Siebel Search Administration Guide Addendum for FAST InStream

Version 8.0

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Chapter 5: Administering Search Indices

Chapter 6: Using Siebel Search

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1 What's New in This Release

This guide covers how to administer Oracle's Siebel Search application for customers using the legacy Siebel Search-FAST integration, and should be used in combination with *Siebel Search Administration Guide*. Instructions in this guide are specific to integrating Oracle's Siebel Search and Microsoft's FAST InStream products. For information on administering features which are independent of the search engine, such as Mobile Search, Find, and Filter Search, see *Siebel Search Administration Guide*.

What's New in Siebel Search Administration Guide Addendum for FAST InStream, Version 8.0

Table 1 lists the changes described in this version of the documentation to support Release 8.0 of the software.

Table 1. Changes in Siebel Search Administration Guide Addendum for FAST InStream, Release 8.0

Topic	Description
"About FAST Index Profile Mapping Fields" on page 27	Modified topic. Updated to include index and available field mappings for custom business components.

2 Setting Up Siebel Search with FAST InStream

This chapter covers setting up Siebel Search with FAST InStream, and includes the following topics:

NOTE: Before beginning the installation process see *Siebel System Requirements and Supported Platforms* on Oracle Technology Network, and the FAST documentation on the *Siebel Business Applications Third-Party Bookshelf* in the product media pack on Oracle E-Delivery, for system requirements and supported platforms.

About Installing Siebel Search

The legacy Siebel Search-FAST integration contains a FAST InStream instance that has been pre-configured for integration with Siebel Search.

Required Server Components for Siebel Search

Siebel Search requires the installation of the Siebel Enterprise Server, including the Siebel Server and the Gateway Name Server, and the FAST InStream Server. The recommended installation and configuration sequence is as follows.

- Install the Siebel Enterprise Server
- Install the FAST InStream Server
- Configure Siebel Search

See the Siebel Installation Guide for the operating system you are using, for the installation of the Siebel Enterprise Server.

Upgrading from Siebel Search Version 7.x

Any custom search objects which were defined in Siebel Search Version 7.x need to be redefined in the file *<application_suite>_Field-Mappings.xml*. See Chapter 4, "Customizing Search Objects for FAST."

Siebel Search Deployment

It is recommended that you deploy the FAST InStream Server and Siebel Enterprise Server on separate, dedicated machines. Deploying the FAST and Siebel Enterprise servers on the same machine would degrade system performance.

See *Siebel System Requirements and Supported Platforms* on Oracle Technology Network, and the FAST documentation on the *Siebel Business Applications Third-Party Bookshelf* in the product media pack on Oracle E-Delivery, for system requirements.

Installation Requirements for FAST InStream

For information about which versions of the Windows operating system are supported by Siebel Search, see *Siebel System Requirements and Supported Platforms* on Oracle Technology Network. Make sure that the following requirements are met before you begin the installation process:

- If you are installing FAST InStream after a previous un-install operation, make sure all registry items have been removed. Restart the server after both un-install and re-install operations.
- If you plan to have very large indices (or frequent searches and indexing), use a dedicated Siebel Server.
- Make sure that you have enough disk space for the indices. Temporary space requirements for indexing can be two to four times the ultimate size of the index files.
- The Search server machine must have client connectivity to the Siebel database.
- To install Siebel Search the Windows user must have administrator privilege and Log On As Service privilege.

Installing FAST InStream on Windows

To install Siebel Search, the Windows user must have *administrator* privilege and *Log On As Service* privilege. For information about which versions of the Windows operating system are supported by Siebel Search, see *Siebel System Requirements and Supported Platforms* on Oracle Technology Network.

To install FAST Server under Windows

1. In Windows Explorer, navigate to the Siebel install image location, such as \Windows\Server_Ancillary\Fast_Install_Search_Server\<language>\windows.
2. Extract the Siebel Search Sever installation file *SSS_OEMInstaller_Win32.zip* to a temporary location.
3. Modify the environment settings in the file *<install_dir>\etc\SSC_OEMConfiguration_Win.xml*. The required parameters are described in the following table:

Field	Description
InstallPath	This should be set to the directory in which you want FAST InStream to be installed.
LogOutput	This should be set to the path to the log file for the installer, for example, *<install_root>\temp\Install.log*.
Tempdir	This should be set to the path of a temporary directory that will be used for the installation process, for example, *<install_root>\temp*.
UserName	Login user name for the FAST machine. This account is used to run the Fast Data Search service, and *Log on as service* permissions must be set up for the specified user account.
Password	Login password for the FAST machine. This password is used for the Fast Data Search service user.

4. Open a command prompt and change directory to the *<FAST Server install>\bin* directory.
5. Type the following at the command prompt:

```
oeminstaller –f <install_dir>\etc\SSC_OEMConfigration_Win.xml -h|-o|-n –v 7–U
<domain>\<admin_user> –P <admin_password>
```

The options are described in the following table. All options are case sensitive. For a full listing of arguments, run the command *oeminstaller* at the command prompt.

Option	Description	Mandatory
-f	Specifies the configuration file that contains all information needed for the installer. This option is required.	Yes
-h	Overrides the hostname check. Installation will continue if the hostname check fails.	No
-o	Overrides the supported platform check. Installation will continue if the platform is not supported.	No
-n	Overrides the network loop back check. Installation will continue if the check fails.	No

Option	Description	Mandatory
-v	Specifies the verbosity of the installer. The verbosity options are: ■ 0 = No output ■ 1 = Fatal ■ 2 = Error ■ 3 = Warning ■ 4 = Progress ■ 5 = Info ■ 6 = Debug ■ 7 = Trace The default value is 5.	No
-U	The Windows administrative user that the Search service will run as. The user must have the Windows *Log on as Service* privilege.	Yes
-P	The Windows administrative user password.	Yes

Verifying FAST InStream Installation on Windows

This topic covers verifying the FAST InStream processes and collections, once installation has completed.

