Siebel

Smart Answer Guide

August 2021

Siebel
Smart Answer Guide

August 2021

Part Number: F12798-03

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1 What's New in This Release

What's New In Siebel Smart Answer Guide, Siebel CRM 21.8 Update

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

Topic	Description
Installing Siebel Smart Answer Server	Modified topic. When installing the Siebel Smart Answer Server, you must specify which languages will be used in the knowledge base on the server. A note has been added to Step 5 of the procedure.

What's New In Siebel Smart Answer Guide, Siebel CRM 20.1 Update

No new features have been added to this guide for this release. This guide has been updated to reflect only product name changes.

What's New In Siebel Smart Answer Guide, Siebel CRM 19.1 Update

No new features have been added to this guide for this release. This guide has been updated to reflect only product name changes.

2 Overview of Siebel Smart Answer

Overview of Siebel Smart Answer

This chapter describes overview information Oracle's Siebel Smart Answer and its various modules. It includes the following topics:

- *About Siebel Smart Answer*
- *Siebel Smart Answer Modules*
- *Types of Knowledge Base Files*
- *About Training, Feedback, and Learning*
- *About Knowledge Base Models*
- *Training the Siebel Smart Answer Knowledge Base Model*
- *Feedback from Siebel Smart Answer Manager*
- *Learning Process for Siebel Smart Answer*

About Siebel Smart Answer

Siebel Smart Answer analyzes the content of email and search requests and does one of the following:

- Returns an automatic response.
- Suggests one or more responses to the agent for approval.
- Detects the mood or the sentiment of the incoming service requests.

Siebel Smart Answer uses a knowledge base. A knowledge base is a file of categories, category relationships, and a natural language processing (NLP) model that represents each category as it relates to the entire set of categories.

Siebel Smart Answer is used in the following:

- Siebel Smart Answer for Siebel Email Response
- Siebel Smart Answer for employee applications, such as Siebel Call Center

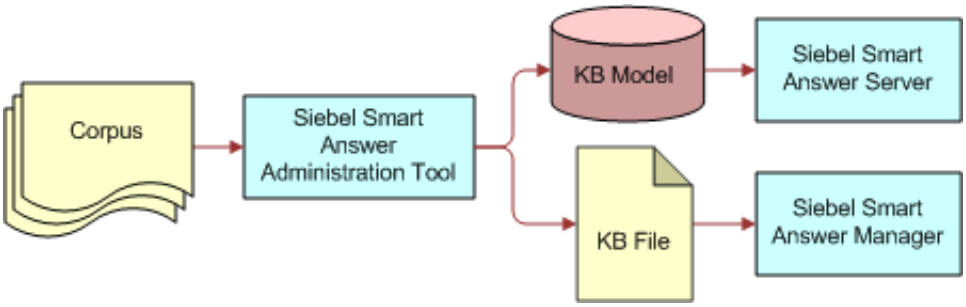
There are two basic setup scenarios: employee applications and email. The setup for email differs in many ways.

Siebel Smart Answer Modules

Siebel Smart Answer is comprised of the following three main modules:

- Siebel Smart Answer Manager
- Siebel Smart Answer Server
- Siebel Smart Answer Administration Tool

The following figure illustrates the relationship between the main modules.



Siebel Smart Answer Manager

Siebel Smart Answer Manager is the server component used by the Siebel application to control Siebel Smart Answer. Siebel Smart Answer Manager facilitates the detection of the meaning or intent of the following:

- Incoming free-form email inquiries for Siebel Email Response.
- Specified texts from inquiries for the employee applications such as Siebel Call Center.

Siebel Smart Answer Manager invokes Siebel Smart Answer for natural language processing (NLP) and semantic analysis services in order to do the following:

- Interpret the meaning, intent, and sentiment of email messages
- Generate concept models
- Assign a confidence level percentage

Siebel Smart Answer Manager works as follows:

1. Siebel Smart Answer Manager receives text input. For example, Siebel Smart Answer Manager might receive an email.
2. Siebel Smart Answer passes the message to the natural language processing engine, Siebel Smart Answer. The NLP engine compares the concepts extracted from the message to the concept model for each of the categories (the knowledge base model).
3. The NLP engine categorizes the emails based on the concept model comparison.
4. Siebel Smart Answer returns categories to the Siebel Smart Answer Manager who then passes categories with a confidence-level score to Siebel Business Applications, such as Siebel Email Response. This percentage represents the probability that the text falls within that category.

Note: Extremely short text strings might return inconsistent results because there is little content to analyze.

If the confidence level of the accuracy of a category is high, you might want Siebel Email Response to automatically respond directly to the sender. If the confidence level is not high, Siebel Smart Answer might suggest responses to an agent for approval.

For Siebel Call Center, Siebel Smart Answer sends the text from the Summary field of the service request to Siebel Smart Answer for categorization when the agent selects the option, “Siebel Smart Answer?” This opens Search Center for Siebel Smart Answer and a list of suggested solutions appears. To send feedback to Siebel Smart Answer, the agent selects the option, “Was this information helpful?”

Siebel Smart Answer Server

Siebel Smart Answer Server is the natural language processing engine that Siebel Smart Answer Manager invokes for any incoming service request. The service requests are compared to a concept model or knowledge base model for each of the categories. Each category is assigned a confidence score for matching the incoming request. The Siebel Smart Answer Server is able to receive feedback from the Siebel Smart Answer Manager in order to improve and tune its underlying concept model to the customer service operating environment. For more information on installing and administering Siebel Smart Answer, see *Installing and Administering Siebel Smart Answer*.

Siebel Smart Answer Administration Tool

The Siebel Smart Answer Administration Tool provides all the required functionality for creating and managing a corpus, creating and maintaining categories, building, tuning and exporting a knowledge base, and monitoring the run time effectiveness of the exported knowledge base. All of this functionality is exposed in an easy to use GUI interface. With the Siebel Smart Answer Administration Tool, the corpus, the knowledge base model, and the knowledge base file created for use by the Siebel Smart Answer Server and the Siebel Smart Answer Manager components. For more information on how to use the Siebel Smart Answer Administration Tool, see *Using the Siebel Smart Answer Administration Tool*.

Types of Knowledge Base Files

A knowledge base file stores the categories, the relationships between the categories. The knowledge base file is the input to the Siebel Smart Answer Manager and is generated by the Siebel Smart Answer Administration Tool based on the knowledge base model. There are two types of knowledge base files, as follows:

- **Flat Knowledge Base file.** This type of file contains one level of categories and is easier to create and maintain than a hierarchical knowledge base file. The following code is a knowledge base file for the knowledge base named *KB* that has five categories: apparel, automotive, baby, beauty, and books.

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

 knowledge-base name="KB">

 category name="apparel"/>

 category name="automotive"/>

 category name="baby"/>

 category name="beauty"/>

 category name="books"/>

 /category>

 /knowledge-base>
```

- **Hierarchical Knowledge Base file.** This type of file uses a hierarchy of categories. Multiple levels of categories might be beneficial when similar concepts appear in more than one category. By grouping categories under a

branch, it is easier to locate a specific solution associated with a category. The following code is a hierarchical knowledge base with two top-level categories: English and German. The knowledge base name is still *KB*, but now the five categories are repeated for each language.

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

 knowledge-base name="KB">

 category name="English">

 category name="apparel - English"/>

 category name="automotive - English"/>

 category name="baby - English"/>

 category name="beauty - English"/>

 category name="books - English"/>

 /category>

 category name="German">

 category name="apparel - German"/>

 category name="automotive - German"/>

 category name="baby - German"/>

 category name="beauty - German"/>

 category name="books - German"/>

 /category>

 /category>

 /knowledge-base>
```

About Training, Feedback, and Learning

The training feature is part of the Siebel Smart Answer Administration Tool and is used to create the initial knowledge base model, while the learning feature is used for incorporating the daily feedback into the knowledge base model from the Siebel Smart Answer Manager. When new categories are added, deleted, or the training data used for existing categories is updated, use the training feature to create a new knowledge base model.

About Knowledge Base Models

The knowledge base model is what allows the Siebel Smart Answer Manager to accurately categorize similar incoming requests and queries that are received and processed. The knowledge base model is a collection of statistical concept models that are based on the natural language processing (NLP) attributes of each concept.

During training and learning, the NLP engine builds a concept model to represent each category maintained by the knowledge base file. The NLP engines analyze texts, and generate concept models for each category that is part of the final knowledge base model.

NLP enables Siebel Smart Answer Manager to understand the intent of the text rather than just treating the text as a collection of randomly ordered words or strings. The NLP engine can locate unnecessary header information and allows Siebel Smart Answer to disregard this text when Siebel Smart Answer analyzes the incoming text.

Training the Siebel Smart Answer Knowledge Base Model

Training begins by analyzing a collection of message texts each of which are assigned to one or more categories. This collection is called a corpus and contains the necessary data for training the assigned categories that make up the knowledge base. During the analysis the knowledge base populates the concept models for each category in order to generate the knowledge base model.

For Siebel Call Center, train the knowledge base model based on the topics associated with the business objects that will be retrieved and displayed in response to natural language queries from agents.

A corpus must contain examples of all categorized emails, or requests that you expect to receive in your production environment. By default the number of emails or requests in each category must be roughly the same in order to ensure that each category is given equal weight during the categorization process. Otherwise, the number of emails or requests in each category must be in proportion to the number that you expect to receive in your production environment. Categories in the knowledge base will only return scores (confidence-level percentages) after they have gathered sufficient statistical information, which is driven by the number of emails or requests associated with the categories.

Feedback from Siebel Smart Answer Manager

Feedback is processed when Siebel Smart Answer Server receives text together with its correct classification from the Siebel Smart Answer Manager. For Siebel Email Response, this process can be as simple as a customer service representative who answers a customer inquiry by manually selecting a different category than the one that was suggested by Siebel Smart Answer. When the customer service representative selects Send on the Communication Detail - Response view, Siebel Smart Answer Manager immediately notifies the Siebel Smart Answer Server to store the feedback information.

Learning Process for Siebel Smart Answer

Learning is a gradual process that occurs as Siebel Smart Answer Manager receives feedback from processing emails or requests. This reshapes categories so that the concept models for categories constantly evolve. As agents process emails or requests, the NLP engine updates the concept models of existing categories. After the daily scheduled rebuild of the concept model is executed, the concept model will reflect this new information.

3 Installing and Administering Siebel Smart Answer

Installing and Administering Siebel Smart Answer

This chapter describes how to install and administer the Siebel Smart Answer Server. It includes the following topics:

- *Components of Siebel Smart Answer Server*
- *Installation Prerequisites for Siebel Smart Answer*
- *Installing Siebel Smart Answer Server*
- *Installing Siebel Smart Answer as a Windows Service*
- *Running the Command Line Administration Tool for Initial Setup*
- *Installing the Siebel Smart Answer Administration Tool*
- *Installing the Siebel Smart Answer Adapter*
- *Uninstalling Siebel Smart Answer*
- *Siebel Smart Answer Server Directory Contents*
- *Running the Command Line Administration Tutorial*
- *Redeploying the Siebel Smart Answer Servers*
- *Installing the Siebel Smart Answer Administration Tool on Other Computers*
- *Siebel Smart Answer Error Codes*

Components of Siebel Smart Answer Server

Siebel Smart Answer uses the following components:

- **Siebel Smart Answer Installer.** The installer for Siebel Smart Answer will perform the initial steps of configuration and installation for your Siebel Smart Answer System. It is capable of installing the Siebel Smart Answer Server and Siebel Smart Answer Administrative Tool. It also contains all the necessary software required for the Siebel Smart Answer Integration Adapter.
- **Siebel Smart Answer Server.** All the major functionality of the Siebel Smart Answer System is driven by the Siebel Smart Answer Server, such as the operations of the Integration Adapter and Administrative Tool. The Siebel Smart Answer Server is capable of running a Primary and Alternate setup such that if a Siebel Smart Answer Server fails, the alternate server will immediately take over operation, ensuring high availability.
- **Siebel Smart Answer Administration Tool.** This tool is a graphical user interface for managing the data inside of the Siebel Smart Answer Server. For more information on Siebel Smart Answer Administration Tool, see *Using the Siebel Smart Answer Administration Tool*.
- **Siebel Smart Answer Integration Adapter for Siebel.** The adapter is a small library that allows Siebel Business Applications to connect to the Siebel Smart Answer Server for providing Language Identification, Categorization, and Feedback for Categorization.

Installation Prerequisites for Siebel Smart Answer

This section will cover the hardware and software requirements for the Siebel Smart Answer components. The requirements for Siebel Smart Answer are broken into three parts: Siebel Smart Answer Server, Siebel Smart Answer Administration Tool, and Siebel Smart Answer Adapter requirements.

Siebel Smart Answer Server

For more information about the operating system, hardware, and software required as prerequisites to installing Oracle's Siebel Smart Answer Server, see *Siebel System Requirements and Supported Platforms Guide*.

Siebel Smart Answer Administration Tool

The Siebel Smart Answer Administration Tool is a remote client for interfacing with Oracle's Siebel Smart Answer Server. In order to use the Siebel Smart Answer Administration Tool you must have an active Siebel Smart Answer Server installed on your network. The Siebel Smart Answer Administration Tool is currently available on all major operating systems that support the Java Runtime Environment (JRE) 1.6 or greater.

Smart Answer Adapter for Siebel

The Smart Answer Adapter for Siebel is a thin client interface that interacts with Oracle's Siebel Smart Answer Server. A Siebel Smart Answer Server must be installed on your network for the adapter to work. For more information about the prerequisites for installing Oracle's Smart Answer Adapter for Siebel, see *Siebel System Requirements and Supported Platforms Guide*.

Installing Siebel Smart Answer Server

The following are the required tasks for installing Oracle's Siebel Smart Answer Server.

To install the Siebel Smart Answer Server

1. Unpack the Installation Package (SmartAnswerInstall.zip), located in the Smart_Answer directory.
2. Run install.py in the extracted directory.
3. Select language from the list.
4. The main install screen appears providing the options described in the following table:

Option	Description
Configure And Install	Creates a new configuration for Siebel Smart Answer and installs the necessary software for Siebel Smart Answer Server.

Option	Description
Install	Installs Siebel Smart Answer Server from an existing configuration.
Admin Tool	Creates a distributable package for the Administrative Tool.
Quit	Exits the installer.

