Siebel

Search Administration Guide

September 2026

Siebel
Search Administration Guide

September 2026

F87475-08

Copyright © 1994, 2026, Oracle and/or its affiliates.

Author: Sukanya Mishra

Contents

Get Help i

1 What's New in This Release 1

What's New in This Release 1

2 Siebel Search Overview 3

Overview of Siebel Search 3
About Siebel Search 3
Supported Features for Siebel Find and Siebel Search 4
Siebel Search Supported Search Engines 6
Siebel Search Architecture Overview 7
Using Siebel Search in Siebel Open UI 9
AutomaticWildcardSearch System Preference 10

3 Configuring Siebel Find 13

Configuring Siebel Find 13
About Siebel Tools Configuration Tasks 13
About Siebel Tools Find Objects 13
Configuring Searchable Find Categories 14
Configuring Find Parameters for Computer Telephony Integration 14
Configuring Siebel Find for the Search Results View 15
Displaying System Fields in Find Results 16
Configuring Access Control for Find Operations 18
Integrating Siebel Search With Siebel Applications 18
Siebel Tools Find Object Reference 21

4 Configuring Siebel Search for Third-Party Search Engines 27

Configuring Siebel Search for Third-Party Search Engines 27
Process of Configuring Siebel Search for Third-Party Search Engines 27

5 Setting Up Siebel Search with Oracle Secure Enterprise Search 33

Setting Up Siebel Search with Oracle Secure Enterprise Search 33

About Installing Siebel Search 34
Installing Oracle Secure Enterprise Search 34
Creating the Siebel Search Center Directory Structure on the Siebel Server 35
Configuring EAI File Transport Folder Access for Siebel Search 37
Administering FTP Indexing 37
Configuring Field Mapping Settings 41
Administering Siebel Server Component Groups 42
Administering Workflow Management Components 43
Enabling Search Security Web Service 43
Activating the Search Engine for Oracle Secure Enterprise Search 44
Configuring Search Engine Settings for Oracle Secure Enterprise Search 44
Configuring Oracle Secure Enterprise Search Engine for the Search Results View 49
Configuring the Default Search Definition 50
Clearing Attachments From the Shared Search UNC Location 51
Configuring User Authentication for Search Queries 51
Activating Search Run-Time Events 51
Siebel Search Web Services 52
Process of Setting Up the Business Component Source and Connector 52
Process of Setting Up the File System Source and Connector 58
Process of Setting Up the Web Crawler Source and Connector 61
Process of Setting Up the Database Source and Connector 64
Process of Setting Up the IMAP Email Source and Connector 67
Administering Connectors for Oracle Secure Enterprise Search Integration 69
Disconnecting from Oracle Secure Enterprise Search and Deactivating the Identity Manager 70
Oracle Secure Enterprise Search Changes Required for EAI to Support HTTPS 71

6 Configuring Siebel Search for Oracle Secure Enterprise Search 73

Configuring Siebel Search for Oracle Secure Enterprise Search 73
About Siebel Tools Configuration Tasks 73
Configuring the Indexing Mode for Index Status Monitoring 73
Process of Configuring Access Control for Search Results 74
Administering Searchable Fields 76
Administering Navigable Fields 76
Administering Field Weighting 77
Administering Query-Time Clustering Configuration 78
Configuring the Language LOV for Siebel Search Preferences 78

7 Configuring Index Mappings for Oracle Secure Enterprise Search 81
Configuring Index Mappings for Oracle Secure Enterprise Search 81
About Searchable Objects 81
Defining Index Elements 81
Defining Index Attributes 84
Creating Search Run-Time Events for Custom Search Objects 88
Configuring the Business Service User Property in ContentService When Indexing Business Component Pairs 89

8 Administering Siebel Search Index Settings for Oracle Secure Enterprise Search 93
Administering Siebel Search Index Settings for Oracle Secure Enterprise Search 93
About Search Indexes 93
Creating a New Index Definition 93
Creating a Logical Collection 95
Filtering the Index Record-Set 95
Creating Searchable Business Component Fields 96
About Indexing Search Objects 96
Administering Asynchronous Indexing and Index Status Monitoring 99
Monitoring Index Status 99
Administering Batch Processing Status for FTP Indexing 100

9 Setting Up Oracle Secure Enterprise Search for Siebel Remote 103
Setting Up Oracle Secure Enterprise Search for Siebel Remote 103
About Installing Search for the Siebel Remote Client 103
Creating the Siebel Search Center Directory Structure on the Siebel Remote Client 104
Installing Oracle Secure Enterprise Search for Siebel Remote 104
Starting the DSM Listener 105
Configuring Search Field Mapping Settings for Siebel Remote 106
Adding the Siebel Mobile Search Administration Screen for Siebel Remote 106
Verifying the Business Component Search Connector Settings for Siebel Remote 107
Activating Search for Siebel Remote 108
Configuring Search Engine Settings for Siebel Remote 108
Process of Setting Up the Index Definition for the Siebel Remote Client 109
Activating Search Run-Time Events for Siebel Remote 110
Synchronizing Siebel Search for Siebel Remote 111
Search Functionality Supported for Siebel Remote 111

10 Preconfigured Search Objects for Oracle Secure Enterprise Search 113
Preconfigured Search Objects for Oracle Secure Enterprise Search 113
Call Center Searchable Objects 113
Self Service Searchable Objects 114
Sales Searchable Objects 114
Service Searchable Objects 114
Application and Search Definition Mappings 114

11 Filter Search Specifications Syntax for Oracle Secure Enterprise Search 119
Filter Search Specifications Syntax for Oracle Secure Enterprise Search 119
Filter Search Specification Syntax 119

12 API Examples for Oracle Secure Enterprise Search 123
API Examples for Oracle Secure Enterprise Search 123
Search inputArgs Example 123
Search outputArgs Example 124
Feed File Example 126
Index inputArgs Example 127

13 Siebel Intelligent Search 129
Siebel Intelligent Search 129
About Siebel Intelligent Search 129
Integration Architecture and Configuration Flow 130
Setting Up Siebel Intelligent Search 131
Global Search UX and Supported Use Cases 150
Testing Your Initial Setup 161
Access Control 161
Post Siebel Monthly Update Installation 163
Supported Languages 163
External File Ingestion for Siebel Intelligent Search 164
Troubleshooting Siebel Intelligent Search 167
Siebel OpenSearch APIs 173

Get Help

Preface

This preface introduces information sources that can help you use the application and this guide.

Using Oracle Applications

To find guides for Oracle Applications, go to the Oracle Help Center at *https://docs.oracle.com/*.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the *Oracle Accessibility Program website*.

Contacting Oracle

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit *My Oracle Support* or visit *Accessible Oracle Support* if you are hearing impaired.

Comments and Suggestions

Please give us feedback about Oracle Applications Help and guides! You can send an email to: *oracle_fusion_applications_help_ww_grp@oracle.com*.

1 What's New in This Release

What's New in This Release

This chapter tracks the changes in the documentation. It includes the following topics:

- *What's New in Siebel Search Administration Guide, Siebel CRM 26.6 Update*
- *What's New in Siebel Search Administration Guide, Siebel CRM 26.3 Update*
- *What's New in Siebel Search Administration Guide, Siebel CRM 25.10 Update*
- *What's New in Siebel Search Administration Guide, Siebel CRM 22.8 Update*
- *What's New in Siebel Search Administration Guide, Siebel CRM 21.10 Update*

What's New in Siebel Search Administration Guide, Siebel CRM 26.6 Update

The following table lists the changes in this revision of the documentation to support this release of the software.

Topic	Description
External File Ingestion for Siebel Intelligent Search	New topic. Enables administrators to upload and index approved external files in OpenSearch, making them available for Siebel Intelligent Search and RAG experiences.
Global Search UX and Supported Use Cases	Modified topic. Updated with information about Field based Search and Hierarchical Search.
Enabling Search Engine in Siebel Application	Modified topic. New Search Engine Driver Parameter added.
Create Search Categories and Generate Index	Modified topic. Updated with a new section, *Resubmit Failed Indexing Jobs for Search Categories*.
Configuring OpenSearch Integration via YAML File	Modified topic. A new **`modernsearchconfig_template.yaml`** file is introduced. This file contains the latest out-of-the-box (OOB) configuration required to support new Intelligent Search functionalities.
Siebel OpenSearch APIs	Modified topic. API table updated.
Post Siebel Monthly Update Installation	New topic. Describes the repository, configuration, and indexing updates required after upgrading to Siebel 26.6+ to support the latest Intelligent Search features and enhancements.

What's New in Siebel Search Administration Guide, Siebel CRM 26.3 Update

The following table lists the changes in this revision of the documentation to support this release of the software.

Topic	Description
Enabling Required Component Groups in Siebel	New topic. Provides step-by-step instructions to enable and validate the required Siebel Server component groups for OpenSearch.

What's New in Siebel Search Administration Guide, Siebel CRM 25.10 Update

The following table lists the changes in this revision of the documentation to support this release of the software.

Topic	Description
Siebel Intelligent Search	New chapter. Describes about Siebel Intelligent Search functionality.

What's New in Siebel Search Administration Guide, Siebel CRM 22.8 Update

The following table lists the changes in this revision of the documentation to support this release of the software.

Topic	Description
Process of Setting Up the Lotus Notes Source and Connector	Obsolete topic. This topic has been removed from the guide.
Application and Search Definition Mappings.	Modified topic. Siebel eBriefings is no longer supported.

What's New in Siebel Search Administration Guide, Siebel CRM 21.10 Update

The following table lists the changes in this revision of the documentation to support this release of the software.

Topic	Description
Configuring Incremental Indexing for Third-Party Search Engines	Modified topic. Added a note about the Enable Incremental Indexing system preference.

2 Siebel Search Overview

Overview of Siebel Search

This chapter provides an overview of Oracle's Siebel Search functionality and architecture, and includes the following topics:

- *About Siebel Search*
- *Supported Features for Siebel Find and Siebel Search*
- *Siebel Search Supported Search Engines*
- *Siebel Search Architecture Overview*
- *Using Siebel Search in Siebel Open UI*
- *AutomaticWildcardSearch System Preference*

Note: The procedures in this guide assume that you do not use the Tree navigation control option to access screens and views. However, you can choose to use the Tree navigation control if required. For more information about setting navigation options, see *Siebel Fundamentals Guide* .

About Siebel Search

Oracle's Siebel Search provides incremental indexing of search fields, basic and advanced search functionality for both structured and unstructured data, and Find operations for real-time database queries. Siebel Search is integrated with Oracle Secure Enterprise Search and can also be extended to integrate with other third-party search engines with custom-built adapters.

About Siebel Search Operations

Full text searches can be performed across multiple business components, fields, and files, in one operation. A Search operation allows a broad search by not requiring the user to specify specific fields to search on. Search also gives you the option of searching through attachments.

Note: Searching through attachments applies to Oracle Secure Enterprise Search only and has not been implemented for third-party search engines.

Search operations are case insensitive. Indexed Search requires licensing Oracle Secure Enterprise Search or implementing a custom adapter that integrates with another third-party search engine.

About Siebel Find Operations

A Siebel Find operation consists of a direct query on a database, and allows users to query across all configured fields across multiple categories or on a field-by-field basis using the Advanced Find capabilities. Find objects are accessible through the Search Center, and allow users to perform queries on specific predefined fields linked to specific business components (such as querying for a name in the Last Name field). Find results are a real-time reflection of database records. This makes Find appropriate for searching on transactional database records that change frequently, such as Activity or Opportunity records. Find operations are case sensitive.

Note: The Siebel Query tool is covered in the Siebel Fundamentals guide on Oracle Help Center.

Supported Features for Siebel Find and Siebel Search

The following table summarizes the features available for Siebel Find, Siebel Search, and third-party search engine.

Feature	Supported for Find	Supported for Search	Supported for Third-Party SE
Siebel Open UI	Yes	Yes	Yes
Business component indexing	Not applicable	Yes	Yes
File system indexing	Not applicable	Yes	No
Web source indexing	Not applicable	Yes	No
Database source indexing	Not applicable	Yes	No
IMAP email source indexing	Not applicable	Yes	No
Secure indexing	Not applicable	FTP : Yes	FTP indexing: No
Refresh indexing	Not applicable	Yes	No
Incremental indexing	Not applicable	Yes	Yes
Asynchronous indexing	Not applicable	Yes	Yes
Index status monitoring	Not applicable	Yes. Supported for FTP indexing mode.	Yes

Feature	Supported for Find	Supported for Search	Supported for Third-Party SE
Real time database queries	Yes	No. Searches are run against search indices.	No
Full text search	Not applicable	Yes	Yes
Keyword search	No	Yes	Yes
Automated suggested keywords	No	Yes	Yes
Parametric search (field based search).	Yes	No	Yes
Case insensitive search	No	Yes	Yes
Wildcard search For more information, see *AutomaticWildcardSearch System Preference*.	Yes. Applies to any character, including punctuation characters, such as a space, or a comma. The find operation can span more than one word.	Yes. Does not apply to punctuation characters, such as a space, or a comma. Applies to characters only within a word.	Yes
Boolean operators	No	Yes. Supports AND and OR Boolean operators.	Yes
Searches on content in attachments	No	Yes	No
Searches on external data sources and file systems	Not applicable	Yes	Yes
Search by file format	Not applicable	Yes. The search can be filtered by the following file types: • All • HTML • Microsoft Excel • Microsoft PowerPoint • Microsoft Word • PDF • Plain text • Rich Text Format	No

Feature	Supported for Find	Supported for Search	Supported for Third-Party SE
		Note: This features applies only for FileSystem Search. The file format filter cannot be applied on a Buscomp search.	
Search by language	Not applicable	Yes	No
Search History	Yes	Yes	Yes
Password Encryption	Not applicable	Not supported for FTP indexing	Not applicable
Computer Telephony Integration	Yes	Not applicable	Yes
Siebel Smart Answer Integration	Yes	Not applicable	Yes

Siebel Search Supported Search Engines

Siebel Search supports the following search engine options:

- **Siebel Find.** This is the default search engine setup which is available by default in Siebel Search.
- **Third-Party Search Engine Integration.** Siebel Search supports the integration of third-party search engines. You must write your own search adapter to enable third-party search engines, and then configure Siebel to use the third-party search engine.
- **Oracle Secure Enterprise Search Engine Integration.** Siebel Search supports the integration of Oracle Secure Enterprise Search. You must configure Oracle Secure Enterprise Search for Siebel Search (it is not available by default).

The following table summarizes the Siebel Search supported search engine options and lists the topics that you should review for further information.

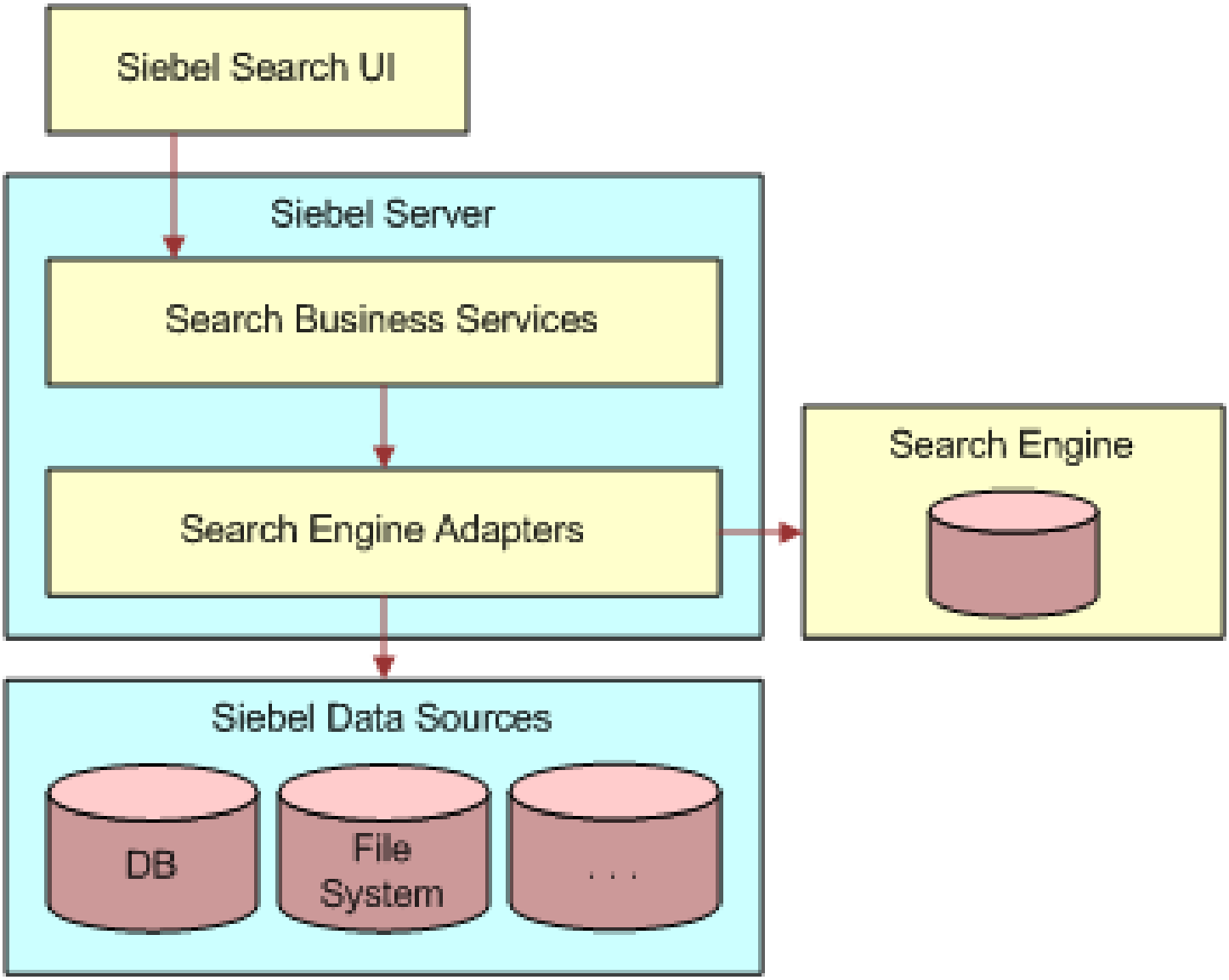
Search Engine	See...
Siebel Find	For more information about Siebel Find, see the following: • *Using Siebel Search in Siebel Open UI* • *Configuring Siebel Find*
Third-Party Search Engine	For more information about integrating third-party search engines, see the following: • *Using Siebel Search in Siebel Open UI* • *Configuring Siebel Search for Third-Party Search Engines*
Oracle Secure Enterprise Search	For more information about integrating Oracle Secure Enterprise Search, see the following:

Search Engine	See...
	• *Using Siebel Search in Siebel Open UI* • *Configuring Siebel Search for Third-Party Search Engines* • *Setting Up Siebel Search with Oracle Secure Enterprise Search* • *Configuring Siebel Search for Oracle Secure Enterprise Search* • *Configuring Index Mappings for Oracle Secure Enterprise Search* • *Administering Siebel Search Index Settings for Oracle Secure Enterprise Search* • *Setting Up Oracle Secure Enterprise Search for Siebel Remote* • *Preconfigured Search Objects for Oracle Secure Enterprise Search* • *Filter Search Specifications Syntax for Oracle Secure Enterprise Search* • *API Examples for Oracle Secure Enterprise Search*

Siebel Search Architecture Overview

Siebel Search architecture contains the elements in the following figure, including the following elements:

- **Siebel Search UI.** Interface for retrieval of Find and Search results. Support is provided for Siebel Open UI.
- **Siebel Server.** Hosts the search business services and search engine adapters.
- **Search Engine Adapters and Indexing Adapters.** Interface with the Siebel data sources and search engine. Index the Siebel business data.
- **Data Sources.** Indexed data sources, for example, Siebel business components, Web sources, or file systems.


Siebel Search UI
Siebel Server
Search Business Services
Search Engine Adapters
Search Engine
Siebel Data Sources
DB
File System
. . .

Using Siebel Search in Siebel Open UI

For information about how Siebel Find and Oracle Secure Enterprise Search end user functionality works for applications using Siebel OpenUI, including information on performing the following tasks, see *Siebel Fundamentals Guide* :

- Performing a Basic Search Operation

  Basic search searches every field in every business component configured across all search engines configured for Siebel Search (for example, Siebel Find, Oracle Secure Enterprise Search, and any other third-party search engine configured).

  > **Note:** For Oracle Secure Enterprise Search, user access to search results is determined by the sblvisibilityid index field mapping, and the account profile of the logged in user, such as Position ID or Account ID. For information about configuring the sblvisibilityid index field, see *Defining Index Attributes*. The sblvisibilityid index field mapping does not apply to third-party search engines.

  The auto suggest feature must be enabled for your search engine for auto suggestions to appear when typing in your search criteria. For more information about enabling the auto suggest feature for your search engine, see *Configuring Siebel Find for the Search Results View*.

  > **Note:** Sorting is applied to the search results that appear in the results view rather than the entire result set. For third-party search engines, the Search Web Service receives SortField and SortOrder hints from Siebel, which indicates that the search results must be sorted. The Web service issues the appropriate commands to the search engine. The search engine sends results based on the SortField and SortOrder values.

- Performing an Advanced Find Operation

  When you select Advanced Find in the Search Toolbar and then click Find, a drop-down list of categories to search against appears provided that the auto suggest feature is enabled for Siebel Find. For more information, see *Activating the Search Engine for Oracle Secure Enterprise Search*.

- Performing a Siebel Smart Answer Search

  The Siebel Search Center supports integration with the Siebel Smart Answer knowledge base for manual or automated searches. For information on configuring and using Siebel Smart Answer, see *Siebel Smart Answer Guide* .

- Performing a Siebel Smart Answer Search from Service Requests

  The Siebel Search Center supports integration with the Siebel Smart Answer knowledge base for manual or automated searches. For information on configuring and using Siebel Smart Answer, see *Siebel Smart Answer Guide* .

- Performing an Advanced Oracle Secure Enterprise Search Operation

  Advanced Oracle Secure Enterprise Search is enabled when a search engine has been configured and set as the default, see *Defining Index Attributes*.

  You can choose to retrieve your search results from multiple data sources. This feature is available if external data sources have been enabled, for example, a File System Connector or a Web Crawler Connector:

  - To enable the File System Connector, see *Configuring the Siebel File System Connector*.
  - To enable the Web Crawler Connector, see *Process of Setting Up the Web Crawler Source and Connector*.
  - Modifying Search Settings for Oracle Secure Enterprise Search

Siebel search allows you to perform full text searches using simple or compound (boolean) query operators. Boolean operators allow you to create a more precise query. For more information about using simple and compound query operators, see *Siebel Fundamentals Guide* .

AutomaticWildcardSearch System Preference

Siebel CRM prepends and appends a trailing wildcard to a search string if the AutomaticWildcardSearch system preference is set to `TRUE` or does not exist. If AutomaticWildcardSearch does not exist, then Siebel CRM behaves as if AutomaticWildcardSearch was set to `TRUE`.

Note: AutomaticWildcardSearch applies when using Siebel Find, including Advanced Find functionality, and the Search Toolbar - it does not apply to Oracle Secure Enterprise Search or Siebel applet search.

When AutomaticWildcardSearch is set to `TRUE` (the default value), Siebel CRM behaves as follows:

- Siebel prepends and appends any entry in the search text box with `*`, see example 1 in the following table.
- Siebel executes any entry within double quotes as is. That is, it does not prepend or append any entry within double quotes with `*`, see example 2 in the following table.
- Siebel executes any entry with `*` as is, see example 3 in the following table.

Example	User types in the following:	Siebel Find searches for the following:	The Search Results pane displays the following
1	Antonio	*Antonio*	Results for *Antonio* in All Categories
2	“Antonio”	Antonio	Results for Antonio in All Categories
3	Antonio* *Antonio *Antonio*	Antonio* *Antonio *Antonio*	Results for Antonio* in All Categories Results for *Antonio in All Categories Results for *Antonio* in All Categories

When AutomaticWildcardSearch is set to FALSE, Siebel CRM behaves as follows:

- Siebel executes any entry in the search text box as is. That is, it does not prepend or append the search string with *, see example 1 in the following table.
- Siebel executes any entry within double quotes as is. That is, it does not prepend or append any entry within double quotes with *, see example 2 in the following table.
- Siebel executes any entry with * as is, see example 3 in the following table.

Example	User types in the following:	Siebel Find searches for the following:	The Search Results pane displays the following:
1	Antonio	Antonio	Results for Antonio in All Categories
2	“Antonio”	Antonio	Results for Antonio in All Categories
3	Antonio* *Antonio *Antonio*	Antonio* *Antonio *Antonio*	Results for Antonio* in All Categories Results for *Antonio in All Categories Results for *Antonio* in All Categories

3 Configuring Siebel Find

Configuring Siebel Find

This chapter describes how to configure Siebel Find objects and Find functionally. It includes the following topics:

- *About Siebel Tools Configuration Tasks*
- *About Siebel Tools Find Objects*
- *Configuring Searchable Find Categories*
- *Configuring Find Parameters for Computer Telephony Integration*
- *Configuring Siebel Find for the Search Results View*
- *Displaying System Fields in Find Results*
- *Configuring Access Control for Find Operations*
- *Integrating Siebel Search With Siebel Applications*
- *Siebel Tools Find Object Reference*

This chapter assumes knowledge of Siebel Tools. For more information, see *Using Siebel Tools* .

About Siebel Tools Configuration Tasks

Siebel Tools is a declarative software development tool that allows you to configure the underlying data and data presentation of your Siebel application without making changes to the program source code. Siebel CRM provides a core set of search object definitions that you can use as a basis for your tailored application. There are no source code modifications, nor modifications to schema. Siebel Tools uses the Siebel Runtime Repository configuration provided by Oracle.

About Siebel Tools Find Objects

Your Siebel application contains a list of application-specific Find objects. Users have access to the Find objects that are associated to the application being used, depending on their responsibilities. You can also specify a default Find object for your Siebel application. Find objects identify business components and corresponding fields that can be searched. Global Find items are used to perform find operations on particular business components. Following execution of a Find, the Find Results view in the main window lists records from the application that satisfy the Find criteria.

Note: Customizing Siebel Find using virtual business components (VBCs) is not supported.

Configuring Searchable Find Categories

This topic covers the activation of Find objects to display as searchable Find categories in the Search Center Look In list.

To configure searchable Find categories

1. Log in to Siebel Tools.
2. Select the application for which Find categories are to be configured in the Application Object Explorer.
3. Navigate to Application Find in the Object Explorer and activate the Find Objects that you want to display as searchable Find categories in the Search Toolbar.
4. Make sure that the relevant Business Components are part of the Search Execution Business Object.
5. Update the repository and deliver the updates.

> **Note:** Changes made to the Application Find object in Siebel Tools are automatically reflected in the UI.

Configuring Find Parameters for Computer Telephony Integration

This topic covers configuring event response parameters for Find to enable CTI (Computer Telephony Integration) functionality in the Siebel Search Center. OnInboundCallReceived event response, to automatically launch the Search Center with pre-populated search criteria, when an agent accepts a call on the CTI toolbar.

Siebel CTI provides voice-channel support for call center agents using Siebel CRM. Agents are notified of incoming calls through the communications toolbar, and can perform a range of call-handling activities using the toolbar and related menu commands. If the CTI Find parameters are defined for the OnInboundCallReceived Event Response, and if QuerySpec does not return any records, then the Search Center is automatically launched when the agent accepts a call. The Search Center is automatically pre-populated with the criteria specified in the Find Event Response parameters. For more information on configuring Siebel CTI, see *Siebel CTI Administration Guide*

To configure Find and Computer Telephony Integration for the Siebel Search Center

1. Navigate to Site Map, Administration - Communications screen, then the All Configurations view.
2. Select the Configuration for which you want to define the Event Response.
3. Select the Event Handlers tab.
4. Select the OnInboundCallReceived Event Response.
5. Click the Event Response Parameters tab and configure the Find parameters. Some fields are described in the following table.

Field	Sample Value	Description
FindDialog	Service Request	Find object name to determine what Find Category is displayed in the Look In field when the Search Center

Field	Sample Value	Description
		is launched. The Find object name must match that defined in the Find column of the Application Find view in Siebel Tools for the Siebel application that you are using, for example, set this to the Service Request business component.
FindField.<Display Name>	{ANI}	The FindField.<Display Name> Event Response Parameter is used to dynamically pre-populate Find fields in the Search Center. The Display Name must match that defined in Siebel Tools. The following sample FindField.<Display Name> Event Response Parameters are used to define pre-populated field values for the Service Requests Find Category: • **FindField.CSN.** Set this field value to {ANI} to pre-populate the Service Request CSN (Customer Service Number) field with the incoming telephone number. At runtime, on answering a call from the CTI toolbar, the Find CSN field in the Search Center is pre-populated with the telephone number of the incoming call. • **FindField.First Name.** Set this field value to {@UserName} to pre-populate the Service Request First Name field with the agent's User Name. At runtime, on answering a call from the CTI toolbar, the Find First Name field in the Search Center is pre-populated with the agent's User Name for the Siebel application.

Configuring Siebel Find for the Search Results View

Siebel Find is installed, activated, and configured by default in Siebel CRM. However to enable or disable Siebel Find so that it appears or is hidden in the Search Results view, to enable or disable auto suggest for Siebel Find, or to change the position of the Siebel Find tab in the Search Results view, then complete the steps in the following procedure.

> **Note:** The search engine settings for Siebel Find are configured in the Administration - Search screen, Search Engine Settings view. For information about the different search engine settings that you can set for Oracle Secure Enterprise Search and third-party search engines in general, see *Configuring Search Engine Settings for Oracle Secure Enterprise Search* and *Configuring Siebel Search for Third-Party Search Engines*.

Search results are displayed in the Search Results view. In the Search Results view, when you drill down on a record to see the detailed record information, the search results are retained. This mode of display is known as Results Retention Mode. Preview and Attach features are available in Results Retention Mode

To configure Siebel Find for the Search Results view

1. Navigate to the Administration - Search screen, then the Search Engine Settings view.
2. In the Search Engine applet, go to the Siebel Find record and modify the values for the record as shown in the following table.

Field	Description	Value
Engine Name	Name of the search engine, which appears as the tab display name in the Search Results view.	Siebel Find **Note:** Siebel Find is the default display name but you can modify this as required.
Search Adapter	Name of the search adapter, which maps to the search engine configured.	Siebel Find Adapter Service
Sequence Number	Indicates the position where the the Siebel Find tab will appear in the Search Results view. For example, 1 indicates the first position and so on.	1
Active	Indicates whether to show (Y) or hide (N) the Siebel Find tab in the Search Results view.	Y
Auto Suggest Supported	Indicates whether to enable (Y) or disable (N) the auto suggest feature for Siebel Find.	Y

3. In the Driver Parameters applet, configure the driver parameters for Siebel Find as shown in the following table.

Name	Description	Default Value
Default Categories	If no category is specified for a search, then Siebel Find searches categories according to the value in this parameter setting.	All **Note:** All means to search all categories.

Displaying System Fields in Find Results

This topic covers exposing system fields in the Find Results view. For more information on system fields and system columns, see *Configuring Siebel Business Applications* .

Note that for third-party search engines, the data displayed in the Find Results view is as follows and you cannot modify the data:

- **Result title**, which is in the following format: Category Name - Matched Field Name - Matched Field Value.

- **Result fields**, which appear when you click the arrow beside a result to show a summary of the search result. The result fields include all the indexed fields, but system fields such as RowID, Created on, and Created By are not included.

Displaying the ID System Field in Find Results

This topic provides an example of exposing a system field that already exists in the Field picklist, such as the ID system field. The ID system field represents the ROW_ID column in the base table. This example uses the Accounts business component.

To display the ID system field in the Find Results view

1. Log in to Siebel Tools.
2. Select Find in the Object Explorer.
3. Query for Account.
4. In the Object Explorer, navigate to the Find Field object.
5. Right-click on the Find Field object and create a new record with the following details:
    - Display Name = ID
    - Field = Row ID
    - Display In Results = TRUE
6. Update the repository and deliver the updates.

Displaying the Created System Field in Find Results

This topic provides an example of exposing a system field that does not already exists in the Field picklist, such as the Created system field. An alias field must be created for the system field, such as Date Created. For information on which column name to use for each system field, see *Configuring Siebel Business Applications* . This example uses the Accounts business component.

To display the Created system field in the Find Results view

1. Log in to Siebel Tools.
2. Select Business Component in the Object Explorer.
3. Query for Account.
4. In the Object Explorer, navigate to the Field object.
5. Right-click on the Find field and create a new record with the following details:
    - Column = CREATED
    - Name = Date Created
6. Select Find in the Object Explorer.
7. Query for Account.
8. In the Object Explorer, navigate to the Find Field object.
9. Right-click on the Find Field object and create a new record with the following details:
    - Display Name = Created
    - Field = Create Date
    - Display In Results = TRUE

10. Update the repository and deliver the updates.

Configuring Access Control for Find Operations

Access control for Find is accomplished through specifying views for a Find object. For example, you can define All Accounts across Organizations as a Find View for an Account Find object. Within Siebel Search, visibility determines the set of records displayed to the user from specific business components in the Find Results view. The user's access to records is determined through a combination of user position, Siebel Tools object attributes, and record values. The following visibility modes can be applied for Find operations within Siebel CRM:

- **All Organizations view.** The user has access to all records.
- **All view.** User has access to all records in his or her own organization.
- **Team view.** User has access to records in his or her team.
- **My view.** User has access only to his or her own records.

For more information on each visibility mode, and on setting up visibility within your Siebel application, see *Siebel Security Guide* .

Integrating Siebel Search With Siebel Applications

Siebel Search is enabled by default for most Siebel applications. You can search or query for records in your Siebel application provided that a search control has been configured in Siebel Tools for the specific view or applet in question. If you do not see a search toolbar or text box when you navigate to a view or applet in your Siebel application, then a search control has not been configured in Siebel Tools for that particular view or applet.

You can customize Siebel Search to suit your own business needs. The following procedure shows you how to integrate Siebel Search in to an application.

To integrate Siebel Search in to an application

1. Log in to Siebel Tools and do the following:
   a. Go to the Application object and make a note of the Container Web Page.

