SERVICEWARE

The Search in Serviceware Knowledge

(Stand 31.08.2021)

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The Search in Serviceware Knowledge

1 Introduction

The Serviceware Knowledge Tree is the central entity when it comes to finding knowledge. It enables the user to purposefully navigate through the structured knowledge and find the content that covers his current demand for information. In case of the user not knowing the path to the knowledge he needs, the Serviceware Knowledge -Search supports him in finding the suitable content. On top of that it does not only display Serviceware Knowledge -Texts, but also documents, news, contacts, suggestions and dialogs, as well as templates. Facets enable the user to narrow down the list of content to find the knowledge he needs even faster.
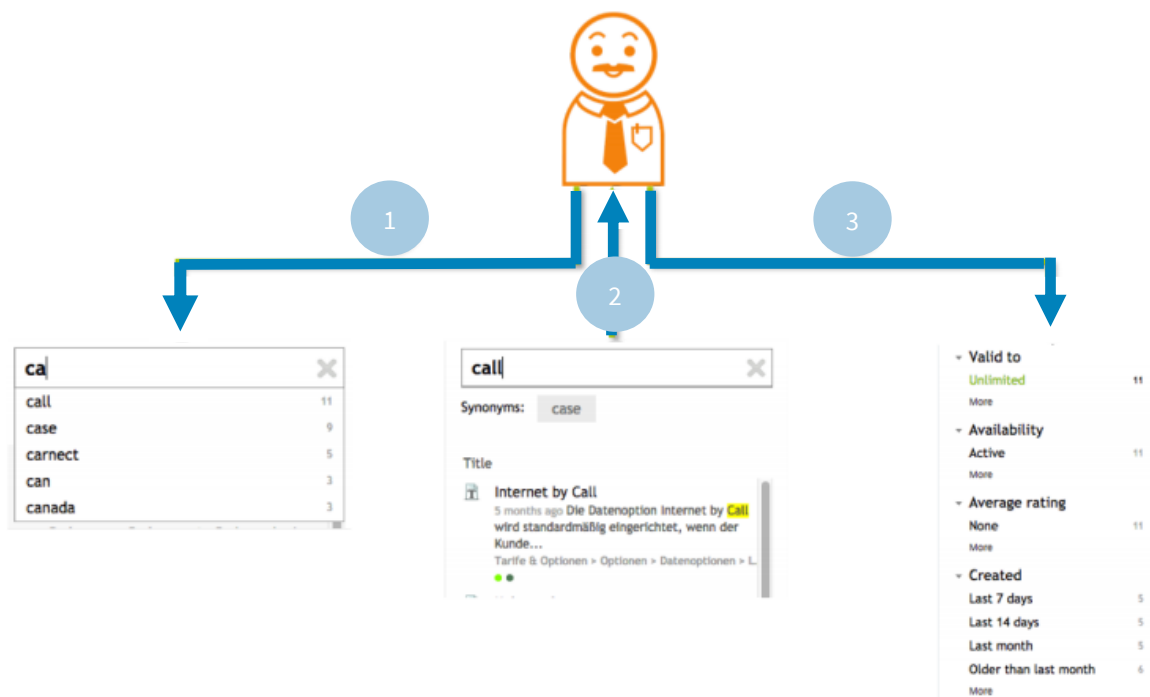
1   The user enters a search term into the search field. The autosuggest feature displays several matching terms contained in the system.

2   The syste provides all search results matching the search request in a list of content. The search term in highlighted.

3   The user narrows down the search results applying sources and facets to quickly find the required knowledge.

2 The Search-Tab

To initiate a search request the user opens the Search-Tab. This tab consists of the following elements:

Sources
Through the sources the user can choose the content types that shall be included in the list of content. The content types that can be chosen by default are the following ones:

- › texts
- › documents
- › news
- › contacts
- › templates (for authorized users only)
- › dialogues (for authorized users only)

Facets
By using the facets the user is able to narrow down the list of content displayed by the search even more to find the required content even faster. The Serviceware Knowledge support-team configures the facets available to all users in the system settings. By default the system offers the following facets:

- › Author
- › User groups
- › Confirmation
- › Rating
- › Document-Type
- › Created (describes a time period)
- › Approvals
- › Last changes (describes a time period)
- › Modified by
- › Valid from
- › Valid to
- › Commented by
- › Priority
- › Write permission
- › Status
- › Tags
- › Availability
- › Template
- › Target group

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Search field

Search requests are entered in the search field.

