Troubleshooting database errors

A symptom-first table of the database problems an Exponential site meets on each engine - the site looks down, missing tables, read-only SQLite files, lock timeouts, charset question marks, pgcrypto, sequences, MongoDB...

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This page is for database administrators called in when an Exponential site has a database problem. It answers: where to look first, and for each common symptom, the cause and the fix. Sources: 12.10 Databases and the gotchas of each engine in chapter 9.

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Where to look first

1. `var/log/error.log`: most database problems are named there (Log viewer).
2. The setting in effect: `php bin/php/console exp:ini get site.ini/DatabaseSettings/DatabaseImplementation --allow-root-user`.
3. **Setup > System information**, if the administration still loads.
4. The database server's own log.
5. For a detailed view, the debug output for your address only (Finding slow queries).

Every engine

Symptom	Cause	Fix
Every content page fails; `error.log` says "Database implementation not supported"	a mistyped `DatabaseImplementation`; the kernel falls back to a null database	correct the alias, clear the INI cache, restart Velocity

Symptom	Cause	Fix
The "database cannot be reached" page	wrong host, user, password or database, or the server is down; the driver raises `eZDBNoConnectionException`	test the login with the engine's client from the web server
No page loads after switching engines	`DatabaseImplementation` still names the old engine	set it in `settings/override/site.ini.append.php`, clear the INI cache
A change of settings has no effect	INI cache not cleared, Velocity not restarted, or a siteaccess file overrides it	`exp:ini where`, clear, restart
Pages show old data after a manual SQL change or a restore	caches, including the SQL query cache	`php bin/php/ezcache.php --clear-all --allow-root-user` and `exp:velocity cache clear`
Works in the browser, fails in cron	the command line PHP lacks the database extension	`php -m` (PHP extensions)

SQLite

Symptom	Cause	Fix
"database is busy: the transaction could not start within N s ..."	another write held the writer lock for the whole `SQLiteTransactionWait`	nothing was written; retry; find the long writer (Write queue)
"attempt to write a readonly database"	a `-shm`, `-wal` or the directory is not writable by this process	common group, `2775`, umask `0002` (Permissions)
The site reports missing tables	a wrong `Database` value opened a new, empty file	compare the path in the error with `ls var/storage/sqlite3/`
Slow after an install or import	no statistics	`sqlite3 var/storage/sqlite3/exponential.db ANALYZE`
"SQLite3 extension was not found"	`sqlite3` not loaded in that PHP	install it
The database file can be downloaded	the web server serves `var/`	shipped rewrite rules or Velocity; check with `curl -sI`

MySQL and MariaDB

Symptom	Cause	Fix
? where accented letters were	the connection fell back to the server's default charset	`AlwaysLog[]=warning`, look for "could not set the connection charset" (utf8mb4)
The wizard refuses the database's charset	the database is `latin1` or similar	recreate it in `utf8mb4`
Emoji are lost	the `utf8` (`utf8mb3`) connection	a known limit of the connection
Transactions do not roll back	MyISAM tables	`ezconvertmysqltabletype.php --newtype=InnoDB`

Symptom	Cause	Fix
A replica shows old content	replication lag	monitor lag (Read replicas)

PostgreSQL

Symptom	Cause	Fix
"The 'digest' function is not available in your database ..."	`pgcrypto` missing	`CREATE EXTENSION IF NOT EXISTS pgcrypto;` as owner or superuser
Connection refused	`listen_addresses`, `pg_hba.conf`	allow the web servers (Setting up PostgreSQL)
Duplicate key on insert after an import	sequences behind their tables	`setval()` (Operating PostgreSQL)
Permission denied to create a table (PostgreSQL 15+)	the account does not own the database	make it the owner
An extension's SQL fails here only	backticks or MySQL-only statements	Reviewing extension SQL

MongoDB

Symptom	Cause	Fix
"Failed to parse MongoDB URI: ... 'default' authentication mechanism requires a username"	no `User` given	create a user in the site's database (Setting up MongoDB)
`Class "MongoDB\Client" not found`	the library `mongodb/mongodb` is missing	`composer require mongodb/mongodb`
Subtree and URL alias queries are slow	indexes not created	`bin/mongodb/create_indexes.js`
A list or page is empty that is not empty elsewhere	SQL the adapter cannot translate	`grep -rn "MONGO TODO" var/log/` (Limits)
The setup wizard times out	the configuration step takes minutes	raise `request_terminate_timeout` or install from the console

Oracle

Symptom	Cause	Fix
The driver is not found	`ezoracle` not active, or `oci8` not loaded	check `extension/ezoracle`, `ActiveExtensions[]`, `php -m`
`ORA-00933` in an extension's SQL	`AS` before a table alias	fix the extension
An empty string comes back as NULL	Oracle stores `''` as NULL	`OracleEmptyStringForNull=enabled`
A login works only in one case	binary comparison	`OracleCaseInsensitive=enabled`, then `ext:ezoracle:ci-indexes --create`

Symptom	Cause	Fix
CLOB values cut short	an older `ezoracle` or a client that cuts long CLOBs above `LobPrefetch 2000`	update the extension
Settings in your site extension are ignored	it is listed after `ezoracle`	list it before (Oracle tuning)

Upgrades

Symptom	Cause	Fix
`SET storage_engine=InnoDB;` fails	an update file from before October 2026	take the current file (`SET default_storage_engine`)
"duplicate column name" on SQLite	the 6.0.15 file ran a second time	the database is already updated
An update file failed half way		restore the backup and apply the file again from the start
Every insert fails on PostgreSQL after coming from 5.x	old `<table>_s` sequence names	the current 6.0 update file renames them
"The audit index classes are not in the autoload array"	autoloads stale	`php bin/php/ezpgenerateautoloads.php -k`

When to ask for help

Collect the error lines, the engine and version, and the report from **Setup > System information** (it never contains passwords), then use the channels in When something goes wrong. Report security problems privately, never in a public issue.

Related pages

- Database error codes and messages
- Site down runbook
- Monitoring the database
- Free documentation: this page is free to copy, translate and improve under the GNU FDL 1.3.

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