> **Note:** Configuration will walk you through a number of screens asking you to enter in some information. After you have entered in the appropriate data, select Next to proceed. You may also select Previous at any point to go to the previous screen. On the final configuration screen you will be able to select Finish to start the installation process. At each step of the configuration process you will be asked to enter information. If the Installer thinks you may have entered incorrect information it will prompt you for a correction. Select Next when you have filled in all information on a screen to proceed to the next configuration step.

5. Select Configure and Install.

   > **Note:** For the question, "What languages are permitted for corpus entries?", select the check box for each language that will be used in the knowledge base. The supported languages are English, French, Italian, German, and Spanish.

6. Choose an installation directory. The first item to configure is the location where the `smart_answer_server` directory will be created. This directory will store all of the Siebel Smart Answer Server software and data.
7. Name the Primary and Alternate servers. These are server host names which must be accessible from each other and also from the computer where the Siebel application is installed. Configuring an Alternate server is optional, but highly recommended for environments requiring uninterrupted service with high reliability.
8. For best performance the Siebel server, Primary server, and Alternate server must be installed and run on separate computers.
9. Configure Smart Answer to send notifications. The Siebel Smart Answer Server can send email notifications to administrators whenever the Alternate or Primary server becomes unreachable. To enable notifications you will need an SMTP mail server and an existing email address to send to. If your SMTP mail server requires authentication you will must specify this as well. To specify multiple addresses to send to, simply separate with a comma; that is, admin@mycompany.com, other@mycompany.com. Addresses can also be in the format Name [address]; that is, First Last admin@mycompany.com.
10. Identify the Siebel Database. In order to keep the Siebel Smart Answer Server synchronized with Siebel, Siebel Smart Answer needs read access to the database that the Siebel application uses. Siebel Smart Answer will not insert data directly into the Siebel application; it will only read parts of the database to ensure the categories it is returning are up to date. Siebel Smart Answer supports synchronization with Microsoft SQL Server and Oracle.

    > **Note:** If using Oracle as the backend database, the database name is *SIEBEL*. It assumes the database name is *dbo*, for MSSQL. For information on modifying the defaults, see *Configuring Siebel Smart Answer to Synchronize with Siebel Catalogs*.

11. Set the PostgreSQL database installation location (for example: `C:\Program Files\PostgreSQL\8.3`). Siebel Smart Answer Server uses the PostgreSQL database for storage. This is done to ensure performance of the Siebel application is not compromised by Siebel Smart Answer. No other configuration is needed beyond the default installation of the PostgreSQL database. After Siebel Smart Answer knows where the PostgreSQL database has

been installed, the Siebel Smart Answer Server will handle all of the setup and administration of the database it uses.

12. After you have completed all configuration steps, select Finish to start the installation process.
A new window will pop up showing the progress of the installation. As a final step in the installation of the Siebel Smart Answer Server, the installer will create a Windows service Smart Answer Server - Master (if installing the Primary server), or Smart Answer Server - Alternate (if installing the Alternate server).
13. Select OK and the main installation screen will be presented to you again.

Installing Siebel Smart Answer as a Windows Service

Running Siebel Smart Answer as a service eliminates the possibility of data corruption and allows the Siebel Smart Answer Server to run in the background without the need of a logged in user. As the final step of the installation process the Siebel Smart Answer Server(s) are installed as services.

Starting the Siebel Smart Answer Servers

Use the following procedure to start the Siebel Smart Answer servers.

To start the Siebel Smart Answer Servers

1. Navigate to Administrative Tools - Services from the Start Menu or the Control Panel.
2. Select the Primary service (Smart Answer Server - Master) or the Alternate service (Smart Answer Server - Alternate).
3. Right-click on the entry for the selected service and select the Properties from the menu.
4. Change the Startup Type to Automatic.
5. Select Apply and then OK to close the Properties window.
6. To start the service, go to the Status column, right-click, and select Start.

Running the Command Line Administration Tool for Initial Setup

Siebel Smart Answer Server has a command line client utility for maintaining the Siebel Smart Answer Server after it is installed and running. This utility only works on the computer with the active Siebel Smart Answer Server.

To run the command line utility

1. Navigate to the `smart_answer_server` directory.
2. Run python cmd_admin.py help to see the full listing of all the command options.

   > **Note:** Executing python cmd_admin.py help [command name] will show more information about the command specified in [command name]. For more information on the command line utility options, see *Running the Command Line Administration Tutorial*.

3. Run tests to ensure your installation is fully up and running by executing python cmd_admin.py test. If not all tests pass, attempt to re-install. Or for help with installing the Siebel Smart Answer Server create a Service

Request (SR) on My Oracle Support. Alternatively you can phone Oracle Global Customer Support directly to create a service request or get a status update on your current SR.

4. Create a new user by executing: python cmd_admin.py createuser sa_admin. You will be prompted for a new password and also to confirm the new password.

   Note: This is the same user and password that will be used for the Siebel Smart Answer Administration Tool.

5. Create the default corpus by executing: python cmd_admin.py createcorpus [corpus name. i.e KB]. You will be prompted for a user name and password. Enter the user you created in the previous step.
6. Delete the default user admin by executing: python cmd_admin.py deleteuser admin.

Installing the Siebel Smart Answer Administration Tool

The Siebel Smart Answer Administration Tool is an easy to use interface for creating and managing a knowledge base corpus and model. For more information on the Siebel Smart Answer Administration Tool, see *Using the Siebel Smart Answer Administration Tool*.

To install the Siebel Smart Answer Administration Tool

1. Run install.py in the extracted directory.

   The main install screen appears providing the following options:

Option	Description
Configure And Install	Creates a new configuration for Siebel Smart Answer and installs the necessary software for Siebel Smart Answer Server.
Install	Installs Siebel Smart Answer Server from an existing configuration.
Admin Tool	Creates a distributable package for the Administrative Tool.
Quit	Exits the installer.

2. Select Admin Tool. The Siebel Smart Answer Administration Tool installation starts a configuration wizard with Previous, Next, Cancel, and Finish buttons for navigating the configuration steps.
3. Load the installation configuration file from the `smart_answer_server` directory (`D:\smart_answer_server\install.properties`). This file is called install.properties and contains configuration information about the location of the Primary and Alternate Siebel Smart Answer servers installed in the previous steps.
4. Select an installation directory where the smart_answer_admin will be created. This directory will contain all of the necessary software to run the Siebel Smart Answer Administrative Tool.

   When created, it is possible to copy this directory to any computer with Java installed and run the client. This has been done for ease of installation. Siebel Smart Answer will only allow one user to administer a corpus at a time.

5. Configure Siebel Smart Answer Server Endpoint. As an optional second step a user can configure the Siebel Smart Answer Administration Tool to point to a default Siebel Smart Answer Server. This is an optional step and can be done later by changing the default.ini file inside the installed `smart_answer_admin` directory.
6. Select Finish to proceed with Installation. A progress bar will be presented to you showing how far along the installation process is. A pop up dialog will notify you that installation has finished.

After the installation is complete, you will be asked if you would like to create a shortcut in the Programs menu to run the Administrative tool.

Installing the Siebel Smart Answer Adapter

Siebel requires two files to talk to Siebel Smart Answer: SAAdapter.dll, and saconnectorconfig.txt. The connecting component between the Siebel Server and the Siebel Smart Answer Server is a library called SAAdapter.dll. This file can be found in the installation package or the `smart_answer_server` directory under siebel_dll.

1. Copy SAAdapater.dll to the server running Siebel under the Siebel installation directory `siebsrvr\BIN`.

   > **Note:** SAAdapter.dll operates on the network port 20102

2. Create a file saconnectorconfig.txt inside the `siebsrvr\smartanswer` directory. saconnectorconfig.txt must contain the hostnames of the Primary and (if available) and Alternate server where you installed the Siebel Smart Answer Server(s). The format of saconnectorconfig.txt must follow the following example with the Catalogs Sales and Support enabled for Siebel Smart Answer:

   [Sales]

   my_sa_host1

   my_sa_host2

   [Support]

   support_sa_host1

   support_sa_host2

   > **Note:** It is highly recommended that each knowledge base have a dedicated Siebel Smart Answer server in order to guarantee timely responses.

3. Verify that the file SAConfig.xml inside `siebsrvr\smartanswer` contains the correct location to SAAdpater.dll.
4. Create a system environment variable SAConnectorConfigDir that contains the full path of the directory containing saconnectorconfig.txt; that is

   ```
   D:\ sba81\siebsrvr\smartanswer
   ```

5. Log out and log back in to the account that you are installing Siebel Smart Answer and Siebel Server so that the variable takes effect.
6. Restart the Siebel Server.

Uninstalling Siebel Smart Answer

If at any time you must upgrade to a new version of the Siebel Smart Answer Server or wish to remove Siebel Smart Answer from a computer you must uninstall the Siebel Adapter, the Siebel Smart Answer Administration Tool, and the Siebel Smart Answer Server.

Uninstalling the Siebel Smart Answer Adapter

Use the following procedure to uninstall the Siebel Smart Answer Adapter.

To uninstall the Siebel Smart Answer Adapter

1. Disable Siebel Smart Answer for all Catalogs to ensure no requests attempt to run.
2. Remove SAAdapter.dll from **`siebsrvr/BIN`**.
3. Delete saconnectorconfig.txt from **`siebsrvr/smartanswer`**.

Uninstalling the Siebel Smart Answer Administration Tool

Use the following procedure to uninstall the Siebel Smart Answer Administration Tool.

To uninstall the Siebel Smart Answer Administration Tool

1. Ensure no Siebel Smart Answer Administration Tools are running on the computer.
2. Delete shortcut under Programs menu.
3. Delete **`smart_answer_admin`** directory.

Uninstalling the Siebel Smart Answer Server

Use the following procedure to uninstall the Siebel Smart Answer Server.

To uninstall the Siebel Smart Answer Server

1. Stop the Siebel Smart Answer Server.
2. Ensure no windows are open to the smart_answer_server folder and that the Siebel server is stopped.

   > **Note:** The uninstall process will fail to delete all files if a window is open to the installed directory that is to be removed. This includes all command prompts and directory explorers.

3. Execute uninstall.py from the Installation package.
4. The uninstall process will ask you to do the following:
   - Enter the full path to the installed directory. Example: **`c:\smart_answer_server`**.
   - Answer YES or NO if you would like to remove all Windows services for running Siebel Smart Answer.
   - Answer YES or NO if you would like to delete the installed directory and all of its contents.

> **Note:** This will remove all data and software for this installation. If you wish to save your data create a backup file using the Siebel Smart Answer Administration Tool.

Siebel Smart Answer Server Directory Contents

The `smart_answer_server` directory contains the program files for running and administering the Siebel Smart Answer Server. The program files covered in this section include:

- cmd_admin.py starts a command line client for basic server administration tasks.
- metaserver.log contains the logs for the Siebel Smart Answer Server. This file will not be created until the Siebel Smart Answer Server is first run.

Running the Command Line Administration Tutorial

Siebel Smart Answer Server has a command line utility for basic administration tasks. This is especially important since both user and corpus creation and deleting is only available from the command line client.

To run the command line administration tutorial

1. Navigate to the `smart_answer_server` directory and execute: python cmd_admin.py help.
2. Execute python cmd_admin.py help [command name] to show more information about each available command. The commands available from the command line cmd_admin.py tool are described in the following table.

Command	Description
createcorpus	Creates an empty collection of documents for later use.
createuser	Creates a user for using the Siebel Smart Answer Server.
deletecorpus	Deletes all data associated with a corpus.
deleteuser	Deletes a user.
domaintenance	Immediately execute a maintenance cycle on a corpus. **Note:** A maintenance cycle synchronizes categories from Siebel, removes redundant or outdated examples that have accumulated in the corpus, and trains a new knowledge base.

Command	Description
getmaintenance	Reports the time daily maintenance is set to run for a corpus.
help	Displays the list of commands available in the Command line administrative tool.
setmaintenance	Sets the time daily maintenance is set to run for a corpus.
shutdown	Cleanly shuts down the Siebel Smart Answer Server.
test	Executes a brief set of tests to verify basic functionality of the Siebel Smart Answer Server.
testnotification	Sends an email testing notification configuration.

Configuring Siebel Smart Answer to Synchronize with Siebel Catalogs

By default Siebel Smart Answer assumes that the Siebel Database is named *SIEBEL* if the type of the database is Oracle. It assumes it is *dbo*, if the database is MSSQL. These default names are set at installation time. Your database name might not match these default names.

To configure Siebel Smart Answer to synchronize with Siebel Catalogs

1. Navigate to the smart_answer_server\scripts directory.
2. Open the file metaserver.config in Notepad or the editor of your choice.
3. Add the parameters as described in the following table.

Parameter	Value
siebel.query.catalog = SELECT ROW_ID FROM [DBNAME].S_CTLG WHERE NAME = ?	Replace [DBNAME] with the name of your database.
siebel.query.categories = SELECT ROW_ID, NAME, PAR_CAT_ID, RESP_THRESHOLD FROM [DBNAME].S_CTLG_CAT WHERE CTLG_ID =?	Replace [DBNAME] with the name of your database.

Configuring Primary and Alternate Siebel Smart Answer Servers

Each Siebel Smart Answer Server is capable of running with two servers. The Primary server is the active server which is responsible for the run time operations of the Siebel Smart Answer system. The Alternate server is the backup server which does no run-time processing, but collects data from the Primary to ensure all of the data is synchronized between the servers in case failover is required. There are two programs for starting servers in the `smart_answer_server` directory, which were installed as services during installation.

Startup Behavior

What follows are guidelines for the start up process and expected behavior of the Siebel Smart Answer Primary and Alternate servers.

1. The server immediately tries to locate and connect to the other server. This is true for both the Primary and the Alternate servers.
2. Servers must not be started simultaneously. Wait approximately 30 seconds for the Primary server to start before starting the Alternate server.
3. If this attempt fails, this server considers itself the Primary and takes over the Siebel Smart Answer run-time services.
4. If at startup a server successfully connects to a Primary, it considers itself the Alternate.
5. When this happens the Alternate will re-initialize its underlying data to match the Primary and then continue to mirror any updates to the Primary as long as the Primary is reachable.

> **Note:** Configuration data is not mirrored, only data relating to corpora, dashboard analytics, and knowledge bases are mirrored (All data viewable in the Siebel Smart Answer Administration Tool is synchronized).

