeopleSoft system and SES. When you have SSL configured, you then need to set the SSL Option field on the Search Instance Properties page to ENABLE.

To set up SSL, use the instructions provided with PeopleTools PeopleBooks for setting up SSL on PeopleSoft Internet Architecture. Also, refer to the instructions for setting up SSL on SES provided with your Oracle SES documentation.

Setting Up Role-Based Search Group Access

Application Search displays search groups in the Application Search Bar based on the user's role. If a search group assigned to a context belongs to the permissions for a role to which that user belongs, then the search group will appear in the search group drop-down list for that user. You configure search group access by selecting PeopleTools, Security, Permissions & Roles, Permission Lists, Search Groups.

Permission List: PTPT1000

Description: PeopleSoft User

Search Groups		
*Search Group Name		
EMPLOYEE2_GSAWYER_852803		
PTPORTALREGISTRY		

PeopleTools Permission Lists: Search Groups page

Use the Search Groups grid to add search groups to which you want to add access. Search groups are those search categories that have the Search Group check box selected on the General tab of the search category definition.

Note. This does not define the security, this only gives a mechanism to control what is displayed in the Application Search Bar for a given user.

See Also

Chapter 9, "Working with PeopleSoft Search," Working with Application Search, page 89

Chapter 9

Working with PeopleSoft Search

This section contains an overview and discusses:

- Working with search pages.
- Working with Application Search.
- Working with search results.

Understanding PeopleSoft Search

PeopleSoft Search refers to the collection of interfaces that PeopleSoft application end users access to submit search requests. The PeopleSoft Search interfaces depend on the Search Framework being completely configured with PeopleSoft search definition-based indexes deployed to the search server and populated.

Important! The PeopleSoft Search features discussed in this document do not support the use of the Verity search engine. These features work only with the Search Framework and the SES search engine.

These are the PeopleSoft Search features:

<i>Feature</i>	<i>Description</i>
Application Search	Provides users a search edit box, called Application Search Bar, appearing in the header of the PeopleSoft browser session. From the Application Search Bar, users can select relevant search categories against which to run searches.
Search Pages	<p>When a user accesses a component, they use Search Pages to enter search keys to isolate the desired rows of data. Search Pages come in these formats: Find an Existing Value Search and Keyword Search.</p> <p>Find an Existing Value Search refers to the traditional component search, where users enter level 0 search keys running directly against the database on the Find an Existing Value tab, which appears regardless if Search Framework is configured.</p> <p>Keyword Search involves the use of the Keyword tab, which enables more free-form searches against an SES index.</p>

PeopleSoft Search Framework features that are key to enhancing user experience are:

Feature	Description
Facets	Facets filter and narrow search results by ordering search results by categories, which are the fields you have selected to be facets in the search definition. These are similar to Google's left-hand, navigational search facets, for example.
Search Groups	Search groups enable you to specify search categories to become available to be displayed conditionally in the Application Search Bar, depending on search contexts. (Applies only to Application Search).
Search Contexts	Search contexts enable you to configure when a search group is available in the Application Search Bar. For example, you may only want search groups relevant to a particular portal node to appear, or only those search groups applicable to a specific WorkCenter. (Applies only to Application Search).

Working with Search Pages

This section provides an overview and discusses:

- Understanding Search Pages.
- Enabling Keyword search.
- Developing for Keyword search.

Understanding Search Pages

The traditional search pages for PeopleSoft application components provided these options:

- Find an Existing Value.
- Add a New Value.

Department

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Value
Add a New Value

▼ Search Criteria

Search by: SetID ▼ begins with

☐ Include History
☐ Correct History

Search
[Advanced Search](#)

[Find an Existing Value](#) | [Add a New Value](#)

Classic PeopleSoft Application Component Search

While the Find an Existing Value tab enables end users to find the rows of data they need to view or modify, it is limited to running searches only across level 0 fields. The Find an Existing Value search runs against the live data tables, not an SES index. The Find an Existing Value tab works in conjunction with the Keyword search, and it can be effective to provide both options to end users.

Using the Keyword search page, which you enable through the Search Framework, end users can perform a deeper, more free-form search against the data. The Keyword search runs across the indexed values stored on the SES server, which contains fields across all scroll levels.

Note. The Keyword Search tab only appears if a search index has been associated with the component in a search definition. Because the keyword search runs against the indexed data, depending on the frequency of index builds, the indexed data may not entirely match the Find an Existing Value search results.