      The Container Web Page specifies the Web page object definitions that Siebel CRM uses to display the elements that surround a Siebel view. This page contains typical user interface elements, such as viewbars, screenbars, logos, search control, and so on.
   b. Go to the Web Page object and search for the Container Web Page that you noted in Step a.
      - Expand the Web Page object and then add a new Web Page Item entry with the values shown in the following table:

Field Name	Value
Name	Search Results Pane Applet

Field Name	Value
Type	Applet
Item Identifier	10,000

- Drill down into the Web Page Item that you added in the previous step and then add a new Web Page Item Parameter with the values shown in the following table:

Field Name	Value
Name	Mode
Value	Edit List

- Make a note of the Web Template for the current Web Page.

c. Go to the Web Template object in Siebel Tools and search for the Web Template for the current Web page that you noted in the previous step.

In the definition for that Web Template, add the following piece of code:

```
<!-- SEARCH TOOLBAR START -->
<div class="siebui-banner-btn siebui-srch-banner-btn" title="Search Button">
 <div id="s_srch_new" class="siebui-search-esearch bannerDiv
ToolbarButton">
 <div id="srch_icon_new" class="ui-menubar siebui-search-tb-btn siebui-
icon-search" title="Search" role="text"><span></span></div>
 </div>
</div>
<div id="searchtoolbar" class="siebui-banner-btn siebui-search-bar"
title="Search Toolbar">
 <div id="searchtoolbaroption" class="siebui-search-option">
 <button class="siebui-search-toolbar-options siebui-closed"
id="srch_toolbar_option">
 </button>
 <ul class="ui-menu ui-widget ui-widget-content siebui-search-dropdown-
menu-hide" role="menubar" tabindex="0">
 <li id="srch_settings" class="siebui-appmenu-item ui-menu-item"><a
href="c_Feed_File_Example_vp203175.ditac_Feed_File_Example_vp203175.dita" class="ui-state-
disabled"></a></li>
 <li id="srch_adv_find" class="siebui-appmenu-item ui-menu-item"><a
href="c_Feed_File_Example_vp203175.ditac_Feed_File_Example_vp203175.dita" class="ui-state-
disabled"></a></li>
 <li id="srch_adv_search" class="siebui-appmenu-item ui-menu-item"><a
href="c_Feed_File_Example_vp203175.ditac_Feed_File_Example_vp203175.dita" class="ui-state-
disabled"></a></li>
 <li id="srch_barcode" class="siebui-appmenu-item ui-menu-item"><a
href="c_Feed_File_Example_vp203175.ditac_Feed_File_Example_vp203175.dita"></a></li>
 </ul>
 </div>
 <div id="searchtoolbarsrch" class="siebui-search-text">
 <input type="text" id="srch_toolbar_text_box" class="siebui-search-
toolbar-textbox"/>
```

```
 </div>
</div>
<!-- SEARCH TOOLBAR END -->
```

2. Log in to your Siebel application and modify the manifest as follows:

> **Note:** If your application uses a custom Web Page presentation model or physical renderer, then manifest changes are not required so skip this step and proceed to Step 3.

   a. Navigate to the Administration - Application screen, then the Manifest Administration view.
   b. Query for the following:

Field Name	Value
Type	Web Page
Name	Container Web Page

   c. Activate the Web Page entries (if not already activated).
   d. Select Physical Renderer in the Usage Type field, click Navigate to Files, and then do the following:
      - Inactivate the following existing Name entry: `Name = 'siebel/webpgpr.js'`
      - Associate a new file with Name as follows: `Name = 'siebel/searchrenderer.js'`
   e. Select Presentation Model in the Usage Type field, click Navigate to Files, and then do the following:
      - Delete the following existing Name entry: `Name = 'siebel/webpgpm.js'`
      - Associate a new file with Name as follows: `Name = 'siebel/searchmodel.js '`

3. If using a customized Web Page presentation model or physical renderer, then make sure that your application inherits the following searchmodel and searchrenderer to enable the search functionality in the Web Page presentation model and physical renderer:

> **Note:** This step is required only if your application uses a custom Web Page presentation model or physical renderer. All customized Web Page presentation model and physical renderer is inherited from the Search presentation model and physical renderer.

   - The Presentation Model (`siebel/searchmodel`) inherits `siebel/webpgpm`

     Sample code for the custom presentation model is as follows:

```
if (typeof (SiebelAppFacade.ShoppingCartWebPagePM) === "undefined") {
 SiebelJS.Namespace('SiebelAppFacade.ShoppingCartWebPagePM');
 define("siebel/shoppingcartwebpagepm", ["siebel/searchmodel.js"], function () {
```

   - The Physical Renderer (`siebel/searchrenderer`) inherits `siebel/webpgpr`

     Sample code for the custom physical renderer is as follows:

```
if (typeof (SiebelAppFacade.ShoppingCartWebPagePR) === "undefined") {
 SiebelJS.Namespace('SiebelAppFacade.ShoppingCartWebPagePR');
 define("siebel/shoppingcartwebpagepr", ["siebel/searchrenderer.js"], function () {
```

Siebel Tools Find Object Reference

This topic contains reference information on Find Objects contained in your Siebel application. These include the following:

- *Find Object*
- *Application Find Object*
- *Find Field Object*
- *Find View Object*
- *Find Field Locale Object*
- *Find Locale Object*
- *Find Pick View Object*

Find Object

A Find object definition creates a searchable Find Category that can be added to the Search Center Look In list, and a corresponding set of Find fields and possible views. The Find fields and find views are implemented as child object definitions of the Find object. Predefined Find objects are provided for each Siebel application.

Find Object Properties

The following table lists the Find object properties.

Property	Required	Description
Applet	Required	The applet that will be used by the Find object. It is required that the applet defined be on every one of the views defined in the Find views for the Find operation to work properly. When configuring the Find object, the choices you have for selecting come from the business component on the applet.
Destination Field	Optional	A TRUE or FALSE value, which if TRUE, highlights this Find object definition in the Search Center list. This property applies only to the initial find operation in the application.
Display Name	Optional	The name that will be displayed to the user, such as Accounts.
Drilldown View	Optional	The view that appears when the user drills down. If this property is not set (has no value), then the view is taken from the Find View records. If a Drilldown View is not specified, the view in the Find Views that the user has access to will be used. You cannot disable the drilldown on find objects.
Name	Required	The name of the Find object definition. This is referenced when setting up Application Find object definitions that use this Find object definition.

Property	Required	Description
Preview	Optional	The view that appears when a user invokes the Preview button. This feature allows the user to preview a result record in a pop-up window.

Application Find Object

An application Find object definition associates one Find object definition with one application. Application Find is a child object type of Application. The name of the Find object definition appears in the Find property in the Application Find object definition. Each application has multiple Find objects defined as Find Categories in the Search Center Look In list, each one included by virtue of an Application Find object definition. You can also specify a default find in the Object Properties list.

Application Find Object Properties

The following table lists the Application Find object properties.

Property	Required	Description
Default Find	Optional	Valid values for the Application Find Default Find object are TRUE or FALSE. Setting this value to TRUE allows you to set the default Find object for your application. The default find object is defined in the Application Default Find property. For information on the Application Default Find property, see Siebel Object Types Reference. The default Find object displays as the default Find category in the Search Center Look In list.
Find	Required	The Find object definition to include in the application. Example values include Contact and Account.
Name	Required	It is the same as the Find property.
Sequence	Required	The order in which the Find Category appears in the Search Center Look In list. This property takes an Integer value.
Text	Required	The translatable text that appears as the title of the Find dialog box.

Find Field Object

The Find Field is a child object type of Find. A Find Field object definition adds a find field to its parent Find object definition. The find field appears as a text box in the Search Center when the parent Find is active. Each child Find Field object definition provides the parent Find with a find value text box and corresponding Find field name to search.

Find Field Object Properties

The following table lists the Find Field object properties.

Property	Required	Description
Display Name	Optional	The text (or key to localized text) that will be displayed for this find field when its parent Find object definition is active in the Search Center window.
Field	Required	The field being searched in the business component.
Name	Required	Name of the search field added.
Sequence	Optional	The position of this find field in the list of fields displayed in the Search Center-Find category for the parent Find object definition.
Display in Results	Optional	Selecting this option allows the field to be displayed on the find results applet in the Search Center. By default, the whole field value will be displayed, but you can set a limit so that characters after the maximum length will be skipped. An ellipsis (...) is appended to the end of the results when a limit is set. You must use the user property in Find Results List Applet to set the length limit. Use the following applet user properties: • User Property Name: [Find object Name] • User Property Value: [Find Field] = [Length] If there is more than one, use the following applet user property syntax: User Property Value: [Find Field Name] = [Length], [Find Field Name] = [Length], [Find Field Name] = [Length]...
Display in Entry	Optional	Selecting this option allows the field to be displayed on the find entry applet in the Search Center.

Find Field Object Rules and Assumptions

- Boolean operators are not supported when searching on a Find object.
- The field specified in a find field must be a field that exists in the business component for the applet for the Find object definition.
- The Search Center-Find category and a query by example (QBE) can have different behavior for multi value fields, because the Search Center will generate the same query as if you did an EXISTS query on the field in QBE. You can verify this by embedding your QBE expression with Exists(), for example, (Ada*).
- QBE supports both types of querying, but to keep the Search Center simple, Siebel CRM implements a query that works in all cases. This query uses the syntax Ada* (where the wildcard, as indicated by an asterisk (*) is appended to the search text). If you want to mimic the behavior of the nonExists version with the Search Center-Find category, you must create a join from the primary ID field for the MVLink to the table containing the data. Then add a field to the table you joined to, and point your find field to this new field. This configuration change will cause the query to do a query on the join field that does not use EXISTS.

- If you want to do an exact search in a Find field, prefix the search text with an equal sign (=), for example, = Ada. The query uses the syntax = Ada. (No wildcard is appended to the text.)
- Do not configure the State field as a Find Field for a Find object.

  For example, if the Accounts Find object configuration in Siebel Tools includes the State Find Field, then the State field appears as an option (in the Accounts Find object menu) in the UI. In such a case, do the following in Siebel Tools to remove the State field from the Accounts Find object menu:

  - Deactivate the Find Field, then update the repository and deliver the update.
  - Disable the State field for the required language.
  - Disable the State Find Field for the Accounts Find Object.

Find View Object

Each Find view object definition specifies a view that can be activated when the parent Find is initiated from the Search Center. Each find view specifies a different visibility level for the same business component. The views are acted upon in a fixed order, as specified in the Sequence property of the Find view object, until a view is encountered in which the user can view data. The visibility for this view is then applied to the results from the query on the Find object.

For a given user, the find operation uses the first find view object definition that is in the user's responsibility list. Because different views apply different visibility, you have the least restrictive views, first in the list, and the most restrictive, last. This order allows users with different responsibilities to find items using the most broad visibility that they have access to use.

Find View Object Properties

The following table lists the Find View object properties.

Property	Required	Description
Sequence	Optional	The order that views are used for the Find object definition.
View	Required	The name of the view to be used for the find operation when this find view is used.

Find Field Locale Object

Locale objects are children of Find Field objects and contain all translatable information. Locale objects represent language-specific overrides used with the Find Field object type.

Find Field Locale Object Properties

The following table lists the Find Field Locale object properties.

Property	Required	Description
Display Name	Optional	The text or that will be displayed for this find field when its parent Find object definition is active in the Search Center.
Name	Required	The abbreviation of the language being used. For example, the value ENU is used to denote U.S. English.

Find Locale Object

Find Locale objects are children of UI objects and contain all translatable information. They represent the language-specific overrides, used with the Find object type.

Find Locale Object Properties

The following table lists the Find Locale object properties.

Property	Required	Description
Display Name	Optional	Description on the Find Locale object property.
Name	Required	The abbreviation of the language. For example, the value ENU is used to denote U.S. English.

Find Pick View Object

Users can associate find results from the Search Center with the active record in the main content area. The Pick View object, located under Find Pick View, identifies the applet that can receive the selected item from the Find Results List as an associated record. This applies only to applets that can handle such associations.

Find Pick View Object Properties

The following table lists the Find Pick View object properties.

Property	Required	Description
Applet Name	Required	Name of the applet
View Name	Required	Name of the view containing the applet
Name	Required	Logical name of the pick view

Property	Required	Description
Field Name	Optional	Name of the multivalue group field that will receive the search result

4 Configuring Siebel Search for Third-Party Search Engines

Configuring Siebel Search for Third-Party Search Engines

This chapter describes how to configure Siebel Search for third-party search engines. It includes the topic: *Process of Configuring Siebel Search for Third-Party Search Engines*.

Process of Configuring Siebel Search for Third-Party Search Engines

Siebel Search can work with any third-party search engine, if the third-party search engine has a web service endpoint.

If the third-party search engine has a web service endpoint, then Siebel Search can:

- Send indexing and search requests to the web service endpoint.
- Receive responses and display the responses in the Siebel application's search results.

To set up third-party search engines for integration with Siebel Search, perform the following tasks. Note that the third-party Elastic Search Engine is used as an example in the tasks in this process.

- Write a web service for your search engine and host it on a web server.
- Configure Siebel Search and indexing. See:
  - *Configuring Siebel Search for Third-Party Search Engines*
  - *Defining Index Categories for Third-Party Search Engines*
  - *Configuring Indexing for Third-Party Search Engines*
  - *Configuring Incremental Indexing for Third-Party Search Engines*

Configuring Siebel Search for Third-Party Search Engines

Configuring Siebel Search for third-party search engines involves adding a new search engine record and configuring the search engine settings as required.

This task is a step in *Process of Configuring Siebel Search for Third-Party Search Engines*.

To configure Siebel Search for third-party search engines

1. Navigate to the Administration - Search screen, then the Search Engine Settings view.
2. In the Search Engines applet, add a new record for the third-party search engine and configure the fields described in the following table for the new search engine.

For example, add an Elastic Search Engine record with the values shown in the following table.

Field	Description	Value
Engine Name	Name of the search engine, which appears as the tab display name in the Search Results view.	Elastic SE
Search Adapter	Name of the search adapter, which maps to the search engine configured.	WS Search Adapter Service.
Sequence Number	Indicates the position where the Elastic SE tab will appear in the Search Results view. For example, 1 indicates the first position and so on.	2
Active	Indicates whether to show (Y) or hide (N) the Elastic SE tab in the Search Results view.	Y
Auto Suggest Supported	Indicates whether to enable (Y) or disable (N) the auto suggest feature for search.	Y

3. In the Driver Parameters applet, configure the fields for the third-party search engine.

   For example, configure the fields shown in the following table for Elastic SE.

Field	Description	Value
URL	The address of the Web Service for the third-party search engine.	http://<ip_address>:<port_number>/SiebelSearchService/SiebelSearchService
Batch Submit Size	The number of records submitted at a time for indexing. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Submit Size. Set the value to the following: o If you are using FTP indexing, set the value to less than or equal to 1500.	1000
Batch Split Size	The number of business component records in a batch. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Split Size. Set the value to the following:	100

Field	Description	Value
	◦ If you are using FTP indexing, set the value to less than or equal to 4500.	

Defining Index Categories for Third-Party Search Engines

The following procedure shows you how to define index categories and the fields in each index category to index for third-party search engines.

When setting up the fields to index in each index category,

This task is a step in *Process of Configuring Siebel Search for Third-Party Search Engines*.

To define new index categories for third-party search engines

1. Navigate to Administration - Search screen, then the Search Category Settings view.
2. Click New (the plus (+) icon) to define a new category to index, and then do the following:
   a. In the BC Name field, click the look up icon, select a business component from the list that appears, and then click OK.
   b. In the Name field, enter a name for the new category.
   c. In the Name field, drilldown on the hyperlink.
3. Go to the Available Fields tab and specify the fields in the category to be indexed as follows:
   a. Click New (the plus (+) icon) to add fields to the category as required.
   b. For each field in the category, select (Y) or deselect (N) the check box in the Searchable column.

      Y indicates to index the field and N indicates not to index the field in the category.
   c. (Optional) Enter a weighting for each field in the Weighting factor column.
4. Go to the Applications tab and add applications and views to the category as follows:
   ◦ Click New (the plus (+) icon), then add an Application Name.
   ◦ In the Drilldown Views applet, click the plus (+) icon, then add new drilldown views.

   > **Note:** When you specify multiple drilldown views for a category, the least restrictive view will be chosen for the user.

Repeat this procedure for each index category that you want to define.

Configuring Indexing for Third-Party Search Engines

The following procedure shows you how to configure indexing for third-party search engines.

This task is a step in *Process of Configuring Siebel Search for Third-Party Search Engines*.

To configure indexing for third-party search engines

1. Navigate to Administration - Search screen, then the Search Index Settings view.
2. In the Search Engine applet, navigate to the third-party search engine for which you want to configure indexing.

   For example, navigate to the Elastic SE record.
3. In the Search Categories applet, click New (the plus (+) icon) to add a new search category, and then do the following:

   - In the Category Name field, click the look up icon, select a business component field from the list that appears, and then click OK.
   - Click the Index button.
   - Refresh the page to check the value in the Status Message field. The value in the Status Message field changes as it moves through the following stages: Not Started, Queued, In Progress, Indexed.

   Repeat this step for each category that you want the third-party search engine to index.
4. In the Search Categories applet, drilldown on the indexed search category.
5. Add applications and views to the selected indexed search category as follows:

   a. Select the Applications tab, click New (the plus (+) icon), and then add the application names.
   b. In the Drilldown Views applet, click the plus (+) icon, and then add the drilldown views.

Configuring Incremental Indexing for Third-Party Search Engines

The following procedure shows you how to configure incremental indexing for third-party search engines. Initially a full index of the category (for example Account) is performed, followed subsequently by the incremental indexing.

This task is a step in *Process of Configuring Siebel Search for Third-Party Search Engines*.

> **CAUTION:** When the Enable Incremental Indexing system preference is set to True, the Transaction Processor component (alias TxnProc) runs automatically. In this case, for Siebel Remote deployments, you must stop TxnProc before you run the Database Extract component (alias DbXtract) for the first time. After DbXtract has completed, then you can restart TxnProc. If you do not follow these steps, then some transactions might not be routed to remote clients. For more information about running DbXtract, see *Siebel Remote and Replication Manager Administration Guide* .

To configure incremental indexing for third-party search engines

1. Enable the component groups for incremental indexing as follows:

   a. Navigate to the Administration - Server Configuration screen, then the Component Groups view.
   b. Query for and then enable the following component groups. To enable each component group, select the component, and then click Enable.

      - Search
      - MobileSync

2. Configure System Preferences for transaction logging:
   a. Navigate to the **Administration - Siebel Remote** screen, and then the **Remote System Preferences** view.
   b. Check the **Enable Transaction Logging** check box.
   c. Restart the Transaction Processor under the MobileSync Component Group.
3. Configure the Enable Incremental Indexing system preference as follows:
   a. Navigate to the Administration - Application screen, then the System Preferences view.
   b. Set the Enable Incremental Indexing system preference to True. If the system preference is not already defined, then add it.
   c. Restart the Siebel server.
4. Add a Job Template as follows:
   a. Navigate to the Administration Server Configuration screen, then the Job Template view.
   b. Add a new job template with the settings shown in the following table.

Field	Description
Name	Search Incremental Indexer
Short Name	SII
Component Name	Search Data Processor
Component Type	BusSvcMgr

   c. Set the following job parameters:

Name	Value
Business Service Name	Search Data Processor
Method Name	DoIncrementalIndex

5. Add a new job as follows:
   a. Navigate to the Administration - Server Management screen, then the Job view.
   b. For the Component Job called Search Incremental Indexer, select the Repeating? check box.
   c. Set the following job details as required for the Search Incremental Indexer component job:
      - Schedule Start date and time
      - Expiration date and time
      - Delete Interval
      - Delete Unit

- Repeating Information
- Retry Information

Sample settings for the repeating job section:

'Repeating' checkbox: check

'Repeat Unit': 'Seconds' or other unit of time

'Repeat Interval': 90 or other value of time

'Repeat From': 'Scheduled Start'

Sample settings for the retry section:

'Retry on Error' checkbox: check

'Sleep Time': define wait time before attempting the next retry

d. Set the following job parameters:

Name	Value
Business Service Name	Search Data Processor
Method Name	DoIncrementalIndex

e. Submit the job.

5 Setting Up Siebel Search with Oracle Secure Enterprise Search

Setting Up Siebel Search with Oracle Secure Enterprise Search

This chapter covers setting up Siebel Search with Oracle Secure Enterprise Search. All tasks in this chapter are required for Siebel Search and Oracle Secure Enterprise Search integration. This chapter includes the following topics:

- *About Installing Siebel Search*
- *Installing Oracle Secure Enterprise Search*
- *Creating the Siebel Search Center Directory Structure on the Siebel Server*
- *Configuring EAIFileTransportFolder Access for Siebel Search*
- *Administering FTP Indexing*
- *Configuring Field Mapping Settings*
- *Administering Siebel Server Component Groups*
- *Administering Workflow Management Components*
- *Enabling Search Security Web Service*
- *Activating the Search Engine for Oracle Secure Enterprise Search*
- *Configuring Search Engine Settings for Oracle Secure Enterprise Search*
- *Configuring Oracle Secure Enterprise Search Engine for the Search Results View*
- *Configuring the Default Search Definition*
- *Clearing Attachments From the Shared Search UNC Location*
- *Configuring User Authentication for Search Queries*
- *Activating Search Run-Time Events*
- *Siebel Search Web Services*
- *Process of Setting Up the Business Component Source and Connector*
- *Process of Setting Up the File System Source and Connector*
- *Process of Setting Up the Web Crawler Source and Connector*
- *Process of Setting Up the Database Source and Connector*
- *Process of Setting Up the IMAP Email Source and Connector*
- *Administering Connectors for Oracle Secure Enterprise Search Integration*
- *Disconnecting from Oracle Secure Enterprise Search and Deactivating the Identity Manager*
- *Oracle Secure Enterprise Search Changes Required for EAI to Support HTTPS*

About Installing Siebel Search

Siebel Search uses Oracle Secure Enterprise Search as the default search engine. This topic covers installation of Oracle Secure Enterprise Search, and installation of Siebel components related to Search.

Upgrading from Siebel Search Version 7.x

Any custom search objects which were defined in Siebel Search Version 7.x must be redefined in the Application_Suite_OSES_Field-Mappings.xml file. For more information, see *Configuring Index Mappings for Oracle Secure Enterprise Search*.

Installing Server Components for Siebel Search

Siebel Search requires the installation of the Siebel Enterprise Server, including the Siebel Server and the Siebel Gateway, and Oracle Secure Enterprise Search. Oracle Secure Enterprise Search and the Siebel Enterprise Server must be deployed on separate, dedicated servers.

> **Note:** The system requirements and supported platform certifications are available from the Certifications tab on My Oracle Support.

The recommended installation and configuration sequence is as follows:

- Install the Siebel Enterprise Server
- Install the Oracle Secure Enterprise Search Server
- Configure Siebel Search on the Oracle Secure Enterprise Search server and Siebel servers.

For information on installing server components, see *Installing Oracle Secure Enterprise Search*.

Oracle Secure Enterprise Search Pre-Installation Tasks

Refer to the Pre-Installation Tasks topic in the *Oracle Secure Enterprise Search Installation and Upgrade Guide*. This guide is provided on Oracle Help Center.

Installing Oracle Secure Enterprise Search

This topic covers Oracle Secure Enterprise Search installation and additional installation steps required for Siebel Search. Capture the Search and Administration URLs from the Oracle Secure Enterprise Search install wizard during the Oracle Secure Enterprise Search installation process, as these will be required for post-installation verification. The Administration Password will also be required when configuring the Search Engine Settings in the Siebel Search administration view. The examples in this guide use Siebel1 as the Oracle Secure Enterprise Search Administration

Password. Make sure that the file RSS_Crawler_Configuration.xml is accessible to the Oracle Secure Enterprise Search engine and that the file Application_Suite_OSES_Field-Mappings.xml is accessible to the Siebel Server.

To install Oracle Secure Enterprise Search

1. Complete the tasks in the Installation Tasks section of the *Oracle Secure Enterprise Search Installation and Upgrade Guide*. Use the installation values in the following table.

Field	Value
Search Server Name	Set the value to SES.
Administrative Password	Set the value to siebel1.
HTTP Port	The default port can be used.
Destination Path	Set the value to D:\oracle\ses\ses version\OH.
Data Storage Location	Set the value to D:\oracle\ses\ses version\oradata.

2. Create the Siebel Search Center Config directory under the Siebel File System on the Oracle Secure Enterprise Search Server:
   - On Windows create the Config directory at D:\fs\SSC\Config\.
   - On UNIX create the Config directory at /export/home/fs/SSC/Config/.
3. Copy the file RSS_Crawler_Configuration.xml from the Siebel Server to the SSC Config directory on the Oracle Secure Enterprise Search Server:
   - On Windows copy the crawler file from siebsrvr\bin\ on the Siebel Server to D:\fs\SSC\Config/ on the Oracle Secure Enterprise Search Server.
   - On UNIX copy the crawler file from siebsrvr/lib/ on the Siebel Server to /export/home/fs/SSC/Config/ on the Oracle Secure Enterprise Search Server.
4. Set the permissions for fs\SSC\Config\ to Full Control for Everyone.

Creating the Siebel Search Center Directory Structure on the Siebel Server

This topic covers creating the Siebel Search Center directory structure on the Siebel Server for storing the XML feed files and feed status files which are generated at runtime.

This topic includes the following tasks:

- *Creating the Siebel Search Center Directory on Windows*

- *Creating the Siebel Search Center Directory on UNIX*

Creating the Siebel Search Center Directory on Windows

This topic covers creating the Siebel Search Center directory structure on the Siebel Server for a Windows environment. The D:\fs\SSC directory on the Siebel Server will also be used as the FTP home directory.

To create the Siebel Search Center directory structure on Windows

1. Create a directory for storing the XML feed files on the Siebel Server, for example, D:\fs\SSC\xmlidata.

   The XML feed files are generated at runtime and temporarily stored in the fs\SSC\xmlidata folder. The feed files are automatically deleted once indexing completes.
2. Create a directory for storing the XML feed status files on the Siebel Server, for example, D:\fs\SSC\xmlidata \err.

   The XML feed status files are generated at run time, and indicate the error or success status of the crawl operation.
3. Create a directory for storing the XML field mapping file on the Siebel Server, for example, D:\fs\SSC\Config.
4. Copy the file Application_Suite_OSES_Field-Mappings.xml from the installation directory at siebsrvr\bin\ to the config directory at D:\fs\SSC\Config\.
   - Copy the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales or Siebel Marketing.
   - Copy the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma.
5. Copy the file Search_Engine_Config.xml from the installation directory to the config directory at D:\fs\SSC \Config\.

   Note: Do not modify the contents of the file Search_Engine_Config.xml from the preconfigured settings.
6. Set the permissions for D:\fs\ to Full Control for Everyone.

Creating the Siebel Search Center Directory on UNIX

This topic covers creating the Siebel Search Center directory structure on the Siebel Server for a UNIX environment.

To create the Siebel Search Center directory structure on UNIX

1. Create a directory for storing the XML feed files on the Siebel Server, for example, /export/home/fs/SSC/ xmlidata.

   The XML feed files are generated at runtime and temporarily stored in the fs/SSC/xmlidata folder. The feed files are automatically deleted once indexing completes.
2. Create a directory for storing the XML feed status files on the Siebel Server, for example,

   /export/home/fs/SSC/xmlidata/err.

   The XML feed status files are generated at runtime, and indicate the error or success status of the crawl operation.
3. Create a directory for storing the XML field mapping file on the Siebel Server, for example:

/export/home/fs/SSC/Config.

4. Copy the file Application_Suite_OSES_Field-Mappings.xml from the installation directory at siebsrvr/lib/ to the config directory at /export/home/fs/SSC/Config/.
    - Copy the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales or Siebel Marketing.
    - Copy the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma.
5. Copy the file Search_Engine_Config.xml from the installation directory to the config directory at /export/home/fs/SSC/Config/.

    Note: Do not modify the contents of the file Search_Engine_Config.xml from the preconfigured settings.

6. Set the permissions for /export/home/fs/ to Full Control for Everyone.

Configuring EAI File Transport Folder Access for Siebel Search

The EAIFileTransportFolders parameter must be configured to grant write access to specific folders within the Siebel file system that are required for Siebel Search. For information on configuring the EAIFileTransportFolders parameter, see *Transports and Interfaces: Siebel Enterprise Application Integration*.

Administering FTP Indexing

Siebel supports FTP connections with Oracle Secure Enterprise Search. This topic includes information about the following:

- *Enabling FTP Indexing*
- *Configuring the FTP Server for FTP Indexing*
- *Configuring the RSS Crawler for FTP Indexing*
- *Creating Server Repeating Jobs for Incremental Indexing*
- *Configuring Field Mapping Settings*

Note: As of Siebel CRM 16.0, URL credentials are disabled. As a result, HTTP indexing is not supported by Oracle Secure Enterprise Search. Only FTP indexing is supported.

Enabling FTP Indexing

Siebel Search provides an FTP option for indexing. The FTP indexing method uses a type of feed. The feed is defined as the collection of documents in the data repository for the index operation. FTP indexing uses the following feed type:

- FTP indexing using directory feed. All feeds are placed in a directory, and this directory is the input to the connector. The directory feed location is configured in the file RSS_Crawler_Configuration.xml. Directory feed is

useful when the data feeds are available in a single directory. The number of documents in each directory must be less than 10,000.

To enable FTP indexing for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Engine Settings view.
2. Configure the Send Index Feed Via HTTP settings as follows:
   - Set the value to False to turn on FTP indexing.
     The default value is False.

For information on configuring search engine settings for FTP indexing, see *Configuring Search Engine Settings for Oracle Secure Enterprise Search*.

Configuring the FTP Server for FTP Indexing

Siebel Search uses an Oracle Secure Enterprise Search XML framework for submitting records for indexing in the form of XML feeds. The pre-indexed XML feed files are stored on an FTP server for Oracle Secure Enterprise Search access. The FTP server and Siebel Server must be colocated on the same server. All examples in this guide assume that the FTP server and Siebel Server are colocated. Accessing the feeds over FTP is a crawl time operation requiring administrative privileges. The FTP location is not accessed at search time, therefore there is no end user access to the FTP location.

This topic includes the following tasks:

- *Configuring the Search FTP Server on Windows*
- *Configuring the Search FTP Server on UNIX*

Configuring the Search FTP Server on Windows

This topic covers configuring the FTP server on Windows, so that Oracle Secure Enterprise Search can access the Siebel Search XML feed files for crawling and indexing operations. The FTP home directory is set to the Siebel Search Center directory. For more information on setting up the FTP server, see your operating system documentation on Internet Information Services.

To configure the Search FTP server on Windows

1. From the Start menu choose Control Panel, Add or Remove Programs, and then the Add/Remove Windows Components option.
2. From the Windows Components list choose Application Server, Details, Internet Information Services (IIS), and then Details.
3. Select File Transfer Protocol (FTP) Service and click OK.
4. Click Next on Windows Components Wizard.
   This will install the IIS and FTP services.
5. From the Start menu choose All Programs, Administrative Tools, and then Internet Information Services.
   The Internet Information Services (IIS) console is launched.
6. Right-click on Default FTP Site and select Properties.
7. Select the FTP Site tab.
8. Enter Siebel Search Center FTP Site in the Description field.
9. Select the Home Directory tab.
10. Select the option Directory Located on this Computer.
11. Set the Home Directory Local Path to D:\fs\SSC.
    The paths in the RSS Crawler file are configured relative to your FTP Home Directory.

12. Select the options Read, Write and Log visits.
13. Set Directory Listing Style to UNIX.

Configuring the Search FTP Server on UNIX

This topic covers configuring the FTP server on UNIX, so that Oracle Secure Enterprise Search can access the Siebel Search XML feed files for crawling and indexing operations.

To configure the Search FTP server on UNIX

1. Enable the FTP service on the Siebel Server.
2. Set the FTP home directory to /export/home/fs/SSC.
   The paths in the RSS Crawler file are configured relative to your FTP home directory.

Configuring the RSS Crawler for FTP Indexing

Oracle Secure Enterprise Search crawls Siebel data in RSS feed format. The file RSS_Crawler_Configuration.xml is located on the Oracle Secure Enterprise Search Server and is used to configure the Oracle Secure Enterprise Search Crawler. The path to this configuration file must be specified when creating the Siebel Source in Oracle Secure format. The fileRSS_Crawler_Configuration.xml is located on the Oracle Secure Enterprise Search Server and is used to configure the Oracle Secure Enterprise Search Crawler. The path to this configuration file must be specified when creating the Siebel Source in Oracle Secure Enterprise Search. Siebel Search uses the directory feed type for indexing over FTP.

To configure the RSS Crawler for FTP indexing on Oracle Secure Enterprise Search Server

1. Open the file RSS_Crawler_Configuration.xml on the Oracle Secure Enterprise Search server in an XML or text editor:
   - On Windows this file is located at D:\fs\SSC\Config\.
   - On UNIX this file is located at /export/home/fs/SSC/Config/.
2. Complete the mandatory fields in the Siebel Customer configuration section - these fields are described in the following table.