To verify FAST InStream installation on Windows

1 In the Windows Task Manager verify that the correct number of instances of the following processes are running:

Process	Instance
anchorserver.exe	1
Apache.exe	2
cachemanager.exe	1
cmd.exe	1
configserver.exe	1
contentdistributor.exe	1
FASTDataSearch.exe	1
FASTSRCH.exe	1
fdispatch.exe	2

Process	Instance
frtsobj.exe	1
fsearch.exe	3
fsearchctrl.exe	2
lmgrd.exe	1
logserver.exe	1
mysqld.exe	1
omniNames.exe	1
procserver.exe	1
qrserver.exe	1
statusserver.exe	1
win32exec.exe	4

2. Start Fast Instream and Fast Instream Web Server.
3. Start the Fast InStream administration console by launching the URL *http://<Fast_Server>:16000*.
4. Select the System Overview tab and verify that all modules have a status of *Responding*, except for *Data Source*.
5. Select the Collections Overview tab and verify that the *buscomp* collection is listed.
6. Select the Document Processing tab and verify that the following eight custom Siebel pipelines are loaded in the Pipelines section:
   - SSCLotusNotesPipe (webcluster)
   - SSCBCHybridPipe (webcluster)
   - SSCMSExchangePipe (webcluster)
   - SSCEntWebCrawlerPipe (webcluster)
   - SSCFileSystemPipe (webcluster)
   - SSCDBPipe (webcluster)
   - SSCBCPipe (webcluster)
   - SSCSharepointPipe (webcluster)
7. Select the Document Processing tab and verify that the following twenty three processing pipelines are loaded in the Custom Stages and Default Stages sections:
   - CleanupFileURI
   - DocumentRetrieverWithRetryWithProxy
   - ExchangeDateNormalizer

- RetrieveContentID
- SSCAttributeAssignerBCColName
- SSCAttributeAssignerBCDocType
- SSCAttributeAssignerDBColName
- SSCAttributeAssignerDBDocType
- SSCAttributeAssignerEWCBCType
- SSCAttributeAssignerEWCColName
- SSCAttributeAssignerFSBCType
- SSCAttributeAssignerFSColName
- SSCAttributeAssignerLNBCType
- SSCAttributeAssignerLNColName
- SSCAttributeAssignerSPBCType
- SSCAttributeAssignerSPColName
- SSCAttributeAssignerXchgBCType
- SSCAttributeAssignerXchgColName
- SSCAttributeAssignerXchgData
- SSCAttributeCopyExchange
- SSCAttributeCopyFileURI
- SSCAttributeCopyMailDateRecieved

8 Select the Matching Engines tab.

9 Click on the update icon in the Cluster column.

The Edit Webcluster view is displayed.

10 Select the *View Current Index-Profile* link and verify that the customized Siebel index profile XML file is launched.

11 Navigate to Matching Engines > Host and verify that three partitions are indexed and are in state *idle*.

Installing FAST InStream on UNIX

To install FAST InStream the user must have administrative privileges. For information on supported platforms, see *Siebel System Requirements and Supported Platforms* on Oracle Technology Network.

To install FAST InStream on UNIX

1. Navigate to the Siebel image location for the Siebel Search installation file at *<install_directory>/Siebel_Install_Image/<version>/<OS>/Server_Ancillary/Siebel_Search_Server/*.
2. Launch a bash shell.
3. Execute the command *gunzip SSS_OEMInstaller_<OS>.tar.gz* to convert *SSS_OEMInstaller_<OS>.tar.gz* to a tar file.
4. Execute the command *tar –xvf SSS_OEMInstaller_<OS>.tar* to extract the contents of the tar file.
5. Update the file *<install_directory>/FAST/installer/oeminstaller/etc/SSC_OEMConfiguration_Unix.xml* with the correct parameters. For example, replace all the occurrences of */vol3/unixuser/* with */home/FAST/instream/*. Some configuration fields are described in the following table:

Field	Description
InstallPath	This should be set to the directory in which you want FAST InStream to be installed.
LogOutput	This should be set to the path to the log file for the installer, for example, *<install_directory>/temp/Install.log*.
Tempdir	This should be set to the path of a temporary directory that will be used for the installation process, for example, *<install_directory>/temp*.
UserName	This value must be left blank for UNIX environments.
Password	This value must be left blank for UNIX environments.

6. Change Directory to the *./FAST/installer/oeminstaller/bin* directory.
7. Execute the command *setupenv.sh* to setup the environment variables necessary for FAST InStream installation.
8. Echo the environment variables to make sure that they are set by executing the following commands:

   ```
   echo $PWD

   echo $LIBPATH

   echo $SHLIB_PATH

   echo $LD_LIBRARY_PATH
   ```

9. If the environment variables have not been set by the *setupenv.sh* script they should be set individually by executing the following commands:

   ```
   setenv PWD /<install_directory>/FAST/installer/oeminstaller/bin

   setenv LIBPATH /<install_directory>/FAST/installer/oeminstaller/lib:$LIBPATH

   setenv SHLIB_PATH /<install_directory>/FAST/installer/oeminstaller/lib
   ```

```
setenv LD_LIBRARY_PATH /<install_directory>/FAST/installer/oeminstaller/lib.
```

10 Execute the `oeminstaller` command to install FAST InStream.

```
oeminstaller –f <install_directory>/etc/SSC_OEMConfigration_Unix.xml -h|-o|-n –v
<verbosity level>
```

For a full listing of arguments run the command *oeminstaller* at the command prompt. The options are described in the following table. All options are case sensitive.

Option	Description	Mandatory
-f	Specifies the configuration file that contains all information needed for the installer.	Yes
-h	Overrides the hostname check. Installation will continue if the hostname check fails.	No
-o	Overrides the supported platform check. Installation will continue if the platform is not supported.	No
-n	Overrides the network loopback check. Installation will continue if the check fails.	No
-v	Specifies the verbosity of the installer. The verbosity options are: ■ 0 = No output ■ 1 = Fatal ■ 2 = Error ■ 3 = Warning ■ 4 = Progress ■ 5 = Info ■ 6 = Debug ■ 7 = Trace The default value is 5.	No

The installation process is then invoked and when it terminates you should get a message indicating that it has completed successfully.