List of content

The list of content displays all search results matching the search request, the filtering, as well as the reading permissions and branches of the user.

Detailed view

The detailed view displays the search result that has been selected via mouse-click in the list of content.

Export-feature

By clicking the export-button an authorized user is able export the list of content as a CSV-file. All filterings applied by the user will be considered in this export.
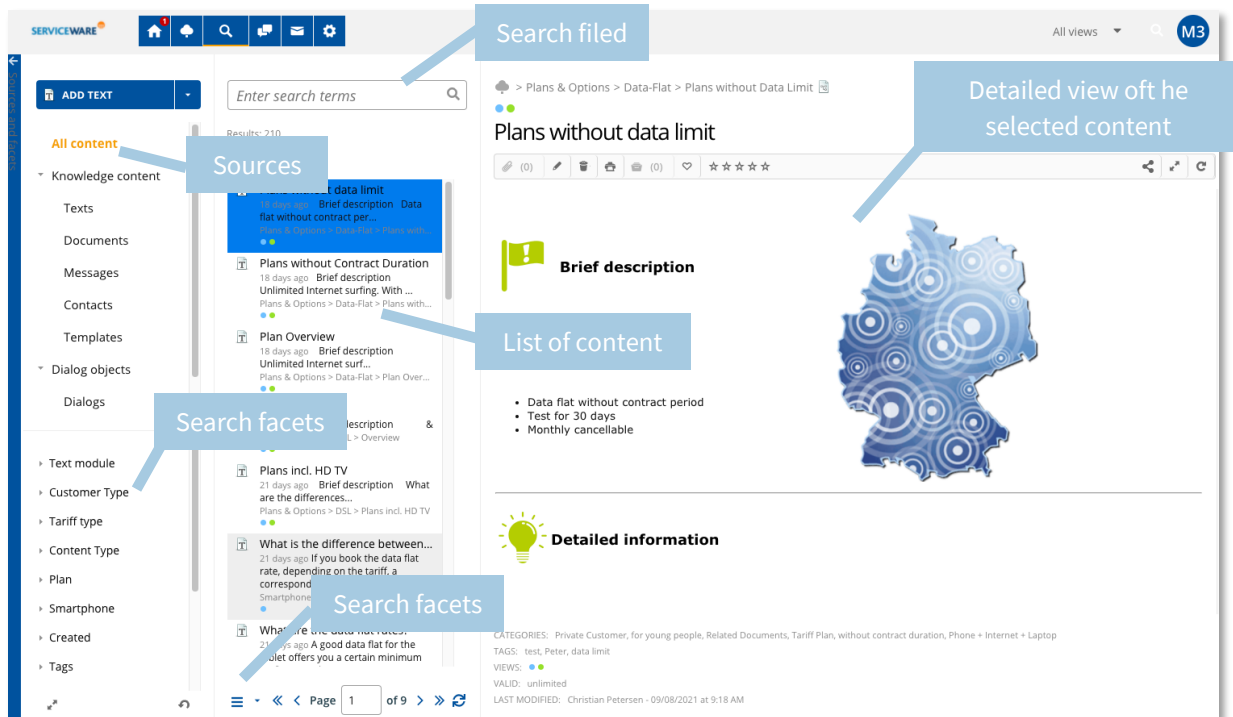
3 Operations in the Serviceware Knowledge Search

The Serviceware Knowledge-Search supports several different features to further specify the search result. The search allows for one or more search words, phrases, synonyms, multilanguage terms, as well as wildcards. Furthermore the search terms are always reduced to their word-stem. Compound words (e.g. „Paketsendung") should always be entered with separated word-stems, because the search is able to assemble compound words, but not to separate them. Furthermore it is possible to search using boolean operators (i.e. AND, OR). If no operator is entered, the search applies the AND-operator by default. By assigning integrated tags to the different contents (keyword search) the search can also include search results that do not literally contain the search term. The following wildcards are applicable with the Serviceware Knowledge -search:

