

Field	Description
Mime Types	<ul style="list-style-type: none">• Unlimited: The search engine supports over 1,200 different MIME types. Selecting "Unlimited" will include this full list of MIME types during crawling.• Include:List the MIME file types to be included in the index. Specify the file type by using the MIME specification. Enter only one MIME type per line. You may use the "*" wildcard only for MIME types. For example, "text/*". This example will include all the MIME types that start with "text/".• Exclude: List the file types NOT to be included in the index. Specify the file type by using the MIME specification. Enter only one MIME type per line. You may use the "*" wildcard only for MIME types. For example, "text/*". This example excludes all the MIME types that start with "text/". <p>The default values in the drop-down list for MIME types can be configured as follows:</p> <ol style="list-style-type: none">1. Go To Tailoring > Database Manager.2. Search for the kmmimetypes table to retrieve the full list of MIME types. Note: You can edit the list of MIME types. See "Edit the list of MIME types" on page 53.3. Check the Mimelist box, so that the all available MIME types will appear in the drop-down list.4. Save your changes.
Proxy Configuration	<ul style="list-style-type: none">• Proxy Host: Provides the proxy host name when the web site being crawled uses a proxy server.• Port: The port number used by the proxy server.• Username: The user name required by the proxy server for access. This may not be required for all proxy servers.• Password: The password associated with the user name provided. This may not be required by all proxy servers.

Field	Description
Security Scripts	<ul style="list-style-type: none"> • Knowledgebase access script: This script specifies the script the system uses to determine if a particular user has rights to access the knowledgebase. See the default script for more detailed information. • Search security script: This script further limits what the user has access to when accessing the knowledgebase. This script returns a query string that is added to the user's normal query to limit the scope of the particular user's access to documents in the knowledgebase. See the default script for more detailed information. • Category index script: This script processes the document category so that the indexer can translate the document's category into a string that the search engine can use later to find the document based on the user's category access. • Advanced search script: This script processes a string of library-specific query values using the KMQuery object. The values in KMQuery were entered by the user under the tabs in the Advanced Search screen. You can tailor this script if this knowledgebase has a tab in the Advanced Search screen. • Default locale: Specifies the default language used by the search engine when searching and indexing. By default, the language code matches the language you logged in as.

Task 2: Configure the Status tab.

The Status tab for a weplib knowledgebase displays information about the selected knowledgebase's index. This information includes the following:

Field	Description
Master, Slave, or Load Balancer	<p>This field provides information about the search servers that are connected to the selected knowledgebase. Details on each server connection include type of server (Master, Slave, or Load Balancer), state of the server, date the server was created, and the number of documents that were indexed in the knowledgebase. For more information, see the State, Created, and Docs settings.</p> <p>To make changes to a search server, go to Knowledge Management > Manage Search Servers and select the search server.</p>
State	Indicates whether the knowledgebase is on-line, off-line, or replicating (if it is a slave server). If State is blank, the knowledgebase is either off-line or the search engine is not connected. If the knowledgebase has not been created, this field is blank.
Created	Displays the knowledgebase creation date and time. If the knowledgebase has not been created, this field is blank.
Docs	Displays the number of documents contained in the index. If the knowledgebase has not been created, this field is blank. If the knowledgebase has been created but not indexed, this field will show 0 documents.

Field	Description
Status	Since the index is created separately from the knowledgebase creation, the Status field displays the current status of the index. Values can be "Not Created," "Created," "Running," and "Finished."
Schedule this index?	You can choose to schedule the index to start on a particular day and time. Select the Schedule this index? check box to enable scheduling.
Start Date	Select the first day you wish this index to run. Adjust the time values to the time of day the index should run.
Frequency	You can schedule the index to run once, hourly, daily, weekly, or monthly. For example, if you scheduled the index to run on Monday, May 5, at 6 p.m. and selected an hourly frequency, the index would run the first time on Monday, May 5, at 6 p.m. and would then run again at 7 p.m., 8 p.m., and so on until you updated the schedule. Note: When indexing, the search engine only indexes documents that have changed since the last run.
Crawler Host	Specify the host name of a search server for web crawling. It can be a master or slave search server; however for optimized performance you can use a dedicated server for crawling only.
Crawler Port	Specify the Tomcat port of the crawler host.