11 Change directory to *$FASTSEARCH/bin*, for example */<install_directory>/instream/bin*.

12 Run *setupenv.sh* to setup the environment variables necessary for FAST Instream processes.

Verifying FAST InStream Installation on UNIX

Once installation has completed, the FAST installation should be verified by checking the status of the FAST processes.

To verify FAST InStream installation on UNIX

1. Change directory to */<install_directory>/instream/bin*.
2. Start the FAST InStream server by executing the command *start_server all*.
3. Run the command *./nctrl systatus*

   This will list the status of the modules and processes.
4. If the status of any process is *Dead* or *User Suspended*, start all the processes by executing the command *./nctrl start*.
5. If any remaining processes have a status of *Dead* or *User Suspended*, start each process individually by executing the command *./nctrl start <ProcessName>*.
6. Start the Fast InStream administration console by launching the URL *http://<Fast_Server>:16000/*.
7. Select the System Overview tab and verify that all modules have a status of *Responding*, except for the *Data Source* module.
8. Select the Collections Overview tab and verify that the *buscomp* collection is listed.
9. Select the Document Processing tab and verify that the following eight custom Siebel pipelines are loaded in the Pipelines section:
   - SSCLotusNotesPipe (webcluster)
   - SSCBCHybridPipe (webcluster)
   - SSCMSExchangePipe (webcluster)
   - SSCEntWebCrawlerPipe (webcluster)
   - SSCFileSystemPipe (webcluster)
   - SSCDBPipe (webcluster)
   - SSCBCPipe (webcluster)
   - SSCSharepointPipe (webcluster)
10. Select the Document Processing tab and verify that the following twenty three processing pipelines are loaded in the Custom Stages and Default Stages sections:
    - CleanupFileURI
    - DocumentRetrieverWithRetryWithProxy
    - ExchangeDateNormalizer
    - RetrieveContentID
    - SSCAttributeAssignerBCColName
    - SSCAttributeAssignerBCDocType
    - SSCAttributeAssignerDBColName
    - SSCAttributeAssignerDBDocType
    - SSCAttributeAssignerEWCBCType

- SSCAttributeAssignerEWCColName
- SSCAttributeAssignerFSBCType
- SSCAttributeAssignerFSColName
- SSCAttributeAssignerLNBCType
- SSCAttributeAssignerLNColName
- SSCAttributeAssignerSPBCType
- SSCAttributeAssignerSPColName
- SSCAttributeAssignerXchgBCType
- SSCAttributeAssignerXchgColName
- SSCAttributeAssignerXchgData
- SSCAttributeCopyExchange
- SSCAttributeCopyFileURI
- SSCAttributeCopyMailDateRecieved

11 Select the Matching Engines tab.

12 Click on the update icon in the Cluster column.

The Edit Webcluster view is displayed.

13 Select the *View Current Index-Profile* link and verify that the customized Siebel index profile XML file is launched.

14 Navigate to Matching Engines > Host and verify that three partitions are indexed and are in state *idle*.

Administering Siebel Server Component Groups

This procedure enables the *Search Processing* and *EAI* server component. The SearchDataProcessor component processes Search data and builds the index. Once the Search server is set up and the indices have been defined, the components need to be synchronized.

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

To administer Siebel Server component groups

1 Navigate to Administration - Server Configuration > Component Groups.

2 Query on the *Search Processing* Component Group.

3 On the Component Groups applet, click the Enable button.

4 Query on the *EAI* Component Group.

5 On the Component Groups applet, click the Enable button.

6 Navigate to Administration – Server Management > Servers > Component Groups.

7 Make sure that the *Search Processing* and *EAI* Component Groups have State *Online*.

8 Navigate to Administration – Server Configuration > Enterprises > Synchronize.

9 Query on the *Search Processing* Component in the list applet.

10 Select the Search Data Processor component.

11 Click Synchronize.

12 Re-start the Siebel Server.

Administering the Siebel Search Business Component Connector for FAST

The Siebel Business Component Connector is required for integration between Siebel Search and FAST InStream. The business component Connector is preconfigured and the settings should be verified in the Siebel Administration – Search > Search Connector Settings view.

To verify the Siebel Business Component Connector for FAST

1 Navigate to Administration – Search > Search Connector Settings.

The Search Connector Settings List applet is displayed.

2 Verify the settings in the following table. Values are case-sensitive.

Field	Value
Name	Business Component
Library Name	buscomp
Engine Name	FAST
Type	buscomp

Activating the Search Engine

A search engine is activated by selecting the Default Flag check box in the Administration – Search > Search Engine Settings view. Only one search engine can be activated at any one time.

To activate the search engine

1 Navigate to Administration – Search > Search Engine Settings.

2 Check the Default Flag field for FAST.

Administering Search Engine Settings for FAST InStream

This topic covers configuration of the FAST InStream and Siebel Search integration fields in the Search Engine Settings view of the Siebel Search Administration UI.

To administer search engine settings for FAST InStream

1. Navigate to Administration – Search > Search Engines.
2. Select FAST in the Search Engines applet.

   The FAST InStream fields are displayed in the Search Engine Settings list applet.
3. Complete the search engine fields. Some fields are described in the following table:

Field	Description
Batch Split Size	The number of business component records in a batch. This should be set to a value between 3000 and 10000. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Split Size.
Batch Submit Size	The number of records submitted at a time for indexing. This should be set to a value between 1500 and 2500. The Object Manager query performance, search engine footprint size, and Siebel Server specification are used in determining optimum Batch Submit Size.
Cluster	This value should always be set to *webcluster*. A Cluster is a group of Logical Collections, and a Logical Collection is a group of Search Categories.
DB Cnctr Install Dir	This value should be set to *<Search engine install dir>\DBC*.
Exchange Cnctr Install Dir	This value should be set to *<Search engine install dir>\EC*.
Search Engine Install Dir	The search engine root installation directory.