Syntax	Meaning	Examples
*	The * wildcard in Serviceware Knowledge means „Find a string containing my search term". There are three different ways to utilize the *: 1. prefix* - The prefix* wildcard searches for all words beginning with the prefix or the prefix itself. 2. *postfix - The *postfix wildcard searches for all words ending with the postfix or the postfix itself. 3. *searchterm* - A hybrid searching for all words containing the search term or the search term itself.	› Search for: roller* Finds content containing words beginning with roller, e.g. rollercoaster. › Search for: *rider Finds content containing words ending with coaster, e.g. lowrider › Search for: *eel* Finds content with words containing eel, e.g. wheelchair, heel
?	The ? wildcard works similar to the * wildcard, with the difference, that the question mark stands for exactly one alphanumeric letter.	› Search for: he?l Finds content containing e.g. heel, heal › Search for: ?eel Finds content containing e.g. heel, feel › Search for: su??en Finds content containing e.g. sudden, sullen

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-	Writing a minus before a search term yields content not containing this word. Note: Please note that there must not be a space between the minus and the search term to be excluded!	› Search for: -rollercoaster Finds content not containing the word rollercoaster. › Search for: lowrider -rollercoaster Finds all content containing lowrider but not containing rollercoaster
„“	Phrase Search: 1. a. By putting search terms in Double Quotations it is possible to create a phrase. This phrase is not interpreted any further and the phrase must be part of the content exactly as given for the content to be found. Note: The phrase may contain "stop words" b. Whenever more than one search term is used, the system creates a phrase automatically, making it unnecessary to use double quotations under normal circumstances. 2. If special characters (e.g. „?" or „()") are used in double quotations they do not have any implications on the search. They a merely searched for as part of the content.	› Search for: "I eat steak" finds content containing exactly the phrase I eat steak. b. Search for: I eat steak finds content containing the words I, eat and steak. Content containing the exact phrase I eat steak will be displayed on top of the list of content. › a. Search for: was? finds content containing was, waste, wasp and was? b. Search for: "was?" merely finds content containing the string was?

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Syntax	Meaning	Examples
AND	When more than one search terms are given, the search automatically finds only content containing both terms. Explicitly stating the AND operator is only necessary when using complex search terms. Please refer to the paragraph concerning parentheses below.	› Search for: parsley sage thyme or parsley AND sage AND thyme finds only content containing all three search terms
OR	The OR operator allows the search for content containing both search terms or only one.	› Search for: parsley OR sage finds content containing **parsley** or **sage** or **both**
()	Parentheses can be used to create nested search terms.	› Search for: **parsley AND (sage OR thyme)** finds all content containing parsley as well as **sage** or **thyme** or both › Search for: **parsley OR (sage AND thyme)** finds all content containing either **parsley** or both, **sage** and **thyme** or **all three**

4 The Search Result

The Serviceware Knowledge -Search displays all content stored in Serviceware Knowledge (texts, news, contacts and templates) as well as common file-formats (e.g. MS Office, PDF etc.). Furthermore external sources such as websites or network drives can be linked in the system and included in the search index. All content found by the Serviceware Knowledge -Search matching a search term are clearly arranged in a list of content. The user can narrow this list down as required by using sources and facets in order to quicken his search for the required knowledge. A grey number next to the respective facets informs the user about the amount of search results that will remain after the facet has been applied.
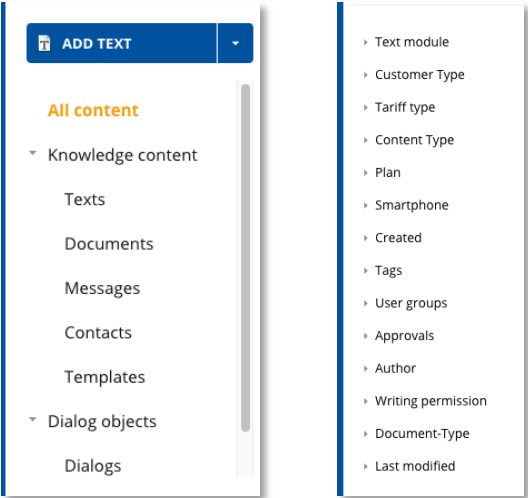
The entered search term is highlighted in the list of content as well as in the detailed view of the content. Furthermore the highlighting in the detailed view points to the exact search term, while the highlighting in the list of content also marks words, that are similar to the entered search term.