Failover Behavior

If for any reason the Primary server is unreachable by the Alternate server, (power outage, computer failure, network failure). The Alternate server will enter recovery mode. When this happens the Alternate server:

1. Stops trying to synchronize data.
2. Starts the Siebel Smart Answer run-time services.
3. Waits for communication from clients such as the SAAdapter.dll or the Siebel Smart Answer Administration Tool.

   > **Note:** At this point the Alternate is now considered the Primary server.

4. The original Primary server must be manually started again, at which point it will:

   a. Re-initialize data from the new Primary.
   b. Begin synchronizing incoming data from the new Primary.

      > **Note:** The server will stay in the Alternate state until the new Primary fails.

5. The SAAdapter.dll will rotate through the list of servers in saconnectorconfig.txt until it finds a valid connection. Currently Siebel Smart Answer only supports one additional backup server.
6. The Siebel Smart Answer Administration Tool must be reconnected to the new Primary.

Redeploying the Siebel Smart Answer Servers

In the case where the Siebel Smart Answer servers must be moved or upgraded to different hostnames you must update the Siebel Smart Answer connector configuration files and restart the appropriate services.

To redeploy the Siebel Smart Answer Servers

1. Navigate to the Siebel Smart Answer Server installation directory.
2. Back up `smart_answer_server\scripts\metaserver.config`.
3. Back up `siebsrvr/smartanswer/saconnectorconfig.txt`.
4. Update the new hostname references in:

   `siebsrvr\smart_answer_server\scripts\metaserver.config`
5. Update the new hostname references in:

   `siebsrvr\smartanswer\saconnectorconfig.txt`
6. Restart Siebel Server.

Notifications When Communication Is Lost to a Siebel Smart Answer Server

Whenever an Alternate loses communication with a Primary or a Primary loses communication with an Alternate. An email will be sent to the address specified in Installation with a message identifying the detected failure.

Installing the Siebel Smart Answer Administration Tool on Other Computers

The `smart_answer_admin` directory created by the installer can be copied to another computer for easy distribution of the Administrative Tool. The default.ini file in the `smart_answer_admin` folder is the only configurable element of the Siebel Smart Answer Administration Tool. For more information on configuring the default.ini file, see *Using the Siebel Smart Answer Administration Tool* and *Siebel Smart Answer Administration Tool Guide*.

Siebel Smart Answer Error Codes

The following are the error codes and their meaning. The errors and any relevant details can be found in `[siebelserverinstallationroot]\log\smartanswer_XXX.log`:

- **NoDefaultModel.** There is no model present for the selected catalog. To fix this error, the user must retrain the model using the Smart Answer Administration Tool.

- **NoSuchCatalog.** The catalog specified in the request does not exist on this Smart Answer instance.
- **RequestParseError.** The request was ill-formed in some way. Details may be found in the Smart Answer log.
- **NoEndpointFound.** No endpoint corresponding to the specified Catalog could be found in the connector's configuration file. A connection to the endpoint for the specified catalog could not be established.
- **UnknownError.** An error other than one of the previously described errors occurred. The server administrator must consult the Smart Answer log for more details.

4 Configuring and Implementing Siebel Smart Answer

Configuring and Implementing Siebel Smart Answer

This chapter provides instructions for configuring and implementing Siebel Smart Answer. It includes the following topics:

- *Requirements for Using Siebel Smart Answer*
- *Creating and Training Your Knowledge Base Model*
- *Setting Up Siebel Smart Answer Manager*
- *Siebel Server Instances and Response Groups*
- *Siebel Email Response and Response Groups*
- *Setting Up Siebel Smart Answer*
- *Setting Up Siebel Smart Answer for International Deployment*
- *Working with Siebel Smart Answer Content Types*
- *Working with Siebel Smart Answer Settings*
- *Working with Siebel Smart Answer Profiles*
- *Creating a Manual Search Profile in Siebel Call Center*
- *Creating an Auto Search Profile for Service Requests*
- *Creating a Siebel Email Response Profile*
- *Setting up Siebel Smart Answer*
- *Process of Administering and Maintaining Siebel Smart Answer*

Requirements for Using Siebel Smart Answer

To set up Siebel Smart Answer Servers and the Siebel Smart Answer knowledge base files and model, perform the following steps:

- Install and start the Siebel Smart Answer Servers. For instructions, see *Installing and Administering Siebel Smart Answer*.
- Gather and analyze the data that you want Siebel Smart Answer Manager to categorize. This data is the source data for the corpus file that you use to generate the knowledge base file.
- Determine the categories to use in your knowledge base for classification and training.

  Choosing categories is one of the most important steps in building an initial knowledge base file. A category is a classification that you assign to each type of inquiry or request that you receive from customers. You define your own categories based on your business requirements during the Siebel Smart Answer planning process.

Categories might represent actual content or intent, or might identify another attribute of the text, such as the name of the sender. Examples of categories are product complaint, service complaint, and order status.

Siebel Smart Answer Manager returns category names and their scores to your Siebel application. Siebel Email Response can use this information to automatically respond to emails, suggest categories of response to agents, route emails, and perform other workflow tasks. Siebel Smart Answer Manager stores all the data that it needs to correctly identify intents and concepts in the knowledge base, including information about the individual categories. This information is the foundation for the concept models.

Siebel Smart Answer for employee applications uses the content items associated with the category to display various content types like solutions, decision issues, literature items, and resolution items.

You need the Siebel Smart Answer Administration Tool 1.0 to create and train the knowledge base model and build the knowledge base file. This tool replaces the Knowledge Base Editor, the RME Jumpstart, and the Banter Workbench used in previous releases of Siebel Smart Answer. The installation file (SmartAnswerInstall.zip) is located My Oracle Support SmartAnswerInstall.zip.

- Choose an installation location for the Siebel Smart Answer Administration Tool. All the Siebel Smart Answer Server and Administration Tool software will be installed in a folder named `smart_answer_admin` on your local computer in that location.
- Install the Siebel Smart Answer Administration Tool. Follow the instructions in the Chapter entitled Installing and Administering Siebel Smart Answer Servers.

  > **Note:** The Siebel Smart Answer Administration Tool allows you to create or import a corpus of texts, train and test a knowledge base file, and analyze the performance of the trained knowledge base file. This program also contains a Category Editor which helps you to create the structure of the knowledge base file. For simplicity, use a flat knowledge base file at first, unless you are creating a multilingual knowledge base.

- If your knowledge base file grows to contain a large number of categories, you may have to convert it to a hierarchical knowledge base file to increase the accuracy of Siebel Smart Answer feedback.

  > **Note:** You can use the Siebel Smart Answer Administration Tool to convert a flat knowledge base file into a hierarchical knowledge base file. The conversion is a manual process. You use the Category Editor to add parent branches for each group of categories. If you change the structure of a knowledge base or the entries assigned, you must train and test the knowledge base again. It is always a good idea to periodically test your knowledge base as feedback accumulates in Siebel Smart Answer.

  Note the following points relevant to a hierarchical knowledge base:

  - To use a multilingual knowledge base, you must create a hierarchical knowledge base.

    For more information about multilingual knowledge bases, see *Using the Siebel Smart Answer Administration Tool*.
  - When you create a hierarchical knowledge base, you must assign categories unique names.
  - The maximum length for category names is 128 characters.

- Define the corpus.

  When you import a corpus, the Siebel Smart Answer Administration Tool will detect all the available fields that are part of each corpus entry and use those for training your knowledge base. By default, Siebel Email Response sends the Body field and the Subject field to the categorization engine. If you want Siebel Email Response to send more fields, then specify them in the Siebel Smart Answer Server Component.
- Create and edit your corpus file.

A corpus contains your texts for training the categories that are part of your knowledge base. A corpus can be created in a number of formats. For more information about the supported formats, see *Using the Siebel Smart Answer Administration Tool*.

- Build a new knowledge base model in the Siebel Smart Answer Administration Tool.
  For information about how to start building a new knowledge base model, see *Using the Siebel Smart Answer Administration Tool*.
- Generate the knowledge base file for Siebel Smart Answer Manager by exporting the categories from the Siebel Smart Answer Administration Tool. This will produce the knowledge base file which you import to your catalog, and it resides in the Siebel File System.

Creating and Training Your Knowledge Base Model

After you successfully install the Siebel Smart Answer Administration Tool, and create and categorize your corpus file, you are ready to create and train your knowledge base model.

To create and train your knowledge base model

1. Create and analyze your knowledge base model in the Siebel Smart Answer Administration Tool.

   Note: If you want to create a hierarchical knowledge base, use the Category Editor to define the structure and use this category set to apply training and analysis on.

2. When you use the Siebel Smart Answer Administration Tool to create and analyze your knowledge base model, the main corpus is used to both create and evaluate the knowledge base model, as follows:
   - Training the corpus - the entire corpus is used to create the knowledge base model.
   - Testing the corpus - the corpus is randomly split 5 times into a testing and a training set. A knowledge base model is built and tested for each of the 5 random splits. The performance is averaged over the 5 tests and reported in the Benchmarking and Analysis Tab of the Siebel Smart Administration Tool.
3. Train and test the knowledge base model within the Siebel Smart Answer Administration Tool.
   In general, if you increase the number of items that you use for training the knowledge base model, the performance of the knowledge base model improves.
   Before you introduce your knowledge base model into a production environment, use the Knowledge Base Status, Benchmarking and Analysis workflow in the Siebel Smart Answer Administration Tool. For more information on using the Benchmark and Analyze Work Flow, see *Creating a Knowledge Base Model Using the Benchmark and Analyze Work Flow*
4. Inspect the results and check the score for each category to verify that the results are accurate. As a final check you can optionally use the Query and Batch Query workflow in the Siebel Smart Answer Administration Tool detailed in Querying the knowledge base model to enter email messages either one at a time or in bulk in order to further verify the accuracy of the currently built knowledge base.
   After you begin using a knowledge base file to categorize incoming email and requests, and agents select categories or give feedback, the feedback is sent to the Siebel Smart Answer Server where it is stored for later processing.
5. Review the Siebel Smart Answer Administration Tool Benchmarking Analysis Tab to evaluate the training results.

The categories are listed in a table at the start of the screen in descending order of performance. You can select a category and view the mis-categorized entries for that category in a table at the end of the screen. Each entry is editable, so that if you determine this entry is adding confusion to the knowledge base model, you can:

- Re-label the entry with a category label (either existing or new).

  For more information on how to edit categories, see *Modifying Categories*.
- Edit the content of the entry to make it more semantically informative.
- Remove the entry.

> **Note:** Each time you modify the contents of a category or edit the category set, you must repeat the Benchmarking and Analyze Work Flow in order to measure the impact of your changes.

Setting Up Siebel Smart Answer Manager

Siebel Smart Answer Manager is a server component on Siebel Server. Each instance of Siebel Server can run only one instance of the Siebel Smart Answer Manager server component.

Setting Up the Siebel Smart Answer Servers

Use the following procedure to set up the Siebel Smart Answer Servers.

To set up the Siebel Smart Answer Servers

1. Enable Siebel Communications Manager and Siebel Smart Answer Manager before performing the setup tasks.
2. Import the knowledge base file and its categories into a catalog file.
3. Set up input arguments, create templates and solutions (if you are using Siebel Email Response).
4. Associate templates and solutions with categories.

   For information about how to set up Siebel Smart Answer, see *Installing Siebel Smart Answer Server*

Using the Auto Response Feature of Siebel Smart Answer

Use the following procedure for the auto response feature.

To use the auto response feature of Siebel Smart Answer

1. Make changes to some of your categories.

   For information about how to set up the auto response feature, see *Setting Up Auto Response*.
2. Import the knowledge base file into a catalog in the Administration - Catalog screen. The catalog name must be the same value in the following places:
   a. Name field for the catalog in the Administration - Catalog screen.
   b. Knowledge Base Name parameter in the Siebel Smart Answer Manager server component. Select Smart Answer Manager and navigate to the Parameters Tab.

3. Catalog Name field in the Administration - Smart Answer screen - Smart Answer Profiles view must match the following:
   a. Knowledge Base Name parameter in the Smart Answer Manager component in the Administration - Server Configuration screen, choose Servers list, choose Components view.
   b. The Catalog Name input argument on the appropriate response group.
4. (Siebel Email Response only) The Siebel Smart Answer Catalog process property in the Siebel Email Response - Process Message workflow. The value of this process property value is *Knowledge Base* by default. To override this value with the name of your catalog, you assign the name of your catalog to the Catalog Name input argument of the response group.

Note: By default, the Response Group monitors the catalog titled *Knowledge Base*. As a result, a Catalog Name input argument is not required as long as you enter *Knowledge Base* as the name of your catalog and as the knowledge base name parameter in the Siebel Smart Answer Manager server component.

Siebel Server Instances and Response Groups

You must run one instance of Siebel Server and create one response group for each knowledge base catalog, for the following reasons:

- Each Siebel Server instance can have only one Siebel Smart Answer Manager.
  There is a one-to-one association between each knowledge base catalog and one Siebel Server. If you have multiple knowledge base files located on different Siebel Servers, each knowledge base file must have a unique name.
  If you only have one Siebel Server, then you can have only one knowledge base file. The knowledge base catalog name can be *KB* because all your response groups monitor this catalog. To monitor multiple knowledge base files, you must set up multiple knowledge base files on multiple servers. For information about how to set up multiple knowledge base files, see *Using Multiple Knowledge Base Files*.
- Each response group can monitor only one knowledge base catalog.
  Because a response group can monitor only one knowledge base file, you must assign the same knowledge base name to one response group and one instance of Siebel Server.

Siebel Email Response and Response Groups

In Siebel Email Response, you must create one response group for each knowledge base catalog. The knowledge base catalog name on the Siebel Smart Answer server component must match the knowledge base catalog name on the appropriate response group.

The Siebel Email Response - Process Message workflow can send the Body, Subject, and Sender fields of the email message to the categorization engine for analysis. You can also send one additional field. Use the Text label to specify the name of the field that you want to send.

In the Siebel Smart Answer Administration Tool, the Body, Subject, and Sender fields of the corpus entries are used to build the knowledge base if they are available. For instance, a product manual will only have message field populated. In the Siebel Email Response - Process Message workflow, you must add the input arguments for the fields you want the

categorization engine to analyze. Body and Subject are default input arguments. If you want the categorization engine to analyze the Sender field, you must add the input argument for the Sender field. For more information about how to add input arguments, see *Creating Additional Fields for Analyzing Incoming Messages*.