The tab also includes buttons for indexing.

Button	Description
Initialize Index	Once you have all your settings specified for a new knowledgebase, click this button. The system sends the settings to the search engine. The search engine creates the empty knowledgebase for index. After a knowledgebase and index have been created, click this button to erase the index and create an empty knowledgebase. You should create a new knowledgebase if you change the parameters on either the Type information tab or Field Definitions tab.
Start Indexing	Click this button to start an index manually. Instead of scheduling index updates, you can use this button if the file system you are crawling does not change or if you want to test index settings once.
Stop Indexing	Click this button to stop an indexing process that is running. Click the Start Indexing button to resume indexing from the point where the index was stopped. To start indexing from the beginning, click Initialize Index .
Refresh Statistics	When selected, the search engine refreshes the statistics of the indexing process to show how many documents are indexed and searchable at that time in the process.

Task 3: Index the weblib knowledgebase.

1. On the **Status** tab, click **Initialize Index**.
2. Click **Start Indexing**.
3. Click **Refresh Statistics** to monitor the indexing status. Once the documents have been indexed on the crawler and replicated to the searcher, you can continue to perform a test search on the weblib knowledgebase.

The following figure shows an example.

Display Name: My Web
Type: weblib
Search Server Name: mli6

Master: mli6:8088
State: online
Created: Mon Mar 19 15:49:43 CST 2012
Docs: 306

Schedule this index?

Start Date: 03/16/12 01:15:20
Frequency: Hourly
Crawler Host: mli6
Crawler Port: 8088

Initialize Index Start Indexing Stop Indexing Refresh Statistics

Task 4: Search in the weblib knowledgebase.

Perform a search in the new weblib knowledgebase to verify that it is set up properly.

1. Click **Knowledge Management > Search Knowledgebase**.
2. In the Search In section, select only the new weblib knowledgebase.
3. Enter a search word in the search box, and click **Search**.

The following figure illustrates a list of search results of an example weblib knowledgebase.

Search Knowledgebase

crisis Search Advanced...

Search within results

Search In

- Incidents
- Interactions
- Configuration Items
- My File System
- My Web

53 documents found. 306 documents searched.

<http://www.bbc.co.uk/bottle. Oxfam warns of West Africa crisis US report: China cyberwar a risk Brazil football boss 'off sick>
Knowledgebase: yahoo Status: Relevancy: 0.033453114

Edit the list of MIME types

User role: System Administrator, KMAAdmin

When indexing file systems and web sites, there are MIME type file extensions recognized by the Knowledge Management search engine. The web server passes along MIME-type information based on its own internal tables.

To edit the list of MIME types to be included or excluded in the drop-down lists:

1. Click **Tailoring > Database Manager**.
2. In the Table field, type **kmmimetypes** and then click **Search**.
3. Based on your business needs, edit the "include" and "exclude" MIME type selections.

Note: MIME types with the Mimetype checkbox selected (or checked) will display in the drop-down selections.

- a. Select the MIME type **Mimetype** check boxes that are blank, so that those MIME types will be included in the drop-down selections.
 - b. Uncheck the MIME type **Mimetype** check boxes that are currently selected, so that those MIME types will be excluded from the drop-down selections.
 - c. Click the **Unlimited** radio button to store all MIME types in the kmmimetypes table, so that all MIME types are used.
4. Save your changes.

Add an fsyslib Knowledgebase

User role: System Administrator, KMAdmin

File systems can be crawled to create fsyslib-type knowledgebases. File system crawling enables administrators to make the knowledge in a file system outside of Service Manager accessible to users and to reduce administration costs.

Note: The KM Crawler can crawl only local file systems on the crawler host.

