

Unified Index

This applies to the [search](#) and capabilities in [Tiki](#) to filter (search filters, permissions, etc) content. It is important if not critical to keep a [fresh Unified-Index](#) as Tiki relies on the freshness of the Unified-Index to display and filter content.

Tiki can support multiple search engines internally. Each of those will have different capabilities and limitations. The default engine should provide capabilities good enough for small and medium sites. Larger sites may need additional infrastructure to get the most performance. Please see: [Unified Index Comparison](#)

FIELDS

Below is a matrix between the fields and the object types.

Legend:

X - Available

/ - Static value

? - Depends on the data

Field**Type****object_type**

Generic

Tokenized*

Sortable

wiki page

forum post

X

X

X

blog post article file trackeritem sheet

X

X

X

X

X

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

X

X

7

Field	Type
object_id	Generic
title	Generic
title_initial	Generic
title_firstword	Generic
language	Generic
creation_date	Generic
modification_date	Generic
contributors	Generic
description	Generic

Tokenized*

Sortable

wiki page

forum post

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

blog post	article	file	trackeritem	sheet
------------------	----------------	-------------	--------------------	--------------

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	?
---	---	---	---	---

X	X	X	X	?
---	---	---	---	---

	X		?	
--	---	--	---	--

X	X	X	X	
---	---	---	---	--

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

	X	X		X
--	---	---	--	---

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

X	X	7
---	---	---

?	X	7
---	---	---

?		?
---	--	---

?		?
---	--	---

7

X	X	7/15
---	---	------

X		7
---	--	---

X		7
---	--	---

7

Field	Type
contents	Generic
wiki_content	Specific
wiki_uptodateness	Specific
wiki_approval_state	Specific
post_content	Specific
post_snippet	Specific
parent_thread_id <i>(not to be confused with parent_object_id)</i>	Specific
root_thread_id	Specific

Tokenized*	Sortable	wiki page	forum post
X		X	X
		X	
	X	X	
		X	
			X
			X
			X
			X

blog post

article

file

trackeritem

sheet

X

X

X

X

X

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

X		
---	--	--

	X	
--	---	--

		7
--	--	---

	X	
--	---	--

		7
--	--	---

		7
--	--	---

		11
--	--	----

		7
--	--	---

		14
--	--	----

		8
--	--	---

		14
--	--	----

Field	Type
parent_contributors	Specific
blog_id	Specific
blog_excerpt	Specific
blog_content	Specific
topic_id	Specific
article_content	Specific
article_topleft	Specific
article_subtitle	Specific
article_author	Specific

Tokenized*

Sortable

wiki page

forum post

X

X

X

blog post

article

file

trackeritem

sheet

X

X

X

X

X

X

X

X

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

		14
--	--	----

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

		9
--	--	---

Field	Type
article_type	Specific
article_heading	Specific
<i>available as description</i>	
published	Specific
sitetitle	Specific
siteurl	Specific
gallery_id	Specific
filename_id	Specific
filetype	Specific

Tokenized*

Sortable

wiki page

forum post

X

X

X

X

blog post

article

file

trackeritem

sheet

X

X

X

X

X

X

X

X

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

		9
--	--	---

		9
--	--	---

		13
--	--	----

		13
--	--	----

		13
--	--	----

		7
--	--	---

		7
--	--	---

		7
--	--	---

Field	Type
filesize	Specific
file_comment	Specific
file_content	Specific
tracker_id	Specific
tracker_status	Specific
tracker_field_ <i>PERMNAME/ID</i> <i>(see below for more details)</i>	Specific
sheet_content	Specific
comment_content	Specific

Tokenized*

Sortable

wiki page

forum post

X

X

X

X

X

?

X

blog post

article

file

trackeritem

sheet

X

X

X

X

X

X

X

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

		15
--	--	----

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

		7
--	--	---

X		
---	--	--

		7
--	--	---

Field	Type
user_country	Specific
groups	Specific
hits	Specific
lastpost_title	Specific
lastpost_modification_date	Specific
lastpost_contributors	Specific
lastpost_post_content	Specific
lastpost_post_snippet	Specific
lastpost_hits	Specific

Tokenized*

Sortable

wiki page

forum post

X

X

X

X

X

X

X

X

X

X

X

blog post article file trackeritem sheet

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

	X	10
--	---	----

	X	?
--	---	---

		15
--	--	----

		15
--	--	----

		15
--	--	----

		15
--	--	----

		15
--	--	----

		15
--	--	----

		15
--	--	----

Field	Type
lastpost_thread_id	Specific
view_permission	Internal
parent_object_type	Internal
parent_object_id	Internal
parent_view_permission	Internal
global_view_permission	Internal
hash	Internal
url	Internal
categories	Global

