

# **DB Maintenance 1.3.0**

## **User Manual**

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## **Overview**

DB Maintenance is a powerful mod that helps you in administrating your phpBB 2.0.x-Board in cases where you reach the limits of the normal board administration. DB Maintenance helps you in checking your database, fixing inconsistencies or restoring data. It also includes an Emergency Recovery Console (ERC) for the cases where your board is not accessible the normal way.

## **System Requirements**

For installing DB Maintenance you'll need:

- A phpBB Board 2.0.4 or newer (tested up to 2.0.11; 2.1/2.2 branch is not supported; 2.0.3 will work with some additional changes in functions.php (see using\_with\_203.txt for details)).
- MySQL 3.22 or higher (any other database system is currently not support. To use the full power of the mod, MySQL 3.23.17 or newer is recommended).
- About 250 KB space on your web space and some additional bytes in the database.
- For recreating the search index, PHP 4.0.5 or newer is recommended.



DB Maintenance was build on the database structure of an standard phpBB. There are however (little) modifications who do change this structure. In this case it may happen that DB Maintenance interprets special data of these Mods as faulty and corrects them. Therefore no guaranty can be given for the correct operation of DB Maintenance special when using other modifikations.

## **Installation**

For installing the mod, follow the instructions included in db\_maintenance.txt. If you want to make use of the German translation, don't forget that you need to rename the file lang\_dbmtnc\_ger.php to lang\_dbmtnc.php.



It is strongly recommended that you install the Emergency Recovery Console (ERC) (erc.php) only in cases where necessary to prevent any unauthorized use of it. Although the ERC is protected by password, this is an additional action to prevent any misuse of the tool.

In addition some SQL statements have to be executed to generate the configuration data for DB Maintenance. You can do this either by executing the update\_db\_for\_dbmtnc.php delivered with the mod (don't forget to delete this file after usage) or by manually executing the SQL commands provided in db\_maintenance.txt. For latter, tools like phpMyAdmin (<http://www.phpmyadmin.net/>) are recommended.

## **Support**

Support for DB Maintenance will be provided under <http://phpbb.kordowich.net/> or at one of the following forums:

- <http://www.phpbb.de/> (German – preferred)
- <http://www.phpbb.com/> (English)
- <http://www.phpbbhacks.com> (English)

Please use the already existing topic for this mod (where available) or open a new one in an appropriate forum. If you do not get a replay to your question within 48 hours, please send me a private message (user name: PhilippK) to inform me about your post.



Support requests directly per email or private messages are not supported and may be deleted unanswered.




Please do not post a security issue directly in one of the forums mentioned above but inform me by email or private message instead. This is the only exception to the support rules above.

## Database Maintenance

Database Maintenance is the main part of the mod. After installing you'll find an additional entry 'Database Maintenance' in the 'General Admin' section of the Admin-Panel.

After selecting the entry you'll get an overview of the functions available (Functions may differ depending on the current configuration of the board).



Forum that's free

**Administration**

- Admin Index
- Forum Index
- Preview Forum

**Forum Admin**

- Management
- Permissions
- Pruning

**General Admin**

- Backup Database
- Configuration
- Database Maintenance
- Mass Email
- Restore Database
- Smilies
- Word Censors

**Group Admin**

- Management
- Permissions

**Styles Admin**

- Add
- Create
- Export
- Management

**User Admin**

- Ban Control
- Disallow names
- Management
- Permissions
- Ranks

### Database Maintenance

Here you can check your database for inconsistencies and errors.  
**Attention:** Some operations will take a longer time to perform. Your board will be **locked** during the operations.