To add an fsyslib-type knowledgebase:

1. Click **Knowledge Management > Configuration > Knowledgebases**.
2. Type a unique name for the new knowledgebase in the Knowledgebase name field (required). For example, **My_FYS**.
3. Type a display name for the knowledgebase (required). For example, **My File System**.
4. Select **fsyslib** in the Type field list.
5. Click **Add**. The knowledgebase record is added.
6. Configure the **Type information** tab.

Field	Description
Directories	<ul style="list-style-type: none"> ■ Start Path: Type the Universal Naming Convention (UNC) directory path. You can enter more than one path, but use only one path per line. If the starting directory is hosted on a UNIX server, also specify: ■ Replace this UNIX path: The UNIX directory to substitute with the Windows mapping to the UNIX server path. ■ With this Windows mapping: The Windows mapping to the UNIX path. This translation of the mapped path is necessary so that the Windows client loads the knowledge article from the correct location when displaying it in the hitlist after a search. <p>For example: Start Path: /samba/test/webcrawltest Replace this UNIX path: /samba/test With this Windows mapping: \\blade100\test\\<UNIX mapping on Windows></p>
Path depth:	<p>Limits indexing to the specified number of path segments in the file system path. The default is 100 path segments.</p> <p>The path length is determined as follows:</p> <ul style="list-style-type: none"> ■ The host name (for example, \\hostname) is not included in determining the path length. ■ All elements following the host name are included and determine the path length in the path name, including the actual file name (for example, \world.htm) if it is present. ■ Any directory paths between the host and the actual file name are included. <p>Example: For the following UNC path, the path length would be 4: \\host\comics\fun\funny\world.html</p> <p>where: comics = 1 segment fun = 1 segment funny = 1 segment world.html = 1 segment</p>

Field	Description
Mime Types	<ul style="list-style-type: none"> ■ Unlimited: The search engine supports over 1,200 different MIME types. Selecting "Unlimited" will include this full list of MIME types during crawling. ■ Include: List the MIME file types to be included in the index. Specify the file type by using the MIME specification. Enter only one MIME type per line. You may use the "*" wildcard only for MIME types. For example, "text/*". This example will include all the MIME types that start with "text/". ■ Exclude: List the file types NOT to be included in the index. Specify the file type by using the MIME specification. Enter only one MIME type per line. You may use the "*" wildcard only for MIME types. For example, "text/*". This example excludes all the MIME types that start with "text/". <p>The default values in the drop-down list for MIME types can be configured as follows:</p> <ol style="list-style-type: none"> a. Go To Tailoring > Database Manager. b. Search for the kmmimetypes table to retrieve the full list of MIME types. c. Check the Mimelist box, so that the all available MIME types will appear in the drop-down list. d. Save your changes.
Security Scripts	<ul style="list-style-type: none"> ■ Knowledgebase access script: This script specifies the script the system uses to determine if a particular user has rights to access the knowledgebase. See the default script for more detailed information. ■ Search security script: This script further limits what the user has access when given access to the knowledgebase. This script returns a query string that is added to the user's normal query to limit the scope of the particular user's access to documents in the knowledgebase. See the default script for more detailed information. ■ Category index script: This script processes the document category so that the indexer can translate the document's category into a string that the search engine can use later to find the document based on the user's category access. ■ Advanced search script: This script processes a string of library-specific query values using the KMQuery object. The values in KMQuery were entered by the user under the tabs in the Advanced Search screen. You can tailor this script if this knowledgebase has a tab in the Advanced Search screen. ■ Default locale: Specifies the default language used by the search engine when searching and indexing. By default, the language code matches the language you logged in as.

7. Configure the **Field Definitions** tab.

Column	Description
Field Type	Select Constant. You may alias the 'constant' field as you would any other field. Every document indexed will have a field with the name you specified and the value listed in this field. Constant fields can be used for search security, categorization, or similar types of data that you do not have edit access to. Example constant: \$PASSAGE_BASED_SUMMARY
Field Name	Define a unique name for your 'constant' field in the Field Name.
Alias	This is the name of the field as it is to be indexed. You can make use of the Alias field to have a single common field name for searching and for the hitlist.
Data Type	Specify the Data Type for date fields to allow date range searching.
Hitlist	Defines what fields are available on the search hitlist. Fields marked as 'true' in the Hitlist field are available to be included on a search results hitlist display.
Value	Specify the value for the 'constant' field. Note: The Value field is not used for a field type meta tag.