Field	Description	Mandatory
feedLocation	The xmlidata\(XML-based indexable data) directory location on the FTP Server, where the XML-based feed files are stored for indexing. This value is specified relative to your FTP Home Directory, for example, if your FTP Home Directory is set to D:\fs\SSC and the xmlidata folder is at D:\fs\SSC\xmlidata, then set the feedLocation value to ftp://Siebel_Server_IP_Address/xmlidata. On Windows this value is specified in the format: `ftp://Siebel_Server_IP_Address/xmlidata` On UNIX this value is specified in the format:	Yes

Field	Description	Mandatory
	`ftp://Siebel_Server_IP_Address/xmlidata` **Note:** FTP must be included in the feedLocation value.	
feedType	Type of feed file. Set the value to directoryFeed.	Yes
errorFileLocation	Location on the FTP Server where the FileName.err and FileName.suc files will be stored. This value is specified relative to your FTP Home Directory On Windows and UNIX the value is specified in the format: `/xmlidata/err` **Note:** FTP is not included in the errorFileLocation value.	No
securityType	Type of security to be enabled. Set the value to attributeBased.	Yes
sourceName	Name of the Siebel data source. Set the value to buscomp.	Yes
securityAttribute	Attribute in the feed files that provides the security information. Set the value to sblvisibilityid. Multiple access control mappings for sblvisibilityid can be passed to SES at index-time.	Yes
Grant	This attribute governs the Siebel user's access to a set of result records. Set the value to True. The Siebel user will have access to the records with Visibility IDs set up for that user. The Visibility ID for each record is set in the XML feed that is generated by Siebel Search for Oracle Secure Enterprise Search to crawl. The set of Visibility IDs accessible to a user is retrieved by Oracle Secure Enterprise Search from Siebel CRM through the Siebel Web service, when the user logs in to Oracle Secure Enterprise Search.	No

Example of Configuring the RSS Crawler for FTP Indexing

This extract provides an example of configuring the file RSS_Crawler_Configuration.xml for FTP indexing.

```
<feedLocation>ftp://Siebel_Server_IP_Address/xmlidata</feedLocation>
<feedType>directoryFeed</feedType>
<errorFileLocation>/xmlidata/err</errorFileLocation>
<securityType>attributeBased</securityType>
<sourceName>buscomp</sourceName>
<securityAttribute name="sblvisibilityid" grant="true"/>
```

Creating Server Repeating Jobs for Incremental Indexing

This topic covers creating server repeating jobs to enable incremental indexing. Incremental indexing enables the index to automatically update, at preconfigured intervals, with create, update and delete operations that have been executed on the data source since the last index update. It provides a more efficient method of updating the index without the overhead of a full Refresh Index operation. Incremental indexing is supported for thin clients. Refresh indexing must be used on thick clients.

When importing a batch of data, it is recommended that incremental indexing is turned off and a one time Index All operation is performed. Incremental indexing is turned off by deactivating the Update Index action set on the Runtime Events Action Set view. For more information on server component repeating jobs, see *Siebel System Administration Guide*.

Note: This task is required only for thin client deployments.

To create server repeating jobs for incremental indexing

1. Navigate to the Administration - Server Configuration screen, then the Job Templates view.
2. In the Jobs Templates list, click New.
3. Set the Name to Search Incremental Indexer.
4. Set the Short Name to SII.
5. In the Component/Job field, click the list and select the SearchDataProcessor server component.
6. In the Job Parameters list, add the following two parameters for the component job.

Name	Value
Business Service Name	Search Data Processor
Method Name	CreateIncrementalIndex

Configuring Field Mapping Settings

The settings enclosed in percentages in the field mapping file must be configured for integration between Siebel Search and Oracle Secure Enterprise Search. There are two mapping files and the correct one to use is as follows:

- Use the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales or Siebel Marketing.
- Use the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma.

To configure field mapping settings

1. Open the file `Application_Suite_OSES_Field-Mappings.xml`, located on the Siebel Server, in an XML or text editor.
   - On Windows this file is located at `D:\fs\SSC\Config\`.
   - On UNIX this file is located at `/export/home/fs/SSC/Config/`.
2. Configure all fields enclosed in the percentage symbol. The fields are described in the following table.

Field	Description
%webserver%	Set the value to the `ApplicationInterfaceHost:HTTPSPort_Number` of the Siebel Web server.
%objmgr%	This is the application object manager. Set the value to the application that is running. For example, `CallCenter/<lang> or Fins/<lang>`.
%lang%	Set the value to the language for which the Siebel application is configured. For example, the value for English is enu.
%hostName%	Set the value to the IP address of the Siebel host.

Administering Siebel Server Component Groups

This procedure enables the Enterprise Application Integration (alias EAI) and Search Processing server component groups. These two component groups must be enabled for all indexing operations. The Search Data Processor component processes Search data and builds the index. Once the Search server is set up and the indexes have been defined, the components must be synchronized. For more information on Siebel Server component groups, see *Siebel System Administration Guide*.

To administer Siebel Server component groups

1. Navigate to the Administration - Server Configuration screen, and then the Component Groups view.
2. Query on the Search Processing component group.
3. On the Component Groups applet, click the Enable button.
4. Query on the Enterprise Application Integration component group.
5. On the Component Groups applet, click the Enable button.
6. Restart the Siebel Server.
7. Navigate to Administration - Server Management screen, then the Servers and Component Groups view.
8. Make sure that the Search Processing and Enterprise Application Integration component groups have state Online.
9. Navigate to Administration - Server Configuration screen, then the Enterprises and Synchronize view.
10. Query on the Search Data Processor component in the list applet.

11. Click Synchronize.
12. Restart the Siebel Server.

Administering Workflow Management Components

This topic covers enabling the Workflow Management Server components. All Workflow Management components must be enabled for incremental and refresh indexing. For more information on Siebel Server component groups, see *Siebel System Administration Guide*.

To administer Workflow Management Components for incremental and refresh indexing

1. Navigate to Administration - Server Configuration screen, and then the Component Groups view.
2. Query on the Workflow Management component group.
3. On the Component Groups applet, click the Enable button.
4. Restart the Siebel Server.
5. Navigate to Administration - Server Management screen, then the Enterprises, Servers and Components view.
6. Query on each of the following Workflow Management components and verify that the State of each is Online:
    - Workflow Action Agent
    - Workflow Monitor Agent
    - Workflow Process Batch Manager
    - Workflow Process Manager
    - Workflow Recovery Manager
    - Generate Triggers
7. Click the Startup button for any Workflow Management component that is not online.

Enabling Search Security Web Service

This topic covers enabling the SearchSecurityService inbound Web service for integration with Oracle Secure Enterprise Search. This Web service uses SOAP header authentication.

To enable security for search inbound Web services

1. Navigate to Administration - Web Services screen, and then the Inbound Web Services view.
2. Click on the Query button on the Inbound Web Services applet.
3. Enter SearchSecurityService in the Name field and click Go.
4. On the Address field of the Service Ports applet, substitute the address variables in the following URL:

    ```
    https://<ApplicationInterfaceHost>:<httpsPort>/siebel/app/<ApplicationName>/<language>
    ```

    a. Substitute <ApplicationInterfaceHost> with the Siebel Application Interface hostname.
    b. Substitute <httpsPort> with the port number where the application interface is configured to run.
    c. Substitute <ApplicationName> with the name of the Siebel application. For example: callcenter.

d. Substitute <language> with the Siebel application language. For example: enu.

5. On the Service Ports applet select Menu, and then the Save Record menu item.
6. Click the Clear Cache button on the Inbound Web Services applet.

Activating the Search Engine for Oracle Secure Enterprise Search

A search engine is activated by selecting the Default Flag option in the Search Engine Settings view. Only one search engine can be activated at any time. Make sure that the Default Flag option is selected for just one search engine.

To activate the search engine for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, then the Search Engine Settings view.
2. In the Search Engines applet, select the Default Flag option for Oracle Secure Enterprise Search.

Configuring Search Engine Settings for Oracle Secure Enterprise Search

This topic covers configuration of the Oracle Secure Enterprise Search and Siebel Search integration fields in the Search Engine Settings view of the Siebel Search Administration UI.

To configure the search engine settings for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Engine Settings view.
2. Change the version number of the OSES search engine from 10.1.8 to 11.2.2.2.0.

   The version number for the OSES search engine is 10.1.8 by default but if you are using Oracle Secure Enterprise Search version 11.2.2.2, then you must update the version number of the OSES search engine to 11.2.2.2.0.
3. In the Driver Parameters applet, complete the search engine settings described in the following table as required.

Setting	Description
Admin API Namespace	The Namespace for the OracleSearchAdminService Web service. This Oracle Secure Enterprise Search Web service invokes the Oracle Secure Enterprise Search Schedule that crawls and indexes the Siebel business component data. o For Oracle Secure Enterprise Search version 11.2.2.2, set the value to: `http://search.oracle.com/Admin`

Setting	Description
	○ For Oracle Secure Enterprise Search version 11.1.2 or earlier, set the value to: `http://search.oracle.com/AdminService/2006-09-15`

Admin API Webserver Address	The Web server address for the Oracle Secure Enterprise Search OracleSearchAdminService Web service.
	
	○ For Oracle Secure Enterprise Search version 11.2.2.2, set the value to:
	
	`http://SES_Server:Port/search/api/admin/AdminService`
	
	○ For Oracle Secure Enterprise Search version 11.1.2 or earlier, set the value to:
	
	`http://SES_Server:Port/search/ws/admin/SearchAdmin`

Advanced Batching And Indexing	This setting is used to turn the asynchronous indexing and index monitoring features on or off: ○ Set the value to True to enable the asynchronous indexing and index monitoring features. ○ Set the value to False to disable the asynchronous indexing and index monitoring features. The default value is True.
Batch Split Size	The number of business component records in a batch. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Split Size. Set the value to the following: ○ For FTP indexing, set the value to less than or equal to 4500.
Batch Submit Size	The number of records submitted at a time for indexing. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Submit Size. Set the value to the following: ○ For FTP indexing, set the value to less than or equal to 1500.
Dupmarked	This functionality is not supported. Set the value to false. **Note:** This setting is case sensitive.
Dupremoved	This is a Boolean setting to enable or disable the removal of duplicates from the result set. Set the value to true to remove duplicates from the results. **Note:** This setting is case sensitive.

Setting	Description
Feed Access Password	This is the password for accessing the RSS feeds that Oracle Secure Enterprise Search will crawl. o For FTP indexing, set the value to the password used to log in to the FTP server where the XML feed files are generated. Feed Access User ID is set in the Search Connector Settings view.
Filename	The path to the Application_Suite _OSES_Field-Mappings.xml file on the Siebel Server. o Use the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales or Siebel Marketing. o Use the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma. This file is located on the Siebel Server in the \fs\SSC\Config directory.
Login URL	The administration URL for Oracle Secure Enterprise Search. The URL format is: `http://SES_Server:HTTP_Port/search/admin/control/login.jsp`
Namespace	The name of the Oracle Secure Enterprise Search Web service. Set the value to OracleSearchService.
OSESAutoStartSchedule	This setting is used to turn automatic Oracle Secure Enterprise Search scheduling on or off. o Set the value to True to enable automatic scheduling of the index operation in Oracle Secure Enterprise Search. The schedule is automatically started once Siebel Search generates the feed files. o Set the value to False to disable automatic scheduling of the index operation. This option requires manually starting the indexing schedule in Oracle Secure Enterprise Search. The default value is True.
Password	This is the Oracle Secure Enterprise Search Administration User Password. Example passwords for Oracle Secure Enterprise Search follow: o For version 11.2.2.2: Welcome1. o For version 11.1.2 or earlier: siebel1. For more information, see *Installing Oracle Secure Enterprise Search*.
Recordcount	This setting configures the inclusion of an estimate in the result for the number of records in the result set. Set the value to True.
Remote Admin Support	This setting is used to turn the remote administration feature for the Oracle Secure Enterprise Search Connector on or off: o Set the value to True to enable the remote administration feature.

Setting	Description
	○ Set the value to False to disable the remote administration feature. The default value is True.
Schedule Name	This is used for starting the Oracle Secure Enterprise Search Schedule remotely. This field takes the same value as the Business Component Connector Library Name, and is set to buscomp. This value is case sensitive.
Schedule URL	Oracle Secure Enterprise Search schedule URL for starting the crawler remotely using the Oracle Secure Enterprise Search HTTP API. Set the value to `http://SES_Server:HTTP_Port/search/admin/schedules/schedules.jsp` The Oracle Secure Enterprise Search Server can be specified using either the DNS name or IP address.
Search Engine Config Filename	The path to the search engine configuration file on the Siebel server. The value is set to: `\\SearchServer\fs\SSC\config\Search_Engine_Config.xml` Note that \fs refers to the FTP path.
Send Index Feed Via HTTP	This setting is used to turn FTP indexing on or off: ○ Set the value to False to turn on FTP indexing. ○ Set the value to True to turn on HTTP indexing. The default value is False.
SES Username	This is the unique User ID which Siebel Search uses to access the application for the search operation. This value corresponds to the Entity Name which is set when creating the Oracle Secure Enterprise Search Federation Trusted Entities. The examples in this guide use sblsesuser as the Oracle Secure Enterprise Search Username/Entity Name. For more information, see *Verifying Oracle Secure Enterprise Search Federated Trusted Entities and Siebel Identity Plugin Manager*.
SES Password	This is the password which Siebel Search uses to access the application for the search operation. This value corresponds to the Entity Password which is set when creating the Oracle Secure Enterprise Search Federation Trusted Entities. Examples for the Oracle Secure Enterprise Search Password/Entity Password follow: ○ For Oracle Secure Enterprise Search version 11.2.2.2: Welcome1. ○ For Oracle Secure Enterprise Search version 11.1.2 or earlier: Welcome. For more information, see *Verifying Oracle Secure Enterprise Search Federated Trusted Entities and Siebel Identity Plugin Manager*.

Setting	Description

Shared Search UNC Location	This setting is specific to FTP indexing. The value is set to the Siebel Search Center shared FTP UNC location where Siebel Search decompresses the Siebel File System files. It is the parent directory of the Xmlidata directory.
	o The address format on Windows is:
	`\\IP address\fs\SSC`
	o The address format on UNIX is:
	`/export/home/qa/fs/SSC`
	Note: Adding a slash (/) or backslash (\) after SSC will create an error.

SSC FTP Location	This setting is specific to FTP indexing. The value is set to the FTP Server shared search center location from where Oracle Secure Enterprise Search reads the Siebel File System files. The FTP Home directory is configured on the FTP server. The value must be set to: `ftp://Siebel_Server_IP_Address/`
Strong Password Encryption Rules Enforced	This setting is used to turn the enhanced security features on or off: o Set the value to True to enable the enhanced security features. The default value is True. o Set the value to False to disable the enhanced security features. The default value is True.
Username	This is the Oracle Secure Enterprise Search Administration User ID. o For Oracle Secure Enterprise Search version 11.2.2.2, the default value is searchsys. o For Oracle Secure Enterprise Search version 11.1.2 or earlier, the default value is eqsys.
Visibility Support	This setting is used to turn enhanced access control functionality on or off: o Set the value to True to enable the enhanced access control feature. o Set the value to False to disable the enhanced access control feature. The default value is True.
Web Service Endpoint Address	This is the Siebel authentication and validation Web service endpoint. Set the value to: `http://<SiebelWebServer.com>:<Port>/siebel/app/<ApplicationName>/<language>`

Setting	Description
	This value can be copied from where it was configured in the Inbound Web Services view of the iebel administration UI, removing the username and password from the URL. For more nformation, see *Enabling Search Security Web Service*.
Web Service Endpoint Password	This is the Siebel administrative User Password. This value is used by Oracle Secure Enterprise Search when connecting to the Siebel server and authenticating the connection.
Web Service Endpoint Username	This is the Siebel administrative User ID. This value is used by Oracle Secure Enterprise Search when connecting to the Siebel server and authenticating the connection.
WebServer Address	URL for the Oracle Search Service. The address format is: `http://SES_Server:HTTP_Port/search/query/OracleSearch`
XML Indexable Data Location	This setting is specific to FTP indexing. Set the value to the Siebel Search Center shared FTP location for storing data for the RSS crawler to access and index. o The path format on Windows is: \\IP address\fs\SSC\xmlidata\ o The path format on UNIX is: /home/export/fs/SSC/xmlidata/

4. Select Save Record on the list applet.

Note: The Siebel Server must be restarted every time a change is made to Search Engine Settings configuration.

Configuring Oracle Secure Enterprise Search Engine for the Search Results View

After installing Oracle Secure Enterprise Search, activating the search engine and configuring the search engine settings for Oracle Secure Enterprise Search, you must configure the Oracle Secure Enterprise Search engine for the Search Results View as follows:

- Enable or disable Oracle Secure Enterprise Search so that it appears or is hidden in the Search Results view.
- Configure the position of the Oracle Secure Enterprise Search tab in the Search Results view.
- Enable or disable the auto suggest feature for the Oracle Secure Enterprise Search engine.

Note: This procedure applies to both new customers setting up Oracle Secure Enterprise Search for the first time and customers upgrading to the latest release of Oracle Secure Enterprise Search.

Search results are displayed in the Search Results view. In the Search Results view, when you drill down on a record to see the detailed record information, the search results are retained. This mode of display is known as Results Retention Mode. Preview and Attach features are available in Results Retention Mode.

To configure the Oracle Search Enterprise Search engine for the Search Results view

1. Navigate to the Administration - Search screen, then the Search Engine Settings view.
2. In the Search Engines applet, add a new record for OSES (if not already present) with the values shown in the following table.

Field	Description	Value
Engine Name	Name of the search engine, which appears as the tab display name in the Search Results view.	OSES
Search Adapter	Name of the search adapter, which maps to the search engine configured.	OSES Search Adapter Service
Sequence Number	Indicates the position where the <SearchEngineName> tab will appear in the Search Results view. For example, 1 indicates the first position and so on.	3
Active	Indicates whether to show (Y) or hide (N) the <SearchEngineName> tab in the Search Results view.	Y
Auto Suggest Supported	Indicates whether to enable (Y) or disable (N) the auto suggest feature for search.	Y

Configuring the Default Search Definition

The list of Categories displayed in the Search Index Settings view is determined by the default Search Definition in the Search Definition view. Each Siebel application is mapped to a Search Definition. Before indexing business components or configuring Search Categories in the Search Index Settings view for a particular application, the corresponding Search Definition must be set up as the default Definition in the Search Definition view. For more information on Search Definition and Siebel application mappings, see *Application and Search Definition Mappings*.

To configure the default search definition for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Definition view.
2. Select the Search Definition that is to be set as the default.

3. Select the Default Flg option.

Clearing Attachments From the Shared Search UNC Location

Attachments are crawled by Oracle Secure Enterprise Search. In order for Oracle Secure Enterprise Search to remove attachments from the temporary Shared Search UNC Location, the Delete Linked Documents search engine setting must be set to True in the source configuration. Delete Linked Documents is set to False by default.

To clear attachments from the Shared Search UNC Location

1. Navigate to the Administration - Search OSES screen, then the Search Engine Settings view.
2. In the Search Engines applet, select the OSES search engine.
3. In the Driver Parameters applet, change the default value for Delete Linked Documents from False to True.

Configuring User Authentication for Search Queries

This topic describes configuring end user authentication for search queries. To require user login for secure content, configure the Login Requirement value in Oracle Secure Enterprise Search.

To configure user authentication for search queries

1. Log in to the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Global Settings screen, then the Query Configuration view.
3. Set the Login Requirement value to one of the following options:
    - **Require login for secure content only.** This is the default. Users can search public content without logging in, but they must log in to retrieve secure content.
    - **Require login for public and secure content.** Users must first log in to retrieve any content.

Activating Search Run-Time Events

Activating preconfigured Search run-time events is required to enable incremental indexing and refresh indexing. This task is required for both thick and thin clients. Search runtime events monitor create, update and delete events executed on Search Objects in the data repository. The Action Sets create records in the transaction table (S_SRCH_CHG_TXN) and trigger the Search Content business service method UpdateIndex.

To activate the Search run-time events

1. Navigate to the Administration - Runtime Events screen, then the Action Sets view.
2. Query on the Update Index Action Set.

3. Select the Active and Enable Export options to activate the Update Index run-time events.

Siebel Search Web Services

Siebel Search provides a set of Business Service APIs, which can be implemented as Web services through the Siebel Web services framework. The following Search Web services are provided:

- **SearchExternalService.** This Web service can be used as a Search Front End Web service, to facilitate searches on the data stored in the Siebel application, from a non-Siebel Web application.
- **SearchSolutionService.** This Web service can be used to search for solutions based on user inputs, and retrieve a solution as a search result.
- **RetrieveAttachmentService.** This Web service has one standard QueryPage method to retrieve attachment documents.
- **ProductSearchService.** Business Service (Search Product Service) for searching product business components, and performing eligibility checks.

For more information on Siebel Search Web services, see *Siebel CRM Web Services Reference*.

Process of Setting Up the Business Component Source and Connector

The business component source and connector must be set up to integrate Siebel Search and Oracle Secure Enterprise Search.

To set up the business component source and connector for integration with Oracle Secure Enterprise Search, perform the following tasks:

- *Configuring the Siebel Business Component Connector*
- *Activating the Siebel Identity Plugin Manager for Oracle Secure Enterprise Search*
- *Verifying Oracle Secure Enterprise Search Federated Trusted Entities and Siebel Identity Plugin Manager*
- *Deploying the Business Component Source*
- *Verifying the Oracle Secure Enterprise Search Source for the Business Component Connector*

Configuring the Siebel Business Component Connector

This topic covers configuration of the business component connector settings for integration with Oracle Secure Enterprise Search.

This task is a step in *Process of Setting Up the Business Component Source and Connector*.

To configure the Siebel business component connector settings for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.

The Search Connector Settings List applet is displayed.

2. Complete the business component connector fields described in the following table as required. Values are case-sensitive.

Field	Value
Name	This field is preconfigured and takes the value Bus Comp. Do not change the preconfigured value.
Library Name	This field is preconfigured and takes the value buscomp. Do not change the preconfigured value.
Engine Name	This field is preconfigured and takes the value OSES. Do not change the preconfigured value.
Configuration URL	This is the file URL of the crawler configuration file. Set the value to the location of the RSS_Crawler_Configuration.xml file on the Oracle Secure Enterprise Search server. o On Windows set the value to: **file://localhost/fs/SSC/config** /RSS_Crawler_Configuration.xml o On UNIX set the value to: **file://localhost//export/home/fs/SSC/config/RSS_Crawler_Configuration.xml**
Feed Access User ID	This is the User ID for accessing the RSS feeds that Oracle Secure Enterprise Search will crawl. o For FTP indexing, set the value to the User ID used to log into the FTP server where the XML feed files are generated. If the server has user accounts registered in multiple domains, then use the format Domain\UserID. Feed Access Password is set in the Search Engine Settings view.
Scratch Directory	Create a Temp/ local directory on the Oracle Secure Enterprise Search server where status files can be temporarily written.
Type	Set the value to buscomp. This value is case sensitive.
className	This field is preconfigured and takes the value oracle.search.plugin.security.auth.siebel.SiebelAuthManager. Do not change the preconfigured value.
jarFile	This field is preconfigured and takes the following value: **/oracleapplications/Siebel8Crawler.jar**

Field	Value
	Do not change the preconfigured value.

Activating the Siebel Identity Plugin Manager for Oracle Secure Enterprise Search

The Oracle Secure Enterprise Search Federation Trusted Entities and Siebel Identity Plugin Manager are activated remotely when the Siebel SES adapter connects to Oracle Secure Enterprise Search.

This task is a step in *Process of Setting Up the Business Component Source and Connector*.

To activate the Siebel Identity Plugin Manager for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Engine Settings view.
2. Select the CSSOSESAdapter search engine library, and click Connect.

   The Connected flag in the Search Engine Settings view is set to true.

Verifying Oracle Secure Enterprise Search Federated Trusted Entities and Siebel Identity Plugin Manager

This task covers verification of the Federation Trusted Entities settings, and configuration and activation of the Identity Plugin Manager. It is recommended to execute this task if the status of the `cssosESAdapter` search engine library does not update correctly after the Connect operation, or if the error message “Error in RemoteAdmin Adapter" is displayed.

This task is a step in *Process of Setting Up the Business Component Source and Connector*.

To verify Federated Trusted Entities and the Siebel Plugin Manager

1. Log in to the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Global Settings screen, then the Federation Trusted Entities view.
3. Verify the fields described in the following table.

Field	Description
Key	Siebel Search uses this value to access the application for the search operation. Verify that the value is set to **`sblsesuser`**. This value corresponds to the Oracle Secure Enterprise Search Username configured in the Siebel Search Engine Settings view. This value also corresponds to the Entity Name in the Key column of the Oracle Secure Enterprise Search Trusted Entities table. For more information, see *Configuring Search Engine Settings for Oracle Secure Enterprise Search*.
Description	Verify that the description is set to Trusted Siebel-Oracle Secure Enterprise Search user.

Field	Description
Authentication	Verify that the value is set to Password.
Authentication Attribute	This field is not used for Siebel Search integration and is empty.

4. Navigate to the Global Settings screen, then the Identity Management Setup view.
5. Verify that the `oracle.search.plugin.security.identity.siebel.SiebelIdentityPluginMgr` Identity Plugin Manager is listed as an active plug-in.
6. Verify the Authorization Manager plugin fields described in the following table.

Field	Description
Siebel 8 authentication web service endpoint	This is the Siebel authentication Web service endpoint. Verify that the value is set to the following: `http://<webserver>/eai_<language>/start.swe?SWEExtSource=WebService&SWEExtCmd=Execute&WSSOAP=1` For more information, see *Enabling Search Security Web Service*.
Siebel 8 validation web service endpoint	This is the Siebel user validation Web service endpoint. Verify that the value is set to the following: `http://<webserver>/eai_<language>/start.swe?SWEExtSource=WebService&SWEExtCmd=Execute&WSSOAP=1` For more information, see *Enabling Search Security Web Service*.
User ID	This is the Siebel administrative user ID.
Password	This is the Siebel administrative password.

Deploying the Business Component Source

This topic covers remote administration of the Oracle Secure Enterprise Search Connector. This task configures the Oracle Secure Enterprise Search business component Source and Source Group, and creates the Oracle Secure Enterprise Search business component Schedule.

This task is a step in *Process of Setting Up the Business Component Source and Connector*.

To deploy the business component Source for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view. The Search Connector Settings List applet is displayed.
2. Select Bus. Comp Connector and click Create Source.

   The Deployed Flag field is automatically selected when the business component source has been deployed.

Verifying the Oracle Secure Enterprise Search Source for the Business Component Connector

This topic covers verification of the Oracle Secure Enterprise Search Source to integrate with the Siebel Search business component connector. It is recommended to execute this task if the status of the business component connector does not update correctly after the Deploy operation, or if the error message “Error in RemoteAdmin Adapter" is displayed.

This task is a step in *Process of Setting Up the Business Component Source and Connector*.

To verify the Oracle Secure Enterprise Search Source for the business component connector

1. Start the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Sources screen.
3. Select the Edit option for the buscomp Source.

   The Source Configuration tab is displayed for the buscomp Source.
4. Verify the Source fields and values against the following table.

Field	Description
Source Name	Verify that the value is set to buscomp. This value corresponds to the buscomp connector library name in the Siebel Search Connector Settings view. **Note:** This value is case sensitive.

Configuration URL	This is the file URL of the configuration file. Verify that the value is set to the location of the RSS_Crawler_Configuration.xml file on the Oracle Secure Enterprise Search server.
	
	o On Windows the value is set to:
	
	`file://localhost/fs/SSC/config/RSS_Crawler_Configuration.xml`
	
	o On UNIX the value is set to:
	
	`file://localhost//export/home/fs/SSC/config/RSS_Crawler_Configuration.xml`

Field	Description
Authentication Type	This field is not supported. The value must be empty.
User ID	This setting corresponds to, and takes the same value as, the business component connector Feed Access User ID field. For more information, see *Configuring the Siebel Business Component Connector*.
Password	This setting corresponds to, and takes the same value as, the business component connector Feed Access Password field. For more information, see *Configuring the Siebel Business Component Connector*.
Realm	This field is not supported for Siebel Search and Oracle Secure Enterprise Search integration. Verify that this field is empty.
Scratch Directory	This value points to a Temp/ local directory on the Oracle Secure Enterprise Search server where status files can be temporarily written.
Max. no. of connection attempts	This is the maximum number of connection attempts to access the data feed or upload the status feed. Verify that the value is set to 3.

5. Select the Authorization tab.
6. Verify that Crawl-time ACL Stamping is set to ACLs Controlled by the Source.
7. Verify the Authorization Manager fields and values against the following table.

Field	Description
Plug-in Class Name	This field takes the value: `oracle.search.plugin.security.auth.siebel.SiebelAuthManager`
JAR File Name	This field takes the value: `oracleapplications/Siebel8Crawler.jar`
Siebel 8 authorization Web service endpoint	This field takes the value: `http://<webserver>/eai_<language>/start.swe?SWEExtSource=WebService&SWEExtCmd=Execute&WSSOAP=1`
User ID	This is the Siebel administrative User ID.

Field	Description
Password	This is the Siebel administrative User password.

8. Start the Oracle Secure Enterprise Search application, and verify that buscomp appears as a searchable source on the Search home page.
9. Navigate to the Sources screen.
10. Select the Edit option for the buscomp Source.

    The Source Configuration tab is displayed for the buscomp Source.
11. Select the Authorization tab.
12. Verify that the SBLVISIBILITYID attribute is listed, with a value of Grant, in the Security Attributes table.

    If the attribute has not been created you might have specified an incorrect path to the file RSS_Crawler_Configuration.xml.

Process of Setting Up the File System Source and Connector

The file system source and connector must be set up if you want external file systems to be indexed and searched by Oracle Secure Enterprise Search.

> **Note:** The file system is not a required connector for Siebel Search and Oracle Secure Enterprise Search integration. This process is only required if the Siebel File System connector will be used.

To set up the file system source and connector for integration with Oracle Secure Enterprise Search, perform the following tasks:

- *Configuring the Siebel File System Connector*
- *Deploying the File System Source*
- *Verifying the Oracle Secure Enterprise Search Source for the File System Connector*
- *Enabling Rich Text Format Processing for the External File System Connector*
- *Verifying Indexing for the File System Connector*

Configuring the Siebel File System Connector

The file system connector must be set up if you want external file systems to be indexed and searched by Oracle Secure Enterprise Search.

> **Note:** The file system is not a required connector for Siebel Search and Oracle Secure Enterprise Search integration. This process is only required if the Siebel File System Connector will be used.

This task is a step in *Process of Setting Up the File System Source and Connector*.

To configure the Siebel file system connector for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.

   The Search Connector Settings List applet is displayed.
2. Click on the New button on the list applet.
3. Complete the following file system connector fields.

Field	Value
Name	filesystem
Version	1.0
Library Name	filesystem
Engine Name	OSES

StartingUrl	The starting URL is the location where the files or directories are crawled for indexing. If a URL represents a single file, then the crawler searches only that file. If a URL represents a directory, then the crawler recursively crawls all files and subdirectories in that directory.
	
	Only local host file URLs are allowed. You cannot specify file URLs on a remote computer. It is recommended to set the Starting URL to a shared folder.
	
	On Windows set the value to:
	
	`file://localhost///SiebelServerIPAddress/fs/`
	
	On UNIX set the value to:
	
	`file://localhost//directory_1/directory_2`

4. Select Save Record on the Connector list.

Deploying the File System Source

This topic covers remote administration of the Oracle Secure Enterprise Search File System Connector. This task configures the Oracle Secure Enterprise Search File System Source and Source Group, and creates the Oracle Secure Enterprise Search file system Schedule.

This task is a step in *Process of Setting Up the File System Source and Connector*.

To deploy the file system source for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.

   The Search Connector Settings List applet is displayed.
2. Select Filesystem Connector and click Deploy.

   Verify that the deployment status of the file system Connector changes in the Search Connector Settings view.

Verifying the Oracle Secure Enterprise Search Source for the File System Connector

This topic covers verification of the Oracle Secure Enterprise Search Source to integrate with the Siebel Search file system connector. It is recommended to execute this task if the status of the file system connector does not update correctly after the Deploy operation, or if the error message “Error in RemoteAdmin Adapter" is displayed.

This task is a step in *Process of Setting Up the File System Source and Connector*.

To verify the Oracle Secure Enterprise Search Source for the file system connector

1. Start the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Sources screen.
3. Select the Edit option for the Filesystem Source.

   The Source Configuration tab is displayed for the Filesystem Source.
4. Verify that the Starting URL is set to file://localhost///SiebelServerIPAddress/fs/.
5. Start the Oracle Secure Enterprise Search application, and verify that Filesystem appears as a searchable source on the Search home page.

Enabling Rich Text Format Processing for the External File System Connector

Rich Text Format file types are not processed by default by Oracle Secure Enterprise Search. This task enables indexing and searching of RTF files for the external file system connector.

This task is a step in *Process of Setting Up the File System Source and Connector*.

To enable Rich Text Format processing for the external File System Connector

1. Start the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Sources screen.
3. Select the Edit option for the file system Source.

   The Customize File Source screen is displayed for the file system source.
4. Select the Document Types tab.

   The supported document types are listed for the source type.

5. Select RTF Document in the Not Processed column, and click the arrow button to move it to the Processed column.
6. Click Apply.

Verifying Indexing for the File System Connector

The crawling and indexing operations can be invoked from the Oracle Secure Enterprise Search administration UI to make sure that the Oracle Secure Enterprise Search File System Source has been configured correctly. It is recommended to execute this task if the status of the business component connector does not update correctly after the Deploy operation, or if the error message “Error in RemoteAdmin Adapter" is displayed.

This task is a step in *Process of Setting Up the File System Source and Connector*.

To verify indexing for the file system connector

1. Navigate to the Schedules screen in the Oracle Secure Enterprise Search administration application.
2. Select Filesystem Schedule and click Start.
3. Click the Status link to view status details.
4. Start the Oracle Secure Enterprise Search application, and verify that Filesystem appears as a searchable source on the Search home page.

Process of Setting Up the Web Crawler Source and Connector

The crawler source and connector must be set up if you want web sources to be indexed and searched by Oracle Secure Enterprise Search.

Note: The Web Crawler is not a required connector for Siebel Search and Oracle Secure Enterprise Search integration. This process is only required if the Siebel Web Crawler connector will be used.

To set up the Web Crawler source and connector for integration with Oracle Secure Enterprise Search, perform the following tasks:

- *Creating an Oracle Secure Enterprise Search Source for the Web Crawler Connector*
- *Creating a Source Group for the Web Crawler Connector*
- *Verifying Oracle Secure Enterprise Search Indexing of the Web Crawler Source*
- *Administering the Siebel Web Crawler Connector*

Creating an Oracle Secure Enterprise Search Source for the Web Crawler Connector

This topic covers creation of an Oracle Secure Enterprise Search Web Crawler Data Source to integrate with the Siebel Search Web Crawler connector.