**It is always recommended to backup your database before using any of the functions listed below!**

Function	Description
<a href="#">Statistics</a>	Shows information about the board and the database.
<a href="#">Configuration</a>	Allows the configuration of DB Maintenance.
<a href="#">Check user and group tables</a>	This will check the user and the group tables for errors and will restore missing single user groups.
<a href="#">Check post and topic tables</a>	This will check the post and the topic tables for errors.
<a href="#">Check vote tables</a>	This will check the vote tables for errors.
<a href="#">Check private message tables</a>	This will check the private messages tables for errors.
<a href="#">Check configuration table</a>	This will check the configuration table for missing entries.
<a href="#">Check search word match table</a>	This will check the word match table for errors. This table is used for the search function.
<a href="#">Check search word list table</a>	This will remove all unnecessary words in the word list used for search.
<a href="#">Synchronize forums and topics</a>	This will synchronize the post counters and the post data in the forums and topics.
<a href="#">Synchronize user post counters</a>	This will synchronize the post counters for the users.
<a href="#">Synchronize moderator status</a>	This will resync the moderator status in the user table.
<a href="#">Reset last post date</a>	This will reset the last post data if it is in the future. This will solve issues where users get a message that they are not allowed to make another post so soon after the last one.
<a href="#">Reset all sessions</a>	This will reset all current sessions by emptying the session table.
<a href="#">Rebuild search index</a>	This function will rebuild the index used for searching. You won't need this function under normal conditions.
<a href="#">Check database</a>	Checks the database for errors.
<a href="#">Optimize database</a>	Optimizes the tables. This will reduce the database size after deleting lots of records and so on.
<a href="#">Repair database</a>	Fixes the database when an error is found.
<a href="#">Reset auto increment values</a>	This function resets the auto increment values. This should only be performed if there seems to be a problem when inserting new data in the tables.
<a href="#">Unlock the board</a>	Use this function if you got an error during an operation done before and the board is still locked.

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Figure 1: Database Maintenance Overview

You call a function by clicking on the name of the function on the left side of the table. While some functions will execute directly after clicking the link, others will display a warning. Latter will be used if the function may cause lost or modification of data or takes several time to complete. Most functions will disable the board during operations so no data can be modified during the checks. If the database was unlocked at the beginning of the checks, the lock will be removed after their completion.



Although the board is locked during the operations, this does not prevent you (or any other administrator) from doing any chances within the admin panel. It is strongly recommended that you and any other administrator do not use any part of the admin panel while using DB Maintenance.

## Statistics

***Parts of the statistics are not available when an older version as MySQL 3.23.17 is used***

This function gives you a small statistic about the board and the database. You'll get information about the number of topics, posts and users in the database; information about the tables of the database and the number of their records and their size as well as information about the version of the board, of DB Maintenance, of PHP and of MySQL.

The statistic includes also a list of users having administrative privileges. By checking this list regularly you can ensure that there is no user who gets administrative rights by a hacking attempt or so.

The database statistic always includes three values for each topic:

- The first number (in bold) gives information about all tables in the database – independent whether these are tables from phpBB or not.
- The second number (called 'core tables') gives information about the core table set used by phpBB. Tables added by a modification should not be included in this value.
- The third number (called 'advanced tables') gives information about all tables using the defined prefix for the phpBB tables. In most cases this number should also include tables added by modifications.

## Configuration

*This option can be disabled by altering the `admin_db_maintenance.php`*

This calls the configuration screen of DB Maintenance. This screen is separated in three parts:

- General configuration
- Configuration of rebuilding of search index
- Configuration of current rebuilding

The 'General configuration' consists of two options which allow you to disable the synchronization of the user post counters and the rebuilding of the search index. The second and the third part control the behavior when rebuilding the search index. The options are described under 'Customization of rebuilding'.

The changes are applied after submitting the form. When submitting the form with no value entered in the field, the default value will be restored.

## Adaptation of display of configuration

You can configure which parts of the configuration screen are displayed by altering the `admin_db_maintenance.php`. At the beginning of this file you'll find a constant `CONFIG_LEVEL`, which has a standard value of 2.

When this value is 0, the configuration is disabled completely, removing even the entry in the functions overview. When setting this value to 1, the 'General configuration' section is displayed. A value of 2 also includes the 'Configuration of rebuilding of search index' section and with a value of 3, all parts are displayed.

## Check user and group tables

This function checks the user and the group tables for inconsistencies and checks the user data for faulty language and styles settings. One important part of this function is to check the existence of the single user groups used for granting access rights. If you get an error when trying to modify the access rights, this function may resolve these problems.

## Check post and topic tables

This function checks the post and the topic tables for inconsistencies. In most cases DB Maintenance can reconstruct lost posts. In these cases a new forum is created to include the reconstructed post data.

If this function finds incorrect data at a regularly base, you should check the prune settings of your forums since these problems may be the result of too long execution times when checking and pruning the forums.

## Check vote tables

This function checks for invalid data in the vote tables.

## Check private message tables

This function will check the private message tables for inconsistencies. The counter for new and for unread messages in the user table will also be checked and corrected.

This function will remove messages send from or to a deleted user in cases where the message is unread. Messages that had already been read will be preserved. This behavior is different from the standard behavior of phpBB, which deletes all messages independent whether they are already read or not. To change this behavior, you should install the 'Prevent private messages from being deleted Mod' available at <http://phpbb.kordowich.net/>.