8. View the **Status** tab.

Field	Description
Master, Slave, or Load Balancer	This field provides information about the search servers that are connected to the selected knowledgebase. Details on each server connection include type of server (Master, Slave, or Load Balancer), state of the server, date the server was created, and the number of documents that were indexed in the knowledgebase. For more information, see State, Created, and Docs . To make changes to a search server, go to Knowledge Management > Configuration > Configure Search Servers and select the search server.
State	Displays whether the collection is online or offline. If the knowledgebase has not been created, this field is blank.
Created	Displays the knowledgebase creation date and time. If the knowledgebase has not been created, this field is blank.
Docs	Displays the number of documents contained in the index. If the knowledgebase has not been created, this field is blank. If the knowledgebase has been created but not indexed, this field will show 0 documents.
Status	Since the index is created separately from the knowledgebase creation, the Status field displays the current status of the index. Values can be "Not Created", "Created", "Running", and "Finished".

Field	Description
Schedule this index?	You can choose to schedule the index to start on a particular day and time. Select the Schedule this index? check box to enable scheduling.
Start Date	Select the first day you wish this index to run. Adjust the time values to the time of day the index should run.
Frequency	You can schedule the index to run once, hourly, daily, weekly, or monthly. For example, If you scheduled the index to run on Monday, May 5, at 6 p.m. and selected hourly for the frequency, the index would run the first time on Monday, May 5, at 6 p.m. and would then run again at 7 p.m., 8 p.m., and so on until you updated the schedule. When indexing, the search engine only indexes documents that have changed since the last run.
Crawler Host	Specify the host name of a search server for web crawling.
Crawler Port	Specify the Tomcat port of the crawler host.

This tab also contains the following indexing buttons:

Button	Description
Initialize Index	Once you have all your settings specified for a new knowledgebase, click this button. The system sends the settings to the search engine. The search engine creates the empty knowledgebase for index. After a knowledgebase and index have been created, click this button to erase the index and create an empty knowledgebase. You should create a new knowledgebase if you change the parameters on either the Type information tab or Field Definitions tab.
Start Indexing	Click this button to start an index manually. Instead of scheduling index updates, you can use this button if the file system you are crawling does not change or if you want to test index settings once.
Stop Indexing	Click this button to stop an indexing process that is running. Click the Start Indexing button to resume indexing from the point where the index was stopped. To start indexing from the beginning, see Initialize Index .
Refresh Statistics	When selected, the search engine refreshes the statistics of the indexing process to show how many documents are indexed and searchable at that time in the process.

9. Click **Initialize Index** to index the new fsyslib knowledgebase.

Display Name: My File System
Type: fsyslib
Search Server Name: mli6

Status Type information Field Definitions

Master: mli6:8088
State: online
Created: Tue Mar 20 11:20:11 CST 2012
Docs: 0

Schedule this index?

Start Date: [] Crawler Host: mli6
Frequency: [] Crawler Port: 8088

Initialize Index Start Indexing Stop Indexing Refresh Statistics

10. Click **Save**.
11. Perform a test search on the new fsyslib knowledgebase to verify that it is set up correctly.

Search Knowledgebase

Integration [] Search [] Advanced... []

Search In

- Problems
- Incidents
- Interactions
- Configuration Items
- My File System
- My Web

0 documents found. 0 documents searched.

Delete a knowledgebase

You can delete an existing knowledgebase, using a Delete button available on the Knowledgebase Maintenance form. When you delete a knowledgebase, the system automatically performs certain clean-ups needed for the removed knowledgebase, however for a sclib type knowledgebase, you still need to manually undo the changes to the system you made when adding the knowledgebase.

