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Genesys Knowledge Center User's Guide

Knowledge Center Current

1/2/2022

Table of Contents

Genesys Knowledge Center Help

Tip

The latest version of our documentation (titled "**Current**") relates to release **9.0.x**.

Welcome to the *Genesys Knowledge Center Help*. This document provides procedures and instructions for common tasks you need to perform when administering, authoring, and using the knowledge that Genesys Knowledge Center provides. See the summary of chapters below.

Agent Assisted Knowledge

Working with Knowledge Center Plugin for Genesys Workspace Desktop Edition

Knowledge Center Plugin for Workspace Desktop Edition

Authoring

Learn how to use Knowledge Center Content Management System (CMS)

Using the CMS to Work with Knowledge Bases

Knowledge Center Plugin for Workspace Desktop Edition

The Knowledge Center Plugin for Workspace Desktop Edition allows you to browse or search corporate knowledge bases while handling a customer's interaction.

There two ways to access the knowledge:

- by selecting the Knowledge tab
- by selecting the options button

The way to share knowledge will depend on the particular media that you are using to communicate with your customer.

Below you'll find information regarding integrating Knowledge Center with Workspace Desktop Edition.

> **Important**
> To work with Knowledge Center plugin you must have **Knowledge.Worker** privileges.

Overview

The Knowledge Center Plugin for Workspace Desktop Edition enables you to perform a number of tasks. Use the following guide to help you get the most out of your Knowledge Base:

1. **Before you begin**
    - Select a Language
    - Select a Knowledge Base
    - Select a Channel
2. **Getting started**
    - View recent customer questions
    - Search for Answers in a Knowledge Base
    - View attachments
    - Copy Found Answers to a Reply

Using the Knowldge Tab

The Knowledge tab provides an easy way to share knowledge with your customer while working your interaction.

Important

To work with Knowledge Center plugin you must have **Knowledge.Worker** privileges.

See the following sections for more information on using the Knowledge tab:

- Before you begin
- Getting started
- Advanced features

Before you begin

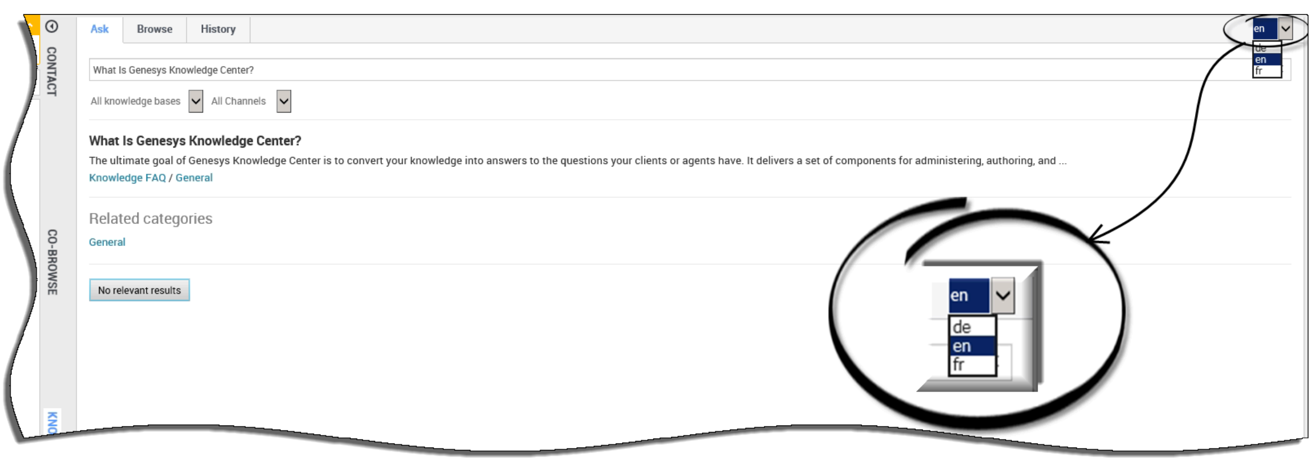
Terminology

First, let's deep-dive into the Knowledge functionality within Workspace by reviewing some of the major terminology used:

- **Knowledge base** - The organized collection of your digital assets. It allows you to group documents related to the same area within one collection.
- **Category** - This is the taxonomy for a document within a knowledge base. It provides a logical grouping of documents belonging to the same topic.
- **Document** - An element of corporate knowledge. The document may contain multiple content fields and attributes. The structure of the document depends on the document type.
- **Document type** - Knowledge supports the following document types:
  - **FAQ** - A document that is structured in a question and answer format for frequently asked questions.
  - **Article** - A document describing the topic mentioned in the title. Ordinarily, an article provides much more detail than a FAQ.
- **Attachment** - A supplementary document that is provided with the main document.
- **Channel** - The channel/media of the interaction in which are serving your customer with. Different channels provide different ways of collaboration between you and your customer.

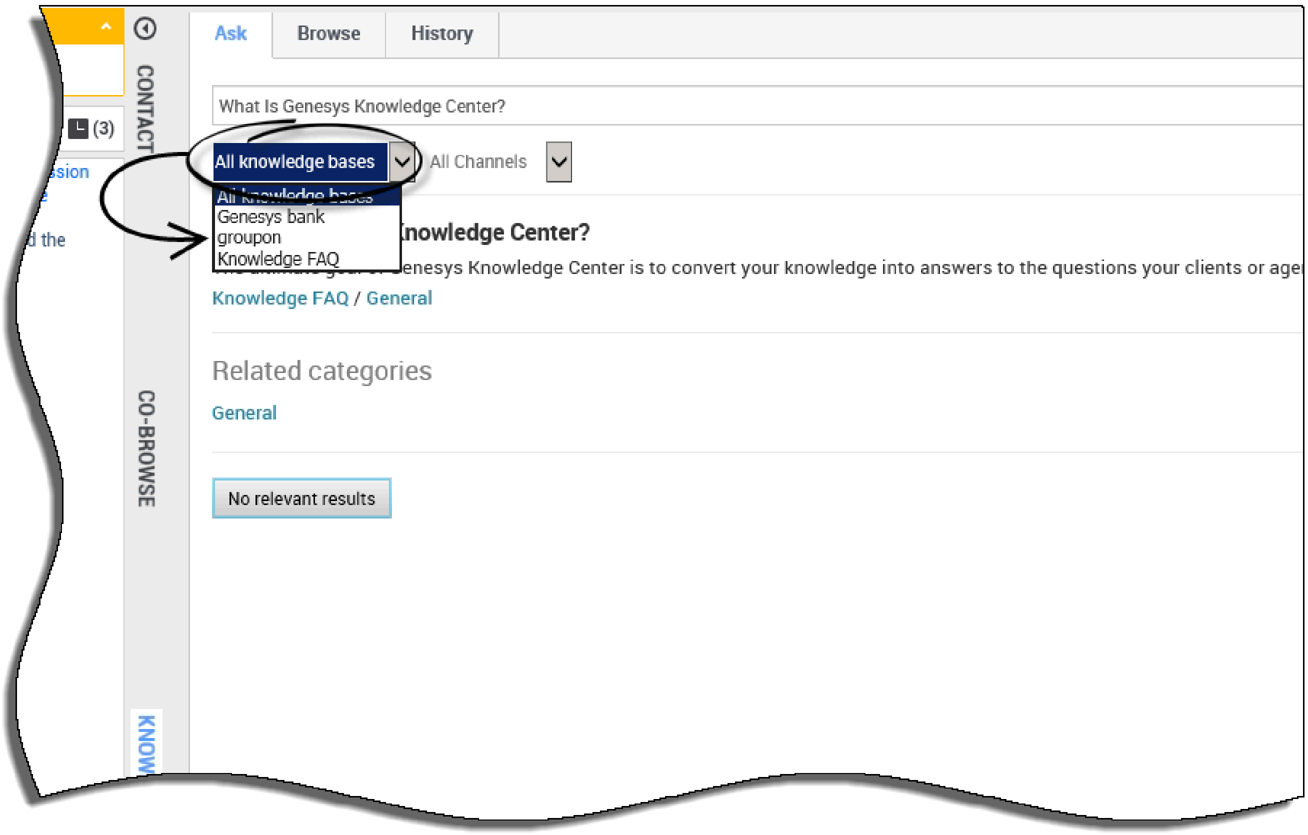
Next, let's review some of the first steps you'll take in using the knowledge:

Selecting a Language



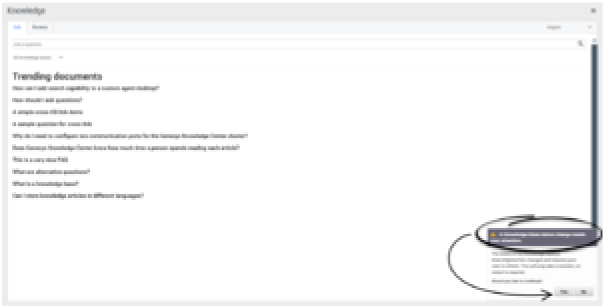
To select a language, click the language menu and choose your language from the list.

Selecting a Knowledge Base

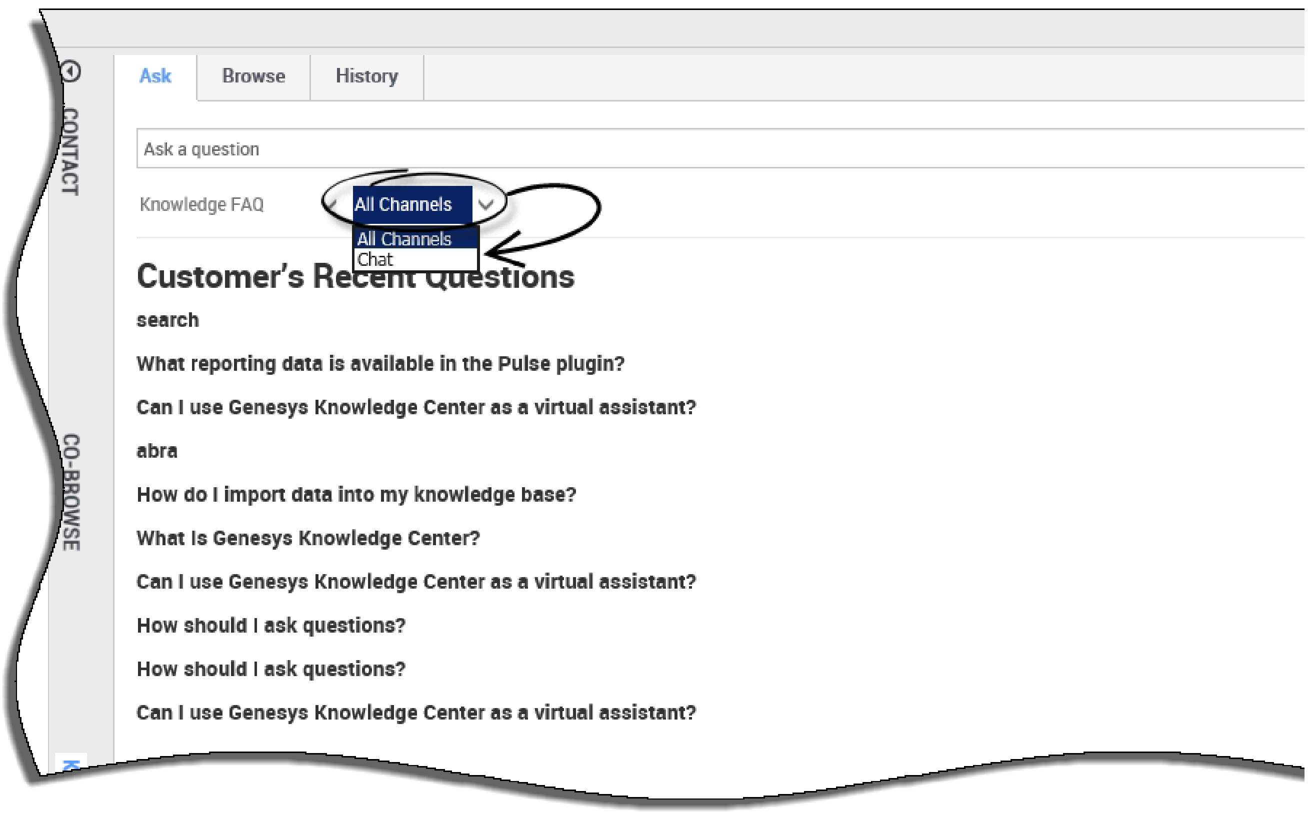


By default, the Knowledge Base is set to **All knowledge bases** allowing you to search through all live Knowledge Bases at the same time. Should you wish to search a single Knowledge Base however, clicking on the Knowledge Base menu allows you to choose a specific Knowledge Base from the list.

The plugin obtains a list of available Knowledge Bases on initialization (available starting **9.0.005.x**). If the list is changed during an agent's working session, some Knowledge Bases can become inactive or an active Knowledge Base can become disabled. The plugin displays a notification and the agent can view this notification to obtain the actual list:
Click thumbnail to expand



Selecting a Channel

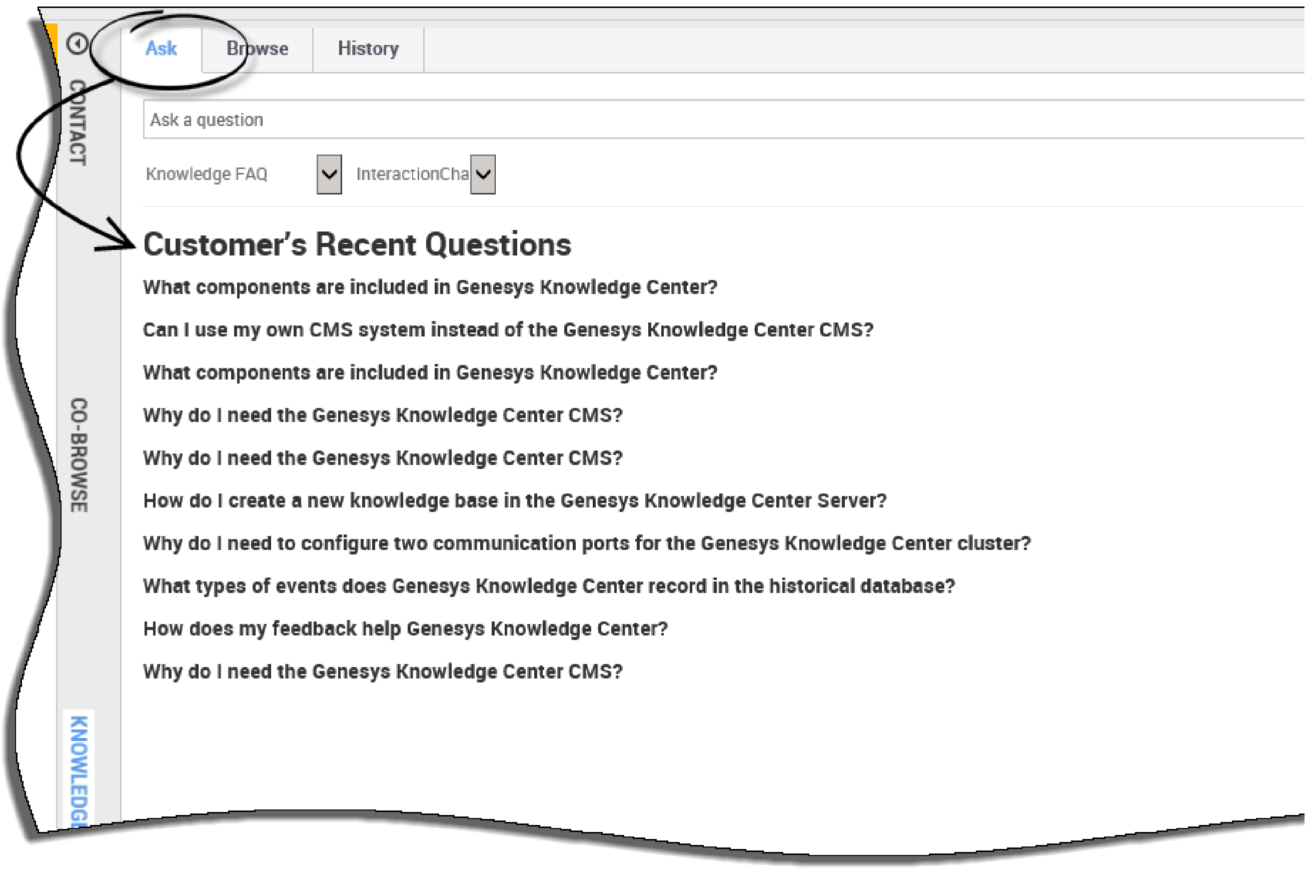


By default, Channels are set to **All Channels** allowing you to search through all Channels at the same time. Should you wish to search a single Channel however (for example, documents relating to Chat only), clicking on the Channels menu allows you to choose a specific Channel from the list.

Now, let's get started!

Getting started

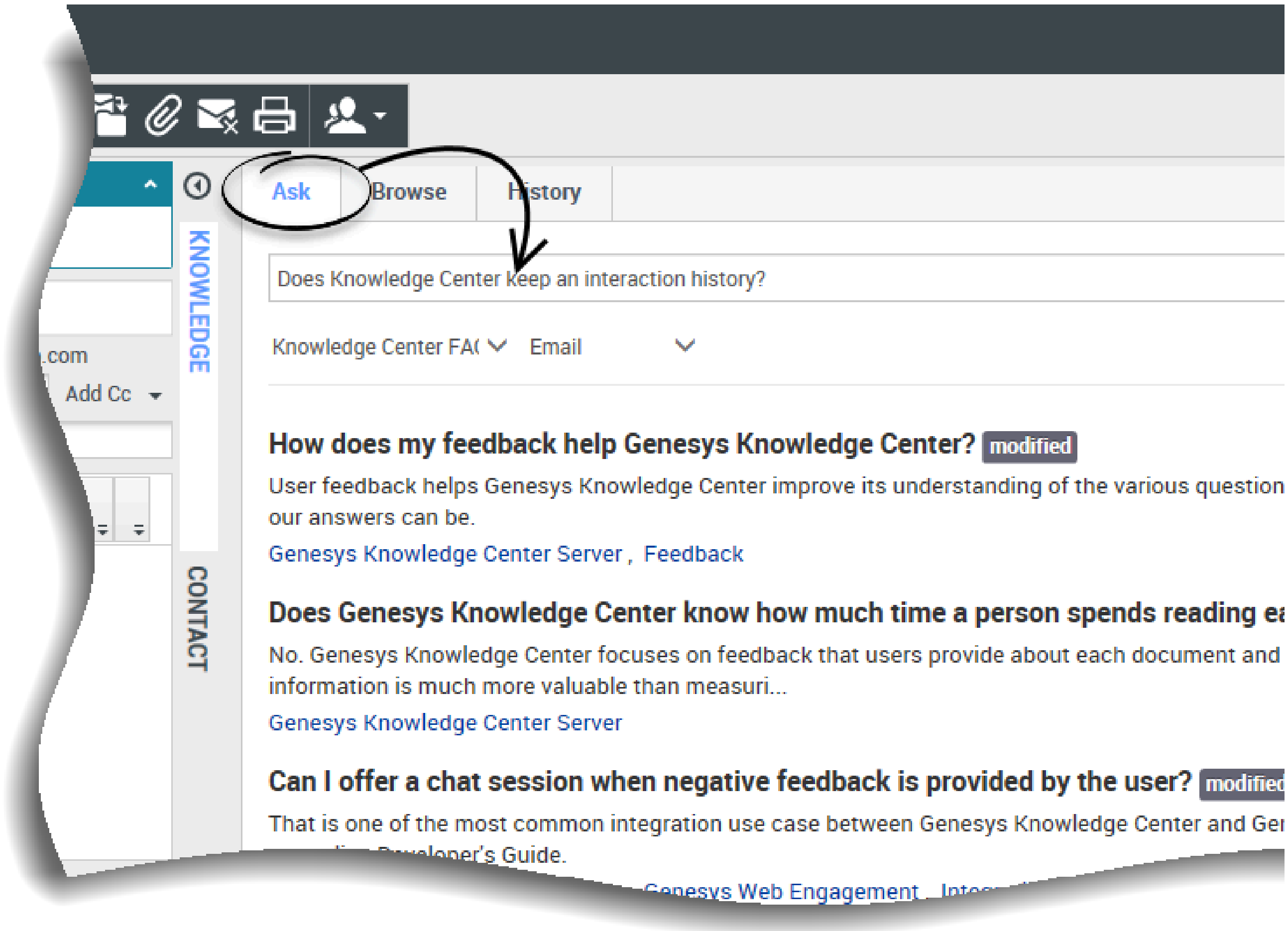
Viewing Recent Customer Questions



Use the following procedure to view any recent customer questions:

1. Go to the **Ask** tab.
2. If there is no question asked, the system shows a list of the most recent customer questions.
3. For detailed knowledge on the customer's usage history please see Browsing Customer Search History

Searching for Answers in a Knowledge Base



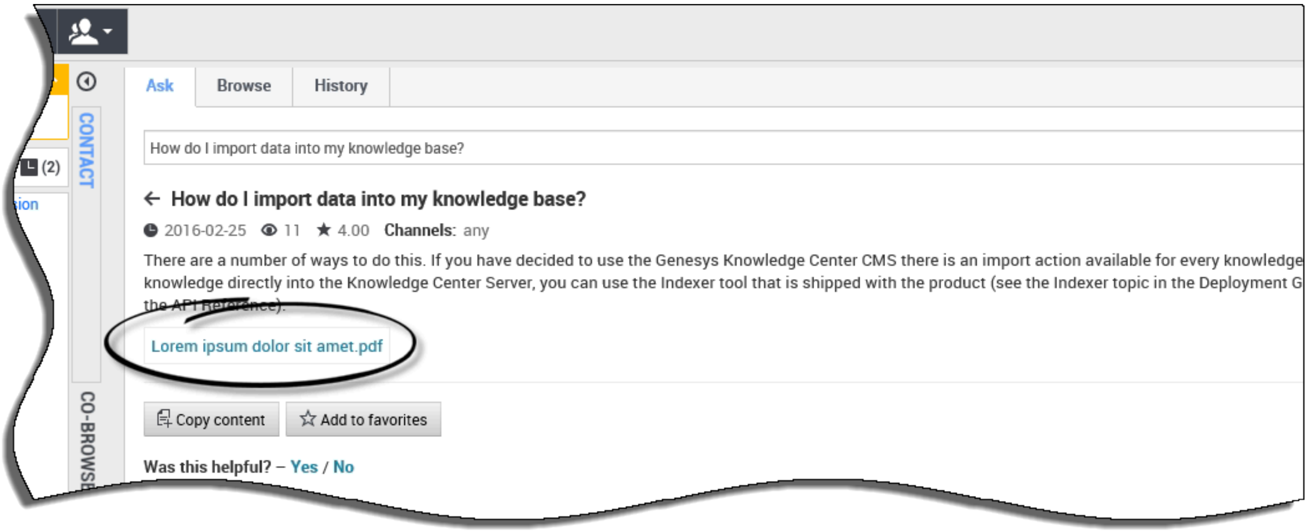
Use the following procedure to search for answers in a Knowledge Base.

Prerequisites:

- The incoming interaction has been accepted.

1. Click the **Knowledge** tab.
2. Click the **Ask** tab.
3. Enter the search term and either click the **Search** button or press **Enter**.
4. Knowledge Center will provide the appropriate search results.

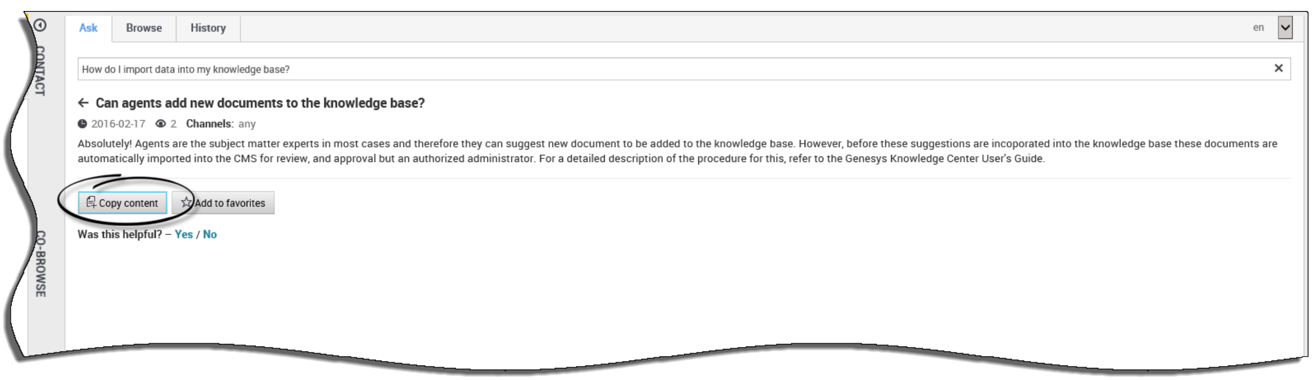
Viewing Attachments



Use the following procedure to view any attachments that might have been added to the documents:

1. Click the question heading to expand the answer.
2. Click the appropriate attachment to open it in a new window.
3. To close the attachment, simply close the new window.

Copying Answers



Use the following procedure to copy public content of answers into your interactions:

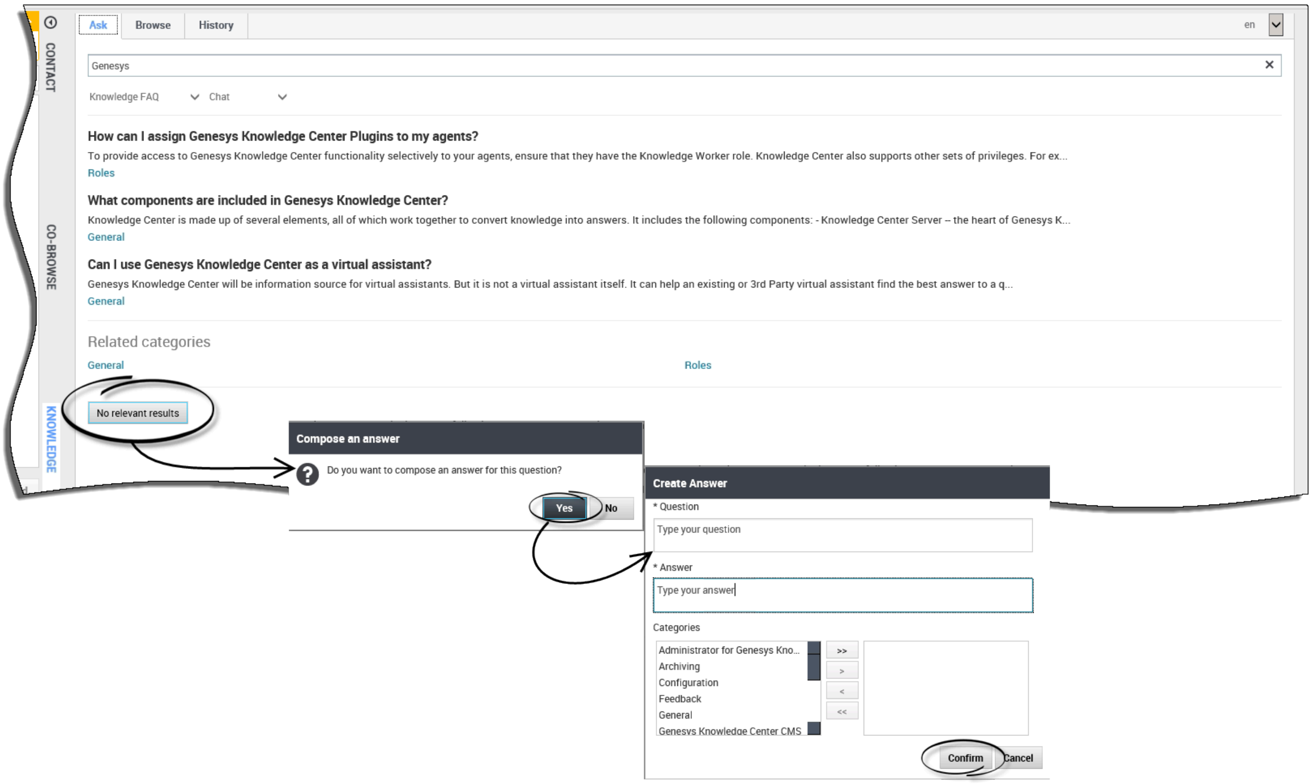
Prerequisites

- The incoming interaction has been accepted.

1. Click the **Knowledge** tab.

2. Click the **Ask** tab.
3. Enter the search term and either click the **Search** button or press **Enter**.
4. Click the question heading to expand the answer
5. Click the **Copy content** button.

Suggesting an answer



Use the following procedure to suggest an answer to the Knowledge Base:

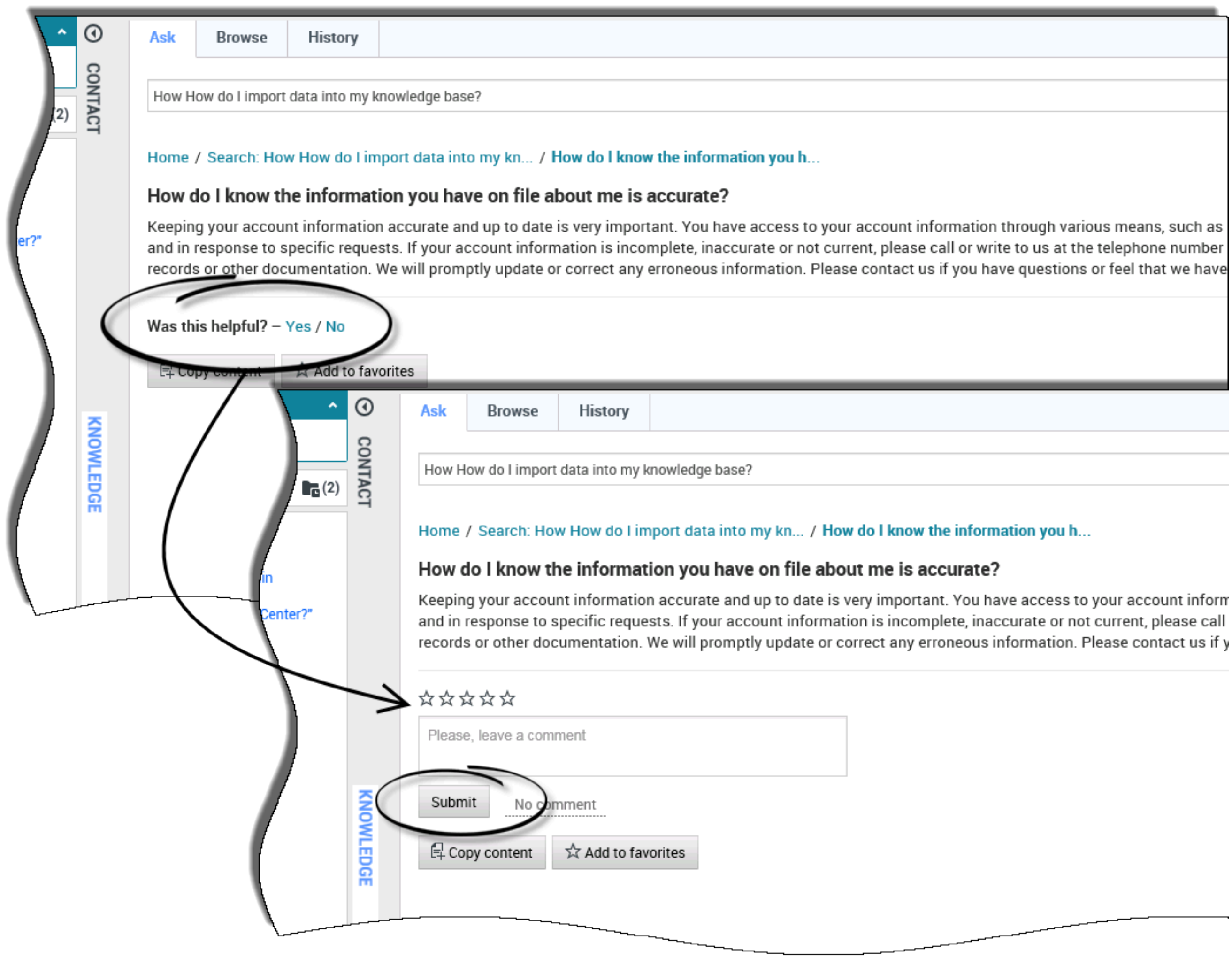
Prerequisites

- The incoming interaction has been accepted.

> **Important**
> Only an agent that is granted authoring rights (with **Knowledge.AUTHOR** privilege) will have access to this functionality

1. Go to the **Knowledge Center** tab.
2. Open the **Ask** tab.
3. Enter the search term and either click the **Search** button or press **Enter**.
4. Click **No relevant results** button.
5. Click **Yes** when asked "Do you want to compose the answer for the question?".
6. Compose the answer, set the appropriate categories, and submit the answer by clicking **Confirm**.
7. You can copy the new answer as a reply to the customer by clicking **Yes** when asked, "Do you want to send this answer to the customer?".
8. Once submitted, your suggested answer can be found under **My Documents** in the **Browse** tab at the top. From there you can view their current review status.

Providing Feedback



If the answer provided has been helpful, this is your chance to improve the knowledge base by providing feedback. Answering the question "Was this helpful" allows the system to better serve your future interactions by training the knowledge base to know which answers are the most suitable. Leaving a star-rating helps with overall reporting.
Use the following procedure to provide feedback on a document in the Knowledge Base from the **Ask** tab:

1. Answer **Yes** or **No** to the question, "Was this helpful?"
2. Give the current answer a star rating of your choice.
3. Type your feedback in the field provided and click **Submit**.

Use the following procedure to provide feedback on a document in the Knowledge Base from the

Browse tab:

1. Give the current answer a star rating of your choice.
2. Type your feedback in the field provided and click **Submit**.

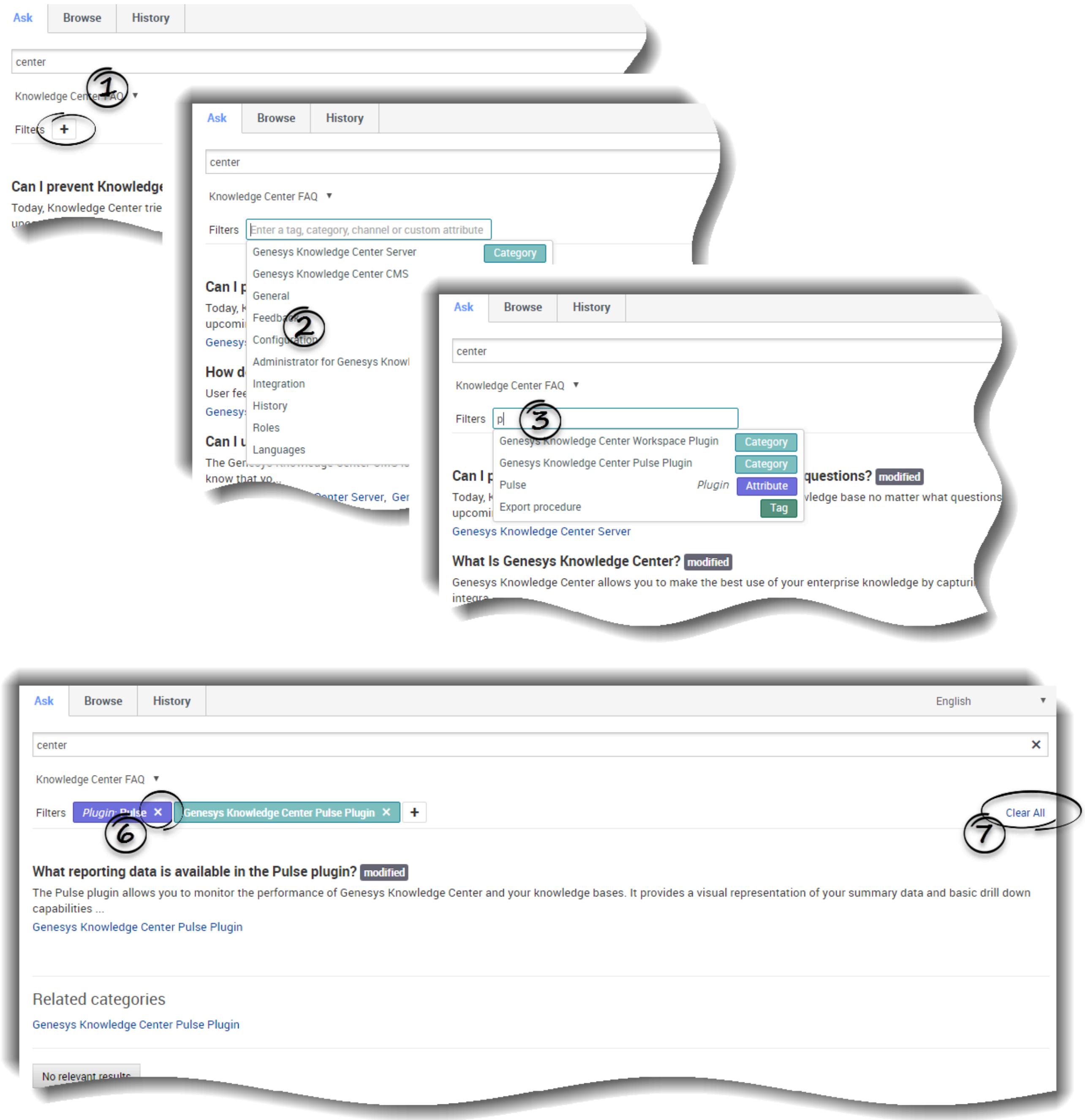
Search Result Filters

Important

This functionality is available as of the 9.0.001.xx release of the product.

You can use search result smart filtering to improve the precision of your search results. Also, while browsing, smart filtering allows you to type in contextual information that is related to your question and Knowledge Center will provide suggested filters that can be applied in the given context. Knowledge Center analyzes the categories that documents are assigned to, as well as the documents' attributes, tags, and channels to come-up with the most relevant suggested filters for you to choose from.

How to use smart filtering when asking a question

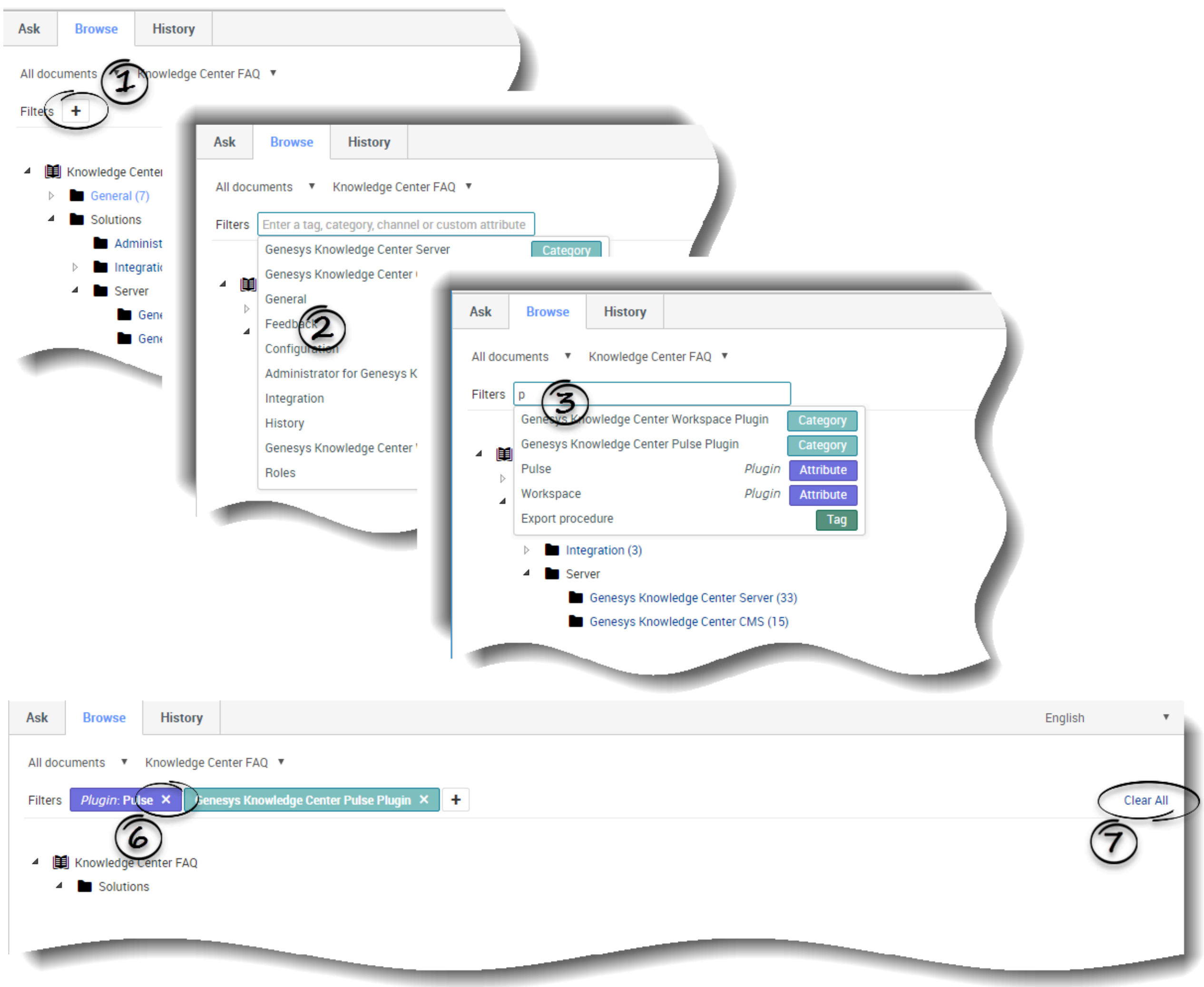


Under the **Ask** tab, you'll find the **Filters +** area immediately below the "Ask a question" field. To add a smart filter:

1. click on the **+** button.
2. When you click in the filter area you will be immediately provided with some suggested filters.

3. As you begin typing in this field, Knowledge Center refines the list of suggested filters to reflect the context you are searching.
4. Knowledge Center suggests smart filters based on the:
    - categories used
    - document attributes
    - document tags
    - channels that knowledge can be used across
5. Click on one of the suggested filters to add it. This will refine the results on your ask query.
6. To remove a smart filter, click on the **X** next to the filter name.
7. To remove all applied filters, click on **Clear all** at the end of the Filters line.

How to use smart filtering when browsing the knowledge



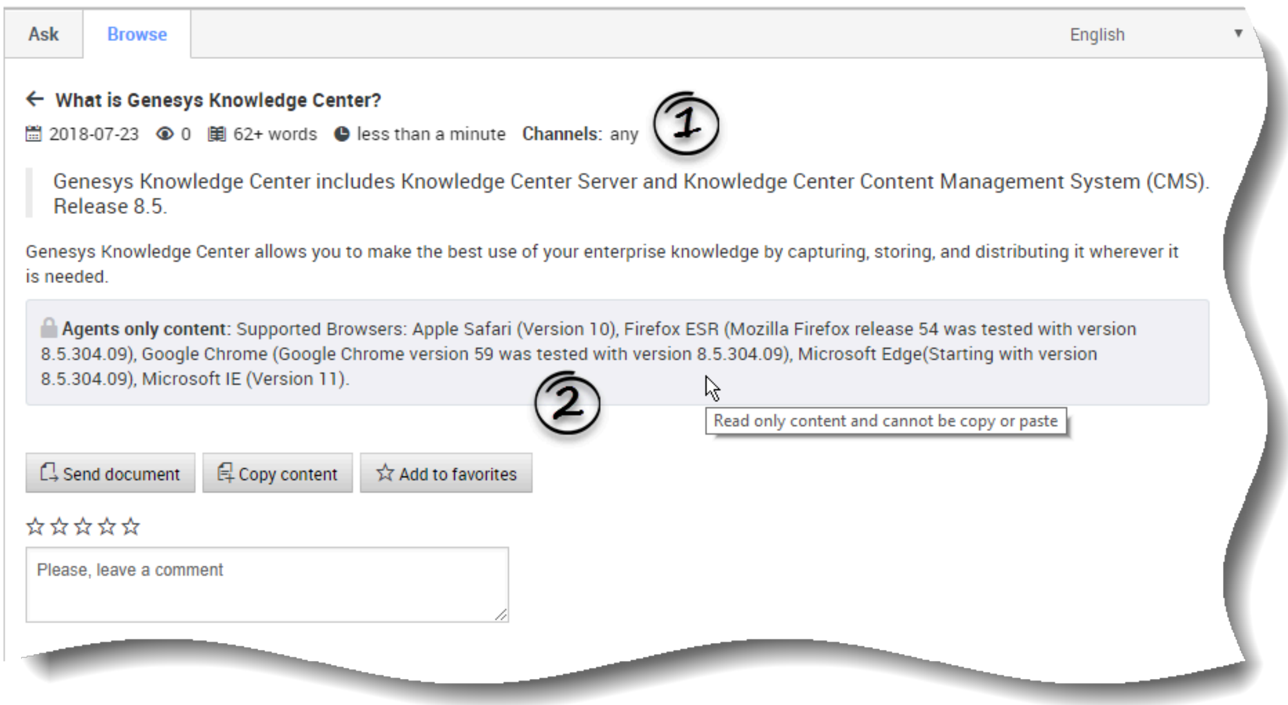
Under the **Browse** tab, you'll find the **Filters +** area immediately below the knowledge base selection.
To add a smart filter you need to:

1. Click on the **+** button.
2. When you click in the filter area you will be immediately provided with some suggested filters.
3. As you begin typing in this field, Knowledge Center refines the list of suggested filters to reflect the context you are searching.
4. Knowledge Center suggests smart filter based on the:
    - categories used
    - document attributes
    - document tags
    - channels that knowledge can be used across
5. Click on one of the suggested filters to add it. This will refine the results on your browse query.
6. To remove a smart filter, click on the **X** next to the filter name.
7. To remove all applied filters, click on **Clear all** at the end of the Filters line.

Next, let's check out some of the Knowledge tab's advanced features!

Advanced features

Reviewing document data



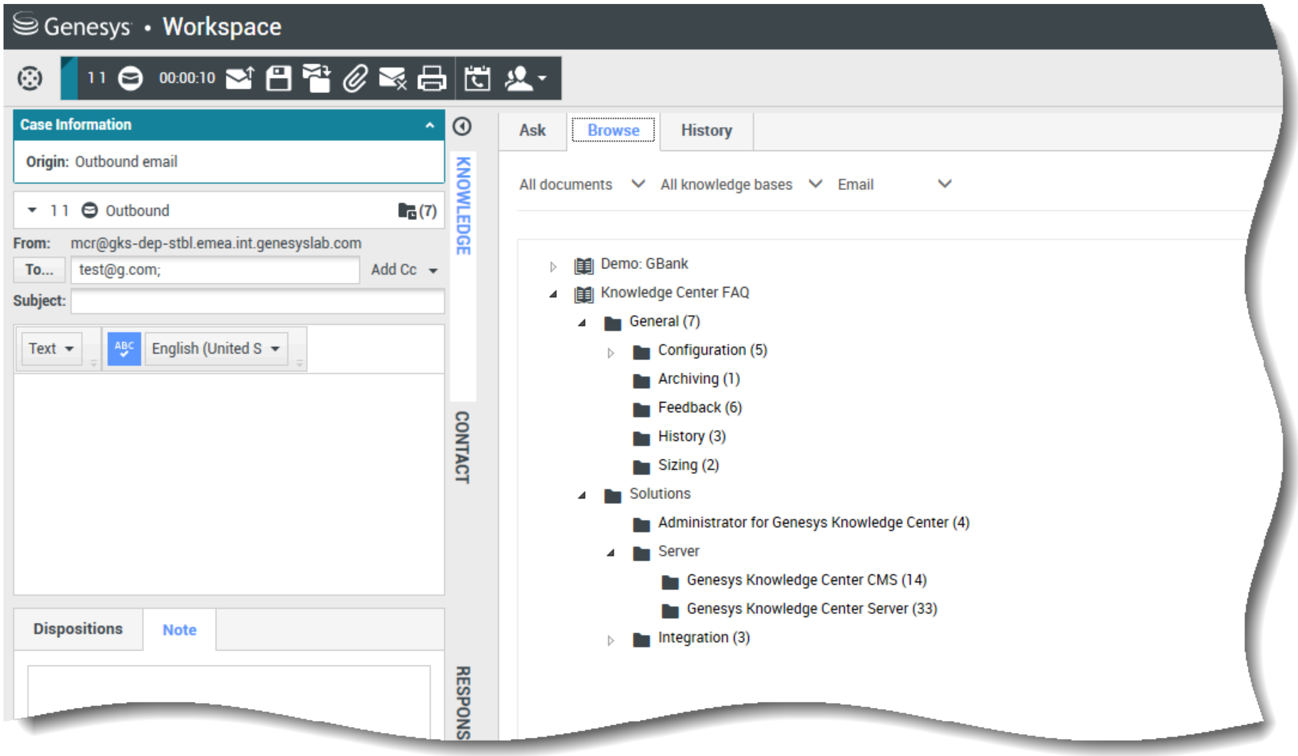
If you are curious to know:

- how current the document appears
- how many views a document has had
- how long it takes to read the document
- the word count of the document
- the average document rating
- the suggested channels that document can be used for

then simply look to the icons below the question heading 1 for all that useful information.

Note: Your document can contain both public and private content (private means only available for agents). The private content 2 is highlighted with a background color and denoted by a lock-icon with title, and a pop-up tooltip.

Browsing the Knowledge Base using Categories



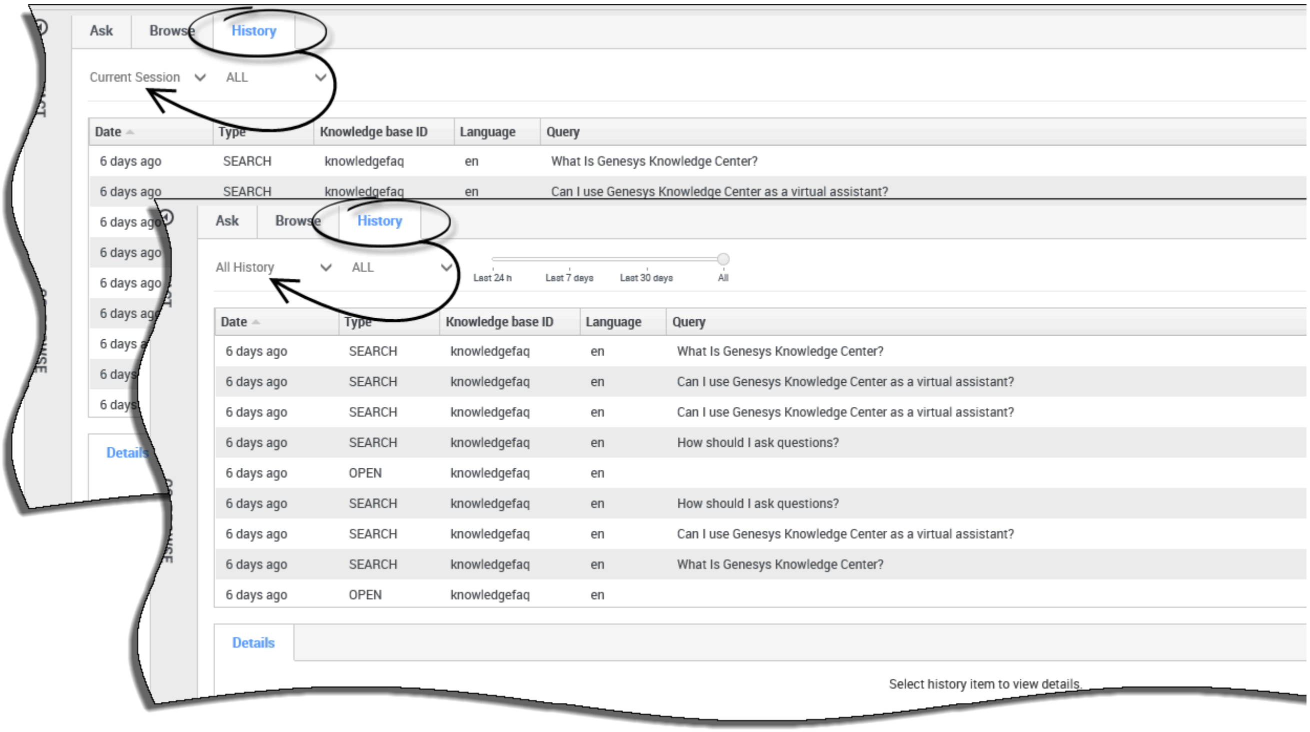
Use the following procedure to browse the Knowledge Base using Categories:

1. From the Browse tab, click a category name from the tree of categories. Clicking the category name opens all documents relating to that category. The number near the category name indicates the number of documents in that category.
2. To view any child categories click the light triangle by the folder icon, next to the category name to expand it (clicking on the dark triangle closes the child categories).

Important

For information on copying answers, please see Copying Answers.

Browsing Customer Search History



Use the following procedure to review the customer search history:

Prerequisites:

- The incoming interaction has been accepted.