Job Data

Enter any information you have and click Search. Leave fields blank for a list of all values.

Find an Existing Value **Keyword Search**

Note: Keyword Search will return data updated less than 1 hour ago (08/15/2011 1:57:19PM)

▼ Search Criteria

Keywords

Search [Advanced Search](#)

Find an Existing Value and Keyword Search pages

The search pages that display after you've enabled Keyword search for a component are:

- Find an Existing Value Search: This is the same interface as the Find an Existing Value page, that you see for previous PeopleSoft releases.
- Keyword Search: This page enables the user to run free-text searches using the Keywords edit box. Implementation teams can index any attributes that they would like the end user to be able to search.
- Add a New Value: This is the same interface as the Add a New Value page used in previous PeopleSoft releases, which enables you to add new rows to PeopleSoft tables.

Enabling Keyword Search

To enable Keyword Search, you use the Component Mapping page in the Search Definition component for the Search Framework Designer. The Component Mapping page enables you to map a component to a specific search definition to enable SES integration with Search Pages.

Note. Search definitions mapped to a component use document level security. This is enforced by the Search Designer interface.

For components that have been added to the grid on the Component Mapping page for a search definition, the search page for that component displays both the classic search options and the Search Framework search options. That is, users can initiate a Find an Existing Value search against level 0 values, using the default PeopleTools search capabilities run directly against the database, and, they can also take advantage of the Keyword search page.

The keyword Search Framework feature enables the user to search deeper (level 0-3) by running a free-formed search against crawled and indexed values in the search engine. The keyword search is powerful because it allows you to search across all fields in an index rather than just inside a specific set of fields defined in the search record.

When the search definition is deployed, the system updates the component meta data to indicate the search category to which the component is mapped. When the system renders the page, it displays the keyword search tab for that component.

Note. Multiple components can be mapped to the same search definition.

To enable search pages for a component:

1. Select PeopleTools, Search Framework, Designer, Search Definition, and open the desired search definition.
2. Select the Component Mapping tab.
3. Add the desired component to the grid.
4. Update the security restrictions and access appropriately.
5. Save the search definition.
6. Deploy or update the search definition to SES.
7. Navigate to the component and verify that you see the Keyword search page.

See Also

[Chapter 4, "Creating Search Definitions," Mapping Components to Search Definitions, page 34](#)

[Chapter 4, "Creating Search Definitions," Setting Document Level Security, page 29](#)

Developing for Search Pages

This section describes these items to consider while implementing Search Pages.

- Setting component properties for search pages.
- Working with Find and Existing Value and Keyword Search behavior differences.
- Working with Keyword Search data currency.
- Maintaining a consistent user experience.

Setting Component Properties for Search Pages

You configure properties for your search pages in the Component Properties dialog box in PeopleSoft Application Designer. On the Internet tab, in the Search Page group box there are numerous settings related to your application search pages. These settings apply specifically to the Keyword search page:

Primary Action (Keyword Search)	Enables you to set the primary action of the component to display the Keyword Search page.
Default Search\Lookup Type (Keyword Only)	Enables you to set the default look up type to be the Keyword Search page.
Link to Realtime Search Page	Specifies the message set and number displayed on the Find an Existing Value page <i>if</i> Keyword Search is enabled.

Link to Keyword Search Page Specifies the message set and number displayed on the Find an Existing Value page *if* Keyword Search is enabled.

Note. The Link to Realtime Search Page and Link to Keyword Search page values only come into play if Keyword Search is enabled for that component. The term, *Realtime*, is used to differentiate between the currency of the data between the Find and Existing Value search and the Keyword search. While the Find an Existing Value search displays search results that are always a current reflection of the data in the database, the Keyword Search is only as current as the last index build or incremental index update.

When implementing the Keyword search feature, make sure to adjust these settings accordingly. The general concepts surrounding these settings, along with other component properties, are discussed in the PeopleSoft Application Designer documentation.

See *PeopleTools 8.52: PeopleSoft Application Designer Developer's Guide*, "Creating Component Definitions," Setting Internet Properties.

