Manticore Search

*Manticore Search* is an Open Source database for search that was created in 2017 as a continuation of Sphinx Search engine (Started in 2001). It is integrated with *Tiki Wiki CMS Groupware* and one of the components of *WikiSuite*. This is especially interesting for the *Tiki Trackers database web app builder*. Manticore Search is very appreciated by its community.

Status:

- Experimental in *Tiki 25.0*
- Beta in *Tiki 25.2*
- Will be stable in *Tiki 26*

You can check out benchmarks at: https://db-benchmarks.com/

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How to install

It is normally this:

```bash
sudo apt-get install wikisuite-manticore
```

How to verify version

This confirms if it installed properly, but it doesn't mean it's running in the background (see next section)

```bash
root~# searchd -v
Manticore 6.0.2 89c7a5139@230210 (columnar 2.0.0 a7c703d@230130) (secondary 2.0.0 a7c703d@230130)
Copyright (c) 2001-2016, Andrew Aksyonoff
Copyright (c) 2008-2016, Sphinx Technologies Inc (http://sphinxsearch.com)
Copyright (c) 2017-2023, Manticore Software LTD (https://manticoresearch.com)
```

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Start service at server reboot

For Manticore to be available for applications like *Tiki Wiki CMS Groupware*, you want to enable

```bash
sudo systemctl enable manticore
```

In some newer operating systems it can fail with error "Failed to enable unit: Unit ... is transient or generated.". In this case you can remove the generator and try again. It's unlikely you need the generator ever again after
Manticore is installed.
In Debian-based operating systems run:

```bash
sudo rm /lib/systemd/system-generators/manticore-generator
sudo systemctl daemon-reload
sudo systemctl enable manticore
```

For more detail, please see:
https://manual.manticoresearch.com/Starting_the_server/Linux#Starting-and-stopping-using-systemd

To check if the Manticore service is set to run at boot

```bash
sudo systemctl is-enabled manticore
```

Then reboot to test

```bash
sudo reboot
```

It is not recommended to use this unless you are a developer, but if you prefer "Nightly" (development) versions, please see: https://manual.manticoresearch.com/Installation/Debian_and_Ubuntu#APT-repository

**Indicate to Tiki to use Manticore Search**

1. Pick Manticore as **Unified search engine** at tiki-admin.php?page=search
2. Rebuild index
   - Small sites, via GUI
   - Medium and large sites, via CLI `php console.php index:rebuild --log`
3. Enjoy!

**Syntax error or access violation: 1064**

If you get this error:

```bash
SQLSTATE[42000]: Syntax error or access violation: 1064 error adding index 'tiki_pref_en': file not found: '/home/example/tmp/manticore-stopwords-tiki_pref_en'
```

The temporary workaround:
Virtualmin Virtual Server -> Services -> PHP-FPM Configuration -> Edit Configuration Manually
Old:

```bash
php_admin_value[sys_temp_dir] = /home/example/tmp
```

New:

```bash
php_admin_value[sys_temp_dir] = /tmp
```
Configuration file

On Debian 10 and 11, it is located at /etc/manticoresearch/manticore.conf

Here are tweaks you may want to do in /etc/manticoresearch/manticore.conf

Disabling binary logging

Tiki uses Manticore as an index. So it's a copy of the data, optimized for speed and search. The real data lives in MariaDB/MySQL. Thus, we don't need binary logging because we can rebuild the index any time.

```
binlog_path = # disable logging to improve performance, and it's not needed in the Tiki context.
```

Ref: https://manual.manticoresearch.com/Logging/Binary_logging#Disabling-binary-logging

Increasing max_packet_size

If you get errors like this on index rebuild:

```
2023-03-03T16:07:21+00:00 ERR (3): NOTICE: PDOStatement::execute(): send of 32768 bytes failed with errno=104 Connection reset by peer
{"code":null,"file":"/lib/core/Search/Manticore/PdoClient.php","line":201}
```

you can increase max_packet_size

```
max_packet_size = 128M
```

Ref: https://manual.manticoresearch.com/Server_settings/Searchd#max_packet_size

Advanced morphology

Lemmatization, stemming, word forms, etc.:

- https://manual.manticoresearch.com/Creating_an_index/NLP_and_tokenization/Morphology
- https://manual.manticoresearch.com/Creating_an_index/NLP_and_tokenization/Wordforms#Word-forms

Related links

- https://manticoresearch.com/about/
- https://dev.tiki.org/Manticore-Search
- https://gitlab.com/tikiwiki/tiki/-/merge_requests/1805
- https://manticoresearch.com/blog/manticore-alternative-to-elasticsearch/
- https://roadmap.manticoresearch.com
WikiSuite: The most comprehensive and integrated Open Source enterprise solution.

- https://doc.tiki.org/Unified-Index-Comparison
- https://doc.tiki.org/Manticore-Search
- https://www.slideshare.net/SergeyNikolaev27/manticore-6pdf