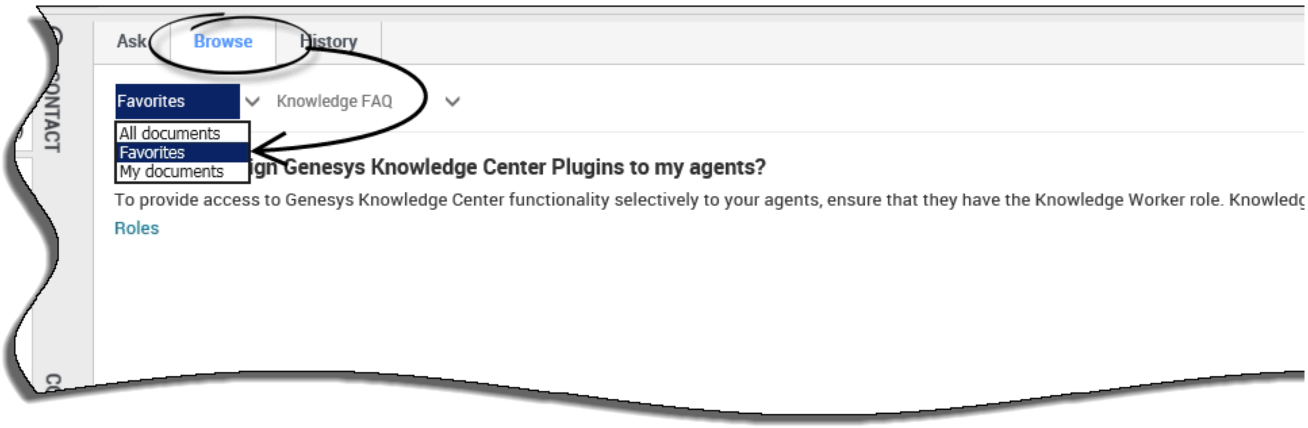
1. Go to the **Knowledge Center** tab.
2. Open the **History** tab.
3. Browse either the customer's search history from the current session or the customer's entire search history (by choosing either **Current Session** or **All History** in the drop-down).
4. Filter the history events by type:

ALL - shows all events (you can define a date range here, if needed)
SEARCH - shows the customer's search queries
NO ANSWER - shows queries when the customer indicated that there was no answer found
OPEN - shows documents that customer opened to view
FEEDBACK - shows the customer's likes & dislikes

Important

When you select any line in the history table, the **Details** view is refreshed to show all information on the selected event.

Browsing Favorites



The ability to save documents as **Favorites** makes it easy for you to quickly access information that you use frequently. Once you add a Favorite, you can perform a number of actions from the **Favorites** option, found under the **Browse** tab such as:

- remove documents from favorites
- browse favorite documents by category
- copy document content to your interaction
- see how many times the document has been viewed
- see the date of the last modification to the document

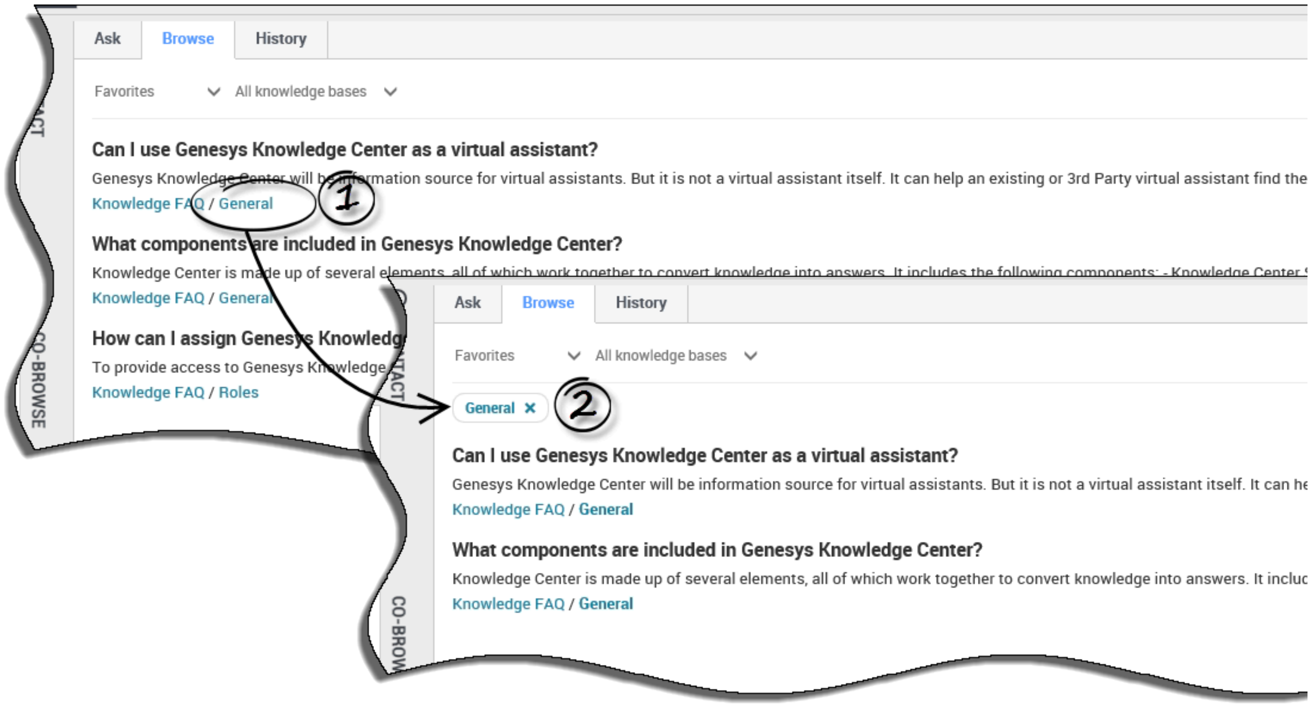
Adding and removing Favorites

Adding and removing favorites is easy! With the click of a button, you have complete control over what documents are important to you.

To add content to your favorites, click **Add to favorites** within any document and it is automatically added to your **Favorites** found under the **Browse** tab for you to access at any time.

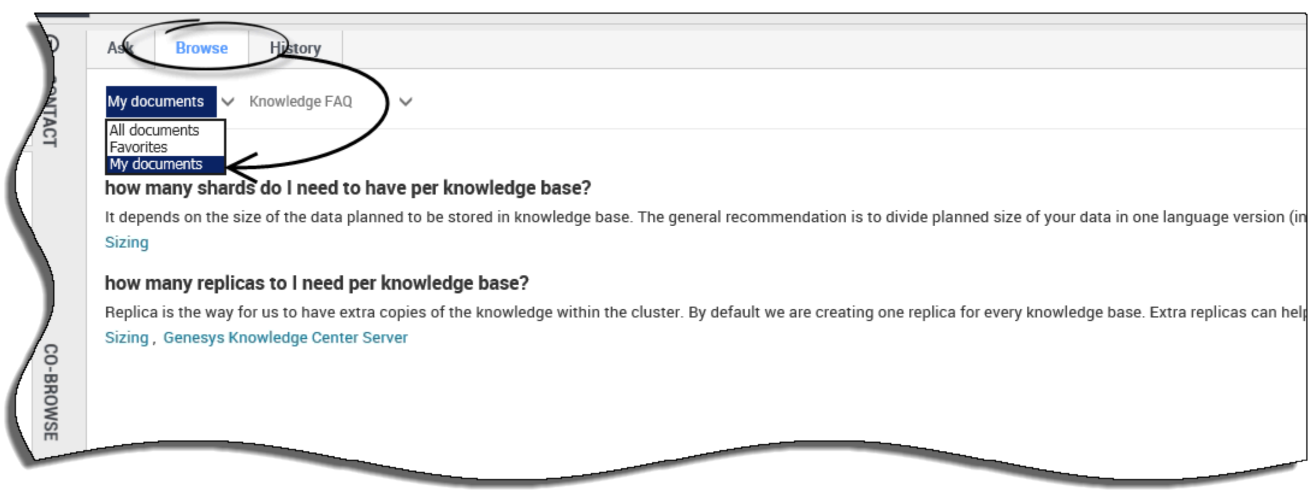
To remove a document from your favorites, click the **Browse** tab to navigate to your **Favorites** then click the question heading to expand the answer. From there you simply click **Remove from favorites** and the document is removed from your **Favorites**.

Browsing Favorites by category



If your administrator has defined categories, you can use these to quickly jump to the right answer at the right time. Clicking on any of the categories helps narrow your search by only showing those documents that apply.

Browsing My Documents



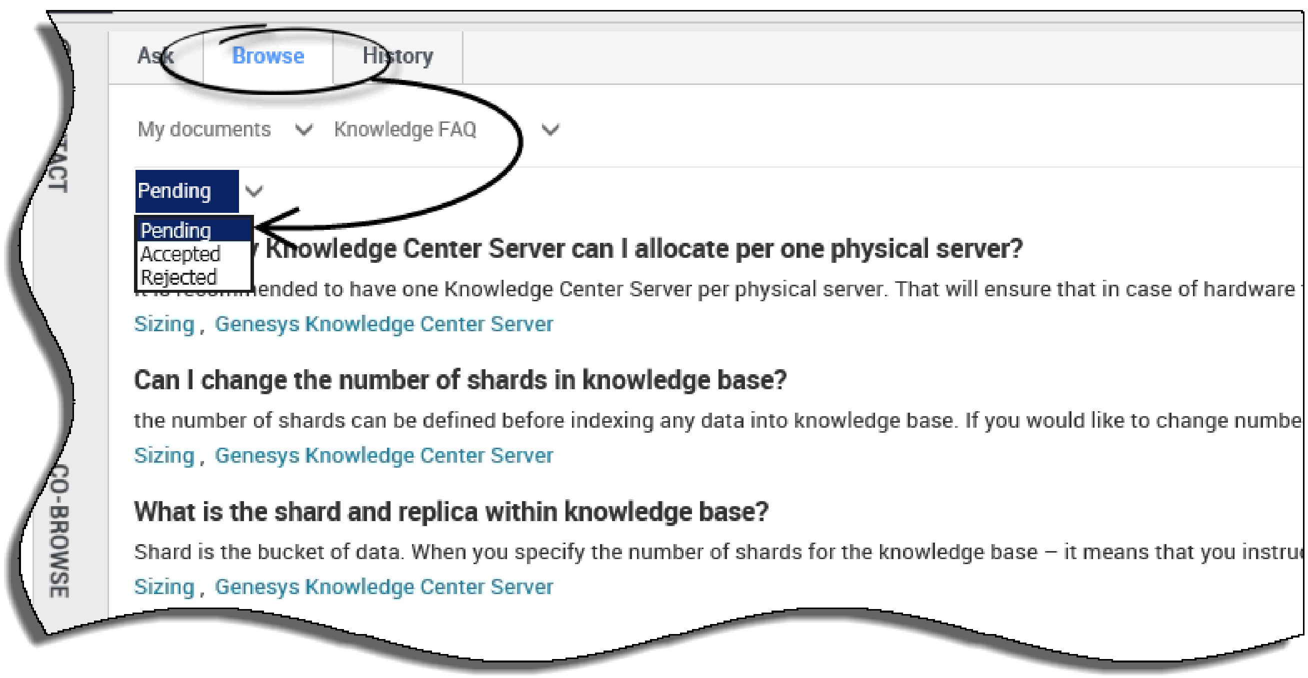
The **My documents** option under the **Browse** tab gives you the ability to browse all the documents you authored in the Knowledge Base and verify their current status. From **My Documents** you can view all of the documents you wrote and for which you submitted a draft. The list will be sorted by creation date and will include drafts that are:

- Pending
- Accepted
- Rejected

The default view in **My Documents** is **Pending** however clicking on the status menu allows you to choose from the list of statuses.

Important
Only an agent that is granted authoring rights (with **Knowledge.AUTHOR** privilege) will have access to this functionality

Pending status

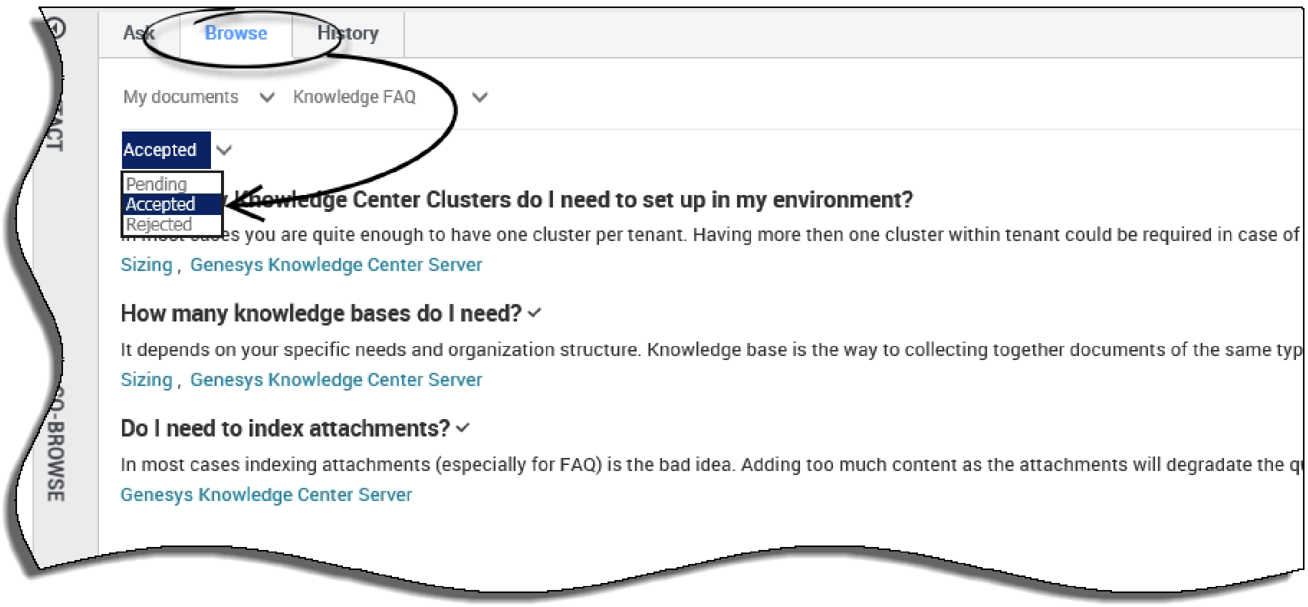


When you click **My Documents**, you're immediate view is of all your documents that are waiting for approval from your Knowledge Base Administrator. This is the default view.

From this view you can:

- browse documents by category (if your Administrator has defined Categories)
- copy document content for use in your interaction

Accepted status

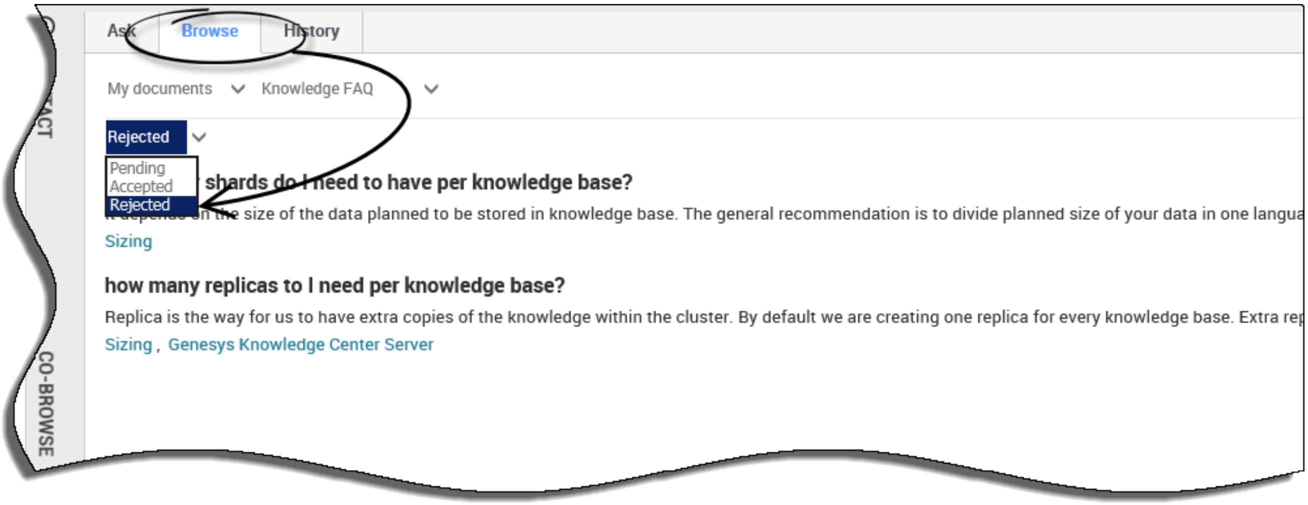


From the status menu, choose **Accepted** to see all the documents you've authored in the Knowledge Base that are approved by your Knowledge Base Administrator.

When viewing the **Accepted** status, you can also:

- browse documents by category (if your Administrator has defined Categories)
- add documents to your Favorites tab
- remove documents from your Favorites tab
- copy document content for use in your interaction
- view and hide your original document submission

Rejected status

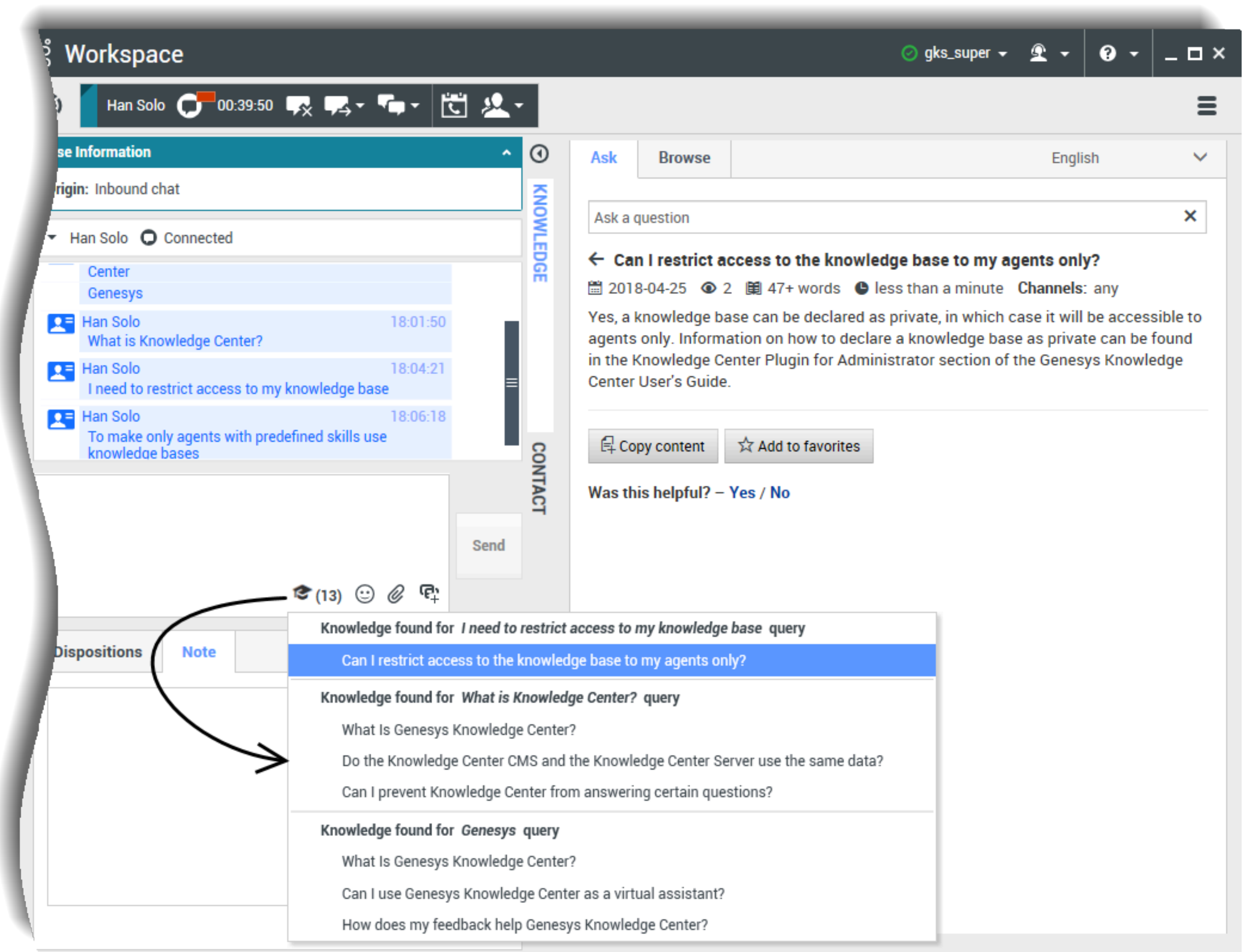


From the status menu, choose **Rejected** to see all the documents you've authored in the Knowledge Base that are not approved by your Knowledge Base Administrator.

When viewing the Rejected status, you can also:

- browse documents by category (if your Administrator has defined Categories)

Proactive Knowledge in Chat



While working with a chat interaction, Knowledge Center proactively looks up relevant knowledge for the customer queries asked. When there are relevant knowledge documents found, you will see the knowledge icon in the chat message area ((13)).
When you click on the Icon you will see a drop-down list with:

- The last 3 customer queries
- Under each query, you will see (up to) the top 3 relevant knowledge documents
- The number next to the knowledge icon indicates the total number of relevant documents for all customer queries shown

If you click on:

- A customer query from the list — the Knowledge tab is displayed with the pre-searched results for this query. You can use one of the suggested document or refine the query to find a more precise result.

- A suggested document under the customer's query — the Knowledge tab is displayed with the selected document opened. You can use the content of this document to serve the customer interaction.

For more information on using Proactive Knowledge, please see the following video:

[+] Genesys Knowledge Center: Using Proactive Knowledge Suggestions

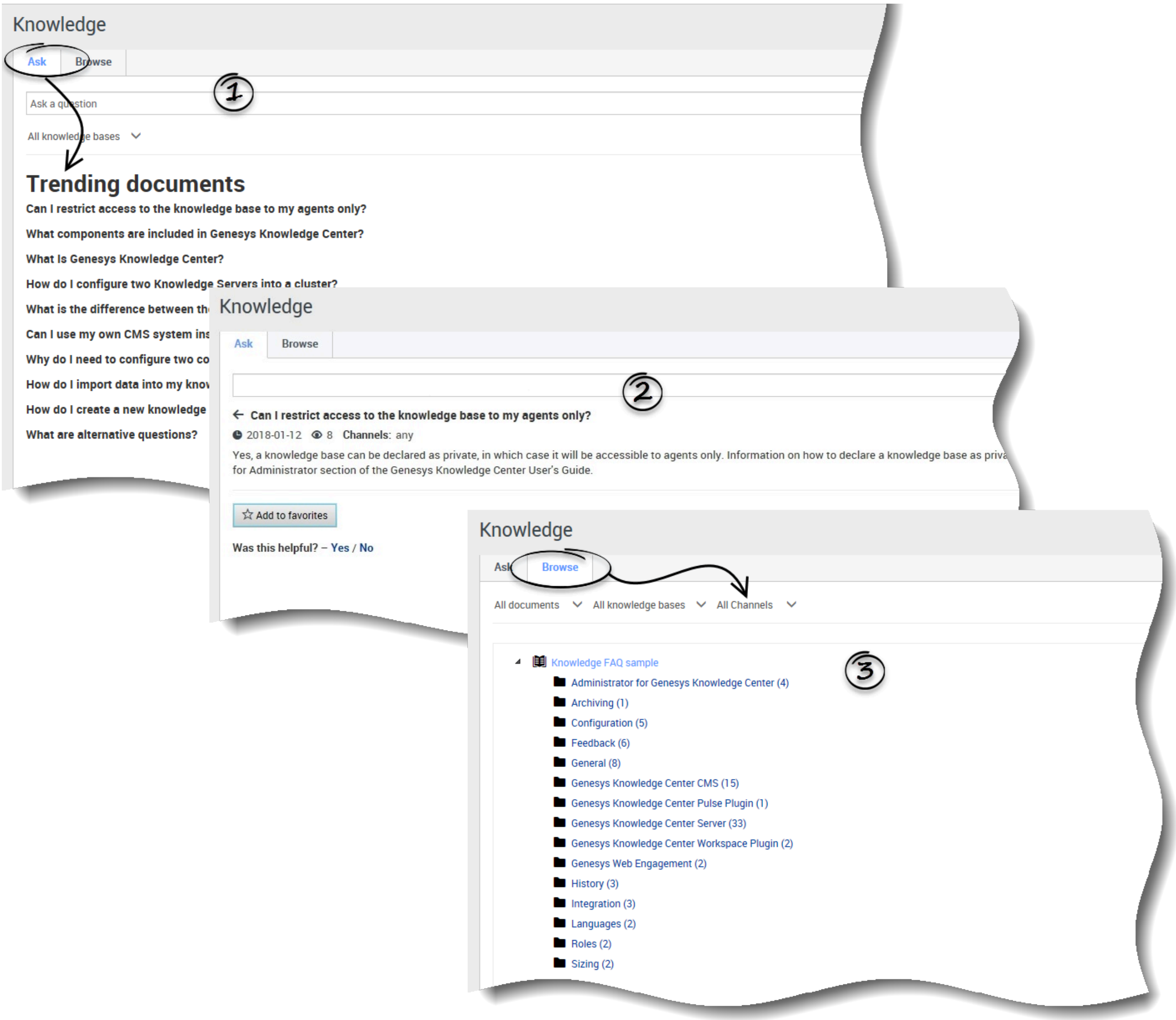
Link to video

Using the options menu (Interaction-less Knowledge)

Important

To work with Knowledge Center plugin you must have **Knowledge.Worker** privileges.

Knowledge window differences in the case of no interaction



It should be noted that the Knowledge window differs slightly when there is no interaction:

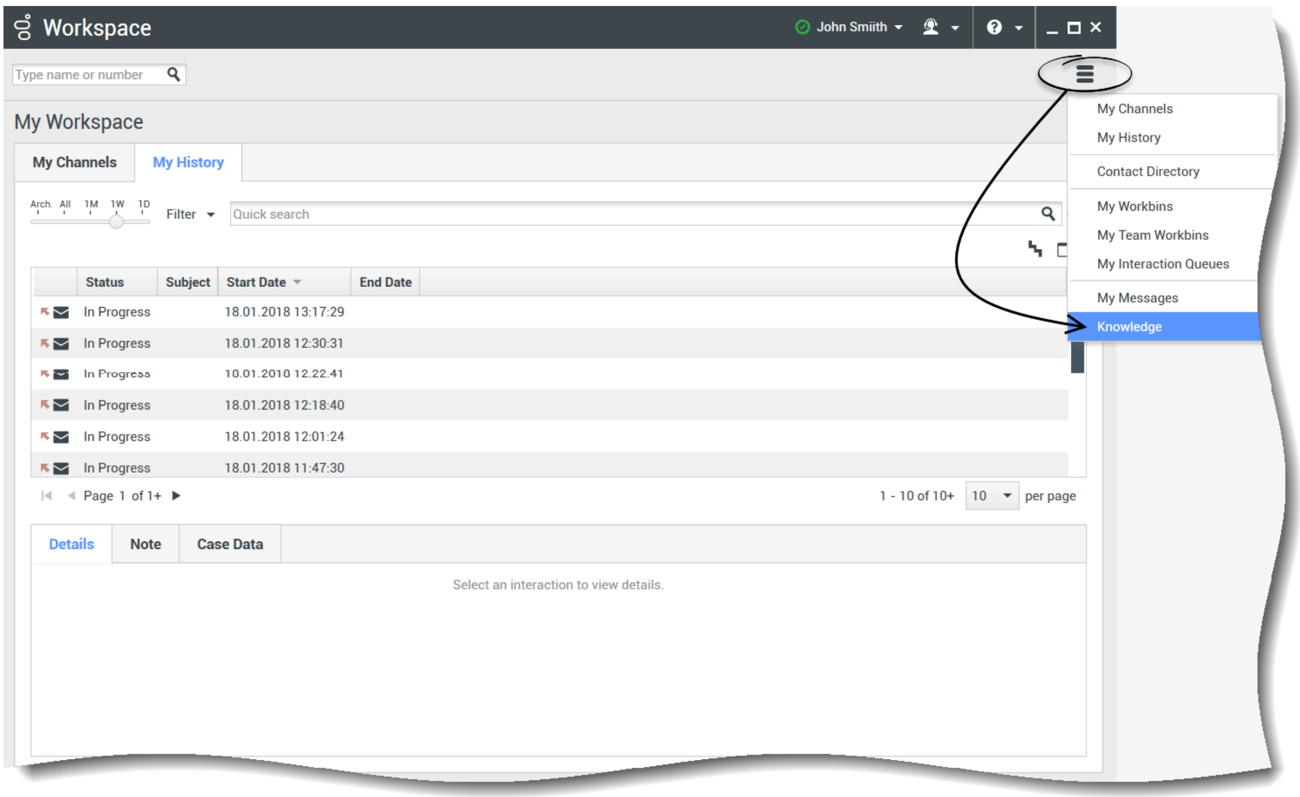
1. Ask tab
On the **Ask** tab, a list of top 10 **Trending documents** is displayed instead of the customer's recent questions.

2. Viewing the document
The **Copy content** and **Send document** buttons are unavailable as there is no active interaction.

3. Browse tab
The **Channels** selector is set to **All Channels** by default.

- History tab
The **History** tab is unavailable in interaction-less Knowledge.

Interaction-less Knowledge



Interaction-less Knowledge allows agents to access the Knowledge Center plugin functionality without an active interaction in Workspace Desktop. To get started, simply click **Knowledge** from the options menu ( ).

Using the CMS

Overview

Genesys Knowledge Center CMS is an easy and intuitive application that allows your knowledge authors to collaborate to create valuable digital assets used within your company. The CMS provides a user interface that your editorial team and managers use to create, manage, and deliver content to your employees, customers, and IT systems.

The user interface is secure, role-based and customizable, allowing your development team to cater the editorial experience to the exact needs of end users. The CMS also provides you access to the various types the information collected while knowledge being used, such as:

- Likes and dislikes for the results searched
- Document content quality ratings
- Questions there is no relevant knowledge for
- Most used, recent questions, and so on

All of this feedback is valuable to the author for content quality improvement.

Basics

Before we start to deep-dive into the CMS functionality, let's go through the key principles of content organization within the CMS.

Knowledge base

A knowledge base is the organized collections of your digital assets. It is the top level of the organization within the CMS that allows you to keep documents related to different areas aside from each other. Also, it allows you to define the key principles of the organization within its boundaries. For example:

- Languages supported by the knowledge base
- Types of the documents
- Access rights
- Publication schedules
- Category taxonomy

Category

Taxonomy element helping you to define the topics hierarchy within your knowledge base and group documents to those topics.

Document

An atomic element of the knowledge. The document captures a bit of corporate information as well as the history of its evolution. The document might have multiple language versions within languages allowed in the knowledge base.

Language

The CMS allows you to keep different translations of the same document together by creating language versions of the document. On top of support of distinct different languages (for example, English, French, German), the CMS also allows regional languages that help you to adopt documents to particular regions using the same language, but different dialects (for example, French - Canadian and French - France),

Who is the CMS intended for?

There are several types of roles the CMS is intended for:

- Knowledge Administrator - technical personnel responsible for maintaining your knowledge solution
- Knowledge Author - your editorial team that creates and maintains valuable knowledge within your organization
- Knowledge Managers - supervisors of the editorial team who validates the authored knowledge and approves it for company-wide usage

How to create and use your first document?

To start with your knowledge you need:

- As the Knowledge Administrator:

1. Create a new knowledge base,
2. Make it active and public
3. Define the synchronization schedule that allows automatic knowledge publication

- As the Knowledge Author:

1. Create a new category/topic
2. Create a new document

3. Submit both newly created category and document for review

- As the Knowledge Manager:

1. Approve submitted category
2. Approve submitted document

Having this step completed, newly created document will be published automatically (according to the defined schedule) and be available for your customers, agents, and automated systems:

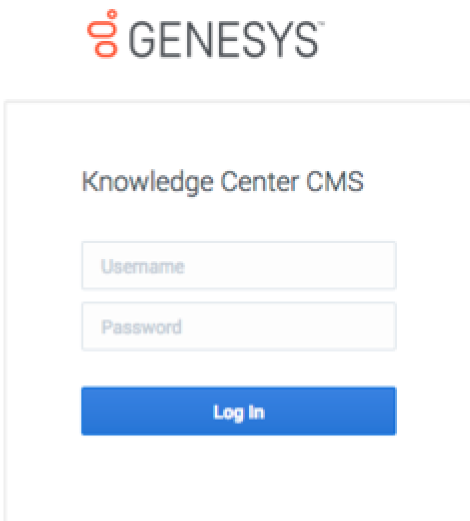
- Agents can use Knowledge Center Plugin for Workspace Desktop Edition Help to browse or search through the knowledge and apply it to customer's interactions.
- Customer can interact with the knowledge in Genesys Widgets and Sample UI.
- Automated systems, such as routers, conversation bots, can use knowledge to serve the customer without the involvement of the agent (for example, Chat Deflection within Genesys Widgets).

Overview of the CMS User Interface

This chapter describes general principles of the CMS UI organization as well as such general functions as login/logout, getting help, navigating between different views, and so on.

Login into the CMS

When you enter the CMS URL in your browser, the first page you will see is the login screen:



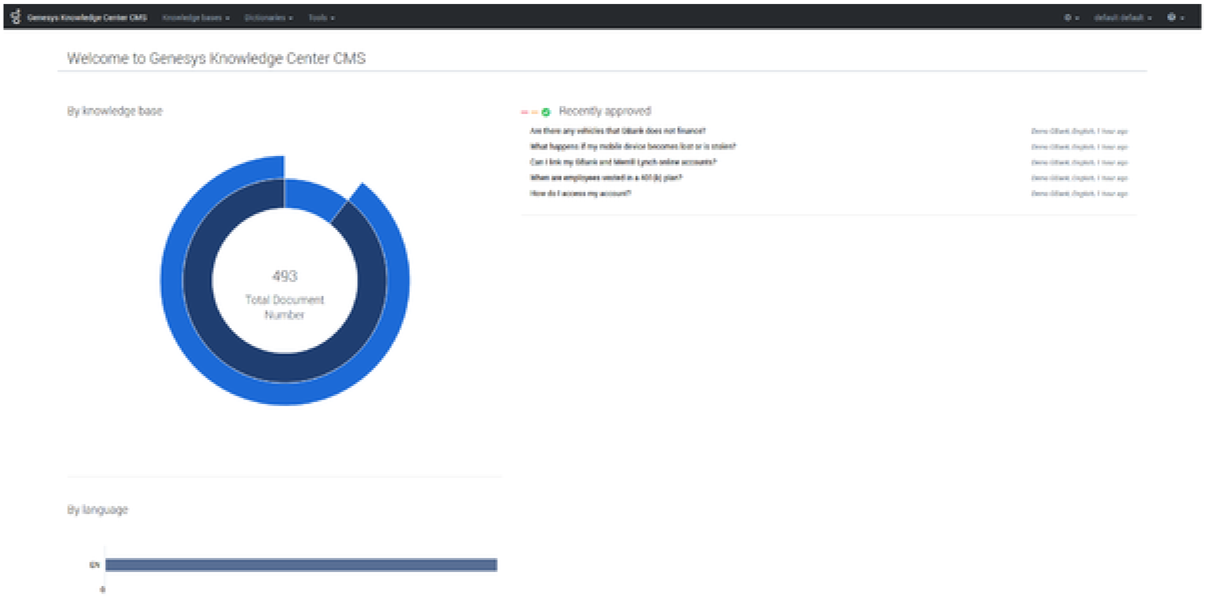
Enter your login and password in the dedicated boxes and hit the **Log In** button.

Note: To login to the CMS you need to have at least one of the knowledge privileges assigned (author, approver and/or administrator).

Inside the CMS

Dashboard

Once you've logged in to the CMS the Knowledge Dashboard displays the summary of the knowledge authored in the CMS.



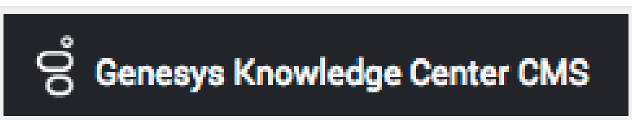
Page Elements

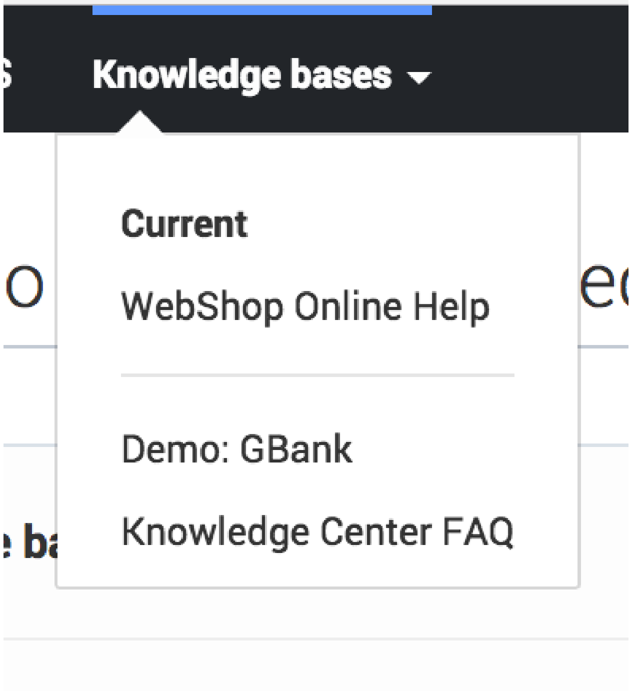
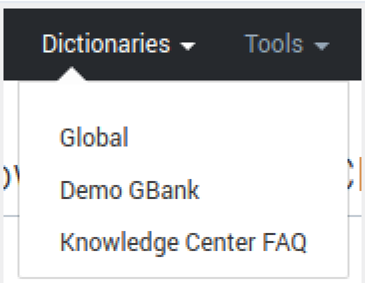
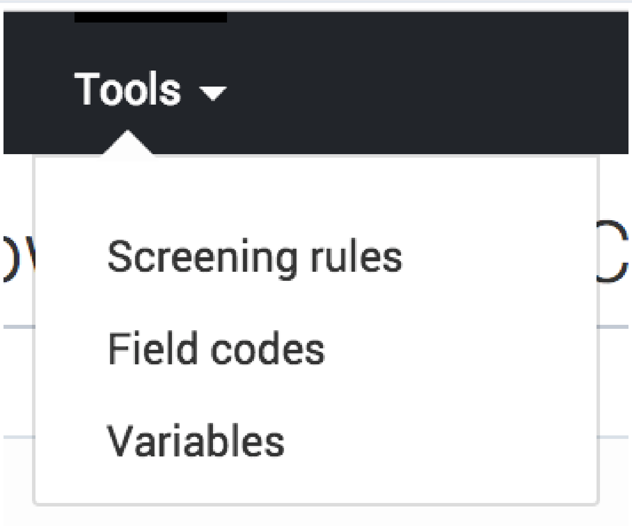
Let's review some of the major navigation elements available on the page.

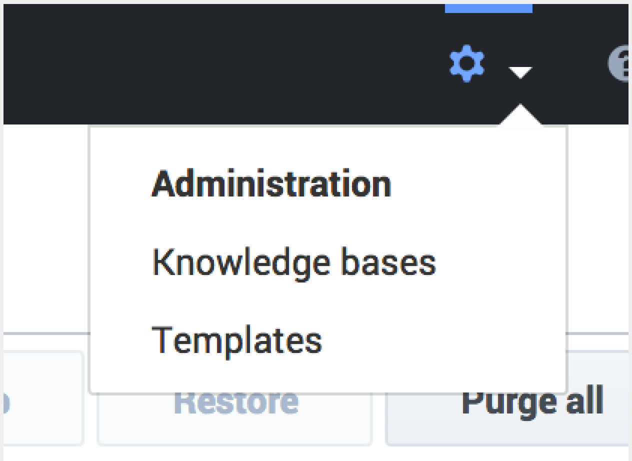
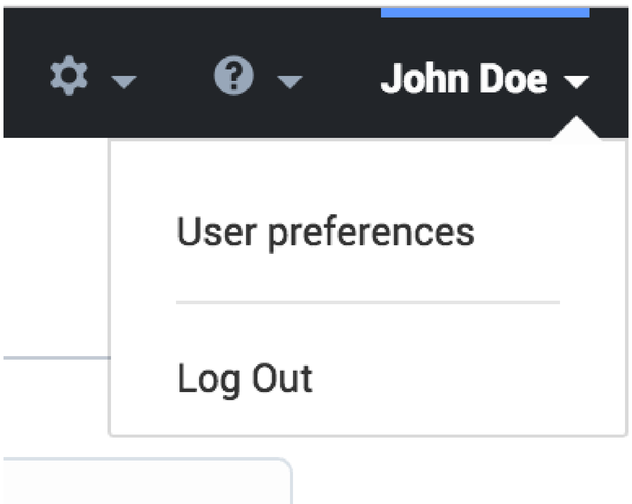
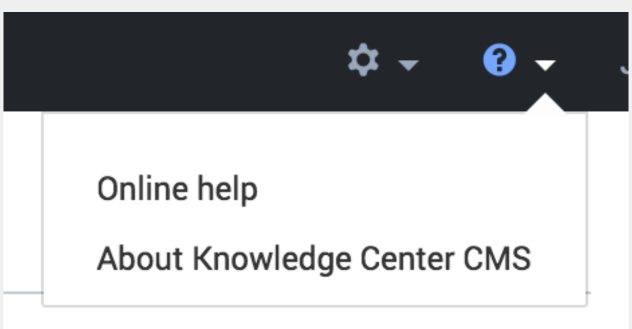
> **Tip**
> Click any of the images below to enlarge them

The top-most line is the main menu line providing you access to the functional areas of the product:

This main menu includes the following elements:

	**Product name:** clicking this area will always bring you back to the Knowledge Dashboard.

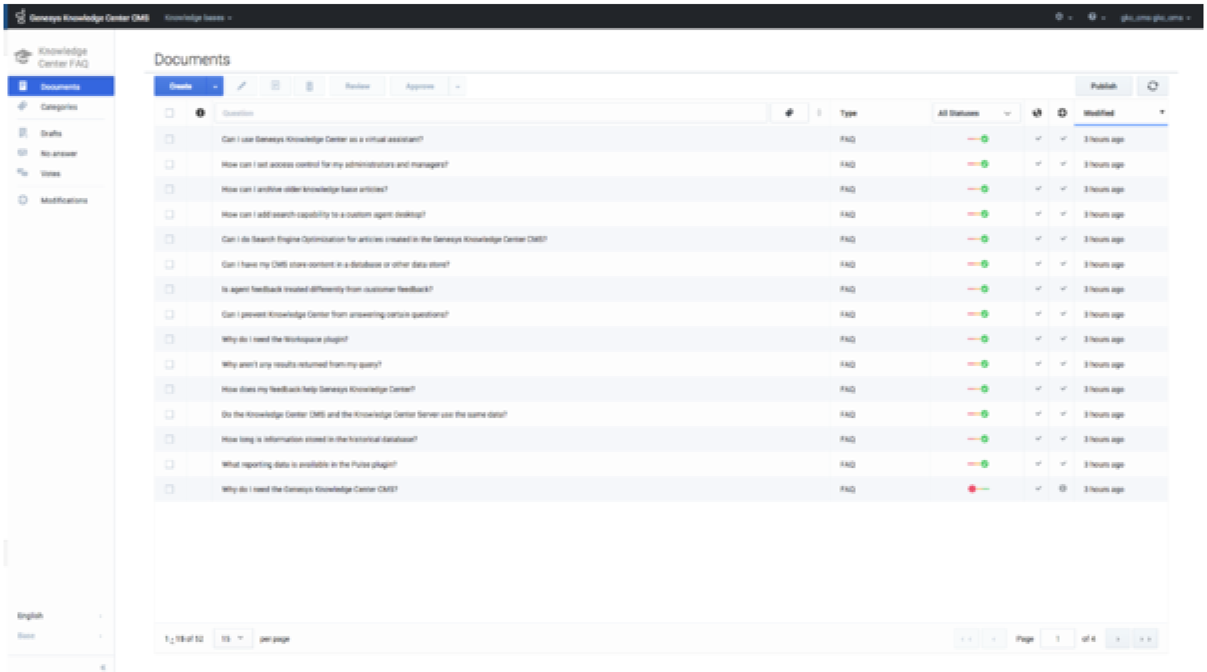
	**Knowledge base menu:** brings you to the authoring area within one of the knowledge bases. This is the area that is used by the knowledge workers (authors) and knowledge managers (approvers). Clicking this area will open a drop down list displaying the current knowledge base (just below "Current" label) as well as the list of all available knowledge bases (below the separation line). Clicking on one of the listed knowledge bases will bring you to the document authoring view for that knowledge base.
	**Dictionaries menu:** Provides a shortcut to access dictionaries. You need Administrator privileges to be able to access this area. There is a Global dictionary that affects all knowledge bases and one per knowledge base. Dictionaries are automatically created and cannot be deleted. Clicking on an existing dictionary in the drop-down menu will open that specific dictionary management view.
	**Tools menu:** allows you to manage Variables. You need Administrator privileges to be able to access this area. Clicking on this area will open a drop-down menu with the different objects to edit. Select one from the list and the authoring area of the selected object opens.

<table>
<tr>
<td>
</td>
<td>Administration menu: opens the administrator area where knowledge administrators can create new knowledge bases, document templates, modify properties of existing ones, and do other administrative actions. Click the gear icon and then select Knowledge Bases or Templates from drop down menu.</td>
</tr>
<tr>
<td>
</td>
<td>Personal menu: the last element in the main menu indicates the name of the user who is currently logged in, and also allows that user to change user preferences and logout from the system.</td>
</tr>
<tr>
<td>
</td>
<td>Help menu: provides easy access to the contextual and online help documentation of the Knowledge Center CMS as well as the "About" window.

When you click the question mark in the main menu, the Contextual Help widget opens. The Contextual Help widget displays help content that is relevant to the particular place you are in, in the application.

If you click on the down arrow beside the question mark a drop-down list displays where you can navigate to the online help (opened in a new browser window or tab) or display the "About" window of the Knowledge Center CRM.</td>
</tr>
</table>

Clicking on the elements of the Knowledge base menu or Administration menu will lead you to the working area of the product (for example, document authoring):

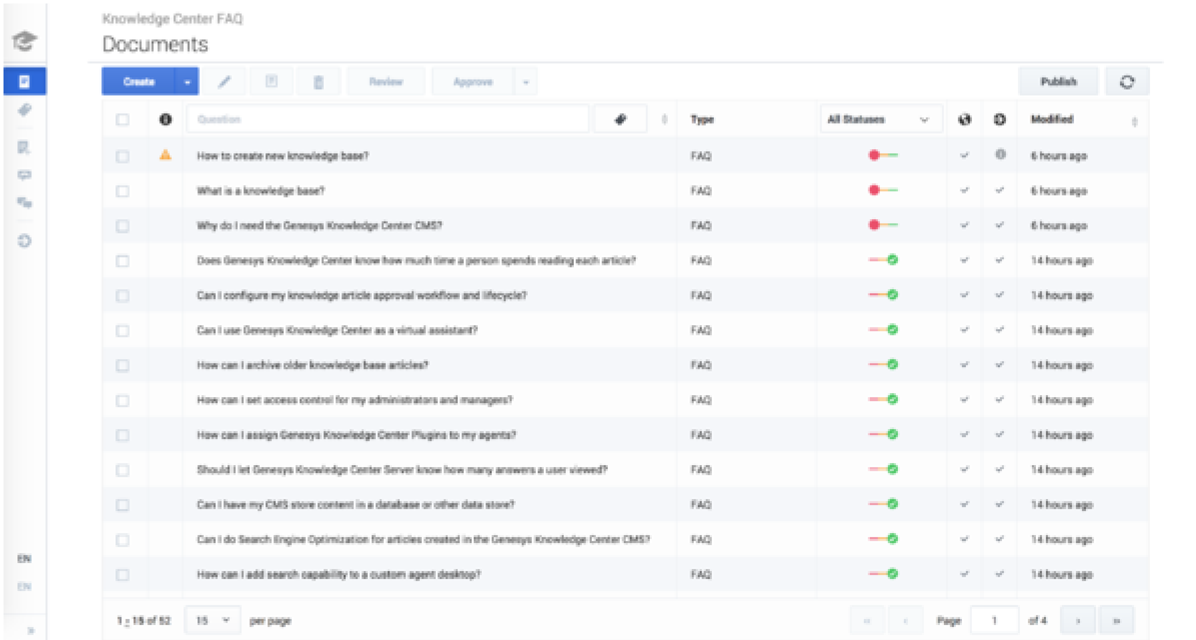


On the left side, there is a sidebar menu that helps you navigate within the authoring area. While an in-depth review of each element is covered in the authoring manual, let's go though the general principles:

The top line of the sidebar is dedicated to the visual indication of the area that you are in:

- If you see a graduation hat icon and the knowledge base name, you are in the authoring area
- If you see the gears icon, you are in the administration area

At the very bottom of the sidebar, there is an element that allows you to expand or collapse the sidebar. Collapsing the sidebar leaves more space for the main area:

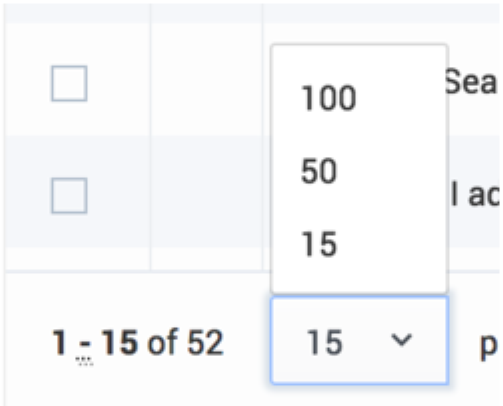


The main area is the one where all the work happens. There are two main types of the main area views:

- Table view (as shown above) - displays multiple elements (documents, categories, knowledge bases, and so on) with some summary information.
- Element view - displays a particular element.

Within table view you have:

- The knowledge base name (if the sidebar is collapsed)
- Sub-area name (for example, Documents, Categories, Knowledge Bases)
- Toolbar with action buttons
- Table view itself
- Table view navigation:
    - Number of elements per table page:



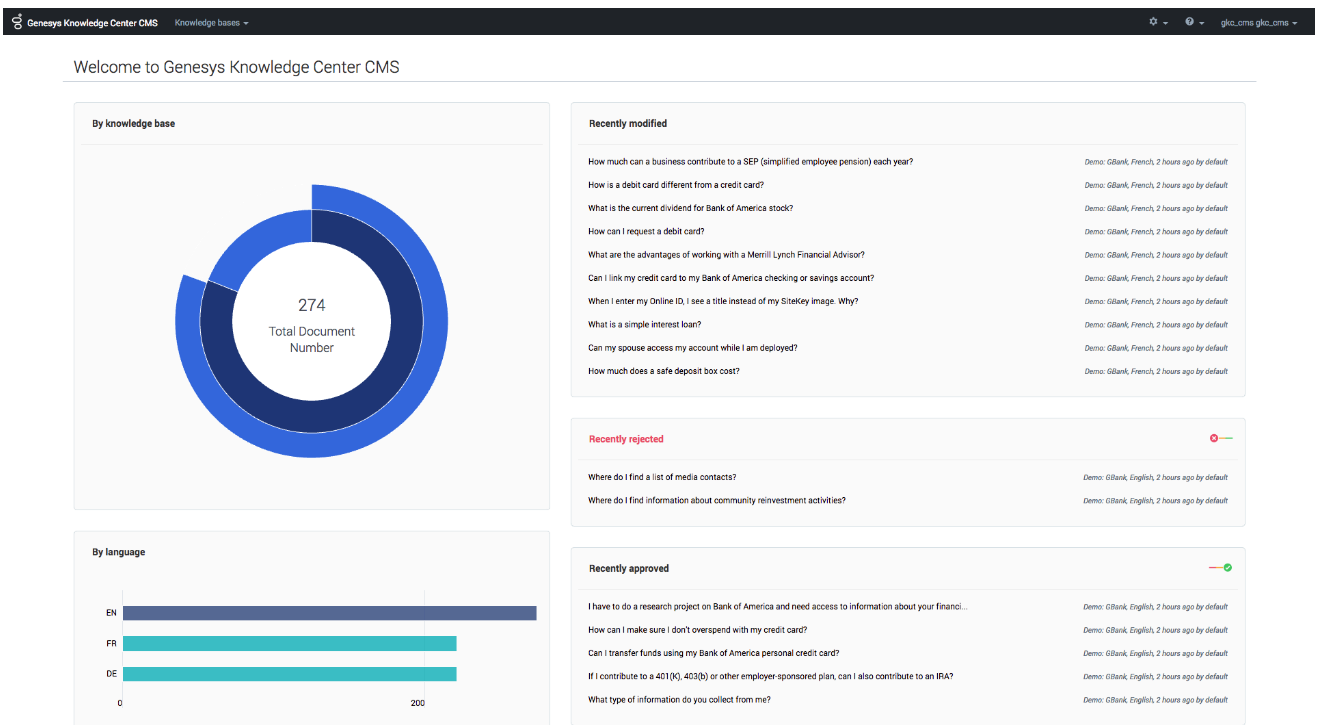
- Navigation between pages:

Knowledge Dashboard

Overview

Knowledge Dashboard provides you with valuable information on your content. It allows you to see the total number of documents, their distribution within the knowledge bases, and languages. It also shows the most recent changes in the documents.