This task is a step in *Process of Setting Up the Web Crawler Source and Connector*.

To create an Oracle Secure Enterprise Search source for the Web crawler connector

1. Start the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Sources screen.
3. Select Web from the Source Type list.
4. Click Create.
5. Complete the Web Source fields. The fields are described in the following table.

Field	Description
Source Name	The name for the Web Source. This value corresponds to the crawler connector Library name in the Siebel Search Administration Search Connector Settings view. Set the value to crawler. This value is case sensitive.
Starting URL	The URL for the crawler to begin crawling. The starting address can be in HTTP or HTTPS format, for example, `http://www.oracle.com`.
Self Service	Enable Self Service so that Web sources that require user authentication can be crawled and indexed. Enabling Self Service means that end users can enter their credentials and authenticate themselves to crawl their data.
Start Crawling Immediately	Select this to start crawling automatically after the source is created. Clear this for crawling to begin at the next scheduled time. **Note:** If the Create and Customize button is clicked rather than the Create button, or if Self Service is enabled, then this option is ignored.

6. Click Create.

Creating a Source Group for the Web Crawler Connector

The Oracle Secure Enterprise Search File System Source must be assigned to an Oracle Secure Enterprise Search Source Group. The Oracle Secure Enterprise Search Source Group name must correspond to the Source name and the Siebel connector library name.

This task is a step in *Process of Setting Up the Web Crawler Source and Connector*.

To create a source group for the File System connector

1. Start the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Search screen, then the Source Groups view.
3. Click Create.
4. Enter crawler as the name of the Source Group. This value is case sensitive.

5. Click Proceed to Step 2.
6. Select Web from the Select Source Type list.
7. Click Go.
8. Select crawler from the Available Sources list, and click the arrow button to add it to Assigned Sources.
9. Click Finish.
10. Start the Oracle Secure Enterprise Search application, and verify that crawler appears as a searchable source on the Search home page.

Verifying Oracle Secure Enterprise Search Indexing of the Web Crawler Source

This topic covers invoking the crawling and indexing operations from the Oracle Secure Enterprise Search administration UI, to make sure that the Oracle Secure Enterprise Search crawler source has been configured correctly.

This task is a step in *Process of Setting Up the Web Crawler Source and Connector*.

To verify Oracle Secure Enterprise Search indexing of the Web Crawler data source

1. Navigate to the Schedules view in the Oracle Secure Enterprise Search administration application.
2. Select the crawler Schedule and click Start.
3. Click the Status link to view status details.

Administering the Siebel Web Crawler Connector

The Siebel Search web crawler connector is required for integrating with the Oracle Secure Enterprise Search web crawler source. It is administered in the Search Connector Settings view.

This task is a step in *Administering the Siebel Web Crawler Connector*.

To configure the Siebel Search web crawler connector for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.

   The Search Connector Settings List applet is displayed.
2. Click the New button on the list applet.
3. Complete the following fields.

Field	Value
Name	crawler
Version	1.0
Library Name	crawler

Field	Value
Engine Name	OSES

4. Select Save Record on the Connector list.

Process of Setting Up the Database Source and Connector

The database source and connector must be set up if you want JDBC sources to be indexed and searched by Oracle Secure Enterprise Search.

Note: The Database Connector is not a required connector for Siebel Search and Oracle Secure Enterprise Search integration.

To set up the Database source and connector for integration with Oracle Secure Enterprise Search, perform the following tasks:

- *Creating a Source for the Database Connector*
- *Creating a Source Group for the Database Connector*
- *Verifying Oracle Secure Enterprise Search Indexing of the Database Source*
- *Configuring the Database Connector*

Creating a Source for the Database Connector

This topic covers creation of an Oracle Secure Enterprise Search Source to integrate with the Siebel Search Database Connector. This task is executed in the Oracle Secure Enterprise Search Administration application.

This task is a step in the *Process of Setting Up the Database Source and Connector*.

To create a source for the Database Connector

1. Navigate to the Sources screen.
2. Select Database from the Source Type menu.
3. Click Create.
4. Complete the Database Source fields. The fields are described in the following table.

Field	Description
Source Name	The name of the Database Source. This value corresponds to the crawler connector Library name in the Siebel Search Administration Search Connector Settings view. Set the value to Database.

Field	Description

Database Connection String	The JDBC connection string for the database.
	o Set the value to the following for an Oracle database:
	`jdbc:oracle:thin@<Hostname>:<Port Number>:<SID>`
	o Set the value to the following for SQL Server:
	`jdbc:sqlserver://<Hostname>`

User ID	User ID to log in to the database.
Password	Password to log in to the database.
Query	Query to retrieve contents for crawling.
Query File	Path to the XML file specifying the attribute and attachment sub queries.
Cache File	Absolute path and filename prefix of temporary file for caching crawled data, for example: `c:\temp`
Path Separator	Path separator in the document path. Set the value to #.

5. Click Next.
6. Select ACLs Controlled by the Source to secure the table that is crawled.
7. Click Create.

Creating a Source Group for the Database Connector

The Oracle Secure Enterprise Search Database source must be assigned to an Oracle Secure Enterprise Search source group. The Oracle Secure Enterprise Search source group name must correspond to the source name and the Siebel connector library name. This task is executed in the Oracle Secure Enterprise Search Administration application.

This task is a step in the *Process of Setting Up the Database Source and Connector*.

To create a source group for the Database Connector

1. Navigate to the Search screen, then the Source Groups view.
2. Click Create.
3. Enter Database as the name of the Source Group.
4. Click Proceed to Step 2.
5. Select Database from the Select Source Type menu.
6. Click Go.
7. Select Database from the Available Sources list, and click the arrow button to add it to Assigned Sources.

8. Click Finish.
9. Start the Oracle Secure Enterprise Search application, and verify that Database appears as a searchable source on the Search home page.

Verifying Oracle Secure Enterprise Search Indexing of the Database Source

This topic covers invoking the crawling and indexing operations from the Oracle Secure Enterprise Search administration UI, to make sure that the Database source has been configured correctly.

This task is a step in the *Process of Setting Up the Database Source and Connector*.

To verify Oracle Secure Enterprise Search indexing of the Database Crawler

1. Navigate to the Schedules view in the Oracle Secure Enterprise Search administration application.
2. Select the Database Schedule and click Start.
3. Click the Status link to view status details.

Configuring the Database Connector

The Siebel Search Database Connector is required for integrating with the Oracle Secure Enterprise Search Database source. It is administered in the Siebel Search Connector Settings view.

This task is a step in the *Process of Setting Up the Database Source and Connector*.

To configure the Database Connector for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.

   The Search Connector Settings List applet is displayed.
2. Click the New button on the list applet.
3. Complete the following fields.

Field	Value
Name	Database
Version	1.0
Library Name	Database
Engine Name	OSES

4. Select Save Record on the Connector list.

Process of Setting Up the IMAP Email Source and Connector

The IMAP E-Mail source and connector must be set up if you want to index and search IMAP email sources. An email source derives its content from emails sent to a specific email address. When Oracle Secure Enterprise Search crawls an email source, it collects email from all folders set up in the email account, including Drafts, Sent Items, and Trash emails.

> **Note:** The IMAP E-Mail Connector is not a required connector for Siebel Search and Oracle Secure Enterprise Search integration.

To set up the IMAP E-Mail source and connector for integration with Oracle Secure Enterprise Search, perform the following tasks:

- *Creating a Source for the IMAP E-Mail Connector*
- *Creating a Source Group for the IMAP E-Mail Connector*
- *Verifying Oracle Secure Enterprise Search Indexing of the IMAP E-Mail Source*
- *Configuring the IMAP Email Connector*

Creating a Source for the IMAP EMail Connector

This topic covers creation of an Oracle Secure Enterprise Search Source to integrate with the Siebel Search E-Mail Connector. This task is executed in the Oracle Secure Enterprise Search Administration application.

This task is a step in the *Process of Setting Up the IMAP Email Source and Connector*.

To create a source for the IMAP E-Mail Connector

1. Navigate to the Sources screen.
2. Select E-Mail from the Source Type list.
3. Click Create.
4. Complete the email source fields. The fields are described in the following table.

Field	Description
Source Name	The name of the IMAP E-Mail Source. This value corresponds to the crawler connector Library name in the Siebel Search Administration Search Connector Settings view. Set the value to IMAP E-Mail.
IMAP Server	The address of the IMAP server.
User Name	The user name for the email account.
Password	The password for the email account.

Field	Description

5. Click Create.

Creating a Source Group for the IMAP E-Mail Connector

The Oracle Secure Enterprise Search IMAP E-Mail source must be assigned to an Oracle Secure Enterprise Search source group. The Oracle Secure Enterprise Search source group name must correspond to the source name and the Siebel connector library name. This task is executed in the Oracle Secure Enterprise Search Administration application.

This task is a step in the *Creating a Source for the IMAP E-Mail Connector*.

To create a source group for the IMAP E-Mail Connector

1. Navigate to the Search screen, then the Source Groups view.
2. Click Create.
3. Enter IMAP E-Mail as the name of the Source Group.
4. Click Proceed to Step 2.
5. Select E-Mail from the Select Source Type list.
6. Click Go.
7. Select IMAP E-Mail from the Available Sources list, and click the arrow button to add it to Assigned Sources.
8. Click Finish.
9. Start the Oracle Secure Enterprise Search application, and verify that IMAP E-Mail appears as a searchable source on the Search home page.

Verifying Oracle Secure Enterprise Search Indexing of the IMAP E-Mail Source

This topic covers invoking the crawling and indexing operations from the Oracle Secure Enterprise Search administration UI, to make sure that the IMAP E-Mail source has been configured correctly.

This task is a step in the *Process of Setting Up the IMAP Email Source and Connector*.

To verify Oracle Secure Enterprise Search indexing of the IMAP E-Mail Crawler

1. Navigate to the Schedules view in the Oracle Secure Enterprise Search administration application.
2. Select the IMAP E-Mail Schedule and click Start.
3. Click the Status link to view status details.

Configuring the IMAP Email Connector

The Siebel Search IMAP Email Connector is required for integrating with the Oracle Secure Enterprise Search Email source. It is administered in the Siebel Search Connector Settings view.

This task is a step in the *Process of Setting Up the IMAP Email Source and Connector*.

To configure the IMAP Email Connector for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.
   The Search Connector Settings List applet is displayed.
2. Click the New button on the list applet.
3. Complete the following fields.

Field	Value
Name	IMAP E-Mail
Version	1.0
Library Name	IMAP E-Mail
Engine Name	OSES

4. Select Save Record on the Connector list.

Administering Connectors for Oracle Secure Enterprise Search Integration

This topic covers administering connectors for Siebel Search and Oracle Secure Enterprise integration.

To administer connectors for Siebel Search and Oracle Secure Enterprise integration, perform the following tasks:

- *Updating Connector Settings*
- *Deleting a Connector*

Updating Connector Settings

This topic covers updating Search connector settings for a connector which has already been deployed. The changes are entered in the Siebel Search Connector Settings view, and submitted to Oracle Secure Enterprise Search for remote update.

This task is a step in *Administering Connectors for Oracle Secure Enterprise Search Integration*.

To update connector settings for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.
   The Search Connector Settings List applet is displayed.

2. Select the Connector for which settings have been changed, and click Update Source.

Deleting a Connector

This task deletes the Siebel connector, the corresponding Oracle Secure Enterprise Search source, source group, and schedule, and all index records for that connector. It is recommended to execute this task if a malformed connector must be deleted and recreated.

This task is a step in *Administering Connectors for Oracle Secure Enterprise Search Integration*.

To delete a connector for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Connector Settings view.

   The Search Connector Settings List applet is displayed.
2. Select the Connector and click Delete Source.

Disconnecting from Oracle Secure Enterprise Search and Deactivating the Identity Manager

This topic covers disconnecting from Oracle Secure Enterprise Search, and deactivating the identity plugin manager for Siebel.

Disconnecting from Oracle Secure Enterprise Search

Use the following procedure to disconnect from Oracle Secure Enterprise Search, using the Siebel Search Administration UI.

To disconnect from Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Engine Settings view.
2. Select the CSSOSESAdapter search engine library, and click `Disconnect`.

   The Connected flag in the Search Engine Settings view is set to false.

Deactivating the Siebel Identity Plugin Manager

Use the following procedure to deactivate the Siebel identity plugin manager, using the Oracle Secure Enterprise Search Administration UI.

To deactivate the Siebel Identity Plugin Manager

1. Log in to the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Global Settings screen.

3. Select Identity Management Setup.

   The Siebel Identity Plugin Manager is displayed.
4. Click Deactivate.

Oracle Secure Enterprise Search Changes Required for EAI to Support HTTPS

As of Siebel CRM 17.0, the Enterprise Application Integration (EAI) URL has changed from HTTP to HTTPS. As a result, a certificate must be included in Oracle Secure Enterprise Search for callbacks from Oracle Secure Enterprise Search to EAI to be successful.

The following Oracle Secure Enterprise Search changes are required for EAI to support HTTPS:

1. Install JDK 7 for Oracle Secure Enterprise Search 11.2.2.2.0.
2. Modify the Searchctl.bat file and set the SetDomainEnv files to point to JDK 7.
3. Import the Siebel Certificate into JDK 7.
4. Update the Oracle Secure Enterprise Search WebLogic server to include the certificate.

6 Configuring Siebel Search for Oracle Secure Enterprise Search

Configuring Siebel Search for Oracle Secure Enterprise Search

This chapter describes how to configure search views and execution settings for Oracle Secure Enterprise Search. It includes the following topics:

- *About Siebel Tools Configuration Tasks*
- *Configuring the Indexing Mode for Index Status Monitoring*
- *Process of Configuring Access Control for Search Results*
- *Administering Searchable Fields*
- *Administering Navigable Fields*
- *Administering Field Weighting*
- *Administering Query-Time Clustering Configuration*
- *Configuring the Language LOV for Siebel Search Preferences*

This chapter assumes that you know how to use Siebel Tools. For more information, see *Using Siebel Tools* .

About Siebel Tools Configuration Tasks

Siebel Tools is a declarative software development tool that allows you to configure the underlying data and data presentation of your Siebel application without making changes to the program source code. Siebel Business Applications provide a core set of search object definitions that you can use as a basis for your tailored application. There are no source code modifications, nor modifications to schema. Siebel Tools uses the Siebel Runtime Repository configuration provided by Oracle.

Configuring the Indexing Mode for Index Status Monitoring

This topic covers configuration of the indexing mode for index status monitoring. The indexing mode is configured for FTP indexing by default. For information on index status monitoring, see *Monitoring Index Status*.

To configure the indexing mode for index status monitoring

1. Log in to Siebel Tools.

2. Query for the Search Index Batches BC business component.
3. Configure the Search Specification property using the following SQL conditions:
    - Set Search Specification to Index Mode<>'HTTP' for FTP indexing.
4. Update the repository and deliver the update.

Process of Configuring Access Control for Search Results

User access to a particular view in the search results is determined by the sblvisibilityid index field mapping, and the account profile of the logged in user, such as Position ID or Account ID.

To configure access control for search results, perform the following tasks:

- *Configure sblvisibility Index Field Mappings*
- *Configuring the Search Visibility Objects*
- *Configuring Drill Down View Sequence for Search Results*

Configure sblvisibility Index Field Mappings

The sblvisibilityid index fields are mapped to business component access control fields, such as Position ID or Account ID. The sblvisibilityid index fields can also be mapped to custom access control fields. Multiple sblvisibilityid index fields can be defined for each business component. The sblvisibilityid index fields are configured in Aplication_Suite_OSES_Field-Mappings.xml. For more information on configuring index field mappings, see *Configuring Index Mappings for Oracle Secure Enterprise Search*. For more information on access control, see the access control topic in *Siebel Security Guide*.

This task is a step in the *Process of Configuring Access Control for Search Results*.

To configure sblvisibilityid index field mappings

1. Open the index mapping file Application_Suite_OSES_Field-Mappings.xml.The correct mapping file to use is determined as follows:
    - Use the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales or Siebel Marketing.
    - Use the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma.
2. Set the bc-name attribute of each sblvisibilityid field to a business component access control field.
3. Save the changes to the mapping file.
4. Restart the Siebel server to populate the Search Index Settings and Available Fields views of the search administration UI with any new index fields.

Example of Mapping sblvisibilityid index fields

This extract provides an example of configuring the sblvisibilityid index field.

```
<field bc-name="Primary Organization Id" in-name="sblvisibilityid" ui-name="" on-
name="" nv-name="" one2many="" is-id="N" id-rank="" type="na" />
```

```
<field bc-name="Contact Id" in-name="sblvisibilityid" ui-name="" on-name="" nv-
name="" one2many="" is-id="N" id-rank="" type="na" />

<field bc-name="Owned By Id" in-name="sblvisibilityid" ui-name="" on-name="" nv-
name="" one2many="" is-id="N" id-rank="" type="na" />

<field bc-name="Owner Position Id" in-name="sblvisibilityid" ui-name="" on-name=""
nv-name="" one2many="" is-id="N" id-rank="" type="na" />
```

Configuring the Search Visibility Objects

This task covers configuring search visibility objects for determining access control for search result views.

This task is a step in the *Process of Configuring Access Control for Search Results*.

To configure the search visibility objects for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Visibility Settings view.
2. Add the Search Visibility objects with the values shown in the following table.

Visibility Object	Description
Business Object	This is the business object name.
Business Component	This is the business component name.
Input Field Name	This is a field name in the business component, such as Login Name, used to retrieve the access control values assigned to that user. The access control values retrieved can include fields such as PositionId, OrganizationId, or AccountId.

3. Configure the search visibility object fields with the values shown in the following table.

Visibility Object Field	Description
Field	The field name of the business component field used to determine access control, such as PositionId, OrganizationId, or AccountId.
Multi Valued	Set to Y for a multi valued field.
Parent Field	(Optional) The parent field name. It must be set if the parent field is to be included in determining access control.

4. Save the record.

Configuring Drill Down View Sequence for Search Results

This topic covers configuration of the sequence of drill down views for search results. User access to a particular view is determined by the sblvisibilityid index field mapping, and the account profile of the logged in user, such as Position ID or Account ID.

This task is a step in the *Process of Configuring Access Control for Search Results*.

To configure drill down view sequence for Oracle Secure Enterprise Search results

1. Navigate to Administration - Search OSES screen, then the Search Index Settings view.
2. In the Search Index Settings applet, select the Search Category for which drill down views are to be configured.
3. In the View Name column, select the drill down view.
   Multiple views can be selected.
4. In the Seq Num column, enter a sequence number.

Administering Searchable Fields

The Searchable fields option on the Available Fields list applet determines which Search Category fields are displayed on the Search Center UI as searchable fields.

To administer searchable fields for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Index Settings view.
2. In the Search Index Settings applet, select the Search Category for which searchable fields are to be configured.
   The fields for the selected Search Category are displayed in the Available Fields applet.
3. Select Y (searchable) or N (not searchable) in the Searchable column for each field.
4. Enter a Display Name if it does not already exist.
   The Display Name appears on the searchable field text box on the Search Center UI.
5. Select Save Record on the Available Fields list.

Administering Navigable Fields

The Navigable fields option on the Available Fields list applet determines which fields are displayed in a Refine Results operation.

To administer navigable fields for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Index Settings view.
2. In the Search Index Settings applet, select the Search Category for which navigable fields are to be configured.
   The fields for the selected Search Category are displayed in the Available Fields applet.

3. Select Y (navigable) or N (not navigable) in the Navigable column for each field.
4. Enter a Display Name if it does not already exist.

   The Display Name appears in the Refined Results view on the Search Center UI.
5. Select Save Record on the Available Fields list.

Administering Field Weighting

The Search Index Settings view enables different weights to be defined for each searchable field in the search criteria, determining the field's ranking in the search results. For example, in the Service Request Category, a weighting of 4 could be assigned to the Description field and a weighting of 2 could be assigned to the Abstract field, to rank the Description field higher in the search results, and thereby make the results more relevant. The search is executed first against the fields that have more weighting.

The Siebel Search numeric weights are mapped to the Oracle Secure Enterprise Search weight parameters in the file Search_Engine_Config.xml. Do not modify the contents of the file Search_Engine_Config.xml from the preconfigured settings.

To administer field weighting for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, then the Search Index Settings view.
2. In the Search Index Settings applet, select the Search Category for which field weightings are to be configured.

   The fields for the selected Search Category are displayed in the Available Fields applet.
3. Enter a Weighting for each field in the Weighting factor column. The available weightings and corresponding rankings are described in the following table.

Numeric Weighting	Ranking
4	Very high
3	High
2	Medium
1	Low
0	Very low

4. Select Save Record.

Administering Query-Time Clustering Configuration

Siebel Search uses the Oracle Secure Enterprise Search Cluster Nodes framework to dynamically generate query-time automated keywords. This task covers verifying the Oracle Secure Enterprise Search cluster settings that are required for Siebel Search automated keywords.

It is recommended to assign the “keywords" value to the in-name attribute of a descriptive business component field, if automated keywords are required. For information on defining index attributes, see *Defining Index Attributes*.

For more information on cluster configuration and search attributes, see *Oracle Secure Enterprise Search Administrator's Guide*.

The Siebel Search automated keywords framework is mapped to the Oracle Secure Enterprise Search cluster configuration framework in the file Search_Engine_Config.xml. Do not modify the contents of the file Search_Engine_Config.xml from the preconfigured settings.

To verify Oracle Secure Enterprise Search query-time clustering configuration

1. Start the Oracle Secure Enterprise Search Administration application.
2. Navigate to the Global Settings screen, and then the Clustering Configuration view.
3. Confirm that Enable Clustering is selected under Cluster Tree Configuration.
4. Confirm that the Topic cluster tree has been created under Cluster Trees with the following values:

Field	Value
Tree Name	Topic
Cluster Type	Topic
Attributes	Keywords, Title, eqsnippet, eqtopphrases
Status	Enabled

Configuring the Language LOV for Siebel Search Preferences

This topic describes how to create and configure the Language list of values for the Search Preferences applet. The examples in this topic use English, German, and Korean.

To configure the Language LOV for Siebel Search

1. Navigate to the Administration - Data screen, and then the List of Values view.
2. Create the LOV header record, using the information in the following table.

Type	Display Value	Language Independent Code
LOV_TYPE	SEARCH_LANGUAGE	SEARCH_LANGUAGE

3. Select the Active option.
4. Select the Translate option.
5. Set the Replication Level to All.
6. Define the list of languages to display in the Language LOV, using the information in the following table.

Type	Display Value	Language Independent Code	Language Name	Order
SEARCH_LANGUAGE	English	English	English-American	1
SEARCH_LANGUAGE	German	German	English-American	2
SEARCH_LANGUAGE	Korean	Korean	English-American	3

7. Select the Active option.
8. Select the Translate option.
9. Set the Replication Level to All.

7 Configuring Index Mappings for Oracle Secure Enterprise Search

Configuring Index Mappings for Oracle Secure Enterprise Search

This chapter covers customizing and extending search objects for integration with Oracle Secure Enterprise Search, and includes the following topics:

- *About Searchable Objects*
- *Defining Index Elements*
- *Defining Index Attributes*
- *Creating Search Run-Time Events for Custom Search Objects*
- *Configuring the Business Service User Property in ContentService When Indexing Business Component Pairs*

About Searchable Objects

All searchable objects are defined in an XML mapping file, rather than through Siebel Tools. Siebel Search ships with the preconfigured search categories listed in *Preconfigured Search Objects for Oracle Secure Enterprise Search*. To create additional custom search objects, or to add 7.x custom search objects, the object definition must be mapped in a field mapping XML file. The elements and attributes defined in the XML field mapping file populate the Search Index Settings and Available Fields views of the search administration UI. The search objects can be configured in the search administration UI once the search object has been created in the XML mapping file. These index mapping definitions are used to generate the XML data feed files, which Oracle Secure Enterprise Search crawls and indexes.

If amendments to the XML field mapping are required to create custom Search Objects, it is recommended that these are completed before the index is initially built, if possible. If the XML field mapping file is edited after initial deployment, the Siebel Server must be restarted, and an Index All operation must be executed to index any new or modified search objects.

Defining Index Elements

Siebel Search index mapping fields are mapped to business component fields in the file SIA_OSES_Field-Mappings.xml or the file SSC_OSES_Field-Mappings.xml, to define searchable objects. The definitions in this mapping file are used to generate the XML data feed files, which Oracle Secure Enterprise Search crawls and indexes.

Once the index mappings have been defined in Application_Suite_OSES_Field-Mappings.xml, the Siebel Server must be restarted, and the Search Administration UI must be populated with the new Search Categories or Available Fields. See *Administering Siebel Search Index Settings for Oracle Secure Enterprise Search*.

The correct mapping file to use is determined as follows:

- Use the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales or Siebel Marketing.
- Use the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma.

The following table lists the elements and attributes for defining business component index mappings.

Element	Attributes	Description	Mandatory
BusComp	name	Name of the business component, for example: `name="Service Request Attachment"`	Yes
	ui-name	This is the string that will be displayed in the user interface, for example: `ui-name="SR Attachments"`	Yes
	on-name	This attribute is not supported.	No

	url	This attribute takes the following format:
		
		`url="http://`
		`%webserver%`
		`/`
		`%objmgr%`
		`_`
		`%lang%`
		`/`
		`start.swe?SWECmd=GotoView&SWEView=#VIEWNAME#&S`
		`WERF=1&SWEHo=%hostName%&SWEBU=1&SWEApplet0=#AP`
		`PLETNAME#&SWERowId0=#ROWID#"`
			Yes

	parent	This attribute is used to specify the parent of a child business component, for example: `parent="Service Request"`	No
	fkey-field	This attribute is used to define a foreign key field, for example: `fkey-field="Activity Id"`	No
field	bc-name	Name of the business component field, for example:	Yes

Element	Attributes	Description	Mandatory
		`bc-name="Attachment List"` The value displays in the Field Name column of the Available Fields list applet.	
	in-name	This is the index field for the business component field, for example: `in-name="listing01"` See *Defining Index Attributes* for a list of required, recommended and optional in-name definitions.	Yes
	ui-name	This is the string that will be displayed as the search result snippet in the user interface, for example: `ui-name="Attachments"` This value populates the Available Fields list applet on the Siebel Search administration UI. The field name is displayed on the application UI if the Searchable flag option is selected in the Available Fields list applet.	No
	on-name	This attribute is not supported.	No
	nv-name	This attribute is not supported.	No
	is-id	This attribute is not supported.	No
	id-rank	This attribute is not supported.	No
	on-name	This attribute is not supported.	No
	one2many	This attribute is used for passing the business component child category information. This attribute is mandatory when you want to index a child business component, and the child business component has multiple rows associated with the parent business component. The one-to-many mapping must conform with the following format: `<Child Business Component Name>:<Child Fields><Child Reference Field>, for example, Service Request Attachment:ActivityFileSrcPath,ActivityFileName,ActivityFileExt,Activity Id.` In this example the constituent parts are as follows: **Child Business Component Name.** This must be the exact name defined in Siebel Tools. Child Business Component Name takes just one value, for example: `Service Request Attachment`.	Yes

Element	Attributes	Description	Mandatory
		Child Fields. Comma separated list of child business component fields to be indexed, for example: `ActivityFileSrcPath,ActivityFileName`. One or more values can be entered for Child Fields, each value must be separated by a comma. **Child Reference Field.** Child Reference Field is the foreign key equivalent of the parent Business Component linked to `PAR_ROW_ID` of the child table, for example: `Activity Id`. Child Reference Field takes just one value.	
	type	Used to define the file type represented by the field. This attribute is mandatory for file fields. Valid values are as follows: • type="path" • type="filename" • type="ext" • type="na"	Yes

Defining Index Attributes

This topic covers defining the attribute values for the in-name attribute. Attributes are defined in name-value pairs. In the example `<field bc-name="Description" in-name="keywords ui-name="Description" type="na"/>`, `in-name` is an attribute name, and `"keywords"` is an optional attribute value. The following table lists the mandatory, recommend and optional attribute values for assigning to the in-name attribute. The in-name attribute and values are defined in the file Application_Suite_OSES_Field-Mappings.xml. The index fields are reusable for mapping across business component fields.

Attribute Name	Attribute Value	Description	Mandatory
in-name	accessURL	Used for mapping to the business component access URL field.	No
	alias	Used for mapping to name fields.	No
	author	This index field is reserved and cannot be mapped to user-defined fields. This index field maps to the business component Updated By field. The Updated By field must also be populated in the Search Index Settings Available Fields applet in the Administration - Search UI.	Yes
	body	Used for mapping to main content field. This field is mandatory and is used to generate search results.	Yes
	city	Used for mapping to city name fields.	No

Attribute Name	Attribute Value	Description	Mandatory
	code01	Used for mapping to generic code or ID fields.	No
	code02	Used for mapping to generic code or ID fields.	No
	comment	Used for mapping to comment fields.	No
	country	Used for mapping to country name fields.	No
	createdBy	This index field is reserved and cannot be mapped to user-defined fields. This index field maps to the business component Created By field. The Created By field must also be populated in the Search Index Settings Available Fields applet in the Administration - Search UI.	Yes
	createdOn	This index field is reserved and cannot be mapped to user-defined fields. This index field maps to the Created business component field. The **Created** field must also be populated in the Search Index Settings Available Fields applet in the Administration - Search UI.	Yes
	csn	Used for mapping to customer ID number fields.	No
	date01	Used for mapping to date fields.	No
	date02	Used for mapping to date fields.	No
	description	Used for mapping to generic descriptive fields, such as comments, FAQ or details.	Recommended
	emailed	Used for mapping to email address fields.	No
	faxNumber	Used for mapping to fax number fields.	No
	firstName	Used for mapping to first name fields.	No
	keywords	This index field corresponds to the Oracle Secure Enterprise Search Keywords search attribute, and, if configured, is used for cluster configuration. This field is recommended if automated keywords are required. The following provides an example keywords definition for the SR Resolution Item business component: `<field bc-name="Description" in-`	Recommended

Attribute Name	Attribute Value	Description	Mandatory
		`name="Keywords" ui-name="Description" on-name=""nv-name=""one2many="" is-id="N" id-rank=""type="na"/>` This configuration ensures that the content of the SR Resolution Item Description field is mapped to the Oracle Secure Enterprise Search Keywords attribute. This definition tags the Description value as a keyword in the feed file. When Oracle Secure Enterprise Search crawls and indexes the feed file, it processes the value of the Description field as a keyword for cluster configuration and automated keywords. For information on administering cluster configuration for automated keywords, see *Administering Query-Time Clustering Configuration*. For more information on search attributes, see *Oracle Secure Enterprise Search Administrator's Guide*.	
	language	Used for mapping to language identifier fields.	No
	lastModifiedDate	This index field is reserved and cannot be mapped to user-defined fields. This index field maps to the business component Updated field. The Updated field must also be populated in the Search Index Settings Available Fields applet in the Administration - Search UI.	Yes
	lastName	Used for mapping to last name fields.	No
	level	Used for mapping to level fields.	No
	listing01	Only to be used for one-to-many field mapping.	No
	listing02	Only to be used for one-to-many field mapping.	No
	location	Used for mapping to site, directory, or path fields.	No
	name	Used for mapping to name fields.	No
	orgName	Used for mapping to organization name fields.	No
	owner	Used for mapping to Organization Information or other visibility information fields.	No
	phoneNumber01	Used for mapping to phone number fields.	No
	phoneNumber02	Used for mapping to phone number fields.	No

Attribute Name	Attribute Value	Description	Mandatory
	price	Used for mapping to price fields.	No
	sblbctype	This index field is reserved and cannot be mapped to user-defined fields. This index field is used for mapping to the BC Name business component field, and is used to generate search results. The BC Name field must also be populated in the Search Index Settings Available Fields applet in the Administration - Search UI.	Yes
	sblrowid	This index field is reserved and cannot be mapped to user-defined fields. This index field is used for mapping to the business component ID field. The ID field must also be populated in the Search Index Settings Available Fields applet in the Administration - Search UI.	Yes
	sblvisibilityid	The sblvisibilityid index field is used for mapping to business component fields used for access control, such as the business component's Organization ID , Contact ID, Owner Position ID, or Account ID fields. The sblvisibilityid index field can also be mapped to custom access control fields. Multiple sblvisibilityid index field mappings can be used for each business component. The visibility ID is captured at index-time and stored in the database with the indexed records. At query-time, the User ID is sent with the search criteria and authenticated by the Oracle Secure Enterprise Search Web Service. The search results are filtered based on the field's sblvisibilityid settings, and the profile of the logged in user. This mapping is mandatory for access controlled business components. See the access control information in *Siebel Security Guide* for more information.	Yes
	sblvisibilityinfo	This index field is reserved and cannot be mapped to user-defined fields. This index field is used for mapping to the business component Organization Information or other visibility information fields. This mapping is optional, and is used for access controlled business components.	No
	sourceHierarchy	Used for mapping to hierarchy information fields.	No
	state	Used for mapping to geographical state fields.	No
	status	Used for mapping to BusComp status fields.	No

Attribute Name	Attribute Value	Description	Mandatory
	street	Used for mapping to street address fields.	No
	summary	Used for mapping to descriptive summary fields.	Recommended
	textID	Used for mapping to text ID fields.	No
	Title	Used for mapping to title information fields.	Yes
	type	Used for mapping to record type fields.	No
	value	Used for mapping to String value fields.	No
	zipcode	Used for mapping to zip-code, postal-code and pin-code fields.	No

Creating Search Run-Time Events for Custom Search Objects

Search run-time events must be created for any custom search object that you create. Run-time events must be created to enable incremental indexing and refresh indexing for custom Search Objects. This topic covers configuration of search runtime events for monitoring create, update and delete events executed on Search Objects in the data repository. These runtime events can be customized to monitor any type of event. The Action Sets create records in the transaction table and trigger the Search Content business service method UpdateIndex(). See *Siebel Personalization Administration Guide* for more information on Siebel Run-Time Events.

To create Search run-time events for custom search objects

1. Navigate to the Administration - Runtime Events screen, then the Action Sets view.
2. Query on the Update Index Action Set.
3. Click the Event Aliases tab.
4. Click the New button on the Event Alias screen.
5. Complete the Event Alias fields for each buscomp create, update and delete operation. Use the Service Request values in the following table for reference.