## Check configuration table

This function will check the configuration table for missing entries. If a missing entry was found, it will be recreated with its default value.

(When using this function with phpBB 2.0.4 or older, you may receive an error when updating to a newer version of phpBB since two new entries in the configuration table have already been added to the table. This is nothing to worry about and the error can be ignored.)

## Check search word match table

This checks the table used for search where the words are assigned to a post. This function can take some amount of time to complete.

## Check search word list table

This function checks the list of words used for search and removes all words no longer needed. When deleting a post, phpBB does not check whether a word is still needed, so there may remain some unused words in the database. This has no impact to the board but using this function may help you to reduce your database size a bit.

## Synchronize forums and topics

This function will synchronize the information stored about the replies of a topic and about the posts and topics of a forum. This function may take some time to execute but there is no impact on data integrity when execution is interrupted.

## Synchronize user post counters

*This function can be disabled in the configuration*

This function will synchronize the post counters of the user. After execution the post counter of each user will reflect the number of posts of the user still in the database.



phpBB does not subtract posts from the user post counters when posts get pruned. So these counters may be higher than the number of posts of the corresponding user still in the database. This function will reduce this counter to the number of posts still in database. You only should use this function if you want to map the counter to the posts still in database.

## Synchronize moderator status

This function checks the moderator status of each user and resets the level of the user if necessary. This function might help if the status of the user is not correctly shown in 'Who is online'.

## Reset last post date

This function checks the dates of the posts and the dates set for the last private message and the last email of a user. If these dates are not in the past, they are set to the current time. This might

help if some users get the message 'You cannot make another post so soon after your last; please try again in a short while.' although they didn't send a post in the last time.

## Reset all sessions

This function clears all sessions currently set und clears the corresponding search result data. All users are logged off (the might not realize this when they have auto logon enabled). The session of the current users is restored so that you are able to continue work in DB Maintenance or the admin panel.

## Rebuild search index

### *This function can be disabled in the configuration*

This function will rebuild the search index. Therefore the search tables are cleared and rebuilt. Depending on the size and the performance of your board, this function may take several hours to complete. If PHP 4.0.5 or a newer version is used, DB Maintenance can make use of an advanced function for rebuilding, which may reduce the time needed up to a tenth part. Rebuilding is done in several steps to avoid problems with any limit of execution time and to allow an interruption of the process.

Please keep in mind that this function is not for everyday use.

## Customization of rebuilding



The procedures described below are only needed under special circumstances. Since any misconfiguration can lead to unexpected results, these procedures are only recommended for advanced users.

The function used for rebuilding tries to identify the configuration of the server and adapts the number of posts indexed per step to this information. But there may be some conditions where this function fails and a manual adoption is necessary. This customization is done within the 'Configuration of rebuilding of search index' section of the configuration.

- Maximum execution time for rebuilding (in seconds): DB Maintenance tries to identify the time available for execution. This value configures the maximum amount of time DB Maintenance uses for execution, even when a longer time might be possible. If a lower amount is identified, the lower value is used. Please keep in mind that DB maintenance always calculates five seconds for administrative tasks.
- Fixed amount of time available for execution (in seconds): If this value is 0, DB Maintenance use the execution time identified by checking the configuration. If any higher value as zero is set, DB Maintenance assumes that the given time is available for execution – even if the configuration indicates a lower time available.
- Maximum post size for rebuilding (in kByte): With standard configuration, up to 1880 posts are indexed per step. Depending on the size of these posts, the memory usage could grow up to several megabytes. To prevent this, a maximum level is defined by this value. When the sum of the sizes of the posts exceeds this limit, the current data is written to the database so that the memory currently used is set free. Please keep in mind that this value has nothing to do with the total amount of memory used by DB Maintenance.
- Minimum posts to index per step: Gives the number of posts at least indexed per step. This value is mostly to prevent loops where no post is indexed.
- Use only standard PHP 3 compatible method for indexing: With this option you can disable the advanced method used for indexing when PHP 4.0.5 or newer is available.
- Posts indexed per second when using advanced indexing method: Gives the number of posts who can be indexed in one second when using advanced indexing method.
- Posts indexed per second when using standard indexing method: Gives the number of posts who can be indexed in one second when using the standard indexing method.

When rebuilding is interrupted by the server or you get no result displayed (indicated either by an error message or a blank page), you should try to set a fixed amount of time available for execution. Try to set this value to 30. If this doesn't fix the problem, try to reduce this value in steps about 5 until the problem does no longer occur.