> **Tip**
>
> Click any of the images on this page to enlarge



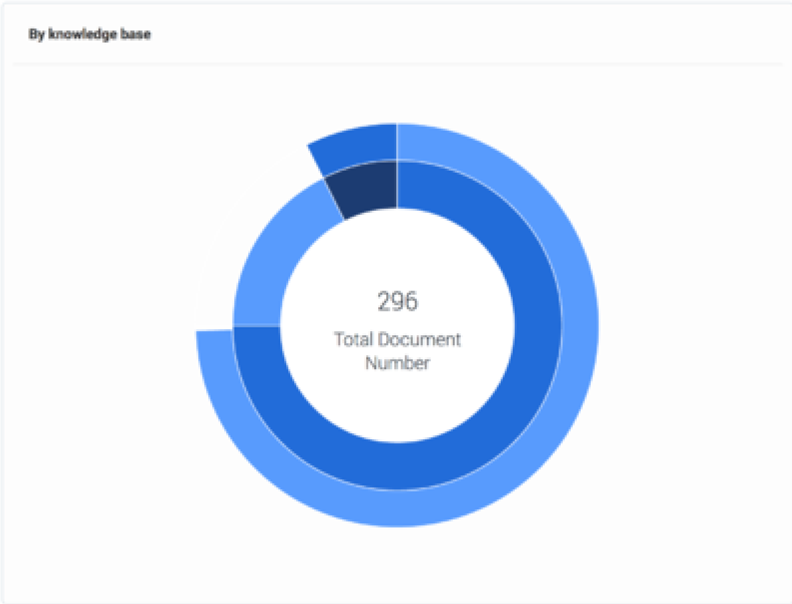
Knowledge Analytics

The left column of the dashboard contains analytical diagrams showing the distribution of the knowledge content by knowledge bases and languages.

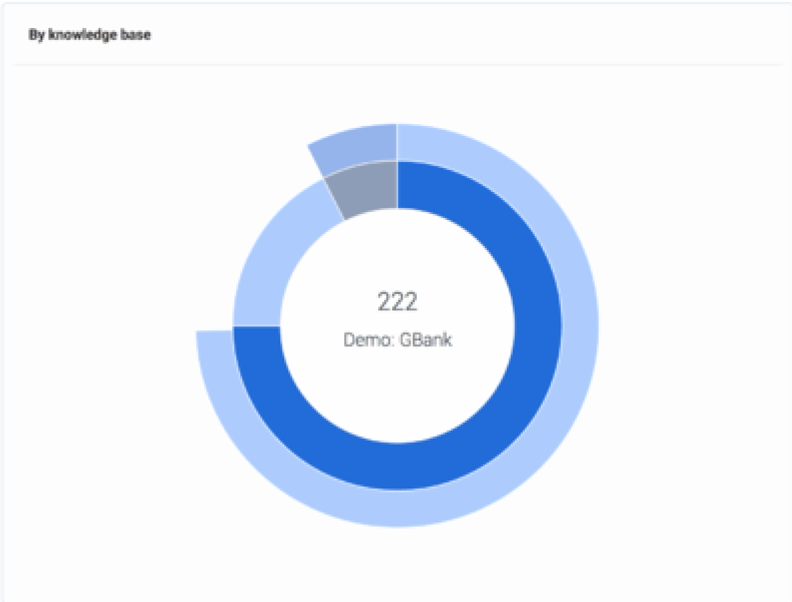
By knowledge base

This interactive sunburst diagram allows you to see:

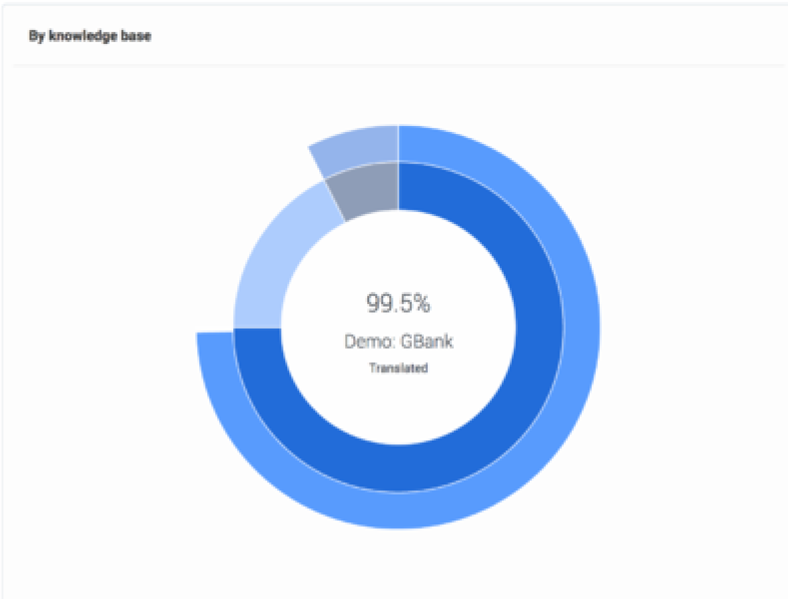
- A total number of unique documents in knowledge bases



- The inner cycle of the diagram shows distribution of those documents between the different knowledge bases. A sector is assigned to every knowledge base, representing a percentage of the documents that belong to each knowledge base. If you hover your cursor over a sector, you see the name of the knowledge base and the number of documents in it:



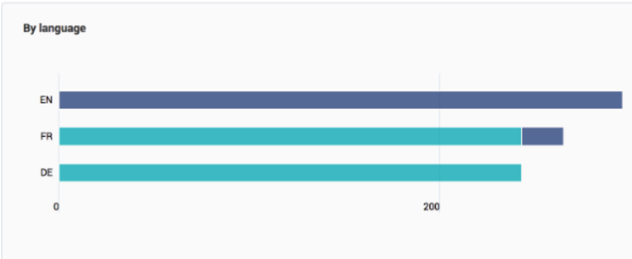
- The outer cycle of the diagram shows the average percentage of the translated documents within the knowledge base. A percentage is shown relative to the number of documents within a particular knowledge base (not in the relation of the total number of the documents within all knowledge bases). For example, say you have 100 unique documents in English and the knowledge base also has French and German languages available, with 50 and 70 documents translated. The Inner cycle will show 100 as the number of documents in the knowledge base. Outer cycle will show 60% as the average translation percentage (50 + 70 / 2).

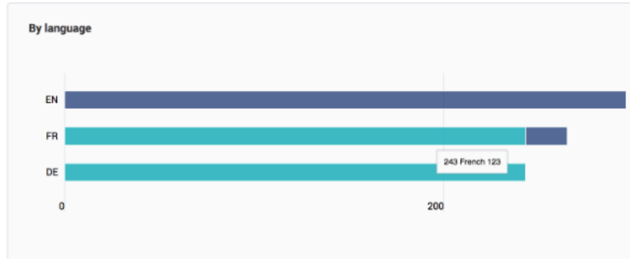


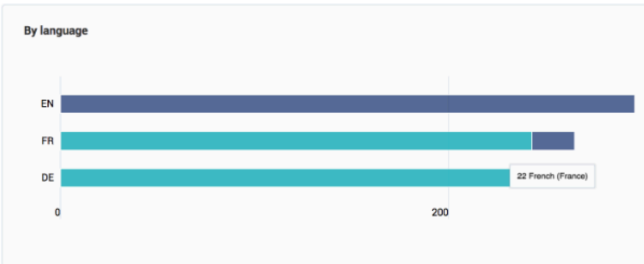
By language

Below **By knowledge base** you will find **By language** distribution. This diagram shows the number of documents you have in every language and its regional sub-languages (if they are defined for a language). **Note:** Total number of documents is higher compared to "By knowledge base" as every language version of the same document is counted toward its language.

For example, in the example above you, have 100 English, 50 French, and 70 German documents. Whereas on "By knowledge base" the total number of documents will be 100 as it shows only unique documents.



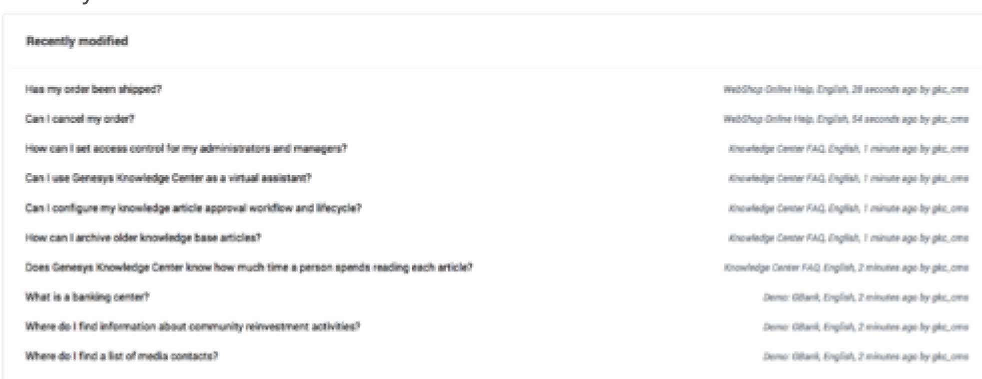




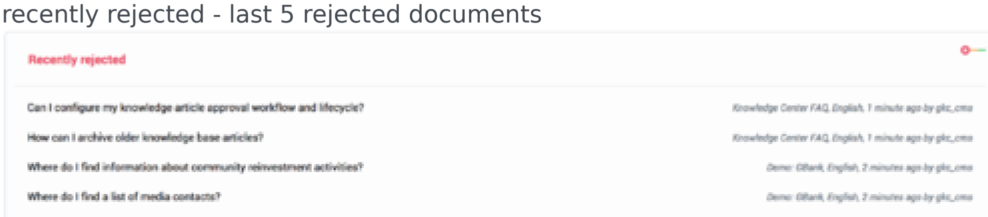
Recent changes

The right column of the dashboard contains the recent changes in the knowledge content:

- recently modified - last 10 edited documents

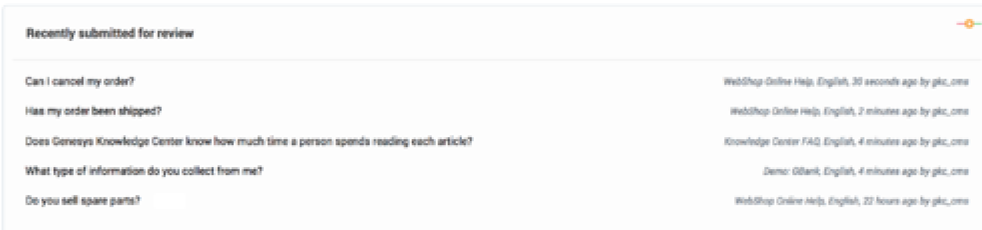


- recently rejected - last 5 rejected documents



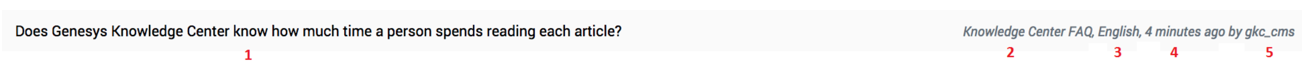
- recently approved - last 5 approved documents

- recently submitted for review - last 5 documents submitted for manager's review



Every document shown in recent changes has:

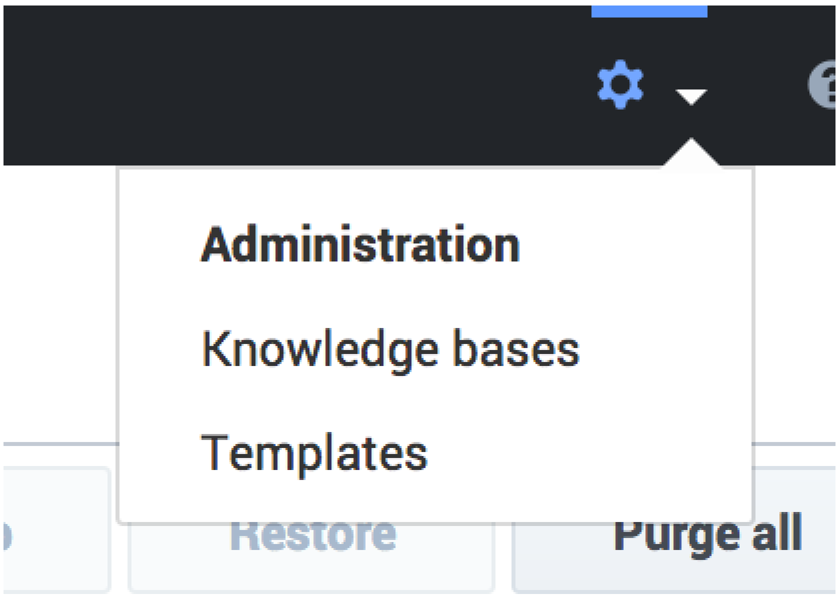
1. Document title that you can click to open the document
2. Knowledge base that it belongs to
3. Language of the document
4. When it was changed
5. Login of the agent that changed the document



Managing Knowledge Bases

Overview

The administration area allows you to set up knowledge bases according to your company needs. To open the administrator area click the gear icon in the main menu and then select **Knowledge Bases** from the drop down menu.

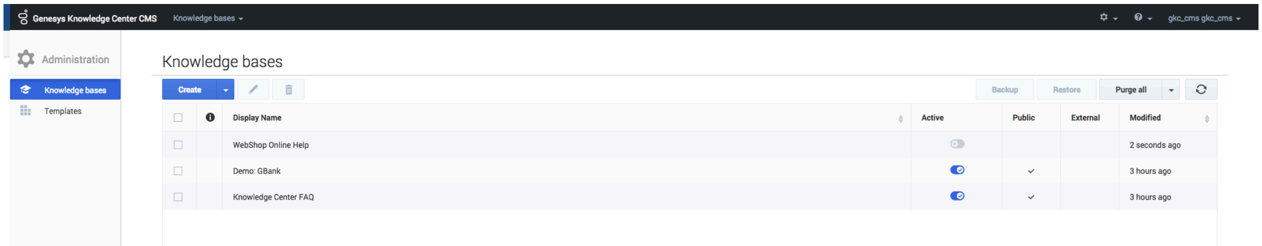


> **Important**
> To access the functionality you need to be assigned CMS Administrator privilege - Knowledge.CMS.Administrator (for more details, please see Access Permissions).

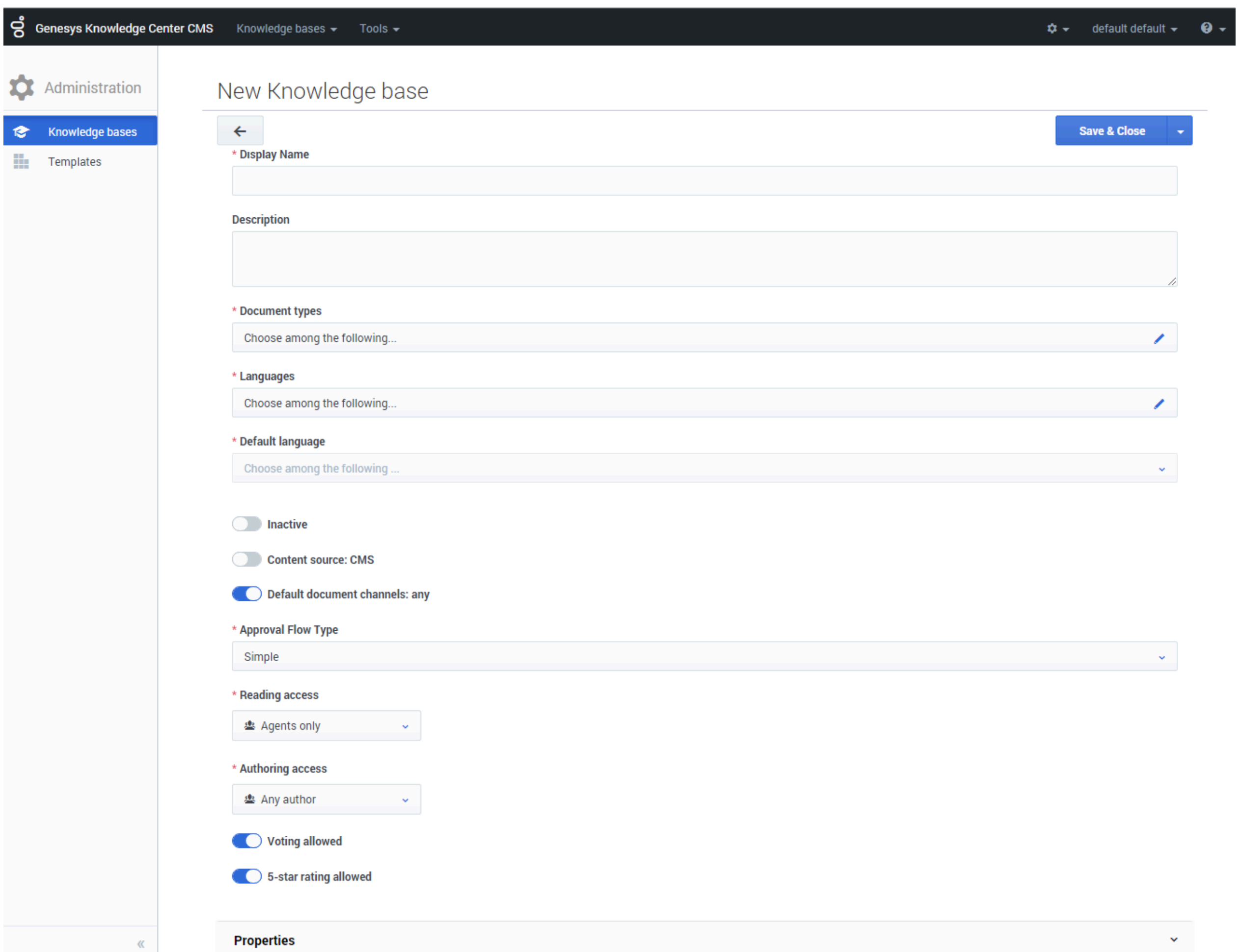
Creating a New Knowledge Base

To create a knowledge base in the administration area:

1. press the **Create** button:



2. A new knowledge base form is opened. Fill in the mandatory fields:
   - enter **Name**
   - enter **Display Name**
   - select at least one document type in **Document types**
   - select at least one language in **Languages**
   - select the **Default language**
   - Select the **Approval Flow Type** (from version 9.0.003).



3. Click **Save & Close**.

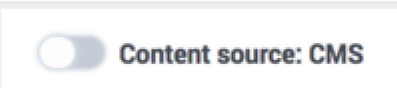
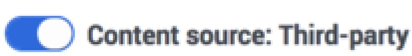
Important

There are several properties that cannot be changed after you have created a knowledge base. Please pay special attention when you select your values for them:

- Name - defines unique name of the knowledge base
- Document types - type of the documents that can be created in the knowledge base
- Default language - language that documents need to be created first in
- Content source - defines whether the content of the CMS will be created in Genesys Knowledge Center CMS (value: CMS) or in third-party CMS system (value: Third-party)
- Approval Flow Type - defines approval flow type in the knowledge base

Using External Content

Knowledge Center allows you to source content from an external system and still be exposed in the same way to the company's agents and customers.

	**Content source: CMS** (default) - Content will be authored in Knowledge Center CMS
	**Content source: Third-party** - Content will be sourced from external CMS system

Important

Content source can only be defined when the knowledge base is being created. You cannot change the source for the existing knowledge base.

Defining Access Permissions

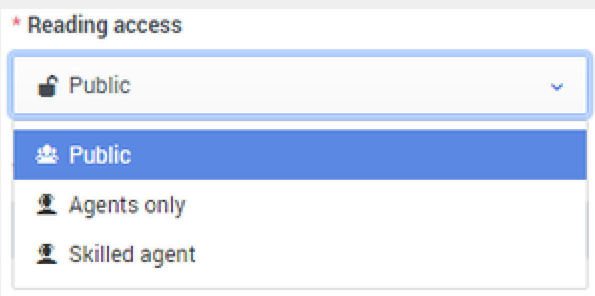
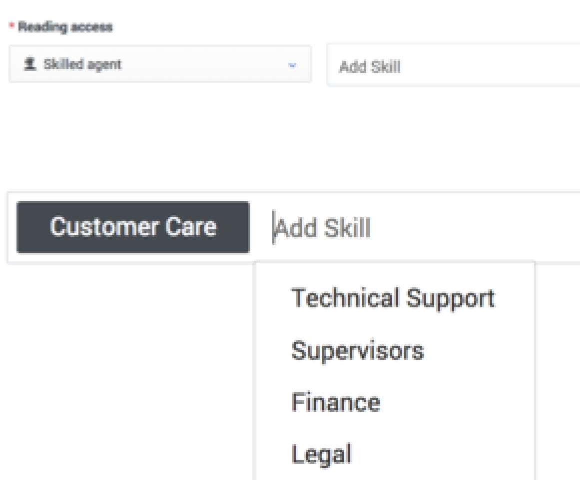
The following properties allow you to define the proper access to your knowledge base:

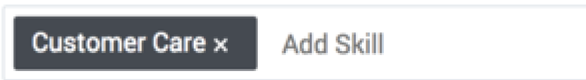
Active/Inactive

	**Inactive** (default) - If you select the inactive status for your Knowledge Base neither your customers nor your agents will be able to search for information in that knowledge base. Knowledge authors and knowledge administrators can still use the base to prepare content stored in it. Inactive status is recommended when your knowledge base is not ready for prime time
	**Active** - allows knowledge base to be available for search by agent and customer (according to set permissions)

Access For Reading

Reading access allows to define knowledge base visibility for customer and agents:

	**Reading access** - defines the Knowledge base visibility for reading (default reading access is "Public"). You can specify whether the Knowledge base should be available to: • **Public** (default value) - all users (consumers and all agents) • **Agents only** - to all of your agents, but not exposed to customers • **Skilled agent** - only to the agents that have at least one of the specified skills.
	When **Skilled agent** is selected as the **Reading access** value, the skill selection is shown. It allows you to define the list of skills for restriction. In a case where you have specified several skills for the reading access, the agent needs to have at least one of them to access the knowledge base. Skill level does not influence the ability to access the knowledge base. To add a skill: 1. Select a **Skilled agent** access type. 2. Click **Add Skill** in the form field located to the right. 3. Type a skill name you would like to add and click enter.

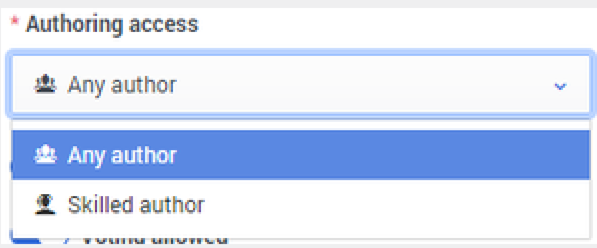


Hint: you can select it from the drop-down list provided.
Hint: as you begin typing the skill name, a list of proposed skills is refined to match the information being typed. This helps to easily find the required skills in large lists.

To remove a skill:

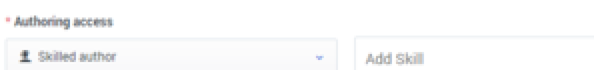
1. Move your mouse over the selected skill.
2. Click the **X** icon next to the skill name.

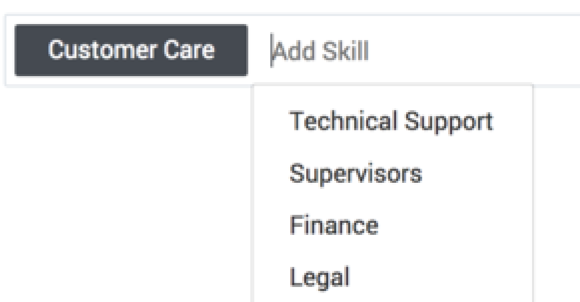
Access For Authoring

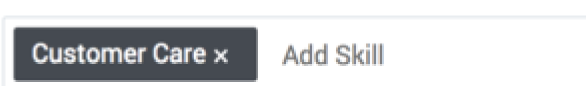


Authoring access - defines the Knowledge base visibility for authoring (default reading access is "Agents only"). You can specify whether the Knowledge base should be available for authoring to:

- **Any author** - any authors that have authoring privilege
- **Skilled author** - only to the authors that have at least one of the specified skills.







When **Skilled author** is selected as the **Authoring access** value, the skill selection is shown. It allows you to define the list of skills for restriction. In the case where you have specified several skills for the authoring access, the agent needs to have at least one of them to access the knowledge base. Skill level does not influence the ability to access the knowledge base.

To add a skill:

1. Select a **Skilled author** access type.
2. Click **Add Skill** in the form field located to the right
3. Type a skill name you would like to add and click enter

Hint: you can select it from the drop-down list provided
Hint: as you begin typing the skill name, a list of proposed skills is refined to match the information being typed. This helps to easily find the required skills in large lists.

To remove a skill:

1. Move your mouse over the selected skill.
2. Click the **X** icon after the skill name.

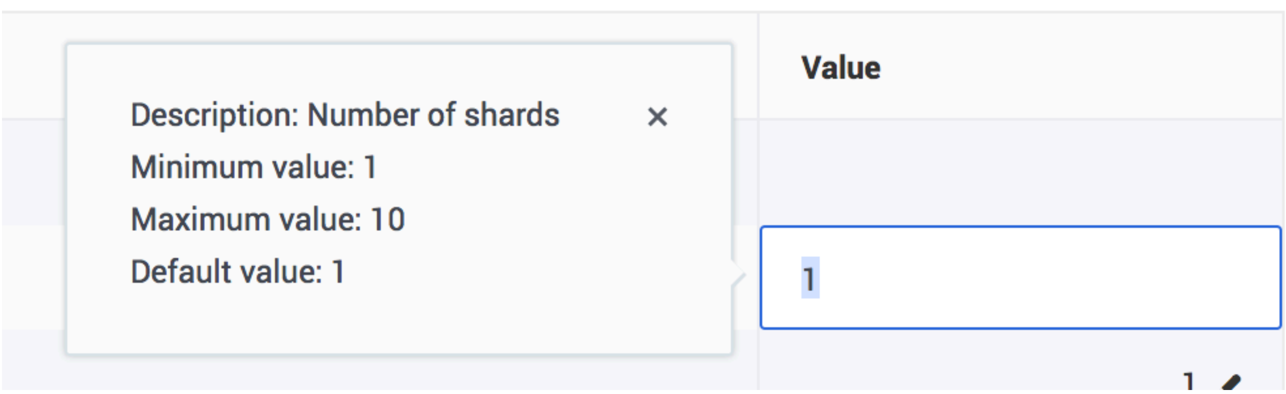
Behavior Options

To edit the behavior options you need to expand **Properties** at the bottom of the knowledge base form:

Behavior

Name	Value
index	
Number of shards	1
Number of replicas	1
faq	
Out of domain	0.5
Number of answers	3
Number of answers in preconfidence selection	10
Trending period in days	30
Marked as created during period	1
Marked as recently modified during period	1

An option can be edited by clicking on the value. While editing, a hint is shown describing the option and valid values:

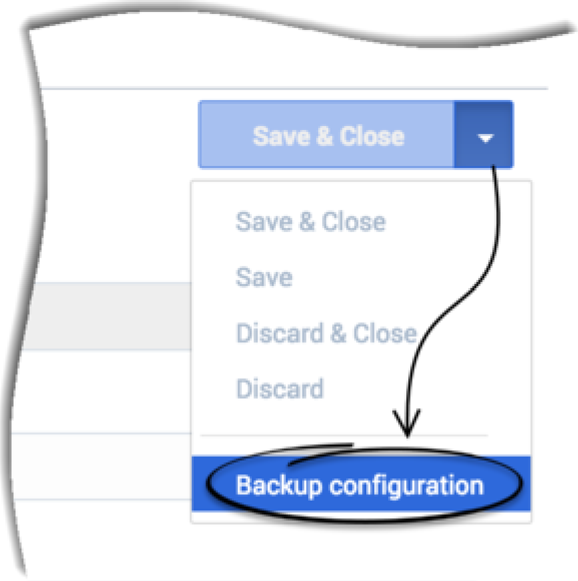


Importing Knowledge Base Configuration

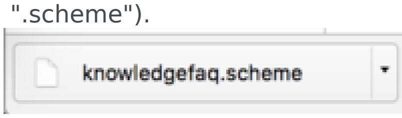
Cloning the Knowledge Base Configuration

To re-use the configuration of an existing knowledge base to create a new one you must:

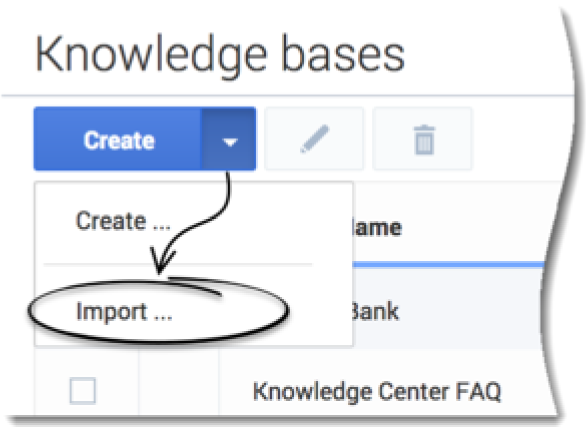
1. Open the list of knowledge bases.
2. Open the knowledge base you wish to clone.
3. Click the drop-down menu next to the **Save & Close** button.
4. Select the **Backup configuration** menu:



5. The browser downloads a text file with the knowledge base configuration (name: knowledgenbaseId + ".scheme").



6. Go back to the **Knowledge Bases** page.
7. In the **Create** drop-down menu select the **Import ...** option:



8. Select **Browse**, choose the recently downloaded file in the opened dialog window and then, click **Import**:

9. **For CMS 8.5.304 and later:** The new Knowledge Base form is opened and pre-filled with the values from the loaded knowledge base configuration.

Important

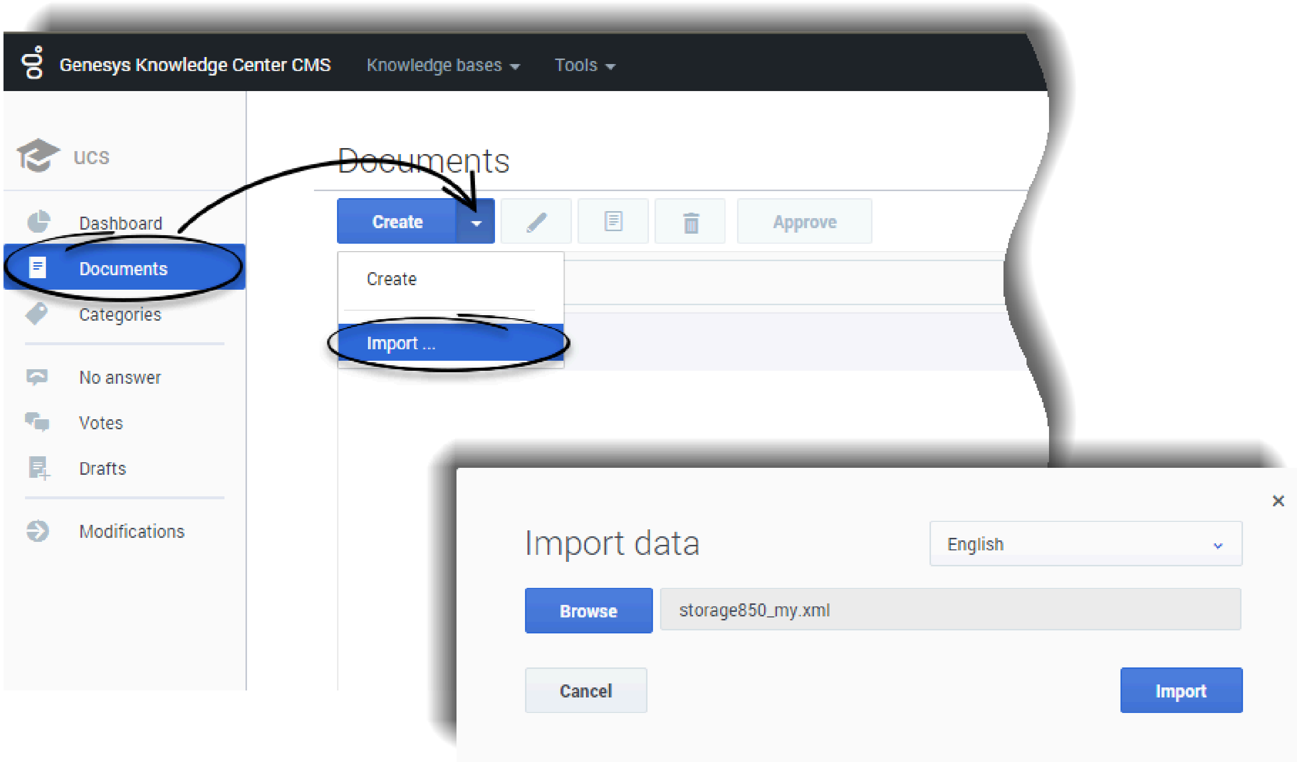
You must change the knowledge base ID. You cannot have more than one knowledge base with the same ID.

Note: In CMS versions earlier than 8.5.304 , you were required to modify the knowledge base ID and properties in the exported file before importing it to the system.

Importing Knowledge Base Content

You can import your own data (documents+categories) to the knowledge base.

1. Click **Knowledge bases** from the toolbar at the top
2. Choose your knowledge base from list
3. Click the **Documents** tab
4. Click the arrow next to the **Create** button
5. Click **Import...**
6. Choose the XML-based file with your data
7. Choose the language
8. Click **Import**



Supported data format

The Import tool supports xml-files with the following structure:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<knowledge lang="en" kbId="knowledgefaq" version="9.0.000">
    <categories>
        <category>
            <id>cat1</id>
            <categoryParentId></categoryParentId>
            <name>Root</name>
            <description></description>
            <status>APPROVED</status>
        </category>
        <category>
            <id>cat2</id>
            <categoryParentId>cat1</categoryParentId>
            <name>Cat ER 89313</name>
            <description></description>
            <status>APPROVED</status>
        </category>
    </categories>
    <documents>
        <document>
            <id>doc1</id>
           <templateId>basearticle</templateId>
            <status>APPROVED</status>
            <media/>
            <tags/>
```