When you delete a knowledgebase, the system automatically:

- Removes four triggers on the table whose records were indexed:
after.add.KM.<tablename>, before.update.KM.<tablename>, after,
update.KM.<tablename>, and before.delete.KM.<tablename>.
- Removes the Boolean field from the kmquery table that corresponds to the knowledgebase.
- Removes references to the new knowledgebase from three functions in the KMSearch ScriptLibrary: getAvailableKnowledgeBases, getSelectedCollections, and getSelectedCollectionsString.
- Removes the kmquery.default display options that reference the removed knowledgebase.

To delete a knowledgebase:

1. Click **Knowledge Management > Configuration > Knowledgebases**.
2. Click **Search**.
3. Select the knowledgebase you want to delete.

4. In the knowledgebase detail form, click **Delete** and then click Yes.
5. If it is a weplib or fsyslib type knowledgebase, you do not need to do anything else.
6. If it is an sclib type knowledgebase, continue to clean up any references to the knowledgebase by undoing the changes to the system that you made when you added the knowledgebase.
 - a. Remove the tab for the knowledgebase on the kmknowledgebase.advsearch.g form, if you created one.
 - b. Remove any knowledgebase-specific fields from the kmquery dbdict that you previously added.
 - c. Remove any knowledgebase-specific references that you added to the KMSearch ScriptLibrary.
 - d. Delete the read-only viewing format that you created for the knowledge candidates for the knowledgebase.
 - e. Remove the format name that you added to the kmquery.linkrequest process record.
 - f. Remove the links to this knowledgebase from the kmquery link record for an advanced search record.

Enabling Languages for KM Search

The SOLR search engine supports a set of languages, however only some of them are officially supported in Service Manager. For more information, see "Supported Languages for Knowledge Management" below.

To enable a language for KM search, you must activate the language for KM from the language table, and enable it in the KM search engine schema file.

- "Activate a Knowledge Management language" on page 62
- "Enable Languages in the KM Search Engine" on page 62

Once you have enabled your languages, you can continue to do the following:

- "Create Search Engine Thesaurus Files" on page 65
- "Modify Stop Words" on page 66
- "Add a new KM message to the scmessage table" on page 67
- "Create a hitlist with multilingual labels" on page 67

Supported Languages for Knowledge Management

Technically, the KM search engine supports all languages listed in the **schemastub.xml** file, however only some of them are officially supported in Service Manager.

Important: For Knowledge Management, HP only provides official support for languages that are officially supported in Service Manager.

The following table lists all languages technically supported in the KM search engine, and indicates which of them are officially supported in Service Manager.

Languages Supported in KM Search Engine	Officially Supported in Service Manager?
ARABIC	Yes
CHINESE SIMPLIFIED/TRADITIONAL	Yes
CZECH	Yes
DANISH	No
DUTCH (STANDARD)	Yes
ENGLISH	Yes
FINNISH	No
FRENCH	Yes
GERMAN	Yes
GREEK	No
HEBREW	No
HUNGARIAN	Yes
INDONESIAN	No
ITALIAN	Yes
JAPANESE	Yes
KOREAN	Yes
NORWEGIAN NYNORSK	No
POLISH	Yes
PORTUGUESE	Yes
ROMANIAN	No
RUSSIAN	Yes
SLOVAK	No
SPANISH	Yes
SWEDISH	No
THAI	No
TURKISH	No
VIETNAMESE	No

Activate a Knowledge Management language

User role: System Administrator

Languages in the Knowledge Management search engine are identified by language codes known as "KM Identifier" values. When a KM Identifier value is assigned to a language, the language can be activated and enabled to be used by the search engine.

Note: Languages not containing a valid KM Identifier value are not supported by the search engine and should not be enabled for Knowledge Management. If they are enabled, the search engine will default to the English language processing rules for both searching and indexing.

To activate a language that has a KM Identifier value for the search engine:

Note: By default, the English language is activated.

1. Click **Tailoring > Database Manager**.
2. In the Table field, type **language** and then click **Search**.
3. Double-click the `language` form and click **Search**. A list of language identification records displays.
4. Select the applicable language identification record. The record displays.