When enabled, the section 'Configuration of current rebuilding' includes the status of the current indexing progress. There is no need to adapt these values under normal circumstances:

- Last post indexed: ID of the last post indexed successful. The rebuilding will continue after this post. When indexing is finished, the value of this setting is -1.
- Last post to index: ID of the last post to index. The rebuilding will finish after this post. When indexing is finished, the value of this setting is 0.

## Restart rebuilding

*This command is only available when rebuilding of the search index was interrupted*

This function restarts the process of rebuilding the search index. DB Maintenance uses a system that allows an easy interruption of the process of recreation. You can stop reindexing at any point by either closing the window of your browser or by selecting another topic in the admin panel. Also other interruptions like system crashes or interruptions of the script can be handled by this system, too. You may even interrupt the process, unlock the board and continue reindexing at a later time. DB Maintenance will restart after the last post successfully indexed and will stop after the last post not indexed.

## Check database

*This command is only available when using MySQL 3.23.17 or newer*

This function uses the MySQL-Command 'CHECK TABLE' to check the core phpBB table set for errors.

## Optimize database

*This command is only available when using MySQL 3.23.17 or newer*

This function uses the MySQL-Command 'OPTIMIZE TABLE' to optimize the core phpBB table set. Specially when deleting lots of datasets (e.g. by using the prune function), this function might reduce database size.

## Repair database

*This command is only available when using MySQL 3.23.17 or newer*

This function uses the MySQL-Command 'REPAIR TABLE' to check the core phpBB table set for errors and fixes them. You should only use this function if you got errors reported when checking the database or accessing it.

## Reset auto increment values

MySQL uses so called 'auto increment' values to add a primary key to tables where it is not defined by the INSERT-statement. This value is incremented each time a new record is added. If these values are not proper set, you might get an error that there are duplicate entries or that a new record could not be added to the database. This function checks all auto increment values used by phpBB and resets them if necessary.



## **Convert Session-Table**

***This command is only available when using MySQL 3.23.17 or newer and the session table is defined as a MyISAM table***

When using MySQL 3.23.17 or newer, the session table is converted to a so called HEAP-table at the end of the installation. HEAP tables are much faster than the standard tables used by MySQL since they are only stored in memory and not written to the disk. This function converts the session table to the HEAP-type, which may result in an improved performance.

## **Unlock the board**

***This command is only available when the board is currently locked***

When you manually disable the board or a function of DB Maintenance is interrupted, DB Maintenance does not unlock the board after finishing operations. This function unlocks the board so that it is accessible by the users again.

## Emergency Recovery Console

The Emergency Recovery Console (ERC) is a special part of the mod which does not make use of some of the common procedures of phpBB. So the ERC is also accessible if these procedures fail and you do not have access to your board using the normal way.



It is strongly recommended that you install the Emergency Recovery Console (ERC) (erc.php) only in cases where it is necessary to prevent any unauthorized use of it. Although protected by password, this is an action to prevent any misuse of the tool.

The ERC is started by directly accessing the erc.php in the admin directory. If your board has for example the URL

`http://www.yourboard.com/folder/`

the ERC can be started by entering

`http://www.yourboard.com/folder/admin/erc.php`

in the address bar of your browser.

After starting, the ERC checks the available language files. If only one is available, the entrance page is displayed directly; otherwise you have to select the language you prefer.



### Emergency Recovery Console

Select an option:

Hints for the options:

- Clear all sessions** If you have an error creating a session or so, you can clear the session data by selecting **Clear all sessions**. If you have Problems with accessing database tables, selecting **Repair database tables**. **Check config table** will check the config table for missing entries, which may be helpful by several types of errors.
- Repair database tables**
- Check config table**
- Reset path data** If you enter the admin panel, there may be a fault in your path or your cookie settings. You can reset them with **Reset path data** or **Reset cookie data**. You can reset them with **Reset language data** or the template data with **Reset template data**.
- Reset cookie data**
- Reset language data**
- Reset template data**
- Disable GZip compression** If you disable the GZip compression, you can deactivate it by selecting **Disable GZip compression**.
- Clear ban list**
- Remove all administrators** If your board was hacked, it's recommended that you remove all admin accounts by selecting **Remove all administrators**. (The account itself will not be deleted but the rights will be removed.)
- Grant user admin privileges** If you need to add a new user, you can grant the ban list with **Clear ban list** (this will also restore the anonymous user).
- Recreate config.php**

If you need to restore your config.php you can do so by selecting **Recreate config.php**.