```
            <alternatives/>
            <categories>
                <category>
                    <id>cat</id>
                </category>
            </categories>
            <customFields/>
            <title>
                <id>title</id>
                <value>Sample Article</value>
            </title>
            <content>
               <docField>
                   <id>description</id>
                    <value>Sample body.</value>
                </docField>
            </content>
            <additional>
                <docField>
                    <id>summary</id>
                    <value></value>
                </docField>
            </additional>
        </document>
    </documents>
</knowledge>
```

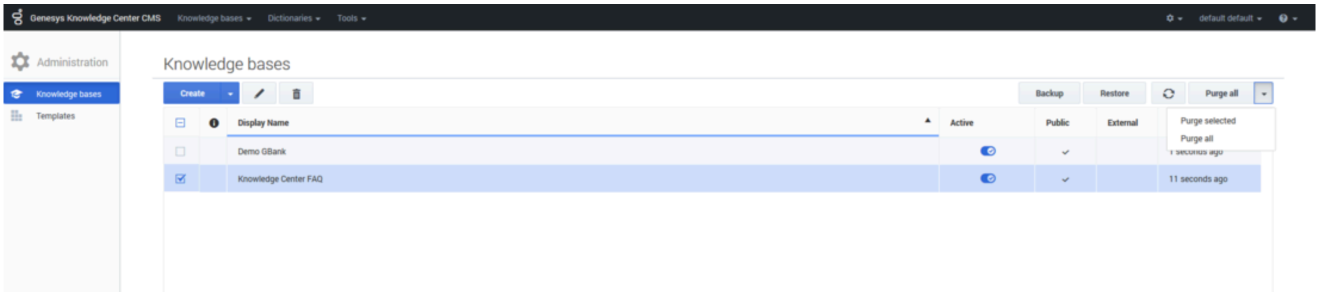
Fields descriptions

- `templateId` - id of basic or custom template. Predefined templates are:
  - `basefaq`
  - `baseartcile`
- `title` - named field(s) for document title part:
  - For FAQ it is 'question'
  - For 'Article' it is 'title'
- `content` - named field(s) for document content part:
  - For FAQ it is 'answer'
  - For 'Article' it is 'description'
- `additional` - named additional field(s):
  - No additional fields for 'FAQ'
  - For 'Article' it is 'summary'

Purge Knowledge Bases

Using a **Purge operation** Genesys Knowledge Center enables you to remove broken or outdated content stored in Elasticsearch. Removing broken or outdated content from Elasticsearch will not delete data or the knowledge base.

The Purge operation only deletes an Elasticsearch index associated with a deleted Knowledge Base (that is, if they were no deleted automatically) and removes categories that are not related to existing documents.



To purge a Knowledge Base

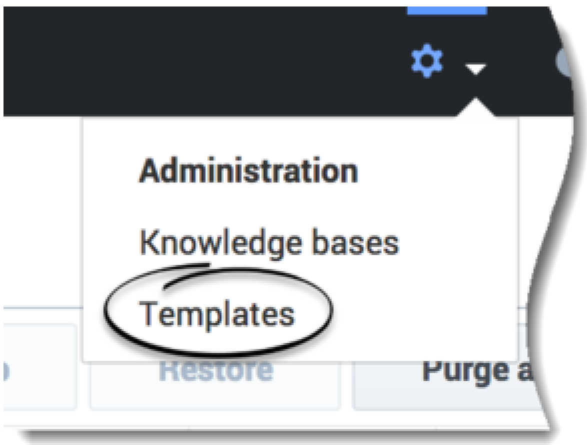
1. Open the Knowledge Base list.
2. Select the Knowledge Base you want to purge.
3. In the top-right corner of the screen open the **Purge all** list.
4. Select **Purge selected**.

> **Important**
> Select **Purge All** when you want to remove broken data in all the Knowledge Bases at once.

Templates

Overview

Templates can be accessed by selecting the **Templates** menu from the **Administration** menu:



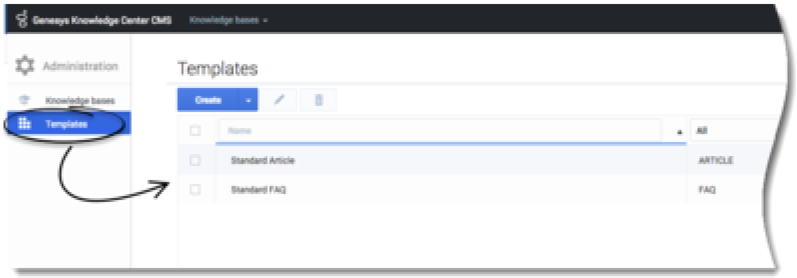
Document templates allow you to define:

- The desired breakdown (into section) of document content
- Any instructions to authors on the intended use of any of the sections
- Visibility for every section by limiting access to its content to the desired group of users (customer, agent or sub-groups of agents)

To be able to view and manage templates you need to have `Knowledge.CMS.Administrator` privilege (for more details, see Access Permissions).

Viewing existing templates

When you navigate to templates by selecting **Templates** from the **Administration** menu, CMS will show you the list of templates that are currently available in your system:

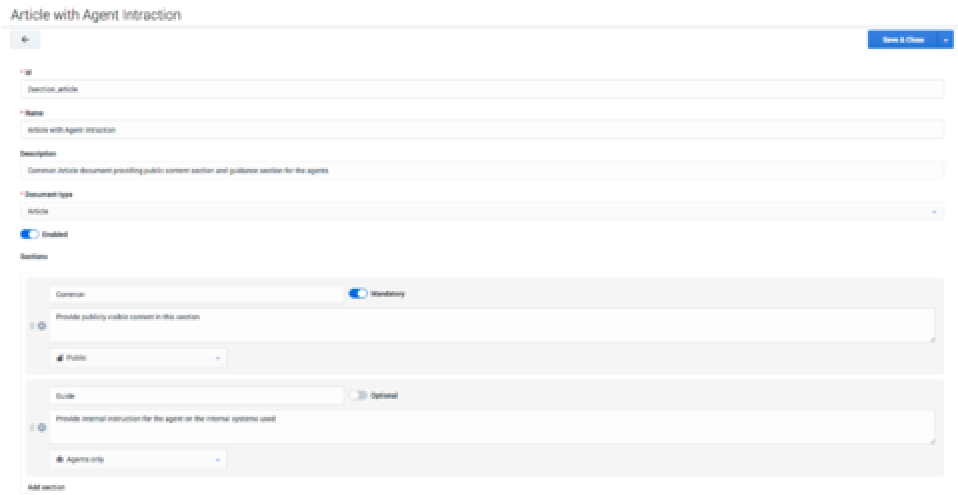


From this view you can:

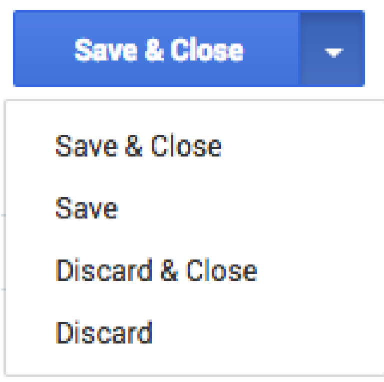
- create new template:
  - from empty template
  - using previously exported template
- modify existing template
- delete existing template
- disable template (to prevent new documents from being created, using this templates)
- see info about how much knowledge bases uses this template in documents (from 9.004.xx version)
- filter out the list of the templates by:
  - template name
  - document type
  - enable/disable status
- sort the template list by:
  - template name
  - modification date
  - number of knowledge bases in use (from 9.004.xx version)

Creating a new template

1. Click **Create**
2. Enter values for the mandatory fields (marked by a red star), as well as any other pertinent fields.



3. Click **Save & Close** or select one of the other options from the **Save & Close** drop-down menu.



Standards templates

When you start CMS for the first time you will see two templates already created for you:

- **Standard Article**
- **Standard FAQ**

Both these templates are created by default and configured to have one public section. You can redefine these templates according to your needs.

> **Important**
> The template can be changed or deleted if there are no documents in your knowledge bases that are using it.

> **Tip**
> You can disable the template to prevent it from being used by authors to create new documents.

Templates explained

Field	Description
Id	Allows you to define a unique technical name for templates. This name is used when you export or import any templates or documents using it. **Id restrictions:** • It is not allowed to have two templates with same id. • Only `[a-z][A-Z][0-9]_-` characters allowed to be used in the id. • Id cannot be modified one document is created.
Name	Defines the name that authors can chose from when they are creating new documents.
Description	Provides a short explanation on how the template is used. It is shown to the authors when they create a new document.
Document type	Allows you to select one of the basic document types that are extended with the templates. Supported types are: • **Article** • **FAQ**
Enable	Allows you to enable or disable templates used by the authors. If templates are `disabled` all existing documents that are using templates will continue to function as is however authors will not be able to create any new documents using this template.
Sections	Define the content parts of which the final document content is compiled. The order of these sections is essential. Knowledge Center uses a defined order to combine content together before showing it to an agent or a customer. Important Every template must have at least one section.

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td></td><td>
For every section you are able to provide:

name - visible for authors only when editing the document in CMS
instruction - visible for authors only when editing the document in CMS
mandatory flag that will instruct CMS that document cannot be sent for approval until content for this section is provided.
visibility rule

Important
At least one section in document must be mandatory.

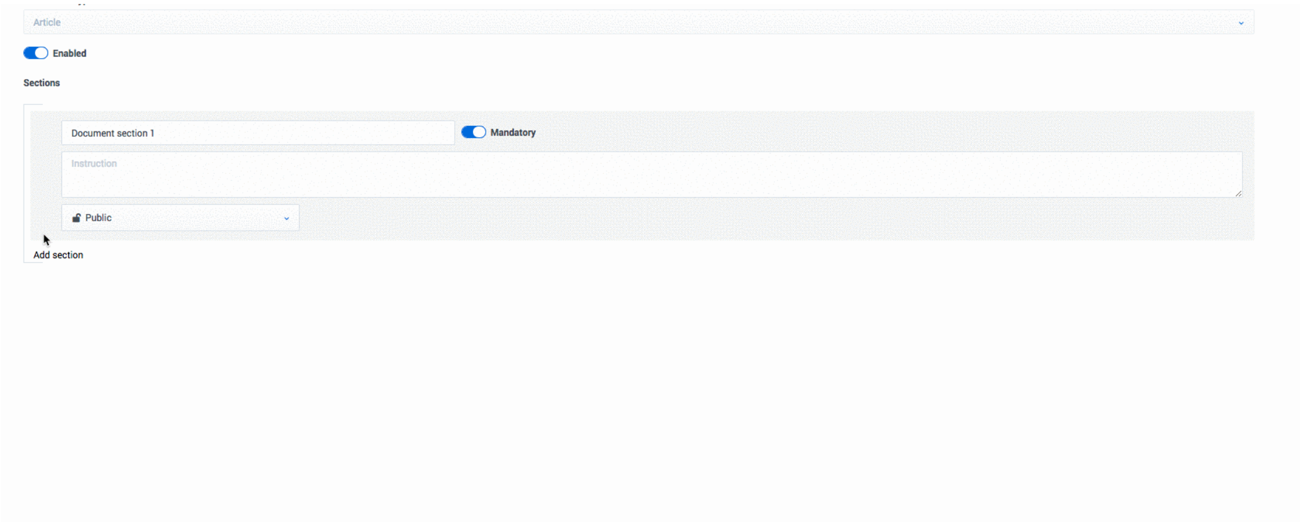
A section can be:

Public - visible to any user
Agents only - visible to any agent, but hidden when customer views the document
Skilled agent - visible to certain set of the agent that has one of the defined skills

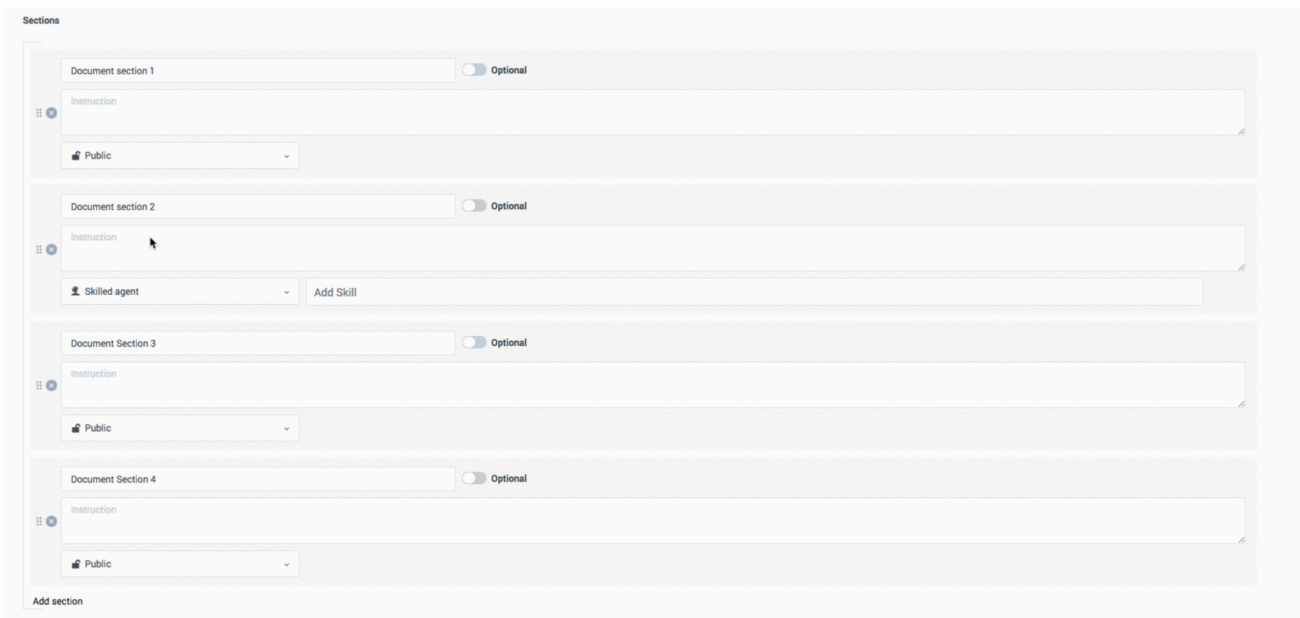
Important
When a template is used within a knowledge base, the Reading access defined for the knowledge base is what's used to set the priority for the section visibility. For example, if you have a template with "Public" sections within a knowledge base that are set to "Agent only" for Reading access, it results in all those sections within the document being visible to agents only. In this instance however, because of the priority set, this also means that none of the documents within this knowledge base are accessible by the customers.
</td></tr>
</table>

While editing templates, you can:

- Add a section by clicking the **Add section** link:

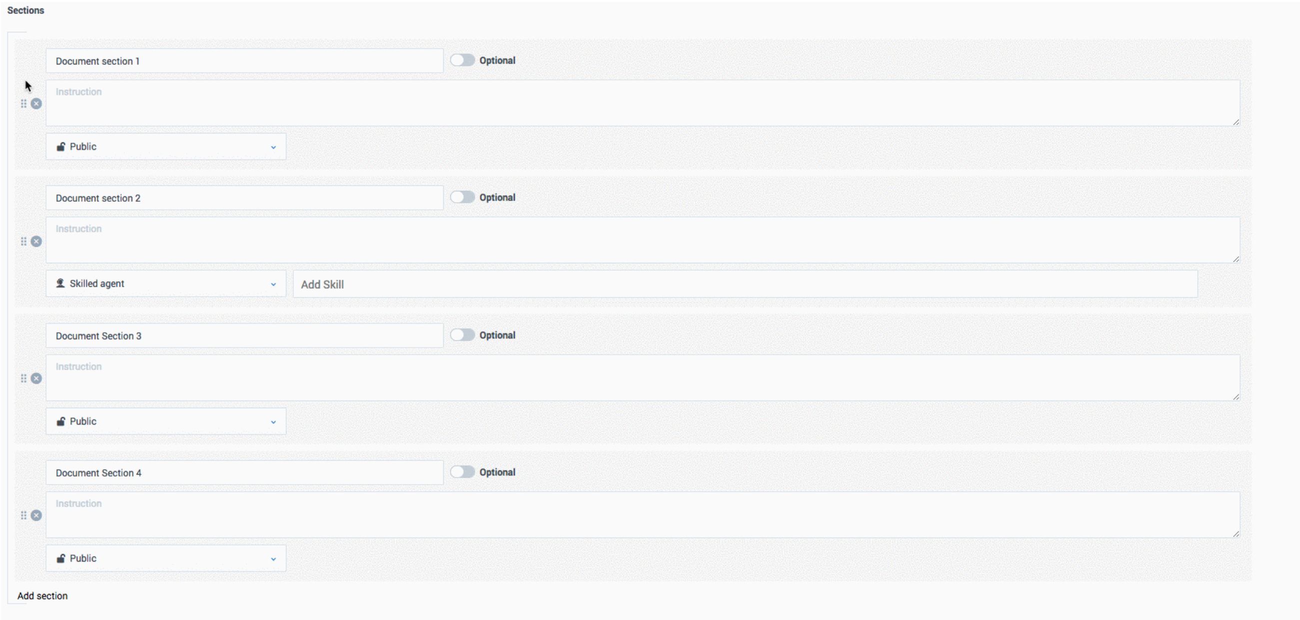


- Delete a section by clicking: .



- change the order of the section by dragging and dropping them into the desired order. Hover your cursor over the

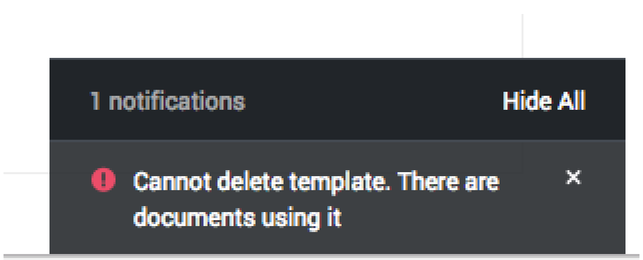
 icon in front of any section then click, hold, and drag to the proper location, and then release your cursor.



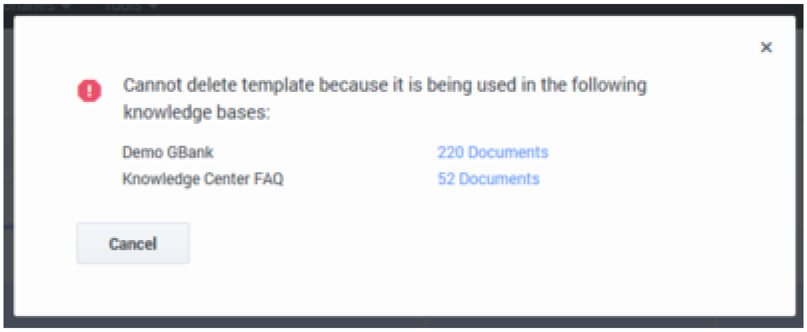
Deleting templates

You can delete templates by selecting the template from the list and then clicking on delete button:

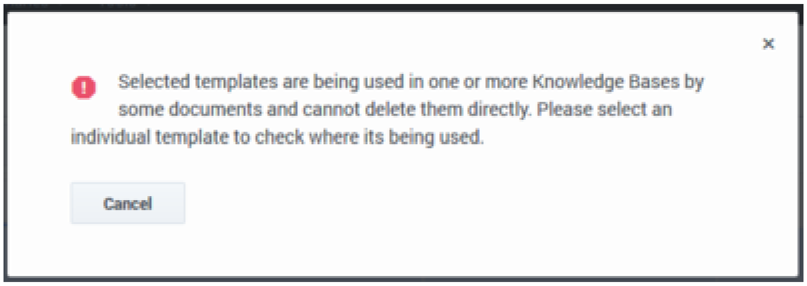
Note: You cannot delete a template that is used in a document within your knowledge bases. Until version 9.003.xx, when trying to delete such a template, the CMS displays the following error message:



As of version 9.004.xx, the CMS displays the following message containing information about which knowledge bases this template was used in, as well as the number of related documents the template affects:



Clicking on the number of documents switches you to the appropriate knowledge base where you can manage your documents before deleting the templates. When attempting to delete several templates with related documents, the CMS displays the following message:



Rather than deleting such templates, you can disable them. This prevents the template from being used when creating new documents.

Tip

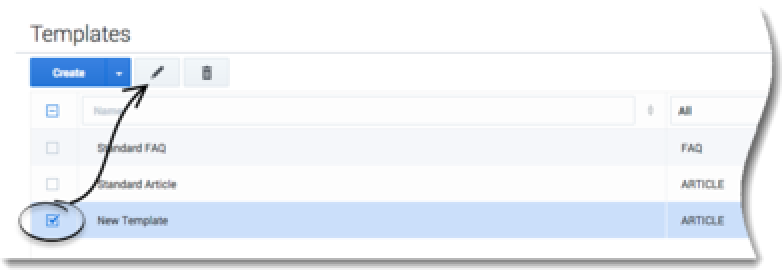
Disabling a template does not disable, hide, or remove any content from the Knowledge Base and the content can still be updated. Disabling a template only prevents the creation of new content with that template.

Important

Ensure that at least one template is created and enabled for every document type. Disabling all templates for certain document types disables the ability to add these documents to your knowledge bases.

Modifying templates

To modify a template, select the template and then click the **edit** button:

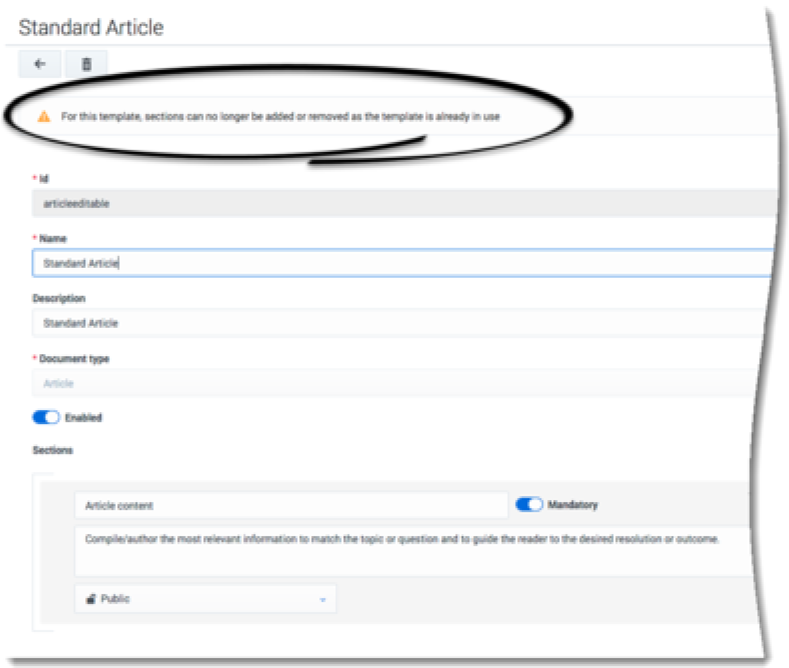


Alternatively, you can double-click on the template to enter edit view.

There are certain restrictions on the editing templates:

- The template **Id** and **Document type** can be defined before the template is created but cannot be changed afterward.
- **Sections** can be added and removed while there is no documents using this template. As soon as you have created at least one document using the template, you cannot add or delete sections within the document. You can however still change the order of the existing sections and change their attributes (such as **Name**, **Instruction**, **Mandatory** flag and visibility).

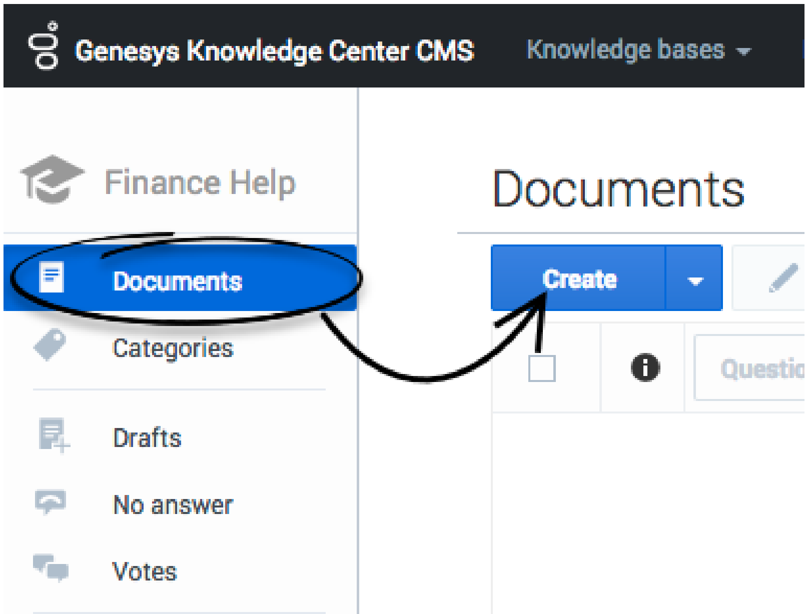
Templates that have restrictions on the modification will have special notice (1) shown when entering the edit mode:



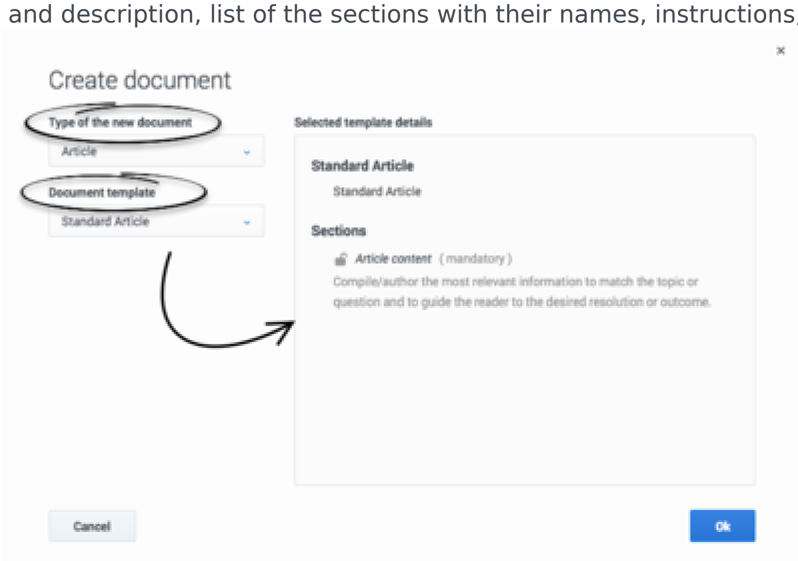
Using templates

When you add a document to the knowledge base you are able to select a template to use for that document.

1. From the *Documents* view click the **Create** button:



2. From the **Create document** window, choose the **Document type** and **Document template**. Once these fields are chosen, the template information is shown on the right of the window (Template name and description, list of the sections with their names, instructions, visibilities):



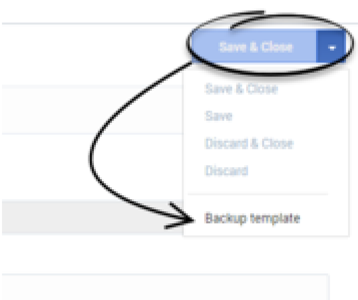
3. Click **Ok** to create the document.

Importing templates

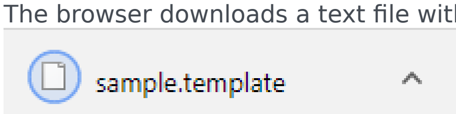
Cloning Template

To re-use an existing template to create a new one you must:

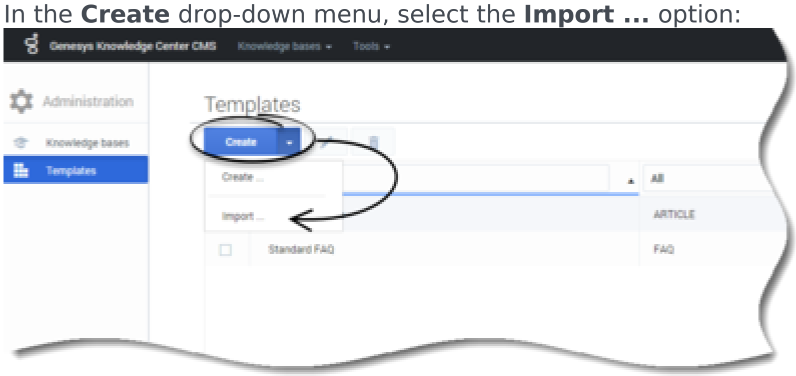
1. Open the list of templates.
2. Open the template you wish to clone.
3. Click the drop-down menu next to the **Save & Close** button.
4. Select **Backup configuration**:



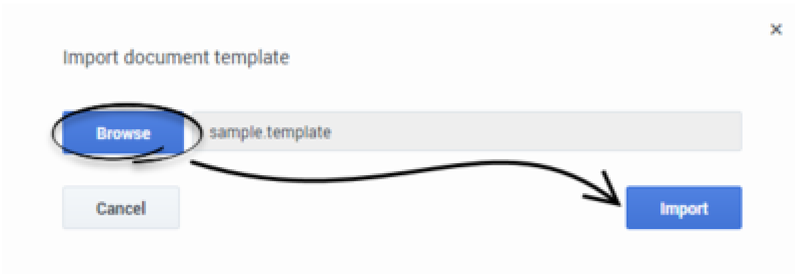
5. The browser downloads a text file with the template configuration (name: templateId + ".template").



6. Go back to the **Templates** page.
7. In the **Create** drop-down menu, select the **Import ...** option:



8. Select **Browse**, choose the recently downloaded file in the open dialog window and then, click **Import**:



9. The new template form is opened and pre-filled with the values from the loaded knowledge base configuration.

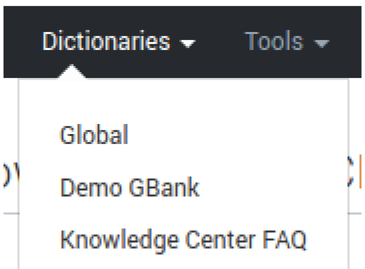
Important

You must change the template ID. You cannot have more than one template with the same ID.

Entities

Overview

Entities are gathered within Dictionaries. Dictionaries are basically containers for entities. There is a Global Dictionary whose Entities will affect all Documents in every Knowledge Base and a Dictionary for every other Knowledge Base created. Dictionaries cannot be created or deleted. To access Dictionaries, select **Dictionaries** from the top menu:



Dictionaries and Entities are a new way to define Knowledge in GKC. This knowledge is arranged as follows:

- A Dictionary can contain many Entities
- An Entity can contain many Values
- A Value can contain many Synonyms

Entities allow the defining of top level concepts that Knowledge Managers know their customers are interested in (for example, furniture or cars). Values, on the other hand can be used to define more specific concepts within the top level one (in other words, sofas or 4x4 cars). For every Value, Knowledge Managers can define as many Synonyms for that word (the value) as they want. For instance, assume we have an Entity called "Table". We also have a Value called "Dining table", and we have two Synonyms for that value, "dining_table_one", "dining_table_2". By defining this very simple Dictionary, if a customer searches for "table", "dining table" or any combination, not only are Documents containing the words "dining", "table" and "dining table" shown, but also Documents that contain the Synonyms.

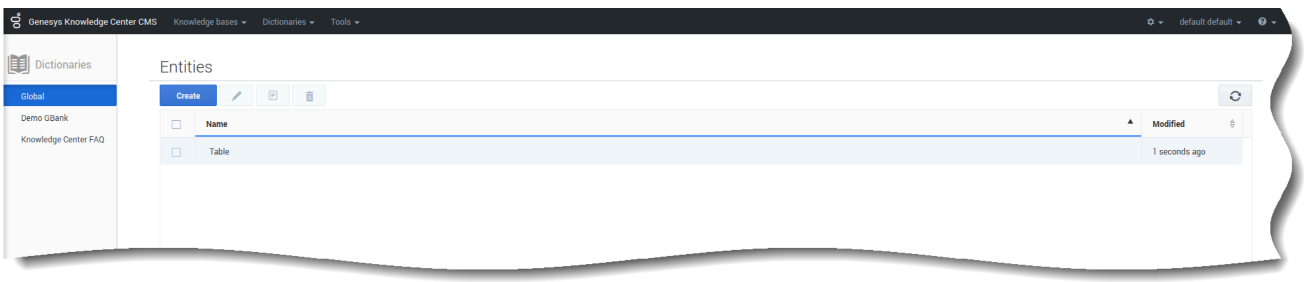
This is a very simplistic example but shows you how Knowledge Managers can influence search results by defining Entities, Values, and Synonyms taking into account they know what query terms they want to relate with what Values and Synonyms.

> **Important**
> Notice that, in terms of priority, a specific Knowledge Base Dictionary has more weight than the Global Dictionary. Meaning that whatever Entities are defined in the

Knowledge Base Dictionaries have more priority when returning results of those defined in the Global Dictionary.

Viewing Entities

Upon selecting one of the available Dictionaries in the top menu, CMS shows the list of available Entities for that particular Dictionary:

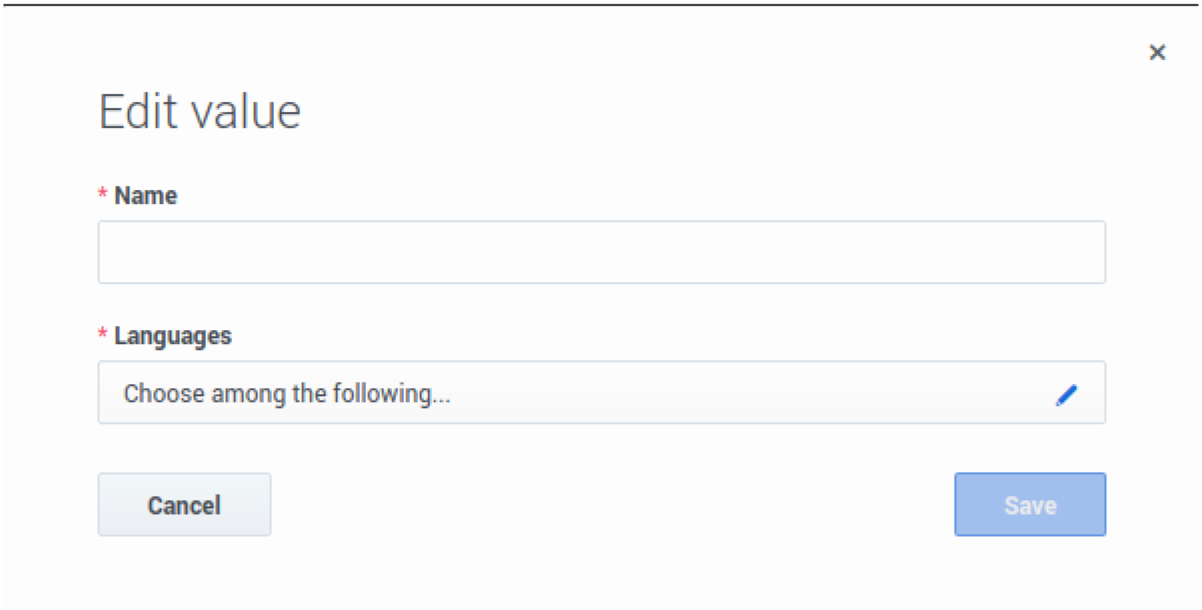


From this view you can:

- Create a new Entity
- View an existing Entity
- Modify an existing Entity
- Delete an existing Entity
- Sort the Entity list by:
  - Entity name
  - Modification date

Creating a new Entity

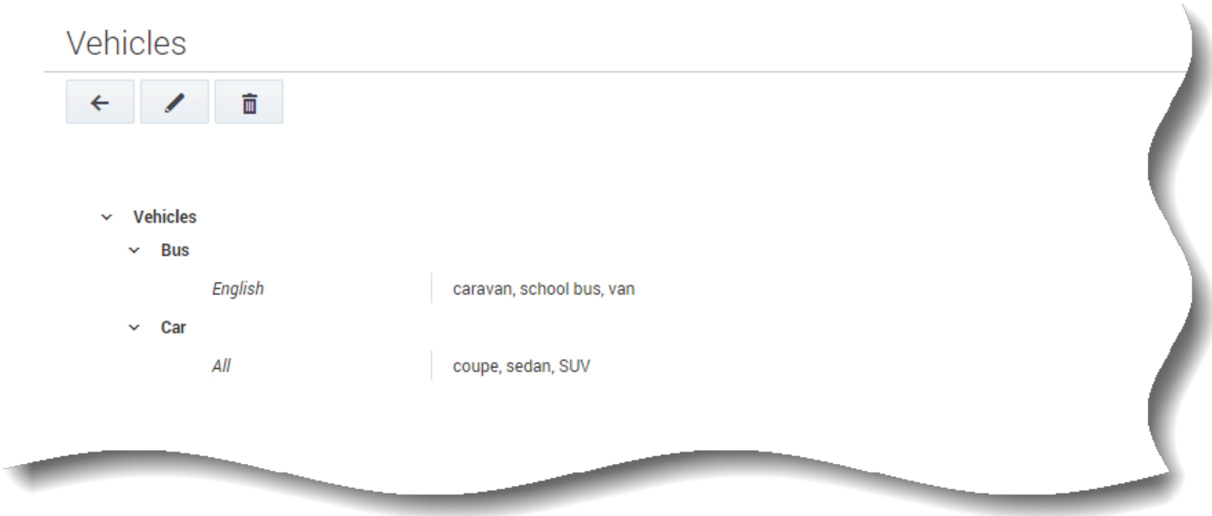
1. Click **Create**.
2. Enter values for the mandatory fields (marked by a red star), in this case, **Entity Name**.
3. An Entity without values makes no sense, thus you will need to add at least one Value by clicking on the **'+'** button.
4. Specify Value **Name** and which **Languages** this Value should effect.
5. Click **Save**.

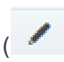
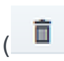


6. While not mandatory, it is recommended you create at least one synonym for this particular Value. To do this, click in **Add Synonym**.
    - Simply type in a related word to create the new Synonym and press your Return/Enter key to save it.
7. Once you have a Value for the new Entity you can click **Save & Close**.

Viewing an existing Entity

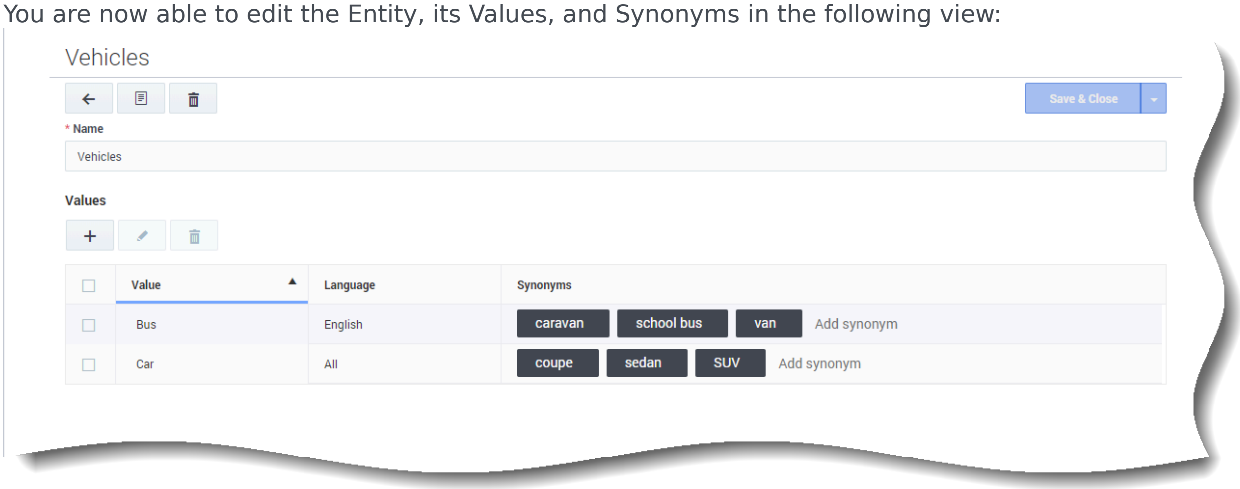
1. Select an existing Entity by checking the checkbox beside its name.
2. Click the **View** button ()
3. You are now able to view the Entity, its Values, and Synonyms in the following window:



4. From here you can either:
    - Go to Edit mode by clicking on the Edit button ()
    - Delete existing Entity by clicking Delete button ()

Modifying an existing Entity

1. Select an existing Entity by clicking the checkbox beside its name.
2. Click the **Edit** button ().
3. You are now able to edit the Entity, its Values, and Synonyms in the following view:



4. From here you can:

- Go to View mode by clicking on the **View** button ( ).
- Delete an existing Entity by clicking the **Delete** button ( ).
- Change the name of the Entity in the **Name** field.
- Add a new Value.
- Edit existing Value.
- Delete existing Value.
- Add new Synonyms.
- Delete a Synonym.
- You can either **Save**, **Save & Close**, **Discard** and/or **Discard & Close** by selecting the desired option in the uppermost blue button.

> **Important**
> While in edit mode for an Entity, all changes made in either Entity, its Values, and Synonyms must be saved in this Window, otherwise any changes made to any of those fields might be lost.

Adding a new Value

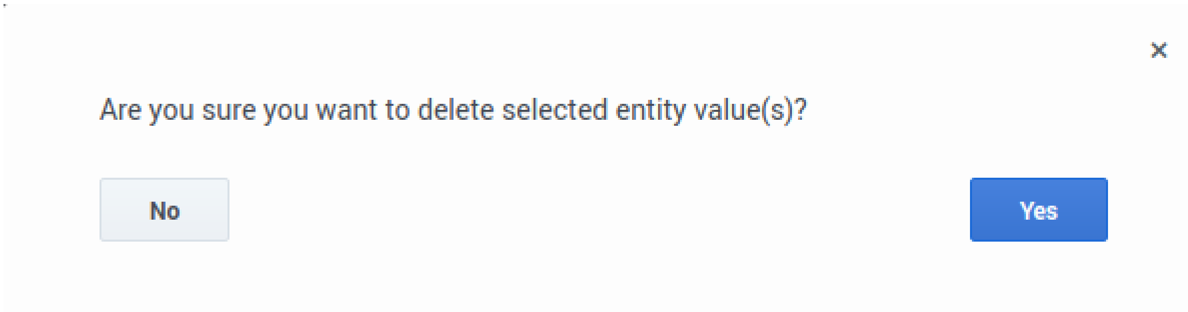
1. To add a new value while editing an existing Entity, simply click the plus button ( ).
2. Add a **Name** and select the **Languages** to be used for the new Value.
3. Click **Save**

Editing an existing Value

1. To edit an existing value, select it from the list by checking the check box next to its name.
2. Click the **Edit** button.
3. Change the name and/or language as needed.
4. Click **Save**.

Deleting an existing Value

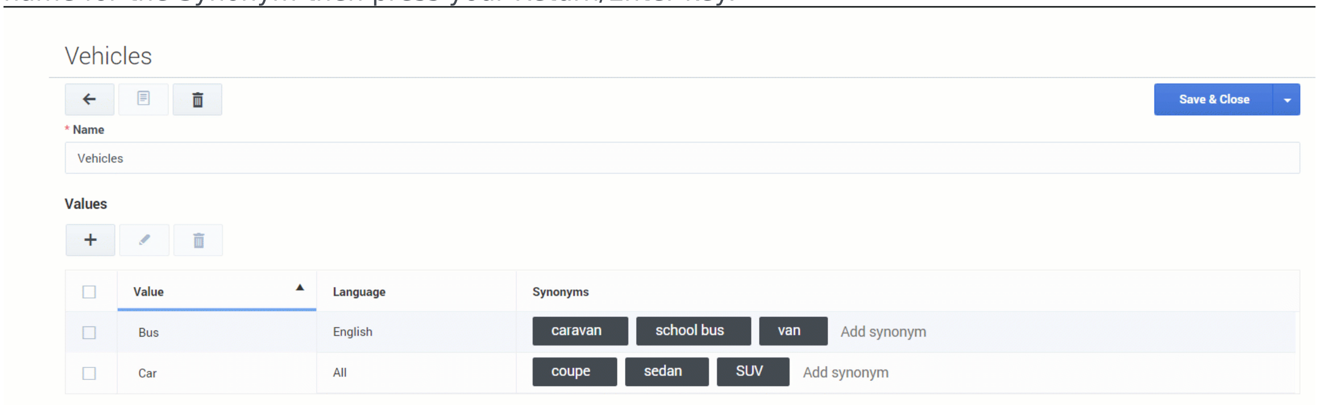
1. To delete an existing value, select it from the list by checking the check box next to its name.
2. Click **Delete**
3. Confirm or Cancel the deletion in following modal dialog:



Note: You can delete several values at once, by selecting more than one.

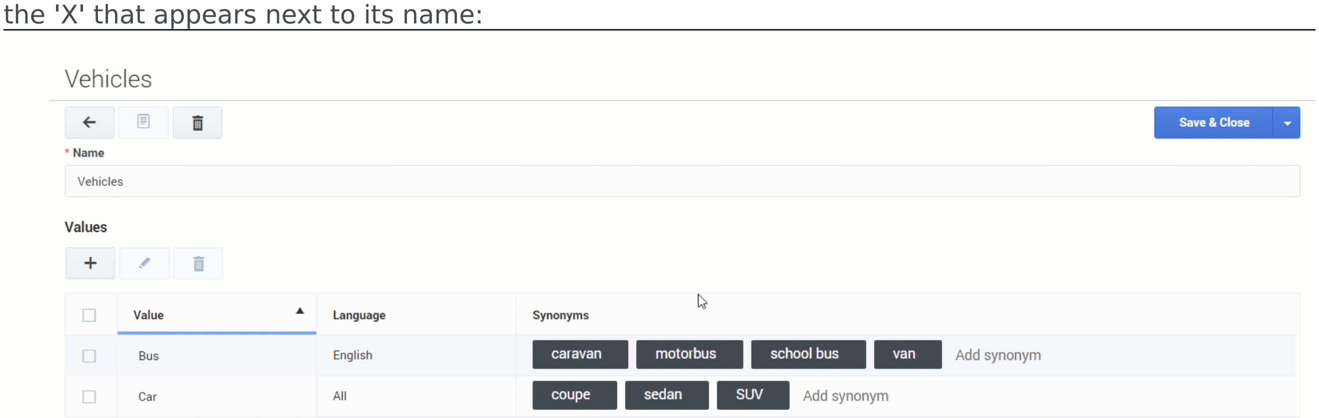
Adding a new Synonym

Adding a new Synonym is quite simple; click **Add Synonym** next to an existing Value and type a name for the Synonym then press your Return/Enter key:



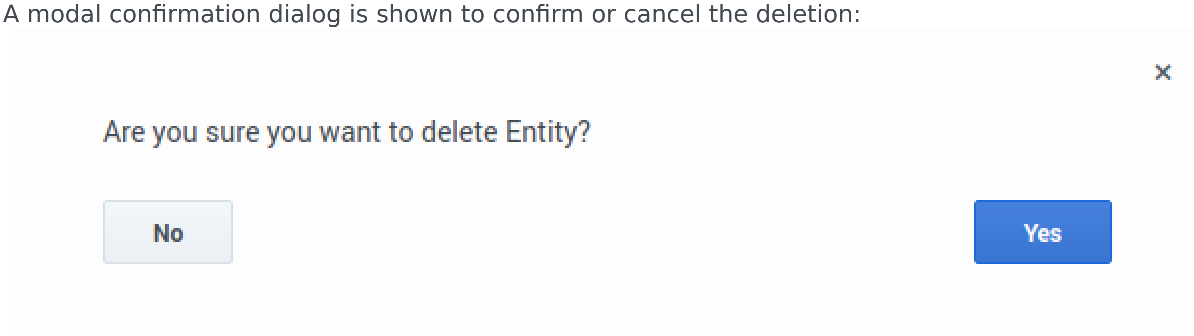
Deleting an existing Synonym

To delete an existing Synonym simply hover your cursor over the synonym to be deleted, and click the 'X' that appears next to its name:



Deleting an existing Entity

1. Select an existing Entity by clicking on the checkbox next to its name.
2. Click on the **Delete** button ().
3. A modal confirmation dialog is shown to confirm or cancel the deletion:



Working with Content

Overview

You can use the authoring area to perform the following functions on the content stored in the CMS:

- Create or edit documents
- Create or edit categories
- Check synchronization status

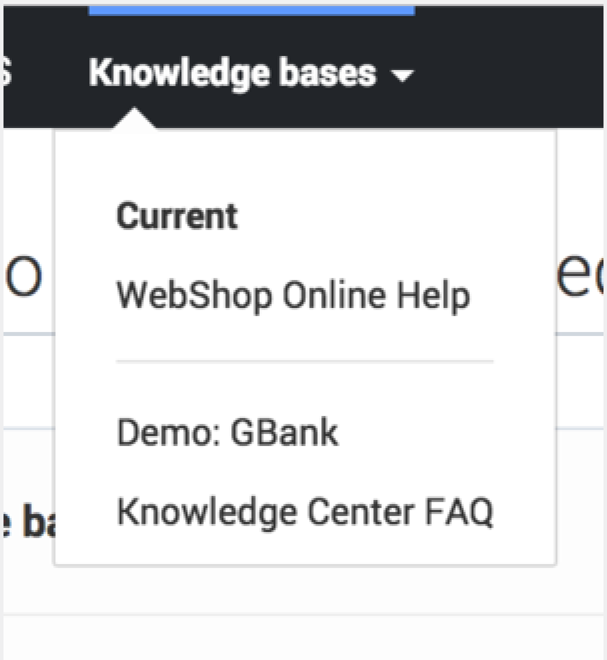
Important

To access this functionality you must have one of these CMS Authoring privileges:

- Knowledge.CMS.Category.Author
- Knowledge.CMS.Document.Author

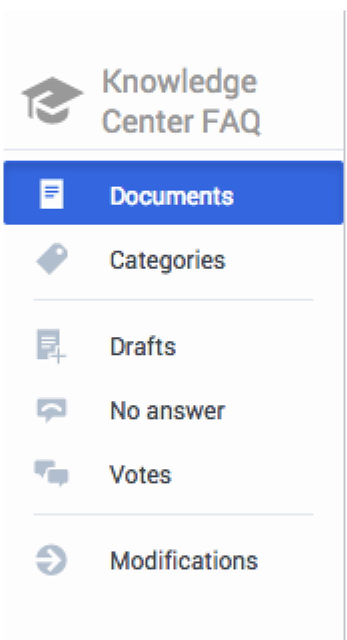
For more information, see Access Permissions.

The authoring area



To open the authoring area, click the **Knowledge bases** menu in the main menu of the application.

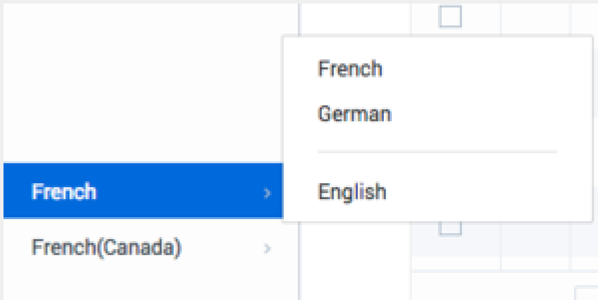
This displays the current knowledge base (just below the **Current** label) as well as a list of all available knowledge bases (below the separation line). Clicking one of the listed knowledge bases displays the document authoring view for that knowledge base.

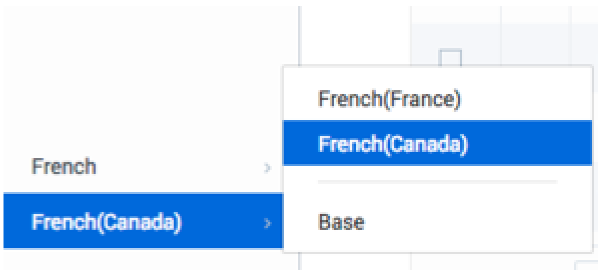


Use the sidebar menu on the left to access these types of knowledge base content:

- Authoring
  - Documents—the documents in the knowledge base
  - Categories—knowledge base categories
- Feedback
  - Drafts—draft documents submitted by agents (using Workspace)
  - No answer—queries for which no relevant results were found
  - Votes—relevancy and 5-star ratings submitted by agents and consumers
- Synchronization status
  - Modifications—a list of the knowledge base modifications that are waiting to be synchronized

Selecting a language

<table>
<tr><td>
</td><td>Select the language you want to use from the list at the bottom of the sidebar.

Note: The language that appears below the separator line is the default language for the knowledge base. Select this language to create a new document or category. Selecting any other language allows you to translate an existing document or category into the selected language.</td></tr>
<tr><td>
</td><td>For multi-regional languages, you can select the specific region you want to work with.

Note:

• Selecting the base language allows you to define content that will be re-used in all regional versions
• You must create a new document or category in the base language before you create a regional version.</td></tr>
</table>

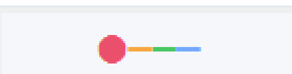
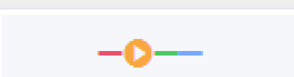
Approval workflow

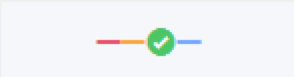
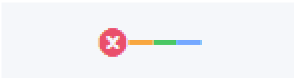
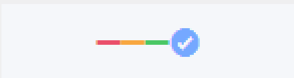
Documents and categories share the same approval workflow. Two approval flow types are supported and can be configured per Knowledge Base:

- Standard
- Simple (from version 9.0.003)

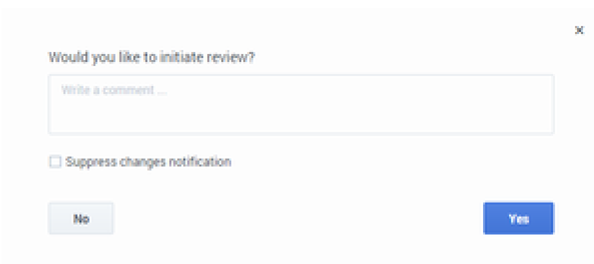
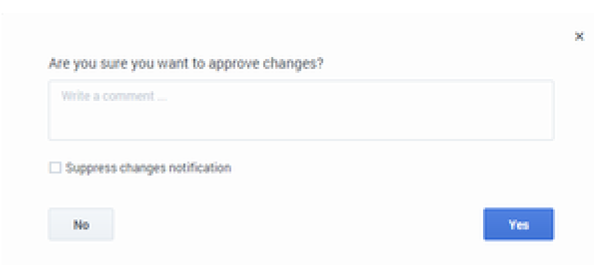
Standard Approval flow

This approval flow consists of 4 states:

<table>
<tr><td></td><td>**Draft**—authoring is in progress.</td></tr>
<tr><td></td><td>**In Review**—the category or document is ready for approval review.</td></tr>
</table>

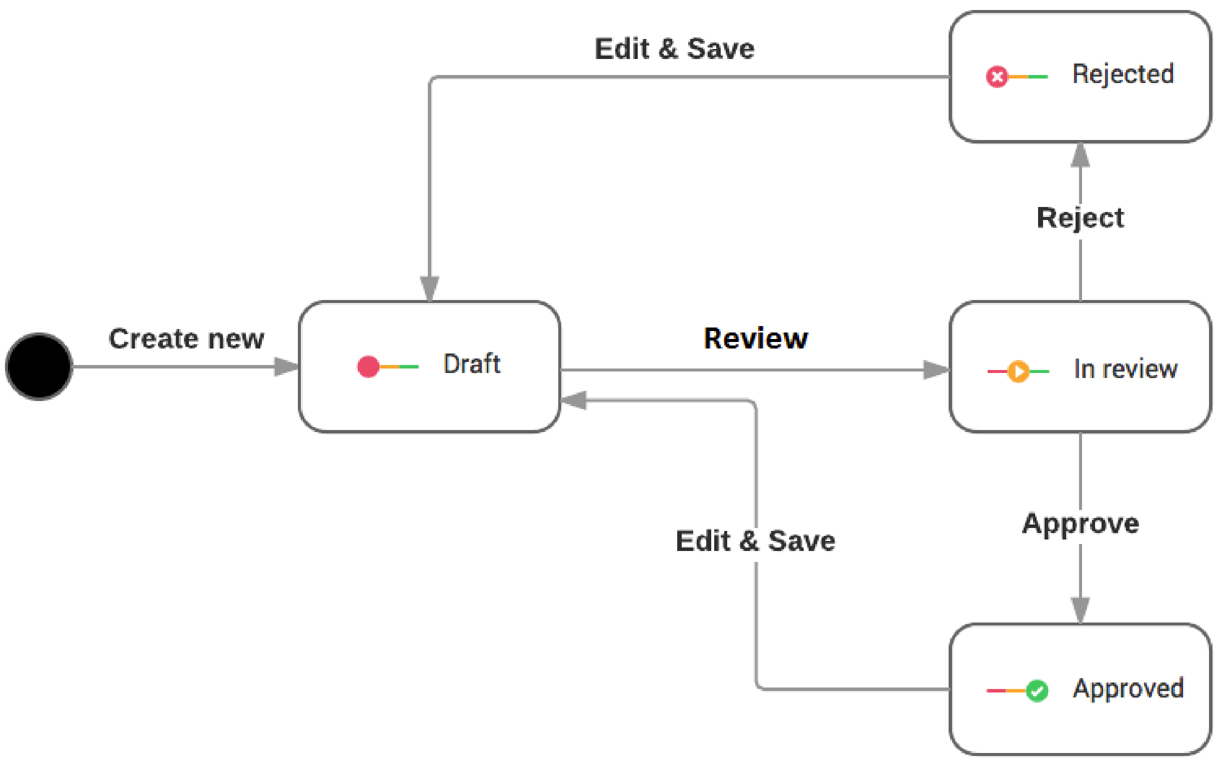
	**Approved**—the category or document is ready to be published to the server so it can be used by Knowledge Center.
	**Rejected**—the category or document has been reviewed and rejected—it requires further editing before it can be resubmitted for review.
	**Published**—the document has been published. Not related to approval flow.

Let's look at an example of this workflow:

	When you create a new category or document, it has a status of **Draft**. You can edit and save it multiple times while it is still in **Draft** status.
	Once you have reached the final version and are ready to send your document or category for review, click the Review button. The category or document is now in **In Review** status. You can also submit comments to the reviewer to explain the changes that you made and why they should be approved. When reviewing the document you can "suppress changes notification" in the Workspace by selecting its checkbox. By default notifications are not suppressed. When reviewing in bulk, the checkbox is unavailable. **Note:** The comments you enter here are only visible in the document history. They are not exported into the Genesys Knowledge Center Server and are not visible to agents and customers using the knowledge.
	Once the category or document has been approved it has a status of **In Review**.
	When a category or document has a status of **In Review**, you can approve the changes by clicking **Approve** , or reject the changes by clicking **Reject**. You can also provide your comments, which can be seen in the **History** view for the category or document. When approving the document you can change the "suppress changes notification" status or keep the same one that was exposed during the review. When approving in bulk the checkbox is unavailable. **Note:** If you change the contents of the category or document and then save it, it will change to a status of **Draft**, which means the approval workflow must be restarted.
	Once the category or document has been approved by the reviewers, it has a status of **Approved**. It can now be published to the Knowledge Center Server for use by agents and customers.

	Note: If you change the contents of the category or document and then save it, it will receive a status of **Draft**, which means the approval workflow will be restarted. Agents and customers can still use the latest approved version of the category or document while the newer version is being evaluated.
	Rejected categories or documents have a status of **Rejected**. They must to be corrected and then resent for review and approval.
	Not related to approval flow. Indicates that document is published. This status is absent for categories.

This state diagram gives an overview of the entire process:



You can change the status of individual documents or categories, as described above, or as a bulk operation:

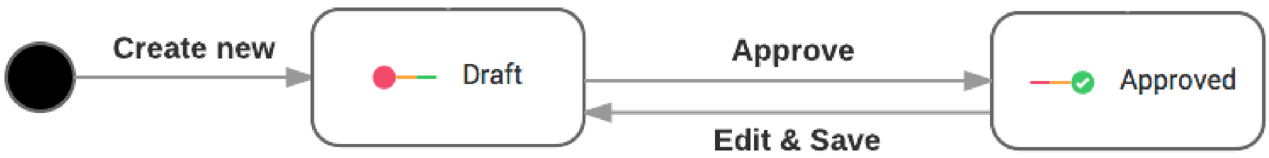
- Select the desired categories or documents from the list.
- Click the desired status (**Review**, **Approve**, or **Reject**) in the toolbar.
- The operation you have chosen will only be applied to any of the selected documents that are in the appropriate state. For example, if you select **Review**, it will only be applied to the documents that have a status of **Draft** or **Rejected**.

- Publishing applied to all Approved documents in knowledge base

Simple Approval flow

This is a simplified standard approval flow which consists only of 2 states: Draft and Approved. After approving documents, these also become Published as in the Standard workflow.

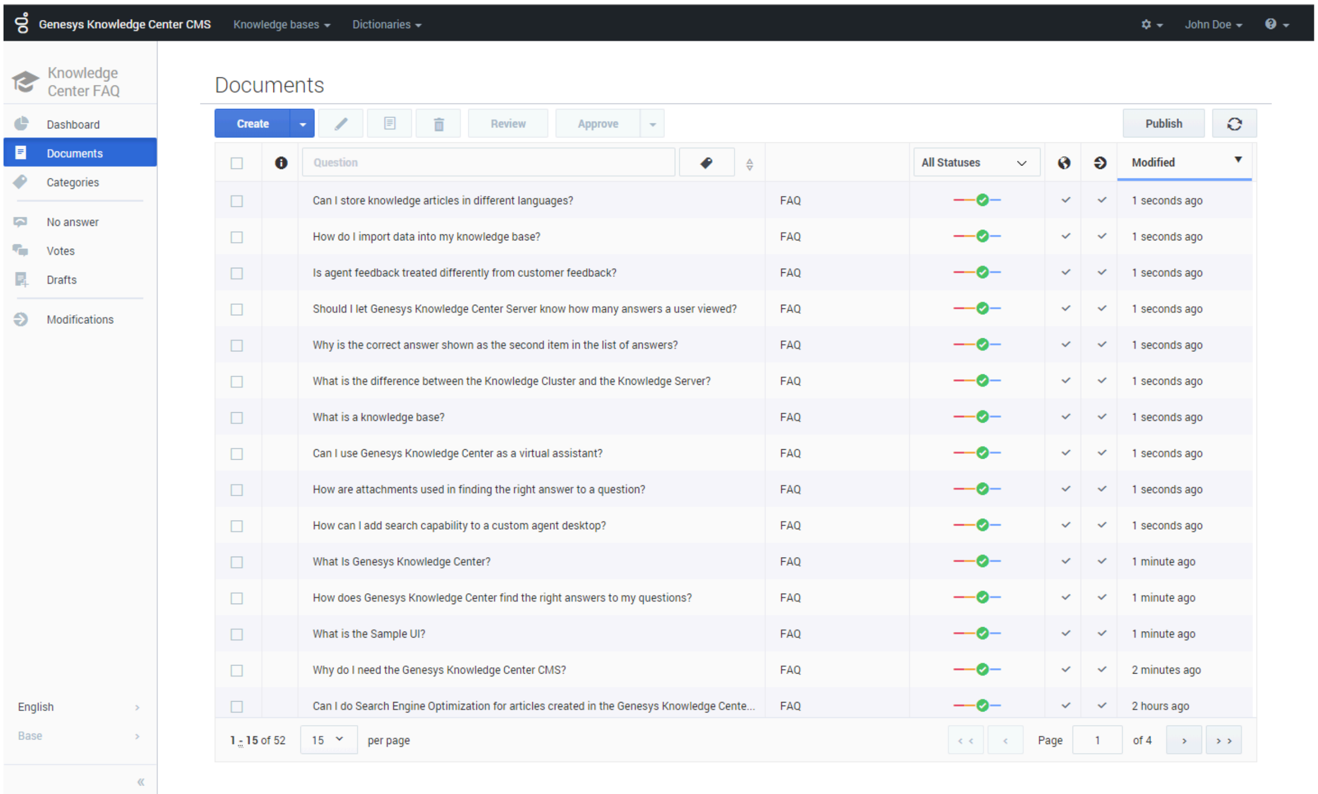
The following state diagram gives an overview of the entire process for Simple workflow:



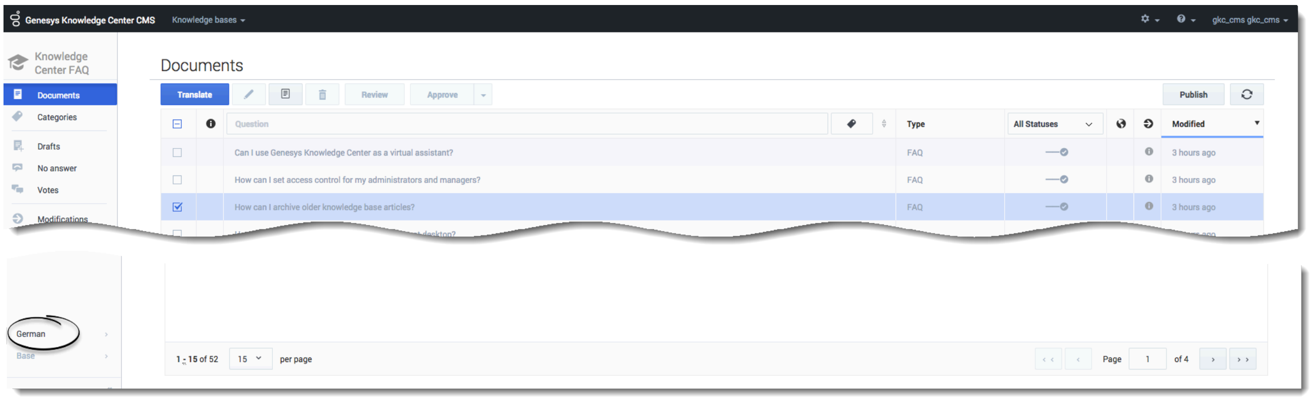
Working with Documents

Displaying documents

Select a knowledge base to display a list of its contents. If you select the default language, you can create documents and categories:



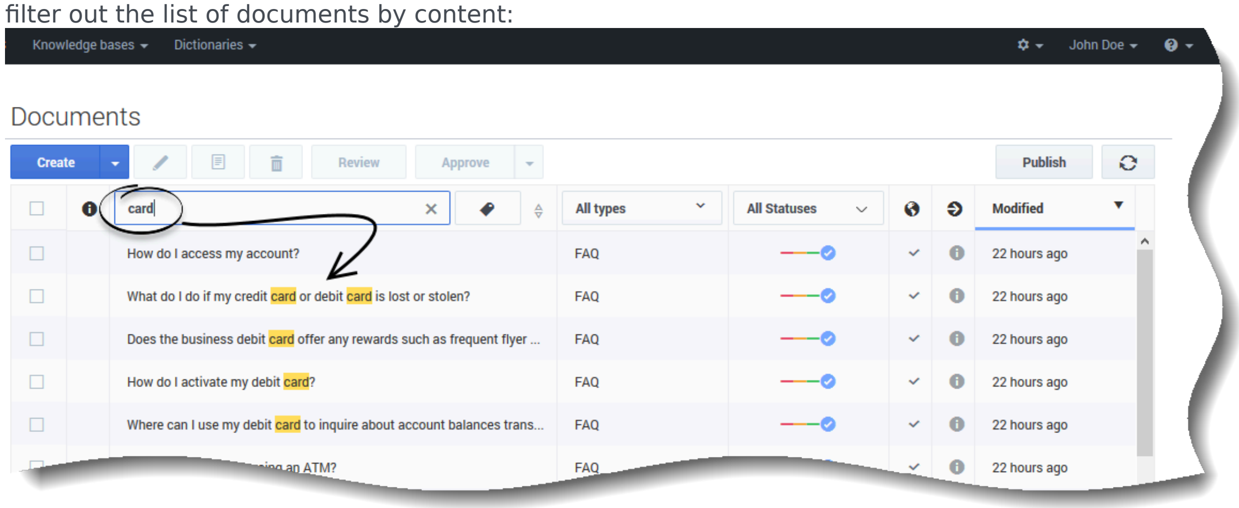