Setting Up Siebel Smart Answer

Siebel Smart Answer is the component that enables auto-suggest and auto-respond capabilities inside the Siebel Server.

To set up Siebel Smart Answer

1. Enable the Knowledge Base Name parameter to enable the Siebel Smart Answer Manager server component.

   > **Note:** You must enable the Siebel Communications Manager and the Siebel Smart Answer Manager server component before you can perform setup tasks. Make sure the Component State of Siebel Smart Answer Manager is set to Online on the Server Administration screen. For instructions on setting up Siebel Smart Answer server, see *Enabling Siebel Smart Answer Server Component*.

2. Create a Siebel Smart Answer profile.

   A Siebel Smart Answer profile is unique to each application of which it is a part. For example, Siebel Call Center has its own Siebel Smart Answer profile. For more information about how to create a profile, see *Working with Siebel Smart Answer Profiles* and *Setting Up Auto Response*.

3. Create a Siebel Smart Answer catalog and import the knowledge base file.
   a. Create a catalog file in the Administration - Catalog screen.
   b. Copy the knowledge base file to the `\fs\smartanswer\import` directory on your Siebel Server file system.

      For more information about creating and sharing a Siebel File System, see *Siebel Smart Answer Connector Guide* .
   c. Import the knowledge base file into that catalog.

      For more information about how to import a knowledge base file, see *Importing the Knowledge Base File*.

   > **Note:** A sample knowledge base file is installed automatically when the Siebel Database Server is installed. Use this sample knowledge base file to practice importing a knowledge base file and installing and using Siebel Smart Answer before you configure your production knowledge base file. For information about how to install the sample knowledge base file, see the topic about populating the Siebel File System in the *Siebel Installation Guide* .

4. Associate content items with categories.

   For Siebel Email Response, you can only associate solutions and templates with categories. For Siebel Call Center, you can associate solutions, literature, decision issues, and resolution items.

   For more information about how to associate content items with categories, see *Process of Administering and Maintaining Siebel Smart Answer*.

5. Modify categories, if you are using the auto response feature.

   For more information about these topics, see *Modifying Categories*.

6. Set the logging level of the Siebel Smart Answer log file.

Change the logging level of the Siebel Smart Answer log file to record more detailed information in your Siebel Smart Answer log file. For more information about how to set the logging level, see *Setting the Logging Level of the Siebel Smart Answer Log File*.

7. In the Siebel Smart Answer Administration Tool set the re-build schedule of the knowledge base in the Knowledge Base Status Tab. Although feedback is collected and reported to the Siebel Smart Answer server immediately, the knowledge base is only rebuilt once a day. This is intended to keep the knowledge base highly available, and to optimize the re-build of the knowledge base.

   For more information on how to control the knowledge base re-build schedule, see the topic *Scheduling Maintenance for the Knowledge Base Model*

   > **Note:** If you wish to re-build the knowledge base model more frequently use the Synchronize Button under Administration Catalog - Synchronize.

8. (Siebel Email Response only) Add the Siebel Smart Answer input argument to the response group.

   This allows you to make sure that your response group uses the appropriate knowledge base for categorization. Enable Smart Answer = TRUE as an input argument to the response group. For more information on adding arguments to response groups, see *Administering Response Groups*.

9. Expose Siebel Smart Answer in your application and in Search Center.

   Use Siebel Tools to expose Siebel Smart Answer in Search Center, or to expose the Auto Response, or Feedback button in your applications. For more information, see *Process of Administering and Maintaining Siebel Smart Answer*.

10. (Optional) Configure the Primary and Alternate server setup.

    > **Note:** If you anticipate large volumes of requests to your knowledge base, you might want to consider a Primary and Alternate server setup to provide load failover and high availability. For more information, see *Installing and Administering Siebel Smart Answer*.

11. (Optional) Set additional Siebel Smart Answer server components parameters.

    For more information, see *Setting Additional Server Component Parameters*.

12. Maintain and administer Siebel Smart Answer.

    For more information, see *Process of Administering and Maintaining Siebel Smart Answer*.

Setting Up Siebel Smart Answer for International Deployment

Before you set up Siebel Smart Answer in a multilingual environment, you must first determine whether to create a multilingual knowledge base or a monolingual knowledge base. In a multilingual knowledge base, all languages are defined in one knowledge base separated at a top-level node by language. A monolingual knowledge base only supports one language.

A multilingual knowledge base gives your agents access to all categories for all languages. Siebel Smart Answer makes an automatic suggestion or an automatic response only with categories in the identified language of the incoming email. A monolingual knowledge base only supports one language, so if your deployment requires multiple languages, you must create one knowledge base for each language.

Siebel Smart Answer only supports one knowledge base for each Siebel Smart Answer Manager server component, and one Siebel Smart Answer Manager server component for each Siebel Server. If you want to deploy multiple monolingual knowledge bases, you must deploy multiple Siebel Smart Answer Manager Server Components, on multiple Siebel Servers.

The overview that follows discusses how to create a monolingual knowledge base file, and how to create a multilingual knowledge base file. For more information on the steps for these tasks, see *Using the Siebel Smart Answer Administration Tool*.

- At import the Siebel Smart Answer Administration Tool determines the number and types of languages detected in the corpus. For a monolingual corpus the language will be identified and used for the rest of the Knowledge Base Build, Benchmark, and Analyze workflow.
- To create a hierarchical knowledge base file you must import the multilingual corpus. The resulting category set has each language as the top branch node of your hierarchical knowledge base, with the categories as the leaf-level nodes of your hierarchy. When you use the Siebel Smart Answer Administration Tool to create, benchmark, and analyze your knowledge base, it will automatically run multiple processes for each language but present them to you in a single screen, such as the Category View or the Benchmarking screen.

Note: The Siebel Smart Answer Administration Tool can be installed in one of the following languages: English, French, Spanish, Italian, and German. The installation language of choice is selected at the start of the Siebel Smart Answer installation program. For more information on defining the language setting, see *Installing Siebel Smart Answer Server*.

Working with Siebel Smart Answer Content Types

Content types for Siebel Smart Answer are created in Siebel Tools. Content types are derived from business components. Content types represent the types of data for which your Siebel Smart Answer engine will search.

For Siebel Smart Answer to work properly in the Search Center, you must create a new Find object in Siebel Tools for each Siebel Smart Answer profile that requires different content types. By default, Siebel Tools already supports four content types that correspond to four predefined Find objects, as follows:

- Siebel Smart Answer Literature
- Siebel Smart Answer Solution
- Siebel Smart Answer Resolution Item
- Siebel Smart Answer Decision Issue

The purpose of having a different Find object for each different content type is to support multiple content types for a Siebel Smart Answer profile. Each content type has a different view for drilldown and preview. You must have different Find objects to specify different drilldown and preview views for each Siebel Smart Answer content type. For more information on Find objects, see *Siebel Search Administration Guide* .

Note: The Siebel Bookshelf is available on Oracle Technology Network (OTN) and Oracle Software Delivery Cloud. It might also be installed locally on your intranet or on a network location.

To create a Siebel Smart Answer content type

1. In Siebel Tools, copy an existing Find object.

2. Change the following object properties to reflect your new find object:
    - Name
    - Drill down view
    - Preview
3. Compile and test the Find object.

Working with Siebel Smart Answer Settings

Your Siebel Smart Answer settings must correspond with the equivalent settings in the Siebel Smart Answer Administration Tool. These settings specify which fields to use to take information from the incoming requests and store in your knowledge base. The Siebel Smart Answer settings are described in the following table.

Heading	NLP Engine Activity	Type of Input
Subject	The natural language processing (NLP) engine will search on fields defined as Message or Content in the Siebel Smart Answer Administration Tool. The Text field is populated with the content of the email message by the Siebel Smart Answer Manager.	Text or numeric
Text	Not applicable. The Text field is populated with the message body content and the NLP engine will search on fields defined as Message or Content in the Siebel Smart Answer Administration Tool.	Text

Working with Siebel Smart Answer Profiles

After you import the knowledge base, you must create a Siebel Smart Answer profile, then associate the profile with Siebel Smart Answer settings. You can create the following types of profile:

- **Manual Search.** Associated with Siebel Call Center.
- **Auto Search.** Associated with customer and partner applications. This profile type allows agents to search for service requests.
- **Siebel Email Response.** Associated solely with Siebel Email Response.

Creating a Manual Search Profile in Siebel Call Center

To implement Siebel Smart Answer in Siebel Call Center, you must create a manual search profile. A manual search means that the agent must enter data manually, click a button, and then view the results.

Creating a Manual Search Profile

Use the following procedure to create a manual search profile.

To create a manual search profile

1. Create a new profile.
2. Configure search settings.
3. Create a new content type in Siebel Tools.
4. Associate a content type with a catalog.
5. Navigate to the Administration - Smart Answer screen, choose Smart Answer Profiles view.
6. Select New, and then complete the Siebel Smart Answer Profile Settings.

   The following table lists the required fields you must complete.

Catalog Name	Knowledge Base Name
Business Component	Not applicable for manual search
Business Object	Not applicable for manual search

Configuring Manual Search Settings

Use the following procedure to configure manual search settings.

To configure manual search settings

1. Navigate to the Administration - Smart Answer screen, choose Smart Answer Profiles view.
2. Select the profile whose manual search characteristics you want to configure, and then the Settings view tab.
3. Select New to create a new setting. Complete the profiles settings as described in the following table.

   The following table lists the required fields you must complete.

Catalog Name	Knowledge Base Name
Business Component	Not applicable for manual search
Business Object	Not applicable for manual search

4. Complete Step 3 for each new setting that you create.

Creating a Siebel Smart Answer Content Type

Use the following procedure to create a Siebel Smart Answer content type.

To create a Siebel Smart Answer content type

1. In Siebel Tools, copy an existing Find object.
2. Change the following object properties to reflect your new find object:
    - Name
    - Drill view
    - Preview
3. Compile and test the new Find object.

Associating a Content Type with a Catalog

Use the following procedure to associate a content type with a catalog.

To associate a content type with a catalog

1. Navigate to the Administration - Smart Answer screen, then the Smart Answer Profiles view.
2. Select the profile for which you want to associate a content type with a catalog, and then the Content Types view tab.
3. Highlight the new profile, then select the Content Types view tab.
4. Select New, and then the new content type from the Add Content Type dialog box
5. Select OK.

   The name of the Find object you created in Siebel Tools appears in the field called Find Category.

Creating an Auto Search Profile for Service Requests

To set up Siebel Smart Answer to return information on Service Requests for Siebel Call Center perform the following tasks.

1. Create an auto search profile
2. Configure auto search settings
3. Associate auto search setting with a catalog
4. Configure a Smart Answer button in Siebel Tools

Creating an Auto Search Profile

Use the following procedure to create an auto search profile.

To create an auto search profile

1. Navigate to the Administration - Smart Answer screen, choose Smart Answer Profiles view.
2. Select New, and then complete the Auto Search Profile Settings.
   The following table lists the required fields you must complete.

Catalog Name	Knowledge Base Name
Business Component	The business component name from which you want to receive information.
Business Object	The business object name from which you want to receive information.

Configuring Auto Search Settings

Use the following procedure to configure auto search settings.

To configure auto search settings

1. Navigate to the Administration - Smart Answer screen, then the Smart Answer Profiles view.
2. Select the profile for which you want to configure auto search settings, and then the Profile Fields view tab.

   Note: Profile fields are the fields in the business component that you associated with your profile in the previous task.

3. In the Profile Fields view, select New, and then complete the profile fields.
   The following table lists the required fields you must complete.

Catalog Name	Knowledge Base Name
Input Field Name	Name of the Business Component field from which you will be taking input information
Setting Name	Siebel Smart Answer setting name you created in the Settings form

Associating the Auto Search Setting to a Catalog

Use the following procedure to associate the auto search setting to a catalog.

To associate the auto search setting to a catalog

1. Navigate to the Administration - Smart Answer screen, then the Smart Answer Profiles view.

2. Select the profile for which you want to associate auto search settings with a catalog, and then the Settings view tab.
3. Select New. The Add Settings dialog box appears.
4. Enter the search profile settings.

   The following table lists the Search Profile Setting fields.

Name	Knowledge Base Name
RME Content Type	Deprecated parameter, set to Other
RME Data Type	Defined by the Siebel Smart Answer Administration Tool for natural language processing. Only one data type is supported: Text

5. Select a setting type, and then OK.

   All fields of the Settings record are automatically populated.

   Note: You can configure any applet of class CSSSWEFrame or CSSSWEFrameBase with a Siebel Smart Answer button. When you change the applet class, the CSSSWEFrameServiceRequest functionality is enabled, but does it not affect the base functionality.

Configuring an Applet with the Siebel Smart Answer Button

Use the following procedure to configure an applet with the Siebel Smart Answer button.

To configure an applet with the Siebel Smart Answer button

1. In Siebel Tools, locate the applet to which you want to add the applet.
2. Verify that the class is either CSSSWEFrame or CSSSWEFrameBase.
3. Change the class to CSSSWEFrameServiceRequest
4. Add the following applet user properties:
   - Siebel Smart Answer Profile
   - A new Category
5. Add an applet control with the properties described in the following table.

   The following table lists the applet properties that you must use.

Applet	Properties
HTML	Encode Data
HTML Type	Minibutton

Applet	Properties
Method Invoked	SmartAnswer
Name	ButtonSmartAnswer

Creating a Siebel Email Response Profile

In order to enable Siebel Smart Answer inside Siebel Server, an email response profile is required.

Implementing Siebel Smart Answer in Siebel Email Response

Use the following procedure to implement Siebel Smart Answer in Siebel Email Response.

To implement Siebel Smart Answer in Siebel Email Response

1. Create a Siebel Email Response profile.
2. Associate the profile with a setting.
3. Make sure the Siebel Email Response - Process Message Workflow points to the Siebel Smart Answer profile.
4. Set up input arguments.

Creating a Siebel Email Response Profile

Use the following procedure to create a Siebel Email Response profile.

To create a Siebel Email Response profile

1. Navigate to the Administration - Smart Answer screen, then the Smart Answer Profiles view.
2. In the Smart Answer Profiles screen, select New, and then complete the required Siebel Email Response Profile fields.

   The following table lists the Siebel Email Response Profile fields.