Field	Description
Filename	The path to the *<application_suite>_SSC_Field-Mappings.xml* file on the Siebel Server. ■ Use the file *SSC_Field-Mappings.xml* if you are using a Siebel Business application, such as Siebel Call Center, Siebel Sales or Siebel Marketing. ■ Use the file *SIA_SSC_Field-Mappings.xml* if you are using a Siebel Industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma. The *<application_suite>_SSC_Field-Mappings.xml* file is located on the Siebel Server.
Namespace	The FAST server and port; used in the query request. The syntax is of the format *corbaname::<server>:<port>16099*. *<server>* is the FAST Server. The default FAST InStream port is *16099* .
SharePoint Cnctr Install Dir	This value should be set to *<Search engine install dir>\SBC*.
Temp Search UNC Location	Path to the shared Siebel Search Center file system. The default value is *D:\fs*. There should be no back slash or forward slash after *fs*.
Timeout	The search query timeout period, specified in milliseconds. The default value is 10000.
Hits	The number of hits you want the search query to return. The default value is 4000.

4 Select Save Record from the list applet drop down menu.

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

Configuring the Default Search Definition

This topic covers configuring the default search definition in the Search Definition view of the Siebel Search Administration screen. 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 first needs to be set up as the default Definition in the Search Definition view.

To configure the default search definition

1. Navigate to Administration – Search > Search Definition view.
2. Select the Search Definition that is to be set as the default. For the list of Search Definition and Siebel application mappings, see *Siebel Search Administration Guide*.
3. Select the *Default Flg* check box.

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 and trigger the Search Content business service method *UpdateIndex*.

To activate the Search run-time events

1. Navigate to Administration - Runtime Events > Action Sets.
2. Query on the *Update Index* Action Set.
3. Select the *Active* and *Enable Export* check boxes to activate the Update Index run-time events.

Creating Server Repeating Jobs

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 should be used on thick clients.

When importing a batch of data, incremental indexing should be turned off and a one time Index All operation should be performed. Incremental indexing is turned off by deactivating the Update Index action set on the Runtime Events Action Set view. See *Siebel System Administration Guide* for more information on Server component repeating jobs.

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

To create server repeating jobs

1. Navigate to Administration - Server Management > Jobs.
2. In the Jobs 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 drop-down list and select the *SearchDataProcessor* server component.

6 In the Job Detail view, enter data in other appropriate fields as described in the following table; click the menu button, and then click Save Record.

Field	Description
Component/Job	This should be set to *Search Incremental Indexer.*
Scheduled Start	The scheduled start date and time of the component job.
Expiration	The date at which the component job is no longer valid.
Requested Server	Set if you want to target a server component on a specific Siebel Server.
Request Key	Set if you want to target a component or repeating component job to a specific instance of the server component identified by the request key. In all other situations, keep this field blank.
Delete Interval	Set with Delete Unit field, this field determines the length of time before the component job is deleted. If not updated, this field defaults to 1.
Delete Unit	Set with Delete Interval field, this field determines the length of time before the component job is deleted. If not updated, this field defaults to Weeks.
Repeating	This check box should be checked.
Repeat Units	This should be set to Seconds.
Repeat Interval	This should be set to 600.
Retry on Error	This check box should be checked to retry the component job in case of error.
Sleep Time	This field determines the amount of time before the component job is retried. This should be set to *60*.
Number of Retries	This field determines the number of times the component job is retried. This should be set to *1*.

7 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

8 Click Start to start the new job.

3 Administering Search Data Sources for FAST InStream

This chapter covers administering Search Connectors for integration between Siebel Search and FAST InStream, and includes the following topics:

About Administering Data Sources for FAST InStream

The business component connector is required for integration between Siebel Search and FAST InStream, see "Administering the Siebel Search Business Component Connector for FAST" on page 17. The File Traverser and Web Crawler connectors are optional connectors. The connector parameters are implemented as name value pairs. The connectors for integration with FAST InStream are configured in the Administration - Search view of the Siebel web client. To define a search connector for the FAST InStream search engine, provide the search engine name, the library the search engine uses to search each data source, and the data source properties.

Administering the File Traverser Connector for FAST

The File Traverser Connector is administered in the Administration – Search > Search Connector Settings view. This connector is available as part of the default FAST installation. No separate connector installation is necessary.

NOTE: This is an optional connector and is not required for integration between Siebel Search and FAST InStream.

To configure the File Traverser Connector for FAST

1. Navigate to Administration – Search > Search Connector Settings.
2. Select the File System connector in the Search Connector Settings applet.
3. Verify the parameter values in the following table.

Parameter Name	Value
Library Name	filesystem
Engine Name	FAST

Parameter Name	Value
Type	Filesystem
Document Types	doc,pdf,xls,txt,ppt,htm,html,log,msg
Index File Changes	Y
Drop Deleted Files	Y
FAST Collection	filesystem
File Date	sblcreationdate
File System Root	D:\fs
Batch Size Limit	200
Single File Size Limit	5000000
Prepend Path	\\<Siebel_Server>\<install_path>\fs
Library Name	filetraverser
Single File Size Limit	5000000

4 Set the *File System Root* parameter to the location of the shared Siebel File System directory. By default this is a local path in the format *D:\fs*.

5 Set the *Prepend Path* parameter to the location of the shared Siebel file system directory on the Siebel Server. The path format is *\\<Siebel_Server>\<install_path>\fs*.

6 Select Save Record on the Connector Parameters drop down menu.

Administering the Web Crawler Connector for FAST

The Web Crawler Connector is administered in the Administration – Search > Search Connector Settings view. Additional configuration needs to be carried out on the FAST side. For more information, see the FAST documentation on the Siebel *Business Applications Third-Party Bookshelf* in the product media pack on Oracle E-Delivery.