If you select any other language, you can translate an existing document or category into the selected language:



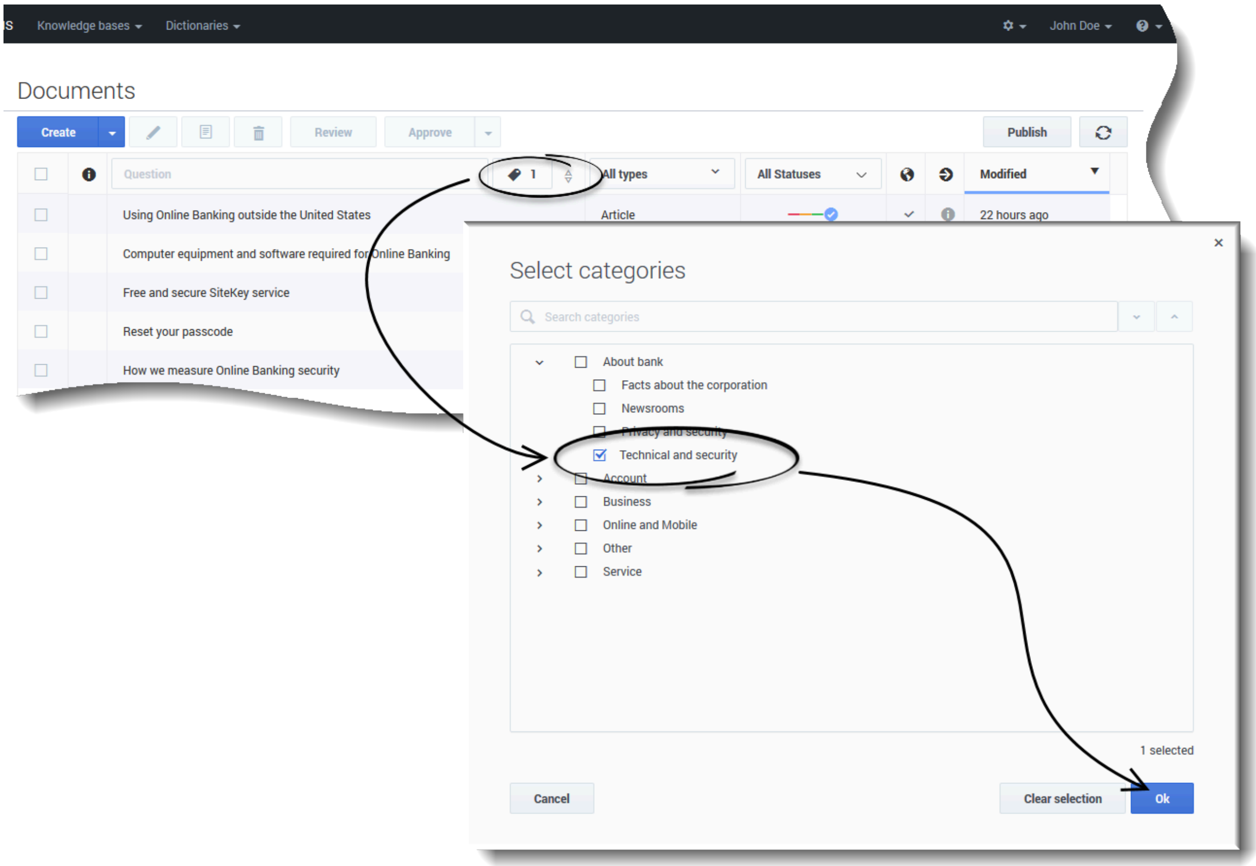
Filtering list of documents

From the list of documents you can:

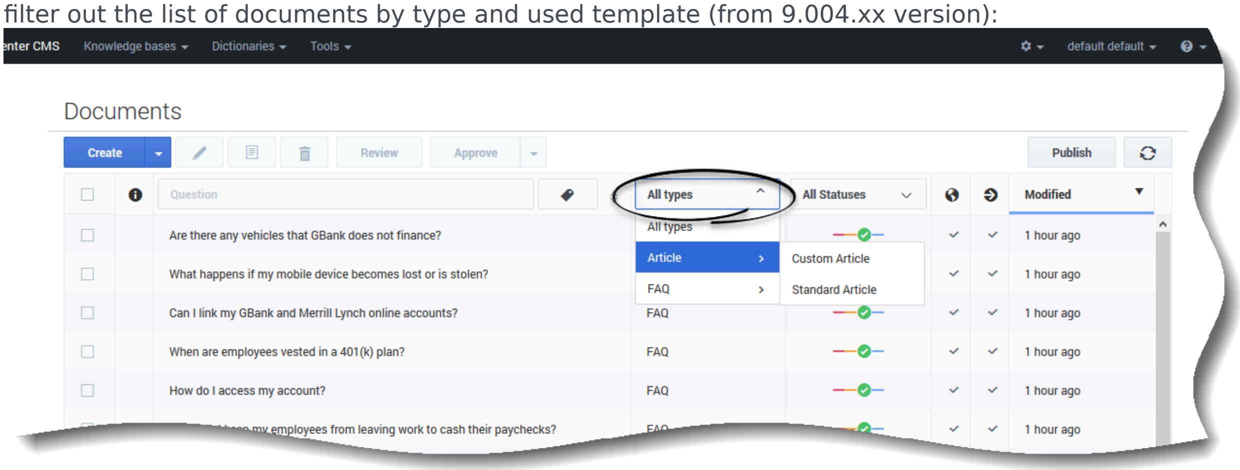
- filter out the list of documents by content:



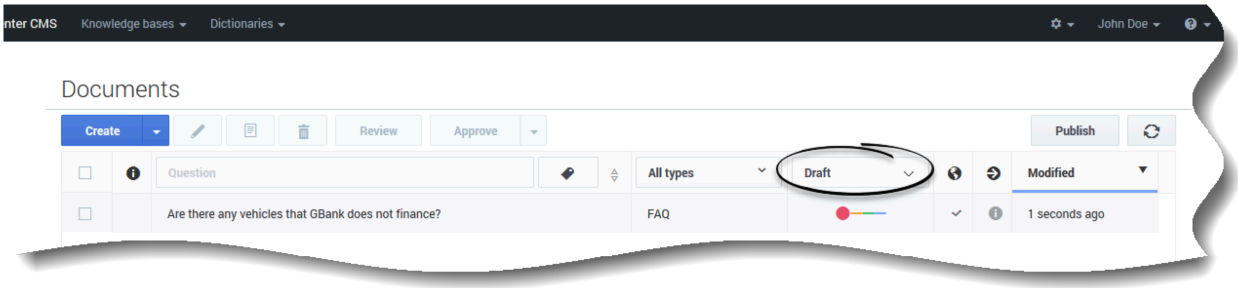
- filter out the list of documents by category:



- filter out the list of documents by type and used template (from 9.004.xx version):



- filter out the list of documents by current status:

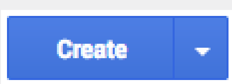
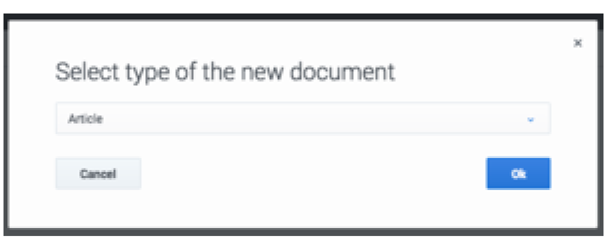
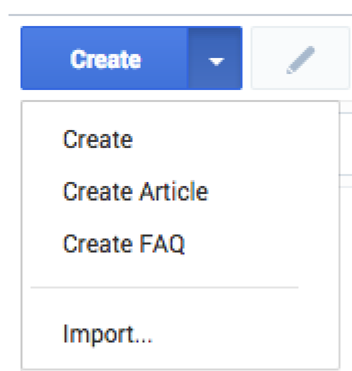


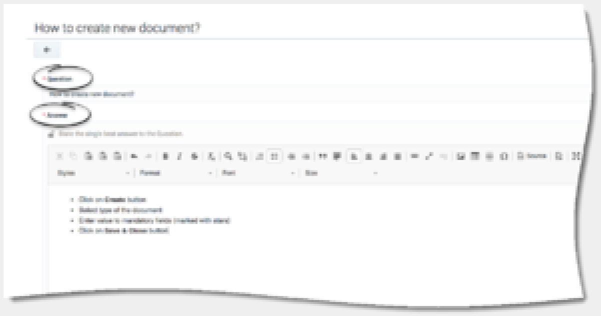
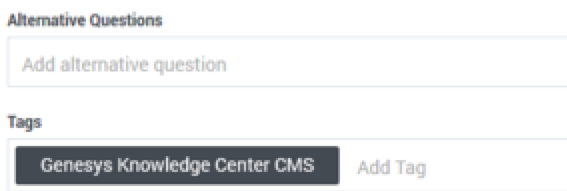
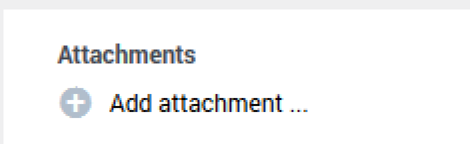
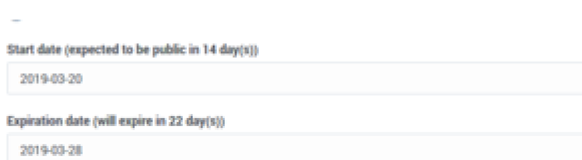
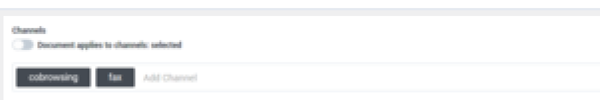
- sort the template list by:
  - document name
  - modification date

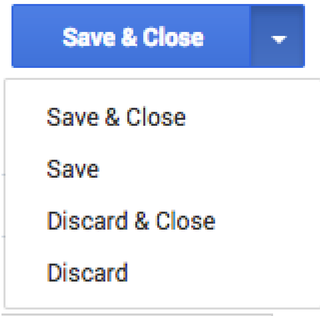
The final 2 columns display:

- A notification about whether or not the document includes translation on current language
- A notification about errors in the document (for example, the document has not attached a category)

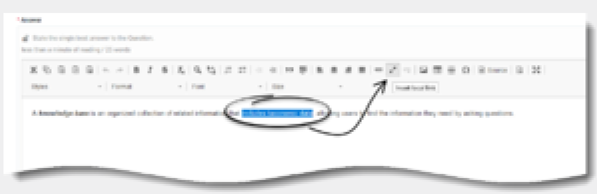
Creating a document

	Click **Create**. **Note:** You can only create documents in the default language. Use other languages to translate existing documents.
	If your knowledge base allows documents of different types, you will be asked to select the document type. You can bypass this step by selecting the desired document type from the Create button's drop-down menu: 

	Enter values for the mandatory fields (marked by the red star), as well as any other fields you have data for.
	***Optional** Enter values in **Alternative Question** and **Tags** fields by typing in a value and then pressing "Enter" to create the new entity.
	***Optional** Add an **Attachment**. The following is a full list of the types of attachments that can be added - .txt, .doc, .docx, .pdf, .rtf, .asc, .csv, .xhtml, .html, .xml, .readme, .ppt, .pptx, .jpg, .png, .jpeg, .pjpeg, .bmp, .gif, .svg, .tiff, .ico, .vnd, .wbmp, .webp, .mpeg, .webm, .ogg, .wmv, .flv, .3gp, .3gp2, .mp4, .aac, .mov, .avi, .raw, .xls, .xlsx.
	***Optional** Set **Start** and **Expiration** dates. • **Start date** indicates that the document will be not published to Knowledge Server before this date, even if it has been approved • **Expiration date** indicates that the document will be not available in Knowledge Server after this date, even if it has been published. The expired document will also not be published to Knowledge Server, even if it has been approved. • Servers use these dates assuming that they are in Greenwich Mean Time (GMT). For example, if your local timezone is GMT+8, these dates will take effect eight hours later.
	***Optional** Add a list of media channels if this document provides data to a conversation via specific media (like chat, for example).



Click **Save & Close** or select one of the other options in the Save & Close button's drop-down menu.



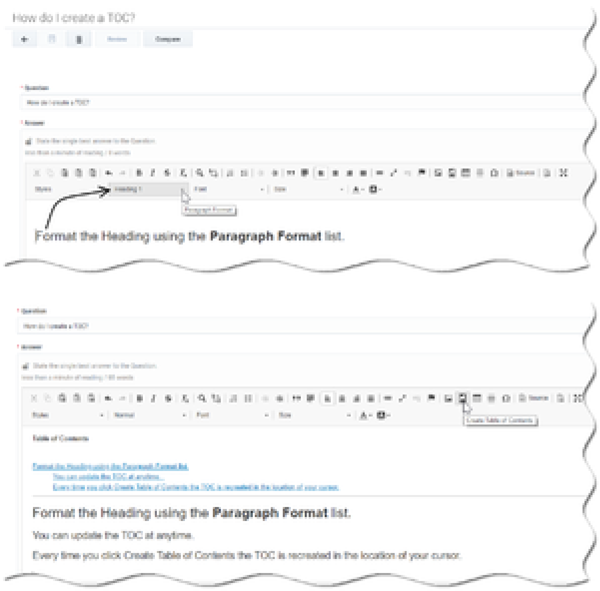
***Optional**

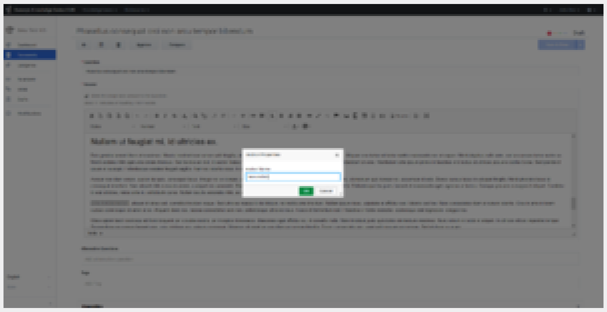
Add a link to any document in any knowledge base:

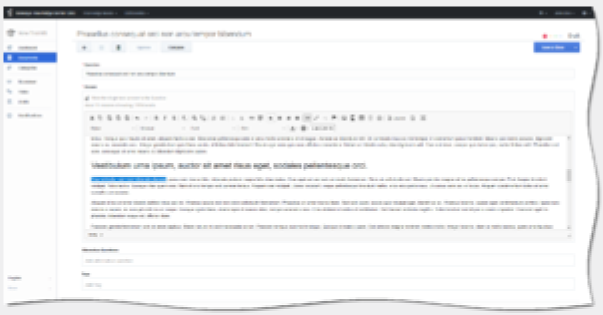
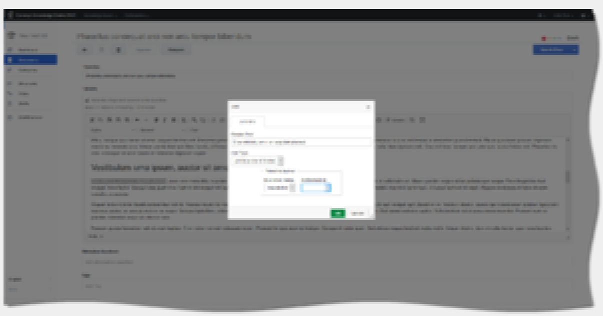
1. Select text (if nothing is selected, the CMS automatically adds the title of the chosen linked document as text).
2. Click **Insert local link**.
3. In the next window, select the knowledge base and language (your current knowledge base and language are selected by default), and begin typing a key word in the **Search documents** field to start a query.
4. Query results are displayed with a list of document titles that match the query.
5. Select a document and click **Insert**.
6. A link to this document is added to your text.
7. If you view a document that contains links, you can click the link to view the linked document.

Important notes:

- A link can be removed using the **Unlink** option in the toolbar or using the right-click menu.
- A document with a link can only be published after the linked document is published. Documents containing a link to a document that is not published contain a red warning in the search results list and in the document itself. Also, the link to a document that is not published will be red.
- If the document being linked to has been deleted, you will see a notification that the link is broken. Both in the list of documents and inside the document itself, the link to a deleted document will be red. Also, a message will appear if you attempt to delete a document that is linked to a different document.

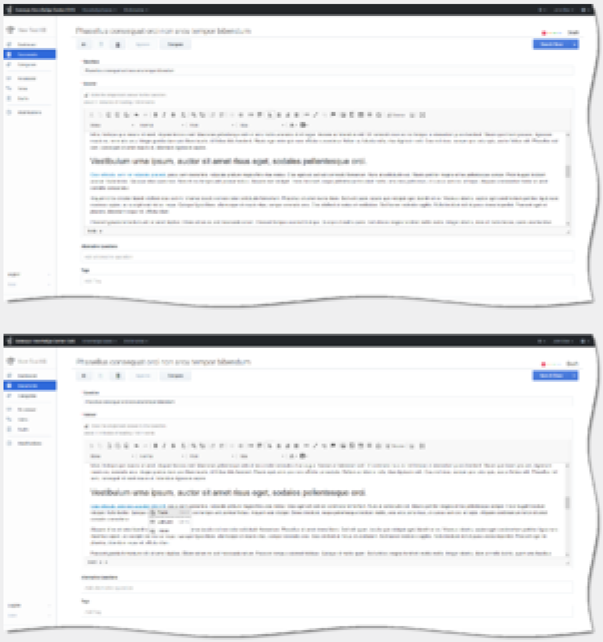
	• A document with a broken link cannot be published. You must fix or remove any broken link(s) from the document in order to publish that document. • A message will appear if you try to review or approve a document that contains a broken link. • If a document with a link was previously published, it will automatically be unpublished when the linked document is deleted from the Knowledge Center server.
	***Optional** Add a table of contents (TOC) to any document in any knowledge base: 1. Place the cursor on the line that you want to format as a header. 2. From the **Paragraph Format** list select the appropriate header. Repeat this step for every header in the document. 3. Scroll to the top of the document and place the cursor at the beginning of the document. 4. Click **Table of Contents**. The TOC appears. **Note:** Every time you click **Table of Contents**, the TOC is recreated in the location of the cursor. Before you update the TOC verify that the cursor is located above the existing TOC.
	***Optional** Add a link from one section of a document to a different section in the same document. Adding links to different sections in the same document enables agents to effortlessly navigate within the document to find answers to customer questions. 1. In the body of the document, select the text that will be the target of the link that you will create in a different section of the same document. 2. Click **Anchor** to create an internal link to the selected text. 3. In the body of the document, select the text that will act as the link to the text selected as the target of your link. 4. Click **Link** and from the **Link Type** list select **Link to anchor in the text**.



5. In the **By Anchor Name** section of the window select the anchor you created in the previous step and click **OK**.

 Note: Repeat these steps for every link you want to create within the document.



Characters Allowed in Names

The names of most Knowledge Center CMS objects can consist only of the alphanumeric characters supported in UTF-8, plus the characters listed below in the "Additional Characters Allowed in Object Names" table.

The length of a category name cannot be longer than 64 characters.

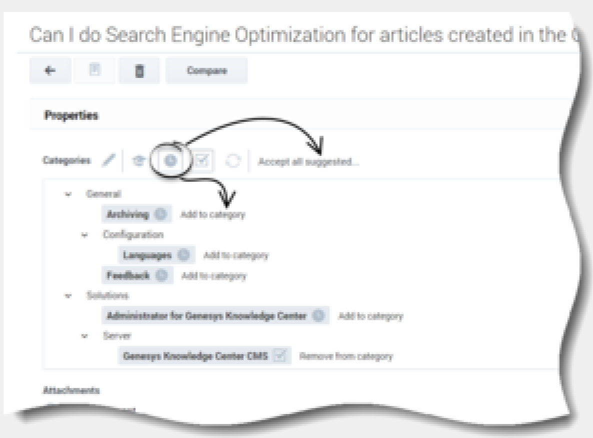
The **Display Name** for the **Language** Business Attribute can only consist of Latin characters and numbers (A-7, a-z, 0-9).

Additional Characters Allowed in Object Names

Name	Character	Name	Character	Name	Character
Hyphen	-	Exclamation point	!	Backslash	\
Number sign, pound	#	Dollar sign	$	Parentheses	( )
Caret	^	Asterisk	*	Question mark	?
Underscore	_	Curly brackets	{ }	Space	
Angle brackets	< >	Period, full stop	.	At sign	@

> **Important**
> Applicable only for CMS from version 9.0.000.15 to 9.0.005.04.

Document categories

Document editor view	
	Categories attached to the document (selected categories) are rendered by default in the **Categories** tree.
	To view Recent categories: • Click  in the **Categories** tree toolbar. • Recent categories are marked with a bold, gray background, their relevant icon, and have an **Add to category** link near the category name. To attach Recent category(s) to the document, 2 options are available: • Click the **Add to category** link near the category name to attach the category to the document. • Click the **Accept all suggested...** link to attach all recent categories to the document.

To view Suggested categories:

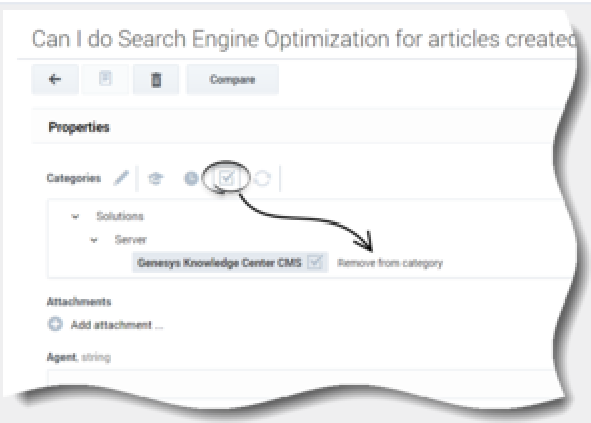
- Click in the **Categories** tree toolbar.
- Suggested categories are marked with a bold, gray background, thier relevant icon, and have an **Add to category** link near the category name.

To attach Suggested category(s) to the document, 2 options are available:

- Click the **Add to category** link near the category name to attach the category to the document.
- Click the **Accept all suggested...** link to attach all Suggested categories to the document.

To refresh the list of Suggested categories:

- Click (enabled only when suggested categories are displayed).



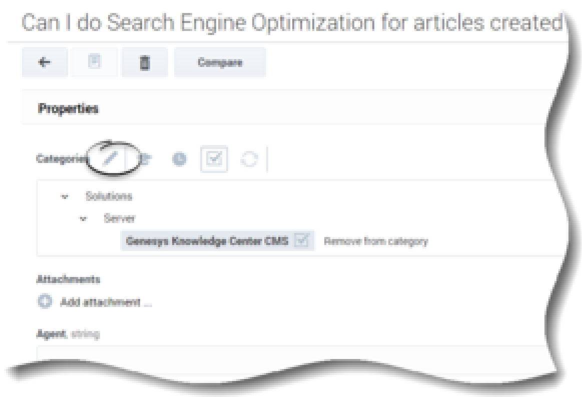
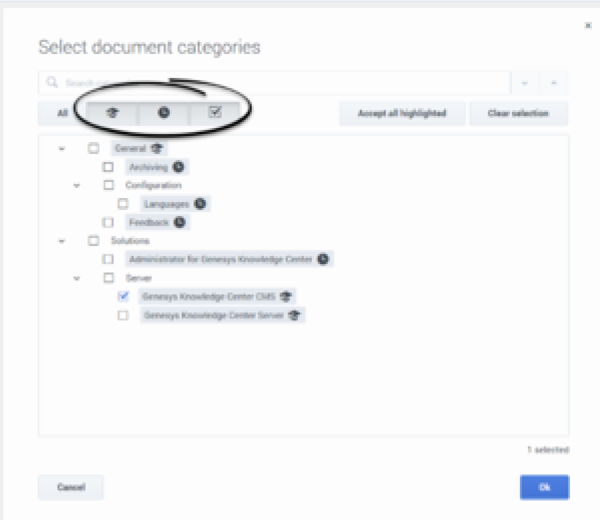
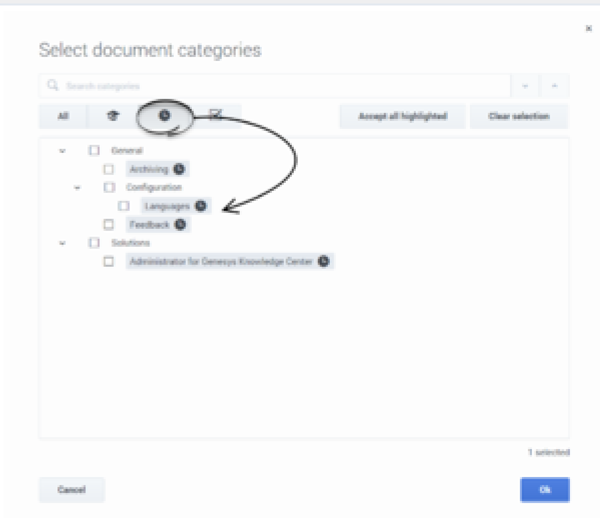
To view Selected categories:

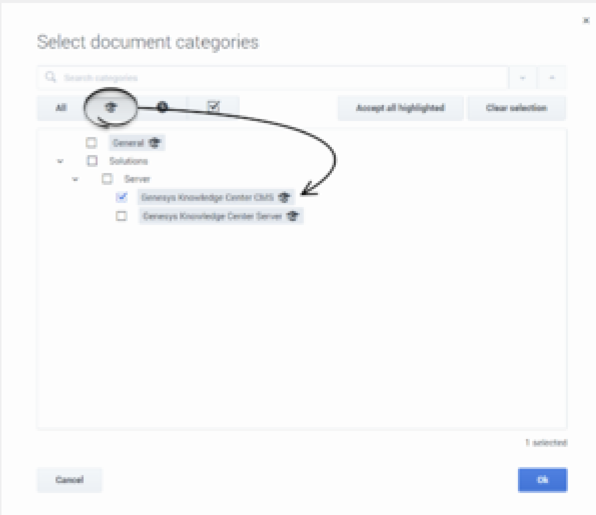
- Click in the **Categories** tree toolbar.
- Selected categories are marked with a bold, gray background, their relevant icon, and have a **Remove from category** link near the category name.

To remove document from Selected category(s):

- Click the **Remove from category** link near the category name to deattach the category from the document.

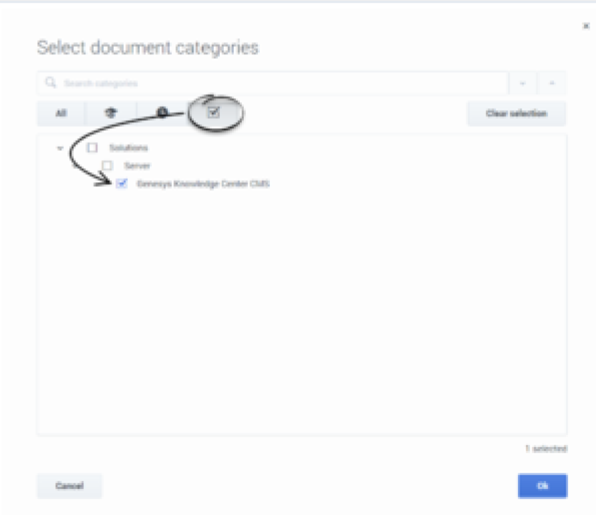
Category selection

	To attach categories to the document or edit categories which are already attached, click  in the **Categories** tree toolbar.
	The Categories tree window is opened with **Selected**, **Suggested**, and **Recent** categories' sub-trees expanded to the terminal highlighted category by default. **Note: Suggested** and **Recent** buttons are disabled when there are no suggested or recent categories available.
	To view **Recent** categories: • Click  in the **Categories** tree toolbar. • Recent categories are marked with a gray background and have the clock icon near the category name

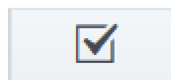


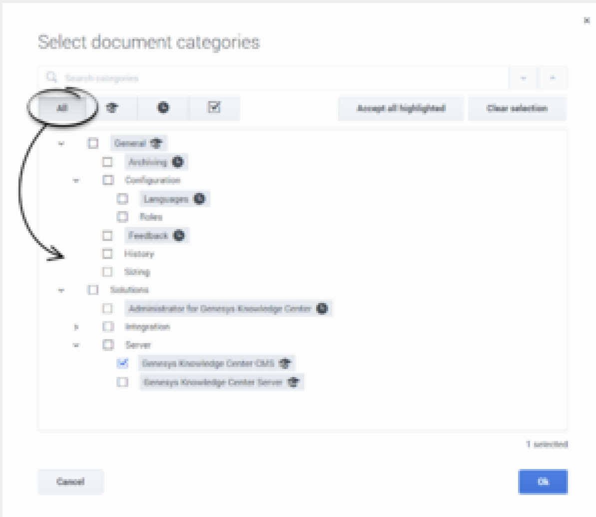
To view **Suggested** categories:

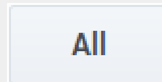
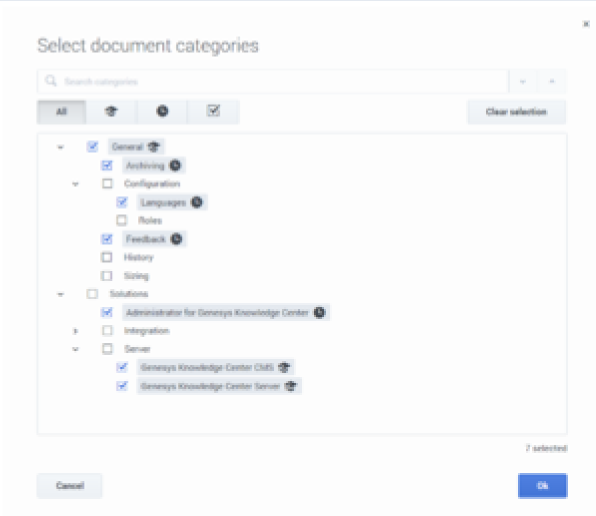
- Click  in the **Categories** tree toolbar.
- Suggested categories are marked with a gray background and have the hat icon near the category name.



To view **Selected** categories:

- Click  in the **Categories** tree toolbar.
- Selected categories are marked with a checkbox.

<table>
<tr>
<td>
</td>
<td>To view All categories in the current Knowledge base:

Click 
 in the Categories tree toolbar.
Category sub-trees are expanded to the terminal highlighted category or selected category, by default.
</td>
</tr>
<tr>
<td>
</td>
<td>To attach Suggested or Recent category(s) to the document 2 options are available:

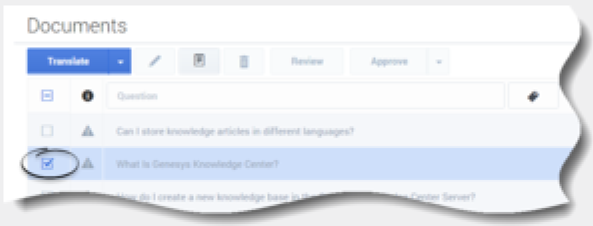
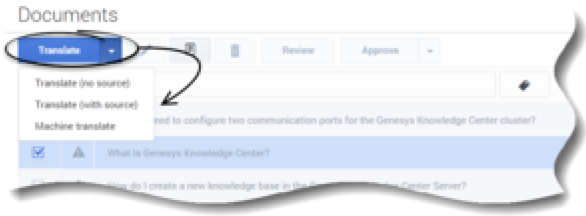
Check the checkbox in front of the highlighted category name to attach the category to the document.
Click 
' to check all the checkboxes for all Suggested and Recent categories for the document.
</td>
</tr>
</table>

Translating a document

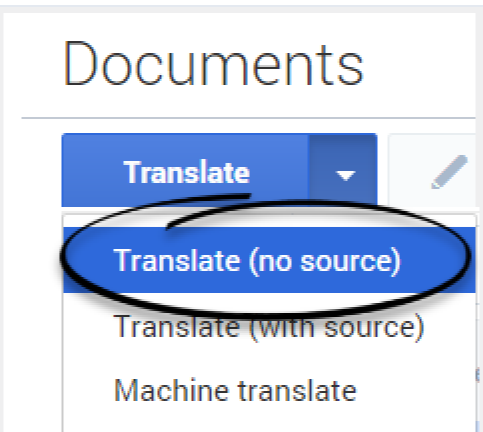
For a quick reference on how to:

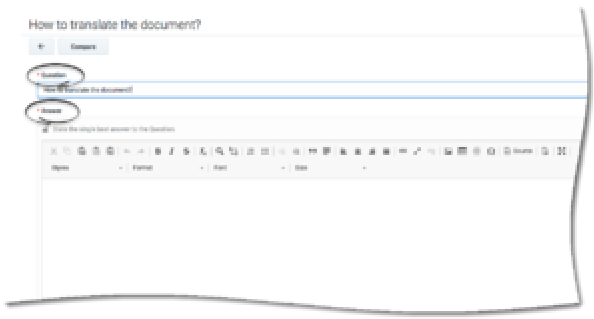
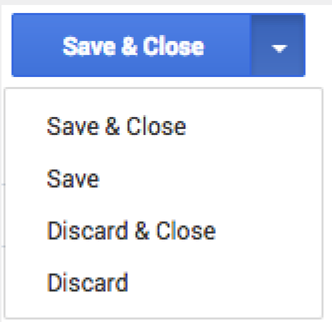
- Translate (no source)
- Translate (with source)
- Machine translate
- Translating a document in compare mode

please see the following video—
Link to video

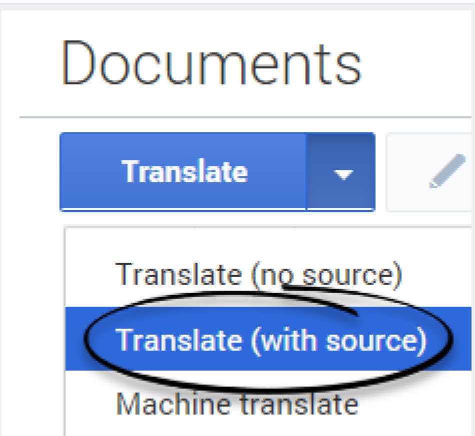
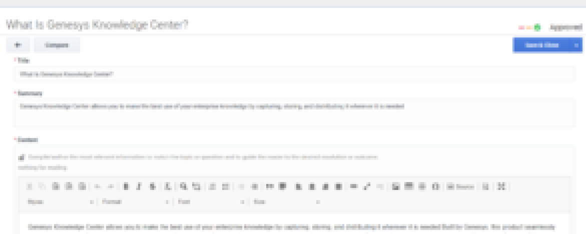
	Select a document to translate to the current language.
	Click the arrow next to the **Translate** menu and choose one of the three types of translations from the list: • **Translate (no source)** - Creates a blank document in the selected language for manual translation. • **Translate (with source)** - Creates a copy of the source document, copying all the content into a newly created language version. Content then needs to be manually translated to the selected language. • **Machine translate** - Uses a machine translation service (needs to be configured by your administrator) to create a document in the selected language by translating the content of the original document.

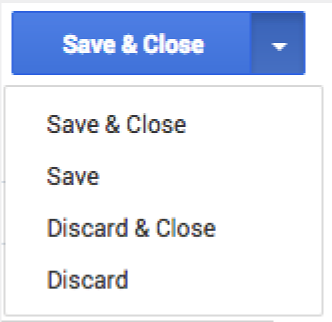
Translate (no source)

	Click the arrow next to the **Translate** button in the toolbar and choose **Translate (no source)** from the menu.

 	Enter values for the mandatory fields (marked by the red star), as well as any other fields you have data for.
 	Click **Save & Close** or select one of the other options in the **Save & Close** menu.

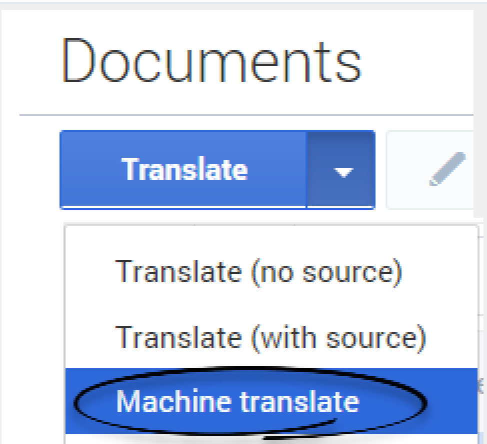
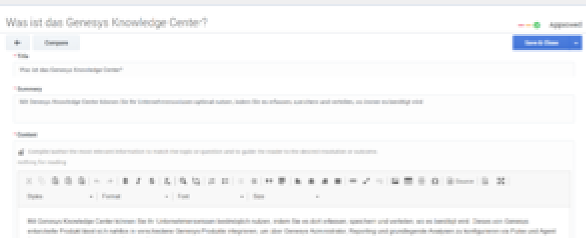
Translate (with source)

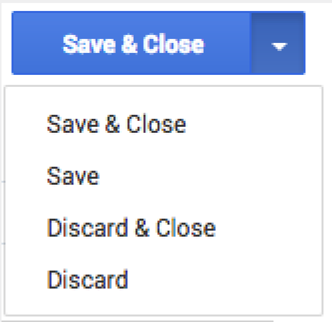
 	Click the arrow next to the **Translate** button in the toolbar and choose **Translate (with source)** from the menu.
 	Translate the document fields using the source document content.

	Click **Save & Close** or select one of the other options in the **Save & Close** menu.

Machine translate

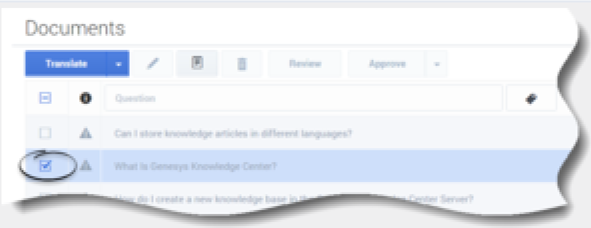
> **Important**
> this mode of translation is only available when your administrator has configured an external translation service to translate content.

	Click the arrow next to the **Translate** button in the toolbar and choose **Machine translate** from the menu.
	Make edits to the translated version of the document, if necessary.

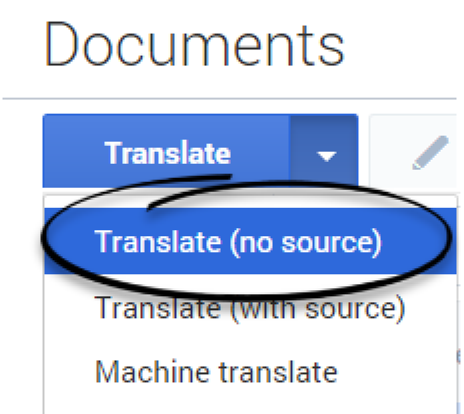


Click **Save & Close** or select one of the other options in the **Save & Close** menu.

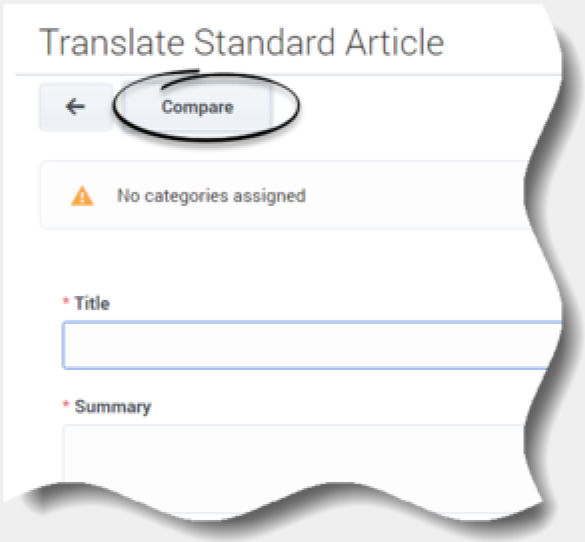
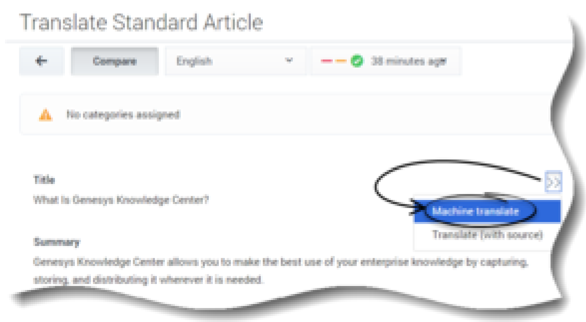
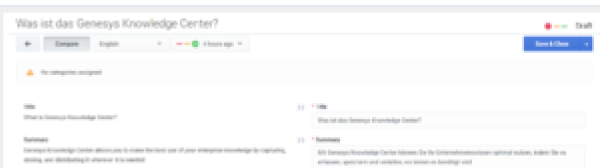
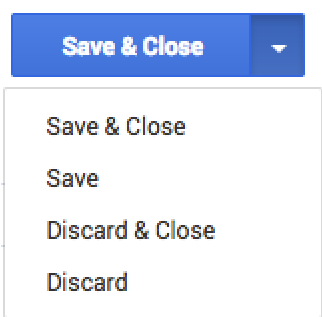
Translating a document in compare mode



Select a document to translate to the current language.



Click the arrow next to the **Translate** button in the toolbar and choose **Translate (no source)** from the menu.

<table>
<tr>
<td>
</td>
<td>Click the Compare button from the Document translation view.</td>
</tr>
<tr>
<td>
</td>
<td>Click Machine translate or Translate (with source) from the menu.</td>
</tr>
<tr>
<td>
</td>
<td>Make edits to the translated fields, if necessary. If you clicked Translate (with source), you must translate the content in the fields manually.</td>
</tr>
<tr>
<td>
</td>
<td>Click Save & Close or select one of the other options in the Save & Close menu.</td>
</tr>
</table>

Document errors

When you save a document, the Knowledge Center CMS validates the values you have entered into its fields. It highlights any fields that contain errors by:

- Marking their borders in red
- Adding an error message below them

Document types

The Knowledge Center CMS supports two types of document:

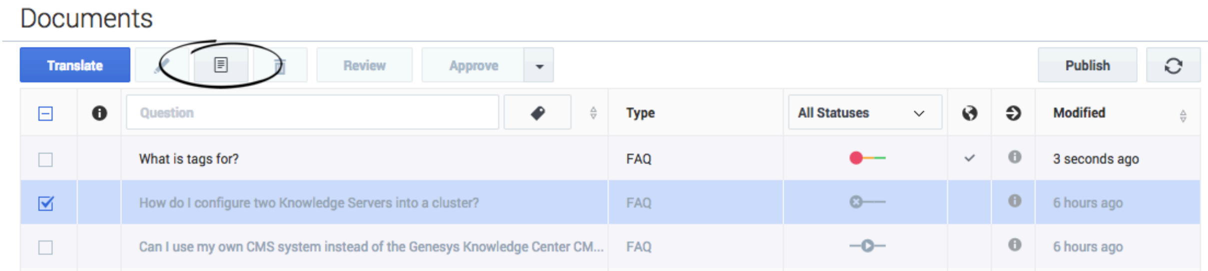
- **Frequently asked questions (FAQ)**—A list of questions and answers, all of which can be commonly asked in a specific context and which pertain to a particular topic. This format is often used on mailing lists and in other online forums, where common questions tend to be asked repeatedly.
- **Article**—An independent piece of writing that provides information or evidence, or that serves as an official record.

Both types of document share the same structure, except for these fields:

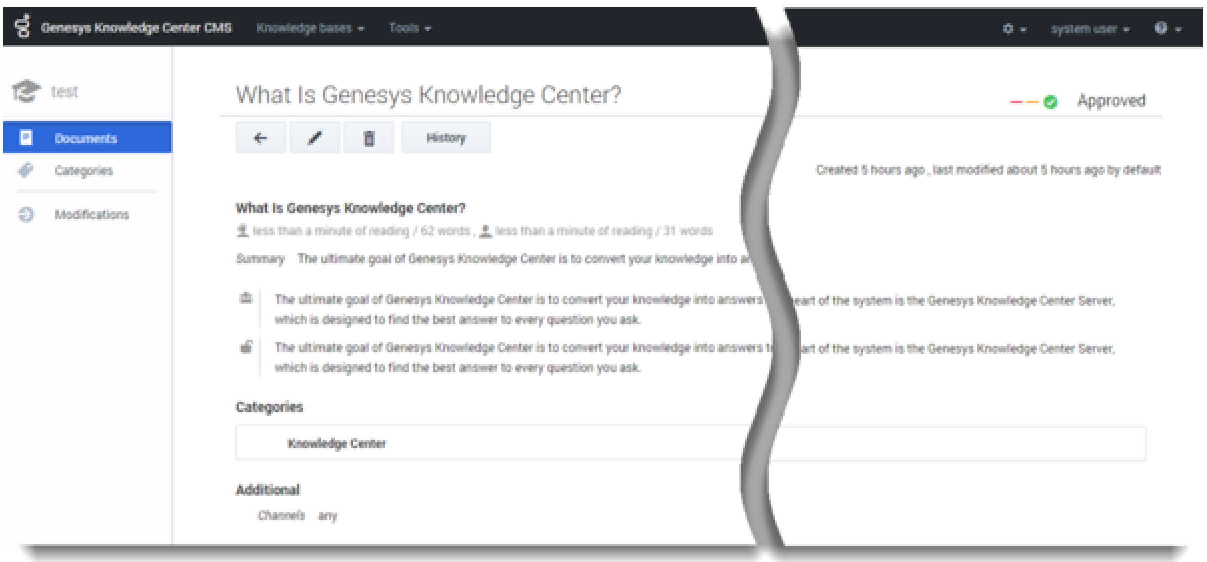
	FAQ	Article
Document name	Question	Title
Short Summary (plain text)		Summary
Document content (formatted text)	Answer	Description
Alternative names	Alternative Questions	Alternative Titles

Viewing a document

To view the contents of a document, double-click the document in the list view or select the document and click **View**:



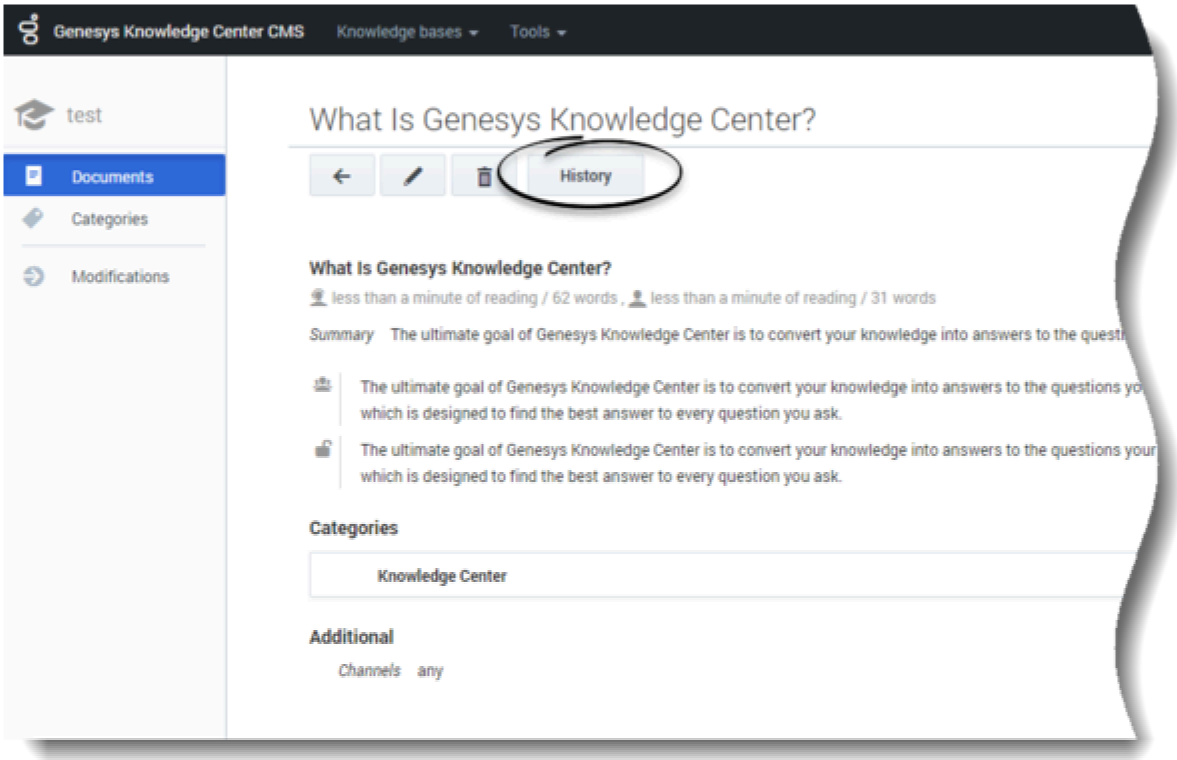
The document will look something like this:



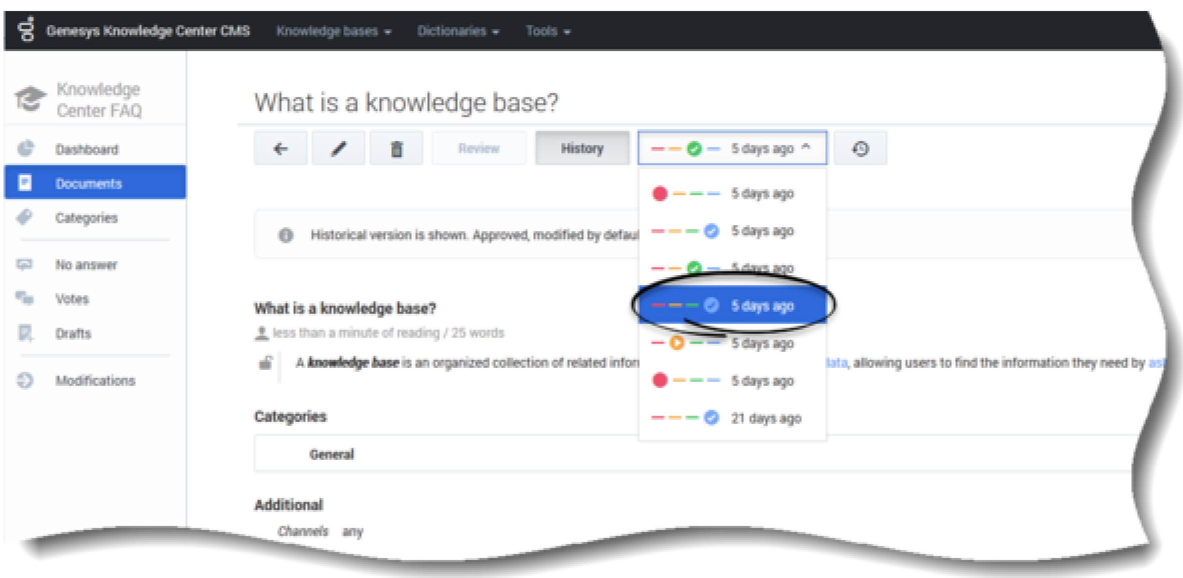
Information about document word count and estimated reading time are found under the question title. The left side (with the agent icon) displays all information (both public + private) and shows the document word count and estimated reading time. The right side (with the customer icon) shows only the public document word count and estimated reading time.

Document history

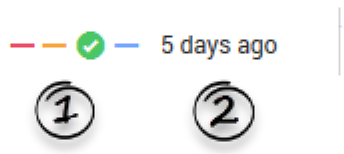
While you are viewing a document content, you can click the **History** button:



Select a version to see its contents. A history drop-down menu shows which version you are looking at:



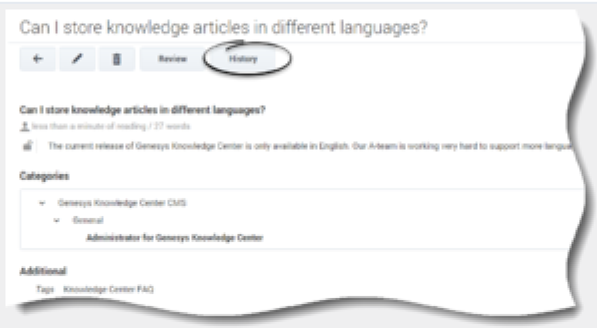
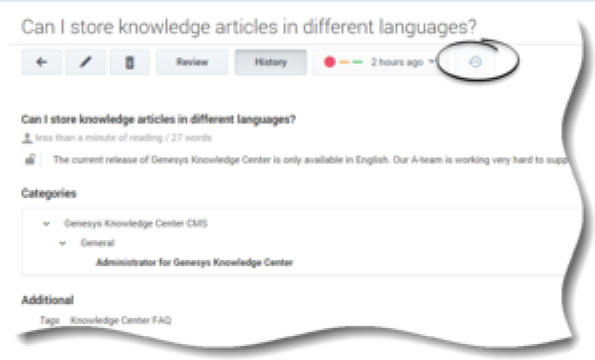
Each line in the history drop-down shows the following information about the version:

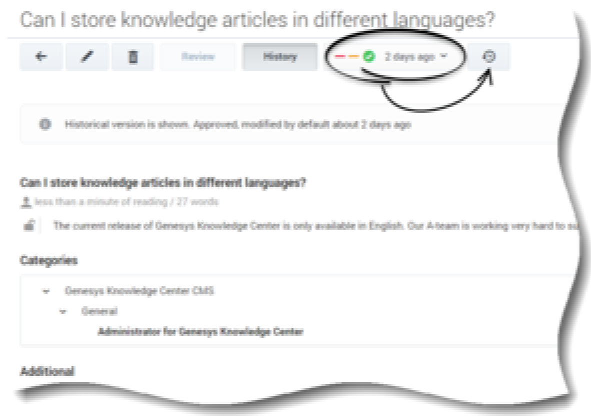


- **(1)** – Approval status (Draft, In Review, Approved, Published) '
- **(2)** – How many days since the version was created

Document version rollback

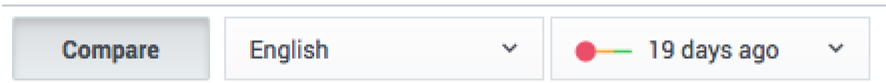
> **Important**
> This functionality is available starting with the 9.0.001.xx release of the product.

	From the document view mode click the **History** button.
	The **Rollback** button is now displayed immediately to the right of the history drop-down menu.

	Select a historical version from the history drop-down menu.
	The **Rollback** button is enabled after a historical version of the document is selected. Click the **Rollback** button.
	The new historical version of the document is created, which is a copy of the source version. A notification is displayed which states that the current version of the document is a rollback version and provides a link to the source version of the current document's revision.

Comparing document versions

While editing a document you can compare the current version with any other version by clicking **Compare**:

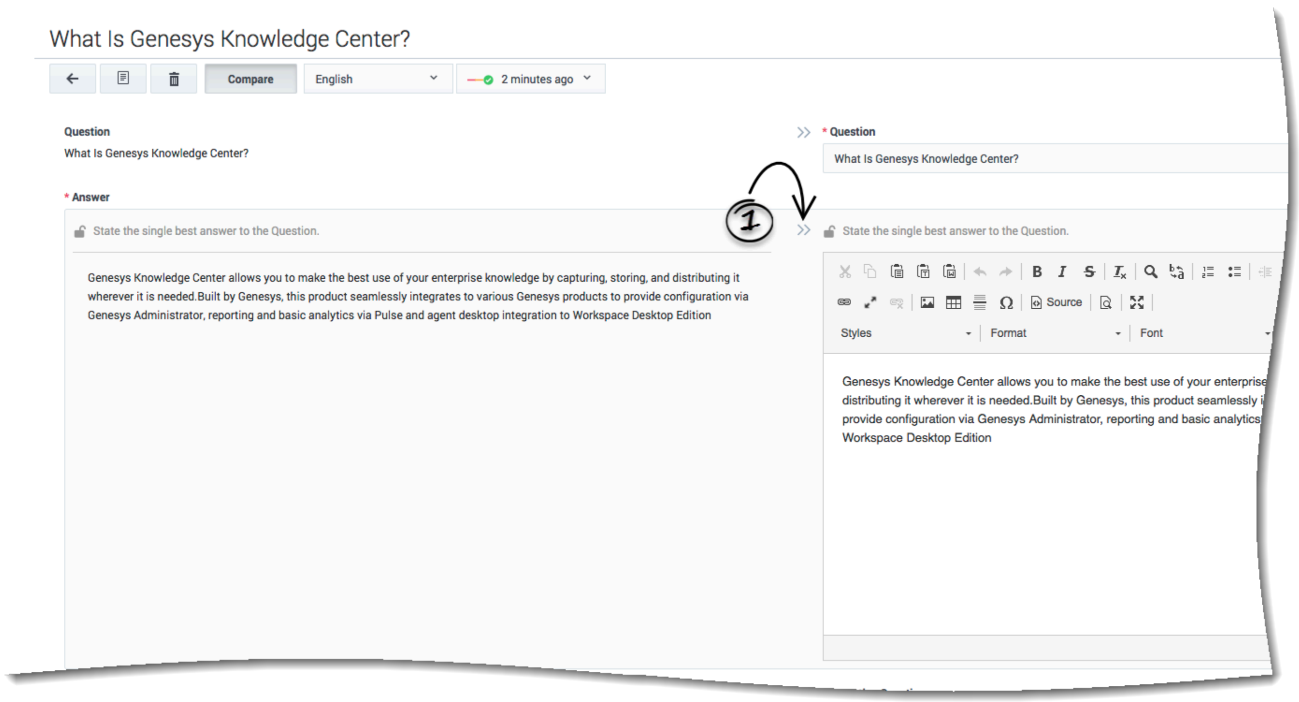


Select the desired language and version from the drop-down lists that appear.

This mode is helpful when you want to:

- Compare the current version with a previous version
- Copy content from a previous version
- Localize a document from one language to another

Compare mode displays the older version and the current version side by side:



Click the Copy button **(1)** near a field to copy its value from the older version to the current one.

Deleting a Document

Prerequisites

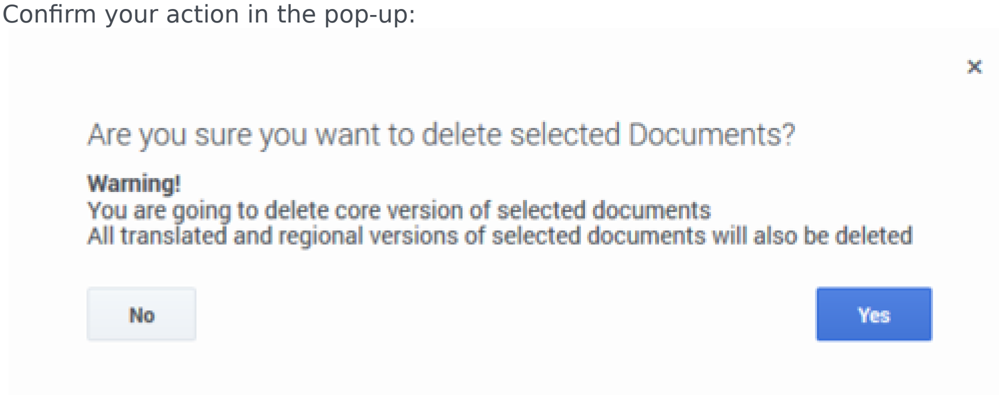
- The knowledge base has been defined in the CMS.
- The Document has already been created.

- A connection to Genesys Knowledge Center is available.
- **Knowledge.CMS.Document.Author** privileges have been assigned to the user.

Important

You can only delete a document from the Knowledge Base if the Genesys Knowledge Center Server contains a Knowledge Base document with the same name.

1. Move your mouse over the appropriate knowledge base icon on the main page.
2. Click **Documents**.
3. Select one or more Documents from the list.
4. Click the **Delete** button.
5. Confirm your action in the pop-up:



Important

If you delete the core version of a document (in other words a document created in the default language in a Knowledge Base), all translations and regional versions of this document are deleted. If you delete the translated version of a document and it has regional versions, all regional versions of this document are deleted.

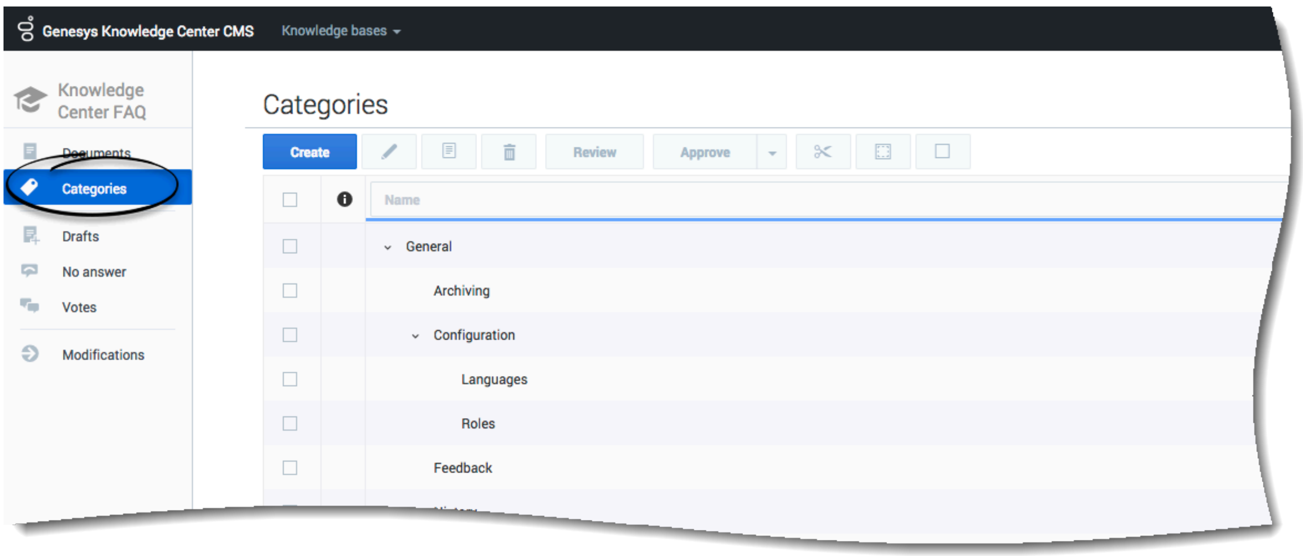
Tip

If the deleted document was published to Knowledge Center Server it is deleted from the Server on the next manual or scheduled synchronization.

Working with Categories

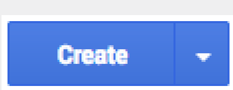
Displaying categories

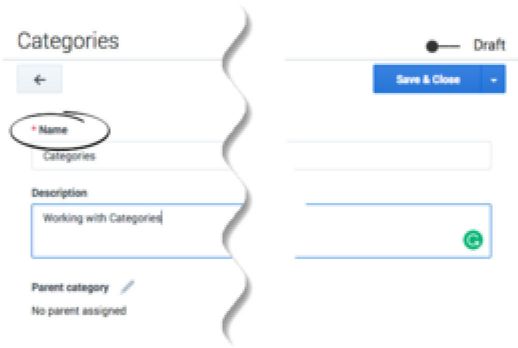
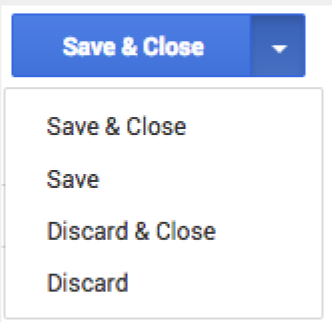
Click **Categories** in the sidebar to open the category tree for the selected knowledge base:



Creating a category

> **Important**
> New categories will not be available in the GKC plug-in until they have been assigned to a document.

	Click **Create**. **Note:** If you select a category from the category list before clicking **Create**, the new category will be created as a child of the category you selected.

<table>
<tr>
<td>
</td>
<td>Enter values for the mandatory fields (marked by the red star), as well as any other fields you have data for.</td>
</tr>
<tr>
<td>
</td>
<td>Click Save & Close or select one of the other options in the Save & Close button's drop-down menu.</td>
</tr>
</table>

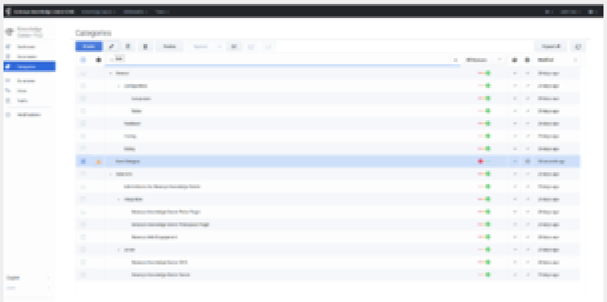
Category Tree

A tree structure represents the hierarchical nature of categories in a graphical form. A Category Tree consists of one or more root categories, each of which can have subcategories under it.

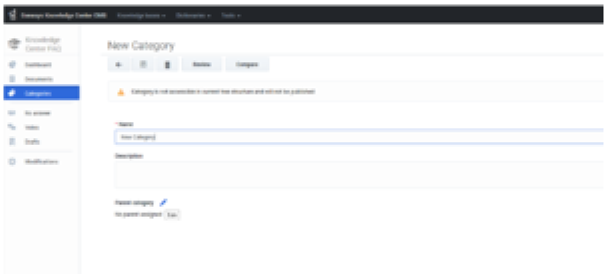
From the category tree you can:

- Create a parent category.
- Move a category.
- Convert a category from child to root.
- Delete a child category.

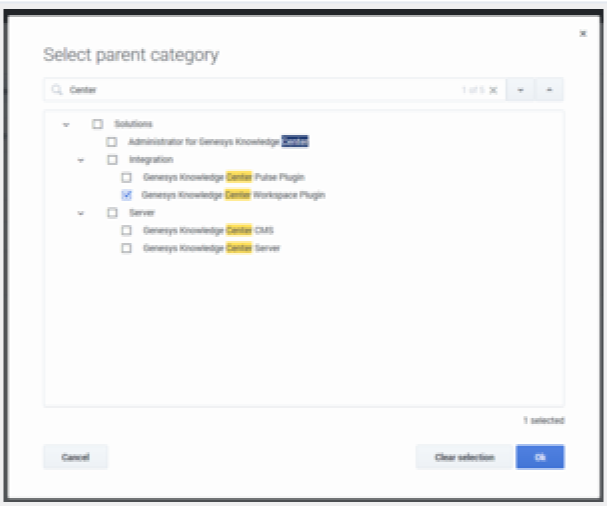
Create a parent category



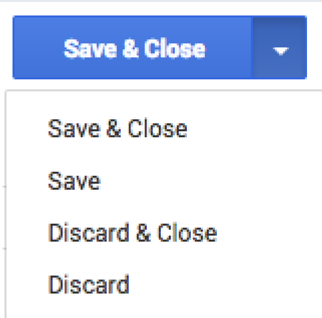
Create a new category or select an existing category to edit.



Click **Edit** > **Parent category**.

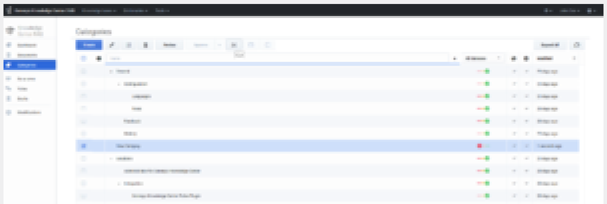
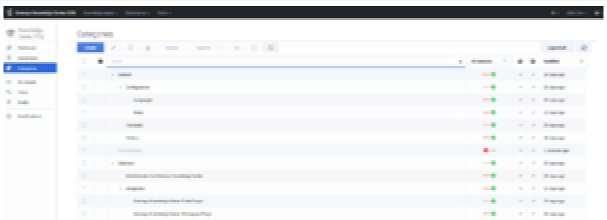
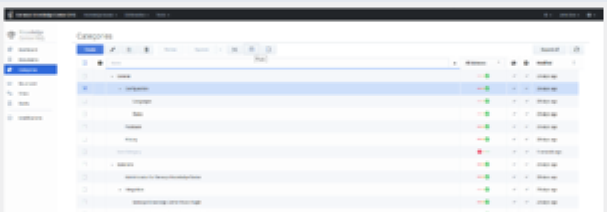
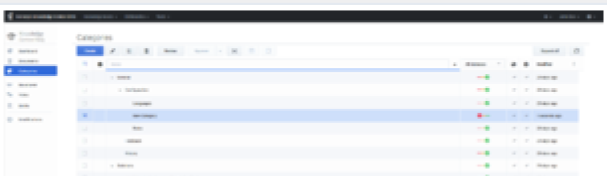


Search for and select one new parent category and click **Ok**. You can only select one parent category.

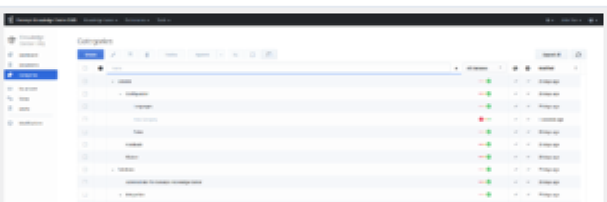
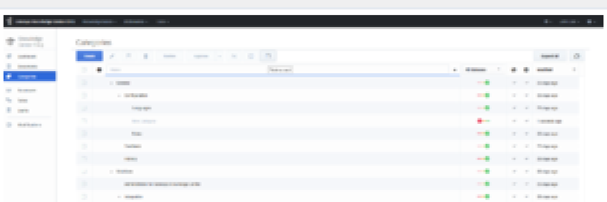


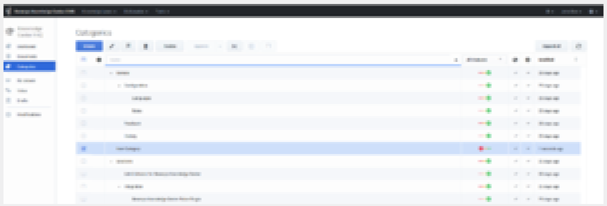
Click **Save & Close** or select a different option from the Save & Close drop-down menu.

Move a category

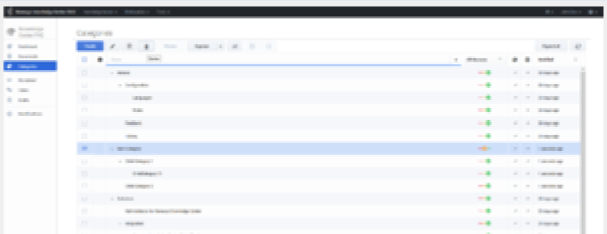
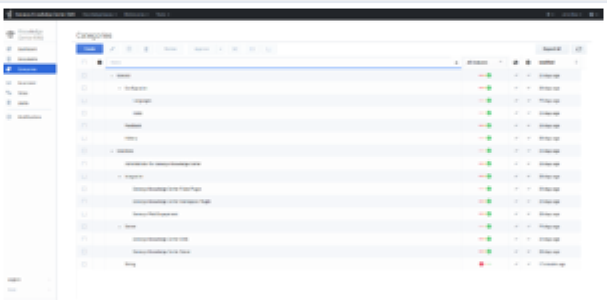
	Select a category.
	Click the **Cut** button. The selected category will be grayed out.
	Select the parent category and click **Paste**.
	The selected category will be pasted as a child category under its new parent category. If the category that was moved includes child categories, the child categories will also be moved.

Convert a category from child to root

	Select category and click the **Cut** button. The selected category will be grayed out.
	Click **Paste as root**.

	The selected category will now be at the root level. If the converted category includes child categorie/ subtrees, the categories/subtrees will also be moved.

Delete a child category

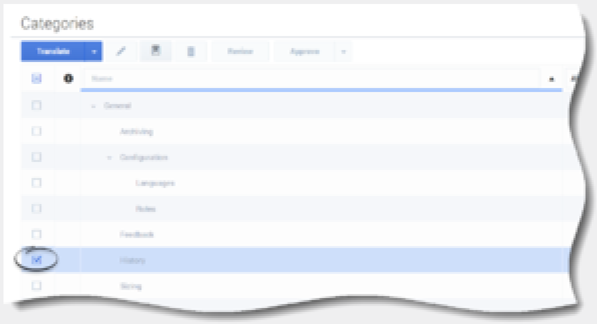
	Select the child category and click **Delete**.
	If the deleted category contains child categories, these child categories will also be deleted.

Translating categories

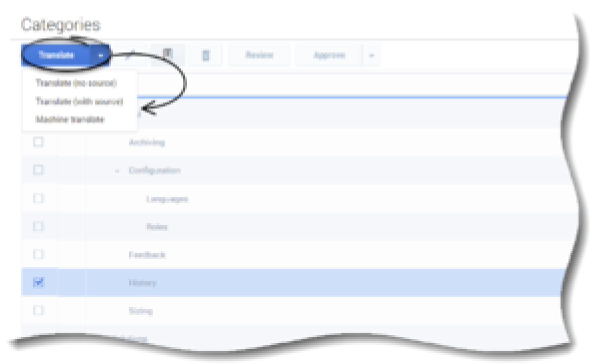
For a quick reference on how to:

- Translate (no source)
- Translate (with source)
- Machine translate
- Translating a category in compare mode

You can reference the video below. Although the information in the video pertains to translating **Documents**, much of the process is the same —
Link to video



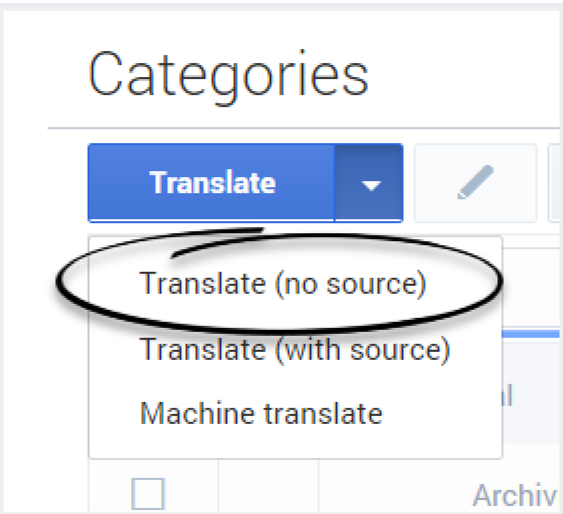
Select a category to translate to the current language.



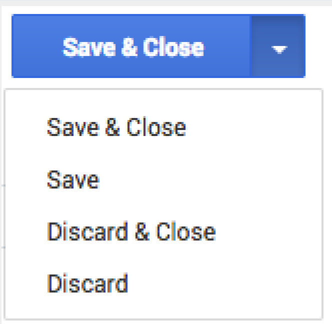
Click the arrow next to the **Translate** menu and choose one of the three types of translations from the list:

- **Translate (no source)** - Creates a blank category in the selected language for manual translation.
- **Translate (with source)** - Creates a copy of the source category, copying all the content into a newly created language version. Content then needs to be manually translated to the selected language.
- **Machine translate** - Uses a machine translation service (needs to be configured by your administrator) to create a category in the selected language by translating the content of the original category.

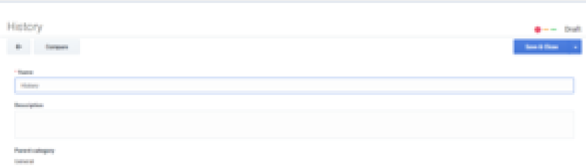
Translate (no source)

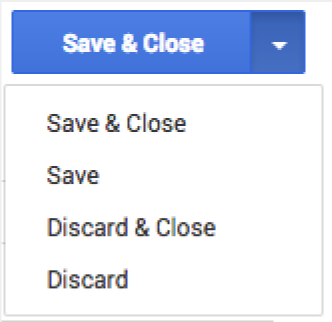


Click the arrow next to the **Translate** button in the toolbar and choose **Translate (no source)** from the menu.

<table>
<tr><td></td><td>Enter values for the mandatory fields (marked by the red star), as well as any other fields you have data for.</td></tr>
<tr><td></td><td>Click Save & Close or select one of the other options in the Save & Close menu.</td></tr>
</table>

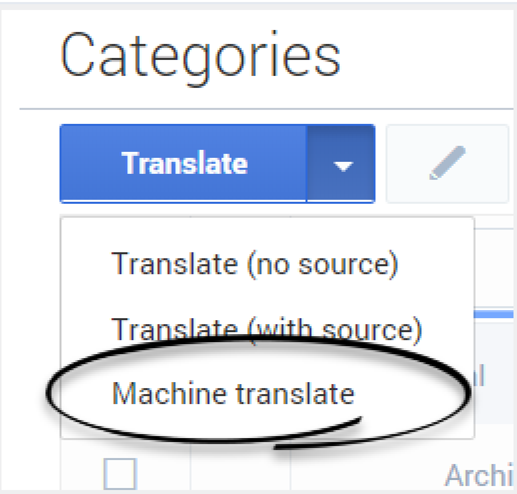
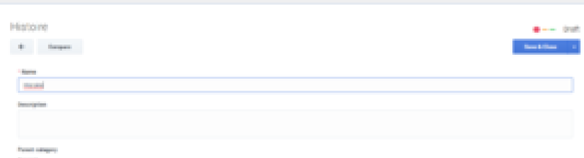
Translate (with source)

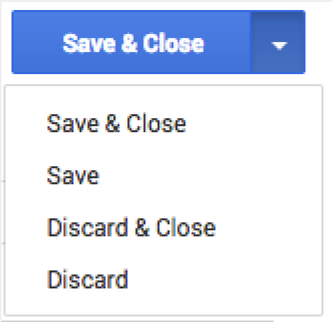
<table>
<tr><td></td><td>Click the arrow next to the Translate button in the toolbar and choose Translate (with source) from the menu.</td></tr>
<tr><td></td><td>Manually translate the document fields using the source document content.</td></tr>
</table>