Catalog Name	Knowledge Base Name
Business Component	Select Mail Agent Activity
Business Object	Select Mail Agent Activity

Associating a Siebel Email Response Profile with a Setting

Use the following procedure to associate a Siebel Email Response profile with a setting.

To associate a Siebel Email Response profile with a setting

1. Navigate to the Administration - Smart Answer screen, then the Smart Answer Profiles view.
2. Select the profile, and then the Settings view tab.
3. Select New, and then a setting.
4. Select OK.

Note: The Siebel Email Response profile is configured in advance to send body and subject fields for categorization. To add another field, see *Creating Additional Fields for Analyzing Incoming Messages*.

Setting up Siebel Smart Answer

The task required to set up Siebel Smart Answer on your system is described in the following.

Importing the Knowledge Base File

You import the knowledge base file into a catalog in the Administration - Catalog screen. The catalog name must be the same value in the following places:

- Name field for the catalog in the Administration - Catalog screen.
- Knowledge Base Name parameter in the Smart Answer Manager server component.
- (Siebel Email Response only) The Smart Answer Catalog Process property in the Siebel Email Response - Process Message workflow. By default, the value of the process property is *KB*. To override this value with the name of your catalog, you assign the name of your catalog to the Catalog Name input argument of the response group.

Note: By default, the Response Group monitors the catalog titled *KB*. A Catalog Name input argument is not required if you enter *KB* as the name of your catalog and as the knowledge base name parameter in the Siebel Smart Answer Manager server component.

Before you can import the knowledge base file into your knowledge base catalog, you must copy the knowledge base file to a specific location in the Siebel File System.

Importing the Knowledge Base File into Your Knowledge Base Catalog

Use the following procedure to import the knowledge base file into your knowledge base catalog.

To import the knowledge base file into your knowledge base catalog

1. Copy your knowledge base file to the Siebel File System in the `\fs\smartanswer\import` directory.

2. Import the knowledge base catalog and categories in the Administration - Catalog screen.

Copying the Knowledge Base file into the Siebel File System

Use the following procedure to copy the knowledge base file into the Siebel File System.

To copy the knowledge base file into the Siebel File System

1. Navigate to the Administration - Server Configuration screen, then the Servers view.
2. Select the Parameters tab for a Siebel Server, then query for Siebel File System.
   - If the query does not find the parameter, click the Advanced button.
   - The value in this parameter shows you the location of the Siebel File System.
3. Copy the knowledge base file to the `\fs\smartanswer\import` root directory of the Siebel File System.

Importing the Knowledge Base Catalog and Categories

Use the following procedure to import the knowledge base catalog and categories.

To import the knowledge base catalog and categories

1. Navigate to the Administration - Catalog screen.
2. Select the catalog to which you want to import the knowledge base catalog, and then the More Info tab.
3. In the More Info form, select New and then complete the Knowledge Base Catalog fields.

   The following table lists the Siebel Email Response Profile fields.

Name	Knowledge Base Name
Siebel Smart Answer Catalog File	Type. The knowledge base filename without the .xml file extension.

4. Select Smart Answer Import.

   The knowledge base file and its categories are imported into your catalog file.

Setting the Logging Level of the Siebel Smart Answer Log File

Set the logging level to 5 to get the greatest level of detail in the Siebel Smart Answer log file. Use this setting to monitor the operation of categorization, and to debug Siebel Smart Answer. The size of the log file corresponds to the logging level.

To set the logging level of the Siebel Smart Answer log file

1. Navigate to the Administration - Server Configuration screen, then the Servers view.
2. Select the Events tab.
3. Select the Server Event Configuration tab, then query for CatMgr.
4. Select a value of 5 in the Log Level field.

> **Note:** You must stop and restart the Siebel Server for your changes to take effect.

Enabling Siebel Smart Answer Server Component

To bring the server component online, you must set the Knowledge Base name parameter in the Siebel Smart Answer Manager server component. The parameter name is the same as that of your catalog. If you named your catalog *KB*, then you must enter this value as the parameter name.

To enable the Siebel Smart Answer server component

1. Enable the Communications Manager and the Workflow Manager.
2. Navigate to the Administration - Server Management screen, then the Servers view.
3. Select the Siebel Server where you want to enable the Siebel Smart Answer server component.
4. Select the Components tab, then query for the Siebel Smart Answer Manager component.

   The Siebel Smart Answer Manager server component has a component state of Unavailable.
5. Navigate to the Administration - Server Configuration screen - Servers view.
6. In component gTab, find the Smart Answer Manager.
7. Select the Parameters tab, then query for the Knowledge Base Name server parameter.
8. In the Parameters list, change the Value field to the knowledge base catalog name.

   > **Note:** Changing the Value field to the knowledge base catalog name allows the Siebel Smart Answer Manager server component to be brought online when the Siebel Server is restarted. For more information, see *Siebel Installation Guide* .
9. Restart the Siebel Server.
10. Navigate to the Administration - Server Management screen, choose Servers view.
11. Select the Components tab, then query for the Siebel Smart Answer Manager component.
12. Verify that the Siebel Smart Answer Manager server component has a component state of Online.

Administering Response Groups

Response groups have attached to them all the settings for the Siebel Smart Answer Server.

Administering the Knowledge Base and Catalog Administration

Use the following procedure to administer the knowledge base and catalog administration.

To administer the knowledge base and catalog administration

1. Make sure that the response group references the catalog that you want Siebel Smart Answer to use to categorize your messages.
2. Make sure that your Siebel Smart Answer input argument is enabled.
3. You must specify a catalog name in the Response Group input argument Catalog Name in the following circumstances:
   - You create the catalog with a name other the knowledge base.
   - You have two response groups that monitor two different knowledge bases of different names.
4. If you create a profile other than the default profile of SA Siebel Email Response, you must specify the profile name in the Siebel Smart Answer Profile input argument.

> **Note:** You can only have one Response Group for each knowledge base. In order to have two Response Groups that monitor two different knowledge bases, you will need two Siebel Servers, each with its own Siebel Smart Answer Manager server component.

Administering Response Groups

Use the following procedure to administer response groups.

To administer response groups

1. Navigate to the Administration - Communications screen, then the All Response Groups view.
2. Select the Siebel Smart Answer Response Group, and then the Input Arguments tab.
3. Make sure that the Enable Siebel Smart Answer input argument is set to True.

> **Note:** The default Knowledge Base value is *KB*. If the name of your catalog is *KB*, you do not will not have to specify a catalog input argument. Now when you start your Communications Inbound Manager task with this response group, all emails sent to a profile monitored by this response group will be sent to the categorization engine for categorization by Siebel Smart Answer.

Adding Input Arguments to Response Groups

Use the following procedure to add an input argument to the response group.

To add an input argument to the response group

1. Navigate to the Administration - Communications screen, then the All Response Groups view, then query for your response group.
2. Select the Input Arguments tab, and then the New.
3. Add an input argument called Enable Smart Answer, and type TRUE in the value field.
4. Add input argument as ProcessName: Email Response - Process Message

Specifying a Catalog Name Other Than Knowledge Base

Use the following procedure to specify a catalog name other than *KB*.

To specify a catalog name other than knowledge base

1. Navigate to the Administration - Communications screen, then the All Response Groups view.
2. Select the Smart Answer Response Group, and then the Input Arguments tab.
3. Add the Catalog Name process property.
4. Perform this step only if you have multiple knowledge base files, or if you want to call your catalog something other than *KB*.

   For more information, see *Using Multiple Knowledge Base Files*.

   a. In the Name field, type Catalog Name.
   b. In the Value field, type the knowledge base catalog name.

      Use the name of the knowledge base catalog that you used when you enabled the Siebel Smart Answer server component.
5. Add the Siebel Smart Answer Profile name.
   a. In the name field type Siebel Smart Answer Profile.

b. In the Value field, type the name of your profile.

> **Note:** You must only perform this task if you do not use the default profile name. If you have multiple knowledge base files or multiple profiles.

6. Repeat Step 5 for each knowledge base file.

Using Multiple Knowledge Base Files

Each instance of a Siebel Server can have only one Siebel Smart Answer Manager. You must have a Siebel Server for each knowledge base file that you want to add to your business system.

Example of Using Multiple Knowledge Base Files

You have two knowledge base files, KB1 and KB2. The knowledge base files require two Siebel Servers, Server A and Server B. Each server must point to the appropriate knowledge base file. Each Siebel Smart Answer Manager must also point to the appropriate knowledge base.

> **Note:** Each Siebel Server must point to the same gateway server. This allows you to administer the servers from the same screen in the application (Administration - Server Management, then the Enterprise Operations view).

To configure Siebel Smart Answer to use multiple knowledge base files

1. On the appropriate Siebel Server, create a new catalog and import the knowledge base file that you want to use.

   > **Note:** For example, on Server A, create a new catalog and import KB1 to this catalog. On Server B, create a new catalog and import KB2 to this catalog.

2. Create a new profile, one for each catalog or knowledge base file.
3. (Siebel Email Response only) Set up the response groups on the main Siebel Server, as follows:
   a. Create a response group for a knowledge base file you created.
   b. Add an input argument in the response group called Catalog Name.
   c. In the value field, enter the name of the catalog.
   d. Repeat Step a through Step c for each knowledge base file you create.
   e. Add another input argument called Siebel Smart Answer Profile with the name of the profile you created.

   > **Note:** For example, on Server A, create two response groups, RG1 and RG2. Also create two Siebel Smart Answer Profiles, P1 and P2, to monitor each of the knowledge bases. Add two input arguments to each response group, with the values as shown in the following table:

Response Group	Knowledge Base	Profile
RG1	KB1	P1
RG2	KB2	P2

4. Install a Siebel Smart Answer Server for each knowledge base, see *Installing and Administering Siebel Smart Answer*.
5. Enable the Siebel Smart Answer Manager Server component on each Siebel Server.

Note: For example, in the Siebel Smart Answer Manager Component Parameters tab, enter the details as shown in the following table:

Server	Knowledge Base Name Parameter
Server A	Catalog name for KB1
Server B	Catalog Name for KB2

6. (Siebel Email Response only) On the main Siebel Server, create Communication Inbound Manager tasks for each response group.

Note: For example, on Server A create two Communications Inbound Manager tasks, one for RG1 and one for RG2, and start both tasks. When you send a message to the profile monitored by RG1, the categories from KB1 are used. Similarly, when you send a message to RG2, the categories from KB2 are used.

Using Primary and Alternate Server Setup Configuration

Use Primary and Alternate server configurations to allow for high availability in production environments that support large volumes of inbound requests, that is, more than 250,000 requests a day, and for a production environment that needs high availability.

The Primary server records Siebel Smart Answer feedback and synchronizes periodically with the Alternate server. If the Primary server crashes, then the Alternate takes over and a notification is sent to the Siebel Smart Answer administrator. If the original Primary is brought back online, then it takes the role of Alternate. Whenever either server fails a notification is sent out to restart the appropriate server. For more information on administering Siebel Smart Answer, see *Installing and Administering Siebel Smart Answer*.

It is suggested to use this server setup configuration when large volumes of incoming requests of the knowledge base are expected. The Siebel Smart Answer Server can handle more than 250,000 email requests for each day.

Setup Scenario

To setup the Primary and Alternate Server, see *Installing and Administering Siebel Smart Answer*.

Rules and Assumptions for using Primary and Alternate Configuration

The following rules and assumptions apply when you use a Primary and Alternate configuration:

- If a categorization of feedback request is made when the Alternate server is taking over for the Primary, the Siebel Smart Answer engine will not process incoming requests, and will the messages will be added to the Communications List to be manually inspected by a call center agent.
- If either the Primary of Alternate server crashes, a notification is sent to the Siebel Smart Answer administrator and the server must be manually started up again to ensure data integrity.

Process of Administering and Maintaining Siebel Smart Answer

You administer Siebel Smart Answer from the Siebel Smart Answer administration view. Siebel Smart Answer administration tasks can be categorized into tasks to be performed by Siebel Smart Answer Manager server component, and tasks to be performed on your knowledge base and catalogs.

To administer and maintain Siebel Smart Answer, perform the following:

1. For the Siebel Smart Answer Manager server component:
   - *Setting Additional Server Component Parameters*
   - *Checking Server Component State*
2. For your knowledge base and catalogs to make sure that messages are categorized correctly, and that responses are available and accurate:
   - *Administering Response Groups*
   - *Modifying Categories*
   - *Associating Templates and Solutions with Categories*
   - *Creating Additional Fields for Analyzing Incoming Messages*
   - *Setting Up Auto Response*

Setting Additional Server Component Parameters

You can set additional server component parameters.

To set additional component parameters

1. Navigate to the Administration - Server Configuration screen, then the Servers view.
2. Select the server on which you want to set component parameters, and then the Components tab.
3. Query for the Siebel Smart Answer Manager component.
4. Select on the Parameters tab, then query for the parameter you want to set.

   The following table lists some of the component parameters.

Knowledge Base Name	Alphanumeric	None	Knowledge Base Name
Maximum Number of Categories	0-65545	4	Number of categories suggested by Siebel Smart Answer to appear in the drop-down list.
Cache Category ID	True or False	False	Deprecated parameter
CatMgr	1-5	1	Siebel Smart Answer logging level

Knowledge Base Name	Alphanumeric	None	Knowledge Base Name
Load Knowledge Base at Startup	True or False	True	Deprecated parameter
Knowledge Base Update Interval	0-65535	1440	Deprecated parameter
Knowledge Base Write Back Interval	Numeric	100	Deprecated parameter

Checking Server Component State

Check periodically to make sure that the Siebel Smart Answer server component is online and functioning correctly.

To check server component state

1. Navigate to the Administration - Server Configuration screen, then the Servers view.
2. Select the appropriate server from the list of servers, and then the Components tab. Query for the Siebel Smart Answer Manager component.
3. Select the Siebel Smart Answer Manager component, and then the Parameters tab for the component. Select the Knowledge Base Name parameter.
4. Navigate to the Administration - Server Management screen, then the Servers view.
5. Select the Components tab, then query for the Siebel Smart Answer Manager component.
6. Verify that the Siebel Smart Answer Manager server component has a component state of Online.
7. If the component is not online, check the Siebel Smart Answer log file at `siebsrvr\log\SmartAnswer`.
8. Make sure that the knowledge base parameter is entered correctly.

   For more information about how to set the knowledge base parameter correctly, see *Enabling Siebel Smart Answer Server Component*.