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When a user selects an item from the list of content, it is displays in the detailed view in the right-handside section of the screen, if the selected content is a Serviceware Knowledge -text or a PDF-document. Documents in MS Office-format – such as Word or Excel – are automatically downloaded to be opened locally. Authorized users are able to download the list of content in a csv.-file. The downloaded file considers all filters that have been applied to narrow down the list of content.
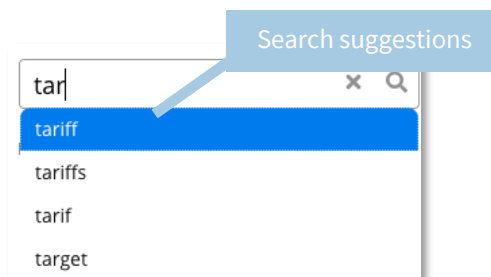
5 Features of the Serviceware Knowledge Search

5.1   The Autosuggest-feature

The autosuggest-feature supports the user by displaying suggestions for search terms that are already stored in the system. Starting from a predefined number of entered characters suggestions are displayed; typing additional characters reduces the list of suggestions. A grey number next to the suggested terms informs the user about the number of search results available in the system for the respective search term. Instead of completing the search term manually, the user can also select the desired term from the list of suggestions.

Search suggestions

tar

tariff

tariffs

tarif

target

5.2   The "Synonym"-feature

If a search request delivers only very few search results or if the system contains a word that is very similar to the entered search term, the Serviceware Knowledge -search suggests an alternative search term. Using this „Did you mean?"-feature the user can initiate a new search request by simply clicking on the suggested search term. In case a search request does not deliver any search results, but an alternative suggestion would, the suggestion is not displayed as a „Did you mean?"-suggestion. The alternative search term is directly used as search term and a respective search result is displayed for the user.

tarf

No results found for   tarf

List shows results for   tarif

Alternate search term

5.3   Searching in Tags

To make texts traceable if the entered search term is neither contained in its content nor in its title, tags can be added to each text. These will be entered as single words, separated by commas, in the tag field of each text.

Tags

Smartphone

More │ Delete

Alternate search term

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The following behaviour is defined regarding the tags:

- › Tags are entered as single words without spaces
- › The system does not consider upper and lower cases
- › Blanks at the beginning and at the end of the tags will be automatically removed upon saving
- › Double spaces will be automatically replaced by single spaces upon saving
- › Special characters will be automatically removed upon saving (apart from underlines)

6 The Search Ranking

The search in Serviceware Knowledge applies a relevance-system to sort the search results for each entered search term. This relevance of a text for an initiated search request is influenced by a few different factors that individually affect the sorting (ranking) of the search result. The following rules of thumb illustrate how content gets found in Serviceware Knowledge and how its´ relevance is calculated for a particular search querie.

- › Relevant fields A content is found if the entered search term is contained in at least one of the following fields:
  - › Title
  - › Content
  - › Tags
  - › Categories

  Example: Text A contains the entered search term "X" in its´ title and text B contains the entered search term "X" in its´ title and content. If a user initiates a search request for "X", both text A and text B will be found.

- › How often is the search term contained in the relevant fields? The more fields the search term is contained in, the more relevant it is related to a search request. Through this fact the position of a text in the list of content is determined.

  Example: Text A contains the search term "X" in its´ title, content and as a tag. Text B contains the search term "X" only in its´ content. In this case text A is more relevant with regards to the search term and will be ranked higher than text B.

- › Frequency of the search term in the whole knowledge base The more often a term is contained in the whole Serviceware Knowledge system, the less relevant a content containing that term is with regards to a search request.

  Example: The company name (e.g. Termo) is contained in the Serviceware Knowledge of the respective company quite often. If a user now searches for that company name in combination with

another word (e.g. Telmo address), the relevance of a content is calculated by adding together the relevances of both search words.

That means: To calculate the relevance of text A regarding the search request (here: Telmo address), the relevance of the first search word (here: Telmo) is added together with the relevance of the second search word (here: address). Since the company name is contained in many contents, the appearance of the second search word is more decisive for the relevance of a single content with regards to the search request. A text B that contains the word "address" five times and the word "Telmo" three times will be ranked higher than a text C containing the word "address" three times and the word "Telmo" five times.

› Length of the knowledge content The relevance of a single content related to an entered search term depends on its´ length compared to the average length of all contents in the Serviceware Knowledge system.

Example: A text A ist 300 words long and contains the entered search term one time, text B is 100 words long and contains the search term once as well. In this case text B (the shorter one) is more relevant regarding the entered search term, since the term appears more often related to the length of the text. Text B will be ranked higher in the list of content then text A.