The DatabaseSettings reference

Every key of site.ini [DatabaseSettings] with its shipped default, the engines that read it and what it does - connection, character set, retries, persistent connections, replicas, transactions, debug output and the...

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This page is for database administrators who read or write the connection settings of an Exponential site. It lists every key of `settings/site.ini`, block `[DatabaseSettings]`, as shipped in 6.0.x, with its default and the engines that use it, and gives a minimal block per engine. Sources: `settings/site.ini` and 9.1 How Exponential chooses a database driver.

> **Note**
>
> Never edit `settings/site.ini` itself: an upgrade replaces it. Put your values in `settings/override/site.ini.append.php` (the whole installation) or `settings/siteaccess/<name>/site.ini.append.php` (one siteaccess). See Reading and changing database settings.

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Connection keys

Key	Shipped default	Used by	Meaning
`DatabaseImplementation`	`ezmysqli`	all	The driver alias (Driver aliases). The installers write the value for your engine.
`Server`	`localhost`	MySQL, PostgreSQL, MongoDB	Host name or address. Not used by Oracle.
`Port`	empty	MySQL, PostgreSQL, MongoDB	Empty means the driver's default port (3306, 5432, 27017). Not used by Oracle.

Key	Shipped default	Used by	Meaning
`Socket`	`disabled`	MySQL, MariaDB	A Unix socket path instead of host and port.
`User`, `Password`	`root`, empty	all but SQLite	The login. Never keep the shipped `root` in production. MongoDB requires a user even without access control.
`Database`	`nextgen`	all	The database name; for SQLite the file; for Oracle the connect string.
`Charset`	`utf-8`	MySQL, Oracle	The connection character set (Character sets and collations).
`UseBuiltinEncoding`	`true`		"Use charset conversion routines in DB if possible" (comment in `site.ini`).

Behavior keys

Key	Shipped default	Used by	Meaning
`ConnectRetries`	`0`	MySQL, PostgreSQL, SQLite	How often to try again when the first connection fails. MySQL and PostgreSQL wait between attempts; SQLite tries again at once. Oracle has its own `RetryCount` and falls back to this value.
`UsePersistentConnection`	`disabled`	MySQL, PostgreSQL, Oracle	Reuse a connection across requests of the same PHP process (`p:` host prefix for mysqli, `pg_pconnect` for PostgreSQL).
`Transactions`	`enabled`	all	Run grouped writes in transactions. Leave it on.

Replica keys

Key	Shipped default	Meaning
`UseSlaveServer`	`disabled`	Send reads to a replica chosen at random per request; writes go to `Server`. MySQL and MariaDB only.
`SlaveServerArray[]`, `SlaveServerPort[]`	commented out	Replica hosts and ports.
`SlaverServerUser[]`, `SlaverServerPassword[]`, `SlaverServerDatabase[]`	commented out	Replica logins and database names. The keys really are spelled `Slaver...`.

See MySQL and MariaDB read replicas.

Debug keys

Key	Shipped default	Used by	Meaning
`SQLOutput`	`disabled`	all	Show statements in the debug output.

Key	Shipped default	Used by	Meaning
`SlowQueriesOutput`	`0`	all	With a value above 0, only statements slower than this many milliseconds.
`QueryAnalysisOutput`	`disabled`	MySQL, MariaDB	With `SQLOutput=enabled`, MySQL's `EXPLAIN` of each statement.
`DebugTransactions`	`disabled`	all	Record a stack trace for every begin and commit, to find an unbalanced transaction.

These only show when the debug output is on for your address. See Finding slow queries.

SQLite keys

Key	Shipped default	Meaning
`SQLitePragmas[]`	empty	PRAGMAs over the driver's defaults, one `name=value` per entry.
`SQLiteTransactionWait`	25	Seconds a transaction waits for the writers ahead of it. Keep it below the web server's request timeout.
`SQLiteCLITransactionWait`	300	The same on the command line (cronjobs, imports, scripts).
`SQLiteBusyTimeout`	5000	Milliseconds a single statement waits for another write in a web request.
`SQLiteCLIBusyTimeout`	30000	The same on the command line.

Details: SQLite: the write queue and locking and SQLite maintenance.

Driver aliases

`ImplementationAlias[]` maps the value of `DatabaseImplementation` to a class. Shipped: `mysql`, `mysqli`, `ezmysql`, `ezmysqli` to `eZMySQLiDB`; `postgresql`, `ezpostgresql`, `pgsql` to `eZPostgreSQLDB`; `sqlite3` to `eZSQLite3DB`; `mongodb` to `expMongoDB`. The `ezoracle` extension adds `ezoracle` and `oracle`. An extension can add more aliases from its own `site.ini.append.php`.

Keys outside this block

Setting	Where	Meaning
Oracle-only keys `OracleEmptyStringForNull`, `OracleCaseInsensitive`, `OracleCaseInsensitiveSort`	`site.ini [DatabaseSettings]`, read by `ezoracle`	See Setting up Oracle
Connection pooling, retries, tracing for Oracle	`ezoracle.ini`	See Oracle: persistent connections, DRCP and tuning
The SQL query cache	`querycache.ini [QueryCacheSettings]`	See The SQL query cache

Setting	Where	Meaning
The DFS cluster metadata database	`file.ini [eZDFSClusteringSettings]`	See Clustering: DFS and its metadata database
Sessions in the database	`site.ini [Session] Handler`	See Sessions in the database

Minimal blocks per engine

INI

```ini
# SQLite 3
[DatabaseSettings]
DatabaseImplementation=sqlite3
Database=exponential.db

# PostgreSQL
[DatabaseSettings]
DatabaseImplementation=ezpostgresql
Server=localhost
Port=5432
User=exponential
Password=<the password>
Database=exponential

# MariaDB and MySQL
[DatabaseSettings]
DatabaseImplementation=ezmysqli
Server=localhost
User=exponential
Password=<the password>
Database=exponential
Charset=utf-8
```

MongoDB and Oracle blocks are on Setting up MongoDB and Setting up Oracle. The placeholder values are examples; use your own and never commit the override file.

Related pages

- Reading and changing database settings
- The database layer in one page
- Database support, the settings
- Free documentation: this page is free to copy, translate and improve under the GNU FDL 1.3.

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