Note: There are three Chinese language records (Chinese Simplified, Chinese Traditional, and Chinese). Service Manager differentiates between Chinese traditional and Chinese simplified, but the search engine uses only one language file for both languages. To enable Chinese for the search engine, select Chinese.

5. Look at the KM Identifier field. If there is a valid KM Identifier value, then this language can be activated and enabled in the search engine. Following are some examples of the valid KM Identifier values that are stored in the language table.

Language	KM Identifier value
Arabic	ar
English	en
German	de
Spanish	es

6. Select the **Active for Knowledge Management** field to make the language available to be used in the Knowledge Management search engine.
7. Click **Save** and **OK**.
8. Users must log out and then log back in for the language activation to take affect.

Enable Languages in the KM Search Engine

User role: System Administrator

The Knowledge Management search engine provides out-of-box languages that can be enabled to allow users to search for knowledge documents using key words in those languages. You can enable or disable languages in the Knowledge Management search engine that contain a valid "KM Identifier" value.

Note: HP recommends that you enable only those languages that are applicable to your knowledgebase. By default, English is the only language enabled.

To enable or disable languages in the Knowledge Management search engine:

1. Update the applicable `fieldType`, `field`, and `copyField` language entries in the **schemastub.xml** file.
 - a. Locate the **schemastub.xml** file in the Service Manager home directory.
 - i. In the Windows client, the default directory is: `C:\Program Files\HP\Service Manager 9.30`
 - ii. In the Linux environment, the install path is: `/apps/sm930/`
 - iii. Once you locate the Service Manager home directory, the path to the **schemastub.xml** file is: `/Server/RUN/km/styles/schemastub.xml`

- b. In the **schemastub.xml** file, find the reference for the language `fieldType` you want to enable (for example, `text_zh` for the Chinese language) and uncomment the entry.

Note: The following XML comment tags start and end (surround) the language entry:
`<!--<fieldType>` and `</fieldType-->`

Following is an example of the Chinese language entry:

```
<!-- CHINESE SIMPLIFIED/TRADITIONAL -->
<!-- <fieldType name="text_zh" class="solr.TextField" positionIncrementGap="100">
<analyzer type="index">
<tokenizer class="com.teragram.solr.AsianTaggingTokenizerFactory"
filename="../../kmsearchengine/languages/data/zh.uhtagger" />
</analyzer>
<analyzer type="query">
<tokenizer class="com.teragram.solr.AsianTaggingTokenizerFactory"
filename="../../kmsearchengine/languages/data/zh.uhtagger" />
<filter class="solr.SynonymFilterFactory"
synonyms="../../languages/thesaurus/synonyms_zh.txt"/>
</analyzer>
</fieldType>
-->
```

- c. Locate the solr field section to uncomment the applicable fields. You will see a list of language-specific docbody and adlearn fields (except docbody, docbody_en, adlearn, and adlearn_en will be commented).

- d. Uncomment the applicable language `field` entry.

Note: Do not comment out the default `docbody` and `adlearn` fields. By default, the `docbody_en` and `adlearn_en` fields are enabled. You may safely comment them out if your system does not require English language processing.

For Example:

```
<!-- <field name="docbody_zh" type="text_zh" indexed="true" stored="true"
multiValued="true"/> -->
```

```
<!-- <field name="attachment_zh" type="text_zh" indexed="true" stored="true"
multiValued="true"/> -->
```

```
<!-- <field name="adlearn_zh" type="text_zh" indexed="true" stored="true"
multiValued="true"/> -->
```

- e. Uncomment the applicable language `copyField` entry.

Important: The three field entries (`fieldType`, `field`, and `copyField`) must match (you must uncomment all three fields to enable the language).