	Click **Save & Close** or select one of the other options in the **Save & Close** menu.

Machine translate

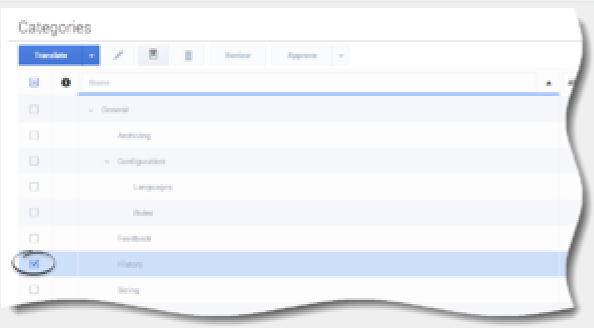
> **Important**
> This mode of translation is only available when your administrator has configured an external translation service to translate content.

	Click the arrow next to the **Translate** button in the toolbar and choose **Machine translate** from the menu.
	Make edits to the translated version of the document, if necessary.

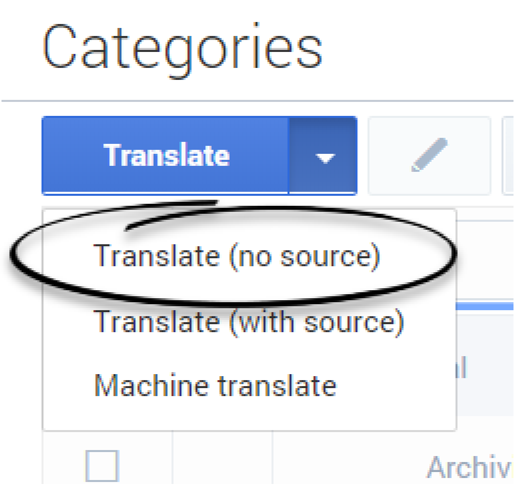


Click **Save & Close** or select one of the other options in the **Save & Close** menu.

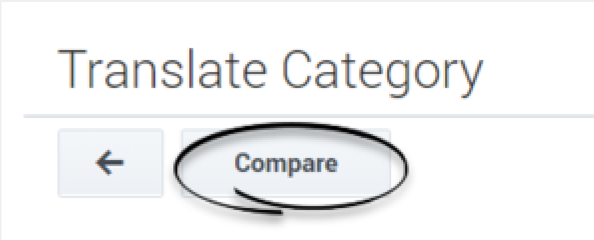
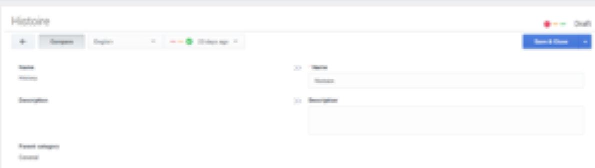
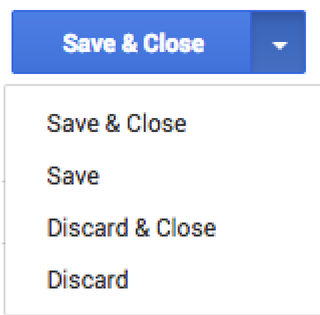
Translating a category in compare mode



Select a category to translate to the current language.



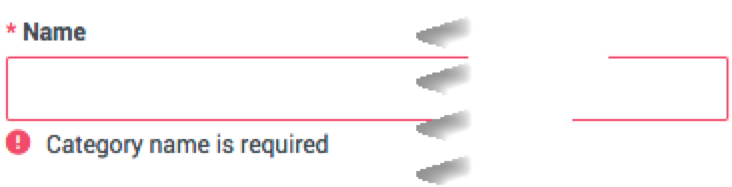
Click the arrow next to the **Translate** button in the toolbar and choose **Translate (no source)** from the menu.

<table>
<tr><td>
</td><td>Click the Compare button from the Category translation view.</td></tr>
<tr><td></td><td>Click Machine translate or Translate (with source) from the menu.</td></tr>
<tr><td></td><td>Make edits to the translated fields, if necessary. If you clicked Translate (with source), you must translate the content in the fields manually.</td></tr>
<tr><td>
</td><td>Click Save & Close or select one of the other options in the Save & Close menu.</td></tr>
</table>

Category errors

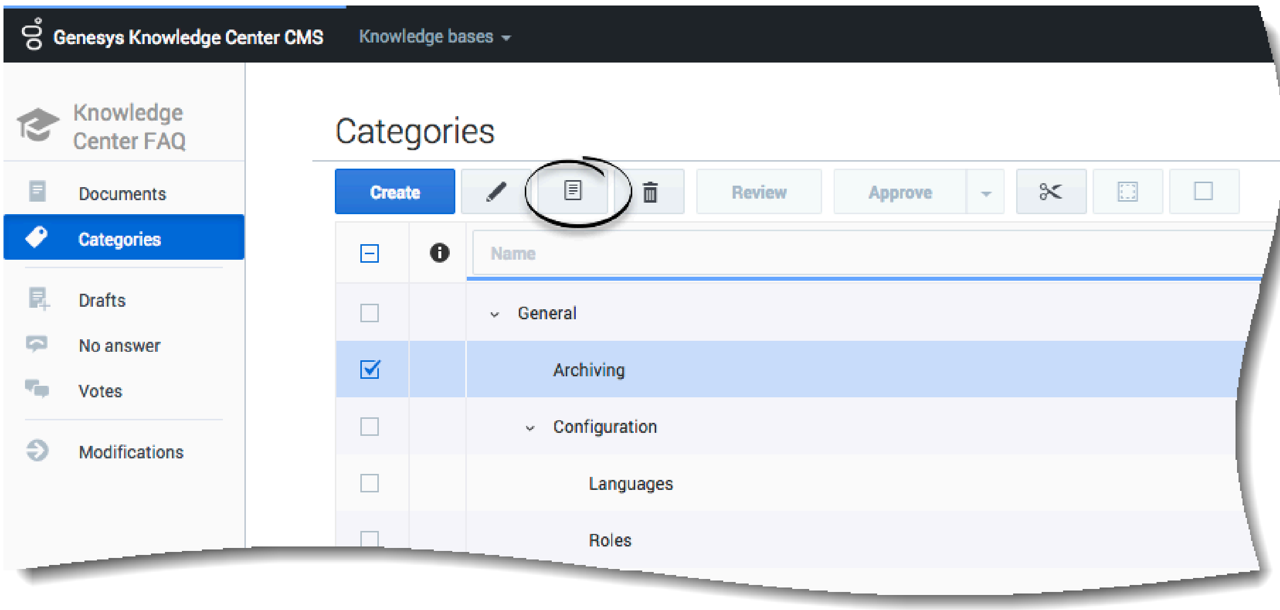
When you save a category, the Knowledge Center CMS validates the values you have entered into its fields. It highlights any fields that contain errors by:

- Marking their borders in red
- Adding an error message below them

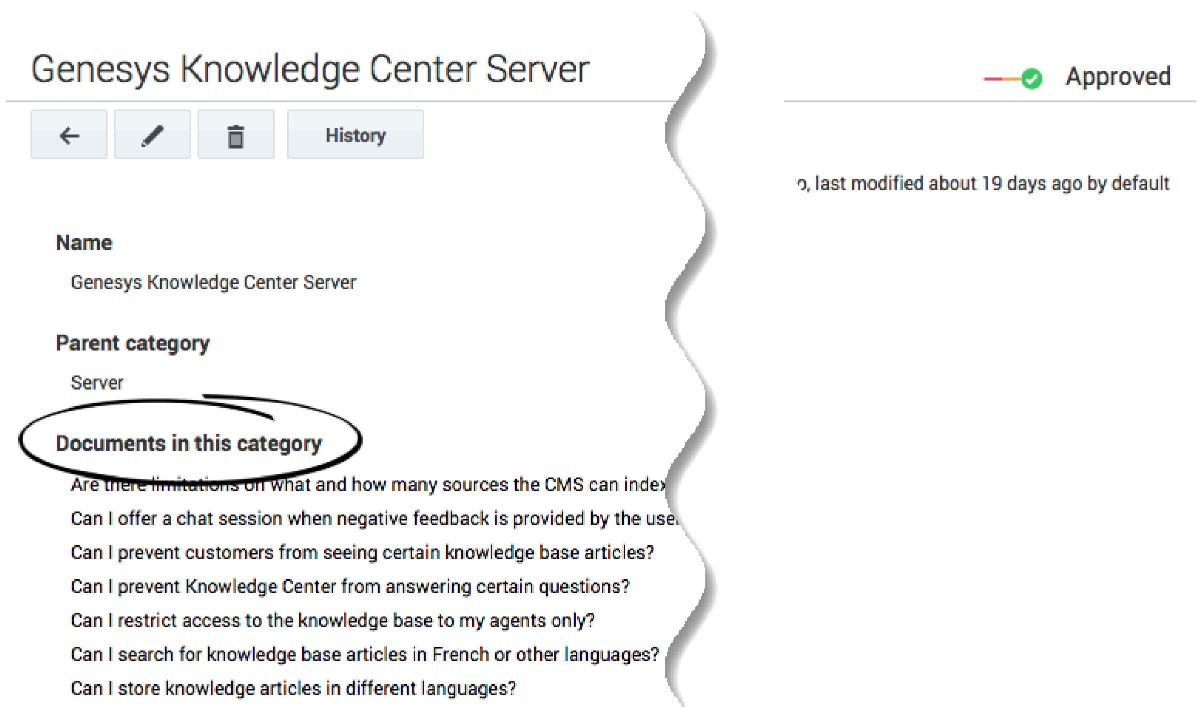


Viewing a category

To view the properties of a category, double-click the category in a list view or select the category and click **View**:



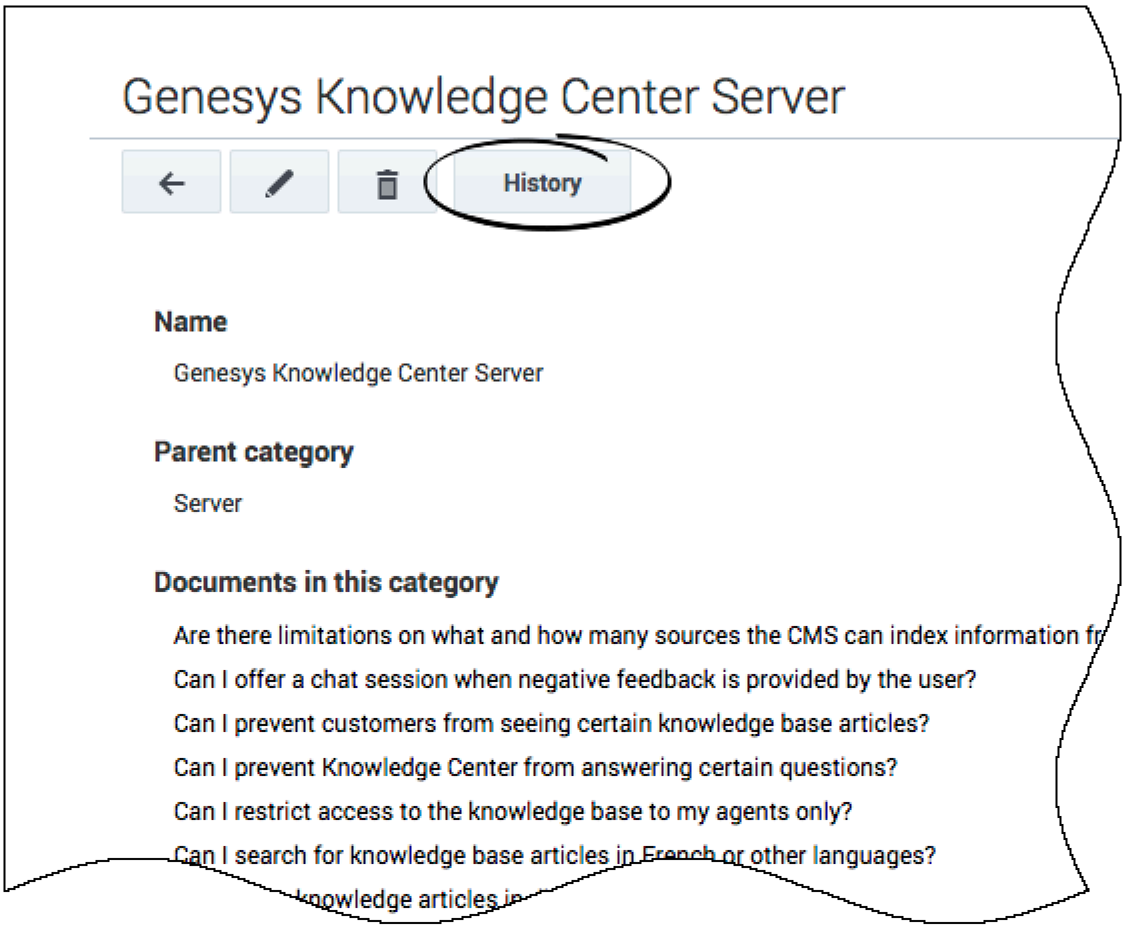
The category will look something like this:



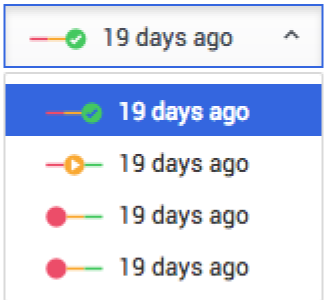
In addition to its properties, you can see a list of the documents that belong to the category. Click a document's name to open it.

Category history

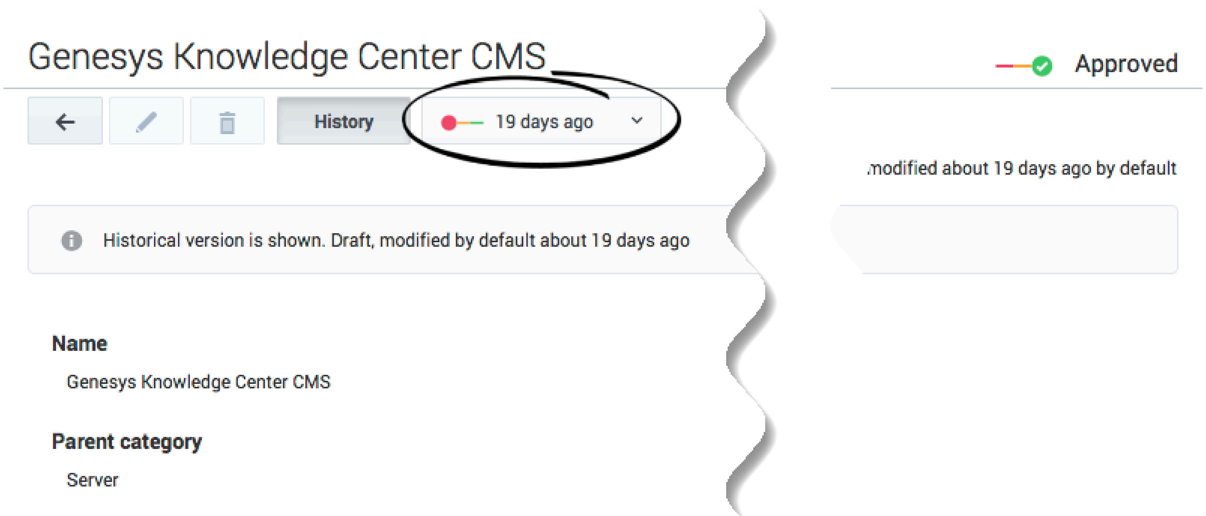
While you are viewing a category, you can click the **History** button:



This displays all of the versions of the category:



Select a version to see its contents. A history drop-down menu shows which version you are looking at:

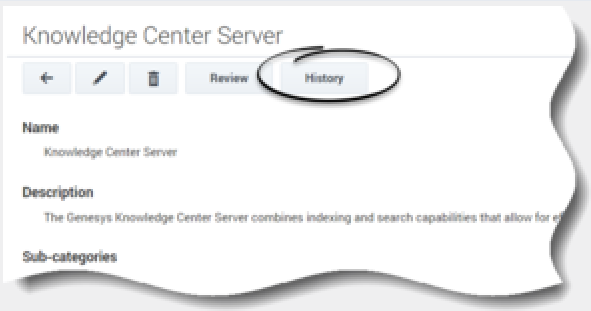
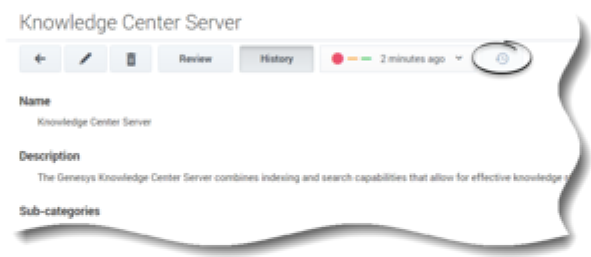
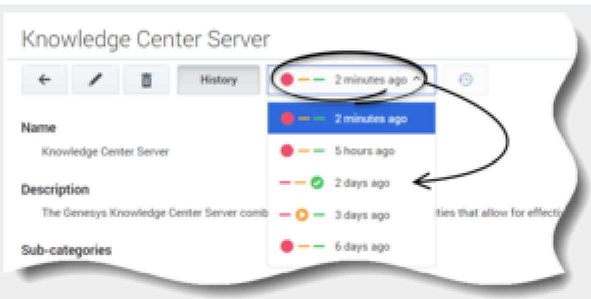
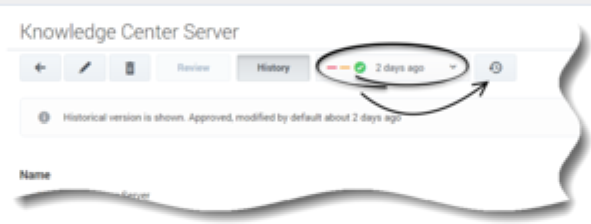


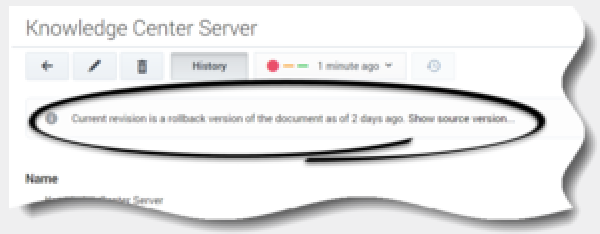
Each line in the history drop-down shows the following information about the version:

- Approval status **(1)**
- How many days ago the version was created **(2)**

Category version rollback

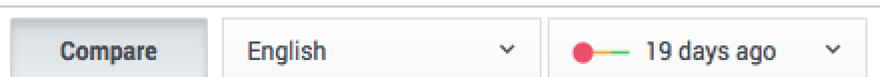
> **Important**
> This functionality is available starting with the 9.0.001.xx release of the product.

<table>
<tr><td>
</td><td>From the category view click the History button.</td></tr>
<tr><td>
</td><td>The Rollback button is displayed immediately to the right of the history drop-down menu.</td></tr>
<tr><td>
</td><td>Select a historical version from the history drop-down menu.</td></tr>
<tr><td>
</td><td>The Rollback button is enabled after a historical version of the category is selected. Click the Rollback button.</td></tr>
</table>

	The new historical version of the category is created, which is a copy of the source version. A notification is displayed which indicates that the current version of the category is a rollback version and provides a link to the source version of the current category's revision.

Comparing category versions

While editing a category you can compare the current version with any other version by clicking **Compare**:

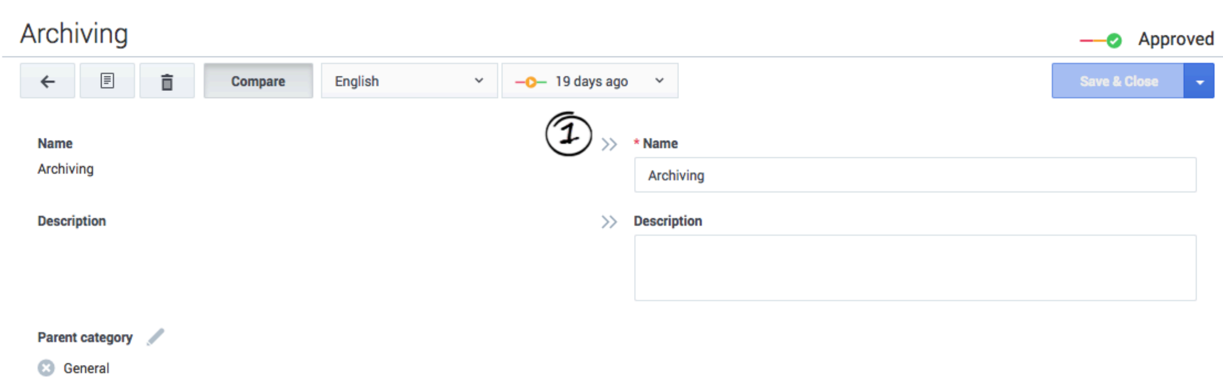


Select the desired language and version from the drop-down lists that appear.

This mode is helpful when you want to:

- Compare the current version with a previous version
- Copy content from a previous version
- Localize a category from one language to another

Compare mode displays the older version and the current version side by side:



Click the Copy button **(1)** near a field to copy its value from the older version to the current one.

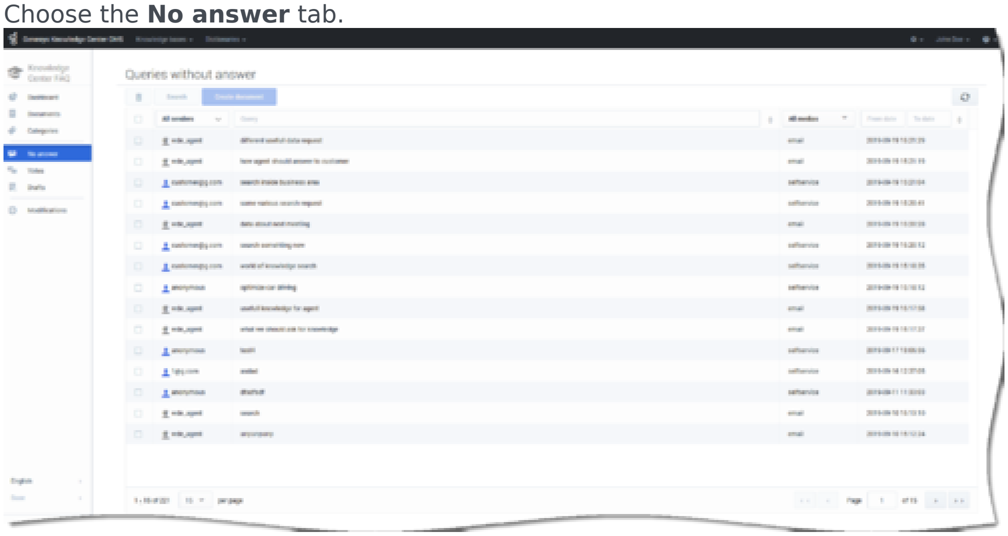
Working with Customer Feedback

Processing a "No answer" Item

Prerequisites

- The knowledge base has been defined in the CMS.
- A connection to Genesys Knowledge Center is available.
- **Knowledge.CMS.Document.Author** privileges have been assigned to the user.
- **Knowledge.Author** privileges have been assigned to the user.

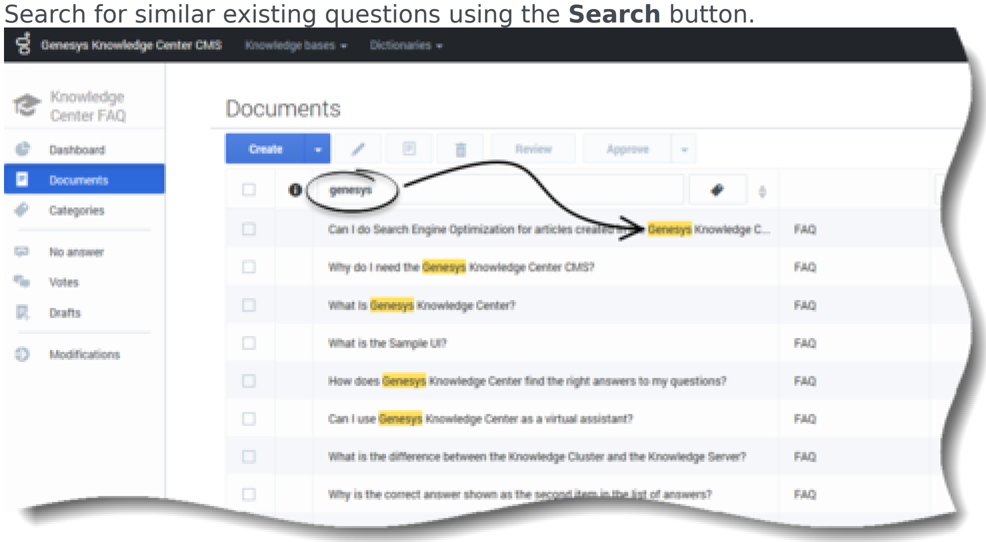
Start

1. Select a knowledge base to display a list of its contents.
2. Choose the **No answer** tab.


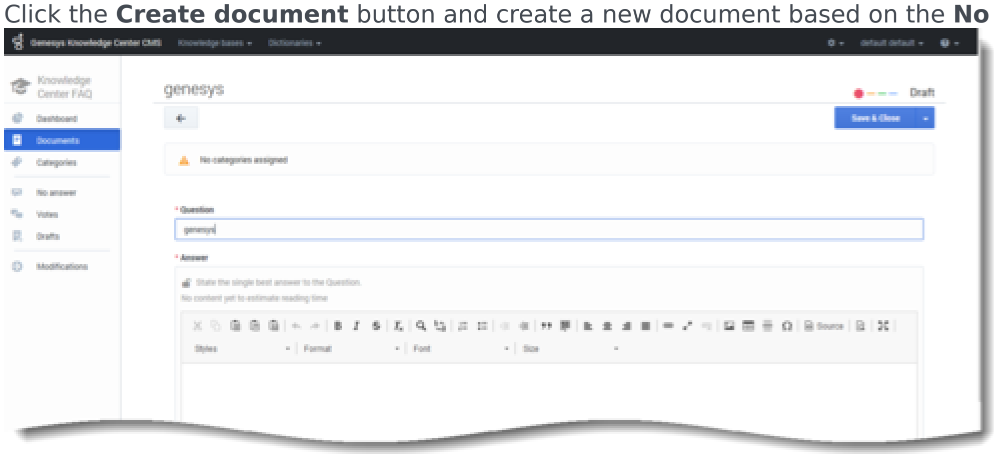
3. Search via unanswered queries or filter them via timestamp, sender or media type.


4. Choose one or more items from the list.

5. Process each item:
   - Search for similar existing questions using the **Search** button.



   - Click the **Create document** button and create a new document based on the **No answer** item.



   - Delete unnecessary items using the **Delete** button.

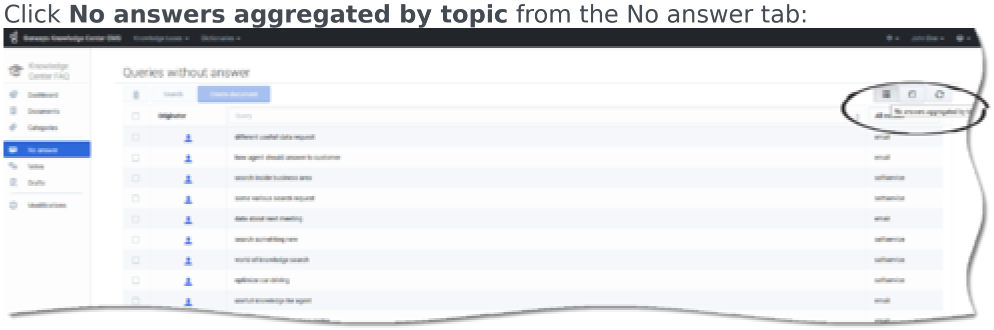
End

Review No Answers Aggregated by Query

Queries that are marked as "No answer" can be grouped. This enables the Knowledge manager to analyze a possible weak point in the knowledge base.

Start

1. Click **No answers aggregated by topic** from the No answer tab:



2. The following information appears:
   - A list of **No answer** grouped search queries.
   - Queries grouped in a tree format.
   - The number of items in each group and in the **Appearance column** the number of times each item was used by customers.
3. Review the list. For example, click to expand each group to view the grouped queries.
   - The **Queries with answer** list can be filtered according to a specific time frame (for example, All time, Today, Yesterday, Last week and Last month).
   - From the expanded list you can search for similar questions and/or click the **Create document** button to create a new document based on the **No answer** list.

End

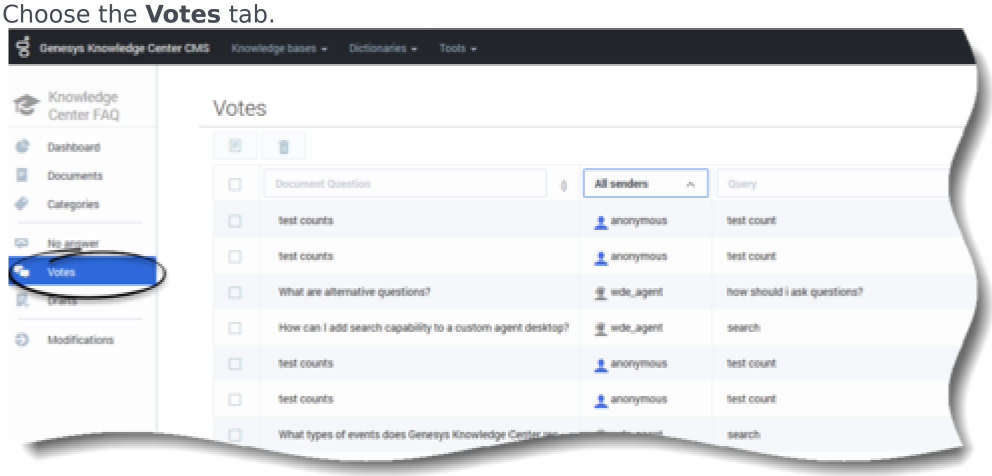
Processing Votes

Prerequisites

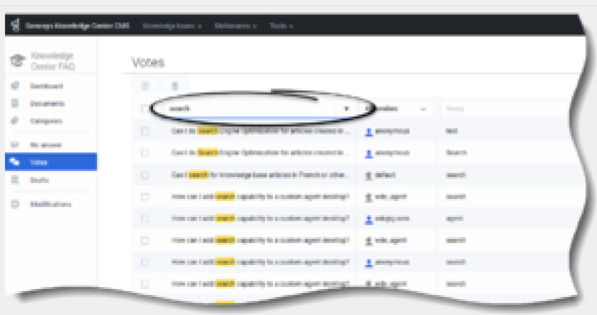
- The knowledge base has been defined in the CMS.
- A connection to Genesys Knowledge Center is available.
- **Knowledge.CMS.Document.Author** privileges have been assigned to the user.

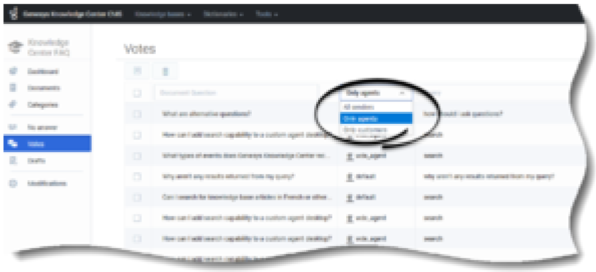
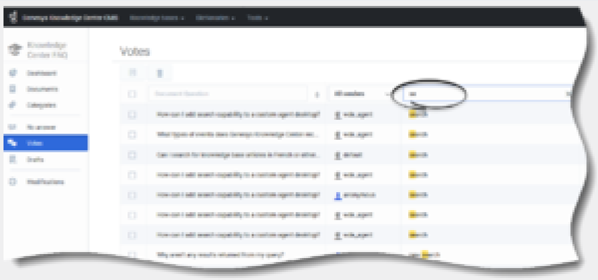
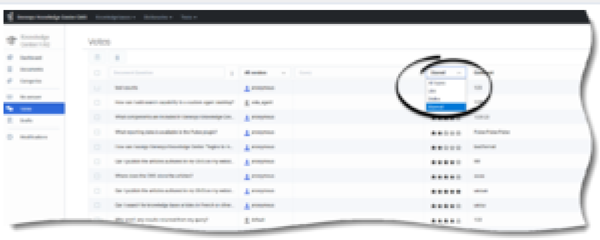
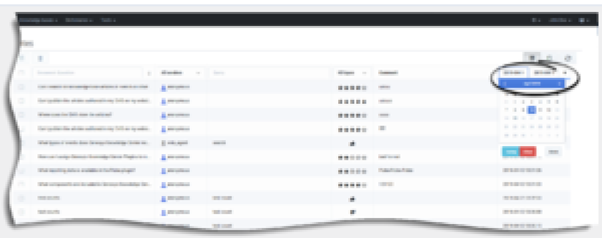
Start

1. Select a knowledge base to display a list of its contents.
2. Choose the **Votes** tab.

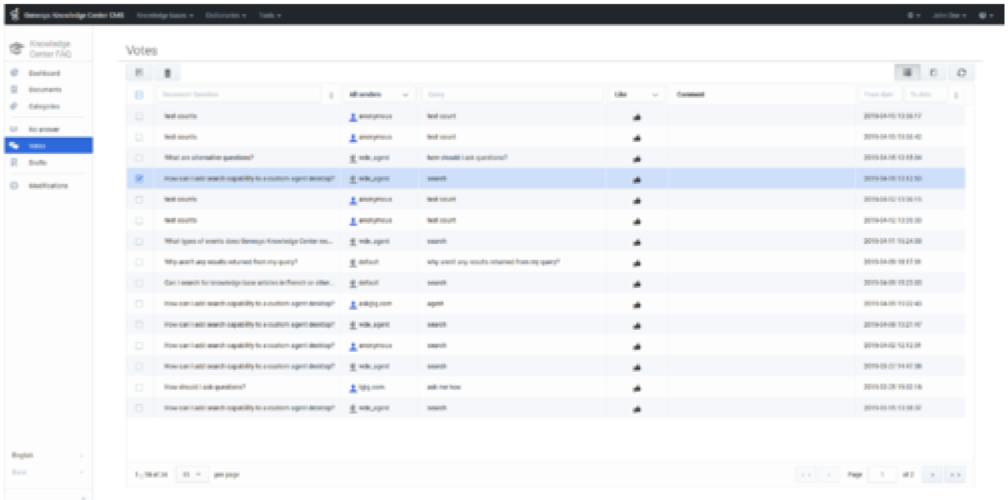


3. Choose one or more items from the list. List of Votes can be:

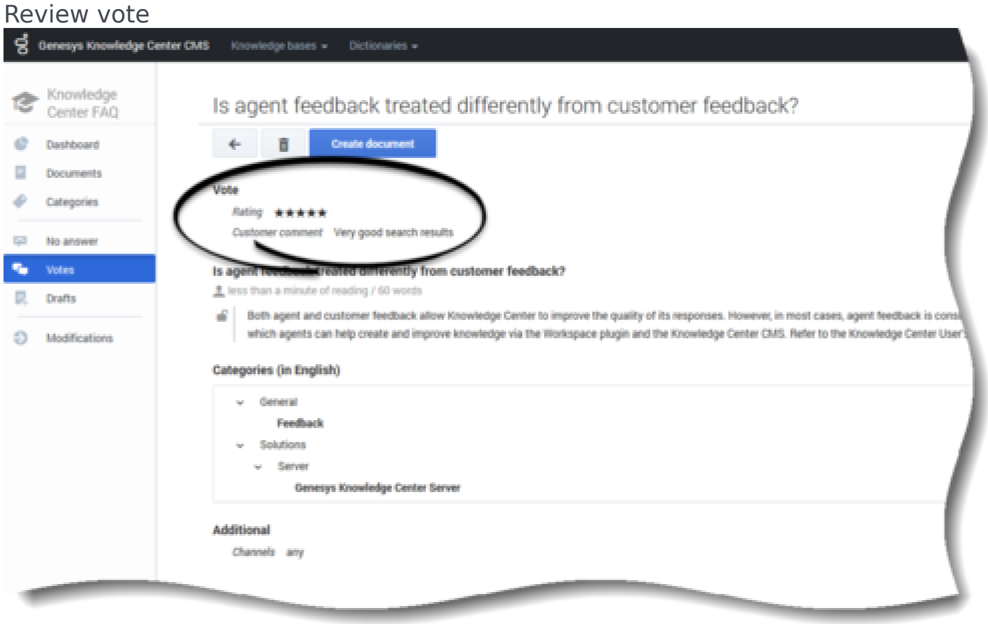
Item	Description
	Filtered by Document Question/Title and sorted (ascending or descending)

Item	Description
	Filtered by type of sender (votes from customers or from agent)
	Filtered by the search query
	Filtered by Vote type (Like, Dislike or Stared Rating)
	Filtered by time period and sorted (ascending or descending) by date

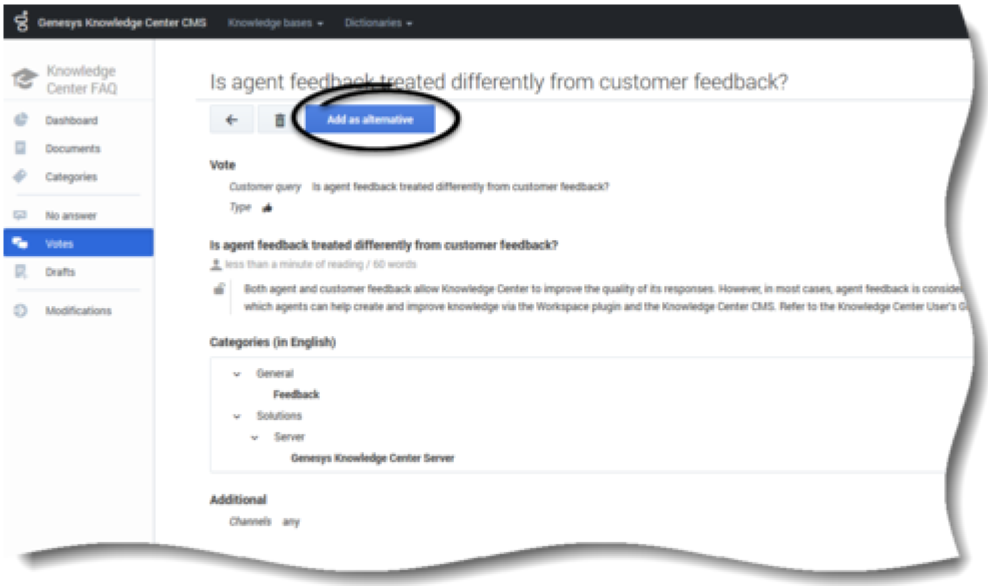
4. Process each item:

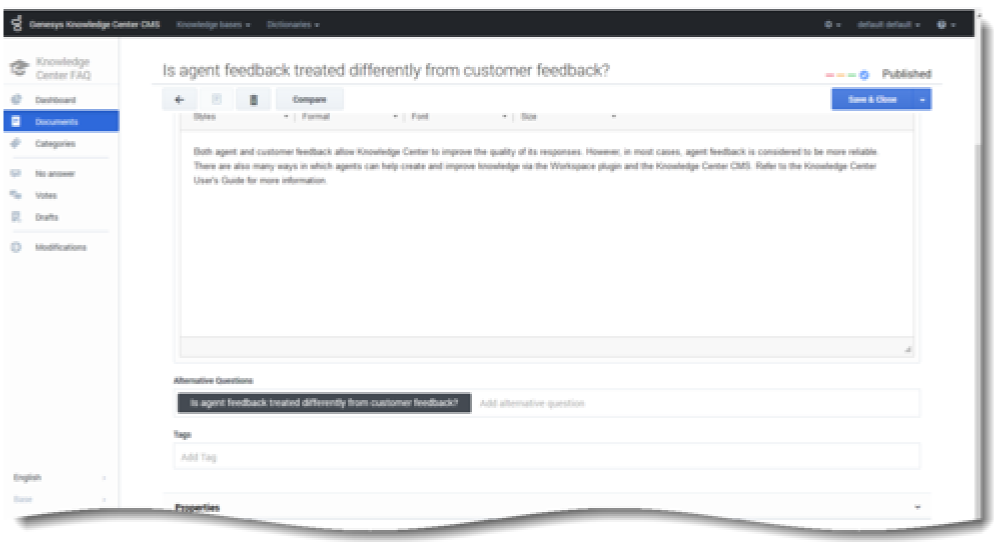


5. Review vote



6. Add a search query as an alternative question for the upvoted document using the **Add as alternative** button. Or **Edit** existing document. Or **Create** new document basing on search query.





7. Delete appropriate items using the **Delete** button.

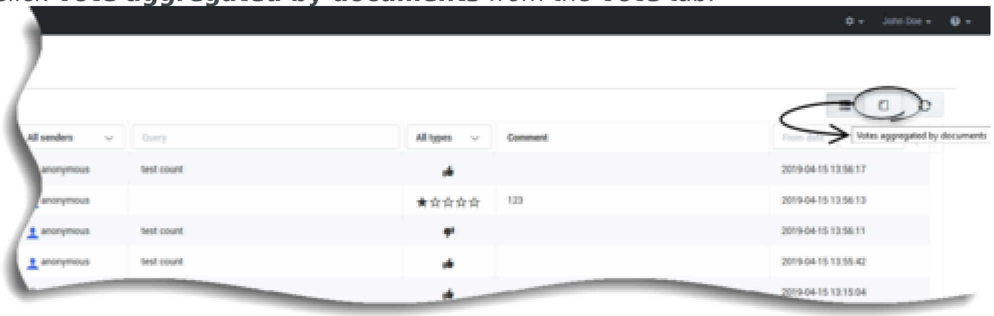
End

Review Votes Aggregated by Documents

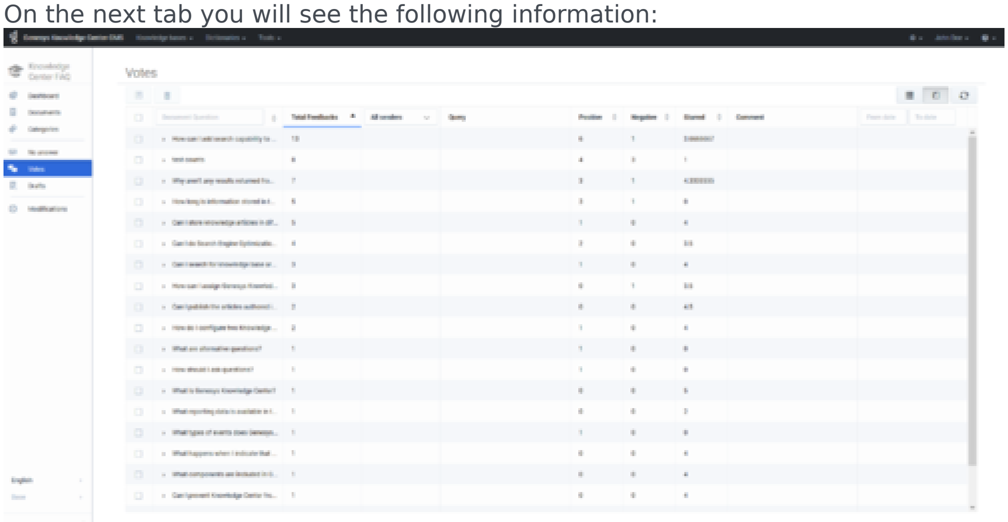
Every vote is connected to a document that has been liked, rated, or commented. So, with this in mind, you can view a list of documents where feedback was provided, and under each of those documents you will find all connected Votes.

Start

1. Click **Vote aggregated by documents** from the **Vote** tab:

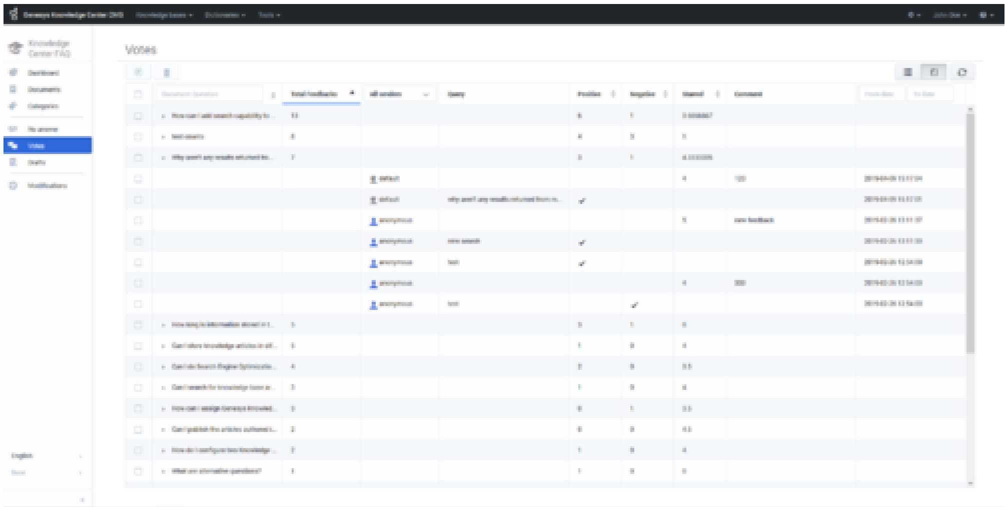


2. On the next tab you will see the following information:



   - A list of documents with related Votes.
   - The total number of unprocessed Votes for each document which can be sorted (ascending or descending).
   - The number of Positive and Negative Votes which can be sorted (ascending or descending).
   - The average star-rating for documents (only unprocessed rating records are counted in this case), which can be sorted (ascending or descending).

3. You can also expand the list of Votes under each particular document:



This includes:

- Sender (Agent or Customer) list which can be filtered to show only Customer's or Agent's Votes.
- Search query which was done before Vote query.
- Type of particular Vote (Positive/Like, Negative/Dislike).
- Comment added during rating document.
- Vote timestamp (votes can be filtered by time period and the filter is applied to all aggregated records on this view).

4. From this view you do the same actions like from simple list of Votes:
   - Review vote.
   - Add a search query as an alternative question for the up-voted document using the **Add as alternative** button; or, you can edit the existing document; or you can create a new document basing on a search query.
   - Delete appropriate items using the Delete button.

Processing Drafts

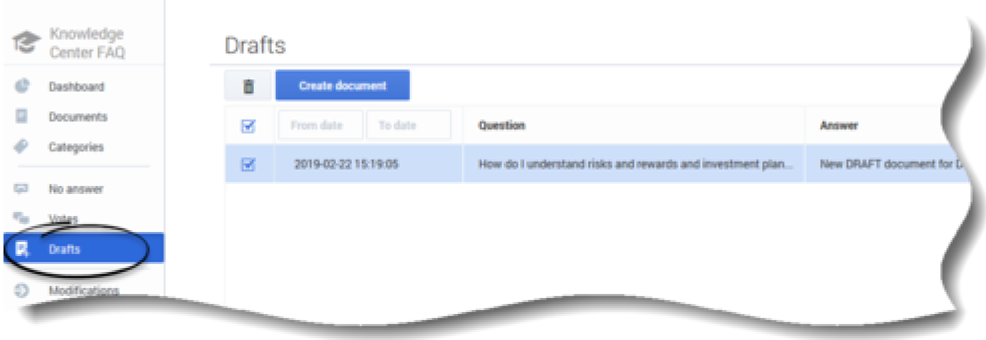
Prerequisites

- The knowledge base has been defined in the CMS.
- A connection to Genesys Knowledge Center is available.
- **Knowledge.CMS.Document.Author** privileges have been assigned to the user.

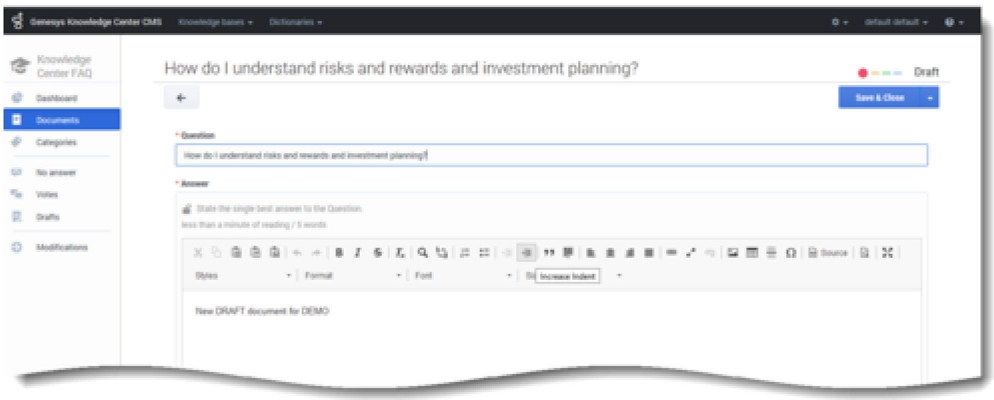
Start

1. Select a knowledge base to display a list of its contents.

2. Choose the **Drafts** tab.



3. If any drafts are awaiting review, they are present under this tab.
4. Process each item: Create a new document or Delete a draft.



End

Publishing

Overview

The publishing process ensures that data authored and approved in the CMS is available for your agents and customers. During the publishing process, all approved documents and approved categories are transferred from the Knowledge Center CMS to the Knowledge Center Server. As soon as these documents are transferred to Knowledge Center Server they are immediately available for searching by your agents and customers.

There are several ways to publish your documents. You can:

- Publish from the document list
- Publish from the modification menu
- Configure scheduled publishing (synchronization)

What version of the document is published?

There are several key rules of document versioning for publishing:

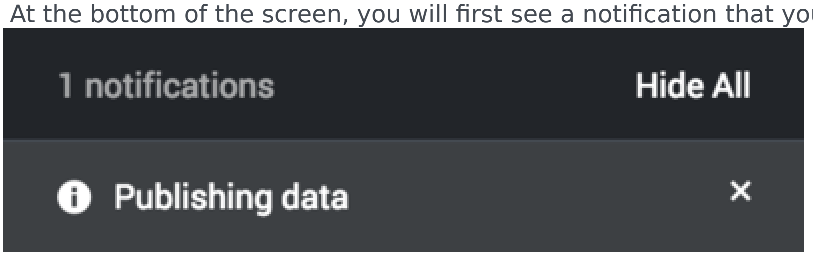
- Only the approved version of the document is published
- If the document has several approved versions, the most recent approved version is selected for publishing
- If the latest approved version of the document has the **Expiration date** defined and that date has passed, the document is not published

Publishing documents

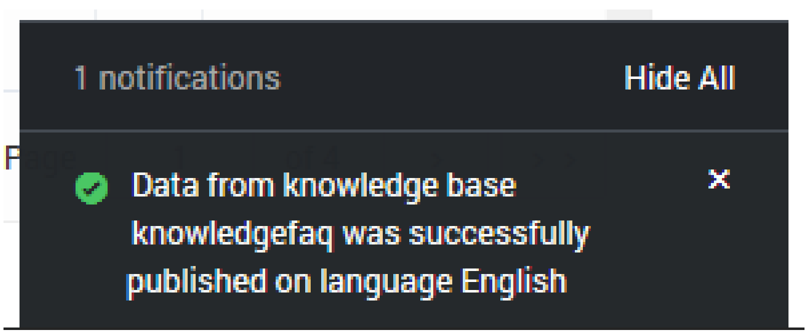
Publishing from document list

1. From the left-hand sidebar menu, click **Documents**.
2. Click **Publish**.

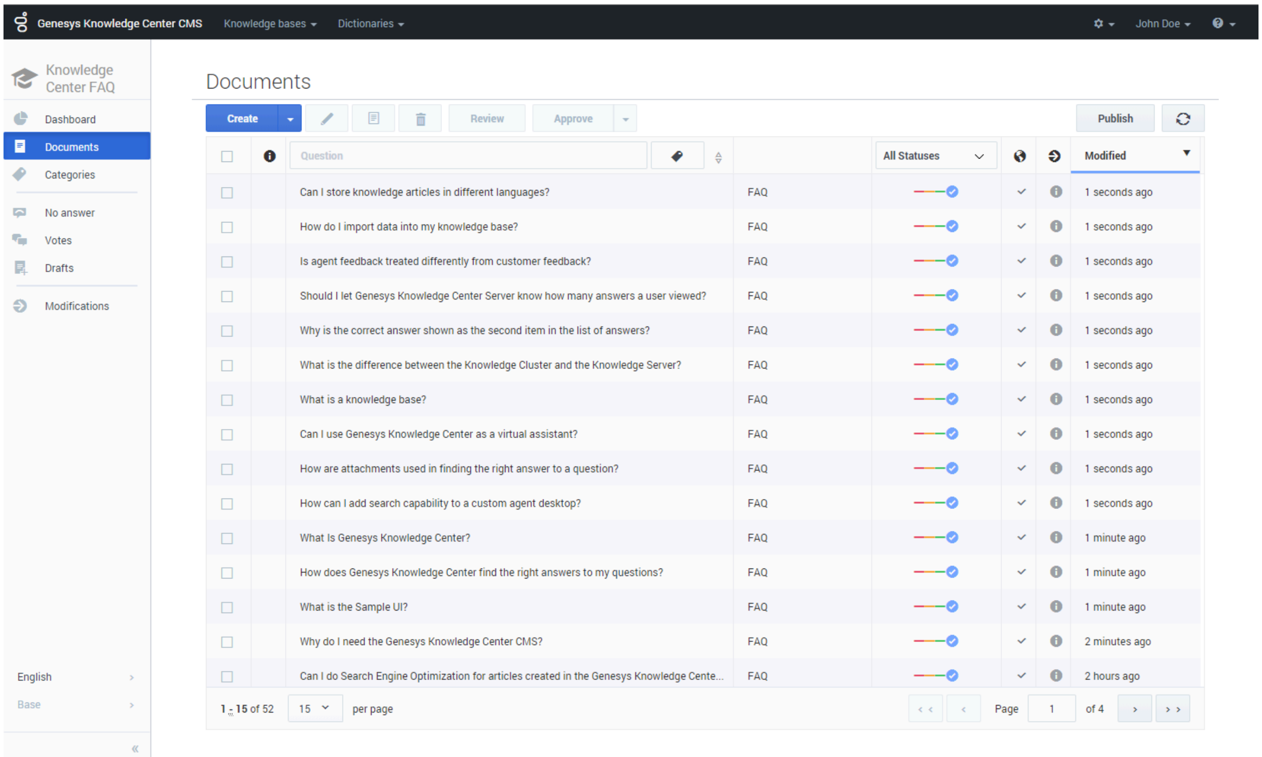
3. Confirm the operation in the dialog window by clicking **Publish** once more.
 At the bottom of the screen, you will first see a notification that your document(s) are being published:



Then you'll see the notification confirming the document(s) are published:



4. The documents get a status of "Published" as indicated by the blue check icon:

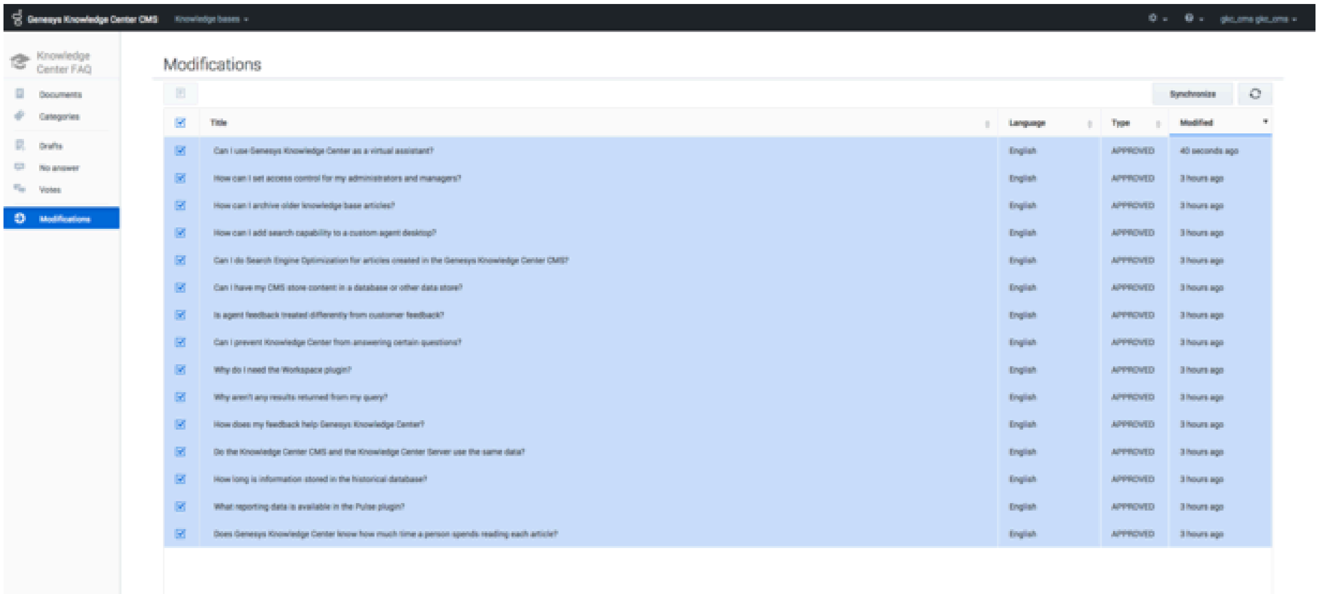


Publishing modifications

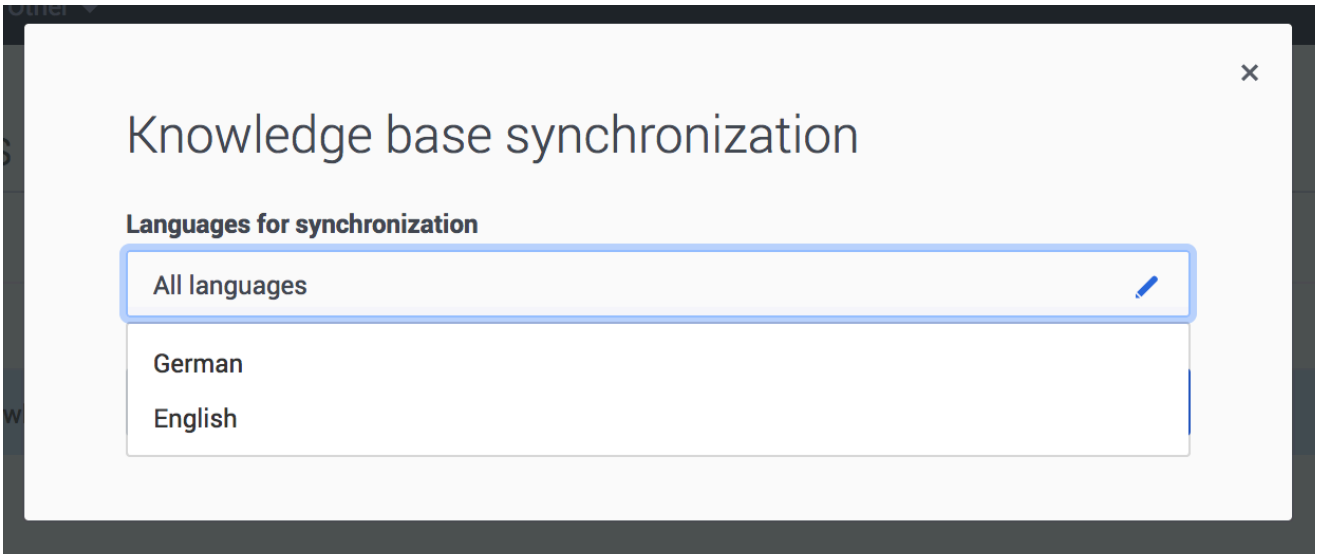
Accessible from the left-hand sidebar menu, the **Modifications** view allows you to see the changes (approved and deleted documents) that are awaiting the next cycle of scheduled publishing (synchronization). Here you can enforce synchronization by clicking the **Synchronize** button.

Important

When you click the **Synchronize** button you instruct the Knowledge Center CMS to immediately execute the synchronization process of all changes in the **Modifications** view to the Knowledge Center Server. This means that all approved documents are published to the Server and all deleted documents are removed from the Server.



To complete the process, you are asked to select which language(s) are to be used for the synchronization.



Scheduled publishing (synchronization)

Synchronization is a convenient and reliable way of making documents available for use. It is strongly encouraged to set up a synchronization schedule according to your needs. This will ensure all the approved content is available in a timely manner.

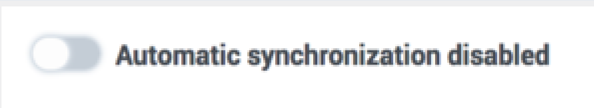
> **Important**
> Synchronization can be configured for **Content source: CMS** knowledge bases only.

To edit synchronization options you need to expand **Properties** at the bottom of the Knowledge Base form.

Enabling Synchronization

To enable synchronization:

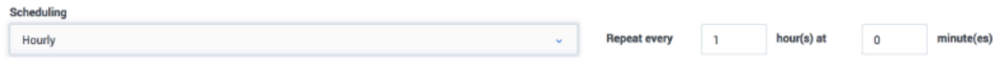
1. Expand **Properties** in the bottom of the Knowledge Base page.
2. From the **Synchronization** section:

	**Automatic synchronization disabled** (default) - disable synchronization
	**Automatic synchronization enabled** - enable synchronization

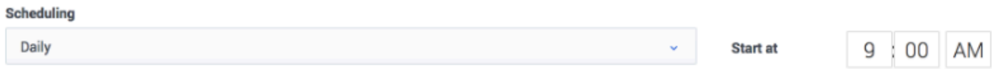
Synchronization Schedule

The following synchronization schedules are supported:

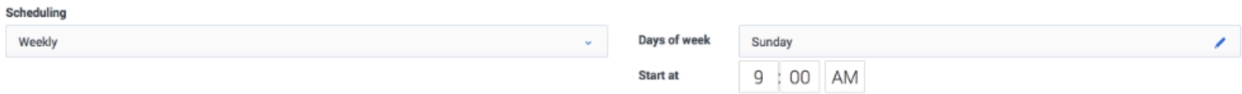
- Hourly - define hours and minutes



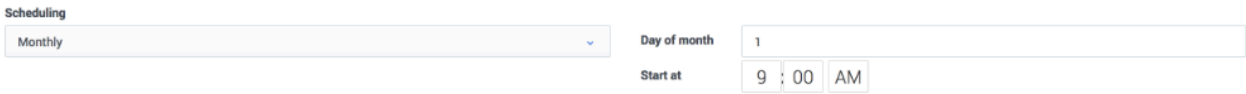
- Daily - select time



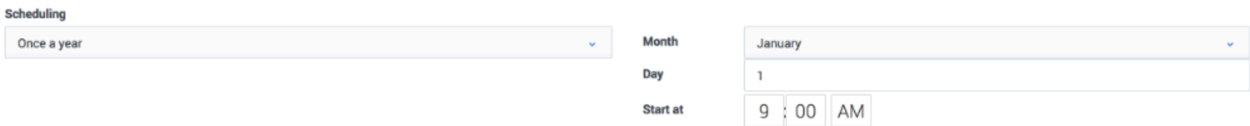
- Weekly - select weekdays and time



- Monthly - select day of the month and time

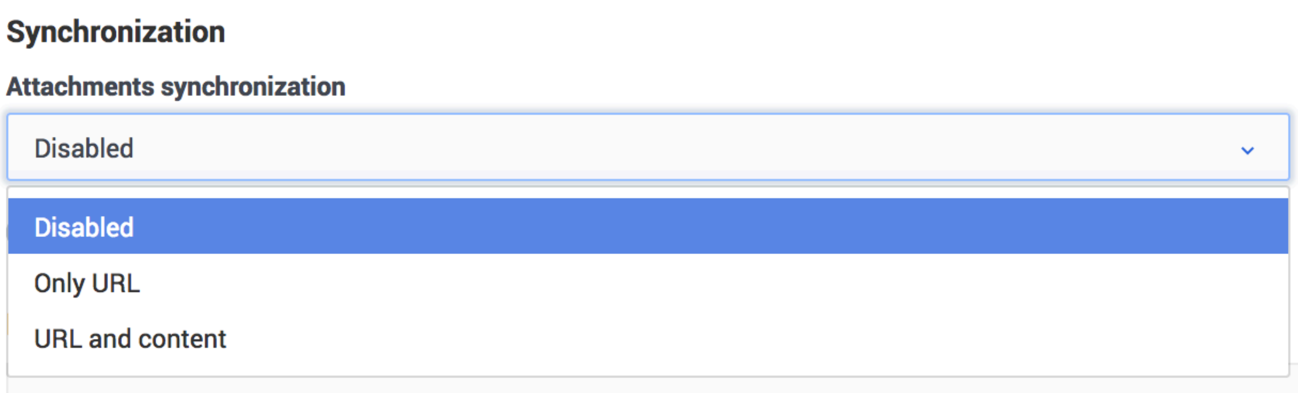


- Once a year - select month, day of the month and time



Synchronized Content

Attachment synchronization

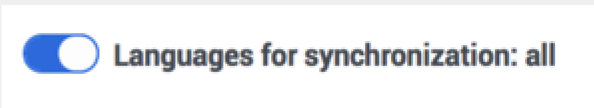
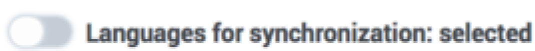


- **Disabled** - attachments are not by synchronized to the Knowledge Center Server
- **Only URL** - link to attachment and attachment name is synchronized to Knowledge Center Server. Attachment content remains in Knowledge Center CMS.
- **URL and content** - link, name, and attachment content is synchronized to the Knowledge Center Server; content is used by Server for search only. To download file, Knowledge Center CMS is used.

> **Important**

> For successful attachment download from Knowledge Document option **externalURL** in section **cms.general** in **Application Cluster** should be correctly configured and point to Knowledge Center CMS URL (such as, http://<cms host>:<CMS default port>/gks-cms)

Synchronized Languages

	(Default) Synchronization enabled for all languages within the knowledge base
	Languages that need to be synchronized (needs to be selected from the list of supported languages by knowledge base):  *click to enlarge*

Screening Rules

Screening rules scan an interaction and try to match either a destination address (who the message is going to, whether that is identified by an email address, a cell phone number, or some other parameter), a regular expression ("regex"), or both. Screening is performed by Classification Server when it is triggered by a Screen Interaction object in a routing strategy.

Creating a new screening rule

1. Click **Tools > Screening rules**.
2. Click **Create**.
3. Fill in the mandatory fields (Name, and Order) as well as any other relevant fields for your new variable. See Field descriptions for more information.
4. Click **Save & Close** to apply your changes.

Field descriptions

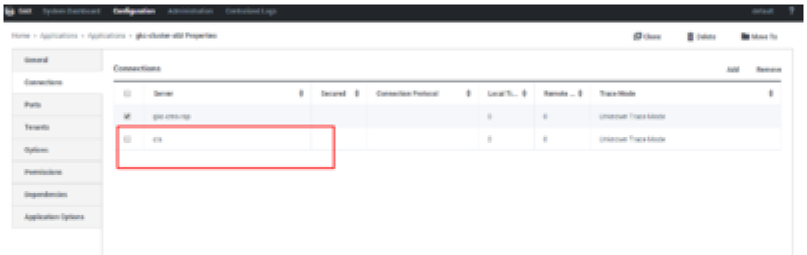
Field	Description
Name	The name of the screening rule
Order	Technical information for routing which tells the system when to apply this screening rule if several rules exist.
Disabled	Toggle to disable or enable this screening rule.
Add patterns	Routing uses these patterns to find any email interactions with the screening rules that you define here, to provide a standard response. You can search the **Subject**, **Body**, **Header**, or **All**,

Field	Description
	and indicate if the text or regex rules should apply to all or just one of these fields by toggling between "Find in every selected field separately" or "Find at least at one of the selected fields". This text or regex can be case sensitive or insensitive and the the patterns can be grouped together for more complex rule creation. Checking the **Not** button will tell the system to search for but ignore this text or regex. Note: These patterns can either be created using the graphical interface as described above or using the text editor.
Add addresses	Routing uses these email addresses to find any email interactions with the screening rules that you define here, to provide a standard response. Email addresses are chosen from the list in the **Add Email** field (pre-defined in Configuration Manager through **Configuration > Environment > Business Attributes > E-mail accounts > Attribute Values**). By default, **Rule** screens the addresses the email is sent to however, if you wish to screen: • an exact address - **Exact address match** should be selected • an address from within the email itself rather than the **To** field - **Screen mailbox** should be selected.
Add category	You can link your rule to a category meaning that when an interaction matches this screening rule, it receives a category name and a confidence level. The confidence level indicates that the system is X percent confident that this interaction belongs in this category. X percent is the Relevancy value that you will set here.

Testing Screening Rules

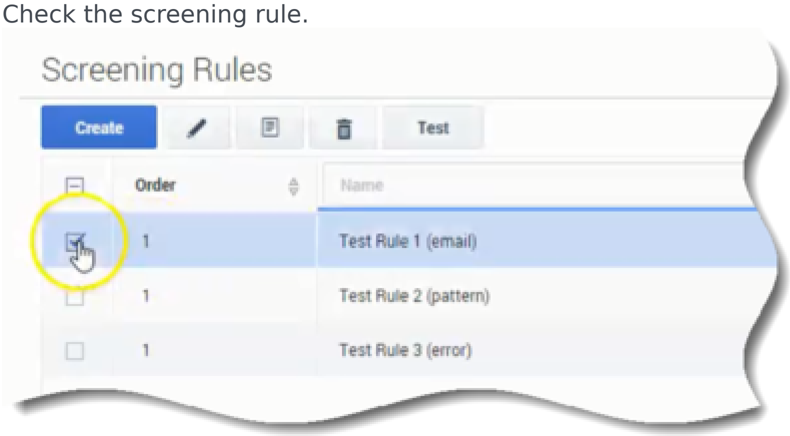
Requirements

Classification server must be added into the connection of Knowledge Center Cluster:

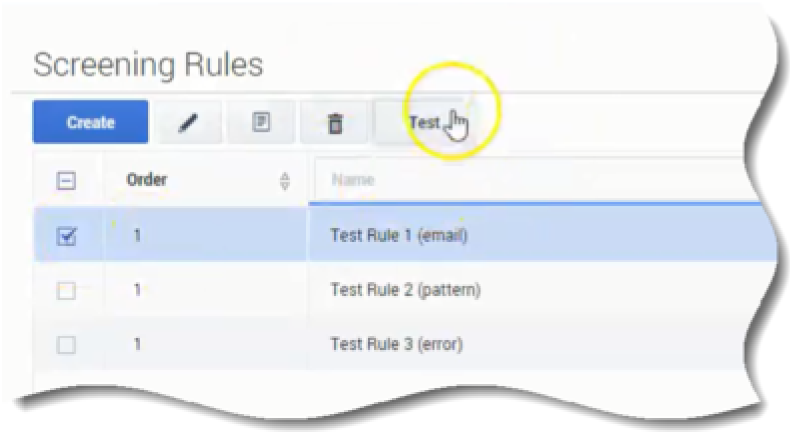


Use Case

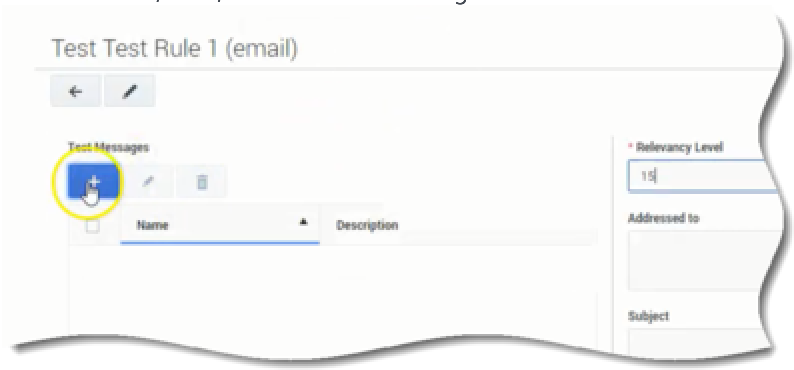
1. Check the screening rule.



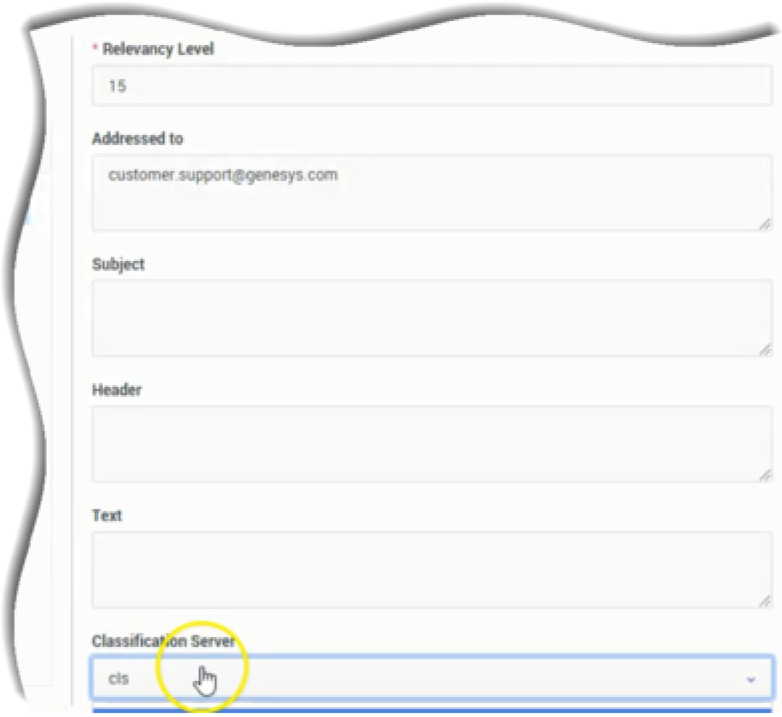
2. Click **Test** button.



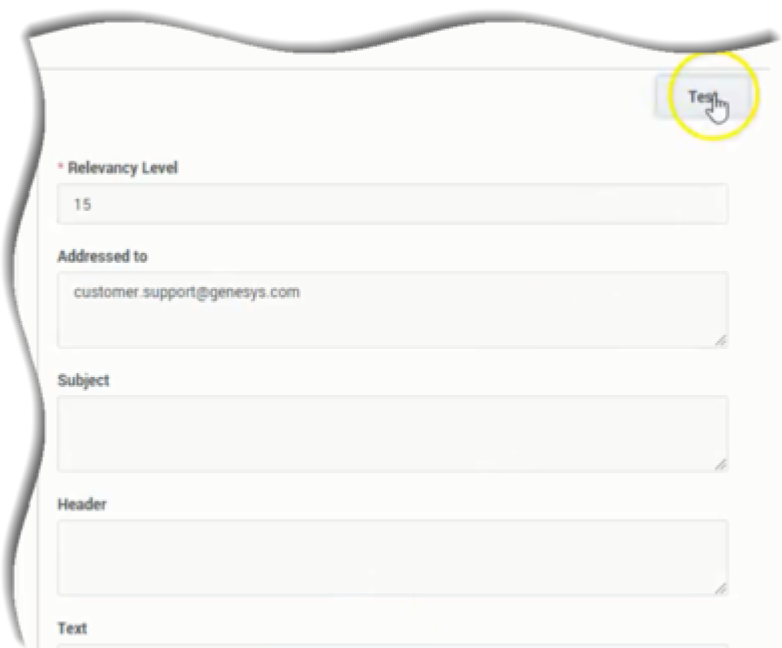
3. Click **Create**/**Edit**/**Delete** test message.



4. Check the test message for testing with the rule.
5. Select the classification server.



6. Click the **Test** button.



7. Observe the results.

Screening Rule Reference

What Text Do Screening Rules Check?

Screening rules check the following parts of an interaction, depending on what you select in the Screening Rule Editor, and on the settings in the IRD screening objects:

- The subject, if you select that check box.
- The body, if you select that check box.
- The header, if you select that check box. See also "Subject, Body, and Header" information below, on how screening rules behave if two or more of the preceding are selected, and on the Pattern is found in any selected field (OR relation) checkbox.
- The destination address, if you have put anything in the Addresses area.
- The value of any key in the user data, if both of the following are true:
  - In the Multiscreen or Classify strategy object, you select a key in the User data key if specified drop-down list under Get screened data from.
  - In the Screening Rule Editor, you select the Body check box in the Pattern area. Use the check boxes to have the screening rule apply to the message body, subject, header, or any combination. You must select at least one.

User data is first associated with the interaction by the media server when it creates that interaction. As an example, E-mail Server associates the following user data with the interaction:

- FirstName (from Contact information)
- LastName (from Contact information)
- Mailbox (value of the address option in the [pop-client] section of the E-mail Server Application object)
- To (MIME header field)
- Subject (truncated to 512 characters)
- FromAddress (personal part of From header field)
- FromPersonal (email address part of From header field)
- All Header fields (except Received, Return-Path, X-MIMETrack, Subject, Sender, From, To, Cc, Bcc) prefixed by Header_
- All parent attached data (originally created by E-mail Server) which can be inherited; that is, all parent attached data:
  - not starting with Header_
  - not starting with _ (underscore)
  - not equal to GEM_Failure
  - not equal to GEM_FailureMsg

- not equal to GEM_FailureArgs

User data may then be added or modified by a routing strategy.

Email Sections to Screen

If you select more than one of the Subject, Body, and Header areas, a screening rule can behave in the following two ways:

- The default behavior is for the rule to apply to each area in turn; for example, with Subject and Body selected, the rule applies first to the Subject, then to the Body.
- The alternative behavior is for all selected items to first be concatenated so that the rule applies to all at once. There are two ways to achieve this alternative behavior.
    - To enforce it for all screening rules, set the subject-body-header option for Classification Server to true.
    - To enforce it for a particular screening rule:
        1. Leave subject-body-header set to false.
        2. Open the rule in the Screening Rule Editor.
        3. Set "Find at least one of selected field"

> **Important**
> Setting subject-body-header to true overrides any selection of the "Find at least one of selected field" for a particular rule.

Functions, Arguments, and Operators

Functions

Screening rules can use three basic functions:

- Contain text (Find("<text>") in text mode), where <text> is a text string. It returns the result true if the interaction contains the exact string between quotes, ignoring case.
- Contain regex (RegExFind("<regular expression>") in text mode), where <regular expression> is a regular expression (see Regular Expressions). It returns the result true if the interaction contains any string that matches the regular expression between quotes.
- Matches Regex (RegExMatch("<regExp>") in text mode), where <regular expression> is a regular expression. It returns the result true only if the entire content of the interaction matches the regular expression between quotes.

> **Important**
> Contain regex and Matches Regex are the same except that Contain regex looks for a match anywhere in the body of the interaction, whereas Matches Regex demands that the entire body of the interaction match the regular expression.

Arguments

All functions have one required argument, which must appear between double quotation marks, as represented above (<text>) or (<regular expression>). This required argument can be followed by one or two optional arguments, depending on the function. The full form of each function, including all arguments, is as follows:

- Find("<text>", <IgnoreCase>)
- RegExFind("<regular expression>",<"key">,<IgnoreCase>)
- RegExMatch("<regular expression>",<IgnoreCase)

Case insensitive (IgnoreCase)

The IgnoreCase argument must be a Boolean value (true or false). All three functions ignore case in searches unless you include the IgnoreCase argument with a value of false.

For example:

- Find("pacific") finds Pacific and pacific.
- Find("Pacific",false) finds Pacific but not pacific.

You can also substitute true for false—for example, Find("Pacific",true)—which means that case is ignored. So Find("Pacific",true)is the same as Find("Pacific").

Key

The key argument must be a string. If this argument is present, the system creates a key-value pair with the following characteristics:

- The key name is the string specified by the key argument, prefixed by ScrKey_.
- The value is the material that the screening rule matches.

The system then adds this key-value pair to the interaction's attached data. For example, RegExFind("[A-Z]\d\d\d","ID_code",false):

1. Finds strings consisting of a capital letter followed by three digits (see Regular Expressions).
2. Attaches to the interaction a key-value pair called ScrKey_ID_code whose value is A123, X005, M999, or whatever the function found in this interaction to match the regular expression.

Operators

Operators are of two types:

- Binary operators join two functions.
- Unary operators operate on a single function.

The operators are as follows:

&& is the binary operator "and". For example,

