# 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). Starting in 2024 Tiki28, it is also the default for the Unified Index

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

- Migrate from MyISAM to InnoDB

# 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