Name	Object Type	Object Name	Event
Service Request - New	BusComp	Service Request	NewRecord
Service Request - Write	BusComp	Service Request	WriteRecord

Name	Object Type	Object Name	Event
Service Request - PreDelete	BusComp	Service Request	PreDeleteRecord

6. Select Save Record.

Configuring the Business Service User Property in ContentService When Indexing Business Component Pairs

For the Solution and Solution Admin business component pair, Solution is typically used for indexing and not Solution Admin where the runtime events are generated. If using the Solution business component for indexing, then you must create a name-value pair for Solution and Solution Admin in Siebel Tools in the Business Service User Prop under the ContentService business service, as shown in the following procedure. These instructions apply to other business component pairs similar to Solution and Solution Admin (for example: Sales Tool and Admin Sales Tool business component pair).

To configure the Business Service User Prop in ContentService for indexing business component pairs

1. Log into Siebel Tools.
2. Go to the Fast Search Project, choose Tools and then Lock Project to lock the Fast Search Project.
3. Go to the ContentService business service.
4. Create a new Business Service User Prop with the following values:

Field	Value
Name	Solution Admin
Value	Solution

5. In the Siebel application, go to the Administration - Runtime Events screen, then the Event Aliases view and verify that the run-time event alias fields for the Solution Admin buscomps are as shown in the following table.

Name	Object Type	Object Name	Event
Solution - New	BusComp	Solution Admin	NewRecord
Solution - Write	BusComp	Solution Admin	WriteRecord

Name	Object Type	Object Name	Event
Solution - PreDelete	BusComp	Solution Admin	PreDeleteRecord

6. Go to the Administration - Runtime Events, then the Events view and verify that the event fields for the Solution Admin buscomps are as shown in the following table.

Sequence	Name	Object Type	Object Name	Event	Action Set Name
0	Solution - New	BusComp	Solution Admin	NewRecord	Update Index
1	Solution - Write	BusComp	Solution Admin	WriteRecord	Update Index
2	Solution - PreDelete	BusComp	Solution Admin	PreDeleteRecord	Update Index

Note the following:

- You can modify records only in the Admin business component but you can set the drilldown search results to a view that corresponds to a non-Admin business component.
- Adding the new Business Service User Prop in the ContentService business service makes sure that:
  - The Solution business component will be indexed.
  - If records are modified in the Solution Admin business component, then the index will refresh and increment the changes.
  - The drilldown search results will be correct.
- The ContentService business service contains an UpdateIndex method which is accessed by run time events when records are inserted, updated, or deleted from various business components. The UpdateIndex method inserts rows into the S_SRCH_CHG_TXN table, which contains a row for each change such as the Row Id val, Business Component Name, and the operation code (W-insert, W-update, or D-delete). If an insert, update, or delete operation is carried out on the Solution Admin business component, then the row inserted into the S_SRCH_CHG_TXN table is as follows: 'BUSCOMP_NAME'=Solution.
- If indexing the Solution Admin (and not the Solution) business component, then it is not necessary to add the new Business Service User Prop mentioned in Step 4. Set the view name for that index category to the Solution Admin business component view. For example:

  - For the Solution Admin business component: Solution Administration View

  - For the Solution business component: All Solution List View

  If indexing the Solution Admin business component and if using the Solution business component as the view, then the search results will be incorrect.

Note: When new run-time events are added, you must synchronize the enterprise components and then restart the Siebel Server and Siebel Gateway services.

8 Administering Siebel Search Index Settings for Oracle Secure Enterprise Search

Administering Siebel Search Index Settings for Oracle Secure Enterprise Search

This chapter covers administering search indexes and enabling server components required for indexing. This chapter includes the following topics:

- *About Search Indexes Creating a New Index Definition*
- *Creating a Logical Collection*
- *Filtering the Index Record-Set*
- *Creating Searchable Business Component Fields*
- *About Indexing Search Objects*
- *Administering Asynchronous Indexing and Index Status Monitoring*
- *Monitoring Index Status*
- *Administering Batch Processing Status for FTP Indexing*

About Search Indexes

The search indexes definition determines what fields in a data source or business component are included in the index and are available for searching, and what fields are displayed in the Search Center UI as searchable fields. The index definition can enable more efficient and relevant indexing and searching by omitting less relevant fields from the index and search operations.

Search indexes are defined and configured in the Search Index Settings view of the search administration UI.

Creating a New Index Definition

Search Categories for each Siebel application are defined in Search Definition groupings in the Search Definition view. This view can be used for creating or customizing Search Definitions and Search Definition Categories. The business component for any new custom Search Category must first be mapped in the file Application_Suite_OSES_Field-Mappings.xml. See *Defining Index Elements* for information on creating custom search objects for Oracle Secure Enterprise Search integration. When a new Search Definition is created, the Definition must be added to the application Object Manager for a Siebel Web Client, or to the application configuration file, for a Siebel Developer Web Client.

Creating a New Index Definition

This topic covers creating a new Search Definition. You create the definition in the Search Definition view.

To create a new index definition for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, the Search Definition view.
2. Click on the New button.
3. Complete the Definition fields.

   The Name field is mandatory.
4. Select the Default Flg field if this Definition is to be set as the default.
5. In the Search Definition Categories list applet click on the New button.
6. Complete the Category fields.

   The Name, View Name and Business Component fields are mandatory. The business component which corresponds to the Search Category must be selected from the list.
7. Select Save Record on the Search Definition list.

Configuring the Search Definition on the Siebel Web Client

This topic covers configuring a new search definition on the Siebel Web Client.

To configure the search definition on the Siebel Web Client

1. Navigate to Administration - Server Configuration screen, then the Servers and Components view.
2. Select the Object Manager Component for your application.
3. In the Parameters list applet click Advanced.
4. Query for the Search - Definition Name parameter.
5. Replace the value of the Search - Definition Name parameter with your Search Definition Name.
6. Restart the Siebel services.

Configuring the Search Definition on the Siebel Developer Web Client

This topic covers configuring the Search Definition in the SearchDefName parameter of the application configuration file for the Siebel Developer Web Client. Application configuration file names are in the format *<application>.cfg*, for example, the file shm.cfg is the Siebel Hospitality application configuration file, and the file uagent.cfg is the Siebel Call Center application configuration file. Verify that you are using the correct application configuration file by checking the ApplicationName parameter in the file.

> **Note:** This configuration change must be applied to each application configuration file for each language in the enterprise.

To configure the Search Definition on the Siebel Developer Web Client

1. Open the application configuration file in a text editor. The file is located at: <install_dir> `\bin\cfgfiles\<application>.cfg`
2. Go to the SIEBEL section of the configuration file.
3. Change the value of the SearchDefName parameter to the Search Definition Name value configured in the Search Definition view, and save the changes.

Creating a Logical Collection

This procedure covers grouping Search Categories into Logical Collections, for example, a People Logical Collection could be created to include the search Categories Employees and Contacts. A search on the People Logical Collection would then include a search on both the Employees and Contacts Search Categories.

To create a logical collection for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, Search Index Settings, and then the Search Indices Parent Category View.
2. In the Search Indices Parent Category View, click New to add a new search index parent category and configure the following fields:
   a. In the Name field, type in the parent category name.
   b. In the Parent Category Field, select the check box.
   c. In the Seq Num field, enter a sequence number.
3. In the Search Category List applet, click New, and select a category to be included from the list of available categories that appears.

   Repeat this step to add more categories to the Search Category List as required.

Filtering the Index Record-Set

The index record-set can be filtered at the Category level, to incorporate custom business rules, using the Filter Search Spec field. This field takes SQL statements that comply with the syntax defined in *Filter Search Specifications Syntax for Oracle Secure Enterprise Search*.

To filter the index record-set for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, then the Search Index Settings view.
2. In the Filter Search Spec field, enter the SQL statement for each category that is to be pre-filtered.

   The syntax must comply with that defined in *Filter Search Specifications Syntax for Oracle Secure Enterprise Search*.

Creating Searchable Business Component Fields

Specific fields in a business component can be excluded from the indexing and search operation, to enable more efficient indexing and searching, and more relevant results. The Available Fields list applet determines which fields are included in an index operation, and therefore which fields are available for searching. The new custom fields must first be mapped in the file Application_Suite_OSES_Field-Mappings.xml. See *Defining Index Elements* for information on mapping custom fields for Oracle Secure Enterprise Search.

To create searchable business component fields for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, then the Search Index Settings view.
2. Select the business component for which the new fields will be indexed.
3. In the Available Fields applet, click New and complete the fields.
    a. In the Field Name field, select a field name from the drop-down list. This field is mandatory.
    b. (Optional) In the Searchable field, select the text box.

About Indexing Search Objects

The indexing process is comprised of a number of tasks on the Siebel side and on the Oracle Secure Enterprise Search side. When indexing initiates, the Status Code changes to a null value in the Search Index Settings view, and a set of SearchDataProcessor jobs are created. The SearchDataProcessor jobs create temporary XML feed files under the XML Indexable Data Location. For each batch of rows to be indexed, a separate job is created. The index operation starts the relevant Oracle Secure Enterprise Search Schedule. Oracle Secure Enterprise Search uses a crawler to collect data from the XML feed files for each data source, and to generate the index. This index is used for searching data sources.

The SearchDataProcessor status can be monitored in the Jobs view of the Administration - Server Management screen. When complete, each SearchDataProcessor job updates the status code for the search index to Indexed, and the Status Details reflect the number of indexed rows. The index operation is complete on the Siebel side when all of the SearchDataProcessor jobs have a status of success or error. The status details for the search index reflect the number of rows successfully transferred to feed files. If the number of indexed rows is lower than the number of records in the business component, it is recommended that the SearchDataProcessor logs are checked for errors on the jobs that have not executed successfully.

The Oracle Secure Enterprise Search schedule status can be monitored in the Crawler Schedules table of the Schedules tab on the Oracle Secure Enterprise Search administration UI. For more information on indexing status, select the log file icon in the Crawler Schedules table.

Siebel Search provides the following indexing operations:

- **Full Indexing**. The full indexing operation can be executed on all search objects defined in the XML mapping file, or on a specific business component or connector. This operation is available for thin and thick clients. For more information, see *Indexing Search Objects*.

- **Refresh Indexing**. Refreshes the index with any create, update or delete operations which have been executed on the data source since the last index operation. This operation is available for thin and thick clients. For more information, see *Refreshing the Index*.
- **Incremental Indexing**. Updates the index, at preconfigured intervals, with any create, update or delete operations which have been executed on the data source since the last index operation. This operation is available for thin clients. For more information, see *Enabling Incremental Indexing*.

Indexing Search Objects

Full indexing can be executed against all entries in the selected Search Category (business component or external file system), by selecting the Index operation, or against all entries in the default Search Definition listed in the Search Index Settings applet, adding any new fields from the field mapping file, by selecting the Index All operation. Upon successful completion of indexing, the Status Code changes to Indexed, and the Status Details column details the number of records indexed. The number of rows indexed must correspond to the number of records in the business component. The number of records indexed is displayed when indexing a business component, and is not displayed when indexing a file system.

To index search objects for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, then the Search Index Settings view.
2. Do one of the following to index one or all search components:

   a. Select the component to be indexed and click Index.
   b. Click Index All to index all components for the Default Search Definition.

   When indexing initiates, the Status Code changes to a null value. When indexing completes the Status Code changes to Indexed.
3. Start the Oracle Secure Enterprise Search administration application to monitor indexing from the Oracle Secure Enterprise Search side:

   a. Select the Oracle Secure Enterprise Search Schedules tab.
   b. Click the Launching or Executing link in the Status table.
   c. Click on the Statistics link.

   The Crawler Progress Summary is displayed, with a list of the number of documents crawled. Indexing is completed from the Oracle Secure Enterprise Search side once the Schedule Status has changed to Scheduled.

Refreshing the Index

Refresh indexing provides for immediate update of the search index. It is supported for both thick and thin clients. The Status Details field is incremented by the number of new records and decremented by the number of deleted records. Record updates do not contribute to the Status Details record count. Refresh indexing is supported for business components, and is not supported for the File System Connector.

Activating search run-time events is a prerequisite for using the index refresh function.

- To enable refresh indexing for preconfigured search objects, see *Activating Search Run-Time Events*.

- To enable refresh indexing for custom search objects, see the following:
  - *Activating Search Run-Time Events*.
  - *Creating Search Run-Time Events for Custom Search Objects*.

The following procedure shows you how to refresh index search objects for Oracle Secure Enterprise Search.

To refresh index search objects for Oracle Secure Enterprise Search

1. Navigate to Administration - Search OSES screen, then the Search Index Settings view.
2. Select the component to be indexed and click Refresh.

   When indexing initiates the Status Code changes to a null value. When indexing completes the Status Code changes to Indexed.
3. Start the Oracle Secure Enterprise Search administration application to monitor indexing from the Oracle Secure Enterprise Search side:
   a. Select the Oracle Secure Enterprise Search Schedules tab.
   b. Click the Launching or Executing link in the Status table.
   c. Click on the Statistics link.

The Crawler Progress Summary is displayed, with a list of the number of documents crawled. Indexing is completed from the Oracle Secure Enterprise Search side once the Schedule Status has changed to Scheduled.

Enabling Incremental Indexing

Incremental indexing is used to schedule automatic refresh indexing on all search objects. The index for all search objects (business components or search categories) is updated, at preconfigured intervals, with any create, update or delete operations which have been executed on the data source since the last index. The interval is configured at the level of each business component, and a different interval can be configured for each business component. For example, a Service Request business component index could be scheduled to update every five minutes, and an Account business component index could be scheduled to update every ten minutes. Incremental indexing is supported for business components, and is not supported for the File System Connector.

Note: Incremental indexing is supported only on thin clients.

To enable incremental indexing for preconfigured search objects, see *Activating Search Run-Time Events*.

To enable incremental indexing for custom search objects, see *Activating Search Run-Time Events* and *Creating Search Run-Time Events for Custom Search Objects*.

Administering Asynchronous Indexing and Index Status Monitoring

This topic covers enabling and disabling the asynchronous indexing and index status monitoring features. These features are enabled by default. For information on configuring indexing mode settings in Siebel Tools, see *Configuring the Indexing Mode for Index Status Monitoring*.

To administer asynchronous indexing and index status monitoring for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Engine Settings view.
2. In the Driver Parameters applet, configure the Advanced Batching and Indexing setting as follows:
    - Set Advanced Batching And Indexing to True to enable the asynchronous indexing and index monitoring features.
    - Set Advanced Batching And Indexing to False to disable the asynchronous indexing and index monitoring features.
3. Restart the Siebel server.

Related Topics

Monitoring Index Status

Administering Batch Processing Status for FTP Indexing

Monitoring Index Status

The index status for FTP indexing mode can be monitored in the Search Index Status view. The data feed for indexing is collated into index batches, and submitted to the Oracle Secure Enterprise Search crawler for indexing. The number of records in each index batch is defined by the Batch Submit Size setting in the Search Engine Settings view. For information on configuring indexing mode settings in Siebel Tools, see *Configuring the Indexing Mode for Index Status Monitoring*.

To monitor the index status for Oracle Secure Enterprise Search

1. Navigate to the Administration - Search OSES screen, then the Search Index Status view.
2. Click Query to populate the table with the status of the index batches for the current indexing operation.
3. Verify the status for each index batch in the Status Indicator column.
4. Click Refresh to update the status for the records in the table.
5. Click Purge Table to clear the status records from the table.

Administering Batch Processing Status for FTP Indexing

You can perform the following batch processing operations on FTP index status information in the Search Index Status view.

- **Purge Table.** Deletes index status information from the table.
- **Query.** Queries the index status information for specific index records.
- **Refresh.** Refreshes the index status information to display the latest information, including any updates to the table.

According to the filter specification that is defined on the business component, batch processing operations (Purge Table, Query, Refresh) are performed on the FTP index status information. For more information, see *Checking Batch Status for FTP Index*.

Checking Batch Status for FTP Index

The following procedure shows you how to check the batch status on FTP index information.

To check batch status for FTP index for Oracle Secure Enterprise Search

1. In Siebel Tools, configure the indexing mode for index status monitoring:
   a. Set the search specification on the Search Index Batches BC business component to the following:

      ```
      Index Mode <> 'HTTP'
      ```

      This filter specifies to show records where Index Mode is FTP (not HTTP) only, and as a result batch processing operations will be performed on FTP index status information only.
   b. Update the repository and deliver the update, then start the Siebel application.

      For more information, see *Configuring the Indexing Mode for Index Status Monitoring*.
2. Delete the FTP index status information in the Siebel application as follows:
   a. Navigate to the Administration - Search OSES screen, then the Search Index Status view.

      The index batch information appears on screen.
   b. Review the status for each index batch in the Status Indicator column.
   c. Click Purge Table to delete the index status records from the table.

      All the FTP records are deleted.

3. Query the FTP index status information in the Siebel application as follows:
    a. Navigate to the Administration - Search OSES screen, then the Search Index Settings view.
    b. Select a Search Index Setting record (for example, Service Requests) and then click Index.

       This creates a Service Requests index category for the FTP index mode.
    c. Go to the Administration - Search OSES screen, then the Search Index Settings view.
    d. Click Query, and then click Go.

       The new batches generated for the indexed Service Requests category appear on screen.
4. Refresh the FTP index status information in the Siebel application as follows:
    a. Navigate to the Administration - Search OSES screen, then the Search Index Settings view.
    b. Select a couple more Search Index Setting records and then click Index.

       For example, select SR Attachment and Solution (Call Center) to create the corresponding index categories for the FTP index mode.
    c. Go to the Administration - Search OSES screen, then the Search Index Settings view.
    d. Click Refresh.

       The new batches generated for the newly indexed SR Attachment and Solution (Call Center) categories appear on screen.

       When the index batches are queued for indexing, their status changes to Queued and the Status Indicator field shows a progress bar.

9 Setting Up Oracle Secure Enterprise Search for Siebel Remote

Setting Up Oracle Secure Enterprise Search for Siebel Remote

This chapter covers setting up Oracle Secure Enterprise Search for Siebel Remote. This chapter includes the following topics:

- *About Installing Search for the Siebel Remote Client*
- *Creating the Siebel Search Center Directory Structure on the Siebel Remote Client*
- *Installing Oracle Secure Enterprise Search for Siebel Remote*
- *Starting the DSM Listener*
- *Configuring Search Field Mapping Settings for Siebel Remote*
- *Adding the Siebel Mobile Search Administration Screen for Siebel Remote*
- *Verifying the Business Component Search Connector Settings for Siebel Remote*
- *Activating Search for Siebel Remote*
- *Configuring Search Engine Settings for Siebel Remote*
- *Activating Search Run-Time Events for Siebel Remote*
- *Synchronizing Siebel Search for Siebel Remote*
- *Search Functionality Supported for Siebel Remote*

About Installing Search for the Siebel Remote Client

This topic covers installation of Search for Siebel Remote, and installation of related Siebel components. The Siebel Mobile Client must be installed before installing Search for Siebel Remote. See *Siebel Remote and Replication Manager Administration Guide* for information on the Siebel Mobile Web Client and Siebel Remote. Siebel Search for Siebel Remote is supported in employee-facing applications, and is not supported in customer-facing applications.

Note: Siebel Search for Siebel Remote is supported only on the Windows operating system.

Upgrading from Siebel Search Version 7.x

Any custom search objects which were defined in Siebel Search Version 7.x must be redefined in the file SSC_DSM_Field-Mappings.xml. See *Configuring Index Mappings for Oracle Secure Enterprise Search*.

Creating the Siebel Search Center Directory Structure on the Siebel Remote Client

This topic covers creation of the directories that are required when using Siebel Search for Siebel Remote.

To create the Siebel Search Center Directory Structure on the Siebel Remote Client

1. Create the Siebel Search Center Config directory `D:\fs\ssc\config\` under the Siebel File System on the Siebel Remote client.
2. Create a directory for storing the XML feed files on the Siebel Server, for example, `D:\fs\ssc\xmlidata`.
   The XML feed files are generated at runtime and temporarily stored in the `\xmlidata` folder. The feed files are automatically deleted once indexing completes.
3. Create a directory for storing the XML field mapping file on the Siebel Server, for example, `D:\fs\ssc\Config`.

Installing Oracle Secure Enterprise Search for Siebel Remote

Siebel Mobile Search crawls Siebel data in RSS feed format. The file ConfigRSS.exe is used to install and configure Siebel Mobile Search.

To install Oracle Secure Enterprise Search for Siebel Remote

1. Install the client for Siebel Remote.
   This installs dsm.zip to `<mobile client install dir>\BIN\`.
2. Extract the contents of dsm.zip to create the directory `<mobile client install dir>\BIN\dsm\`.
3. Copy the XML field mapping file from the mobile Client installation directory at `<mobile client install dir>\BIN\` to the config directory at `D:\fs\ssc\Config\`. The correct mapping file to copy is determined as follows:
   - Copy the file SSC_OSES_Field-Mappings.xml if you are using a Siebel application that operates across industries, such as Siebel Call Center, Siebel Sales, or Siebel Marketing.
   - Copy the file SIA_OSES_Field-Mappings.xml if you are using a Siebel industry application, such as Siebel Finance, Siebel Clinical, or Siebel Pharma.
4. Rename the XML field mapping file to SSC_DSM_Field-Mappings.xml.
5. Double-click on the file ConfigRSS.exe to install the Disconnected Search Module (DSM) client.
6. Complete the DSM Configuration fields. Some fields are described in the following table.

Field	Description
Install Directory	This is the install directory for the DSM log file and encrypted password file. The default value is:

Field	Description
	`C:\Documents and Settings\<UserName>\MyDocuments\Disconnected Search`
Feed Location	Location where the XML-based indexable data files will be generated. Set the value to: `D:\fs\SSC\xmlidata`
HTTP Port	This is the port of the DSM listener. The default value is `8095`. This value will be required when configuring the DSM Index Listener field in the Mobile Search administration view.
User Name	Create a user name for DSM. This value is also required when setting the DSM Username setting in the Search Engine Settings view.
Password	Create a password for DSM. This value is also required when setting the DSM Password setting in the Search Engine Settings view.

7. Click Install.

Starting the DSM Listener

This topic covers enabling Siebel Search for Siebel Remote by starting the Disconnected Search Module (DSM) Listener.

To start the Disconnected Search Module Listener

1. Double-click on the file SearchAPI.exe on the Siebel Mobile client.

   This file is located at `<mobile client install dir>\BIN\dsm\`.
2. Enter the DSM User Name and Password.
3. Select Debug Mode to enable debug logging level.

   This setting is optional, and is only required if you wish to view logging information.
4. Click Start Listener.

Configuring Search Field Mapping Settings for Siebel Remote

This topic covers configuring the Search field mapping settings for Siebel Remote The settings enclosed in percentage tags in the field mapping file must be configured to Search for Siebel Remote.

To configure Search field mapping settings for Siebel Remote

1. Open the file D:\fs\SSC\Config\SSC_DSM_Field-Mappings.xml in an XML or text editor.
2. Configure all fields enclosed in percentage tags. The fields are described in the following table:

Field	Description
%webserver%	Set the value to the IP address of the Mobile Client host computer.
%objmgr%	Set the object manager value to the application that is running, for example, CallCenter or Fins.
%lang%	Set the value to the language which the Siebel application is configured for, for example, the value for English is enu.
%hostName%	Set the value to the IP address of the Mobile Client host computer.

Adding the Siebel Mobile Search Administration Screen for Siebel Remote

The Siebel Mobile Search Administration screen must be added for each application project in Siebel Tools.

Note: The Mobile Search Administration screen has already been added for the Call Center application.

To add the Mobile Search Administration screen for Siebel Remote

1. Connect to Tools.
2. From the Object Explorer, expand the Application object type.
3. Select the application in the Object Explorer.
   Note the project to which the application belongs.
4. Lock the application project.
5. From the Object Explorer, expand the Application object type.

6. Select Screen Menu Item.
7. Choose Edit, and then New Record, and use the information in the following table to define the object properties:

Property	Description
Screen	Set the value to Search Mobile Admin View Screen.
Sequence	Use Screen View Sequence Editor to determine the sequence of views. Do not edit the Sequence property of the Screen View Object manually. See *Configuring Siebel Business Applications* for defining Sequence for Screen View Objects.
Text - String Reference	Set the value to: `SBL_ADMINISTRATION_-_MOBILE_SEARCH`

8. Compile the changes.

Verifying the Business Component Search Connector Settings for Siebel Remote

The Search business component connector for Siebel Remote is preconfigured. This task covers verifying the connector settings.

To verify the Search Connector settings for Siebel Remote

1. Navigate to the Administration - Mobile Search screen, then the Search Connector Settings view.

   The Search Connector Settings List applet is displayed.
2. Verify the settings in the following table. Values are case-sensitive.

Field	Description
Name	The preconfigured value must be set to Mobile Business Component.
Library Name	The preconfigured value must be set to buscomp.
Engine Name	The preconfigured value must be set to DSM.

Activating Search for Siebel Remote

Siebel Search for Siebel Remote is activated by selecting the Default Flag option in the Search Engine Settings view. Only one search engine can be activated at any one time—make sure that the Default Flg option is selected for just one search engine.

To activate Search for Siebel Remote

1. Navigate to Administration - Mobile Search screen, then the Search Engine Settings view.
2. Select the Default Flag option for DSM Search Engine.

Configuring Search Engine Settings for Siebel Remote

This topic covers configuration of the Search Engine Settings view for Siebel Remote.

To configure search engine settings for Siebel Remote

1. Navigate to the Administration - Mobile Search screen, then the Search Engine Settings view.
2. Complete the search engine fields described in the following.

Field	Description
Batch Submit Size	The number of records submitted at a time in each feed for indexing. Set the value to less than or equal to 1500. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Submit Size.
DSM Index Listener	Set the value to `http://<localhost>:<HTTP Port>/?index`, where HTTP Port is the port of the DSM Listener. HTTP Port is defined when installing the Mobile Search client. The default value is: `http://localhost:8095/?index`
DSM Password	This is the password that was created when installing the DSM client. See *Installing Oracle Secure Enterprise Search for Siebel Remote*.
DSM Username	This is the user name that was created when installing the DSM client. See *Installing Oracle Secure Enterprise Search for Siebel Remote*.
Dupmarked	This setting configures the marking of duplicates in the result set. Set the value to False.

Field	Description
Dupremoved	This setting configures the removal of duplicates from the result set. Set the value to True.
Filename	This value configures the path of the DSM field mapping file SSC_DSM_Field-Mappings.xml on the Mobile client. Set the value to: `D:\fs\SSC\Config\SSC_DSM_Field-Mappings.xml`
Recordcount	This setting configures the inclusion of an estimate in the result for the number of records in the result set. Set the value to True.
Shared Search UNC Location	This is the Siebel Search Center location for storing configuration and XML data files. It is the parent directory of the Xmlidata directory. The address format is `D:\fs\SSC`.
WebServer Address	URL for the Search Service. The address format is `http://localhost:<HTTP_Port>/`. The default value is: `http://localhost:8095/`
XML Indexable Data Location	This is the Siebel Search Center location where the XML feed files are temporarily stored for the DSM Listener to access and index. The path format is: `D:\fs\SSC\xmlidata\`

3. Select Save Record on the list applet.
4. Log out and log in to the Mobile Client for the changes to take effect.

Note: The Siebel Server must be restarted every time a change is made to Search Engine Settings configuration.

Process of Setting Up the Index Definition for the Siebel Remote Client

Search Categories for each Siebel application are defined in Search Definition groupings in the Search Definition view. This view can be used for creating or customizing Search Definitions and Search Definition Categories. This topic covers configuring the Mobile Client Search Definition in the Siebel Mobile Search administration UI, and then adding the definition to the application configuration file.

To set up the index definition for the Search mobile client, perform the following tasks:

- *Configuring the Search Definition for Siebel Remote*

- *Configuring the Application Configuration File*

Configuring the Search Definition for Siebel Remote

This topic covers configuring the Mobile Client Search definition in the Search Definition view of the Administration - Mobile Search screen. The list of Categories displayed in the Search Index Settings view is determined by the default Search Definition in the Search Definition view.

To configure the default search definition for Siebel Remote

1. Navigate to Administration - Mobile Search screen, then the Search Definition view.
2. Select Mobile Client Search Definition.
3. Select the Default Flg option.

Configuring the Application Configuration File

This topic covers configuring the Search Definition in the SearchDefName parameter of the application configuration file for the Siebel Mobile Client. Application configuration file names are in the format <application>.`cfg`, for example, the file shm.cfg is the Siebel Hospitality application configuration file, and the file uagent.cfg is the Siebel Call Center application configuration file. Verify that you are using the correct application configuration file by checking the ApplicationName parameter in the file.

Note: This configuration change must be applied to each application configuration file for each language in the enterprise.

To configure the application configuration file

1. Open the application configuration file in a text editor. The file is located at: <install_dir>bin\cfgfiles \<application>.cfg
2. Go to the SIEBEL section of the configuration file.
3. Change the value of the SearchDefName parameter to Mobile Client Search Definition, and save the changes.

Activating Search Run-Time Events for Siebel Remote

Activating preconfigured Search run-time events is required to enable refresh indexing. Search runtime events monitor create, update and delete events executed on Search Objects in the data repository. The Action Sets create records in the transaction table and trigger the Search Content business service method UpdateIndex.

To activate the Search run-time events for Siebel Remote

1. Navigate to Administration - Runtime Events screen, then the Action Sets view.
2. Query on the Update Index Action Set.
3. Select the Active and Enable Export options to activate the Update Index run-time events.

Note: Incremental indexing is not supported for disconnected Mobile Search.

Synchronizing Siebel Search for Siebel Remote

See *Siebel Remote and Replication Manager Administration Guide* for information on synchronizing a Mobile Web Client with the Siebel Remote server.

Search Functionality Supported for Siebel Remote

The following table summarizes the Search functionality available for Siebel Remote.

Functionality	Supported for Siebel Remote
Siebel Open UI	No
Business component indexing	Yes
File system indexing	No
Web source indexing	No
Database source indexing	No
IMAP email source indexing	No
Secure indexing	No
Refresh indexing	Yes
Incremental indexing	Manual incremental indexing supported.
Asynchronous indexing	No
Index status monitoring	No
Real time database queries	No. Searches are run against search indices.
Full text search	Yes
Keyword search	Yes

Functionality	Supported for Siebel Remote
Automated suggested keywords	No
Filter field search (also called parametric search)	Yes
Wildcard search	Yes. Does not apply to punctuation characters, such as spaces, or commas. Applies to characters only within a word.
Case insensitive search	Yes
Boolean operators	Yes. Supports AND and OR Boolean operators.
Searches on content in attachments	Yes
Searches on external data sources and file systems	Yes
Search by file format	No
Associate option in search results	Yes
Password Encryption	No

10 Preconfigured Search Objects for Oracle Secure Enterprise Search

Preconfigured Search Objects for Oracle Secure Enterprise Search

This chapter lists the Oracle Secure Enterprise Search objects that come preconfigured with Oracle's Siebel Search, and the application and Search Definition mappings. This chapter includes the following topics:

- *Call Center Searchable Objects*
- *Self Service Searchable Objects*
- *Sales Searchable Objects*
- *Service Searchable Objects*
- *Application and Search Definition Mappings*

Call Center Searchable Objects

This topic lists the business components that are preconfigured as searchable objects in the Call Center Search Definition:

- Account
- Catalog Category
- Contact
- Decision issue
- Employee
- Internal Product
- Opportunity
- Service Request
- Service Request Attachment
- Solution
- SR Resolution Item

Self Service Searchable Objects

This topic lists the business components that are preconfigured as searchable objects in the Self Service Search Definition:

- Documentation
- Downloads
- Product Literature
- Product News
- Resolution Documents
- Solution

Sales Searchable Objects

This topic lists the business components that are preconfigured as searchable objects in the Sales Search Definition:

- Catalog Category
- Decision issue
- Internal Product
- Sales Tool

Service Searchable Objects

This topic lists the business components that are preconfigured as searchable objects in the Sales Search Definition:

- Internal Product
- Sales Tool
- Solution
- SR Resolution Item

To create or customize Search objects for Oracle Secure Enterprise Search integration, see *Configuring Index Mappings for Oracle Secure Enterprise Search*.

Application and Search Definition Mappings

The following table lists the preconfigured mappings in the application configuration files between Siebel CRM and Search Definitions. See *Creating a New Index Definition* for information on creating and customizing Search Definitions.

Siebel Application	Search Definition
Siebel Automotive	Call Center
Siebel Call Center	Call Center
Siebel Consumer Sector	Call Center Definition
Siebel eBanking	eBanking Definition
Siebel eChannel	eChannel Definition
Siebel eChannel for CG	eChannel Definition
Siebel eChannel for CME	Call Center Definition
Siebel eConsumer	eCustomer Definition
Siebel eConsumerPharma	eConsumerPharma Definition
Siebel eCustomer	eCustomer Definition
Siebel eCustomer for CME	eCustomer Definition
Siebel eDealer	eChannel Definition
Siebel eMail Response	Service Definition
Siebel Web Marketing	Web Marketing Definition
Siebel Energy	Call Center Definition
Siebel eProfessionalPharma	eProfessionalPharma Definition
Siebel ERM	ePortal Definition
Siebel ERM Administration	ERM Administrator Definition
Siebel ERM Embedded	ePortal Definition
Siebel ERM Portal	ePortal Definition
Siebel eSales	eSales Definition

Siebel Application	Search Definition
Siebel eSales for CME	eSales Definition
Siebel Self Service	Self Service Definition
Siebel eSitesClinical	eSitesClinical Definition
Siebel Field Service	Service Definition
Siebel Financial eBrokerage	eBanking Definition
Siebel Financial eChannel	Call Center Definition
Siebel Financial eCustomer	eCustomer Definition
Siebel Financial eEnrollment	eService Definition
Siebel Financial eService	eService Definition
Siebel Financial Services	Call Center Definition
Siebel Financial Services Marketing	Marketing Definition
Siebel FINS eSales	FINSeSales Definition
Siebel Hospitality	Call Center Definition
Siebel Industry Marketing Enterprise	Marketing Definition
Siebel Insurance	Not supported
Siebel Life Sciences	Call Center Definition
Siebel Life Sciences	Sales Definition
Siebel Loyalty	Call Center Definition
Siebel Loyalty Customer Portal	eCustomer Definition
Siebel Loyalty Partner Portal	eChannel Definition
Siebel Marketing Enterprise	Marketing Definition

Siebel Application	Search Definition
Siebel Medical	Call Center Definition
Siebel Oil, Gas & Chemicals	Call Center Definition
Siebel Partner Manager	Partner Manager Definition
Siebel Power Communications	Call Center Definition
Siebel Public Sector	Call Center Definition
Siebel Sales Enterprise	Sales Definition
Siebel Transportation	Call Center Definition
Siebel Travel	Call Center Definition
Siebel Universal Customer Master	Call Center Definition

11 Filter Search Specifications Syntax for Oracle Secure Enterprise Search

Filter Search Specifications Syntax for Oracle Secure Enterprise Search

This chapter covers the syntax for filtering the index record-set to incorporate custom business rules. See *Administering Siebel Search Index Settings for Oracle Secure Enterprise Search* for information on using the Filter Search Spec field. This chapter includes the topic: *Filter Search Specification Syntax*.