Tokenized*

Sortable

wiki page

forum post

X

X

X

X

X

X

X

X

X

X

X

blog post

article

file

trackeritem

sheet

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

		15
--	--	----

		7
--	--	---

X		7
---	--	---

		7
--	--	---

X		7
---	--	---

		7
--	--	---

X		7
---	--	---

		7
--	--	---

X		7
---	--	---

		7
--	--	---

		7
--	--	---

X		7
---	--	---

		7
--	--	---

X		7
---	--	---

		7
--	--	---

Field	Type
deep_categories	Global
allowed_groups	Global
freetags	Global
freetags_text	Global
adv_rating_ID	Global
comment_count	Global
relations	Global
attachments	Global
attachment_contents	Global

Tokenized*

Sortable

wiki page

forum post

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

blog post	article	file	trackeritem	sheet
------------------	----------------	-------------	--------------------	--------------

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

comment	user	Available in Tiki version
----------------	-------------	----------------------------------

X		7
---	--	---

X		7
---	--	---

X		7
---	--	---

X		7
---	--	---

X	X	7
---	---	---

X		8
---	--	---

X	X	8
---	---	---

X		7
---	--	---

X		7
---	--	---

Field

Type

geo_located

Global

geo_location

Global

visits

Global

Tokenized*	Sortable	wiki page	forum post
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		X	X
--	--	---	---

		X	X
--	--	---	---

		X	X
--	--	---	---

		X	X
--	--	---	---

X		X	
---	--	---	--

	X	X	
--	---	---	--

blog post	article	file	trackeritem	sheet
------------------	----------------	-------------	--------------------	--------------

X	X	X	X	X
---	---	---	---	---

X	X	X	X	X
---	---	---	---	---

		X		
--	--	---	--	--

comment user Available in Tiki version

X	X	9
X	X	9
		9.2

** Tokenized - as in decomposed in words for full text search*

SEARCHABLE AND NOT SEARCHABLE

Some fields are indexed and are searchable and other are not searchable (more explanation is required). It will influence results that will be outputted when using the plugins List, CustomSearch and ListExecute (probably).

For exemple, deepcategories (child from a parent category) are indexed but not searchable. When you set one of those plugins you need to specify the `searchable_only` parameter as follow, `searchable_only="0"`

Note that searching for not searchable objects in the Tiki "Experiment with plugin LIST tool" will output "no result found"

The plugin should start as follow:

```
{list(searchable_only="0")}
```


TRACKER FIELDS

In general, **tracker fields** are indexed as **tracker_field_PERMNAME/ID**. *PERMNAME/ID* is your tracker field permanent name or ID. However, many tracker field types have additional useful variants of the main field (see below) that are indexed for each field.

The indexing for tracker fields will vary depending on the field type. As a general rule, **tracker_field_PERMNAME/ID** will be used as the field and will be sortable. However, there are a few exceptions:

- Image and File fields are not indexed
- TextArea is not sortable

MULTILINGUAL FIELDS ARE INDEXED AS MULTIPLE FIELDS

- The main one (**tracker_field_PERMNAME/ID**) contains all languages
- **tracker_field_PERMNAME/ID_lang** contains one language only (**tracker_field_12_fr** for example)

RATING AND RELATED FIELDS STORE AS MULTIPLE FIELDS

- **tracker_field_PERMNAME/ID** contains the average
- **tracker_field_PERMNAME/ID_sum** contains the vote totals
- **tracker_field_PERMNAME/ID_count** contains the number of votes

ITEMS LIST AND ITEM LINK FIELDS

- **tracker_field_PERMNAME/ID_text** contains the text instead of the IDs of the linked/listed items

LANGUAGE OF THE TRACKER ITEM

- If a language field is set for the tracker item, that language is indexed as the item language, i.e. the **language** field.