For example:

```
<!-- <copyField source="docbody_zh" dest="docbody"/> -->
```

```
<!-- <copyField source="attachment_zh" dest="attachment"/> -->
```

- f. Save your changes.
2. Update the Database Manager files.
 - a. Click **Tailoring > Database Manager**.
 - b. In the Table field, type **language** and then click **Search**.
 - c. Double-click the `language` form and click **Search**. A list of language identification records displays.
 - d. Select the applicable language identification record. For this example, there are two records: **Chinese Simplified** (zh-Hans) and **Chinese Traditional** (zh-Hant). The record displays.
 - e. Select the **Active for Knowledge Management** field to make the language available for Knowledge Management.

Note: The Service Manager Language table may contain language entries that are not supported by the search engine. Only languages with a valid **KM Identifier** value should be enabled.

- f. Click **Save** and **OK**. Your language should now be available in the locale dropdown on the Advanced Search screen, Contribute Knowledge screens, and for the default locale dropdown on the Manage Knowledgebases Type Information tab.
3. To disable a language that is no longer being used, do the following:
 - a. Locate and comment the following entries in the **schemastub.xml** file:
`fieldType`, `field`, and `copyField`

Important: The three field entries (`fieldType`, `field`, and `copyField`) must match (you must comment all three field entries to disable the language).

- b. Save your changes.

- c. Go to the Database Manager identification record and uncheck the **Active for Knowledge Management** field to make the language unavailable for Knowledge Management.
- d. Save your changes.

Create Search Engine Thesaurus Files

The search engine uses the thesaurus when doing a simple search. A synonym search is a type of search that locates occurrences of either the search term or any of its synonyms. For example, a synonym search for computer might return documents that contain laptop or desktop .

Thesaurus expansion happens automatically for terms entered into the simple search screen and is not currently supported for advanced searches. The search engine performs thesaurus expansion on words in the natural language query box. Thesaurus expansion is done using the dictionary that matches your login language. To use a different language dictionary, change the query language parameter on the advanced search form.

Note: A synonym search term containing a phrase is not supported.

The search engine supports thesaurus files (or dictionaries) for individual languages, but none are provided out-of-box. You may create your own thesaurus dictionaries for use when searching content, or thesaurus expansion can occur automatically for terms that are entered into a simple search screen that is not currently supported by advanced search.

To add a thesaurus file for a certain language:

1. Go to the `{SERVICE_MANAGER_HOME}/Search_Engine/kmsearchengine/languages/thesaurus` folder, and create an empty text file named `synonyms_synonyms_<language id code>.txt`.

The thesaurus file name format includes the two-character language id. For example, the English thesaurus text file name is `synonyms_en.txt` and the French thesaurus text file name is `synonyms_fr.txt`.

2. Add content to the thesaurus file. The thesaurus file format is as follows:

```
# blank lines and lines starting with pound are comments.

#Explicit mappings match any token sequence on the left hand side
of

#"=>" and replace with all alternatives on the right hand side.

#Examples:

laptop, desktop => computer

#Equivalent synonyms may be separated with commas

#NOTE: When using commas in files, ensure that single-byte commas
#are used instead of double-byte commas.
```

```
#Examples:
foozball , foosball
universe , cosmos

#"computer, laptop, desktop" is equivalent to the explicit mapping:
computer, laptop, desktop => computer

#multiple synonym mapping entries are merged.
foosball => foosball
foozball => fozzball

#is equivalent to
foosball => foosball, fozzball
```

Caution: When using commas to separate terms in files, you must use the single-byte commas instead of double-byte commas.

3. Save the file in UTF-8 encoding.

Caution: Because UTF-8 is part of the Unicode standard which enables you to encode text in practically any script and language, be sure you save your files in UTF-8 encoding.

Modify Stop Words

User role: System Administrator

A stop-word list is a list of terms that can be ignored when the search engine is searching or indexing. Typically, stop-word lists include short and common words or prepositions, such as "a," "the," or "with" in English. However, they may also include longer words, such as long number strings, or words that are too common to be useful as search targets, such as the term "internet."

Stop words are removed from words entered in the "Search for" box unless they are enclosed in double quotes (phrase search). They are not removed during indexing to allow for phrase searching.

Stop words are stored in Service Manager in lists by specific language. Not all languages support stop words (for example, Japanese and Chinese). Adjust the list of stop words by either adding or removing words from this list.