Figure 2: ERC entrance page

On the entrance page you can select the option you want to perform and execute it by using the Send-button.

## Authentication

Since the ERC does not make use of the common phpBB authorization methods, there is a special way used for authentication.

In most cases you will have the choice of two ways to authenticate:

1. You can use any active administrator account of the board. You have to enter the name and the password for the user.
2. You can alternatively use the database account used for database access. You have to enter the name and the password of the database user. Don't forget that you'll need to select the appropriate option box in most cases.

There are some cases where one of the methods indicated above is not available.

## Clear all sessions

This option clears all sessions of the board (including the search results). This function may help you if the session table is filled up and reached its limit.

## Repair database tables

This function repairs the tables of the database. This will help you to get access to your board if a table has crashed and makes accessing impossible.

## Check configuration table

This function will check the configuration table for missing entries. If a missing entry was found, it will be recreated with its default value.

## Reset path data

This function allows you to reset the path data of the board. The ERC checks the current path and will select the suitable configuration in most cases. You can select which part of the path data should be changed and if necessary the option it should be changed to. If you get a 404-error when trying to log in, this function allows you to make the changes necessary to allow logging in again.

## Reset cookie data

This function allows you to reset the data used for cookies. In some cases a wrong configuration of the cookie may be the cause of problems when logging in. The option whether to set a secure cookie or not can be found at 'Reset path data'.

## Reset language data

***Authentication can only be done by using an active admin account of the board***

This function will reset the language settings of the board and the user used for authentication. The language will be set to the language selected in the drop down box provided. This function will help you in cases where an unavailable language set makes accessing impossible.

## Reset template data

***Authentication can only be done by using an active admin account of the board***

This function will reset the style of the board and the user used for authentication to the one selected in the drop down box. There is also an option to recreate the database settings of the standard style (subSilver). This will help you if accessing is impossible due to an unavailable style.

## Disable GZip compression

This function disables the GZip compression and may help when problems occur after enabling GZip compression within the admin panel.

## Clear ban list

This function clears the ban list and the list of prohibited usernames. This will help you in cases where you can no longer log on or register due to a misconfiguration.

## Remove all administrators

This function removes all administrator privileges granted to any user of the board. If you use an admin account to authenticate, the privileges of this user will not be reset. This function is mostly provided for security reasons in cases where your board gets hacked.

## Grant user admin privileges

This allows you to grant a user admin privileges. This user will also be activated in cases where it is deactivated.

## Recreate config.php

This function allows you to recreate your config.php or to create a new one if you need to make changes on it. In the first step you need to select the database type and enter:

- The name of the database server (or the Data Source Name (DSN) when using an ODBC-connection). Please do not add any leading protocols such as http://.
- The name of the database.
- The name of the database user.
- The password for this user (Attention: the password will be displayed in clear text on the next pages).
- The prefix used for the phpBB-tables (phpbb\_ in default configuration).

After submitting the form, the new data for the config.php is displayed. You can either download it or create it by yourself by copying the text in a new text file. Please ensure that there is no character (including spaces and line feeds) before the '<?php' and after the '?>'.

## Common Procedures

### Login problems due to problems when trying to create the session

If login fails and you get an error that it was not possible to create a new session, try this procedure:

1. Clear all sessions (this may fail and an error message is displayed)
2. Repair the database tables
3. Clear all sessions again

### Other login problems

Login problems may occur due to different reasons. In most cases resetting the path data will help to solve them. When this does not help, the next step should be to check the cookie data.

### Getting access to your board after it was hacked

When your board was hacked, you may no longer be able to access the board since your account was removed, disabled or changed. In this case, you can get access this way:

1. Use the function 'Remove all administrators' to disable admin access to any user which may be created by the hacker.
2. Use the function 'Clear ban list'. This will make sure that you can register a new user and log on with this account.
3. Create a new user by using the normal 'Register' function of your board.
4. Use the function 'Grant user admin privileges' to make the new user to an administrator and activate it if necessary.

After doing so you can use the new account to log in and to do any changes to set your board back to the state it should be.



ERC helps you to get access back to your board, but it does **not** help you in preventing further hacking attempts. After any hacking attempt (no matter whether successful or not) you should update your board to the current version and include any security fix provided by the phpBB group (see <http://www.phpbb.com/> for details). It is also strongly recommended that you change the passwords of your board (including the database and the FTP passwords as well as the password of your user) and check for any other possible vulnerability.