Filter Search Specification Syntax

This topic describes the supported syntax elements for filter search specifications, which are used for filtering the index record-set. Filter search specifications are specified in the Search Definition and Search Index Settings views of the Administration - Search OSES screen.

This topic includes the following information:

- *Precedence*
- *Comparison Operators*
- *Logical Operators*
- *Pattern Matching with LIKE and NOT LIKE*
- *Functions in Calculation Expressions*

Precedence

Precedence refers to the order in which the various search operators within the filter search query specification are evaluated. The following table shows the levels of precedence. Expressions within parentheses are evaluated first. Using parentheses can alter the order of precedence within an expression. Oracle's Siebel CRM evaluates the expression within the parentheses first, before evaluating the expression outside.

Level	Operator
1	()
2	NOT
3	AND
4	OR

Level	Operator

Comparison Operators

The following table describes the purpose of each comparison operator, and gives an example of how it is used.

Operator	Purpose	Example
=	Equality Text	[Publish External] = “Y"
>	Inequality text	[Role] > LookupValue (“ROLE_TYPE", “Manager")
>	Greater than	[Start Date] > Today()
	Less than	[End Date] Today() + 4
>=	Greater than or equal to	[Start Date] >= Today()
=	Less than or equal to	[End Date] = Today() - 4

Note: The last four operators are used only for Date fields.

Logical Operators

The following table explains what a value of TRUE or FALSE means for each logical operator.

Operator	Returns TRUE	Returns FALSE
AND	If all component conditions evaluate to TRUE	If any component condition evaluates to FALSE
OR	If any component condition evaluates to TRUE	If all component conditions evaluate to FALSE

Pattern Matching with LIKE and NOT LIKE

The LIKE operator is used in character string comparisons with pattern matching.

The syntax is as follows:

```
char1
 LIKE
char2
```

where:

- char1 is the value to be compared with the pattern.
- char2 is the pattern to which char1 is compared. The NOT logical operator can be used in conjunction with LIKE to exclude patterns.

The syntax including the NOT logical operator is one of the following:

```
 char1 NOT LIKE char2
NOT (char1 LIKE char2)
```

While the equal (=) operator does exact matching, the LIKE operator matches a portion of one character value to another. Patterns can use special characters to denote different characters. These characters are given in the following table.

Character	Purpose	Example
*	Zero or more characters	[Sales Type] LIKE Sales* returns all records whose [Sales Type] value starts with the characters Sales, as in Sales-Brochure, Sales-Presentation, and so on.
?	One character	[Sales Type] NOT LIKE Sale? returns all records whose [Sales Type] value was five characters long, and did not start with the letters Sales. Records with the word Sales would not be returned.

Functions in Calculation Expressions

Functions that can be used in the filter search specification are listed in the following table.

Function	Purpose	Example
GetProfileAttr ("[Attribute]")	String	Returns the value stored in the profile attribute if that attribute has been defined. Used in personalization to retrieve values of attributes in a user profile and to pass information from a script to the UI. Set a session-specific personalization attribute equal to the value of the shared global, and reference the personalization attribute in a calculated field. **Note:** For an undefined attribute or for an attribute that has not been set up, GetProfileAttr returns NULL. Search Server does not support NULL values in the query.

Function	Purpose	Example
LookupValue (type, lang_ind_code)	String	Finds a row in S_LST_OF_VAL table where the TYPE column matches the type argument, the CODE column matches the lang_ind_code argument, and the LANG_ID column matches the language code of the currently active language. Returns the display value (the VAL column) for the row. This function is used to obtain the translation of the specified untranslated value in the specified LOV into the currently active language.
Today	Date	Today's date (in the format mm/dd/yy).
GetValidCatalogCategories()	String	Returns a list of valid catalog categories for the current logged in user.

Filter Search Specification Examples

Assigning a search expression to an object definition's Search Specification property is similar to the predefined query's expression; however, identifying the business component and specifying the reserved word Search is not required.

Note: The Search Specification expression must be on one line. If more than one line is used the search specification might not be processed correctly.

The following are examples of filter search specification syntax:

- [Close Date] > "04/15/07"
- [Sales Tool Type] LIKE "Cal*"
- [Start Date] >= Today () AND [End Date] <= Today() + 100
- [Solution Type] = LookupValue ("SOLUTION_TYPE", "Solution") AND ([Publish External] = "Y"
- [PriceListId]=GetProfileAttr("DefaultPriceListId")

Note: For date formats in filter Search Specification, use the business component format. To reference a field value, you must use [Filter Field Name]. Also, string constants must be enclosed in double quotation marks ("string").

The fields declared must exist within the designated search filter field object definition.

12 API Examples for Oracle Secure Enterprise Search

API Examples for Oracle Secure Enterprise Search

This chapter lists Oracle Secure Enterprise Search Open API sample formats for the Search and Index methods, and the feed file. This chapter includes the following topics:

- *Search inputArgs Example*
- *Search outputArgs Example*
- *Feed File Example*
- *Index inputArgs Example*

Search inputArgs Example

This XML listing displays sample format and values for `inputArgs` when the Search method is invoked from the InvokeMethod method.

```
<?xml version="1.0" encoding="UTF-8"?>
<?Siebel-Property-Set EscapeNames="true"?>

<PropertySet
 XParam2="Val2"
 Search_spcType="BASIC"
 EngineName="XSearch"
 BCType="1#15#Service Request"
 Criteria=""
 Navigation="2#7#Account4#Area"
 Browser="FALSE"
 Filename="\\<server>\filesystem\SSC\Config\<application>_Field-Mappings.xml"
 Shared_spcSearch_spcUNC_spcLocation="\\<server>\filesystem\SSC"
 _XML_spcIndexable_spcData_spcLocation="\\<server>\filesystem\SSC\xmlidata\"
 Sort=""
 DefaultFrom="0"
 XParam1="Value1"
 Context="SENSITIVE"
 DefaultCriteria=""
 DefaultContext="SENSITIVE"
 AdptClassName="\\<server>\fs\XSearchAdapter.dll"
 Batch_spcSplit_spcSize="1500"
 DefaultRecordsPerPage="10"
 SSC_spcFTP_spcLocation="ftp://<server>/"
 AvailableFields="22#17#Service Request@@8#Abstract7#Account4#Area15#Attachment List7#BC
 Name3#CSN7#Created10#Created By11#Description2#Id12#Organization5#Owner23#Primary Organization
 Id20#Requestor First Name19#Requestor Last Name15#Resolution Code9#SR Number6#Status8#Sub-
Area7#Updated10#Updated By"
 RecordsPerPage="10"
 Query=""
 DefaultSort=""
 SubOperation="Search"
 New_spcSearch="0"
```

```
 EngineId="42-CC0HV"
 KeyOperator="OR"
 DefaultTo="10"
 SelectedSearch="Service Requests"
 Freetext=""
 Collection="1#7#buscomp"
 DefaultBrowser="FALSE"
 To="9"
 LogOperator="AND"
 Batch_spcSubmit_spcSize="1000"
 Keyword=""
 From="0">

</PropertySet>
```

Search outputArgs Example

This XML listing displays sample format and values for `outputArgs` when the Search method is invoked from the InvokeMethod method.

```
<?xml version ="1.0" encoding ="UTF-16"?>
<?XsearchAdapter-XML EscapeNames="true"?>
<OutputBlock To ="9" TotalRecords ="13" From ="0">

<OutputBlock
 Rowid ="1-260HR"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary ="NUOVITESTBENCHMARKSULLASCALABILITA&apos;DISIEBELSALES:sonooradisponibilisuwww.siebel.com|
[Author:ITA_CCHE][Name:ITA_SiebelSalesProductNews7.40.01"
 Date ="2002-02-26"
 Title ="ITA_SiebelSalesProductNews7.40.01"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="99-27Y6K"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary ="eMRSolution6|[Author:SADMIN][Name:eMRSolution6][Type:Solution][Status:Approved]"
 Date ="1979-12-31"
 Title ="eMRSolution6"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="99-27Y6B"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary ="eMRSolution|[Author:SADMIN][Name:eMRSolution4][Type:Solution][Status:Approved]"
 Date ="1979-12-31"
 Title ="eMRSolution4"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="1-2G2AY"
 BCType ="Solution"
```

```
 DocumentType ="BusCompRecord"
 Summary ="HowtoSubmitanSRforRSATokenIssuesWhenlogginganSRforRSAtokensonHelpDeskOnline,youwillwanttoensure/
indicatethefollowing:NewRequests1.SR"
 Date ="2002-06-01"
 Title ="RSA-HowtosubmitanSRforanRSAToken"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="1-26GY2"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary
 ="SmartScriptandeSmartScriptusethesamescriptstructureandworkexactlythesame.Thismeansthatyoucancreateas
 Date ="2002-03-05"
 Title ="FRA-SmartScripteteSmartScript"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="1-2G2AW"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary ="HowtoOrderanRSAToken1)ContactITCustomerCare"
 Date ="2002-06-01"
 Title ="RSA-OrderinganRSAToken"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="1-2C38Z"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary
 ="OrderDocumentation(forInternalEmployees)MostSiebelDocumentationandLiteratureitemscanbedownloadedinPDFformatfromth
 Date ="2002-05-30"
 Title ="MfgOps-Q3"
 DataSource ="Solution"
 Location =""></OutputBlock>

<OutputBlock
 Rowid ="1-EZTJ"
 BCType ="Solution"
 DocumentType ="BusCompRecord"
 Summary ="Name:1-EZTJ][Type:ResolutionItem]"
 Date ="2001-07-17"
 Title ="1-EZTJ"
 DataSource ="Solution"
 Location =""></OutputBlock>

</OutputBlock>
```

Feed File Example

This is a sample index feed file for two records. Oracle's Siebel application creates the XML feed files which are input into the index operation.

```
<?xml version="1.0" encoding="UTF-8" ?>

- <rss version="2.0" xsi:schemaLocation="http://xmlns.oracle.com/orarss.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://
www.w3.org/2001/XMLSchema">

- <channel>
 <title>Siebel Search Center</title>
 <link>http://www.oracle.com/apps/rss</link>
 <description>This channel contains feed for Siebel BusComp data.</description>
 <lastBuildDate>2008-05-13T08:03:39.00Z</lastBuildDate>
- <channelDesc xmlns="http://xmlns.oracle.com/orarss">
 <sourceName>buscomp</sourceName>
 <batchId>2008-05-13_08-03-39</batchId>
 <itemCount>2</itemCount>
 </channelDesc>
- <item>

 <link>http://<server>:<port>/siebel/app/callcenter/
enu?SWECmd=GotoView&SWEView=User+Catalog+Explorer+View&SWERF=1&SWEHo=sdchs21n381&S
WEBU=1&SWEApplet0=InfoCenter+Explorer+List+Applet&SWERowId0=1-12931</link>

- <itemDesc xmlns="http://xmlns.oracle.com/orarss" operation="insert">
- <documentMetadata>

 <accessURL>http://<server>:<port>/siebel/app/callcenter/
enu?SWECmd=GotoView&SWEView=#VIEWNAME#&SWERF=1&SWEHo=sdchs21n381&SWEBU=1&SWEApplet
0=#APPLETNAME#&SWERowId0=#ROWID#</accessURL>

 <docAttr name="Title">Siebel Distance Learning - ESN</docAttr>
 <docAttr name="status">Approved</docAttr>
 </documentMetadata>
- <documentContent>
 <content>[Name:Siebel Distance Learning - ESN] [Status:Approved]</content>
 </documentContent>
- <documentAcl>
 <securityAttr name="sblvisibilityid">PUB</securityAttr>
 </documentAcl>
- <documentInfo>
 <status>STATUS_OK_FOR_INDEX</status>
 </documentInfo>
 </itemDesc>
 </item>
- <item>

 <link>http://<server>:<port>/siebel/app/callcenter/
enu?SWECmd=GotoView&SWEView=User+Catalog+Explorer+View&SWERF=1&SWEHo=sdchs21n381&S
WEBU=1&SWEApplet0=InfoCenter+Explorer+List+Applet&SWERowId0=99-27Y6K</link>

- <itemDesc xmlns="http://xmlns.oracle.com/orarss" operation="insert">
- <documentMetadata>

 <accessURL>http://<server>:<port>/siebel/app/callcenter/
enu?SWECmd=GotoView&SWEView=#VIEWNAME#&SWERF=1&SWEHo=sdchs21n381&SWEBU=1&SWEApplet
0=#APPLETNAME#&SWERowId0=#ROWID#</accessURL>
```

```
 <docAttr name="Title">eMR Solution 6</docAttr>
 <docAttr name="status">Approved</docAttr>
 </documentMetadata>
- <documentContent>
```

Index inputArgs Example

This XML listing displays sample format and values for inputArgs when the Index method is invoked from the InvokeMethod method.

```
<?xml version="1.0" encoding="UTF-8"?><?Siebel-Property-Set EscapeNames="true"?>

<PropertySet
 Category_spcId="04-KFT4L"
 EngineName="XSearch"
 Search_spcSpecification="Id &gt;= &quot;1-1009T&quot; AND Id &lt;= &quot;99-4C12M&quot;"
 _XML_spcIndexable_spcData_spcLocation="\\<server>\fs\SSC\xmlidata\"
 Shared_spcSearch_spcUNC_spcLocation=\\<server>\fs\SSCFilename="\\<server>\fs\ssc\config\SSC_OSES_Field-
Mappings.xml"
 Filter_spcSpec=""CategoryName="Solution (Call Center)"
 XParam="Xval"
 Batch_spcSplit_spcSize="1500"
 AdptClassName="\\<server>\fs\XSearchAdapter.dll"
 Search_spcBC_spcName="Solution"
 Connector_spcId="04-KFT4D"
 Adapter_spcInstance_spcCount="0"
 SSC_spcFTP_spcLocation="ftp://<server>/"
 Type="buscomp"
 EngineId="42-CLX4P"
 SearchCategoryName="Solution (Call Center)"
 Batch_spcSubmit_spcSize="1000"
 Operation="Index">

<PropertySet
 Seq_spcNum="" Field_spcType="" Weight_spcFactor="" Searchable_spcFlg="Y" Field_spcName="Author By Name"
 Navigable_spcFlg="N">
</PropertySet>

<PropertySet
 Seq_spcNum="" Field_spcType="" Weight_spcFactor="" Searchable_spcFlg="N" Field_spcName="BC Name"
 Navigable_spcFlg="N">
</PropertySet>

<PropertySet
 Seq_spcNum="" Field_spcType="" Weight_spcFactor="" Searchable_spcFlg="N" Field_spcName="Catalog Category
 Name" Navigable_spcFlg="N">
</PropertySet>

</PropertySet>
```

13 Siebel Intelligent Search

Siebel Intelligent Search

This chapter provides an overview of Siebel Intelligent Search functionality and architecture, and includes the following topics:

- *About Siebel Intelligent Search*
- *Integration Architecture and Configuration Flow*
- *Setting Up Siebel Intelligent Search*
- *Global Search UX and Supported Use Cases*
- *Testing Your Initial Setup*
- *Access Control*
- *Supported Languages*
- *External File Ingestion for Siebel Intelligent Search*
- *Troubleshooting Siebel Intelligent Search*
- *Siebel OpenSearch APIs*

About Siebel Intelligent Search

Intelligent Search provides a modern enterprise search capability in Siebel CRM that leverages OpenSearch and AI to deliver fast, intuitive, and context-aware search across business entities. The unified global search interface supports both keyword and semantic search, enabling accurate data retrieval and improved decision-making. Intelligent Search has been designed for scalability, to ensure it can cater for large enterprise data sets.

Key benefits include:

- Prebuilt adapter enabling a modern Siebel Search UX powered by OpenSearch for enhanced productivity and usability.
- Unified Search UX with filters delivering an intuitive, user-friendly interface for fast data retrieval.
- Integrated solution supporting keyword and semantic search across global business objects and file attachments to retrieve relevant results.
- Enterprise-grade, scalable search handling vast amounts of information efficiently and reliably.

Key functionalities include:

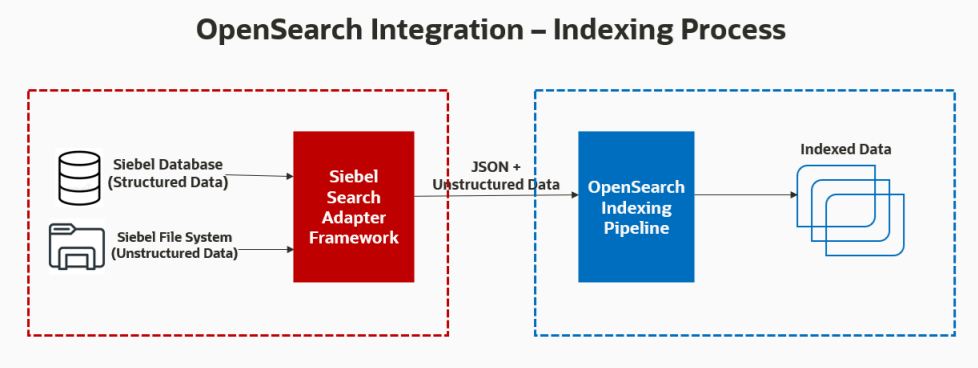
- **Global Search UX**: Enables searching of business records across Siebel global objects, with filters that empower users to refine results based on specific criteria.
- **Keyword Search**: Matches the exact terms or phrases from a user's query in the text or data.
- **Semantic Search**: Retrieves information based on the meaning and intent behind a query, rather than just matching exact keywords.
- **Fuzzy Search**: Identifies close matches to a query, accommodating errors like typos or different spellings.

- **File Attachment Search**: Locates specific files attached to Siebel business objects by searching through file names, content, and metadata.
- **Auto Suggestion**: Provides real-time, suggested search queries as users type, helping them find relevant results faster.
- **Search History**: Stores previous queries for quick retrieval and improved search efficiency.
- **Access Control**: Limits search results to only what users are authorized to see based on their position, organization and visibility rules.

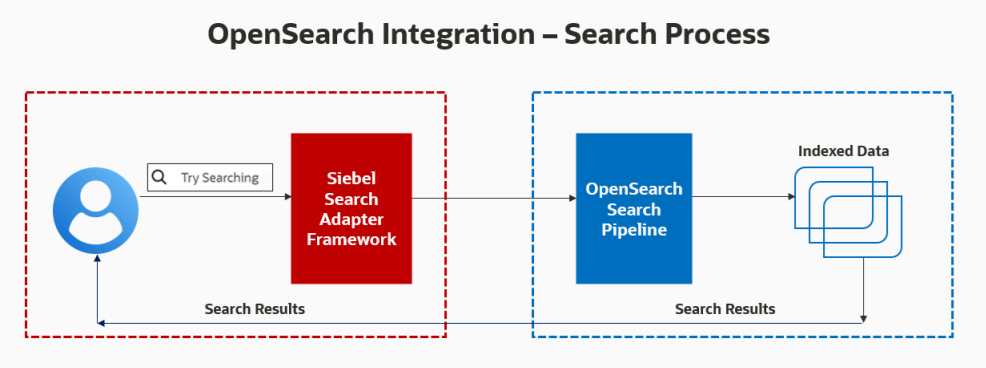
Integration Architecture and Configuration Flow

Siebel Intelligent Search leverages integration between Siebel Search Adapter Framework and OpenSearch search engine to deliver advanced search capabilities. The integration consists of two processes:

1. **Indexing Process**: Collecting, processing, and storing data into OpenSearch so that it can be searched efficiently. Key functionalities:
   - **Data Collection** – Fetching data from various sources like databases, files.
   - **Processing & Transformation** – Cleaning, parsing, and enriching the data.
   - **Indexing** – Storing structured data in an OpenSearch index for fast retrieval.



2. **Search Process**: Retrieving relevant data from OpenSearch based on search requests. Key functionalities:
   - **Query Parsing** – Interpreting the search request.
   - **Searching & Matching** – Finding data that match the query terms.
   - **Ranking & Filtering** – Ranking by relevance and filtering based on search categories.
   - **Response** – Returning the most relevant results to users.



Setting Up Siebel Intelligent Search

Following are the steps to follow for setting up Siebel Intellingent search:

1. *Downloading and Installing OpenSearch*
2. *Configuring OpenSearch Integration via YAML File*
3. *Enabling Required Component Groups in Siebel*
4. *Enabling Search Engine in Siebel Application*
5. *Create Search Categories and Generate Index*
6. *Adding Application User Property*

Downloading and Installing OpenSearch

To download and Install OpenSearch, follow these steps:

1. Download OpenSearch from *https://opensearch.org* .
2. Install OpenSearch on a server that meets your organization's requirements.
3. Install the following OpenSearch plugins:
    - ML Commons
    - k-NN
    - Neural Search
    - Index Management
    - Job Scheduler
    - Security
    - ingest-attachment
4. Refer to the OpenSearch documentation for details about configuring system resources and security.

Note: Ensure the OpenSearch server is up and running before proceeding.

Configuring OpenSearch Integration via YAML File

YAML file for OpenSearch is a human-readable configuration file written in the YAML format, used to define settings and parameters for OpenSearch and search categories for Siebel application.

This file provide a structured way to configure and customize the behavior and environment of a Siebel with OpenSearch deployment. This file serves as the source of truth, providing the up-to-date status of indexing and model deployment. Administrators can use it to identify issues in case of failures.

Follow these steps to configure YAML file:

1. Go to `<Siebel_Build_Location>/ses/applicationcontainer_internal/webapps`.

2. Open modernsearchconfig.yaml, configure both downstream (OpenSearch) and upstream (Siebel) sections.

   Note: A new `modernsearchconfig_template.yaml` file is introduced in Siebel 26.6. This file contains the latest out-of-the-box (OOB) configuration required to support new Intelligent Search functionalities.

   New Customers – Fresh Installation

   - The `modernsearchconfig_template.yaml` file is delivered as part of the installation.
   - No `modernsearchconfig.yaml` file is created by default.
   - You must:
     i. Copy and rename `modernsearchconfig_template.yaml` to `modernsearchconfig.yaml`.
     ii. Modify `modernsearchconfig.yaml` as needed.
     iii. Use this file to enable and configure Intelligent Search.

   Existing Customers – Upgrading to 26.6 and Later

   Scenario 1: Upgrade from pre-26.6 (with OpenSearch enabled)

   - The `modernsearchconfig_template.yaml` file is newly introduced and copied during upgrade.
   - The existing `modernsearchconfig.yaml` file will be deleted during upgrade.
   - You must:
     i. Take a backup of their existing `modernsearchconfig.yaml` **before upgrade**.
     ii. After upgrade, restore the backup file as `modernsearchconfig.yaml`.
     iii. Manually review and update their configuration to align with the new template (`modernsearchconfig_template.yaml`).
   - This is a one-time impact during upgrade to 26.6 (or later).

   Scenario 2: Subsequent Upgrades (26.6 → 26.7 → 26.8 → 26.9 → 26.10, etc.)

   - The `modernsearchconfig_template.yaml` file is updated and replaced with the latest OOB version during each upgrade.
   - The existing `modernsearchconfig.yaml` file:
     - Will not be modified or deleted.
     - Is treated as a customer-managed custom configuration file.
   - You are responsible for:
     i. Reviewing changes in the updated `modernsearchconfig_template.yaml`.
     ii. Manually merging any required updates into their existing `modernsearchconfig.yaml`.

3. Save changes and restart your Siebel Tomcat Server.

Note: Only HTTPS is supported for Siebel Intelligent Search integration with OpenSearch. HTTP is not supported. Ensure that the OpenSearch endpoint is configured with an https:// URL.

Downstream Settings :

Note: If you modify any of these parameters - `username, password, url, port,httpCompression, clientInitConnectionRequestTimeout, or clientResponseTimeout` - you must restart your internal Tomcat Server for the changes to take effect.

Category	Settings	Description
Settings	clientInitConnectionRequestTimeout: 10 (values in seconds) clientResponseTimeout: 7200 (values in seconds) maxTokenCount: 384000 refreshInterval: 60 (value in seconds) httpCompression: false	**clientInitConnectionRequestTimeout :** Time the client waits while establishing the initial connection to the search engine. **clientResponseTimeout :** Maximum time the client waits to receive response from search engine. Set this value based on the maximum time required for a single attachment batch request to complete. **maxTokenCount :** Maximum token count allowed during text analysis. Set this value based on the largest attachment that must be processed. **refreshInterval:** Frequency for refreshing or updating the configuration/state. **httpCompression:** Controls whether Intelligent Search requests gzip-compressed responses from OpenSearch. Set to true only when OpenSearch HTTP compression is enabled; otherwise, leave the value as false.
Search	innerHitsSize: 2	**innerHitsSize (2):** Number of inner matching records returned per result.
IngestPipeline	- type: text_chunking maxChunkLimit: 100 tokenLimit: 384 overlapRate: 0.1 tokenizer: standard	**text_chunking:** Configuration for splitting text into smaller chunks for processing. **maxChunkLimit:**Maximum number of chunks that can be generated for a document. Increase this value only after validating that the environment can process and index the additional chunks. **tokenLimit:** Maximum number of tokens in each chunk. Set this value to match the input token limit of

Category	Settings	Description
		the embedding model used by the environment. **overlapRate:** Percentage of tokens shared between consecutive chunks to preserve context. Valid values are from 0 through 0.5. **tokenizer:** Tokenizer used for text chunking. **Note**: Values should be tuned based on attachment content and OpenSearch cluster capacity.
Connectivity	name: OpenSearch username: <CHANGE_ME> password: <CHANGE_ME> url: <CHANGE_ME> port: <CHANGE_ME>	Connectivity details to access to your OpenSearch instance. OpenSearch version mentioned in YAML file should exactly match the OpenSearch version installed **Note:** Password is in clear text. So exercise caution regarding the same.
Index	category: **- servicerequests:** isIndexed: false **- contacts:** isIndexed: false **- accounts:** isIndexed: false **- opportunities:** isIndexed: false **- literature:** isIndexed: false	• Indexing status for 5 seeded categories. For each category, the default Indexing status is 'false'. Once the indexing process has completed, the status will be updated to 'true' by OpenSearch. **Administrator should not manually update the status value.** • If you are adding a new category like 'Products', make sure you also add a new entry into this Index section: - products: isIndexed: false - orderentryorders: isIndexed: false - orderentrylineitems:

Category	Settings	Description
		isIndexed: false - orderitemxa: isIndexed: false - quote: isIndexed: false - quoteitem: isIndexed: false - quoteitemxa: isIndexed: false - fileingestion: isIndexed: false Provide a unique index name that maps to your search category. This step is required to ensure the newly added category can be indexed properly by OpenSearch. • **Index Naming Conventions**: ◦ Lowercase letters only. Uppercase letters are not allowed. ◦ Cannot contain spaces. ◦ Allowed characters: letters, numbers, hyphens, underscores periods ◦ Cannot start with: underscore, hyphen, plus sign ◦ Length: <255 bytes
Language	`locale:` `defaultLanguage: English`	The value must correspond to a language supported and match the expected string format defined by OpenSearch.
Search	`maxResults: 30` `percentOfTopScore: 20`	**maxResults**: Maximum results retrieved from OpenSearch search engine.

Category	Settings	Description
		percentOfTopScore: Threshold expressed as a percentage of the top hit's score. When applied, OpenSearch uses this threshold to decide which documents are close enough in relevance to the highest scoring document to be considered in the rescoring or filtering process. • Suppose the top document in your search has a score of 10.0. • If `percentOfTopScore` is set to 90, it means documents with a score at least 90% of 10.0, i.e., scores >= 9.0, will be included for further processing or rescoring. • Documents scoring less than that threshold would be excluded from that step.
ML	modelId: <CHANGE_ME> # DO NOT TOUCH, UPDATED BY SYSTEM modelGroupId: <CHANGE_ME> # DO NOT TOUCH, UPDATED BY SYSTEM modelRegistrationTaskId: <CHANGE_ME> # DO NOT TOUCH, UPDATED BY SYSTEM modelDeploymentTaskId: <CHANGE_ME> # DO NOT TOUCH, UPDATED BY SYSTEM	**NOTE: Don't manually change values in this section.** **modelId**: system field, to be updated by OpenSearch **modelGroupId**: system field, to be updated by OpenSearch **modelStatus**: system field, to be updated by OpenSearch. Sample status: INIT, REG_IN_PROGRESS,REG_COMPLETE,DEPLY_IN_PROGRESS, DEPLOY_COMPLETED. Check this value to track model registration status. **modelRegistrationTaskId**: system field, to be updated by OpenSearch. Refers to a unique identifier for tracking the status of a model registration task **modelDeploymentTaskId**: system field, to be updated by OpenSearch. Refers to a unique identifier used to track the status of a model deployment task.

Category	Settings	Description
		Note: If user wants to test any new OpenSearch model, make sure to choose the model that supports Siebel application: **768-dimensional dense vector space**

Pipeline	`- multi_match:`
	`weightFactor: 0.5`
	`- neural:`
	`weightFactor: 0.5`
		Multi-Match Weight Factor: used for keyword-based matches
		
		Neural Weight Factor: used for semantic-based matches
		
		Tuning Weight Factors for Hybrid Search:
		
		• Start with equal weights.
		• Increase multi_match_weight if exact term matching is more important.
		• Increase neural_weight if you're prioritizing semantic similarity.
		• The sum of the 2 weight factors should not exceed 1.

Suggester	numberOfSuggestions: 5 minLength: 3 transpositions: true fuzzyEnabled: true fuzziness: AUTO prefixLength: 3	• **numberOfSuggestions: 5** Return up to 5 suggestions (e.g., autocomplete or spellcheck results). • **minLength: 3** Only suggest corrections or completions for queries at least 3 characters long. • **transpositions: true** Allows swapping of two adjacent characters (like "teh" → "the") as valid edit in fuzzy matching. • **fuzzyEnabled: true** To enable fuzziness feature. • **fuzziness: AUTO** Fuzziness refers to the tolerance of misspellings or slight variations

Category	Settings	Description
		in the terms you're searching for. When you set fuzziness: AUTO, OpenSearch will automatically determine the fuzziness level based on the length of the term being searched. • **prefixLength: 3** Trigger fuzziness after the prefixLength is reached.

Configuration Guidance

1. Start with the recommended values and validate them with representative attachment files before indexing large volumes of data.
2. Increase clientResponseTimeout and JBSTimeout when attachment indexing requests require more time to complete.
3. Increase maxTokenCount only when the largest required attachments exceed the current analysis limit.
4. Increase maxChunkLimit only when the environment has been tested to support more chunks.

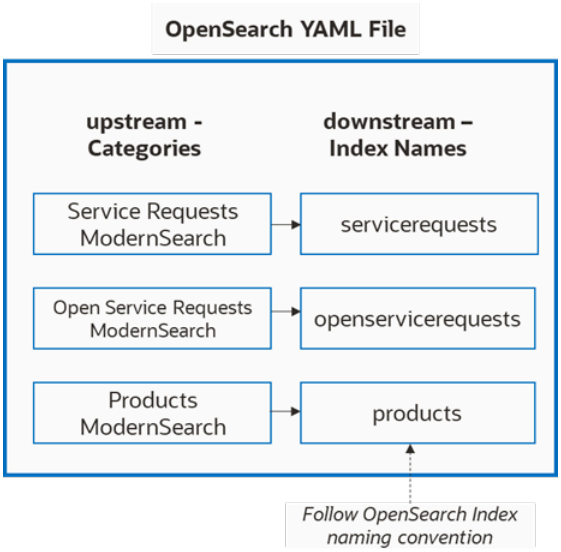
Upstream Settings :

Category	Settings	Description
Category	SR Attachment ModernSearch: embeddingData: '{{ActivityFileName}}' primaryCategoryDetails: primaryCategory: Service Requests ModernSearch primaryCategoryRowIdField: Activity Id	This change is mandatory. If the category hierarchy is not defined correctly, categories are treated as parent categories during indexing. Since child categories lack visibility values, this can lead to errors during drill-down operations. To resolve this, the hierarchy definition has been enhanced to support multiple levels, ensuring correct handling of both parent and child categories. This update is critical for proper hierarchical and incremental indexing of child business components. You can verify how categories are interpreted (parent/child) in the **SearchDataExporter** logs. For example:`SearchPLUSIndexLog SearchPLUSIndex Error 1 0000036369e237c0:0 2026-04-26 23:11:33` **INFO** `BuildNSubmitDataForIndex`:: Its a Parent category. Attempting to read Visibility Data for this Parent row
Category	**Order Entry - Orders Modernsearch**: embeddingData: '{{Quote Id}} is of type {{Quote Type}}' -	Defines hierarchical relationships between categories for indexing, where child entities reference a primary (parent) category using key fields. This enables structured search,

Category	Settings	Description
	Order Entry - Line Items Modernsearch: embeddingData: '{{Product}}' primaryCategoryDetails: primaryCategory: Order Entry - Orders Modernsearch primaryCategoryRowIdField: **Order Header Id - Order Item XA Modernsearch**: embeddingData: '{{Display Name}} of {{Value}}' primaryCategoryDetails: primaryCategory: Order Entry - Line Items Modernsearch primaryCategoryRowIdField: **Object Id** **- Quote ModernSearch**: embeddingData: '{{Quote Id}} is of type {{Quote Type}}' **- Quote Item ModernSearch**: embeddingData: '{{Product}}' primaryCategoryDetails: primaryCategory: Quote ModernSearch primaryCategoryRowIdField: **Quote Id** **- Quote Item XA ModernSearch**: embeddingData: '{{Name}} is having description {{Description}}' primaryCategoryDetails: primaryCategory: Quote Item ModernSearch primaryCategoryRowIdField: **Object Id**	preserving parent–child context across orders, quotes, and related line items. Refer to *Hierarchical Search* section for more details.
Data Source	- type: SiebelDB	Reserved Static Value. **Do not change.**
Category	**- Service Requests ModernSearch:** embeddingData: "{{Status}} SR with {{SR Number}} of {{Account}} is having {{Description}}" **- Contacts ModernSearch:** embeddingData: "{{First Name}} {{Last Name}} of {{Account}} from {{Personal City}}" **- Accounts ModernSearch:** embeddingData: "{{Name}} located at {{Location}} with {{Account Status}} is assigned to {{Sales Rep}}" **- Opportunities ModernSearch:** embeddingData: "{{Name}} of {{Account}} is having revenue {{Primary Revenue Amount}} assigned to {{Sales Rep}}" **- Literature ModernSearch:** embeddingData: "{{Name}} is having content {{Description}}"	Service Requests ModernSearch, Contacts ModernSearch, Accounts ModernSearch, Opportunities ModernSearch, Literature ModernSearch are all seeded categories, each with 1 pre-defined embeddingData. **embeddingData:** • embeddingData consists of key common fields to give actual meaning of a particular search category. • It is defined to support and optimize semantic search and auto suggestion. Both semantic search and auto suggestion perform on embeddingData virtual field only. **Guidelines to define embeddingData:** • Only maintain 1 embeddingData for each category. Do not add additional embeddingData entry.