Modifying Categories

You can specify that you do not want to return feedback for specified categories to the knowledge base file. You can also specify an auto response threshold for each category. For more information about auto response, see *Setting Up Auto Response*.

To modify a category

1. Navigate to the Administration - Catalog screen, then the Smart Answer Settings view.
2. In the catalog list, select the catalog name, and then Categories.
3. In the Categories list, select the category that you want to change.
4. In the Categories form, complete the category setting fields:

   The following table lists the category settings.

Name	Category Name
Description	Optional
Response Threshold	Required for auto response. A value of 0-100 (an integer value) that represents the confidence level that must be reached before the automatic response is sent.
No Training	(Optional) Used for Siebel Smart Answer only. If this option is not selected, feedback is returned to the Siebel Smart Answer manager for the knowledge base. The default value is *off*.

Note: If you have a hierarchical knowledge base, some categories have subcategories. You can modify both categories and subcategories to achieve the results you require.

Creating Additional Categories

You can add more categories to a knowledge base. Make a copy of your existing knowledge base file by creating a back up in the Siebel Smart Answer Administration Tool, adding a new category in the Category Tab, retraining the knowledge base, and exporting and then importing it into Siebel.

To add an additional category to your knowledge base

1. Open the Siebel Smart Answer Administration Tool.
2. Navigate to the Overview Tab and select Create Backup. Save the backup file in a location of your choosing and name it as a .sab (Smart Answer Backup) file.
3. Navigate to the Category View/Edit Tab, and then select Add Category. Specify the parent node, the name of the new category, and the description. ID is filled in automatically and threshold is optional.
4. Review the corpus, and add text to the corpus for the new category by going to the Corpus Browse Tab and either assigning existing corpus entries to the category, or adding new entries by hand and assigning them to the new category.
5. Perform the Knowledge Base Benchmark, and Analysis workflow to apply learning to the new category.

   For more information on using the Benchmark and Analyze Work Flow, see *Creating a Knowledge Base Model Using the Benchmark and Analyze Work Flow*
6. When you are finished, move the knowledge base back to the `\fs\smartanswer\import` directory.
7. Import the new category to your catalog, or add the new category manually to the catalog.

Associating Templates and Solutions with Categories

For information about how to create a template, see *Siebel Email Administration Guide* . For information about how to create and store solutions, see *Siebel CTI Administration Guide* .

To associate solutions or response templates with categories

1. Navigate to the Administration - Catalog screen, then the Smart Answer Settings view.
2. Drill down on the name of your catalog. The Categories screen appears.
3. Select either the Solutions view tab, or the Response Templates view tab.
4. To associate an item with the catalog, add a new solution or response template record.

Creating Additional Fields for Analyzing Incoming Messages

To add additional field for Siebel Smart Answer to send to the Categorization engine for categorization use the following procedures.

Adding Additional Fields to Analyze Content in Incoming Messages

Use the following procedure to add an additional field to analyze content in an incoming message.

To add an additional field to analyze content in an incoming message

1. Navigate to the Administration - Smart Answer screen, then the Smart Answer Profiles view.
2. Select the SA Email Response profile.
3. Make sure the Business Component and Business Object names are set to Mail Agent Activity.
4. Select the Settings view tab, and then New.
5. Select the setting that you want to use from the Add Settings dialog box, and then click OK.
6. Select the Profile Fields view tab, and then New.
7. Select one of the business component fields that are available with the Mail Agent Activity business object in the Input Field Name field.

   > **Note:** The Input Field Name must link with the field in your workflow name, as listed in *Troubleshooting Guidelines for Siebel Smart Answer Server*. The input field name does not contain the prefix Eventfields.

8. From Setting Name field, select a setting.

Adding Fields to Workflow Processes

Use the following procedure to add a field to a workflow process.

To add a field to a workflow process

1. Log in to Siebel Tools.
2. Select Workflow Process in the Object Explorer.
3. Select the process eMail Response - Analyze Message whose status is set to Completed, and then click the Revise toolbar button.
4. Add the process property to the eMail Response - Analyze Message workflow process, as follows:
   a. Select the process eMail Response - Analyze Message whose status is set to In Progress.
   b. In the Object Explorer, expand Workflow Process then select WF Process Prop.
   c. Right-click in the WF Process Props list, then choose New Record.
   d. In the Name field, type the name of the property.

      The following table lists the property names that you can use.

Property Name	Description	Input Argument
MsgBody	EventFields.Email Body	Default. Contains the content of the body area of the incoming email message.
MsgSubject	EventFields.Email Normalized Subject	Default. Contains the content of the Subject field of the incoming email message
MsgSenderAddress	EventFields.Email Sender	(Optional) Contains the email address of the sender of the incoming email
Select the property to send to the categorization engine from the list in the WF Process Props list. Typically, these properties begin with the letters Msg.	Typically, this argument takes the form EventFields.property-name, where property-name is the name of the property you have selected. For example, if you selected the property MsgFormat, the input argument is EventFields.MsgFormat.	(Optional) Contains the value of the property you selected. **Note:** When you add the Text input argument to a workflow, the text input argument does not appear in the list of fields. To use the input argument, type Text in the Input Argument field.

   e. Select String from the Data Type field.

5. Add an input argument to the process property as follows:
   a. Select the process eMail Response - Analyze Message whose status is set to In Progress.
   b. Right-click on the process then choose Edit Workflow Process.
   c. Select the Categorize Message business service to see a list of input arguments for the business service in the Multi Value Property Window.
   d. Right-click in the list of input arguments, then choose New Record.
   e. In the Input Argument field, select the input argument that corresponds to the property name you specified in Step 4. Use the table in Step 4 to identify the correct input argument.
   f. If the input argument that you want does not appear, type the input argument name in the field.
   g. In the Type field, select Process Property.
   h. In the Property Name field, select the appropriate property name. The name you select must match the property name you specified in Step 4.
   i. Close the workflow process window.
6. Select the process eMail Response - Process Message whose status is set to Completed, and then click the Revise toolbar button.
7. Add the process property to the eMail Response - Process Message workflow process, as follows:
   a. Select the process eMail Response - Process Message whose status is set to In Progress.
   b. Right-click on the process then choose Edit Workflow Process.
   c. Select the Analyze Message subprocess to see a list of input arguments for the subprocess in the Multi Value Property Window.
   d. Right-click in the list of input arguments, then choose New Record.
   e. In the Input Argument field, select the input argument that you want to add to the workflow process.

> **Note:** The Categorize Message business service of the eMail Response - Analyze Message workflow uses the input argument that you add.

f. In the Type field, select Process Property.
g. In the Property Name field, select the appropriate property name.
h. Close the workflow process window.
i. For each process listed in the following table, select the process, and then click the Publish toolbar button.

Process Type	Status
eMail Response - Process Message	In Progress
eMail Response - Analyze Message	In Progress

8. Log in to your Siebel application.
9. Navigate to the Administration - Business Process screen, choose Workflow Deployment view.
10. For each of the following processes, select the process in the Repository Workflow Processes list, and then Activate:
    - eMail Response - Process Message
    - eMail Response - Analyze Message

Setting Up Auto Response

Auto response is a feature that sends an automatic response to a customer based on the natural language processing (NLP) analysis of an incoming email. The response that is sent to the customer contains a default solution or template, can contain a greeting or closing template, and can be in plain text or HTML format. For the default greeting or closing, and HTML or plain text settings, the auto response feature uses the Input Argument of the response group. The argument can be configured as follows.

If you choose to use the auto response feature, you must add a threshold value to the appropriate categories. A threshold is an integer value in the range 0-99 that represents the confidence level that must be reached before an auto response is sent. For example, if you want to send an auto response to a customer when a category associated with the incoming email has a confidence level of 90% or greater, set the auto response threshold to 90. When a category associated with an incoming email receives a confidence level of 90% or greater, an auto response message is sent.

Specifying the Email Format for Auto Response

Use the following procedure to specify the email format for auto response.

To specify the email format for auto response

1. Navigate to the Administration - Communications screen, then the All Response Groups view.
2. Select a Response Group, and then the Input Arguments tab.

3. Add a new record, then enter the following values:
    - Name: EmailFormat

      Note: If you do not specify EmailFormat, the default format is Plain Text.

    - Value: HTML/Plain Text (for HTML) or Plain Text for (Plain Text)

Adding Auto Response Thresholds to Categories

Use the following procedure to add an auto response threshold to a category.

To add an auto response threshold to a category

1. Navigate to the Administration - Catalog screen.
2. In the Catalogs list, select the catalog name.
3. In the Categories list, select the category you want to change.

   Note: If you have a hierarchical knowledge base, some categories have subcategories.

4. In the Response Threshold field, type the value that represents the auto response threshold.

Setting up Response Templates and Solutions for Auto Response

Use the following procedure to set up response templates and solutions for auto response.

To set up response templates and solutions for auto response

1. Navigate to the Administration - Catalog screen.
2. In the Catalogs list, select the catalog name.
3. In the Categories list, select the category you want to change.
4. Select the Response Templates tab or the Solutions tab to add a solution or template.

   For more information, see *Associating Templates and Solutions with Categories*.
5. After you add the solution or template, select the Default check box.

   This indicates that when a threshold is met or exceeded, the template or solution will be sent by auto response.

   Note: You can specify the order in which solutions and templates are included in an outgoing auto response email. To specify the order, use the Order number field in Response Templates and the Sequence number field in Solutions. Enter the order or sequence in these fields. Use integer values from 1-99. Enter zero if you do not want to specify an order or sequence position.

   If multiple default solutions or templates are specified for a category, the sequence displayed in the auto response is as follows:

   a. Ordered default templates
   b. Non-ordered default template, where no number is specified
   c. Sequenced default solutions
   d. Non-sequenced default solutions, where no number is specified.

5 Using the Siebel Smart Answer Administration Tool

Using the Siebel Smart Answer Administration Tool

This chapter provides instructions for using the Siebel Smart Answer Administration Tool. It includes the following topics:

- *About Siebel Smart Answer Administration Tool*
- *Logging in to the Siebel Smart Answer Administration Tool*
- *Building a New Knowledge Base Model*
- *Backing Up and Restoring the Corpus*.
- *Building a Corpus*
- *Modifying Corpuses*
- *Assigning and Managing Categories for Corpus Entries*
- *Creating a Knowledge Base Model Using the Benchmark and Analyze Work Flow*
- *Querying the Knowledge Base Model*
- *Exporting the Knowledge Base*
- *Scheduling Maintenance for the Knowledge Base Model*
- *About Dashboard and Reports*

About Siebel Smart Answer Administration Tool

The Siebel Smart Answer Administration Tool provides all the required functionality for creating and managing a corpus, creating and maintaining categories, building, tuning and exporting a knowledge base, and monitoring the run-time effectiveness of the exported knowledge base. The purpose of this section is to describe each of the major features of the Siebel Smart Answer Administration Tool and provide examples of how to use each in order to maximize the accuracy of the knowledge base for use in Siebel Contact Center, Siebel Email Response, and Siebel Self Service Center.

Logging in to the Siebel Smart Answer Administration Tool

The Siebel Smart Answer Administration Tool requires a user name and password, so that the system will not let the same user log in more than once at the same time and so that the corpus and knowledge base are protected.

To log in to the Siebel Smart Answer Administration Tool

1. Obtain a username and password from your system administrator.
2. Add users.

   > **Note:** If you are the system administrator, see *Using the Siebel Smart Answer Administration Tool* for instructions on how to add users.

3. Select the desired language.
4. Enter your username and password, and click OK.

   > **Note:** The path to the configuration file and the knowledge base endpoint must remain untouched, unless advised by your administrator to use a different configuration or knowledge base endpoint. In particular if the Smart Answer Server is installed to a non-default port, then make sure to enter the knowledge base endpoint as *KB name:port number*.

5. Check for the status message: Connected to Server at the end of the screen. This message will appear as soon as the Siebel Smart Answer Administration Tool is connected to the Siebel Smart Answer server and is ready to use. The first screen you will be presented with is the System Overview Tab, which contains information about the server in use as well as the currently logged in account.

Building a New Knowledge Base Model

Use the following procedure to build a new Siebel Smart Answer knowledge base model.

To build a new knowledge base model

1. Log into the Siebel Smart Answer Administration Tool by specifying a username, password, and the knowledge base you want to connect to.
2. Back up your existing corpus.
3. Prepare and import the corpus.
4. Validate the corpus.
5. Assign categories to your corpus entries.
6. Benchmark the knowledge base model.
7. Analyze and tune the knowledge base model.
8. Build the knowledge base model.
9. Export the categories to Siebel.
10. Monitor the activities of the run-time Call Center environment.

Backing Up and Restoring the Corpus

Before making any modifications to your corpus, you must back up the data associated with your corpus.

To back up and restore your corpus

1. Navigate to the Corpus Overview Tab and then click the Create Backup button.

2. Save the .sab file to a place where you can easily access it again in case you want to restore that version of the corpus.
3. To restore the corpus, navigate to the Corpus Overview Tab and select Restore Backup.
4. Browse to the location where you save the .sab file and select the file.

Note: This will completely restore your corpus and categories to the state of the backup file and will delete the current state stored in the Siebel Smart Answer Administration Tool.

If you want the knowledge base model in the Siebel Smart Answer production environment to match the restored version in the Siebel Smart Answer Administration Tool, you must build a knowledge base model. For more information on how to build a knowledge base model, see *Building a New Knowledge Base Model*.

Building a Corpus

Building a corpus is one of the most critical parts of the knowledge base model building process since the quality of the corpus determines the quality of the performance of Smart Answer.

Building, Preparing, and Importing a Corpus for the Siebel Smart Answer Knowledge Base Model

Use the following procedure to build, prepare, and import a corpus for the Siebel Smart Answer knowledge base model.

To build, prepare, and import a corpus for the Siebel Smart Answer knowledge base model

1. Carefully select emails and any other documents that represent your business domain to ensure that Siebel Smart Answer has enough content to learn the concept models for the categories you will later use as part of the Siebel Call Center. The documents can be of mixed language and mixed format.

   The supported formats include:

   - Raw Text
   - HTML
   - Microsoft Word
   - PDF
   - PostScript
   - XML
   - E-mail
   - CSV
   - ENV

   The supported languages include:

   - English

- French
- Italian
- German
- Spanish

> **Note:** The corpus can be heterogeneous and it is not required for the corpus to contain documents in the same format or in the same language.