NOTE: This is an optional connector and is not required for integration between Siebel Search and FAST InStream.

To configure the Web Crawler Connector for FAST

1 Navigate to Administration – Search > Search Connector Settings.

2 Select the Web Crawler connector in the Search Connector Settings applet.

3 Verify the parameter values in the following table.

Parameter Name	Value
Library Name	crawler
Engine Name	FAST
Type	crawler
FAST Host Port	\\<FAST_Server>\:<port>.

4 Set the *FAST Host Port* parameter to the FAST port on the Server. The path format is *<FAST_Server>**:<port>*. The default FAST InStream port is *16099.*

5 Select Save Record on the Connector Parameters drop down menu.

4 Customizing Search Objects for FAST

This chapter covers customizing and extending search objects for integration with FAST InStream, and includes the following topics:

About Searchable Objects

To facilitate dynamic configuration of search Categories, all searchable objects are defined in an XML mapping file, rather than through Siebel Tools. This enables dynamic, runtime configuration of search Categories through the Search administration UI, without requiring a server restart and application downtime.

Siebel Search ships with preconfigured search categories. To create additional custom search objects, or to add 7.x custom search objects, the object definition needs to be mapped in a field mapping XML file. The attributes and elements 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.

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

About FAST Index Profile Mapping Fields

Index profile fields are defined in the file *SSC_Index-Profile.xml*, or *SIA_Index-Profile.xml* on the FAST server. These index profile fields are mapped to Business Component fields and Connectors in *<application_suite>_SSC_Field-Mappings.xml*, to define searchable objects. The index profile fields are re-usable for mapping across Business Component fields and Connectors, therefore you should not need to create additional index profile fields. If you need to modify *<application_suite>_Index-Profile.xml*, see the FAST InStream documentation on *Siebel Business Applications Third-Party Bookshelf* in the product media pack on Oracle E-Delivery. Any change to *<application_suite>_Index-Profile.xml* will require a restart of the FAST server.

The correct mapping file to use is determined as follows:

- Use the file *SSC_Field-Mappings.xml* if you are using a Siebel Business application, such as Siebel Call Center, Siebel Sales or Siebel Marketing.
- Use the file *SIA6_Field-Mappings.xml* if you are using a Siebel Industry application, such as Siebel Finance, Siebel Medical, or Siebel Pharma.

NOTE: Only one Field Mapping XML file is required to support all languages within the enterprise.

The fields listed in Table 2 are defined in *<application_suite>__Index-Profile.xml*, and are available for mapping to custom search objects in *<application_suite>_SSC_Field-Mappings.xml*.

Table 2. FAST Index Profile Mapping Fields

Field Name	Data Type	Description	Mandatory
author	String	Recommended for mapping to String fields, such as author, owner, user, or name.	No
body	String	Used for mapping to main content field. This field is mandatory and is used to generate search results.	Yes
description	String	Recommended for mapping to generic descriptive fields, such as comments, FAQ or details.	Recommended
dgenfield00	Decimal	Recommended for mapping to any monetary or decimal field.	No
dgenfield01	Decimal	Recommended for mapping to any monetary or decimal field.	No
dtgenfield00	Date	Recommended for mapping to date or time fields.	No
dtgenfield01	Date	Recommended for mapping to date or time fields.	No
igenfield00	Integer	Recommended for mapping to whole number fields.	No
igenfield01	Integer	Recommended for mapping to whole number fields.	No
keywords	String	Recommended for mapping to user-defined keywords field only.	No
location	String	Recommended for mapping to site, directory, or path fields.	No
namelist	String	Only to be used for 1:M field mapping.	No

Table 2. FAST Index Profile Mapping Fields

Field Name	Data Type	Description	Mandatory
sblbctype	String	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
sblcollectionname	String	Only to be used for mapping to Logical Collection name.	No
sblcreatedby	String	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
sblcreationdate	Date	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
sbldescription	String	Recommended for mapping to any description or comments fields.	No
sblemailaddress	String	Recommended for mapping to email address fields.	No
sblfirstname	String	Recommended for mapping to first name fields.	No
sbllastname	String	Recommended for mapping to last name fields.	No
sbllastupdatedby	String	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

Table 2. FAST Index Profile Mapping Fields

Field Name	Data Type	Description	Mandatory
sbllastupdatedate	Date	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
sblname	String	Recommended for mapping to name fields.	No
sblphonenumber	String	Recommended for mapping to phone, fax, cell phone or pager number fields.	No
sblrowid	String	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
sblstatus	String	Recommended for mapping to status fields.	No
sbluserid	String	Recommended for mapping to any String field.	No
sblvisibilityid	String	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 ID, or other visibility control business component fields. 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 results are filtered based on the field's sblvisibilityid setting and the visibility setting of the group to which the user belongs. This mapping is mandatory for access controlled business components. See the Access Control chapter in the *Siebel Security Guide* for more information.	Yes

Table 2. FAST Index Profile Mapping Fields

Field Name	Data Type	Description	Mandatory
sblvisibilityinfo	String	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
sblzipcode	String	Recommended for mapping to zip-code, postal-code or pin-code fields.	No
sgenfield00	String	Recommended for mapping to any String field.	No
sgenfield01	String	Recommended for mapping to any String field.	No
sgenfield02	String	Recommended for mapping to any String field.	No
sgenfield03	String	Recommended for mapping to any String field. This field is not mapped out of the box, therefore it can be mapped to any new or existing String field.	No
sgenfield04	String	Recommended for mapping to any String field. This field is not mapped out of the box, therefore it can be mapped to any new or existing String field.	No
sgenfield05	String	Recommended for mapping to any String field. This field is not mapped out of the box, therefore it can be mapped to any new or existing String field.	No
sgenlist	String	For 1:M mapping only.	No
summary	String	Recommended for mapping to any summary or descriptive String field, such as Comments, FAQ or Details fields.	Recommended
taxonomy1	String	Only to be used for taxonomical fields.	No
taxonomy2	String	Only to be used for taxonomical fields.	No
taxonomy3	String	Only to be used for taxonomical fields.	No
textid	String	Recommended for mapping to ID fields.	No
title	String	Recommended for mapping to the business component field which should serve as the search result's title field.	Yes