Category	Settings	Description
		• Administrator can edit the seeded embeddingData as needed. It's recommended to use fields which contain unstructured data like Description, Summary, Notes, etc. Make sure these fields have been indexed, otherwise the field will show 'NA' in the results page. • The field name should match the name defined in Siebel Application → Search Category → Available Fields. • If no embeddingData is defined, you can leave the entry blank. For example: **embeddingData: null**. In this case, OpenSearch will only perform keyword matching. It will not perform semantic search or auto suggestion.

Note: There should be 1:1 mappings between the Category names in upstream and the Index name in downstream, in YAML file. Follow the same sequence order when mapping the category name and index name. See diagram below:



Enabling Required Component Groups in Siebel

This topic guides you through preparing Siebel for OpenSearch indexing.

1. Enable the component groups for OpenSearch as follows:
    a. Navigate to the **Administration - Server Configuration** screen, then the **Component Groups** view.
    b. Query for and then enable the following component groups. To enable each component group, select the component, and then click **Enable**.
        - Search
        - MobileSync
        - EAI
        - SystemAux
2. Synchronize Search Data Exporter Component:
    a. Navigate to **Site Map** > **Administration - Server Configuration** > **Component Definitions**
    b. Search for record - Alias = SearchDataExporter
    c. Click on **Synchronize**
3. Bounce the Siebel Server

> **Note:** Ensure all the above components that are enabled are up. For example, Component "SearchDataExporter" of Search Component Group is up, before you start Indexing. If the component is not up, the Indexing Job Process will be in Queued State.

For configuring incremental indexing. Refer to, *Configuring Incremental Indexing for Third-Party Search Engines*.

Enabling Search Engine in Siebel Application

Prerequisites

1. OpenSearch InstanceEnsure your OpenSearch instance is running and the YAML configuration file is set up.
2. JVM Heap SizeConfigure the JVM heap to 4GB. Refer to the *Performance Tuning Guide*.

Follow these steps to configure and enable Siebel to leverage OpenSearch as the backend search engine.

1. Log into Siebel Application.

    In Site Map, navigate to **Administration - Application** > **System Preferences**.
2. Configure the following system preferences:

System Preference Name	System Preference Value	Description
Enable OpenSearch	Y	To Enable OpenSearch Service for Siebel Standard Objects and Files
Enable OpenSearch FileIndexing	Y	To Enable OpenSearch Service for File Indexing

System Preference Name	System Preference Value	Description
Enable OpenSearch IncrFileIndx	Y	To Enable OpenSearch Service for Incremental File Indexing
OpenSearch Index File Path	<Provide Index File Path>	To Provide OpenSearch Index File Path for Attachments

- **Enable OpenSearch**: Set to `Y` to enable OpenSearch integration.
- **Enable OpenSearch FileIndexing** *(optional)*: Set to `Y` to enable file content indexing.
- **OpenSearch Index File Path** *(optional)*: Provide a file path accessible by Siebel with write permissions.
  - Windows format: `\\<server>\fs`
  - UNIX format: `/home/export/fs`
- **Enable OpenSearch IncrFileIndx** *(optional)*: Set to `Y` to enable incremental indexing of file content.

> **Note:** After making changes to system preferences, restart the Siebel Server for changes to take effect.

3. Go to **Site Map** > **Administration - Search** > **Search Engine Settings**.
4. In the list of search engines, locate or create the entry for **OpenSearch** and set:
   - **Active**: `Y` *(mandatory for integration)*
   - **Auto Suggest Supported**: `Y`

   Setting 'OpenSearch' active flag to 'Y' will trigger a RunTimeEvent (RTE) which will register the ML model as specified.

   Sample values: `modelName: huggingface/sentence-transformers/msmarco-distilbert-base-tas-b`

   `modelVersion: 1.0.2`

   > **Note:**
   > - The **Sequence Number** field is not used by the Siebel Search Adapter framework.
   > - Once "OpenSearch" is active, Siebel Search UX will use only OpenSearch search engine to perform search.

5. Configure OpenSearch Engine Driver Parameters.

   In the OpenSearch search engine configuration, set the following parameters:

Name	Default Value
Batch Split Size	1000
Batch Submit Size	100
FileIndexing BatchSubmitSize	5
FileIndexing NumOfBatchJobs	5

Name	Default Value
Search Pipeline	True
JBSTimeout	<value in milliseconds>

- **Batch Split Size**: The number of records submitted at a time for indexing. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Submit Size.
- **Batch Submit Size**: The number of business component records in a batch. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Split Size.

  Refer to *Configuring Siebel Search for Third-Party Search Engines* for further information.
- **FileIndexing BatchSubmitSize**: The number of file attachment records submitted at a time for indexing. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Submit Size. Do not change this value.
- **FileIndexing NumOfBatchJobs**: The number of active batch jobs to index file attachments. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum FileIndexing NumOfBatchJobs. Do not change this value.
- **Search Pipeline**: When set to 'True,' changes to the weight factor in the YAML file will be updated in OpenSearch by triggering a Runtime Event.
- **JBSTimeout**: Timeout for the indexing request. If this parameter is omitted, the default value is 2 minutes. This value should be set slightly higher than clientResponseTimeout inside Downstream Settings in YAML file.

JBSTimeout

JBSTimeout specifies the amount of time Siebel waits for a bulk indexing response from the Tomcat server. By default, Java Business Service calls are subject to timeout limits. This parameter allows administrators to configure a timeout value greater than 120000 milliseconds, making it suitable for large or long-running bulk indexing operations that may exceed the default threshold.

Here are the parameter details:

Parameter: JBSTimeout

Description: Specifies the timeout duration for waiting on a bulk indexing response from the Tomcat server

Unit: Milliseconds

Configuration Guidelines

- JBSTimeout supports values greater than 120000 ms.
- Configure JBSTimeout in conjunction with the `clientResponseTimeout` parameter in `modersearchconfig.yaml`.
- The JBSTimeout value should be set slightly higher than `clientResponseTimeout` so that the Tomcat-side timeout occurs before the Siebel-side timeout. This allows the OpenSearch service to return a response or timeout condition in a controlled manner.

Example

If `clientResponseTimeout` in `modersearchconfig.yaml` is set to 7200 seconds, configure `JBSTimeout` to a slightly higher value, such as 7,500,000 ms.

Create Search Categories and Generate Index

Follow these steps to Create Search Categories and Generate Index:

1. In Search Category Settings, add a new Category record, associate a Business Component to the Category, for example: "Accounts ModernSearch", "Contacts ModernSearch", "Literature ModernSearch". Refer to *Defining Index Categories for Third-Party Search Engines* in Siebel Search Administration Guide for step-by-step instructions.

   Note: Weighting factor option is not applicable when using Intelligent Search.

Category Name	BC Name	Status Message
Accounts ModernSearch	Account	Indexed
Contacts ModernSearch	Contact	Indexed
Literature ModernSearch	Sales Tool	Indexed
Opportunities ModernSearch	Opportunity	Indexed
Service Requests ModernSearch	Service Request	Indexed

   Note: Diacritic marks are not supported in Category names.

2. Associate a Category with your Application and define the drilldown view.
3. Identify and configure fields of each category. These fields will be indexed during the indexing process. Administrator can determine which fields they want to present in the results page by setting Searchable Flag with “Y” .

   In Redwood Theme, only 4 fields updated as searchable will be presented in Search Results Pane.

   In Aurora Theme, only 3 fields updated as Searchable will be presented in Search Results Pane.

   Note: If you change any searchable fields to Y or N, or add new fields, you must step out of the record for the changes to be saved.

   This table explains searchable fields that can be added for "Contacts ModernSearch" category:

Field Name	Searchable
Account	Y
First Name	Y

Field Name	Searchable
Last Name	Y
Organization	Y
Personal City	N
Personal State	N

> **Note:** The last field marked as Searchable becomes the drillable field. Choose a required field to serve as the drillable field.

Administrator has option to mention both the available fields and searchable fields for every category that will be indexed. For example - Contact category might have First Name, Last Name and City marked as "Searchable" while Service Request might have SR Number, Priority and Description as "Searchable" fields. All the available fields are returned but only the first 3 searchable fields for each category are displayed in the search results page. The order of display is the order in which the searchable fields are presented.

End-to-end flows to add a new Search Category in Siebel application and YAML file:

1. Identify a new search category you want to include into Siebel Intelligent Search, apart from 5 seeded ones (Service Requests ModernSearch, Contacts ModernSearch, Accounts ModernSearch, Opportunities ModernSearch, Literature ModernSearch). For example, you want to add "**Products**" into the search scope.
2. Go to `<Siebel_Build_Location>/ses/applicationcontainer_internal/webapps, open modernsearchconfig.yaml.`
3. In **Upstream Settings** > **Category**, add "**Products**" and define embeddingData for this category.
4. In **Downstream Settings** > **Index**, add "**products**" as the index name and "isIndexed: false". (index name in OpenSearch is in lowercase only and should not include spaces. Refer to *Configuring OpenSearch Integration via YAML File* for naming conventions.
5. Create "**Products**" category in Siebel application. Refer to *Create Search Categories and Generate Index*.
6. Make sure you index the "**Product**" category in Siebel Application. Refer to *Create Search Categories and Generate Index*.
7. After you have added a new search category in Siebel application, you can either refresh the browser or re-log into Siebel application. The newly added category will appear in the Object Filter drop-down list from the Global Search Bar.

Configuring Parent-Child Hierarchy Categories

In Siebel CRM, a Parent-Child Business Component (BC) hierarchy defines how related records are linked, where the child BC depends on the parent BC through a foreign key relationship. The parent BC represents the main entity, while the child BC stores related details or sub-records.

Here is an example: Service Request-Service Request Attachments. Each Service Request can have multiple file attachments (e.g. images, documents). The Service Request Attachments BC is the child, linked by the foreign Key field 'Activity Id'. Other examples include Account-Account Attachments, Opportunity-Opportunity Notes, etc.

Steps to configure parent-child hierarchy categories:

1. In **Siebel Application**, navigate to **Administration - Search** > **Search Engines** > **OpenSearch**.
2. In Search Category Applet, add a Child BC Category record (e.g. 'SR Attachment'), associate it with the corresponding Child Business Component.
3. Associate your Child Category with your Application and define the drilldown view.

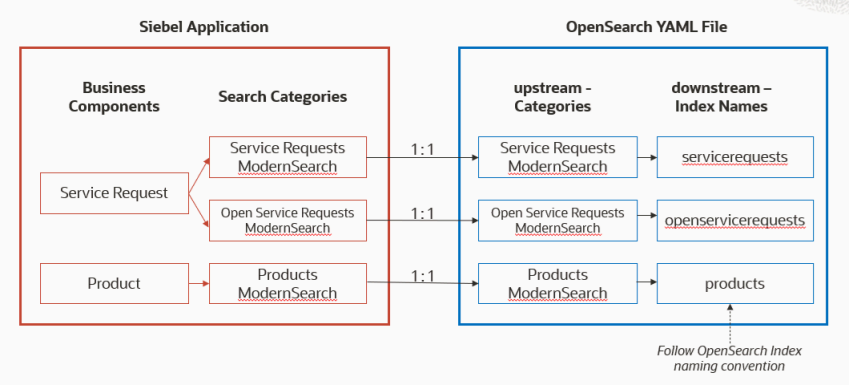
4. Go to **Child BC Category** > **Available Fields**, add the **foreign key** to the Child BC. For example, add 'Activity ID' for SR Attachment. In case the **foreign key** field is required to be displayed in the Search Results page, you need to mark it as Searchable.
5. In **modernsearchconfig.yaml** file, find the **upstream** section, add your Child BC Category. For example: SR Attachment,
6. Include both the **primaryCategory** and **primaryCategoryRowIdField** in your Child BC Category.

```
upstream:
dataSource:
- type: SiebelDB
category:
- SR Attachment ModernSearch:
primaryCategoryDetails:
 primaryCategory:Service Requests ModernSearch
 primaryCategoryRowIdField: Activity Id
```

7. In the **downstream** section, add a new Index name that maps to your Child BC Category. For example: '**srattachment**'

```
downstream:
 name: OpenSearch
 username: <CHANGE_ME>
 password: <CHANGE_ME>
 version: 2.15.0
 url: <CHANGE_ME>
 port: <CHANGE_ME>
 settings:
 defaultNumberOfShards: 2
 defaultNumberOfReplicas: 1
 knn: true
 defaultEnableCache: true
 clientInitConnectionRequestTimeout: 10
 clientResponseTimeout: 7200
 maxTokenCount: 384000
 refreshInterval: 60
 locale:
 defaultLanguage: English
 index:
 category:
 - srattachment:
 isIndexed: false
```

Guidelines to map your Search Category to the category and index settings in YAML file:



1. In Siebel application , 1 business component can map to multiple search categories. For example:
   - Category 1: "Service Requests ModernSearch", Business Component: "Service Request"
   - Category 2: "Open Service Requests ModernSearch", Business Component: "Service Request" with Filter set to "Open"
2. In YAML file → upstream settings, make sure you have 1:1 mappings between the category names listed in this section and the categories defined in Siebel application.
3. In **YAML file** > **upstream settings**, make sure you have 1:1 mappings between the category names listed in this section and the index names listed in downstream index settings.

Refer to *Configuring OpenSearch Integration via YAML File* for instruction. Follow the same sequence order when mapping the category name and index name.

Filtering the Index Record-Set

The index record-set can be filtered at the Category level, to incorporate custom business rules, using the Filter Search Spec field. This field takes SQL statements that comply with the syntax defined in Filter Search Specifications Syntax for Siebel Intelligent Search. For more information, please refer to ***Filtering the Index Record-Set*** in Siebel Search Administration Guide.

Use Case 1: Service Orders

- Category: Service Order
- Business Component: Order Entry - Orders
- Category Filter Spec: [Order Type Code] = LookupValue ('FS_ORDER_TYPE_CODE', 'Service')
- View: Order Entry - All Orders Across Organizations View

User Case 2: Sales Orders

- Category: Sales Order
- Business Component: Order Entry - Orders
- Category Filter Spec: LookupValue ('FS_ORDER_TYPE_CODE', 'Sales') AND [Order Type] <> LookupValue ("FS_ORDER_TYPE", "Bulk Request Template Order")
- View: All Orders Across Organizations View (Sales)

Generating Index

Full Indexing

Note: Administrators must remove or mask any sensitive information, including PII or PHI, before sending documents to OpenSearch for ingestion.

In Search Index Settings, index search category. Refer to *Configuring Indexing for Third-Party Search Engines* step-by-step instructions.

Category Name	BC Name	Status Message
Accounts ModernSearch	Account	Indexed
Contacts ModernSearch	Contact	Indexed
Literature ModernSearch	Sales Tool	Indexed
Opportunities ModernSearch	Opportunity	Indexed
Service Requests ModernSearch	Service Request	Indexed

- **Index**: Indexing a selected search category, one at a time.
- **Index All:** Indexing all the search categories at once.
- **Indexing File Attachments**:
  - Use 'Index' only for Attachment Categories indexing. 'Index All' cannot be used to index file attachments.
- **Delete Index:** Delete an index.

Note: Once a category is indexed, '**isAttachment: false**' entry is appended in the downstream section in YAML file. For example:

- **accounts:**

  isIndexed: true

  isAttachment: false
- **literature:**

  isIndexed: true

  isAttachment: true

Incremental Indexing

Note: Administrators must remove or mask any sensitive information, including PII or PHI, before sending documents to OpenSearch for ingestion.

CAUTION: When the **Enable Incremental Indexing** system preference is set to **True**, the Transaction Processor component (alias TxnProc) runs automatically. In this case, for Siebel Remote deployments, you must stop TxnProc before you run the Database Extract component (alias DbXtract) for the first time. After DbXtract has completed, then you can restart TxnProc. If you do not follow these steps, then some transactions might not be routed to remote clients. For more information about running DbXtract, see Siebel Remote and Replication Manager Administration Guide.

To configure incremental indexing for OpenSearch search engine, you need to first enable the component groups for incremental indexing as follows:

1. Navigate to the **Administration - Server Configuration** > **Component Groups**.
2. Query for and then enable the following component groups. To enable each component group, select the component, and then click Enable.
    - Search
    - MobileSync

Once done, refer to the *Configuring Incremental Indexing for Third-Party Search Engines* for step-by-step instructions on how to configure incremental indexing for OpenSearch.

Set "**Enable OpenSearch IncrFileIndx**" system preference to 'Y' to enable incremental indexing of file content.

Initially a full indexing of a search category is performed, followed subsequently by incremental indexing. Incremental indexing works on both categories that have been fully indexed or partially indexed.

Note: Incremental indexing on child business components is fully supported. Examples of child BCs include Service Request Attachments, Account Attachments, Opportunity Notes, Product Key Features, etc.

Note: If the user deletes a parent record directly without deleting its child records, the corresponding child records may or may not be deleted in OpenSearch. This behavior depends on the Siebel configuration of the **Deep Delete** BC user property.

Business Components	Examples	Full Indexing	Increamental Indexing
Primary BC's	Accounts, Contacts, Opportunities, Service Requests, Activities, Products, Literatures, etc.	Supported	Supported
Child/Non-Primary BC's	Service Request Attachments, Account Attachments, Opportunity Notes, Product Key Features, etc.	Supported	Supported

Resubmit Failed Indexing Jobs for Search Categories

Resubmitting allows administrators to retry failed indexing jobs for search categories that are in a Partially Indexed state.

During category indexing initiated from the Search Category Applet, some indexing jobs may fail due to processing issues while others succeed. In such cases, the category status is set to `Partially Indexed` after all jobs complete.

When the **Resubmit** button is selected, the system identifies jobs with an Errored Index status and resubmits only those failed jobs to `OpenSearch` for reprocessing.

This feature is supported for non-attachment and hierarchical categories, where the complete job context is retained from the original indexing operation. However, it is not supported for attachment categories or OOB File Ingestion VBC, as the required job context is not fully available.

Note:

- Resubmit is not supported for attachment categories or OOB File Ingestion VBC.
- If attempted, the system logs an informational message in the OM log indicating that indexing or resubmission is not allowed for these categories.

Adding Application User Property

Follow these steps to add `ClientBusinessService` user property to your Application Object:

1. Login to Siebel Web Tools.
2. Create and open a Workspace.
3. Navigate to the required Application Object. The Application Object matches your Application Name. Examples: Siebel Universal Agent, Siebel Loyalty, Siebel Field Service, Siebel Financial Services, etc.
4. Navigate to User Properties for your Application.
5. Add a New User Property:
   a. Name: ClientBusinessService<#n>
   b. Value: Search Config Service
6. Validate and deliver the new user property to your application.

Note: Before non-admin user can run queries using Global Search Bar, the responsibility must be associated with the `SiebelModernSearchJBS` Business Service and `Open Search Adapter Service` Business Service.

1. Go to **Administration - Application** screen, then the **Business Service Access** view.
2. Create a new record, add the `SiebelModernSearchJBS` business service and `Open Search Adapter Service` Business Service and save the record.
3. In the **Access By Responsibility** > **Responsibilities** applet, associate the user responsibility with the business service.
4. Save the records, clear the cache and log out of the application and back in again for the changes to take effect.

Global Search UX and Supported Use Cases

Search categories displayed in the Global Search bar are filtered based on the following criteria:

- Only fully indexed or partially indexed categories are displayed in the Object Filter. Categories that are not indexed do not appear in the Object Filter of the Global Search bar.
- A search category is displayed only if it has:
  - At least one valid application configuration, and
  - At least one configured drilldown view
- Only categories associated with the currently logged-in application are displayed.
- A category is visible to a user only if the user has access to at least one of its drilldown views.

Refer to *Create Search Categories and Generate Index* for more information regarding defining search categories.

Global Search with Object Filter

- **Unified Global Search Bar**: Placed at the top of the application screen, it offers an intuitive, user-friendly interface that is seamlessly integrated with OpenSearch and accessible throughout the application.
- **Object Filter**: User clicks the 'Object' filter and uses the drop-down list to choose one or multiple search categories. The filter enables global search across multiple data objects in Siebel application, helping user refine search results for efficient data discovery and retrieval.

Results Page

When performing a search in Siebel application using **Redwood** theme, the search results are presented in a full page with 5 columns:

- Column 1-4: Top 4 searchable fields (as defined in Search Category → Searchable Fields in Siebel application).
- The first field marked as Searchable becomes the drillable field. Choose a required field to serve as the drillable field.
- Column 5: Search category (as defined in Search Category in both Siebel application and YAML file)

When performing a search in Siebel application using **Aurora** theme, the search results are presented in a vertical panel located on the left-hand of the screen. Each result consists of the following information:

- Top line: Search category (as defined in Search Category in both Siebel application and YAML file).
- Top searchable fields (as defined in Search Category → Searchable Fields in Siebel application).
- The first field marked as Searchable becomes the drillable field. Choose a required field to serve as the drillable field.

Keyword Search

Keyword search refers to searching for exact words or phrases within indexed documents. It matches user queries against specific terms in the data, returning results that contain those keywords without interpreting the context or meaning behind them. This type of search is precise and relies on exact matches rather than natural language understanding.

Query Examples:

- Query “Abbey General Hospital” → 1 matching record returned.
- Query “NHS Trust” → "Derbyshire Royal Infirmary NHS Trust", "Nottingham City Hospital NHS Trust", "Kings Mill Ctre Healthcare NHS Trust".

Semantic Search

Semantic search is a search technique that understands the intent and contextual meaning behind a query, enabling it to find relevant results even if they don’t contain the exact keywords used.

Query Examples:

- Details on auto supply
- Exception Handling SR's
- All open service requests

- Accounts assigned to CELLIS
- Symptoms of System crash
- Opportunities created by MNASH
- Closed SR's
- Contacts from "Metro Motors Michigan" organization

Field-Based Search

Field-based search narrows results by applying filters to specific data fields or attributes, such as account location, service request status, deal size, or date ranges. Only records that meet the specified filter criteria are returned in the results. Field-based search is supported for any field indexed as searchable.

Here are a few query examples of field-based search:

- Opportunities having "Primary Revenue Amount > 2000"
- Service Requests "Severity is High"
- SRs "Status is Closed and Priority is Low"

Query Guidelines

1. Enclose field names, operators, and field values in double quotes (“”). This will ensure the Search Engine looks for the right data for your specific queries.

   > **Note:** If you fail to follow the field-based query format, the system falls back to a standard search. If matching records are found, results are returned.

2. Field names are case-sensitive and must be spelled correctly. Field values are not case-sensitive.
3. Use the supported operators in your query:

Category	Supported Operators
And	&, &&, AND, and
Between	BETWEEN, between
Equal	=, ==, EQUALS, equals, Equal, equal, IS, is
Not Equal	!=, NOT EQUALS, not equals, NOT EQUAL, not equal, NOTEQUALS, notequals, NOTEQUAL, notequal, ISNOT, isnot, IS NOT, is not, NOT, not
Or	|, ||, OR, or, ;(semicolon), ,(comma)

Supported Query Types

1. Non-Range Query:
   - oppty with "Primary Revenue Amount = 10000"
   - SRs with "Severity is 2, Priority is High"
2. Numeric Range Query:
   - Opportunities with "Primary Revenue Amount > 1000"
   - Oppty with "Primary Revenue Amount between 1000 & 2000"

> **Note:** Searching on currency fields with currency code is not supported. Do not put comma in your numeric value. (e.g., use 1234 instead of 1,234).

> **Note:** Only mathematical operators are supported for range queries.

3. Date Range Query:
   - Supported date format: **YYYY-MM-DD**
   - Oppty with "Primary Revenue Close Date >= 2022-01-01 & < 2023-01-01".

> **Note:** Only mathematical operators are supported for range queries.

4. Compound Query:
   - Show me SRs with "Status is Closed and Priority is High"

Field Data Type Mappings

Introduces mappings between Siebel and OpenSearch field data types, ensuring fields are indexed with appropriate types such as numeric and date. This enables more accurate typed queries, filtering, sorting, and range searches across supported fields.

Siebel Data Type	OpenSearch Data Type	Features Supported
DTYPE_TEXT	*String*:text	• Full Text Search Supported • Fuzzy Search Supported • Autosuggestions Supported
DTYPE_ID	*String*:keyword	• Exact Match Search Supported • Fuzzy Search not supported • Autosuggestions not supported
DTYPE_BOOL	`boolean`	• Exact Match Search Supported • Fuzzy Search not supported • Autosuggestions not supported • Search Supported values o true o false Example: "Call Back=true" "Call Back=false"
DTYPE_NUMBER	*Numeric*:double	• Exact Match Search Supported • Range Query Supported • Fuzzy Search not supported • Autosuggestions not supported

Siebel Data Type	OpenSearch Data Type	Features Supported
DTYPE_INTEGER	Numeric:integer	• Exact Match Search Supported • Range Query Supported • Fuzzy Search not supported • Autosuggestions not supported
DTYPE_CURRENCY	*Numeric*:scaled_float	• Exact Match Search Supported • Range Query Supported • Fuzzy Search not supported • Autosuggestions not supported
DTYPE_PHONE	*String*:keyword	• Exact Match Search Supported • Fuzzy Search not supported • Autosuggestions not supported
DTYPE_UTCDATETIME DTYPE_DATETIME DTYPE_DATE DTYPE_TIME	Date:date	• Only Exact Match Search Supported • Date Range Query Supported • Fuzzy Search not supported • Autosuggestions not supported
Default	*String*:text	• Full Text Search Supported • Fuzzy Search Supported • Autosuggestions Supported

Hierarchical Search

Hierarchical search retrieves records using parent-child relationships to filter results, enhancing search relevance and precision. Here are sample hierarchical entities with parent-child-grandchild relationships:

- Orders - Line Items - Attributes
- Quotes - Line items - Attributes

Enabling hierarchical search consists of these three steps:

1. Configure Hierarchical Search Categories in Siebel Application
2. Configure Hierarchical Search in **modernsearchconfig.yaml** File
3. Index Hierarchical Search Categories

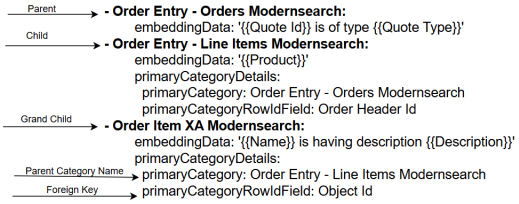
Note: These use Orders, Line Items, and Attributes as an example.

Step 1 - Configure Hierarchical Search Categories in Siebel Application

1. In Site Map, navigate to **Administration - Search** > **Search Engine Settings** > **OpenSearch** > **Search Categories**. Create a category entry for **Order Entry – Orders Modernsearch**.
    a. Configure the required searchable fields.
    b. Associate the category with your Siebel application by specifying the view name **Order Entry – Line Items XA View (Sales)**.
2. Create a category entry for **Order Entry – Line Items Modernsearch**.
    a. Add the required searchable fields and ensure that the mandatory foreign key field **Order Header Id** is included, as it is required to establish the parent–child relationship.
    b. After configuring the searchable fields, associate the category with your Siebel application using the view name **Order Entry – Line Items XA View (Sales)**.
3. Create a category entry for **Order Item XA Modernsearch**.
    a. Add the required searchable fields. Ensure that the foreign key field Object Id is included, as this is a mandatory prerequisite for hierarchy linkage.
    b. Associate this category with your Siebel application by specifying the view name **Order Entry – Line Items XA View (Sales)**.

Step 2 - Configure Hierarchical Search in modersearchconfig.yaml File

Here is a sample modernsearchconfig.yaml regarding configuring hierarchical search for **Orders** > **Order Lines** > **Attributes entities**:




```
index:
  category:
  - servicerequests:
      isIndexed: false
  - contacts:
      isIndexed: false
  - accounts:
      isIndexed: false
  - opportunities:
      isIndexed: false
  - literature:
      isIndexed: false
  - srattachment:
      isIndexed: false
  - orderentryorders:
      isIndexed: false
  - orderentrylineitems:
      isIndexed: false
  - orderitemxa:
      isIndexed: false
  - quote:
      isIndexed: false
  - quoteitem:
      isIndexed: false
  - quoteitemxa:
      isIndexed: false
  - fileingestion:
      isIndexed: false
```

Step 3 - Index Hierarchical Search Categories

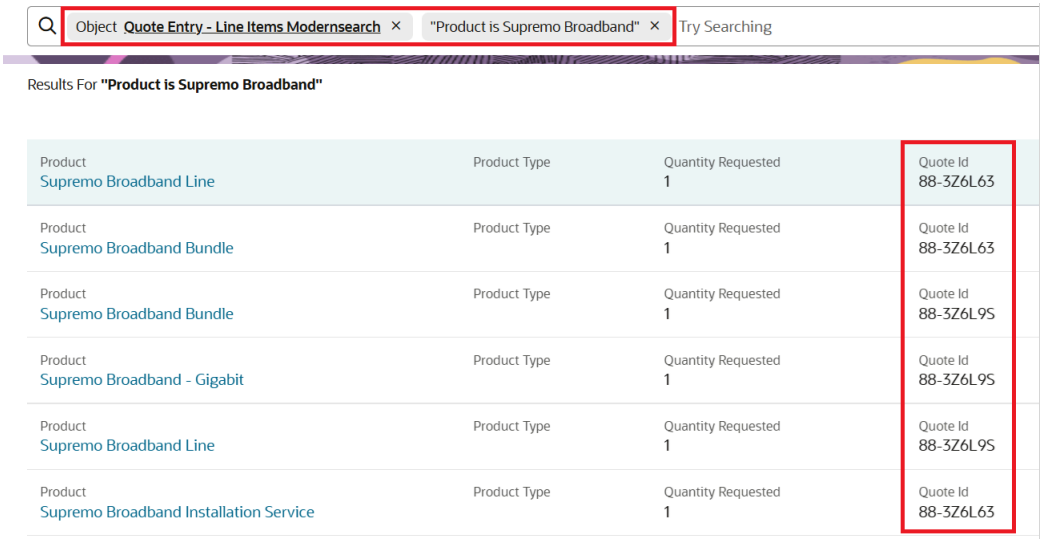
After completing the category configuration, the administrator must initiate indexing starting with the top-level category (e.g., Order Entry – Orders Modernsearch), followed by the child and subsequent nested categories in hierarchical order.

Incremental indexing requires the entire hierarchy to be indexed as a prerequisite. If the parent category is not indexed, incremental indexing for child categories will not function properly.

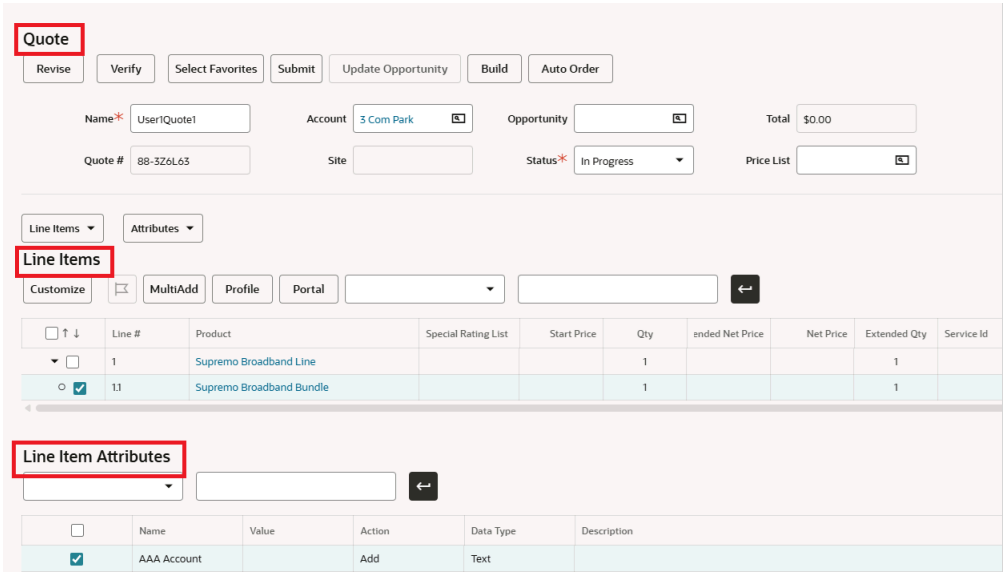
1. After the index is complete for the entire hierarchy, you can start searching data across parent, child, and grandchild category levels. Search results are filtered based on the configured visibility criteria, ensuring that you only see records you are authorized to access.
2. You can drill down into the search results to view detailed information. The drill-down view filters and displays only those records that match your original search criteria.
3. When you search within a child or grandchild level of a nested hierarchy, results are returned based on your query.
4. You can drill down into a result to display the full hierarchy in an expanded format within the hierarchy applet.