Working with Find an Existing Value and Keyword Search Behavior

For a component that has a search index associated with it, the user can perform these types of searches, Find and Existing Value and Keyword. Both search types will have the same, general look and feel, however, these differences and features should be noted:

- With the Find an Existing Value search, the end user selects values based on the underlying record search keys and clicks Search. Results are rendered in a standard grid format, as seen in all previous PeopleSoft versions.
- With the Keyword search, the end user enters values into the Keywords edit box and clicks Search. The end user can also enter a combination of keywords in addition to using the provided search keys. The system runs this search against the SES index. Results can be displayed in either a grid or a list format.
- The Keyword search will show facets, where the Find an Existing Value search cannot.
- When switching between Find an Existing Value and Keyword search, the system replicates any text you've entered in one tab to the other.
- Search operators are different between the Find and Existing Value search and Keyword search. For example, the typical Keyword search operators include *contains*, *=*, *not =*, where as the Find an Existing Value search operators include more, such as *begins with*, *contains*, *=*, *not =*, *greater than*, *less than*, *between*, *in*, and so on.
- Keyword search fields do not contain prompts or drop-down lists. Search text needs to be added in a free-form manner, using wild cards as needed.

Note. In the Find an Existing Value tab you specify a wild card using "%", while in Keyword search you specify a "*".

Working with Keyword Search Data Currency

The Keyword search can display only search results that are included in the index. The index is only as current as the last incremental index update or the last full build date and time. As such, the Keyword search results will not always contain the most current reflection of the transactional data.

For example, assume that an organization has the incremental index update process schedule to run once every 3 days. If a salesperson adds a new customer to the system just after the incremental update occurred, that customer information will not appear in the Keyword Search results until the next incremental index update process has completed. Likewise, if a customer has been deleted from the system just after an incremental index update, the search results for the Keyword Search will continue to include that customer information until the next incremental index update process has completed.

The Keyword Search page displays a message indicating how fresh the search results are. For example:

Note: Keyword Search will return data updated over 18 hours ago (2011-06-22-16.25.48.000000)

Note. The date format will appear according to the user's personalization setting for date display.

Maintaining a Consistent User Experience

Since both types of searches, Find an Existing Value and Keyword, form the same component search interface, these requirements ensure a consistent user experience:

- All the search keys shown on the search page must be indexed attributes.
- Only the fields marked as List Box items on the component search record will be shown in both cases.

Note. This is true when showing the results in the grid format for the keyword search. If you switch to list format, you can display additional fields that are indexed but not marked as List Box or search keys.

- All List Box item fields must be indexed attributes.

Note. Grid-based view of the keyword search results is based on the List Box item configuration on the associated search record.

Working with Keyword Search Modes

The Keyword search page has these modes:

- Keyword-only
- Basic
- Advanced

Working with Keyword-Only Mode

The keyword-only mode can be selected in the Component Properties dialog box, and if selected only the Keywords edit box will appear as the default search mode when an end user accesses the component.

Working with Basic Mode

In basic mode, the Keywords edit box displays with an additional 'Search by' option with a drop-down list box to select a search record field to use for as search criteria.

Working with Advanced Mode

The advanced mode displays all search criteria:

- Keywords.
- Search record fields.
- Search fields defined for the Search Framework search category on the Advanced Search Fields tab.

The screenshot displays the Advanced Search interface with the following components:

- Keywords:** A text input field at the top left.
- Search Record Fields:** A group of fields including:
 - Empl ID: contains [dropdown]
 - Empl Record: = [dropdown]
 - Name: contains [dropdown]
 - Last Name: contains [dropdown]
 - Second Last Name: contains [dropdown]
 - Alternate Character Name: contains [dropdown]
 - Middle Name: contains [dropdown]
- Advanced Search Fields selected for Search Category:** A group of fields including:
 - First Name: contains [dropdown]
 - Business Unit: contains [dropdown]
 - Job Title: contains [dropdown]
 - Location Code: contains [dropdown]
 - Position Number: contains [dropdown]
 - Department: contains [dropdown]
 - Display Name: contains [dropdown]
 - Position Description: contains [dropdown]
 - Location: contains [dropdown]
 - Second Last Name: contains [dropdown]
 - Last Name: contains [dropdown]
 - Regulatory Region: contains [dropdown]
 - Department ID: contains [dropdown]
 - Job Code: contains [dropdown]
 - Name: contains [dropdown]

Callouts with arrows point to the 'Keywords' field, the 'Search Record Fields' group, and the 'Advanced Search Fields selected for Search Category' group.

Advanced mode search options

Note. The system does not display in the Advanced Search Fields list any search fields that are also displayed in the search record search field list.