FAST Index Profile Reserved Fields

The following index profile fields, in *<application_suite>*_Index-Profile.xml, are FAST system fields, and cannot be mapped to user-defined fields in *<application_suite>_SSC_Field-Mappings.xml*:

- docacl
- docaclsystemid
- documenttype
- teaser

Defining Custom Searchable Objects for Integration with FAST InStream

All user-defined objects which should be searchable need to be mapped to index profile fields in the *<application_suite>_SSC_Field-Mappings.xml* file. This topic covers the Search DTD used in *<application_suite>_SSC_Field-Mappings.xml*, and the rules for defining object attributes and elements, to create custom search objects. Once the new custom Business Components or fields have been defined in *<application_suite>_SSC_Field-Mappings.xml*, the Siebel Server needs to be restarted, and the Search Administration UI needs to be populated with the new Search Categories or Available Fields. See Chapter 5, "Administering Search Indices."

Searchable Object DTD for Siebel and FAST Integration

Each searchable object definition in *<application_suite>_SSC_Field-Mappings.xml* can include the attributes bc-name, ip-name, nv-name, ui-name and type, and must conform to the following DTD:

```
<!DOCTYPE searchable-object [
<!ELEMENT searchable-object (BusComp*)>

<!ELEMENT BusComp (field+)>
<!ATTLIST BusComp
          name        CDATA       #REQUIRED
          ui-name     CDATA       #REQUIRED>

<!ELEMENT field EMPTY>
<!ATTLIST field
          bc-name             CDATA                          #REQUIRED
          ip-name             CDATA                          #REQUIRED
```

```
            nv-name             CDATA                              ""
            ui-name             CDATA                            #REQUIRED
            type                  (path | filename | ext | na)     "na"      >
]>
```

FAST Field Mapping Rules for One-To-One Relationships

Each one-to-one field mapping defined in *<application_suite>_SSC_Field-Mappings.xml* must comply with the rules listed in Table 3. The corresponding UI fields in the Search Index Settings and Available Fields applet are also listed.

Table 3. One-To-One Field Mapping Rules for Integration with FAST InStream

Field Attribute	One-To-One Mapping Rule
bc-name	This field attribute corresponds to the Business Component field name in Siebel Tools. The value displays in the *Field Name* column of the Available Fields list applet. This is a mandatory, non-empty attribute.
ip-name	Corresponds to the mapped field in index-profile.xml. This attribute must take one of the fields listed in Table 2 on page 28. This is a mandatory non-empty attribute.
nv-name	This field attribute corresponds to the navigator name, if available. This field attribute is optional.
ui-name	Provides the (non-internationalized) name for the UI Field attribute in the Search Center view. The field name is only displayed on the application UI if the Searchable flag is checked in the Available Fields list applet. A non-empty value must be provided if the field is to be added to the body field teaser of the result set. This value defines the Display Name on the Search UI Available Fields list applet. This field attribute is optional.

FAST Field Mapping Rules for One-To-Many Relationships

Each one-to-many field mapping defined in *<Application>_Field-Mappings.xml* must comply with the rules listed in Table 4. The corresponding UI fields in the Search Index Settings and Available Fields applets are also listed. Each search category can have a maximum of two 1:M fields. Each child category should be mapped to a separate index profile field.

Table 4. One-To-Many Field Mapping Rules for Integration with FAST InStream

Field Attribute	One-To-Many Mapping Rule
bc-name	This field attribute corresponds to the Business Component field name in Siebel Tools. The value displays in the *Field Name* column of the Available Fields list applet. This is a mandatory, non-empty attribute.
ip-name	This attribute is used to specify one-to-many field mappings. in-name must take the index profile field *namelist* or *sgenlist*.
nv-name	This field attribute must be empty for 1:M mappings.
ui-name	This field attribute is mandatory for 1:M mappings and must conform with to the following format: *<Child Bus Comp Name>:<Child Fields><Child Reference Field>*, for example, *Service Request Attachment:ActivityFileSrcPath,ActivityFileName,ActivityFileExt,Activity Id*. In the above example the constituent parts are as follows: **Child Bus Comp Name.** Service Request Attachment. This must be the exact name defined in Siebel Tools. Child Bus Comp Name takes just one value. **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 Bus Comp linked to *PAR_ROW_ID* of the child table, for example Activity Id. Child Reference Field takes just one value.
type	The type attribute must be specified as *na* for 1:M mappings. This attribute corresponds to the type of information represented by the field value, for example *path* or *filename*.

Creating Search Run-Time Events for Custom Search Objects

Search run-time events will need to be created for any custom search object that you create. Run-time events need to 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 Administration - Runtime Events > Action Sets.
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
Service Request - PreDelete	BusComp	Service Request	PreDeleteRecord

6. Select Save Record from the drop-down list.

5 Administering Search Indices

This chapter covers administering Search indices, and enabling server components required for indexing. This chapter includes the following topics:

About Search Indices

The search indices 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, and what weighting is given to fields to determine ranking in results. The index definition can enable more efficient and relevant indexing and searching by omitting less relevant fields from the index and search operations.

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

Defining Search Indices

Siebel Search index settings provide support for the ability to pre-filter the index record-set, dynamic weights, ability to configure navigable fields and searchable fields, ability to configure drill down views, and to group search categories under parent categories in Logical Collections. Out of the box support is provided for some Siebel business components, including Service Requests, Solutions and Products.