2. Navigate to the Corpus Tab and then click the Import button. A popup box will appear that requires the name of the corpus, the location of the corpus, and the file type of the corpus. Create a new Corpus by completing the necessary fields.
   Some fields are described in the following table:

Corpus Import Fields	Input Type
Input knowledge base	Directory or File
Type	Drop Down List

   - During the import process, a status screen will appear that indicates the number of entries processed. When the import is complete if there were any errors, both the file and line number of the file will be listed. Carefully read the error screen and correct each error by either removing the files or editing them so that they are compatible with the expected format.
   - After the errors are corrected, it is not necessary to re-import the entire corpus. Instead navigate to the Corpus Browse tab and select Add Entry for each entry that had errors. This completes the process of preparing and importing a corpus.
3. After the corpus is imported the corpus entries are summarized on the Corpus Browse tab. Each corpus entry is parsed so that multiple fields are associated with it. These include, a unique identifier, the language of the corpus entry, an optional Categories, To, From, and Subject, and then the Message field. In the case the entry is an email, the To, From, Subject, and Message will all be populated. For non-email corpus entries all content will be associated with the Message field.

Modifying Corpuses

Use the following procedure to modify your corpus.

To modify your corpus

1. Navigate to the Corpus Browse Tab.
   The entries can be filtered either by language or by whether the corpus entry has a category assigned to it.
2. To edit an entry, highlight the row of the entry and select Edit. In this screen the category, to, from, subject, message, and language information for a category can be modified and saved.
3. To delete an entry, highlight the row of the entry and select Delete.
4. To add an entry, click on Add and browse to new the corpus entry on your file system.

Assigning and Managing Categories for Corpus Entries

After all the corpus entries have been added, updated, and verified, the next step is to assign categories to each corpus entry. This section will cover the following topics on creating categories for corpus entries:

- Multilingual corpus categories
- Bulk import of category assignments
- Using suggested categories
- Assigning categories and parent categories manually

Extraction of Categories from a Corpus

If the corpus entries are organized in a directory or folder structure, during the import process the Siebel Smart Answer Administration Tool will automatically assign categories to corpus entries. Each corpus entry will be assigned the name of its parent folder or directory.

Hierarchical Knowledge Bases for a Multilingual Corpus

If a corpus is in more than one language, the Siebel Smart Answer Administration Tool will detect the language of each entry and organizes the content into groups by language. When you browse the imported multilingual category set, the top-level nodes of the category hierarchy are the languages in your corpus, the categories themselves have the language name appended with a hyphen, and the entries are leaf-level nodes in the hierarchy.

CAUTION: If you are manually creating your corpus and it consists of multiple languages you must organize your entries by language otherwise the categorization might not work.

Bulk Importing of Category Assignments

Bulk importing of corpus entries and category assignments is most appropriate when a call center has a large set of existing emails and they have already been labeled with one or more categories. For example, as soon as a customer request has been resolved, a call center site might store all service requests with its resolution category in a database table. During the Siebel Smart Answer corpus preparation, the database can be queried for the customer email content and the resolution category. The results of the query can be quickly formatted into a bulk import CSV file.

Expected Format for a Bulk Import CSV file

The supported fields for a Siebel Smart Answer CSV import for email is a subset of those exported by Outlook Express and include: Subject, Body, From: (Name), From: (Address), To: (Name), To: (Address).

The only mandatory field for import is the Body field. An example of an import file with the fields Subject, Content, and Categories might look like the following:

```
Line 1: Subject, Content, Categories

Line 2: stains, I can not get the ink stains out of my cotton shirt using your
product, apparel

Line 3: coffee, The coffee tasted bitter after sitting in the freezer for two weeks,
food
```

Note: If you want to add a document as an entry to the CVS bulk import, you can fill or specify the Body and Categories field and dump the text of the document into the Body field.

Bulking Import Corpus Entries with Category Assignments

Use the following procedure to bulk import corpus entries with category assignments.

To bulk import corpus entries with category assignments

1. Navigate to the Corpus Status Tab, and then click Import.
2. Select the file type CSV.

   For more information on generating a bulk CSV file, see *Expected Format for a Bulk Import CSV file*.
3. Browse to the CSV file, and click OK to start the import process.

Starting Your Category Sets with Suggested Categories

For call centers that are starting from scratch and have no predefined categories for their corpus and entries, the Siebel Smart Answer Administration Tool has the ability to suggest categories for their corpus entries.

To generate suggested categories for your corpus entries

1. Navigate to the Category tab and select Start Clustering, where you will be prompted to fill in the number of categories that you want your corpus to have.

   Note: The suggested number of categories for a corpus is generally the square root of the number of corpus entries. Additionally it is recommended that each category have roughly the same number of corpus entries for best performance of the knowledge base. (For a very large corpus (more than 1000 entries) this can take up to an hour.
2. Fill in the number of desired categories, and click OK.

   Note: For a very large corpus of more than 1000 entries, this process can take up to an hour. You will know the clustering process is complete when the status information has Clustering Result Available: Yes.
3. To generate suggested keywords to use as topics for each cluster, select Create Clusters from Categories.

> **Note:** A pop up box will appear to let you know when this process is complete and will state Successfully created categories and assigned to entries. This can take up to a minute. Select OK to dismiss the box.

4. Navigate to the Category View/Edit Tab.
5. Select List view to see the category to corpus assignments. The clusters will initially be named Cluster [1-n].
6. Highlight the first category set, Cluster1, and select Edit.

> **Note:** The Description Field will list the common keywords for the category and can be used as a guideline for naming the category.

7. Pick the keyword that makes the most sense for your business domain and type it into the Category Name field.
8. Select Save to commit this keyword as the new category name.
9. Repeat Step 2 through Step 8 until all the clusters have been renamed with human understandable category names.

Creating Hierarchical Categories

If you have a large number of categories that can be grouped together, it makes sense to organize them into a hierarchy.

To create hierarchical categories

1. Navigate to the Tree View of the Category Tab.
2. Highlight the category that you would like to assign a parent node.
3. Select a parent from the drop down list of Parent Categories, and then Save to commit the change.
4. Repeat Step 2 and Step 3 for all categories for which you would like to assign parents.

Automatically Creating Categories Using Feedback

As soon as a category is added to the catalog attached to the Siebel Smart Answer knowledge base and agents manually assigning the category to service requests, a feedback request will be sent to Siebel Smart Answer. The feedback request will alert Siebel Smart Answer that the given service request content and the assigned category are new and valid corpus entries. You do not have to manually enter the category in the Siebel Smart Answer Administration Tool. The next time the knowledge base is retrained, the category will be part of the Siebel Smart Answer run-time category set. Over time as more service requests are attached to the new category, the category confidence will increase.

Manually Assigning Leaf and Parent Categories

Manually assigning categories to corpus entries is the most time consuming and error prone method for building a Siebel Smart Answer corpus and is not recommended for a corpus with more than a few hundred entries. If you have more than a few hundred and must assign categories to each of them, see *Starting Your Category Sets with Suggested Categories*.

To manually form a hierarchical category set, you must decide which categories will be the parent nodes and those that will be the leaf or child nodes.

Note: You must first create a new category.

To create a new parent or leaf node

1. Navigate to the Category - Tree View Tab.
2. Create a new category by completing the necessary fields.

   Some fields are described in the following table:

Category Name	Text
Parent Category	Select from Dropdown list
Category Description	Text

After all the categories are added into the Siebel Smart Answer Administration Tool, you can proceed to manually assign them to your corpus entries.

Assigning Categories Manually to Corpus Entries

Use the following procedure to assign categories manually to corpus entries.

To manually assign categories to corpus entries

1. Navigate to the Corpus Browse Tab.
2. Highlight the corpus entry and select Edit.
3. In the categories box select the plus sign to add a category.
4. If you make a mistake you can highlight the category and delete it by clicking the x.
5. Repeat Step 2 through Step 4 for all categories you want to add to the entry.
6. Select Close to save the assignment and move on to the next corpus entry.

Creating a Knowledge Base Model Using the Benchmark and Analyze Work Flow

The process for creating a knowledge base model for use in the Siebel Smart Answer run-time system is an iterative process of benchmarking the model, analyzing the model, and tuning it. If during the analysis process you make any changes to the categories or corpus entries, the benchmark, and analyze process must be repeated to reflect your changes. You must carefully review the analysis and benchmarking results to make sure that your changes are having a positive impact on the Siebel Smart Answer knowledge base model.

Benchmarking the Knowledge Base Model

The Knowledge Base benchmark is the most informative set of statistics to predict how well the Siebel Smart Answer system will perform in the Siebel Smart Answer run time. The Siebel Smart Answer Administration Tool will compute the expected accuracy of each category by randomly sampling the corpus and reserving 20% for testing and using the rest for training. It will repeat this process five different times and then average the scores.

Running a benchmark

1. Navigate to the Knowledge Base Benchmarking Tab and select Run Benchmark.

   Note: The benchmarking process can take several hours for a large corpus.

2. Review the final scores shown in the Benchmarking report.
3. Review for each category the accuracy, the total incorrectly classified entries (Incorrect), the total of correctly classified entries (Correct), and the total number of entries that were not classified as the expected category (Missing).

Modifying the corpus using Benchmark Results

The knowledge base benchmark is the best way to measure the expected performance of your knowledge base model in the call center run time environment. When first building a knowledge base it is expected that you must adjust your knowledge base inputs - the categories, corpus entries, and category assignments, at least once before the knowledge base model will be ready for export in the Siebel Smart Answer environment. The Knowledge Base Benchmarking Tab lists each of the categories with their accuracy scores as well as their corresponding entries.

To adjust and analyze your knowledge base model

1. Navigate to the Knowledge Base Benchmarking Tab.
2. Select a category row and select View… Miscategorized entries to display all the entries that were incorrectly assigned to the selected category.
3. Inspect each entry to verify that:

   a. It really belongs to the category currently assigned to it and not to the one it was categorized as during the benchmarking process. If not, re-label the entry with correct category by clicking Edit entry at the end of the screen and changing the category name using the plus and minus signs.
   b. The content of the entry is informative and meaningful for the currently assigned category. If not then modify the contents of the entry by clicking Edit entry.
   c. For instructions on how to delete an entry because it is noisy or contains irrelevant information, see *Modifying Corpuses*.

Repeating the Benchmarking Process

In order to validate that the changes made to the corpus during the Analyze and Tune process were productive, a new benchmark must be run to measure your modifications to the corpus and/or category set.

To repeat the benchmark process

1. Navigate to the Knowledge Base Benchmark Tab and select Run Benchmark.

   For more information on the benchmarking process, see *Benchmarking the Knowledge Base Model*.
2. Examine the results as described previously and repeat the Knowledge Base Benchmark, and Analyze workflow until the scores for each category are at least 50% or higher.

   > **Note:** Keep in mind that the feedback mechanism will quickly tune the knowledge base model to learn the operating environment and that the initial knowledge base model is only intended as a starting point from which Siebel Smart Answer will learn and refine the categorization models inside the knowledge base model. So if you can not reach the 50% accuracy mark, you can rely on the feedback mechanisms to do the correction in the production environment.
3. Whenever any changes are made to the categories or the corpus inside the Siebel Smart Answer Administration Tool, always build the knowledge base model in order for the changes to take affect in the Siebel Smart Answer run-time system.

   For more information on how to build a Siebel Smart Answer knowledge base model, see *Building a New Knowledge Base Model*.

Building a Knowledge Base Model for a Siebel Smart Answer Production Environment

After you have completed the Benchmark, Analyze and Tune workflow, you must build a knowledge base model in order push the knowledge base model into the Siebel Smart Answer production environment.

> **CAUTION:** Building a Knowledge Base will automatically make the new knowledge base the one used in production. Do not build a knowledge base unless you want the most recent changes to your corpus in the Siebel Smart Answer Administration Tool to be reflected in the Siebel Smart Answer production environment.

To build a knowledge base model for your Siebel Smart Answer production environment

1. Navigate to the Knowledge Base Status tab and select Build Knowledge Base to start the knowledge base model training.
2. Wait for the Training Status to be set to: *Not Training*.

   > **Note:** The training process can take several hours and scales with the size of your corpus. Do not build a new knowledge base model during high call center load.
3. As soon as the knowledge base model is built, it will automatically be the default model for your production environment.

Tuning Thresholds for Your Knowledge Base Model

The knowledge base benchmark is the best way to predict the performance of your knowledge base model in the call center run time environment. When you finish making the corpus adjustments, as determined by the benchmark results, your next step is to adjust the category thresholds. Each of the categories has a target accuracy to simplify this process.

To tune thresholds for your knowledge base model

1. Navigate to the Knowledge Base Analysis Tab.
2. Set the target accuracy of each category with either the arrow keys or manually percentage values.
3. With the modified category selected, click the 'Calculate Threshold' button.
   a. This will set the Confidence threshold to a level so that, based on the benchmark results, the accuracy of entries above the threshold will meet or exceed the target accuracy.
   b. If the Confidence Threshold sets itself to 100%, this means that Target Accuracy can not be achieved.

   > **Note:** You must select the *Push Changes* option to commit and save the changes to a category. When you select the *Reset* option, all of the categories will revert to their current state in the Smart Answer Server.

4. Click the Calculate Expected Accuracy button.

   > **Note:** This may take a few minutes to complete for a large corpus.

5. Inspect the results the Expected Accuracy Results.
   a. *Actual Accuracy* of each category is the accuracy of benchmark results above the confidence threshold.
   b. *Exceeds Threshold* of each category is the percentage of benchmark results that are above the confidence threshold.
6. Select Push Changes to save the changes of all categories to the Smart Answer Server.

Querying the Knowledge Base Model

After the final knowledge base model is built, a good practice is to validate the knowledge base model by testing it on a small sample of emails for which the desired category is already known. There are two methods for doing this:

- Single query mode
- Batch query mode

Validate Your Knowledge Base Model with Single Query Mode

Single query mode is useful for dynamic validation of your knowledge base model. In this mode you can type in text or copy in email text to see how the knowledge base model will categorize it.

To validate your knowledge base model using single query mode

1. Navigate to the Query - Single Query Tab.

2. Type in or copy and paste the text of an email into the box labeled: Enter message to be analyzed here, and select Run Query.
3. Review the category assignments and the confidence scores for your query in the results table at the end of the screen.
4. Select Clear to enter another query.
5. Repeat Step 1 through Step 4.