Note. All search record fields (Key, Alt Key, and List box fields) must be part of the index. If any of the fields have translate values, those translate fields must also be part of the SES index.

Working with Application Search

This section discusses:

- Enabling Application Search.
- Developing for Application Search.
- Working with Related Actions.
- Working with Portal Menu search.

Understanding Application Search

Application Search provides a way for a user to search across all or specific group of search indexes. It is available in the Portal header throughout the user's session irrespective of the content the user is accessing in the target frame. It allows the user to search and drill down to a specific row and transaction from the search results without navigating to the classic component search page. In a Portal environment Application Search can search across indexes from multiple content systems.



Application Search Bar

The Application Search Bar in the Portal header consists of:

- drop-down list to select search groups or categories.
- free text search edit box.
- Advanced Search link.
- Last Search Results link (which displays persistent search results).

Enabling Application Search

When Application Search is enabled, the Application Search Bar appears in the portal header. You enable Application Search on the Portal, Global Settings page.

To enable Application Search:

1. Select PeopleTools, Portal, General Settings.
2. In the Portal Search Options group box, select Display global search in header.

Note. If a user does not have access to any search groups by way of their permissions lists, they will not see the Application Search Bar.

Working with Search Groups and Search Contexts

When implementing Application Search, it is highly recommended to employ search contexts and search groups. These constructs work together to refine the user interaction with the Application Search Bar drop-down list.

A search group is a type of search category that is exposed to Application Search to help manage search definitions deployed to the search engine. Search groups provide a way to show relevant categories based on the context the user is in on the target frame. A search definition can belong to multiple search groups. You manage search groups in the Search Framework Administration interface. In a Portal installation, for example, search groups can be formed to include search definitions deployed across content systems.

Using search contexts, you can configure search groups such that based on the context in the target frame, only a subset of all possible search groups are available to the user in the Application Search Bar. For example, if the end user is accessing content from a PeopleSoft Financial application, then only search groups relevant to that application will be available. Likewise if a user is accessing content from a PeopleSoft Human Capital Management application, then only search groups related to that application will be available.

At any given time, end users have these types of search groups available:

- **All:** This search group will always be available and is a group of search categories that span across all the indexes that have been deployed and made searchable for a PeopleSoft application.
- **Component Specific:** This type of search group will match the component the user is currently viewing in the target frame. For example, if a user is viewing an expense report, then the Expense Report component would be the search group that is available.
- **Context Specific Set:** These are a set of search groups configured to be shown based on specific content in the target frame.

The system follows the end users through the system, recording context as they navigate through the system to show only relevant search groups. While a particular search group can be defined as the default, for search groups defined at the WorkCenter template or node level, the system follows these rules to determine the search groups to display:

- **Template level:** If the current transaction is in a WorkCenter or Home Page template all search groups associated to that template will show. Also, if a default search group is defined for that template it will display.
- **Node level:** If the current transaction is not on a WorkCenter or Home Page all search groups relevant to the node associated with that transaction will show. If a default search group is defined for that node it will display.
- **Component level:** The Application Search Bar drop-down list shows search groups associated with the current component, if that component has been indexed. In addition if there are no default search groups defined for the WorkCenter level or node level, then the system defaults to displaying search groups associated with the current transaction.

Note. Each of these levels can have multiple search groups. For improved user experience, the number of search groups at each level should be limited to a reasonable number, such as five.

Application Search shows search groups in the Application Search Bar based on a user's role. To set up permissions to search groups, you use PeopleTools Security permission lists. Setting up role-based search group access is discussed in the Security chapter of this document.

See Also

[Chapter 8, "Working with PeopleSoft Search Framework Security Features," Setting Up Role-Based Search Group Access, page 78](#)

[Chapter 6, "Administering PeopleSoft Search Framework," Managing Search Context, page 56](#)

[Chapter 5, "Creating Search Categories," Specifying General Search Category Settings, page 37](#)

Working With the Portal Registry Search

PeopleTools provides the search definition, PTPORTALREGISTRY, which enables you to index the content references registered in the portal menu registry. If you deploy this search definition and build the index (just as you would any search definition), end users can search for content references and menu items using the free-text edit boxes and navigate to the underlying pages using the search results.