The stop-word list for your log-in language is used by default, and is loaded once when you first log in. Changing the query language parameter on the advanced search screen changes the stop-word list used. The new stop-word list is loaded each time you search in a language other than your log-in language. This may cause a delay in your search being submitted as the stop-word list is loaded. If you need to perform extensive searches in a language other than your log-in language, HP recommends that you log out and then log back in the other language to reduce this delay.

To modify stop words:

1. Click **Knowledge Management > Configuration > Stopwords**.
2. Click **Search**.
3. Select the record for the language code you wish to change.

4. Add a new word or modify an existing word.
5. Click **Save**.

Add a new KM message to the scmessage table

User role: System Administrator

Use this procedure to add a new message (token), which makes a label multilingual. After you create this new message, use the Message ID to update the label field for the hitlist you want to be multilingual.

1. Type **db** in the command line or navigate to Database Manager (click **Tailoring > Database Manager**).
2. Type scmessage in the Table box.
3. Click **Search**.
4. Type km in the Class box of the HP Service Manager Message form.
5. Click **Search**.
6. Review the list of existing km-related system messages.
7. Add a new record where the class is km, the language code is the language of the string being added, the Message ID is unique within the class, and the text string is the text you want to display in the label of the hitlist.
8. Make a note of the Message ID number. You will need it to update the label field and when you add the text strings for the other languages you want to use for this hitlist label.
9. Click **Save** to create the new record.

Use this procedure to add message text in an additional language for an existing message ID.

1. Type **db** in the command line or navigate to Database Manager (click **Tailoring > Database Manager**).
2. Type scmessage in the Table text box.
3. Click **Search**.
4. Type km in the Class box of the HP Service Manager Message form.
5. Click **Search**.
6. Review the list of existing km-related system messages to find the message number of the message for which you want to add the new language text.
7. Add a new record where the class is km, the language code is the language of the string being added, the Message ID matches the Message ID of the label token for this language, and the text string is the text in the language you want to display in the label of the hitlist.
8. Click **Save** to create the new record.

Create a hitlist with multilingual labels

User role: System Administrator

In addition to creating new document views, administrators can configure the labels for the document view to display in languages other than English.

Note: This procedure is for a hitlist that is not multilingual-enabled. Before you begin, make sure you create a message number ID for each multilingual label and that the message number is defined to display labels in multiple languages.

To create a hitlist with multilingual labels:

Note: The default hitlist is multilingual-enabled in the out-of-box system.

1. Click **Knowledge Management > Configuration > Configure Hitlists**.
2. Click **Search**.
3. Select the hitlist to update.
4. Type the label delimiter (*SCMSG*123*SCMSG*) in the Label field for the label you are making multilingual. The 123 should be the message number ID from the `scmessage` table for the unique message number ID for this label.
5. Continue adding additional label delimiters for each of the multilingual labels in the hitlist.
6. Click **Save**.

Chapter 7

Searching the knowledgebases

When searching the knowledgebases, you can perform:

- A **simple search** where you search for a text string;
- An **advanced search** where you can provide several search parameters. In the advanced search you can specify the knowledgebases to search and the document categories to search. You can also specify a set of filtering parameters, such as exact phrase and creation date.
- A search within the search results after doing an initial search or advanced search.

Each of the knowledgebases has different fields that are indexed for searching, so when you search a knowledgebase, provide search parameters that match the fields in the knowledgebase. For example, the knowledge articles have a title and author field. When you view an incident, the out-of-box system displays the incident number, incident description, and solution for closed incidents.

The out-of-box system includes five separate knowledgebases that can be searched collectively or separately, depending upon what information you are searching for. In addition to making your search more efficient by specifying a knowledgebase, it is also best to search with a limited number of document categories. When you search, your log-in profile determines what information you can search and view.

You can use the Knowledgebase Maintenance feature to add additional knowledgebases for searching. These knowledgebases are created from a table in Service Manager (sclib) or by using web crawling to browse and index an external web site (weblib).

For more information, see the Service Manager help.