Validating Your Model with Batch Query Mode

If you have several test queries, they can be placed in a CSV file with at least two fields: Categories, and Body. The file can be thought of as a key or a test to see how well your knowledge base model does on new emails that were not part of the training set. For more information on the available fields, see *Expected Format for a Bulk Import CSV file*.

To validate your knowledge base model using batch query mode

1. Navigate to the Query - Batch Query Tab.
2. Select Load File and browse to your CSV file with the tests emails and their expected category assignments.
3. Review the results of the batch query at the end of your screen. The format is the same as for the Knowledge Base Analysis Tab.

   For more information on the benchmarking process, see *Benchmarking the Knowledge Base Model*.

Exporting the Knowledge Base

After the final knowledge base model is built and has been tuned adequately, the category set needs to be exported for import into Siebel so that the catalog inside Siebel and the category set inside the Siebel Smart Answer Administration Tool are the same.

To export your knowledge base categories for import into Siebel Smart Answer

1. Navigate to the Category Overview tab and select Export Categories.
2. Save the knowledge base .xml file to the shared Siebel File system under the location configured while installing the Siebel Smart Answer connector. For more information on configuring the knowledge base file import location, see the *Siebel Smart Answer Connector Guide* on the *Siebel Bookshelf* .

For more information on how to import the knowledge base file, see *Importing the Knowledge Base File*.

Scheduling Maintenance for the Knowledge Base Model

In order to incorporate feedback into the Siebel Smart Answer knowledge base model, the NLP engine needs to rebuild the knowledge base model each night. Additionally, any changes made to the catalog or feedback requests sent for new

categories from within the Siebel application, will not be immediately reflected when the Siebel Smart Answer Engine is run. The scheduled maintenance will:

- Synchronize the Siebel Smart Answer Administration Tool data model with the Siebel Catalog data model.
- Incorporate the Siebel Smart Answer feedback from the last 24 hours into the new knowledge base data model.
- Re-adjust thresholds based on Target Accuracy for the new model.
- Rebuild a new model that will become the production Siebel Smart Answer knowledge base model.
- If there are more than 500,000 entries in the knowledge base corpus, the Smart Answer Engine will remove duplicate entries and retain the most recent entries for each category. This action ensures that the categorization time is less than a second. It also tunes the knowledge base model to the most recent activities in the call center.

To schedule a maintenance window for the Siebel Smart Answer knowledge base model

1. Navigate to the Knowledge Base Status tab.
2. Modify the Auto-rebuild time and select Set.

Synchronizing the Knowledge Base Categories and Thresholds

Each time a new knowledge base model is pushed to the Siebel Smart Answer Manager, the confidence thresholds must be updated for auto-response inside Siebel Email Response. Because the knowledge base model will change at least once a day due to scheduled maintenance, synchronization must be done at least once a week. Synchronization will also push any updates made in the Siebel application to the categories into the Siebel Smart Answer Administration Tool and the knowledge base.

> **Note:** If changes are made to the categories inside the Smart Answer Administration Tool, then a knowledge base file must be exported and then imported into Siebel.

To synchronize thresholds and categories

1. Navigate to the Administration - Catalog screen inside Siebel.
2. Select the active knowledge base.
3. Select Smart Answer Synchronize.

About Dashboard and Reports

The Dashboard tab in the Siebel Smart Answer Administration Tool is designed to give the user an at a glance summary of the effectiveness of the call center.

- Messages per Minute and Hourly messages are two views of how much request traffic is being seen by the CSRs and how quickly they are responding to service requests.
- Top five categories of the day is an up to date pie chart of the top five most frequently used categories of the day.
- CSR optimization has two metrics: CSR productivity and CSR assist.

- CSR productivity is a measure of how often the Siebel Smart Answer engine auto-responds to customer requests and consequently increases the productivity of the CSR.
- CSR assist is a measure of how often the CSR uses the auto-suggestions from the Siebel Smart Answer engine.
- Service Affecting Messages is a graph of how many service requests were classified as customer complaints or with a highly negative sentiment. In the run time Siebel Smart Answer engine service affecting messages are classified with the category service_affecting. It is up to the call center manager to impose policies or create specialized work flows to take advantage of this information in case escalation is required. For a definition of service affecting messages, see *Glossary*.

6 Troubleshooting Siebel Smart Answer

Troubleshooting Siebel Smart Answer

This chapter provides tips for troubleshooting Siebel Smart Answer. It includes the following topics:

- *Troubleshooting the Performance of Siebel Smart Answer Knowledge Base*
- *Troubleshooting Guidelines for Siebel Smart Answer Server*
- *Troubleshooting Failure of Siebel Smart Answer DLL to Load*

Troubleshooting the Performance of Siebel Smart Answer Knowledge Base

The following table lists some of the problems you may encounter when working with Siebel Smart Answer knowledge base catalog files and provides suggested solutions.

Problem	Solution
You do not get the desired results from your knowledge base.	Analyze the performance of your knowledge base file using Siebel Smart Answer Administration Tool. For more information, see *Troubleshooting the Performance of Siebel Smart Answer Knowledge Base*.
What happens to my existing categories when I import a new knowledge base that has some of the same categories as the one I already use?	After you import a new knowledge base, new categories are appended to the categories list in the Categories Administration screen. Existing categories are not overwritten or deleted and you do not lose the associations of templates and solutions with a category. For new categories, you must associate templates and solutions. For more information, see *Associating Templates and Solutions with Categories*.
How long does it take a category to learn if I have added a category and not associated any examples with it?	Learning time depends on the volume of incoming requests. Learning time can take from two hours to two days.
How do I control the number of categories that Siebel Smart Answer returns?	Siebel Smart Answer assigns a confidence score to each of the categories, and only returns the categories that have a score within 90% of the highest scoring category, and at most five will be returned.
The knowledge base file has not been updated since it was imported to the Siebel Server for production. How can this file contain learning if it has not been updated?	The knowledge base file in the `\fs\smartanswer\import` directory contains the list of categories. The learning and all the existing concept models are stored with the Siebel Smart Answer Servers. Updates to the knowledge base concept models will only be made once a day in order to optimize the uptime of the classification engine and the retraining process. After you run Siebel Smart Answer for a sufficient amount of time, you can open the Siebel Smart Answer Administration Tool and navigate to the Knowledge Base Benchmarking Tab. Select Run Benchmark. When that is finished the results for each category will be displayed at the end of the screen in a table. Each category will have its own row. You can also create more messages and run Analyze only on those selected messages using either the Single Query or Batch Query option. The

Problem	Solution
	statistics displayed in the table for each category shows you the performance of your production knowledge base.
After training the knowledge base with additional sample emails, can I load the knowledge base back into production without rebooting the server? Also, can I do this during operations or running, or must I wait until after business hours?	You can update existing categories while the knowledge base is in production inside the Siebel Server. Send in an email, select the appropriate category, and then click the Send button and positive feedback is applied to a category. The feedback occurs in real time, but the learning for the category will not be applied until the daily knowledge base rebuild. To add a new category, use the Siebel Smart Answer Administration Tool as described in Creating New Categories. Copy the new knowledge base file to the **`\fs\smartanswer\import`** directory. Add the new category in Catalog Administration screen for the knowledge base. It is unnecessary to re-import the knowledge base. The re-import process loads the categories in the database. As long as the categories in your knowledge base .xml on the Siebel File System match exactly the categories in your catalog in the Siebel application, there is no reason to re-import. Similarly, you do not have to stop and start the Siebel Server. When you restart the Siebel Server, the Siebel Smart Answer Manager server component reloads the knowledge base file. It is unnecessary to restart the Siebel Server because the .xml file name has not changed. If you want Siebel Smart Answer to point to a completely different knowledge base with completely different categories, then it might be easier to re-import than to create a structure in the Siebel Server and that same structure in Knowledge Base Editor. If the name of your .xml file changes, re-import the knowledge base so that Siebel Smart Answer Component picks up the correct knowledge base. You must also stop and start the Siebel Server. Restart the Siebel Server during non-business hours to avoid disruption.
If I import the same knowledge base again, do I have to associate all the solutions and response templates with the categories again?	No. If you load the knowledge base again, and it has the same categories as the one already in your Siebel File System, the solutions and response templates associated with the old knowledge base categories remain associated with the new imported knowledge base categories. However, if you add a new category to your knowledge base, then you must associate new templates and solutions to this new category.
How does the knowledge base handle a message with multiple intents?	When an agent replies to an email, the agent can choose more than one category, template, or solution. Siebel Smart Answer suggests categories and the agent can choose one or more categories, and one or more templates and solutions that are associated with each category. When the agent clicks Send, feedback is generated and then stored in the knowledge base file for each category associated with the templates and solutions selected by the agent.
How many emails do you need to train a category?	The more example emails you can provide for a category, the better the performance of the knowledge base. As a best practice when starting up, collect at least 20 emails for each category. It is important that the number of examples for each category is roughly the same so that all the categories have an equal weight during the categorization process.

Troubleshooting Guidelines for Siebel Smart Answer Server

The following are some common errors that might occur during your Oracle's Siebel Smart Answer Installation.

- During Installation an error occurs while validating the Siebel Database.

- Siebel Smart Answer Server fails to start due to internal database failure.

Common installation issues and error messages, as well as solutions are described in the following table.

Symptom/Error Message	Diagnostic Steps or Cause	Solution
Installation prompts dialog: Failed to connect to database. Ignore?	The installer was unable to connect to the database using the information provided.	For more information on troubleshooting the installer, see *Troubleshooting Failure to Connect to Database During Installation*.
Siebel Smart Answer Server fails to start with an exception stating that it could not start the Postgres sub-process.	The Siebel Smart Answer Server (particularly the internal PostGres database) was not shut down cleanly and was corrupted.	For more information on troubleshooting the Oracle's Siebel Smart Answer Server, see *Troubleshooting Failure of Siebel Smart Answer Server to Start*.
Siebel Smart Answer Server fails with an exception "java.lang.NoClassDefFound"	The wrong version of java is being invoked.	For more information on troubleshooting Java version problems, see *Troubleshooting Java Version Errors for Siebel Smart Answer Server*.
When trying to restore a backup .sab file inside the Siebel Smart Answer Administration Tool, the restore fails with an exception that there are duplicate keys in the database.	The knowledge base is corrupt and needs the database to be reset.	For more information on troubleshooting the Oracle's Siebel Smart Answer Server, see *Troubleshooting Failure of Siebel Smart Answer Server to Start*.

Troubleshooting Failure to Connect to Database During Installation

During installation if the credentials to the database are incorrect, the installation will fail.

To resolve failure to connect to the database during installation

1. Verify the password entered is correct.
2. Verify database hostname is reachable from the computer performing the installation.
3. Verify the database credentials are correct by using a separate database tool to connect to it.

Note: This process tests the database connection to the same database Siebel is using and does not try to connect to the Siebel Server itself.

Troubleshooting Failure of Siebel Smart Answer Server to Start

If the computer running Oracle's Siebel Smart Answer Server was shut down with an error, then it is possible the Siebel Smart Answer Server might have problems starting.

To resolve the failure of Siebel Smart Answer Server to start

1. If running with another Failover Computer:
    a. Ensure the other server is running.
    b. Move the directories postgre-data-1 and postgre-wal-1 to a backup location.
    c. Start the failed server.
    d. The failed server will initialize and restore all data from the other server.
2. If running without Failover:
    a. Move the directories postgre-data-1 and postgre-wal-1 to a backup location.
    b. Start the failed server.
    c. Recreate all your users and corpus.

       For more information, see *Running the Command Line Administration Tutorial*.
    d. Use the Siebel Smart Answer Administration Tool to Restore the corpus from backup.

       For more information, see *Backing Up and Restoring the Corpus*.

Troubleshooting Java Version Errors for Siebel Smart Answer Server

The version of Java installed on the computer hosting the Oracle's Siebel Smart Answer Server is critical. Sometimes even if the right version is installed, if a different version of Java is also installed, that version can override the one required for Siebel Smart Answer Server. You must update your path system environment variable.

To resolve Java version errors for Siebel Smart Answer Server

1. Navigate to Control Panel - System - Advanced and select Environment Variables.
2. Edit the Path System Variable and make sure that the correct version of Java is in path.

Troubleshooting Failure of Siebel Smart Answer DLL to Load

This error will occur while loading the SAAdapter.dll or if the path to the SAAdapter.dll is incorrect.

To resolve the failure of Siebel Smart Answer DLL to load

1. Ensure the path to SAConfig.xml is correct and that the location of SAAdapter.dll is specified correctly.
2. Verify the SAConnectorConfigDir Environment Variable is set.
3. Siebel must be restarted when this variable is created or updated.
4. Verify that no meaningful output is generated in saconnectorlog.txt.
5. You may set the Environment Variable SAConnectorDebug with the value TRUE to produce more verbose output to saconnectorlog.txt.

7 Glossary

Benchmarking

Benchmarking is the process of evaluating the accuracy of a knowledge base model.

Catalog

A catalog contains all the categories in the Siebel application that the knowledge base file that are used by Siebel Smart Answer to classify an incoming request.

Categories

A category is the type of a customer complaint or frequently asked question. Categories make up the Siebel catalog and are the input to the Siebel Smart Answer Server.

Corpus

A collection of documents, emails, solutions to problems, manuals, or any other documentation that represents the business domain you want to capture and support in your Call Center production environment.

Corpus Entry

Any documents such as emails, solutions, manuals, or other documentation that are part of the Corpus is a Corpus Entry.

End point

The hostname of a Siebel Smart Answer server concatenated with the knowledge base name: (for example, siebelserver99/KB).

Feedback

Feedback is the positive re-enforcement of a correct categorization by the Siebel Smart Answer Server. This occurs explicitly when the user clicks Yes to "Was this useful" in the Contact Center, or when a category is selected in the auto-suggest mode of the Email Response Center.

Knowledge Base File

Knowledge base is the file that contains the set of categories that are part of the Siebel catalog.

Knowledge Base Model

Knowledge base model is the mapping of requests to categories.

Knowledge Base

A knowledge base is the combination of the knowledge base model and the knowledge base file.

Learning

Learning occurs when the Siebel Smart Answer engine incorporates feedback from the user into the concept model.

Service Affecting Messages

Messages or requests that contain content indicative of a problem in the service or of overall dissatisfaction by the customer.

Training

Training is the process of building a concept model for a category from a set of example emails or documents that represent the desired semantics of the category.