```
Find("interest rate") && Find("APR",false)
```

matches a message only if it includes both "interest rate" and "APR."

|| is the binary operator "or." For example,

```
Find("station wagon") || Find("convertible")
```

matches any message that includes either "station wagon" or "convertible" (or "Station Wagon" or "station Wagon" or "Convertible").

! is the unary operator "not." For example,

```
!Find("windows")
```

matches any message that does not include the word "windows."

You can combine **!** with a binary operator. For example,

```
Find("bird") && !Find("goose")
```

matches any message that includes "bird" but does not include "goose."

Operator Precedence

```
p && q || r
```

is parsed as

```
(p && q) || r
```

For example, consider:

```
Find("debt") && Find("income") || Find("profit")
```

To paraphrase, this screening rule is basically "find X or find Y," where X is "debt" and "income," and Y is "profit." It matches both "debt exceeds income" and "profits are fantastic".

You can modify the default precedence by the explicit use of parentheses; for example:

```
Find("debt") && (Find("income") || Find("profit"))
```

This screening rule is basically "find X and find Y," where X is "debt" and Y is either "income" or "profit." It matches both "debt exceeds income" and "debts impact profit."

Regular Expressions

A regular expression stands for, not one particular character string, but a class of character strings. For example, suppose that you want to find all interactions with U.S. Zip codes in them. U.S. Zip codes are five-digit numbers, so you could in theory write about 9,000 screening rules (Find(“00000”), Find(“00001”), Find(“00002”), and so on).

Fortunately, you can use the special symbol \d, which stands for any digit, to write a screening rule using a regular expression: RegExFind(“\d\d\d\d\d”). This screening rule matches any sequence of five digits. There are often several different ways of writing the same regular expression.

For instance, two items separated by a hyphen and enclosed in square brackets denotes a range of which the two items are endpoints. So [a-d]matches a, b, c, or d, and [5-8] matches any digit between 5 and 8; hence \d is the same as [0-9].

> **Important**
> In general usage regular expressions are case sensitive. However, in the Knolwedge Center CMS, regular expressions are not case sensitive unless you select this option as described in "Case insensitive".

The table "Elements of Regular Expressions" lists some of the most commonly-used elements of regular expressions:

Elements of Regular Expressions

Symbol	Meaning	Example
.	Any character, including space	b.t matches *bat*, *bet*, *bit*, and *but*.
\d	Any digit	\d\d matches any pair of digits from 00 to 99.
\s	Space	\d\s\d matches 1 0, 5 9, and so on.
	Zero or more instances of the preceding expression	o*f matches oof, of, and f. me.*d matches med, mead, and meed.
+	One or more instances of the preceding expression	bre+d matches *bred*, *breed* and *breeed*.
?	Zero or one instances of the preceding expression	c?rude matches *rude* and *crude*.
{x}	X instances of the preceding expression	st.{2}k matches steak, stork , and stink.

Symbol	Meaning	Example
^	Any character except the following	s[^e]t matches *sat*, *sit*, and *sot*, but not *set*.
[ ]	Any characters or ranges within the brackets	Any characters: b[aeiou]at matches *boat* but not *brat*. Any range(s): [0-9]th matches *5th*, *6th*, *7th* [a-z] matches any lowercase letter; [A-Z] matches any uppercase letter.
\	Turns off the special meaning of the following symbol	* matches the character * (asterisk);\. matches the character . (period or full stop).
|	Or	p]ig matches *big* and *pig*. Do not be confused: | means *or* in regular expressions, but || means *or* as one of the Operators used in screening rule formulas.

Here are some other points to keep in mind:

- Space is just another character. The regular expression savings account contains a space, and so it does not match the string savingsaccount.
- Word boundaries are not considered. The regular expression read matches not only read, but also reader, ready, spread, bread, and so on.
- Use parentheses to group parts of regular expressions together. For example, RegExFind("(\d{3}\.){2}") puts \d{3}\. in parentheses so that the number-of-instances item {2} applies to the all of d{3}\., not just to \. This expression matches any group of three digits plus period plus any three digits plus period (for example, 198.351.). Further examples are provided in Examples of Screening Rules below.
- Regular expressions make use of many more special characters and operators than those listed in the table "Elements of Regular Expressions." Much documentation on regular expressions is available on the Web. Because Genesys Knowledge Center CMS uses Java classes for regular expressions, it is best to consult documents describing the particular version of regular expressions used in Java.

Examples of Screening Rules

Credit Card Number

To find text that includes a typical credit card number, you need to match a sequence of four groups of four digits, each group separated by -(hyphen):

```
\d\d\d\d\-\d\d\d\d\-\d\d\d\d\-\d\d\d\d
```

> **Important**
> This regular expression also works without the \ (backslash) before the hyphens. However, it is better practice to write \- for the character hyphen, because the hyphen

> also has a special use in range expressions like [a-z].

Or if you want to allow for the possibility that some people will omit the hyphens, use? to make the hyphen optional:

```
\d\d\d\d\-?\d\d\d\d\-?\d\d\d\d\-?\d\d\d\d
```

You could also use the repetition notation to shorten each \d\d\d\d to \d{4}.

North American Phone Number

North American phone numbers consists of ten digits, grouped into two groups of three and one of four. There are a number of ways for the groups to be separated:

```
203-555-1234
(203) 555-1234
(203)555-1234
203 555-1234
203.555.1234
```

The following regular expression matches all of the above:

```
(\d\d\d|\(\d\d\d\))[\s\.\-]?\s*\d\d\d[\-\.]\d\d\d\d
```

The table "Phone Number Regular Expression" analyzes this regular expression.

Phone Number Regular Expression

Symbols	Type	Notes
\d\d\d	Three digits	n/a
\(\d\d\d\)	Three digits, or three digits enclosed in parentheses	\ turns off the special meaning of the character (
[\s\.\-]?	Space or period or hyphen or zero	Any one of the items enclosed in square brackets, either once or not at all
\s*	Zero or more spaces	n/a
\d\d\d	Three digits	n/a
[\-\.]	Hyphen or period	Note again the need to use \
\d\d\d\d	Four digits	n/a

Telltale Words

To screen for interactions from dissatisfied customers, you might try a regular expression like the following:

```
(not\s([a-z]+\s)*(pleased | satisfied)) | unhappy | complain
```

The first part of this expression matches not followed by zero or more words followed by pleased or satisfied; for example, not very pleased, not satisfied, not at all satisfied (but it also matches strings like can not believe how pleased I am). The rest matches the single words "unhappy" and "complain."

Variables

Variables can be used in interaction routing but are mainly your building blocks for field codes. The ability to access interaction data is perhaps the most frequent use of field codes. Although field code formulas can be very complicated, many simply retrieve a single piece of data, such as a contact’s name.

Creating a new variable

1. Click **Tools > Variables**.
2. Click **Create**.
3. Fill in the mandatory fields (**Name**, and **Default value**) as well as any other relevant fields for your new variable. See Field descriptions for more information.
4. Click **Save & Close** to apply your changes.

Field descriptions

Field	Description
Name	Mandatory. The name of the new variable.
Type	Optional. **String** – alphanumeric **Integer** – numeric
Default value	Mandatory.

Field	Description
	The content of your variable.
Comment	Optional. Any additional comments you have regarding this new variable.

Using Variables in Standard Responses

Using UCS Data as System Variables in Standard Responses

In the example given in Field Codes Overview, the field code `Contact.FirstName` retrieves a piece of data about the interaction. The ability to access interaction data is perhaps the most frequent use of field codes. Although field code formulas can be very complicated, many simply retrieve a single piece of data, such as a contact’s name.

You access Universal Contact Server data using predefined variables, called "System Variables."

These variables access three predefined objects. Each object has a name and a set of properties. In the example, `Contact` is an object and `FirstName` is one of its properties. The system variable `Contact.FirstName` retrieves the value of the `FirstName` property of the `Contact` object.

In similar fashion, there is a system variable for each `object+property` pair. The objects and properties that you can use in field code formulas are described in the following sections.

Interaction

This object represents the particular interaction being worked on, such as an inbound email. These are its properties:

- AttachedData
- DateCreated
- FromAddress
- Id
- Subject
- TimeZone
- ToAddress

Contact

This object represents the contact associated with the interaction being worked on. These are its properties:

- FirstName
- FullName
- Id
- LastName
- PrimaryEmailAddress

- PrimaryPhoneNumber
- Title

Agent

This object represents the agent working on the interaction. These are its properties:

- FirstName
- FullName
- LastName
- Signature

> **Important**
> Automated responses use the default agent. Create the default agent as a Person object just like any other in Configuration Manager. Then select this Person on the Automated Reply Agent screen of the E-mail Server configuration wizard (or set this Person as the value of the autobot-agent-login-name option in the E-Mail Processing section of the E-mail Server Java application). Since this is the Person who the automated response appears to be from, you may want to name it after your company or institution.

Custom Variables

In addition to the system variables, you can use Knowledge Manager to create custom variables. Custom variables have the following properties:

- Their values are assigned by strategy objects.
- Therefore, standard responses that use field codes containing custom variables must have the usage type Autoresponse or Acknowledgment.

For an example of the use of a custom variable in a standard response, see Using a Custom Variable. For a complete description of the Routing objects that can use custom variables, see the Universal Routing 8.1 Reference Manual.

> **Important**
> The names of custom variables must begin with an alphabetic character or underscore, and the remainder of the name must consist only of alphanumeric characters or underscores. This differs from the requirements for the names of other objects, which may also contain hyphen and space. For example, 5-usercode is not an acceptable name for a custom variable, but it is acceptable as the name of a

> screening rule or category.

Using Your Own Data in Standard Responses

It is possible to incorporate data that you keep external to Universal Contact Server into your standard responses (including automated responses). This data could include case numbers, account information, and so on. Remember that attached data always consists of key-value pairs.

Incorporating external data into standard responses is a two-step process:

1. Retrieve the external information and add it to the interaction as attached data. One place to do this is in a routing strategy (see Interaction Routing Designer Help).
2. Now that you have attached the data to the interaction, you can use the `AttachedData` property of the Interaction object to access the data and incorporate it into your standard response. The `AttachedData` property requires one argument, which is the key name. The result of the following formula is the value associated with the `OrderStatus` attached-data key:

```
<$Interaction.AttachedData("OrderStatus")$>
```

Field Codes

The main use of field codes is to particularize standard responses. For example, you can use the field code `<$Contact.FirstName$>` in a response beginning Dear `<$Contact.FirstName$>`, which you send to dozens of recipients. In each message, `<$Contact.FirstName$>` is replaced by the first name of the addressee of the message (the contact) as listed in the Universal Contact Server database. The most common type of such text object is a standard response (triggered by an Autoresponse or Acknowledgement object), but you can also insert field codes into other types, such as chat transcripts, SMS messages, and forwarded or redirected emails. In some cases, the only place you can insert a field code is in the Subject line using the Format tab in a strategy object.

Creating a custom field code

1. Click **Tools > Field codes**.
2. Click **Create**.
3. Fill in the mandatory fields (**Name**, and **Value**) as well as any other relevant fields for your new variable. See Field descriptions for more information.
   When defining the value, you can use the following variables:
   - **system variables** – a list of standard variables pre-defined in the configuration server.
   - **custom variables** – a list of custom variables and routing values defined in the Variables section.
4. Click **Save & Close** to apply your changes.

Field descriptions

Field	Description
Name	Mandatory.

Field	Description
	The name of the new field code.
Value	Mandatory. A formula that you insert into an outgoing text object (such as an email) that the E-mail Server generates when triggered to do so by a routing strategy object. **Note**: Always be sure to check the completeness of your field code by clicking on the validate field code icon: 
Comment	Optional. Any additional comments you have regarding this new field code.

Overview

The main use of field codes is to particularize standard responses.

For example, you can use the field code `<$Contact.FirstName$>` in a response beginning "Dear `<$Contact.FirstName$>`", which you send to dozens of recipients. In each message, `<$Contact.FirstName$>` is replaced by the first name of the addressee of the message (the contact) as listed in the Universal Contact Server database.

More generally, a "field code" is a formula that you insert into an outgoing text object, such as an email that E-mail Server generates when triggered to do so by a routing strategy object.

The most common type of such a text object is a standard response (triggered by an Autoresponse or Acknowledgement object), but you can also insert field codes into other types, such as chat transcripts, SMS messages, and forwarded or redirected emails. In some cases, the only place you can insert a field code is in the **Subject** line using the **Format** tab in a strategy object.

The following is a complete list of the strategy objects that can use field codes either in a standard response or in the **Subject** line:

- Acknowledgement
- Autoresponse
- ChatTranscript
- Create EmailOut
- Create Notification
- Create SMS
- Forward
- RenderMessageContent

The following is a complete list of the strategy objects that can use field codes only in the **Subject** line:

- Redirect
- Reply from External Resource
- Send

When a text object containing such a formula is processed, the following happens:

1. The formula performs an operation, which produces a result.
2. The result replaces the field code in the text object.

This process of performing an operation and substituting its result is called "rendering."

Important

Field codes can be used in outgoing text objects only.

Using Formulas in Field Codes

A complete reference list of field codes is available in the Genesys Field Codes Reference Information section.

In addition to system variables such as `Contact.FirstName`, field codes may contain formulas. This section provides an outline of formula usage. Details on many of these topics are provided in the Genesys Field Codes Reference Information section.

You must always delimit field codes by using `<$ … $>`. If you type a field code directly into the body of a standard response, then you must enter the delimiters yourself. If you select from the list of field codes, then the delimiters are added automatically.

The text that appears inside the delimiters is a formula. Field code formulas are very similar to formulas in other applications, such as Microsoft Excel.

A *formula* is a sequence of one or more operands (such as numbers and text strings), separated by operators (such as + and -).

For example, in the following formula, 2 and 3 are operands and + is an operator:

```
<$2 + 3$>
```

Operands can be values that do not change (constants), or values that vary based on the context. In the previous formula, all the operands are constants, so the formula always evaluates to 5. The next formula, on the other hand, evaluates to a different value for each agent who uses it:

```
<$Agent.Signature$>
```

Field Code Syntax

To summarize field code syntax:

- A field code must be delimited by `<$ ... $>`.
- Alphabetic strings, whether constants in formulas or elsewhere in a field code, must be enclosed in double quotes.
- Numeric constants require no special treatment.
- You must use special characters for some purposes. For example, for your field code to render with a line break, you cannot simply type a carriage return. Instead, you must insert the expression `\n`. A list of these special characters is available.

HTML in Field Codes

With special configuration, field codes can contain HTML markup; for example, you could have a field code <$my.agent.signature$> defined as

```
Sam Agent<BR />
Acme Products<BR />
29 Exterior Blvd<BR />
Springfield, CX 09090<BR />
```

To enable this, you must use the Java property `-Dsrl-field-code-allow-html=true`, in one of the following ways:

- Add it to the `JavaArgs` section of `ContactServerDriver.ini`
- Add it as an argument to the startup command line in `contactServer.sh`.

Operator Precedence

If you use more than one operator in a formula, the order in which they are evaluated depends on their relative *precedence* (higher precedence operators are evaluated first). For example, multiplication (*) has a higher precedence than addition (+), so that the formula below evaluates to `14`, not `20`:

```
<$2 + 3 * 4$>
```

You can use parentheses to override the default precedence. The formula below evaluates to `20`:

```
<$(2 + 3) * 4$>
```

For a complete list of operators and their relative precedence, see "Operator Precedence" in the Genesys Field Codes Reference Information section.

Data Types

Operands of several different types may appear in formulas:

- Number
- String (text)
- Date/time
- Boolean (true/false)
- Object (Contact, Interaction, and Agent)

Each data type behaves differently in formulas, and the operators have different meanings when you use them with different data types. For example, the + operator means “add” when used with numbers, but “concatenate” (paste together) when used with strings. This formula evaluates to *Uncle Sam Wants You*

```
<$"Uncle Sam " + "Wants You"$>
```

In addition, some operators cannot be used with some data types at all. For example, you cannot use the multiplication (*) operator on two strings.
All formulas, regardless of their final data type, are converted to strings before being merged into your standard response. This conversion follows a set of default rules that depend on the data type. For example, the default rules for numbers round them off to integers. This formula causes 2 to be inserted into your standard response, even though the real result is `2.25`:

```
<$9 / 4$>
```

You can use the `Text` function (see below) or `format operator`:) to override the default formatting. Either of the following formulas inserts `2.25` into your standard response:

```
<$Text(9 / 4, "#.##")$>
```

```
<$(9 / 4):"#.##"$>
```

For a detailed list of data types and how you can use them, see "Data Types” in the Genesys Field Codes Reference Information section.

Functions

When composing formulas, you can use many built-in functions. *Functions* are predefined formulas that perform calculations using values, called *arguments,* which you supply. To use a function, write its name, followed by an opening parenthesis, the arguments for the function separated by commas, and a closing parenthesis.

Function arguments may be of any data type, although individual functions may place restrictions on their arguments. Function arguments may be constants or formulas. The `Length` function, for example, takes a single string argument and returns its length in characters. This formula evaluates to `13`:

```
<$Length("Hello, world!")$>
```

As another example, the `Date` function takes individual date components (year, month, day, and so on), and constructs a date/time value. The formula below evaluates to `1965-11-23 09:03:10`:

```
<$Date(1965, 11, 23, 9, 3, 10)$>
```

Functions may act as arguments to other functions. The `WeekdayName` function takes a single date/time argument and returns the day of the week as a string. The formula below evaluates to `Tuesday`:

```
<$WeekdayName(Date(1965, 11, 23, 9, 3, 10))$>
```

This formula evaluates to `7`:

```
<$Length(WeekdayName(Date(1965, 11, 23, 9, 3, 10))$>)
```

For detailed descriptions of all available functions, see "Functions” in the Genesys Field Codes Reference Information section.

> **Important**
>
> If you want to combine data types, you must first convert the data types to text. Consider the following example:
>
> ```
> <$ Agent.FirstName + Interaction.DateCreated $>
> ```
>
> This formula causes an error, as it mixes two data types: Text (**Agent.FirstName**) and Date (**Interaction.DateCreated**). Instead, use the Text type for both types, as shown below:
>
> ```
> Agent.FirstName + Text(Interaction.DateCreated)
> ```

Using Objects

All object/property pairs are also available in the `Variables` drop-down menu in the `Field Code Editor`.
Object properties can be of any data type. `Agent.FullName`, for example, is a string, but `Interaction.DateCreated` is a date/time.
The data type of an object property can even be another object. For example, `Contact.EmailAddresses` yields another object called a `ContactEmailAddressList`. In cases such as this, you can access the properties of the resulting object by entering a period (.), followed by the property name, just as before. For example, the formula below evaluates to the number of email addresses assigned to the contact:

```
<$Contact.EmailAddresses.Count$>
```

Some object properties require arguments just as functions do. For these properties, write the arguments, enclosed in parentheses after the property name, just as before.

For example, the ContactEmailAddressList object has a property named `Exists`, which you can use to test whether a particular email address is assigned to a contact. The data type of this property is Boolean (true/false), and it takes one argument, the email address to test. For example:

```
<$Contact.EmailAddresses.Exists("samd@acme.com")$>
```

For detailed descriptions of all objects and their properties, see "Objects” in the Genesys Field Codes Reference Information section.

Field Code Examples

This section presents examples of the use of field codes.

Using a Custom Variable

Purpose: This is a simple example of the use of a custom variable in a standard response.

Prerequisites
This example assumes a category tree that includes categories called `Cookbooks, Mysteries,` and `Reference.`

1. In Knowledge Center CMS:
   a. Create a variable called QueryTopic.
   b. Create a field code called `Query_Topic` that consists of the variable `QueryTopic.`
   c. Create a standard response of type `Autoresponse` called `AUTO` that includes the sentence `Thank you for your inquiry about <$ Query_Topic $>.`
   d. Create the following screening rules:
   e. `Cookbook: RegExFind("cook") || RegExFind("recipe") || RegExFind("food") || RegExFind("cuisine")`
   f. `Mystery: RegExFind("murder") || RegExFind("crime") || RegExFind("case of the") || RegExFind("detective")`
   g. `Reference: RegExFind("dictionar") || RegExFind("encyclopedia") || RegExFind("almanac")`

8. In Interaction Routing Designer, create a strategy that applies these screening rules one after the other, assigning a different value to the custom variable for each screening rule:
   a. Create a variable called var_screen.
   b. Create a strategy. Start the strategy with a `Screen` object. On the `General` tab of the `Screen` object, select the `Cookbook` rule.
   c. On the `Result` tab, click `Assign values of the key-value pairs.` Then under `Output values` select `var_screen` for `Variable` and enter `ScreenRuleMatch` for `Key from output.`
   d. Connect the `Screen` object to a `Generic Segmentation` object. Create two segments: `var_screen = true` and `var_screen = false.`
   e. Connect an `Autoresponse` object to the top green port (the one corresponding to `true`) of the Segmentation object. In the Autoresponse, select the `Select standard response` radio button and select `AUTO` in the associated drop-down list.
   f. Still in this `Autoresponse,` go to the `General` tab and in the `Field Codes` area (bottom of the tab) click the `New` icon, enter `QueryTopic` under `Key,` and enter `cookbooks` under `Value.`
   This will generate an email that includes the sentence *Thank you for your inquiry about cookbooks.*

g. Return to the Generic Segmentation and connect a new Screen object to its second green port (the one corresponding to false).

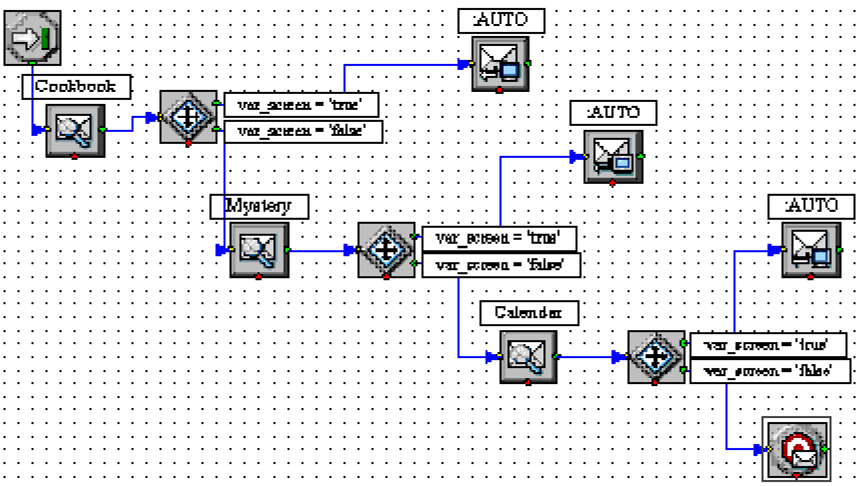
h. On the General tab of the new Screen object, select the Mystery rule. On the Result tab, click Assign values of the key-value pairs. Then under Output values select var_screen for Variable and enter ScreenRuleMatch for Key from output .

i. Proceed as in Steps d–f: Connect this Screen object to a new Generic Segmentation, again with segments for var_screen = true and var_screen = false.

j. As in Step e, connect a new Autoresponse object to the green port for true, select the AUTO standard response, and enter QueryTopic under Key. This time enter mysteries under Value.

k. Return to the second Generic Segmentation's green port for false and repeat Steps g–j, creating a third Screen object and Generic Segmentation. In the Screen object, select the Reference rule; in the Segmentation object, set the custom variable to reference .

The figure "Strategy Using Custom Variable" shows the strategy as described. The single standard response AUTO generates three emails, each with a different word filling the blank in *Thank you for your inquiry about ___.*



Using a Complex Field Code

The following is an example of a complex field code:

```
<$ If (Time() - Interaction.DateCreated > 14, “Please accept our apologies for not
having replied sooner. ”, “”) $>
```

This field code inserts a tardiness apology if more than 14 days have elapsed since the interaction first entered the system. It uses the function If, which has these properties:

- Its syntax is If (Boolean, TrueResult, FalseResult)
- If Boolean evaluates to True, it returns the second argument.

- If `Boolean` evaluates to `False`, it returns the third argument.

In this example, the three arguments of `If` are as follows:

1. `Time() - Interaction.DateCreated > 14` A formula that returns `True` if the difference between the date created and the current system time is more than 14 days. (The result of a mathematical operation on dates is given in days.)
2. “`Please accept our apologies for not having replied sooner. `” A text string apologizing for tardiness, inserted if the formula evaluates to `True`.
3. The null string: if the reply is not late (the formula evaluates to `False`), nothing is inserted in it.

Field Codes Reference Information

With field codes, you can compose standard responses that are automatically personalized when they are used. This feature is very similar to the Mail-Merge feature in word-processing applications such as Microsoft Word. Consider, for example, this standard response:

```
Dear <$Contact.FirstName$>,

…...

<$Agent.Signature$>
```

This response has two field codes. When an agent inserts this response into an e-mail, the first field code, `<$Contact.FirstName$>`, is replaced by the contact's first name as it appears in Universal Contact Server. The second field code, `<$Agent.Signature$>`, is replaced by the agent's signature as it appears in Configuration Manager.

For example, if an agent named Danielle uses this standard response while replying to an e-mail from a contact named Sam, the result might look like this:

```
Dear Sam,

…

Thank you for choosing My Cloud Security Systems.

Sincerely,
 Danielle Rodriguez
 Customer Support
 www.MCSS.com
```

For more reference information, see the following reference sections:

- Escape Codes and Sequences
- Data Types
- Operator Precedence
- Named Constants
- Functions
- Objects

Escape Codes and Sequences

Since the delimiters <$ and $> have special meanings when they appear in field codes, you cannot include them “as is” in a standard response. If you want to write a standard response that includes either or both of these field code delimiters, you must insert a space between the two symbols that make up each delimiter. For example, here is a valid standard response:

```
These field codes are great! You begin them with < $ and end
them with $ >.
```

Data Types

The eServices Field Codes include the following data types:

Number

You use numbers in field code formulas in much the same way you would in other applications, such as Microsoft Excel. All arithmetic calculations are performed internally using floating point arithmetic (with the decimal point). Rounding occurs only during formatting.

When you write numbers in formulas, you can use scientific notation (for example, `12.34e-2` is the same as`0.1234`).

The Operators table lists the operators that you can use with numbers. (Some rows show more than one symbol for the same operator. In these cases, the symbols are synonyms.)

Operators

Operator	Description	Example	Result
-	Unary Minus	-4	-4
^	Exponentiation	2^3	8
•	Multiplication	2*3	6
/	Division	8/2	4
Mod	Modulus (Remainder)	14 Mod 5	4
+	Addition	2 + 3	5
-	Subtraction	2 – 3	-1
> GT	Greater Than	2 > 3	False
>= GE	Greater Than or Equal To	2 >= 2	True
< LT	Less Than	2 < 3	True

Operator	Description	Example	Result
<= LE	Less Than or Equal To	2 <= 3	True
= == EQ	Equal To	2 = 3	False
<> != NE	Not Equal To	2 <> 3	True
:	Format	2 : “#.##”	2.00

String

Use the `String` data type to represent textual data. When you write a string in a formula, you must enclose it in double quotation marks. For example:

```
"The sixth sheik's sixth sheep's sick."
```

You can use the escape sequences shown in the Escape Sequences table to include special characters in a string, such as tabs or carriage returns.

It is also possible to use HTML tags in field codes.

Escape Sequences

Escape	Translates to
\a	Alert (Bell)
\b	Backspace
\f	Form Feed
\n	Line Feed (Newline)
\r	Carriage Return
\t	Horizontal Tab
\v	Vertical Tab
\'	Single Quotation Mark

Escape	Translates to
\"	Double Quotation Mark
\\	Backslash

The Operators and Strings table lists the operators that you can use with strings. All the comparison operators are case insensitive. (Some rows show more than one symbol for the same operator. In these cases, the symbols are synonyms.)

Operators and Strings

Symbol	Meaning	Example	Result
+	Concatenation	"How" + "die"	`"Howdie"`
>GT	Greater Than	"A" > "B"	`False`
>=GE	Greater Than or Equal To	"A" >= "B"	`False`
<LT	Less Than	"A" < "B"	`True`
<=LE	Less Than or Equal To	"A" <= "a"	`True`
= ==EQ	Equal To	"A" = "a"	`True`
<> != NE	Not Equal To	`"A" NE "B"`	`True`

Date and Time

`Date/Time` values in field-code formulas represent specific moments (for example, February 3, 2002, at 10:03:55 AM). The most common operations performed on `Date/Times` are comparisons (for example, `<`, `=`, and so on).
If you subtract two `Date/Time` values, the result is the number of days between them. See the Date/Time Example 1 table for examples.

Date/Time Example 1

Formula	Result
Date(2002, 11, 23) – Date(2002, 11, 22)	`1`
Date(2002, 11, 22) – Date(2002, 11, 23)	`-1`
Date(2002, 11, 23) – Date(2002, 11, 23, 12)	`-0.5`

If you add (or subtract) a number to (from) a `Date/Time`, the result is the `Date/Time` moved forward (or backward) by that many days. See the Date/Time Example 2 table for examples.

Date/Time Example 2

Formula	Result
Date(2003, 11, 23) + 1	`2003-11-24 00:00:00`
Date(2003, 11, 23) – 0.5	`2003-11-22 12:00:00`

Boolean

Set Boolean values in field-code formulas to either `True` or `False`. You can use the `True` and `False` keywords to write a Boolean value explicitly, although this is rarely required. Comparison operators (for example, `<`, `=`, and so on) always yield Boolean results.
The Operators and Booleans table lists the operators that you can use with Booleans. (Some rows show more than one symbol for the same operator. In these cases, the symbols are synonyms.)

Operators and Booleans

Symbol	Meaning	Example	Result
Not !	Unary Not	Not False Not True	`True False`
And &&	Logical And	False And False False And True True And False True And True	`False False False True`
Or ||	Logical Or	False Or False False Or True True Or False True Or True	`False True True True`

Symbol	Meaning	Example	Result
XOr	Logical Exclusive Or	False XOr False False XOr True True XOr False True XOr True	`False True True False`
= == EQ	Equal To	True = False	`False`
<> != NE	Not Equal To	True <> False	`True`

Operator Precedence

The Operator Precedence table lists all the operators that you can use in field-code formulas.

- Unary operators are shown with `[Unary]` after their symbols.
- The operators are listed in order of precedence, with operators of higher precedence above those of lower precedence.
- Operators in the same row have the same precedence. If two operators of the same precedence are used in a formula, then they are computed left to right if they are binary, and right to left if they are unary.
- You can write some operators using more than one symbol. In these cases, the alternatives are shown in parentheses.

Operator Precedence Table

<table>
<tr><th>Operator</th></tr>
<tr><td>+ [Unary], - [Unary]</td></tr>
<tr><td>^</td></tr>
<tr><td>• , /, Mod</td></tr>
<tr><td>+, -</td></tr>
<tr><td>< (LT), <= (LE), > (GT), >= (GE), = (==, EQ), <> (!=, NE)</td></tr>
<tr><td>Not (!) [Unary]</td></tr>
<tr><td>And (&&)</td></tr>
<tr><td>XOr</td></tr>
<tr><td>Or (||)</td></tr>
<tr><td>:</td></tr>
</table>

Named Constants

The Keyword Equivalents table lists keywords that are equivalent to certain useful values. Many of these values can be represented in other ways, but the keywords are provided for convenience.

Keyword Equivalents Table

Keyword	Equivalent
iccCr	"\r"
iccLf	"\n"
iccCrLf	"\r\n"
iccBackslash	"\\"
Null	None
True	None
False	None
Pi	3.14159265358979
E	2.71828182845904

Functions

The Field Codes include the following functions:

- String Functions
- Date/Time Functions
- Type Conversion
- Mathematical Functions
- Miscellaneous Functions

String Functions

The Field Codes include the following string functions:

[+] Find

Find

Description
Finds a substring within a string. Returns the `0-` based character position of the found substring. Returns –1 if the substring is not found.
Syntax
Find(*SearchIn, SearchFor*)

Find String

Argument	Description
SearchIn	The string to search in
SearchFor	The string to search for

Remarks

Examples of Find String

Example	Result
<$Find("Hello, World!", "H")$>	`0`
<$Find("Hello, World!", "lo")$>	`3`
<$Find("Hello, World!", "Qbert")$>	`-1`

[+] Left

Left

Description
Returns a string containing a specified number of characters from the left side of a specified string.
Syntax
Left(*String, Number*)

Left String

Argument	Description
String	The string from which the leftmost characters are returned.
Number	The number of characters to return. If `0,` an empty string (`""`) is returned. If greater than the length of String, then the entire string is returned.

Remarks

Examples of Left String

Example	Result
<$Left("Hello, World!", 5)$>	`"Hello"`
<$Left("Hello, World!", 0)$>	`""`
<$Left("Hello, World!", 25)$>	`"Hello, World!"`

[+] Length

Length

Description
Returns the length of a string.
Syntax
Length(*String*)
Remarks

Example of Length String

Example	Result
<$Length("Hello")$>	5

[+] Mid

Mid

Description
Returns a specified substring of a string.
Syntax
Mid(*String, Start, Length*)

Mid String

Argument	Description
String	The string from which the substring is returned.
Start	The `0-` based character position at which the substring begins. If *Start* is greater than the length of *String,* then an empty string (`""`) is returned.
Length	The number of characters to return. If *Length* is `0,` then an empty string (`""`) is returned. If *Length* is greater than the portion of *String* after *Start,* then all the characters after *Start* are returned.

Remarks

Examples of Mid String

Example	Result
<$Mid("Hello, World!", 2, 3)$>	"llo"
<$Mid("Hello, World!", 25, 5)$>	""
<$Mid("Hello, World!", 7, 25)$>	"World!"

[+] Replace

Replace

Description
Returns a string in which all instances of a specified substring have been replaced with another string.
Syntax
Replace(*String, Find, ReplaceWith*)

Replace String

Argument	Description
String	The string containing the substring to replace
Find	The substring to search for
ReplaceWith	The replacement string

Remarks

Examples of Replace String

Example	Result
<$Replace("Hello", "l", "*")$>	"He**o"
<$Mid("Hello", "j", "*")$>	"Hello"

Example	Result
<$Mid("Hello", "Hello", "")$>	`""`

[+] Right

Right

Description
Returns a string containing a specified number of characters from the right side of a specified string.
Syntax
Right(*String, Number*)

Right String

Argument	Description
String	The string from which the rightmost characters are returned.
Number	The number of characters to return. If `0`, an empty string (`""`) is returned. If greater than the length of *String*, then the entire string is returned.

Remarks

Examples of Right String

Example	Result
<$Right("Hello, World!", 5)$>	`"orld!"`
<$Right("Hello, World!", 0)$>	`""`
<$Right("Hello, World!", 25)$>	`"Hello, World!"`

[+] To Lower

ToLower

Description
Returns a string that has been converted to lowercase.

Syntax
ToLower(*String*)
Remarks

Example of ToLower String

Example	Result
<$ToLower("Hello, World!")$>	`"hello, world!"`

[+] ToUpper

ToUpper

Description
Returns a string that has been converted to uppercase.
Syntax
ToUpper(*String*)
Remarks

Example of ToUpper String

Example	Result
<$ToUpper("Hello, World!")$>	`"HELLO, WORLD!"`

[+] Trim

Trim

Description
Returns a copy of a specified string without specified leading or trailing characters.
Syntax
Trim(*String*, [*CharSet*])

Trim String

Argument	Description
String	The string from which to trim

Argument	Description
CharSet	Optional. The characters to trim. If omitted, then white space (" `\t\r\n"`) is trimmed.

Remarks

Examples of Trim String

Example	Result
<$Trim(" Howdie ")$>	`"Howdie"`
<$Trim("Howdie", "Howd")$>	`"ie"`
<$Trim("Howdy", "y")$>	`"Howd"`

[+] TrimLeft

TrimLeft

Description
The same as `Trim`, except it trims only leading characters.
Syntax
TrimLeft(*String*, [*CharSet*])

[+] TrimRight

TrimRight

Description
The same as `Trim`, except it trims only trailing characters.
Syntax
TrimRight(*String*, [*CharSet*])

[+] FullName

Wrap

Description
Returns a string that has been word-wrapped to a specified line length.
Syntax
Trim(*String*, *LineLength*, [*LinePrefix*, [*Eol*]])

Wrap String

Argument	Description
String	The string to wrap.
LineLength	The maximum length, in characters, of any line, including `LinePrefix` (if specified), but not `Eol`.
LinePrefix	Optional. A string to prefix to each line. Often used to “quote” e-mails being replied to. If omitted, lines are not prefixed.
Eol	Optional. A string to use as a line terminator. If omitted, lines are terminated with "`\r\n`" as usual.

Remarks
Example:
```
<$Wrap(> "Once upon a midnight dreary",<
11,<
">",<
"*\r\n")$>
```

Result:
```
>Once upon*<
>a midnight*<
>dreary*
```

Date and Time Functions

The Field Codes include the following date/time functions:

[+] Date

Date

Description
Returns a `Date/Time` constructed from individual components or a string.
Syntax
Date(*Year, Month, Day* [, *Hour[, Minute[, Second*]]])
Or
Date(String[, String])

Date String

Argument	Description
First argument	The string to parse.
Second argument	Optional. The locale that must be used to parse the first segment. Some examples include: en_US for English (United States), en_GB for English (United Kingdom), and `fr`_FR for French (France). See See Values for fieldcode-format-locale Option for a complete list.

Important

Date(String[, String]) is not recommended. See the “Remarks” section.

Remarks

- When using the first syntax function, the optional arguments each default to `0` if omitted. For example, `<$Date(1965, 11, 23)$>` is equivalent to `<$Date(1965, 11, 23, 0, 0, 0)$>`.
- When using the second syntax function, the date is constructed by parsing the first string. If the optional argument is omitted, first the E-mail Server `fieldcode-format-locale` option (See fieldcode-format-locale) in the `email-processing` section is used if present. Otherwise, the platform locale is used. For example:
    - `<$Date("November 23, 1965 9:03 AM")$>` if the `fieldcode-format-locale` option or platform locale is set to en_US`.`
    - `<$Date(“23 novembre 1965 21:03:00”, “fr_FR”)$>`

Important

Avoid using this second syntax function, since it successively tries multiple `Date/Time` patterns in order to parse the first argument and so consumes a great deal of CPU time. Also, these patterns are not very lenient. For example, `<$Date(“November 23, 1965, at 9:03 AM”)$>` will not parse due to the word `at`. This method of constructing Date/Time values is less exact than specifying the individual components directly, and may yield incorrect results if the day appears before the month.

[+] Day

Day

Description
Returns the numeric day component of a `Date/Time (1 to 31)`.
Syntax
Day(*DateTime*)

[+] Hour12

Hour12

Description
Returns the numeric hour component of a `Date/Time` based on a 12-hour clock `(1 to 12)`.
Syntax
Hour12(*DateTime*)

[+] Hour24

Hour24

Description
Returns the numeric hour component of a `Date/Time` based on a 24-hour clock `(0 to 23)`.
Syntax
Hour24(*DateTime*)

[+] IsAm

IsAm

Description
Returns a Boolean indicating whether a specified `Date/Time` is AM (between midnight and noon). `True` indicates AM and `False` indicates PM.
Syntax
IsAm(*DateTime*)

[+] IsPm

IsPm

Description
Returns a Boolean indicating whether a specified `Date/Time` is PM (between noon and midnight). `True` indicates PM and `False` indicates AM.
Syntax
IsPm(*DateTime*)

[+] Minute

Minute

Description
Returns the numeric minute component of a `Date/Time (0–59)` .
Syntax
Minute(*DateTime*)

[+] Month

Month

Description
Returns the numeric month component of a `Date/Time (1–12)` .
Syntax
Month(*DateTime*)

[+] MonthName

MonthName

Description
Converts a month number or a Date/Time to a month name.
Syntax
MonthName*(Arg[, String])*

MonthName String

Argument	Description
First argument	If it is a numeric value (1 to 12), it is converted to the appropriate month name. If it is a Date/Time, the month number is extracted and converted.
Second argument	Optional. The locale that must be used to format the first argument. Some examples include: en_US for English (United States), en_GB for English (United Kingdom), and `fr_FR` for French (France). See See Values for fieldcode-format-locale Option for a complete list.

Remarks
If the optional argument is omitted, first the E-mail Server `fieldcode-format-locale` option (See fieldcode-format-locale) in the `email-processing` section is used if present. Otherwise, the platform locale is used.

[+] MonthNameShort

MonthNameShort

Description
The same as the MonthName, but this returns an abbreviated version of the month name instead.

Syntax
MonthNameShort*(Arg[, String])*

MonthNameShort String

Argument	Description
First argument	If it is a numeric value (1 to 12), it is converted to the appropriate abbreviated name. If it is a Date/Time, the month number is extracted and converted.
Second argument	Optional. The locale that must be used to format the first argument. Some examples include: en_US for English (United States), en_GB for English (United Kingdom), and `fr_FR` for French (France). See See Values for fieldcode-format-locale Option for a complete list.

Remarks
If the optional argument is omitted, first the E-mail Server `fieldcode-format-locale` option (See fieldcode-format-locale) in the `email-processing` section is used if present. Otherwise, the platform locale is used.

[+] Second

Second

Description
Returns the numeric second component of a `Date/Time (0–59)` .
Syntax
Second (*DateTime*)

[+] Time

Time

Description
Returns a `Date/Time` constructed from individual time components.
Syntax

Time ([*Hour,* [*Minute,* [*Second*]]])
Remarks
The date components of the result (year, month, and day) are set to the current system date. The optional arguments default to `0` if omitted. If all the optional arguments are omitted, then the time is set to the current system time.

> **Important**
> The examples in the Examples of Time String table assume that the current system date is November 23, 2003, @ 09:03:10.

Examples of Time String

Example	Result
<$Time()$>	`2003-11-23 09:03:10`
<$Time(15)$>	`2003-11-23 15:00:00`
<$Time(15, 23, 10)$>	`2003-11-23 15:23:10`

[+] TimeGMT

TimeGMT()

Description
Returns a `Date/Time` set to the current system time and converted to GMT (Greenwich mean time), also called Universal Time Coordinated, or UTC.
Syntax
TimeGMT()

[+] ToTimeZoneDate

ToTimeZoneDate

Returns a `Date/Time` constructed from a string and a time zone.
Syntax
ToTimeZoneDate*(DateString, TimeZoneString)*
Remarks
This date is constructed by parsing the <`DateString`> string and using the specified time zone

`<TimeZoneString>` . Examples include the following:
`<$ToTimeZoneDate(Date(“November 23, 1965 9:03 AM”), “America/Los_Angeles”)$>`
`<$ToTimeZoneDate(Date(“11/23/65 9:03:00”), “Europe/Paris”)$>`

[+] Weekday

Weekday

Description
Returns the numeric weekday component of a `Date/Time` (`0` = Sunday to `6` = Saturday).
Syntax
Weekday (*DateTime*)

[+] WeekdayName

WeekdayName

Description
Converts a number of a Date/Time to a weekday name.
Syntax
WeekdayName*(Arg[, String])*

WeekdayName String

|- valign="top" | rowspan="1" colspan="1" | Argument
| rowspan="1" colspan="1" | Description
|- valign="top" | rowspan="1" colspan="1" | First argument
| rowspan="1" colspan="1" | If it is a numeric value (`0` to `6`), it is converted to the appropriate weekday name. If it is a Date/Time, the weekday number is extracted and converted.
|- valign="top" | rowspan="1" colspan="1" | Second argument
| rowspan="1" colspan="1" | Optional. The locale that must be used to format the first argument. Some examples include: en_US for English (United States), en_GB for English (United Kingdom), and`fr_FR` for French (France). See See Values for fieldcode-format-locale Option for a complete list.
|} **Remarks**
If the optional argument is omitted, first the E-mail Server `fieldcode-format-locale` option (See fieldcode-format-locale) in the `email-processing` section is used if present. Otherwise, the platform locale is used.

[+] WeekdayNameShort

WeekdayNameShort

Description
The same as WeekdayName but this returns an abbreviated weekday name instead.
Syntax
WeekdayNameShort*(Arg[, String])*

WeekdayNameShort String

|- valign="top" | rowspan="1" colspan="1" | Argument
| rowspan="1" colspan="1" | Description
|- valign="top" | rowspan="1" colspan="1" | First argument
| rowspan="1" colspan="1" | If it is a numeric value (`0` to `6`), it is converted to the appropriate abbreviated weekday name. If it is a Date/Time, the weekday number is extracted and converted.
|- valign="top" | rowspan="1" colspan="1" | Second argument
| rowspan="1" colspan="1" | Optional. The locale that must be used to format the first argument. Some examples include: `en_US` for English (United States), `en_GB` for English (United Kingdom), and `fr_FR` for French (France). See See Values for fieldcode-format-locale Option for a complete list.
|} **Remarks**
If the optional argument is omitted, first the E-mail Server `fieldcode-format-locale` option (See fieldcode-format-locale) in the `email-processing` section is used if present. Otherwise, the platform locale is used.

[+] Year

Year

Description
Returns the numeric year component of a `Date/Time` with the century.
Syntax
Year (*DateTime*)

[+] YearShort

YearShort

Description
Returns the numeric year component of a `Date/Time` without the century (`0` – `99`).
Syntax
YearShort (*DateTime*)

Type Conversion

The Field Codes use the following type conversions:

Bool

[+] Bool

Description
Returns a Boolean converted from a number or a string.
Syntax

Bool(*Arg*, [*Default*])

Bool String

Argument	Description
Arg	If a number, then converts `0` to `False` and nonzero to `True.` If a string, then converts `Off, No,` and `False` to `False`, and `On, Yes,` and `True` to `True`. If another string, then returns `Default.` If `Default` is omitted, then returns `False`.

Remarks

Examples of Bool String

Example	Result
<$Bool(0)$>	`False`
<$Bool(25.23)$>	`True`
<$Bool("Yes")$>	`True`
<$Bool("off", True)$>	`False`
<$Bool("Asteroids")$>	`False`
<$Bool("Asteroids", True)$>	`True`

Num

[+] Num

Description
Returns a number converted from a string.
Syntax
Num (*String[, String]*)

Num String

Argument	Description
First argument	The string to be converted. May be expressed in scientific

	notation. Returns 0 if the string is not recognizable as a number. Ignores nonnumeric characters following the number.
Second argument	Optional. The locale that must be used to parse the first argument. Some examples include: en_US for English (United States), en_GB for English (United Kingdom), and fr_FR for French (France). See the Values for fieldcode-format-locale Option in the *eServices 8.1 Reference Manual* for a complete list.

Remarks

If the optional argument is omitted, first the E-mail Server fieldcode-format-locale option (see option description in the *eServices 8.1 Reference Manual*) in the email-processing section is used if present. Otherwise, the platform locale is used.
For clarity, the results shown in the Examples of Num String table appear with three digits after the decimal point and always in the en_US format. Default number formatting shows no digits after the decimal point. Use the Text function (see Field Codes in Standard Responses Reference: Text) or format operator (%) to override the default formatting.

Examples of Num String

Example	Result
<$Num("10")$>	10.000
<$Num("10.00")$>	10.000 (Assuming the locale is en_US.)
<$Num("10,00", "fr_FR")$>	10.000 (Note the comma-decimal separator in the first argument.)
<$Num("12e-2")$>	0.120
<$Num("12.2e2Zork")$>	1220.000 (Assuming the locale is en_US .)
<$Num("12,2e2Zork", "fr_FR")$>	1220.000 (Note the comma-decimal separator in the first argument.)
<$Num("Zaxxon")$>	0.000

Text

[+] Text

Text

Description
Returns a string converted from an argument of any data type. Use the format operator (:) as shorthand for this function.
Syntax
Text (*Arg[, Pattern[, String]])*
or
Arg:Pattern

Text String

Argument	Description
Arg	The value to be converted
Pattern	Optional. The picture string to use for formatting. If omitted, default formatting is used. The syntax of the picture string depends on the data type. See Number Formatting - “Number Formatting (Arg is a Number)”).
String	Optional. The locale that must be used to parse the first argument. Some examples include: en_US for English (United States), en_GB for English (United Kingdom), and `fr_FR` for French (France). See Values for the `fieldcode-format-locale` Option in the *eServices 8.1 Reference Manual* for a complete list. If the optional argument is omitted, first the E-mail Server `fieldcode-format-locale` option in the email-processing section is used, if present. Otherwise, the platform locale is used.

[+] Number Formatting

Number Formatting (Arg is a Number)

If `Arg` is a number, then the regular expression syntax of the optional pattern string is as follows:

```
#*.?#*
```

Where:

> # –The pound sign (#) represents a digit. Any number of # s, including `0` may appear before the decimal character. Specify the minimum number of digits that should appear to the left of the decimal. If the integer part of the formatted number contains fewer than the specified number of digits, the number is padded with leading zeros.

Any number of # s, including 0, may appear after the decimal character. Specify the precision of the fractional part of the number. The number is rounded to the specified precision.

Only the decimal separator in the result is locale dependent (There is no grouping separator).

The Examples of Number Formatting table contains some examples.

Examples of Number Formatting

Pattern	Arg Value	Locale	Result
""	0	en_US	"0"
""	123.456	en_US	"123"
"#"	0	en_US	"0"
"##"	0	en_US	"00"
"##"	123.456	en_US	"123"
"#."	0	en_US	"0. "
"#."	123.456	en_US	"123. "
".##"	0	en_US	".00"
".##"	0.456	en_US	".46"
".##"	123.456	en_US	"123.46"
".##"	20000.456	en_US	"20000.46" (Note the decimal point separator in the result.)
".##"	123.456	fr_FR	"123,46" (Note the comma-decimal separator in the result.)
".##"	20000.456	fr_FR	"20000,46"

Pattern	Arg Value	Locale	Result
			(Note the comma-decimal separator in the result.)

[+] Duration Formatting

Duration Formatting (Arg is a Number)

If `Arg` is a number, then the regular expression syntax of the optional pattern string is as follows:

```
(<dur>).?#*
```

Where:
`<dur>` represents a duration and can be any of the sequences in the following list. (Upper- or lowercase letters are accepted.)

```
HH
HH:MM
HH:MM:SS
MM
MM:SS
SS
H
H:MM
H:MM:SS
M
M:SS
S
```

> `<dur>` may be followed by a `.##` string, which specifies the precision of the last element of the duration. Any `C` or `%` suffixes are ignored. When you format a value as a duration, the value is always assumed to be expressed in days.

The pound sign (`#`) represents a digit. Any number of `#` s, including `0`, may appear before the decimal character and specify the minimum number of digits that should appear to the left of the decimal. If the integer part of the formatted number contains fewer than the specified number of digits, the number is padded with leading zeroes.
Any number of `#` s, including `0`, may appear after the decimal character and specify the precision of the fractional part of the number. The number is rounded to the specified precision.
The Examples of Duration Formatting table contains some examples.

Examples of Duration Formatting

Pattern	Arg Value	Locale	Result
"HH"	10.5083	en_US	"11"
"HH.## "	10.5083	en_US	"10.51"
"HH:MM"	10.5083	en_US	"10:30"
"HH:MM.# "	10.5083	en_US	"10:30.5"
"HH:MM:SS"	10.5083	en_US	"10:30:30"
"MM"	10.5083	en_US	"630"
"MM.## "	10.5083	en_US	"630.50"
"MM:SS"	10.5083	en_US	"630:30"
"SS"	10.5083	en_US	"37830"

[+] Currency Formatting

Currency Formatting (Arg is a Number)

If `Arg` is a number, then the regular expression syntax of the optional parameter string is as follows:

```
#*.?#*[Cc]
```

Where:
A `C` or a `c` means format as currency. The grouping separator, the decimal separator, and the currency sign in the result are locale dependent.
The Examples of Currency Formatting table contains some examples

Examples of Currency Formatting

Pattern	Arg Value	Locale	Result
"C"	12.34	en_US	"$12.34"

Pattern	Arg Value	Locale	Result
"C"	-12.34	en_US	"($12.34)"
"#.#C"	12.34	en_US	"$12.3"
"#.#C"	-12.34	en_US	"($12.3)"
"C"	12.34	en_GB	"£12.34 "
"C"	-12.34	en_GB	"-£12.34 "
"#.#C"	12.34	en_GB	"£12.3 "
"#.#C"	-12.34	en_GB	"-£12.3 "
".##C"	20000.456	en_US	"$20,000.46" (Note the comma grouping separator and point decimal separator in the result.)
".##C"	20000.456	fr_FR	"20 000,46 €" (Note the decimal comma separator in the result.)

[+] Percentage Formatting

Percentage Formatting (Arg is a Number)

If Arg is a number, then the regular expression syntax of the optional pattern string is as follows:

```
#*.?#*%
```

Where:
The percent sign (%) means multiply by 100 and append the locale-dependent sign for percent values. If the % appears by itself, the formatter rounds to the nearest integral value and omits a decimal point (equivalent to the format #%).
The grouping separator, the decimal separator, and the percent sign in the result are locale dependent.
The Examples of Percentage Formatting table contains some examples.

Examples of Percentage Formatting

Pattern	Arg Value	Locale	Result
"%"	0	en_US	"0%"
"%"	0.123456	en_US	"12%"
"#.##%"	0.123456	en_US	"12.35%"
"#.##%"	0.123456	fr_FR	"12,35%" (Note the comma-decimal separator in the result.)

[+] Date/Time Formatting

Date/Time Formatting

Use elements shown in the Date/Time Pattern Letters table to construct a `Date/Time` pattern string. The letters must be in uppercase or lowercase, as shown in the table (for example, `MM` not `mm`). Characters that are not picture elements, or that are enclosed in single quotation marks, will appear in the same location and unchanged in the output string.

Date/Time Pattern Letters

Element	Meaning
d	Day of month as digits, with no leading zero for single-digit days
dd	Day of month as digits, with leading zero for single-digit days
ddd	Day of week as a three-letter abbreviation
dddd	Day of week as its full name
M	Month as digits, with no leading zero for single-digit months
MM	Month as digits, with leading zero for single-digit months
MMM	Month as a three-letter abbreviation

Element	Meaning
MMMM	Month as its full name
y	Year as last two digits, but with no leading zero for years less than 10
yy	Year as last two digits, but with leading zero for years less than 10
yyyy	Year represented by full four digits
h	Hours, with no leading zero for single-digit hours; 12-hour clock
hh	Hours, with leading zero for single-digit hours; 12-hour clock
H	Hours, with no leading zero for single-digit hours; 24-hour clock
HH	Hours, with leading zero for single-digit hours; 24-hour clock
m	Minutes, with no leading zero for single-digit minutes
mm	Minutes, with leading zero for single-digit minutes
s	Seconds, with no leading zero for single-digit seconds
ss	Seconds, with leading zero for single-digit seconds
tt	Time-marker string, such as AM or PM

The examples in the Examples of Date/Time Formatting table assume that the date being formatted is August 6, 2003, @ 15:05:10:

Examples of Date/Time Formatting

Pattern	Locale	Result
"MMMM d, yyyy @ hh:mm:ss tt"	en_US	"August 6, 2003 @ 03:05:10 PM"
"MMMM dd, yyyy @ HH:mm:ss"	en_US	"August 06, 2003 @ 15:05:10"

Pattern	Locale	Result
"dd MMMM yyyy HH:mm:ss"	fr_FR	"06 aout 2003 15:05:10"
"MMM d, yy @ h:mm:ss tt"	en_US	"Aug 6, 03 @ 3:05:10 PM"
"M/dd/yy"	en_US	"8/06/03"

[+] Boolean Formatting

Boolean Formatting

A Boolean picture string is simply two words separated by a comma. The first word is used if the Boolean value is `True`, and the second is used otherwise.
The Examples of Boolean Formatting table shows some examples:

Examples of Boolean Formatting

Field Code	Result
<$Text(True, "Yup,Nope")$>	"Yup"
<$Text(False, "Si,No")$>	"No"
<$Text(False, "walnut,peach")$>	"peach"

[+] String Formatting

String Formatting

Picture strings do not apply to string values. Strings are always output unchanged. If you want to output a piece of a string, or change the case, then you can use one of the string-manipulation functions previously described.

Mathematical Functions

The Field Codes include the following mathematical functions:

Abs

[+] Abs

Description
Returns the absolute value of a number.
Syntax
Abs (*Number*)
Remarks
The *absolute* value of a number is the number without regard to its sign.

Ceil

[+] Ceil

Description
Returns the ceiling of a number.
Syntax
Ceil (*Number*)
Remarks
The *ceiling* of a number is the smallest integer that is greater than or equal to that number.

Floor

[+] Floor

Description
Returns the floor of a number.
Syntax
Floor (*Number*)
Remarks
The *floor* of a number is the largest integer that is less than or equal to that number.

Miscellaneous Functions

The Field Codes include the following miscellaneous functions:

If

[+] If

Description
Returns either the second or the third argument, depending on the value of the first (Boolean) argument.
Syntax

If (*Boolean, TrueResult, FalseResult*)

IsBoolean

[+] IsBoolean

Description
Returns `True` if the data type of the argument is `Boolean`; otherwise, it returns `False`.
Syntax
IsBoolean (*Arg*)

IsDateTime

[+] IsDateTime

Description
Returns `True` if the data type of the argument is `Date/Time`, and `False` otherwise.
Syntax
IsDateTime (*Arg*)

IsNumber

[+] IsNumber

Description
Returns `True` if the data type of the argument is `number`, and `False` otherwise.
Syntax
IsNumber (*Arg*)

IsString

[+] IsString

Description
Returns `True` if the data type of the argument is `string`, and `False` otherwise.
Syntax
IsString (*Arg*)

Type

[+] Type

Description

Returns the type name (`String, Boolean`, and so on) of its argument.
Syntax
Type (*Arg*)

Objects

The following objects can be accessed through Field Codes:

- Agent Object
- Contact Object
- Interaction Object

Agent Object

The `Agent` object is associated with the `Interaction` object. For an automated reply, this object is the agent whose login name equals the E-mail Server `autobot-agent-login-name` option (see option description in the *eServices Reference Manual*) in its `email-processing` section.

FirstName

[+] FirstName

Description

Returns this agent’s first name.

Syntax

Agent.FirstName

LastName

[+] LastName

Description

Returns this agent’s last name.

Syntax

Agent.LastName

FullName

[+] FullName

Description

Returns this agent’s full name (first and last).

Syntax

Agent.FullName

Signature

[+] Signature

Description

Returns this agent’s signature.

Syntax

Agent.Signature

Contact Object

The `Contact` object is associated with the current `EmailIn` interaction. The properties include:

Id

[+] Id

Description

Returns this contact’s ID.

Syntax

Contact.Id

FirstName

[+] FirstName

Description

Returns this contact’s first name.

Syntax

Contact.FirstName

LastName

[+] Lastname

Description

Returns this contact’s last name.

Syntax

Contact.LastName

FullName

[+] FullName

Description

Returns this contact’s full name (first and last).

Syntax

Contact.FullName

Title

[+] Title

Description

This contact’s title (for example, Mr., Ms., and so on).

Syntax

Contact.Title

PrimaryEmailAddress

[+] PrimaryEmailAddress

Description

Returns this contact's primary e-mail address.

Syntax

Contact.PrimaryEmailAddress

PrimaryPhoneNumber

[+] PrimaryPhoneNumber

Description

Returns this contact's primary phone number.

Syntax

Contact.PrimaryPhoneNumber

Interaction Object

The `Interaction` object is the currently processed interaction that is built from a standard response and includes Field Codes.

- For `Acknowledgement`, `Redirect`, `Autoresponse`, `Chat Transcript`, `Forward`, and `Reply From External Resource` strategy objects, this Interaction object handles `EmailIn.`
- For the Send object, which only supports Field Codes for this Subject, this Interaction object handles `EmailOut.`
- This distinction affects the the `FromAddress` and `ToAddresses` properties.

The properties for this object include:

Id

[+] Id

Description

Returns the `Interaction’s` ID.

Syntax

Interaction.Id

DateCreated

[+] DateCreated

Description

Returns the `Date/Time` at which this `Interaction` was created in the system.

Syntax

Interaction.DateCreated

Subject

[+] Subject

Description

Returns the `Subject` of this `Interaction.`

Syntax

Interaction.Subject

ToAddress

[+] ToAddress

Description

Returns the recipient (To field) of this `Interaction.`

Syntax

Interaction.ToAddress

> **Important**
> For the Send strategy object, this syntax translates into the current `EmailOut.ToAddresses`. For the `Acknowledgement, Redirect, Autoresponse, Chat Transcript, Forward`, and `Reply From External Resource` strategy objects, this translates into the current `EmailIn.ToAddresses`.

FromAddress

[+] FromAddress

Description

Returns the originator (`From` field) of this `Interaction`.

Syntax

Interaction.FromAddress

> **Important**
> For the Send strategy object, this syntax translates into the current `EmailOut.ToAddresses`. For the `Acknowledgement, Redirect, Autoresponse, Chat Transcript, Forward`, and `Reply From External Resource` strategy objects, this translates into the current `EmailIn.FromAddresses`.

AttachedData

[+] AttachedData

Description

Returns the attached data (`Interaction Attribute`) value associated with a specified key. The value can be either a string or a number.

Syntax

Interaction.AttachedData (“Key”)

Example

```
Interaction.AttachedData (“ParentId”)
Interaction.AttachedData (“Language”)
```

TimeZone

[+] TimeZone

Description

Returns the time zone of the parent interaction (`Interaction` in general). The value is a string formatted as`“GMT”, “GMT+”hh.mm`, or `“GMT-”hh.mm.`

Syntax

Interaction.TimeZone.

Examples

`GMT+01.00` indicates a Paris time zone.
`GMT-04.00` indicates a Canada east coast (Maritimes) time zone.
`GMT-05.00` indicates an eastern U.S./Canada time zone.