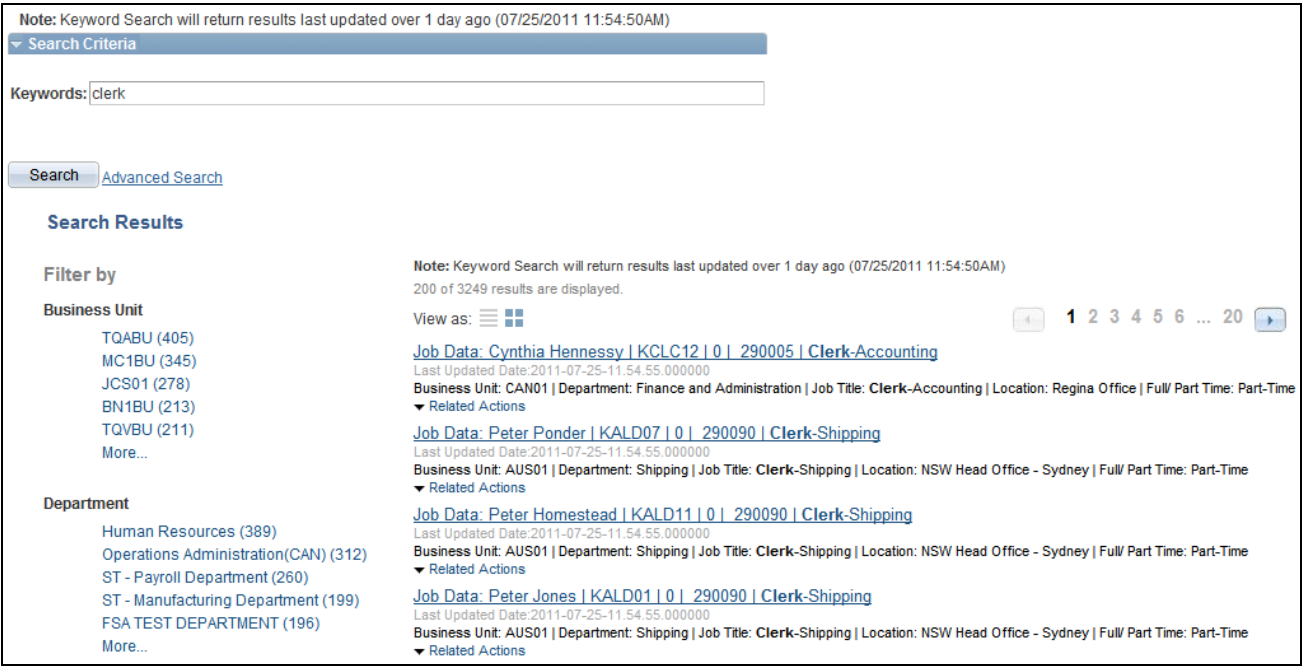
If you run the search from the menu pagelet or drop-down navigation Search Menu edit box, the search request only goes against current portal. That is, if the user is currently logged into the EMPLOYEE portal, the search will be specific to content references defined within the EMPLOYEE portal only.

If you run the search from the Application Search Bar, the search request goes against all the portals defined in the local portal registry.

The search definition is based on the following delivered query: PTPORTALREGISTRY, which verifies the "Valid From" and "Valid To" dates for content references. It is recommended that you schedule running your index updates based on how often the content references in your system change effective dates and expire dates for more accurate search results.

Working with Search Results

The following example illustrates a typical set of search results generated by PeopleSoft Search.



Search Results

- Filter by

The area to the left of the search results, where the end user initially views the search category associated with the search results. By drilling into the category, you view the facets associated with attributes in the search index.
- Title

The title, which is the clickable link, enables the user to identify the search result and navigate to the associated component. The title is defined using the Title edit box on the General tab of the Search Framework, Designer, Search Definition component.
- Summary

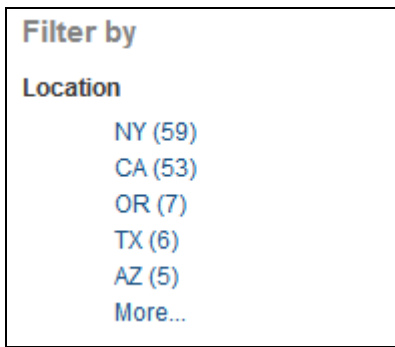
Displays a general overview of the target data.

The summary is defined using the Summary edit box on the General tab of the Search Framework, Designer, Search Definition component.
- Related Actions

If the search definition is mapped to a component, then any defined related actions associated with that component will appear in the Related Actions drop-down list, depending on the user's security access to those related actions.