This topic contains the following tasks:

Creating a New Index Definition

Search Categories for each Siebel application are defined in Search Definition groupings in the Administration – Search > 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 *<application_suite>_Field-Mappings.xml* file, for FAST integration. See Chapter 4, "Customizing Search Objects for FAST" for information on creating custom search objects for FAST InStream integration. When a new Search Definition is created the Definition name should also be changed in the application configuration file.

Creating a New Index Definition in the Search Definition View

This topic covers creating a new Search Definition in the Search Definition view of the Siebel Search Administration screen.

To create a new index definition

1. Navigate to Administration – Search > 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 Bus Comp fields are mandatory. The business component which corresponds to the Search Category should be selected from the drop-down list.
7. Select Save Record on the Search Definition drop-down list.

Configuring the Search Definition in the Application Configuration File

This topic covers configuring the Search Definition in the SearchDefName parameter of the application configuration file. Application configuration file names are in the format *<application>.cfg*, for example, *shm.cfg* is the Siebel Hospitality application configuration file, and *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 in the application configuration file

1. Open the application configuration file in a text editor:
   a. On Windows the file is located at:
   <install_dir>\siebsrvr\bin\<language>\<application>.cfg

b On UNIX the file is located at *<install_dir>/siebsrvr/lib/<language>/<application>.cfg*

2 Scroll 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

1 Navigate to Administration – Search > Search Index Settings > Search Indices Parent Category View.

2 Click New on the Search Indices Parent Category applet.

3 Enter the Parent Category Name.

4 Check the Parent Category check box.

5 Enter a Sequence Number.

6 Select Save Record on the Search Index Settings drop-down list.

7 Click on the New button on the Search Category List applet.

8 Select the Categories to be included from the drop-down list of available categories.

9 Select Save Record on the Search Category List drop-down list.

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 Filter Search Specification specified in *Siebel Search Administration Guide*.

To filter the index record-set

1 Navigate to Administration – Search > Search Index Settings.

2 Enter the SQL statement in the *Filter Search Spec* field for each category that is to be pre-filtered.

The syntax must comply with that defined in *Siebel Search Administration Guide*.

Creating Available 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>_Field-Mappings.xml file*. See Chapter 4, "Customizing Search Objects for FAST" for information on mapping custom fields for FAST InStream.

To create the Available Field records and index the fields

1. Navigate to Administration – Search > Search Index Settings view.
2. Select the business component for which the new fields will be indexed.
3. Click on the New button in the Available Fields applet and complete the fields.
4. Select the Field Name from the drop-down list.

   This field is mandatory.
5. Select Save Record from the drop-down list.

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

1. Navigate to Administration – Search > Search Index Settings.
2. Select the Search Category for which searchable fields are to be configured in the Search Index Settings applet.

   The fields for that 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 drop-down list.

Administering Navigable Fields

The fields which populate the Refine Results applet of the search results are configured for each Business Component in the Navigable property of the Available Fields list applet. The Refine Results links are dynamically generated at runtime from the fields in the search result, which have been enabled as navigable fields.

To administer navigable fields

1. Navigate to Administration – Search > Search Index Settings.
2. Select the Search Category for which navigable fields are to be configured in the Search Index Settings applet.

   The fields for that 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. Select Save Record on the Available Fields drop down menu.

Assigning Weighting to Search Fields

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 100 could be assigned to the Description field and a weighting of 30 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.

To assign weighting to search fields

1. Navigate to Administration – Search > Search Index Settings.
2. Select the Search Category for which field weightings are to be configured in the Search Index Settings applet.

   The fields for that 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 table below.

Numeric Weighting	Ranking
80 – 100	Very high
60 – 79	High
40 – 59	Medium
20 – 39	Low
0 – 19	Very low

4. Select Save Record on the Available Fields drop down menu.

Indexing Search Objects

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.
- **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.
- **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.

This topic contains the following sub-topics:

Full Indexing

Full indexing can be executed against all entries in the selected business component or connector (the *Index* operation), or all entries in the default Search Definition listed in the Search Index Settings applet, adding any new fields from the field mapping file (the *Index All* operation). Upon successful completion of indexing, the Status Code changes to *Indexed*, and the Status Details column details the number of rows indexed.

Indexing Search Objects for FAST

This task covers full indexing of Search Objects for integration with the FAST InStream search engine. To troubleshoot FAST indexing, see *Siebel Business Applications Third-Party Bookshelf* in the product media pack on Oracle E-Delivery.

To index search objects for FAST

1. Navigate to Administration – Search > Search Index Settings.
2. Choose 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. Launch the FAST InStream administration console to monitor indexing from the FAST side:
   a. Select the Matching Engines tab.

b Click on the Host link.

When indexing initiates the *Status* value changes to *Indexing*. When indexing completes the *Status* value changes to *Indexed*. The number of items indexed is displayed in the *Overall Status* table.

Refresh Indexing

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 Search Objects for FAST

This task covers refresh indexing of Search Objects for integration with the FAST InStream search engine.

To refresh index search objects for FAST

1 Navigate to Administration – Search > Search Index Settings.

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 Launch the FAST InStream administration console to monitor indexing from the FAST side:

a Select the Matching Engines tab.

b Click on the Host link.

When indexing initiates the *Status* value changes to *Indexing*. When indexing completes the *Status* value changes to *Indexed*. The number of items indexed is displayed in the *Overall Status* table.

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.

NOTE: Incremental indexing is supported only on thin clients.

To enable incremental indexing for preconfigured Search Objects see“Activating Search Run-Time Events” on page 20.

6 Using Siebel Search

This chapter describes Siebel Search end user functionality. Topics include:

Siebel Search End-User Experience

The Search Center is a central location where users can perform searches and queries on configured data sources. The user may enter a full-text query in the Search box, or may click the Advanced Search link, and perform a search against single or multiple categories and data sources. The Look In drop-down list displays categories in the following order: Find Objects, which are database queries, followed by Search Categories which have been indexed and can be queried against. The search categories map to individual business components. Multiple search categories can be grouped into logical collections, to enable a single search to be executed against multiple search categories. The *Look In* field is preconfigured with different search categories, depending on the Siebel Business Application. The search categories can be configured by the administrator in the Search Definition view of the Search Administration UI. Users can perform queries against Siebel business component records from anywhere in their Siebel application.