5. The following example demonstrates searching for Quote entities.

   - Using Global Search Bar, user picks 'Quote Entry - Line Items Modernsearch" search category from the Object Filter and enters "Product is Supremo Broadband" as the query.
   - The matching records are returned as expected. The search engine is doing a second-level (child entity) search. The Quote Id shows the parent-child relationship:



   - Upon drilldown, the complete hierarchy is displayed: Quotes - Line Items - Line Item Attributes:



Quotes, Orders are now included as the seeded search entities. The search categories are preconfigured in both Siebel Application and in modernsearchconfig.yaml.

Ranking the Search Results

Siebel Intelligent Search performs a complex hybrid search that combines keyword-based and semantic search techniques. The results retrieved from the OpenSearch engine include a relevance score, which quantifies how closely

each result matches the search query. Siebel displays these results in descending order of relevance - meaning that results with the highest match quality (and therefore the highest relevance scores) appear at the top.

The Siebel Search Adapter uses a normalization processor to scale each relevance score to a value between 0 and 1, and then ranks or sorts the results accordingly. It's possible for multiple results to have the same normalized relevance score.

The number of search results displayed is determined by two parameters in the modernsearch configuration YAML file: **maxResults** and **percentOfTopScore**.

First, the result with the highest relevance score is identified. A threshold score is then calculated by applying the percentOfTopScore value to this top score. For example, if the highest relevance score is 0.9 and percentOfTopScore is set to 40, the threshold becomes 40% of 0.9, which is 0.36.

All retrieved results with a relevance score greater than or equal to 0.36 are considered. The total number of such results is then compared with the value of maxResults, and the smaller of the two is used to determine the final number of results shown to the end user.

In the above example, if 15 results meet the threshold of 0.36, and maxResults is set to 20, then 15 results will be displayed to the user.

Fuzzy Search

Fuzzy search is a search technique that finds matches even when the search terms have typos, misspellings, or slight variations. It helps retrieve relevant results when exact matches aren't available by allowing some errors or differences in the query.

Examples:

- Query "Hincklyt & Bosworth PCG" → Auto Suggest will still prompt for the correct entry: "Hinckley & Bosworth PCG"
- Query "Abbey**z** Cardiology" → Auto Suggest will still prompt for the correct entries: "Abbey General Cardiology", "Abbey General Cardio Research", "Abbey General Cardiac Care"

Fuzziness in search can be enabled by setting the fuzzyEnabled parameter to TRUE. This parameter is located in the search section under the downstream section of the modernsearchconfig.yaml file. By default, fuzziness for the search operation is set to FALSE. Enabling fuzziness may result in additional results being retrieved during a search.

For Auto Suggest (or Auto Complete), a separate fuzzyEnabled parameter exists under the suggester section (also within the downstream section), and it is set to TRUE by default. Therefore, if the default values are not changed, users will experience fuzziness during typing (i.e., in Auto Suggest), but not in the actual search results. Additionally, the fuzziness parameter in both the suggester and search sections is set to AUTO by default, which is considered the optimal setting for fuzzy matching.

File Attachment Search

From 26.6 onwards, attachment text can be divided into smaller chunks during indexing. This is an indexing-time behavior that controls how extracted attachment text is represented in the search index. It does not change the end-user Search UI. Users continue to search attachment content through the existing search experience.

Text chunking applies only to attachment categories. To search inside attachment content, users must select an attachment category or select only attachment categories. If a search includes both attachment and non-attachment categories, attachment results are based on indexed attachment metadata, such as file name, file extension, and other attachment attributes.

This indexing behavior does not change auto-suggestion behavior. Suggestions for attachment categories continue to come from indexed metadata fields, not from attachment body text.

> **Note:** Continues to recommend attachments of about 5 MB for attachment search indexing. Larger files can be submitted, but they can fail if the generated indexing request exceeds HTTP request limits, timeout values, or environment capacity.

File Attachment Search locates specific files attached to Siebel business objects by searching through file names, content, and metadata.

Example:

1. Enable OpenSearch File Attachment Search in Siebel Application:
   a. Enable '**OpenSearch File Indexing**' system preference: set it to '**Y**' in you want to include file attachment search.
   b. Set '**OpenSearch Index File Path**' system preference: To Location to store decompressed files temporarily during indexing. Ensure the file path is accessible and has write permissions.
2. Modify "**Literature ModernSearch**" search category if needed, generate index.
3. Choose "Object" filter In Global Search Bar, select "**Literature ModernSearch**" category.
4. Search for "FAQ". A list of documents is returned.

Supported File Formats for Siebel Intelligent Search:

File Type	File Extensions
HTML	.htm, .html, .xhtml
PDF	.pdf
PPT	.ppt, .pptx, .pptm
Word	.doc, .docx, .docm
XLS	.xls, .xlsx, .xlsm
RTF	.rtf

> **Note:** Siebel 26.6 onwards, search indexing supports files larger than 5 MB. For optimal OpenSearch indexing and query performance, Oracle recommends keeping searchable documents under 5 MB when possible.

Auto Suggest

Auto Suggest provides real-time, predictive search query suggestions to users as they type, helping them complete their queries faster and more accurately by anticipating their intent. The default character limit for Auto Suggest is 200.

> **Note:** Visibility is not applied while performing Auto Suggest.

Auto Suggest Within a Single Category:

- If the selected category is of type Attachment, the suggestions will be generated from indexed fields such as ActivityFileExt, ActivityFileName, etc but not from attachment content.

- If the selected category is a non-attachment type, suggestions will be generated from indexed fields including embeddingData.

Auto Suggest Across All/Multiple Categories:

- If any selected category is of type Attachment, suggestions will not be generated for it.
- Suggestions will still be generated for non-attachment categories.

Search History

Search history refers to a saved list of a user's past search queries, enabling easy access and quick reuse of previous searches.

Search history is specific to user login. Each user can only see his/her own search history.

Clear Search History:

Choose 'Clear Search History' at the bottom of the drop-down menu to remove saved search queries. Note that search history cannot be cleared by re-logging into the application, restarting the Siebel Server, or clearing the browser cache. Clearing the search history using one login does not affect search histories saved under other logins.

Search Query Optimization

For optimal search accuracy and performance, follow these recommendations when constructing your search queries:

Tip 1: Enclose the category name in square brackets [ ].

Examples:

John in [Contacts ModernSearch]

John in [Contacts]

John in [Contacts ModernSearch, Accounts ModernSearch]

John in [Contacts, Accounts]

Tip 2: Enclose any specific information that needs to be searched in double quotes " ".

Examples:

"John" in [Contacts ModernSearch]

[SR] in “Open” status

[Oppty] about "medical information"

[SR] with "Contact" information

> **Note:** If you do not follow these tips when performing a search, the search will still function, but some irrelevant results may appear.

Testing Your Initial Setup

Siebel Intelligent Search includes five pre-configured categories:

- Service Requests ModernSearch
- Contacts ModernSearch
- Accounts ModernSearch
- Opportunities ModernSearch
- Literature ModernSearch

Each category contains three searchable fields. The index settings, category configurations, and embedding data are predefined in the `modernsearchconfig.yaml` file. Start with these five categories for indexing and search testing. Once you are familiar with the end-to-end workflow, you can add new search categories by following the configuration guidelines. For more information, refer *Create Search Categories and Generate Index*.

Here are the bare minimum settings you have to configure in YAML file for initial setup and testing:

```
name: OpenSearch
username: <CHANGE_ME>
password: <CHANGE_ME>
url: <CHANGE_ME>
port: <CHANGE_ME>
```

Note: For optimal search performance and indexing efficiency, it is recommended to index search categories in advance, preferably during low-load periods.

Access Control

Siebel Intelligent Search restricts which data a user can see and retrieve when performing searches. It ensures that you can only see the records that you are authorized to access based on their organization, position, and visibility rules.

Siebel Search access control is implemented through a combination of Siebel **Business Component** View Modes and the **Configured drilldown** view's visibility. During the indexing of records from Siebel application into OpenSearch, each record is tagged with the appropriate visibility. At runtime, when you perform a search, your access permissions are included with the search query. As a result, only records that you are authorized to access are returned in the search results.

Siebel Intelligent Search supports four visibility types, listed from least to most restrictive:

- **All**
- **OrganizationId**
- **PositionId**
- **PersonId**

Visibility Use Case 1: Searching Within One Category

You can perform searches using the same or a more restrictive visibility level than the default set by the drill-down view. Searches with less restrictive visibility than the default are not allowed.

For example:

Category	Drill-Down View Visibility	Allowed Searches	Disallowed Searches
ServiceRequests ModernSearch	All (least restrictive)	Any visibility (All, PositionId, PersonId)	None
ServiceRequests ModernSearch	OrganizationId	OrganizationId, PositionId, PersonId	All
ServiceRequests ModernSearch	PersonalId (most restrictive)	Only PersonId	PositionId, OrganizationId, All
Account ModernSearch	PositionId	PositionId, PersonId	OrganizationId, All

Visibility Use Case 2: Searching Across All Categories

Siebel Intelligent Search applies the most restrictive visibility to all indexed categories.

For example: Assume you have indexed the following categories, each with a drill-down view that has a corresponding visibility applet type:

Category	Drill-Down View	Drill-Down View Visibility
Contact ModernSearch	Contact List View	OrganizationId
Accounts ModernSearch	Account List View	SalesRep
Service Requests ModernSearch	All Service Requests Across Organization	ALL
Opportunity ModernSearch	All Opportunities across Organizations	ALL

SalesRep has the most restrictive visibility and will be applied across all categories. Results are filtered accordingly.

On top of this default visibility, you can do more restrictive search based on visibility hierarchy.

Visibility Use Case 3: Searching Across Multiple Categories

Siebel Intelligent Search applies the most restrictive visibility to the selected group of categories.

For example: Assume you have selected 3 categories, each with a drill-down view that has a corresponding visibility applet type -

Category	Drill-Down View	Drill-Down View Visibility
Contact ModernSearch	Contact List View	PersonId
Accounts ModernSearch	Account List View	SalesRep
Service Requests ModernSearch	All Service Requests Across Organization	ALL

PersonId has the most restrictive visibility and will be applied across the selected categories. Results are filtered accordingly. When a view is configured with the visibility type “All”, no visibility filters are applied. As a result, the user can see all search results that match the entered search text.

When a view is configured with the visibility type “NONE”, the standard Siebel Sales Rep visibility rules are applied based on the ‘Admin’ flag. The below table shows the Visibility applied in such scenarios

Drilldown View Visibility Type	Admin Mode Flag	Visibility Applied by Siebel Search Adapter
Drill down view does not have any Visibility Applet type set	FALSE	Sales Rep
Drill down view does not have any Visibility Applet type set	TRUE	ALL

On top of this default visibility, you can do more restrictive search based on visibility hierarchy.

Post Siebel Monthly Update Installation

Required repository, configuration, and indexing updates for Intelligent Search enhancements.

Required indexing updates for Intelligent Search enhancements.

Follow the steps below to generate new index after updating from pre-26.6 to 26.6 and above:

1. In case of a previously indexed search category use the **Delete Index** option in the Siebel application to remove the existing index.
2. You can then perform a full indexing of search categories. For more details, refer to *Create Search Categories and Generate Index* in *Siebel Search Administration Guide*.

Note: Starting with Siebel 26.6, a new modernsearchconfig_template.yaml file is introduced. This file contains the latest out-of-the-box (OOB) configuration required to support new Intelligent Search functionalities. Refer to *Configuring OpenSearch Integration via YAML File* regarding details of your yaml file upgrade.

Supported Languages

Refer to OpenSearch documentation for supported built-in Language Analyzers. Certain languages such as Chinese, Japanese, Korean, Polish may need additional language-specific plugins.

Intelligent Search is not supported in multi-language environment.

External File Ingestion for Siebel Intelligent Search

This topic describes how to configure and operate external file ingestion when OpenSearch is used as the knowledge base for Siebel Intelligent Search and RAG scenarios. External file ingestion enables administrators to include approved unstructured documents with searchable Siebel content.

> **Note:** Use this capability only with publicly available external data or content that is approved for all intended users. Do not ingest confidential, restricted, or access-controlled content unless appropriate authorization, governance, and access controls are in place.

Related topics

For more information, see the following:

- *About External File Ingestion*
- *Using External File Ingestion*
- *Configuring External File Ingestion*
- *External File Ingestion REST APIs*
- *Indexing External Files*
- *Recommended Practices*

About External File Ingestion

External File Ingestion enables administrators to import files from a configured file location and index them in OpenSearch. Once indexed, the content can be returned in Siebel Intelligent Search results and used by Retrieval-Augmented Generation (RAG) experiences that use OpenSearch as the knowledge base.

This capability is only for external, unstructured content such as policies, reference documents, manuals, and other approved knowledge assets. It is not a replacement for secured attachment search or content repositories that require user-specific document authorization.

Using External File Ingestion

Use External File Ingestion when:

- Content is approved for broad consumption by the target user population.
- OpenSearch is enabled and configured as the RAG knowledge base.
- You need to include unstructured documents together with structured Siebel data in search and RAG experiences.

Configuring External File Ingestion

Prerequisites:

Before configuring External File Ingestion:

1. Ensure Siebel Intelligent Search is enabled and configured.
2. Ensure OpenSearch is configured and operational.
3. Enable RAG if the ingested content will be used in RAG experiences.
4. Identify a file location containing only approved files for ingestion.
5. Verify that file formats, sizes, and types are supported by the existing Siebel File Attachments Search ingestion framework.
6. Review content ownership, classification, and retention requirements before indexing documents.

Configure the OpenSearch Engine driver parameters for the external file source.

Parameter	Example or Value	Description
File Ingestion Path	C:\src\LocalFiles	Directory that contains the external files to be imported for indexing.
UploadFile	True/False	Set to True to import files from the configured file location into the Siebel File System staging location.

This Runtime Event is triggered when the UploadFile driver parameter is set to **True**. It imports files from the local file system and stores them in the Siebel File System.

For example, if the **File Ingestion Path** is set to **C:\src\LocalFiles**, all files in this location are imported into the Siebel File System when the `Runtime Event`is triggered. The files will be stored in a File Ingestion directory created under **C:\fs\opensearchindx\fileindex**.

After the files are imported, start indexing for the external file ingestion category in OpenSearch. The indexed content can then be returned by Siebel Intelligent Search and RAG experiences that use OpenSearch as the knowledge base.

Repository and Seed Changes

To enable the ingestion of external files into the OpenSearch engine, a new category is created and mapped to a newly created Virtual Business Component (BC) under the OpenSearch Engine.

Category Name	BC Name
File Ingestion ModernSearch	File Ingestion VBC

Configuring modernsearchconfig.yaml

Configure the File Ingestion category in the `modernsearchconfig.yaml` file.

Upstream Configuration

```
upstream:
```

```
- File Ingestion ModernSearch:
embeddingData: '{{File Name}} is having content {{Description}}'
```

Downstream Configuration

```
downstream:
 - fileingestion:
 isIndexed: false
 isAttachment: false
```

Once indexing is initiated for the **File Ingestion ModernSearch** category, the system automatically retrieves all files from `C:\fs\opensearchindx\fileindex\File Ingestion` and indexes their content into OpenSearch.

External File Ingestion REST APIs

Administrators can upload files for external file ingestion by using REST APIs. These APIs import files from a specified local file system path into the Siebel File System staging location used by OpenSearch indexing.

Use these APIs only with approved source locations and validated content.

The following REST APIs can be used to upload files from a local file system for external file ingestion.

API Name	Endpoint	Request Body	Response
UploadFile	https://<hostname>:<port>/siebel/v1.0/service/Open Search Adapter Service/UploadFile	`{ "body": { "InputFilePath": "<Input FilePath>” } }`	`{ "Response": "OK" }`
UploadFile	https://<hostname>:<port>/siebel/v1.0/service/SiebelModernSearchJBS/UploadFile	`{ "body": { "InputFilePath": "<Input FilePath>", "OutputFilePath": "<Output FilePath>" } }`	`{ "Response": "OK" }`

Indexing External Files

For files to be uploaded:

1. Place approved files in the configured ingestion path.
2. Upload the files by setting `UploadFile=True`, or use the approved REST upload operation.

3. Start indexing for the `File Ingestion ModernSearch` category.
4. Verify that indexed content appears in Intelligent Search or RAG workflow.
5. Perform a full reindex whenever the source corpus changes.

> **Note:** Incremental indexing is not currently supported. Any change to the file corpus requires a new indexing operation.

Search Result Behavior

Indexed external files can appear in Intelligent Search and RAG results.

Characteristics:

- Results are read-only.
- You cannot drill down to a details page.
- Results do not navigate to a Siebel record or document detail page.
- Document content and metadata may be visible in search snippets.

> **Note:** Disabling drilldown should not be considered a security or access-control mechanism.

Recommended Practices

Until visibility-aware retrieval is supported, treat External File Ingestion as suitable only for public or broadly approved content.

Recommended controls include:

- Curate a dedicated source folder that contains only approved public or broadly authorized content.
- Require a content owner or data steward to review files before ingestion.
- Label the feature documentation and configuration runbooks with the public-data-only restriction.
- Separate search or RAG experiences by audience if different user groups require different document sets.
- Review search result snippets and metadata during validation, because even read-only results can disclose sensitive information.
- Avoid indexing restricted content until a supported visibility or authorization-filtering design is available for the retrieval path.

Troubleshooting Siebel Intelligent Search

If you encounter issues with Siebel Intelligent Search or OpenSearch integration, use the following logging and diagnostic steps to identify and resolve problems.

OpenSearch Log:

- Log file name: `modernsearch.log`
- Log file location: `<Siebel_Build_Location>/ses/applicationcontainer_internal/logs`

- Log levels: default Log Level will be 0 which stands for FATAL/ERROR. Set it to 5 to gather all the information including Information/Debug logs. Follow the steps below to set the Siebel JBS log level to 5:
  a. Navigate to **<Siebel_Build_Location>/ses/applicationcontainer_internal/webapps**
  b. Open the file: **configagent.properties**
  c. Add **"JBSLogLevel=5"** and save it.
  d. Restart the internal tomcat server.

Siebel Server Logs:

- Presented in the corresponding Object Manager (OM) logs.
- Turn on OM logs via Siebel Server Manager. All standard Log Levels for Siebel OM apply.
- Apart from setting log level to 5 at component level, you can also set Even log level to 5 for all Search Events as shown below. Enabling this will help identify root causes of Search functionality in Siebel application.

Following table describes Server Event Configuration:

Event Type	Alias	Log Level	Description
SearchLogEvent	SearchLogEvent	5	Used to log events for Search data processor during indexing.
Search Administration	SearchAdmin...	5	Logs all operations for Search Administration
Search Adapter	SearchAdapter	5	Log search adapter operations
Search Execution	SearchExecuti...	5	Logs all operations for Search Execution
Search Service	SearchService	5	Log all the operations for Search services
SearchPLUS Log	SearchPLUSLog	5	Log events for SearchPLUS Manager
SearchPLUS Indexing	SearchPLUSIn...	5	Traces the indexing bath job component

To Set Up OpenSearch Without Demo Certificate

1. Download and Install OpenSearch from *https://opensearch.org/artifacts/by-version/* as Standalone mode.
2. Plugins was already part of OpenSearch installation except Ingest-attachment plugin.
3. Download and install the ingest-attachment plugin version that matches your installed OpenSearch version from the OpenSearch artifacts repository.

   For example, for 2.15.0, download from: *https://artifacts.opensearch.org/releases/plugins/ingest-attachment/2.15.0/ingest-attachment-2.15.0.zip*.
4. Don't install the Demo Certificate
5. Add/Update the below parameter in opensearch.yaml
   - network.host: 0.0.0.0
   - discovery.seed_hosts: []
   - discovery.type: single-node
   - plugins.security.disabled: true

- - node.roles: [cluster_manager, data, ml, ml_model, ml_predictor, ingest] under Nodes section

6. Update the maximum size of total heap space to 4g with the below parameters in jvm.options
   - -Xms4g
   - -Xmx4g
7. Set the proxy as required in jvm.options
   - #Sample proxy:
   - -Dhttp.proxyHost=www-xxx.xx.xxxx.com
   - -Dhttp.proxyPort=xx
   - -Dhttps.proxyHost=www-xxx.xx.xxxx.com
   - -Dhttps.proxyPort=xx
8. Verify the OpenSearch connection is successful using the http URL without the username/password (http://<local_host>:<port>)
9. Update the `modernsearchconfig.yaml` with the http URL and the port (Don't provide the username and password)
10. Do the Model Registration, the Model Registration will not work with http URL.
11. Indexing the Categories (Attachment and Non-Attachment) and perform a keyword search.

To Set Up OpenSearch With Demo Certificate

1. Download and Install OpenSearch from *https://opensearch.org/artifacts/by-version/* as Standalone mode.
2. Plugins are already part of OpenSearch installation except Ingest-attachment plugin.
3. Download and install the ingest-attachment plugin version that matches your installed OpenSearch version. Download the plugin from the OpenSearch artifacts repository.

   For example, for 2.15.0, download from: *https://artifacts.opensearch.org/releases/plugins/ingest-attachment/2.15.0/ingest-attachment-2.15.0.zip*
4. Install the Demo Certificate using the following steps:
   a. Go to OpenSearch installation location: **C:\opensearch-<OpenSearch-version>-windows-x64\opensearch-<OpenSearch-version>\plugins\opensearch-security\tools**
   b. Run "install_demo_configuration.bat" file and it opens the prompt with the below options.
      - Install demo Certificates? [y/N]: Y and enter.
      - Initialize Security Modules? [y/N]: Y and enter.
      - Enable cluster mode? [y/N]: N and enter (If OpenSearch instance as standalone)
5. Verify the following entries get updated in opensearch.yml after installing the demo certificate.

```
file######## Start OpenSearch Security Demo Configuration ########
# WARNING: revise all the lines below before you go into production
plugins.security.ssl.transport.pemcert_filepath: esnode.pem
.....
.....
.....
.....
.plugins-flow-framework-state]
node.max_local_storage_nodes: 3
######## End OpenSearch Security Demo Configuration ########
```

6. Add/Update the following parameters in opensearch.yml:
   - - network.host: 0.0.0.0
   - - discovery.seed_hosts: []
   - - discovery.type: single-node

- - node.roles: [cluster_manager, data, ml, ml_model, ml_predictor, ingest] under the 'nodes' section

7. Update the maximum size of total heap space to 4g with the below parameters in jvm.options
   - -Xms4g
   - -Xmx4g
8. Set the proxy as required in jvm.options
   - #Sample proxy:
   - -Dhttp.proxyHost=www-xxx.xx.xxxx.com
   - -Dhttp.proxyPort=xx
   - -Dhttps.proxyHost=www-xxx.xx.xxxx.com
   - -Dhttps.proxyPort=xx
9. Verify the OpenSearch connection is successful using the https URL with the username/password (https://<local_host>:<port>)
10. Update the `modernsearchconfig.yaml` with the https URL, port, username and password.
11. Do the Model Registration. Model Registration will get registered with https URL.
12. Index the Categories (Attachment and Non-Attachment) and perform a keyword search.

Note:

- **opensearch.yaml**: the primary configuration file for an OpenSearch cluster, used to define both core OpenSearch settings and various plugin configurations. This config file is present in the location where OpenSearch is installed.
- **modernsearchconfig.yaml**: the primary configuration file used to integrate Siebel CRM with OpenSearch, serving as the key component for communication and setup between the two systems. This config file is present where the Siebel build is installed.

Errors and Solutions

Error when clicking the Object Filter in Global Search Bar.

User may see this error when clicking the Object Filter button in Global Search Bar:

Solution: Ensure the Application User Property is configured.

After indexing a search category, user cannot perform searches on that category.

check the followings:

1. If the category has been indexed properly in OpenSearch.
2. If the OpenSearch server is up and running.
3. If the model has been deployed successfully.

After restarting the OpenSearch service on a standalone machine, the model deployment enters a failed state.

Option 1: Identify the modelId from modernsearchconfig.yaml. Run the OpenSearch to redeploy the model - Model Redeploy API: `{{openSearchUrl}}/_plugins/ml/models/{{modelid}}/_deploy`

Option 2: in the 'nodes' section in yaml file, configure" node.roles: `[ cluster_manager, data, ml, ml_model, ml_predictor, ingest ]`"

Category configuration error when doing a search.

User may get the following error when doing a search using the Global Search Bar:

Solution:

1. Category names must appear in both the upstream and downstream sections in modernsearchconfig.yaml, and the sequence of categories must match exactly.
2. When editing the yaml file, avoid mixing tabs and spaces, as this can cause parsing errors.

To Cross Check the Model Deployment Status via OpenSearch API

This can be obtained using API - Get Model Details: `{{openSearchUrl}}/_plugins/_ml/models/{{modelid}}`

Indexing on File Attachment Category is not working.

Check and set the following System Preferences:

1. Enable OpenSearch = Y
2. Enable OpenSearch FileIndexing = Y
3. OpenSearch Index File Path = <OpenSearch Index File Path for Attachments>
4. The above folder must be **shared** and granted full **permission.**

Search Config Service Error when clicking on the Object Filter button in Global Search bar.

Steps to resolve:

1. Log into Siebel Web Tools.
2. Create & Open a Workspace.
3. Navigate to the required Application Object (e.g. **Siebel Universal Agent**)
4. Navigate to User Properties for the selected Application.
5. Add the New User Property:
   a. Name ClientBusinessService<#n> (e.g. **ClientBusinessService13)**
   b. Value Search Config Service
6. Validate and Deliver.

The MobileSync Component Group shows 'Partially Running' status.

Check to make sure the **TxnProc** Component is online.

1. Navigate to Administration - Server Configuration → Enterprises → Component Definitions.
2. Query **TxnProc** in Alias.
3. Click **Synchronize.**

> **Note:** You cannot use OpenSearch deployed via Siebel Cloud Manager to configure Siebel Intellingent Search for your on premises environment.

To Register a Different ML Model

Follow the steps below:

1. Open the OpenSearch documentation at *https://docs.opensearch.org/latest/ml-commons-plugin/using-ml-models/*, identify the Model. Ensure that the Vector dimension is **768** for optimal accuracy.
2. Clean up the existing Model and Model Group information in the OpenSearch instance and in the YAML file.
3. Change the '**isPipelineCreated**' parameter under **pipeline-ingest** and **pipeline-search** section in the YAML file to '**false**'.

4. If any existing categories have been Indexed, use **Delete Index** button in Siebel application to delete the existing Categories.
5. Update the Model name and the version in the YAML file. Please refer to the example below:
   - modelName:: huggingface/sentence-transformers/all-distilroberta-v1
   - modelVersion: 1.0.1
6. For Model registration, reset the OpenSearch engine Active Flag (e.g. unchecking and rechecking the flag).

To Upgrade OpenSearch YAML File

When applying a new Siebel Update, the existing “modernsearchconfig.yaml” file may get overwritten. Users should back up their customized YAML file and reapply the custom changes to the new file provided in the new Siebel Update.

To Configure Two Siebel Instances To Use a Single OpenSearch Instance

Follow the steps below:

1. Ensure the modelGroupName parameter value in modernsearchconfig.yaml file is unique.
2. Ensure the index name in the downstream section in modernsearchconfig.yaml file is unique.

For example:

```
index:
 category:
 - servicerequeststest:
 isIndexed: false
```

Troubleshooting Attachment Indexing

Follow this information to diagnose attachment search and indexing issues related to text chunking.

Symptom or Log Message	Cause	Recommended Action
Attachment content is not searched when using Search All or a mixed category search.	The search includes both attachment and non-attachment categories. In this mode, attachment categories are searched by metadata only.	Select an attachment category, or select only attachment categories, when searching inside attachment content.
SearchAdapterException with MS_ERR_SEARCH_ENGINE during document ingestion.	The OpenSearch document ingestion request did not complete within `clientResponseTimeout`.	Increase `clientResponseTimeout` in `modernsearchconfig.yaml` based on the maximum time required for a single attachment batch request.
SBL-EAI-05000 with HTTP_CONTAINERURL_TIMEOUT in the SearchDataExporter log.	The file indexing request exceeded `JBSTimeout`.	Increase `JBSTimeout` so it is higher than the expected attachment indexing time. Also verify that `clientResponseTimeout` is high enough.
The analyzer reports that the number of tokens produced by _analyze exceeded the allowed maximum.	`maxTokenCount` is too low for the attachment being processed.	Increase `maxTokenCount`based on the largest expected attachment word count, using the token estimate described in this section.
Large attachments fail during indexing.	The attachment or generated chunks exceed request, timeout, or environment capacity limits.	Keep attachments around 5 MB when possible. For larger files, review timeout values, and validate the environment capacity.

Symptom or Log Message	Cause	Recommended Action
Search relevance is poor for content near the end of long attachments.	The document content would require more chunks than the configured **maxChunkLimit**, so excess text is added to the last allowed chunk.	Increase **maxChunkLimit** only if the environment can process the additional chunks; otherwise reduce attachment size.

Error Messages

Following are the error messages:

Error Code	Purpose	String	Example(s)	Explanation
MS_ERR_SEARCH_ENGINE	Error from OpenSearch client is appended in the placeholder to show in the UI	An error occurred at the search engine side %1.	An error occurred at the search engine side contacts already exists.	Error message from OpenSearch is appended in %1. Value at placeholder is not translated; only static words are translated.
MS_ERR_GENERIC	Generic Error to show in UI during different operations with/without reason	An error occurred during %1 %2	An error occurred during CreateSchema index name is missing for category: Service Requests. Please ConfigureAn error occurred during CreateSchema	Flow is appended in %1, and error message from JBS if provided is appended at %2. Value at placeholder is not translated; only static words are translated.
MS_ERR_GENERIC_ADAPTER	Error from OpenSearch client which the JBS catches.	--	--	--

Siebel OpenSearch APIs

You need to configure the correct application name in the Default REST Inbound settings within SMC for the AI profile. This application name is used by the Search API to validate view names, which are internally applied for visibility criteria.

> **Note:** If an application is configured where the corresponding views are not set up for the category, the search will not return any results for that category.

Following table describes the Siebel OpenSearch APIs:

API	Description	Trigger via a Business Service in Siebel	Trigger via Siebel REST API		
			URL	Request Body	Response
RegisterModel	Register a machine learning (ML) model in Siebel Modern Search.	Trigger Business Service via **Runtime Event :** This event is triggered when an OpenSearch	https://<hostname>:<port>/siebel/v1.0/service/SiebelModernSearchJB RegisterModel	`{} (Empty Body)`	`{"Status" : "Accepted"}`

API	Description	Trigger via a Business Service in Siebel	Trigger via Siebel REST API		
			URL	Request Body	Response
		Engine entry is created in **Administration - Search > Search Engines** with Engine set to 'Open Search' and Active Flag set to 'Y'.			
SearchPipeline	Update a search pipeline with a weight factor.	Trigger Business Service via **Runtime Event :** This event is triggered when adding a Driver Parameter in **Administration - Search > Search Engines** with the Name "Search Pipeline" and Default Value "True".	https://<hostname>:<port>/siebel/v1.0/service/SiebelModernSearchJB/SearchPipeline	`{} (Empty Body)`	`{"Status" : "Accepted"}`
DeleteIndex	Delete an index in Siebel Modern Search	Trigger Business Service via **DeleteIndex Button:** The event is triggered upon clicking the DeleteIndex button in **Administration - Search > Search Engines** when the Category has already been indexed.	https://<hostname>:<port>/siebel/v1.0/service/SiebelModernSearchJB/DeleteIndex	For Single Category :`{ "body": { "CategoryName": "<categoryName>"}}` For all categories :`{ "body": {"CategoryName": "All"}}`	`{"Response": "Ok"}`
SearchConfiguration	Reload modernsearchconfig.ya	Trigger via Siebel REST API Only	https://<hostname>:<port>/siebel/v1.0/service/SiebelModernSearchJB/SearchConfiguration	`{} (Empty Body)`	`{"Status": "Ok"}`

SiebelSearch	Perform a Search in Siebel Modern Search
	NOTE:
	
	The correct application name must be configured in the Default REST Inbound settings within SMC for the AI profile. This application name is used to validate view names, which are internally used to enforce visibility criteria.
		Trigger via Siebel REST API only	https://<hostname>:<port>/siebel/v1.0/service/Open Search Adapter Service/SiebelSearch	SearchINCategory
				
				`{ "body": { "SearchText": "<Search Keyword>", "CategoryName": "<CategoryName>",`
				
				`"To": <Starting Index>, // optional "From": <Ending Index>, // optional`
					N/A

API	Description	Trigger via a Business Service in Siebel	Trigger via Siebel REST API		
			URL	Request Body	Response

	If the configured application does not have the appropriate views set up for a given category, the Search API will return no results for that category.			}
				}
				For Multiple Categories
				`<CategoryName> : "CategoryName1, CategoryName2"`
				For All Categories :
				`<CategoryName> : "All" OR ""`	

Deploy Model	Deploy or Redeploy a machine learning (ML) model in Siebel Modern Search.	Trigger Business Service via **Runtime Event :** This event is triggered when adding a Driver Parameter in**Administration - Search** > **Search Engines** with the Name "Deploy Model" and Default Value "True".	https://<hostname>:<port>/siebel/v1.0/service/SiebelModernSearchJB DeployModel	Request Body Type 1 : {} (Empty Body) Request Body Type 2: { "body": { "ModelId": "<ModelId>"}}	`{"Status" : "Accepted"}`

Index	Perform a create schema and Index by REST API.	N/A	https://<hostname>:<port>/siebel/v1.0/service/Open Search Adapter Service/Index	Non-Attachment Category:
				`{ "body": { "CategoryName":<Ca } }`
				Attachment Category :
				`{ "body": { "CategoryName":<Ca "IndexFile": "Y" } }`
					`{ "Status": "Ok", "reqId": "Batch-id"}`