Working With Facets

A facet is an attribute that may be part of one or more search definitions. It provides an alternate representation of the list of values for a given attribute. Facets are attributes used to filter and narrow down a set of search results.



Filter by: Facets

Facets:

- Show search results across each index.
- When clicked show only results in that index related to that facet value.
- Can further narrow results using sub-facets in that index.

For example, assume the Customer component has a faceted attribute of Customer Level with values of L1, L2, and L3. By selecting the L1 facet link, L2 and L3 values will be removed from the search results list, leaving only the L1 for viewing.

For component Keyword search, the system determines facets associated with the search category to which the component is associated and renders them accordingly.

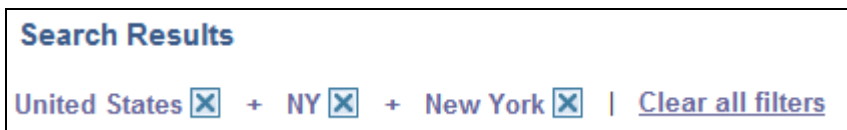
For Application Search, because the search results might span across multiple indexes that are not related to each other, each search definition within a specific search category should have common attributes marked as facets. These attributes should be generic so search results can be classified under one of these attributes. If non-common attributes are marked as facets in the search category, results not having that attribute will not be displayed.

When working with facets, keep these items in mind:

- All Facet values will be sorted in descending order of their counts.
- Facets on date and number are not supported. Only strings can be facets.
- If an attribute is marked as a facet, and if for a given search document that facet attribute does not have a value, then that document gets dropped from the result set.

Facets display five values, by default. If a particular facet has results for more than five facets, *More....* appears at the bottom of the list. Click *More...* to expand the list, and once it is expanded click *Less...* to collapse the list, showing only five again.

As you drill into a set of facets, your path is expressed in the form of facet breadcrumbs.





Facet filter breadcrumbs

You can deselect the check box for a filter to remove its effect on the search results, or to reverse the direction of your filtering and expand the results.

Click Clear all filters to remove all applied filters, returning the search results to the state prior to faceted filtering.

Viewing Search Results With Grid Format and List Format

Use the View As control to toggle between the grid format and the list format for viewing search results.



View as:  



Enables you to switch the view of the search results between list format and grid format. The icon representing the current view is greyed out.

Working with the Grid Format

The following example displays the grid format:

Note: Keyword Search will return results last updated over 1 day ago (07/25/2011 11:54:50AM)

View as:  

[View All](#) First  1-100 of 199  [Last](#)

Empl ID	Empl Record	Name	First Name	Last Name	Second Last Name	Alternate Character Name	Middle Name
HOWS001	0	Melanbacher, Mary Jane	Mary Jane	Melanbacher	(blank)	(blank)	(blank)
MUET219	0	McGuinness, Randy	Randy	McGuinness	(blank)	(blank)	(blank)
HOWS007	0	Collins, Genie	Genie	Collins	(blank)	(blank)	(blank)
HOWS002	0	Rainnie, Jennifer	Jennifer	Rainnie	(blank)	(blank)	(blank)
HOWS005	0	McDougall, Perry	Perry	McDougall	(blank)	(blank)	(blank)
HOWS003	0	Donaldson, Terry Anne	Terry Anne	Donaldson	(blank)	(blank)	(blank)
HOWS006	0	Lavoie, Michael	Michael	Lavoie	(blank)	(blank)	(blank)

Search Results in grid format





To navigate to the PIA page loading the desired data, click the key column with the link.

The Related Actions link does not appear for search results in the grid format.

Note. The default search result display format for Keyword Search is the grid format.

Working with the List Format

The following example displays the list format:

View as:  	 1 2 3 4 5 6 ... 20 
Job Data: Mary Jane Melanbacher HOWS001 0 M011 ST- HR Clerk Last Updated Date:2011-07-25-11.54.55.000000 Business Unit: MC1BU Department: ST - Manufacturing Department Job Title: ST- HR Clerk Location: ST - Test California Full/ Part Time: Full-Time ▼ Related Actions	
Job Data: Randy McGuinness MUET219 0 M011 ST- HR Clerk Last Updated Date:2011-07-25-11.54.55.000000 Business Unit: MC1BU Department: ST - Manufacturing Department Job Title: ST- HR Clerk Location: California Operations Full/ Part Time: Full-Time ▼ Related Actions	
Job Data: Genie Collins HOWS007 0 M011 ST- HR Clerk Last Updated Date:2011-07-25-11.54.55.000000 Business Unit: MC1BU Department: ST - Manufacturing Department Job Title: ST- HR Clerk Location: ST - Test California Full/ Part Time: Full-Time ▼ Related Actions	
Job Data: Jennifer Rainnie HOWS002 0 M011 ST- HR Clerk Last Updated Date:2011-07-25-11.54.55.000000 Business Unit: MC1BU Department: ST - Manufacturing Department Job Title: ST- HR Clerk Location: ST - Test California Full/ Part Time: Full-Time ▼ Related Actions	
Job Data: Perry McDougall HOWS005 0 M011 ST- HR Clerk Last Updated Date:2011-07-25-11.54.55.000000 Business Unit: MC1BU Department: ST - Manufacturing Department Job Title: ST- HR Clerk Location: ST - Test California Full/ Part Time: Part-Time ▼ Related Actions	

Search Results in list format

To navigate to the PIA page loading the desired data, click the Title line of the search result.

The Related Actions link appears only for search results in the list format.

Note. The default search result display format for Application Search is the list format.

Working with Related Actions

For search definitions mapped to components, end users can navigate to related actions from search results without accessing the main result document. Every search result in the list format displays a Related Actions drop-down list, showing the possible related actions for that user, according to security access.

Note. Even though the Related Action drop-down list is available for a search result, it may or may not have any related actions, depending on user authorization. If the end user is not authorized for any of the related actions associated with the component or transaction, the list will be empty.

Working with Persistent Search

If you need to go back to your most recent search results, you can use the Last Search Results icon.



The Last Search Results icon appears both as part of the Application Search Bar as well as the menu breadcrumb navigation. When clicked, it displays your most recent set of search results, retaining any filtering you had previously applied.

Recent Search Results

Job Data
[Refine Search](#)

Job Data: Catherine Moore | KC0005 | 0 | 290075 | Clerk-Payroll
2011-07-25-11.54.55.000000
Business Unit: CAN01 | Department: Finance and Administration | Job Title: Clerk-Payroll | Location: Canadian Headquarters | Full/ Part Time: Part-Time
[Related Actions](#)

Job Data: David Duvall | KC0023 | 0 | 290075 | Clerk-Payroll
2011-07-25-11.54.55.000000
Business Unit: CAN01 | Department: Finance and Administration | Job Title: Clerk-Payroll | Location: Canadian Headquarters | Full/ Part Time: Full-Time
[Related Actions](#)

Job Data: Charles Reid | KC0004 | 0 | 290075 | Clerk-Payroll
2011-07-25-11.54.55.000000
Business Unit: CAN01 | Department: Finance and Administration | Job Title: Clerk-Payroll | Location: Winnipeg Office | Full/ Part Time: Part-Time
[Related Actions](#)

Job Data: Joseph Millier | KC0030 | 0 | 290075 | Clerk-Payroll
2011-07-25-11.54.55.000000
Business Unit: CAN01 | Department: Finance and Administration | Job Title: Clerk-Payroll | Location: Montreal Office | Full/ Part Time: Part-Time
[Related Actions](#)

Job Data: Isabel Issis | KUZ108 | 0 | 290075 | Clerk-Payroll
2011-07-25-11.54.55.000000
Business Unit: CAN01 | Department: Finance and Administration | Job Title: Clerk-Payroll | Location: Canadian Headquarters | Full/ Part Time: Full-Time
[Related Actions](#)

Job Data: Jean-Pierre Desmarais | KC0019 | 0 | 290075 | Clerk-Payroll
2011-07-25-11.54.55.000000
Business Unit: CAN01 | Department: Finance and Administration | Job Title: Clerk-Payroll | Location: Montreal Office | Full/ Part Time: Full-Time
[Related Actions](#)

Recent Search Results page

Click Refine Search to return to the search interface to reapply criteria or filtering.

The results displayed in the Recent Search Results page use the same view format as the previous search result. That is, if the user view the search results in list format, the Recent Search Results page displays the list format.

The Recent Search Results page can be dragged to position it in a convenient location.

Note. The Last Search Results icon in the Application Search Bar is available for both Application Search and Keyword Search on the component. The Recent Search Results icon only appears for Keyword Search on the component when using drop-down navigation, and you have enabled persistent search by setting the Recent Search Results options on the Caching tab for the web profile.

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