Common Siebel Search End-User Tasks

Tasks commonly performed in Oracle's Siebel Search application are listed as follows:

- **Search using keywords.** The user can search using single or multiple keywords. In the case of multiple keywords, a default term separator is inserted between query terms.
- **Sorting results of search operations.** After obtaining results of a Search, the user may sort the results by relevance, data source, result type or date.
- **Refining results of search operations.** After obtaining results of a Search, the user may further refine the results based on preconfigured navigable fields or dynamically generated keywords.
- **Searching using multiple categories with one search.** The user may choose from a number of categories listed in the Look In drop-down list against which they can search. Multiple search categories can be grouped in a single logical collection, for simultaneous searching. Logical collections are defined in the Search Engine Settings > Search Indices Parent Category View of the Search Administration UI.

- **Saving search queries.** The search criteria can be saved for re-use. Saved searches are listed in the Recent Saved Searches applet in the Search Center.
- **Previewing a search result with the selected record in the main view area.** When the Preview button in the Search Center is invoked, a database record is opened in a popup window allowing users to view the record without changing their current application context. External files are opened and presented in their native application.

  NOTE: Preview is not applicable when results are being viewed in the business component view.
- **Setting the Customer Dashboard.** Employees can update the open dashboard with the selected search result.

Setting Search Preferences

You can set search preferences to configure search result formats such as the number of result records displayed on each page, and the default sort mechanism. Search preferences are applied only to Search operations, and are not applied to Find operations. After configuring the search preferences you need to log back into the Siebel application for the preferences to take effect.

To set search preferences

1. Navigate to the Search > Search Preferences view.
2. To change the scope of your search, choose from the options in the following table.

Option	Comments
Number of Records	From the drop-down list, choose the number of records to display on each page in the Search Results view.
Results Window	Check if you want the search results displayed in a new browser window.
Default Sort	Results can be sorted by the following options: ■ **Data Source.** The results can be sorted by individual business component, for example, Service Request or Account, or by external data source, for example by File System or Web Crawler. ■ **Date.** The date that the document was last modified. ■ **Relevance.** The relevance ranking is determined by search engine algorithms and is based on variables such as proximity and frequency. This is not configurable in Oracle's Siebel Search application. ■ **Result Type.** The result data type, for example, a database record or a PDF document. Results are sorted by Data Source by default.

Option	Comments
Context Sensitivity	Check the Context-Sensitive option if you want the Look In default option set by the screen context, for example, if the Search Center is invoked from the context of a particular screen, such as Service Request, the Look In control will automatically be set to that Search object.
Criteria Reservation	The Criteria Reservation is configured using the following options: ■ **Resume previous search.** The search criteria of the previous search operation is preserved, and the search fields are pre-filled for the subsequent search. ■ **Clear previous search.** The search criteria of the previous search operation is deleted.

3 Click Save Preference.

Performing a Search Operation

The type of object that you choose from the Look In drop-down list determines whether you execute a Find or a Search operation. Search results are filtered based on the user's Visibility ID. See the Access Control chapter in the *Siebel Security Guide* for more information on access control.

To perform a search

1 Do one of the following:

- Click the binoculars on the application toolbar.
- From the application-level menu, choose View > Action Pane > Search.

The Search Center appears in a frame on the left part of the application window.

2 From the Look In drop-down list, select the Search Object you want to search against. The Look In drop-down list displays categories in the following order; each category is separated by a dotted line:

- Find categories, which are Find objects that database queries can be executed against.
- Search categories, which are business components that have been indexed and can be queried against.
- External data sources, which are Search objects that have been indexed and can be queried against.

3 Enter your search criteria in the *Search for* field and click *Go*. The *Search for* field is disabled for Find operations. The following table describes search operators supported for integration with FAST Instream.

Search Operator	Function	Description
* (Asterisk)	Wildcard	Placed anywhere in a string, returns items containing the string, or containing the string plus any additional characters after the string, up to (or beginning with) a space.
AND and & (ampersand)	Boolean AND	Placed between terms, returns only items containing both terms.

For more information on FAST InStream operators and syntax rules, see *Siebel Business Applications Third-Party Bookshelf* in the product media pack on Oracle E-Delivery.

4 From the Search Results view, click the hyperlink to go to the results of your search.

Search results can be further refined by Relevance, DataSource, ResultType or Date.

NOTE: Sorting is applied to the search results that appear in the results page rather than the entire result set.

Performing an Advanced Search

Search results can be further refined using the Advanced Search Option.

To perform an advanced search

1 Enter your search criteria in the Search for field.

2 From the Look In drop-down list, select the type of information you want to find.

The type of information that you choose from the Look In drop-down list determines the fields that are available to you when entering the search criteria.

3 Click Advanced Search. The following table describes the Advanced Search options:

Option	Comments
Search for Keywords	This option allows for refinement using the AND, NEAR and OR operators. **NOTE:** The NEAR operator is currently not supported.
Perform Search Using	The results containing the keyword string can be further refined using the following options: ■ **Contains.** Includes only the results that contain the keyword text. ■ **Does not contain.** Excludes from the results all documents containing the keyword text. ■ **Exact phrase.** Only returns results that match the exact phrase specified in the keyword field.
Modified Between	Select this option to get search results for files modified between two particular dates.
Look In	The Advanced Search Look In field displays the business components that have been indexed for that Search Definition. Select the business component or components to include in the advanced search operation.
File Format	You can limit the search operation to specific file formats, such as PDF or Microsoft Word documents. Searching by file format is available when File System or Crawler have been selected as the Data Source.
Data Source	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. See Chapter 3, "Administering Search Data Sources for FAST InStream."

4 From the Search Results view, click the hyperlink to go to the results of your search.

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