

About InnoDB

InnoDB is a [storage engine](#) for the databases supported by Tiki: [MariaDB](#), [MySQL](#) and [Percona Server for MySQL](#).

Support for InnoDB was introduced in [Tiki8](#) (2011). InnoDB is the default storage engine since [Tiki18](#) (2017) and MariaDB 10.2 (2017)

InnoDB provides several benefits over the [MyISAM](#) engine. It offers better crash recovery.

Additionally, InnoDB supports (multi-statement) transactions and row-level locking, i.e. updates, inserts and deletes will no longer lock the whole file/table. It also supports referential integrity by the use of foreign keys. But these features are currently not used by vanilla Tiki. Customized Tiki versions could take advantage of these features, e.g. if the `tiki_pages` table is linked from a custom table.

Installing with InnoDB

When creating the Tiki database, the user can choose to use MyISAM or InnoDB. Once the choice is made, Tiki will remember the selection.

Migrating existing MyISAM databases

Migration steps:

1. Make sure you are not using the deprecated `tiki-searchresults.php` feature (preference name `feature_search_fulltext` and removed after [Tiki26](#)), but instead use `tiki-searchindex.php` (preference name: `feature_search`)
2. Do a full backup of your current database/installation
3. Alter the database engine for all tables to InnoDB using `db/tiki_convert_myisam_to_innodb.sql`

Performing the conversion with phpMyAdmin may cause a PHP timeout. Running the script with the `mysql` command avoids that:

```
mysql -u userName -p databaseName < db\tiki_convert_myisam_to_innodb.sql
```

Nevertheless, step 4 may fail converting the `tiki_files` table if `innodb_log_file_size` is not high enough. In one case, 25 MB was insufficient (80 MB sufficed).

The source code lives here:

https://gitlab.com/tikiwiki/tiki/-/blob/master/db/tiki_convert_myisam_to_innodb.sql

Supporting InnoDB

Installs

Rules

- No FKs are allowed in the `tiki.sql` script.
- Fulltext index definitions are placed in the `tiki_myisam.sql` file. InnoDB specific definitions are placed in the `tiki_innodb.sql` file.
- The word MyISAM must be used (only) in the engine specification, and it is not allowed in attribute names or other definitions.

The Tiki installer translates the engine type, based on the selected database in the installer GUI.

After the main install script (`tiki.sql`), the installer will run `tiki_myisam.sql` or `tiki_innodb.sql` for the respective installation. `tiki_myisam.sql` installs the fulltext indexes.

Upgrades

When adding an engine-dependent patch, the engine-independent SQL statements must be put in the YYYYMMDD_description_tiki.sql file. The engine-dependent parts must be put in an accompanying PHP file, defining a post_YYYYMMDD_description_tiki function.

Example: Add a table with a fulltext index

20110918_tiki_test_tiki.sql

```
DROP TABLE IF EXISTS `tiki_test`; CREATE TABLE `tiki_test` ( `title` varchar(255) default NULL,  
KEY `title` ( `title` ) ENGINE=MyISAM;
```

and a PHP file specifying the engine dependent part

20110918_tiki_test_tiki.php

```
function post_20110918_tiki_test_tiki( $installer ) { if($installer->isMySQLFulltextSearchSupported())  
{ $installer->query( "CREATE FULLTEXT INDEX ft_test ON tiki_test(`title`);"); } }
```

More info at [Database Schema Upgrade](#)

Continuous Integration

The [Tiki CI](#) has sql-engine-conversion section which leverages [doc/devtools/check_sql_engine_conversion.php](#)

See also:

- [InnoDB](#)
- <https://en.wikipedia.org/wiki/InnoDB>