Some used in buildQuery/tiki-searchindex.php (need explanation on whether these are real fields or just helpers):

type: refers to **object_type**

deep: if this is set, **categories** will be considered **deep-categories**

autocomplete: Will search for items with title starting with this

REBUILD SEARCH INDEX

Please see [Rebuild Unified Index](#)

MYSQL LIMITS FOR VERY BIG NUMBERS OF TRACKER FIELDS

HOW TO DETECT

If *Unified Search* is configured with the *MySQL Full Text Search* engine, you might encounter a failure to reindex with the following symptoms:

- `php console index:rebuild` stops without displaying the list of indexing statistics:

```
php console index:rebuild [14 mai 2020 09:26 EDT] Started rebuilding index... Unified search engine: MySQL, version 10.1.45-MariaDB (it takes a very long time and in the end nothing shows up)
```

If you investigate with producing a log it ends this way:

```
php console.php index:rebuild --log [14 mai 2020 16:10 EDT] Started rebuilding index... logging to file:
temp/Search_Indexer_mysql_database_name_console.log Unified search engine: MySQL, version 10.1.45-MariaDB (it takes a
very long time and in the end nothing shows up) tail temp/Search_Indexer_mysql_database_name_console.log
2020-05-14T16:21:47-04:00 ERR (3): Indexing failed while processing "2512" (type
trackeritem) with the error "Could not perform index modification: Too many columns" 2020-05-14T16:21:47-04:00 ERR (3):
WARNING: PDO::query(): SQLSTATE[HY000]: General error: 1117 Too many columns
{"code":null,"file":"/path/to/tikiroot/lib/core/TikiDb/Pdo.php","line":104} 2020-05-14T16:21:47-04:00 INFO (6): addDocument
trackeritem 2513 {"memoryUsage":"46.5 MiB"} 2020-05-14T16:21:47-04:00 ERR (3): Indexing failed while processing "2513"
(type trackeritem) with the error "Could not perform index modification: Too many columns" 2020-05-14T16:21:47-04:00 ERR
(3): WARNING: PDO::query(): SQLSTATE[HY000]: General error: 1117 Too many columns
{"code":null,"file":"/path/to/tikiroot/lib/core/TikiDb/Pdo.php","line":104} 2020-05-14T16:21:47-04:00 INFO (6): addDocument
trackeritem 2514 {"memoryUsage":"46.5 MiB"}
```

TECHNICAL EXPLANATION (THANKS VICTOR)

[+]

SOLUTIONS

The following options in Control panels

Search help for this situation:

- **MySQL use short field names**

Due to frm file constraints, number of search fields that one index can hold is usually limited to about 1500. This can be exceeded if you have numerous tracker fields. Enabling this option will

try to shorten the field names internally that should allow you to use 300-500 more fields. Switching this option requires full index rebuild.

Summary: This makes no difference in how you use Tiki.

- **Don't index non searchable fields**

Indexing will skip adding all tracker fields that are not marked as "searchable". This will free index space but also make it impossible to use those fields in search index queries.

Summary: You need to review the *Searchable* property of you tracker fields. A full index rebuild will be necessary after changes in the tracker fields *Searchable* properties.

Hint: If the first option is enough for your site, you may ignore the second one.

INDEXING LOG COMMON ERROR TROUBLESHOOTING

When rebuilding your index use the following command to create a log file.

Note you need to point to the PHP for the PHP version your Tiki uses.

```
php console.php i:r -p --log
```

In the log you may see some error, this is an attempt to help and diagnose the possible issues.

Possible fix

Edit article275, Advanced tab check the URL validity in the "Source" field.

ERROR: INDEX IS BEING REBUILT AT THE MOMENT AND CANNOT START ANOTHER REBUILD PROCESS.

This error happens when rebuilding dies with fatal error, our PHP shutdown functions are not executed and thus doesn't clear the preference flag that index is being rebuilt. So you try to rebuild and it is blocked because it thinks it's still rebuilding. So make it's not (reboot or kill the process) and then

```
php console.php preferences:delete unified_manticore_index_rebuilding
```

UNIFIED INDEX STORAGE IN THE DATABASE (MYSQL FULL-TEXT SEARCH)

By design the unified-index store data in the MySQL database using MyISAM no matter if your Tiki uses InnoDB or MyISAM (not all versions of InnoDB offer FULLTEXT).

DUPLICATE UNIFIED-INDEX TABLE

For some reasons you may found that your database has several index (tables like index_...alphanumeric...). This happen when they were issues rebuilding the index or when moving and upgrading the database (Tiki upgrade).

You can delete those tables (always consider saving a backup of your data prior any work) and rebuild the unified-index. Tiki will recreate and relink everything properly. You can find information about the unified-index in use at the Search control panel, General settings under Unified search index.

RELATED

- [Cron Job to Rebuild Search Index](#)
- [PluginList](#)
- [PluginCustomSearch](#)
- [Unified Search](#)

DEVELOPER NOTES

See https://dev.tiki.org/Unified-Index#Developer_Notes.

alias names for this page

[Unified Search](#) | [UnifiedSearch](#) | [Enterprise search](#) | [Search Index](#) | [SearchIndex](#) | [UnifiedIndex](#)