

Database Maintenance User Guide

Summary

The maintenance interface of the WPZ Data Warehouse at the webpage <http://wpz.energieerkerbank.ch/instandhaltung> has been designed to mirror the structure of the data tables within the MySQL database, and it's been designed primarily with the use case in mind of precise corrections and additions. Each table within the database is editable loaded with all of its rows and columns displayed in the interface with the options of removing, adding, or editing values one row at a time. Changes such as toggling the visibility of the test results of a certain pump according to the manufacturer's desire for privacy or confidentiality, correcting typos or updating addresses, or adding new testing standards are all examples of needs made simple through this interface.

Authentication

Authentication to the administration section of the website is provided through the following username and password combination:

Username: ntb_admin

Password: gp4HF!9h(X{ef9jx

Changes to the actual table structure of the database rather than simply the rows and values requires updating the files on the server, and this requires the credentials of Markus Markstaler since this website is a subdomain of his website. Please note that changes to the names and presence of tables and of columns will cause many errors to the scripts and webpages currently loaded on the server.

Side Effects of Editing Data

As the database is the central foundation within which all heat pump data used throughout the website is stored, editing its individual rows and values will affect other segments of the WPZ Data Warehouse and can have the potential to break certain portions if done without caution.

Microsoft Excel Export

In the navigation bar of the website, a link exists for users to download the heat pump test results as Microsoft Excel spreadsheets. These spreadsheets are created by a script on the server parsing through the database, and this script is triggered to run whenever the database is updated through the administration portion of the website. Though this script was designed to handle anticipated future changes to the values within the database without needing any edits, it does rely on some values within the tables to remain constant.

The export script sorts and filters the heat pumps by their category and type, using the values “LW”, “WW”, “SW”, and “SW-WW” from the *Kategorie* table and the values “Low”, “Medium”, and “Low & Medium” from the *Heizungstyp* table. It assumes that these values will remain constant and also that they describe all possible heat pumps. Heat pumps with other values than these will not be exported. While the spreadsheets have a legend describing only the possible values “S”, “P”, and “E” for the *Produktart* field of the *Info* table, other values will not cause errors.

Within the *Info* table of the database, adding a value to the *Bemerkung* field will cause the string to appear in the top cell of a heat pump’s stack of three cells in the “Gerät” column of the spreadsheets, and setting the *Sichtbarkeit* field of a heat pump to 0 will hide that pump from the export.

Heat pumps in the spreadsheets are grouped by manufacturer name, and in the case of consecutive heat pumps with the same manufacturer name and address, only the first will display values in the “Auftraggeber” column. This means that during maintenance of the *Auftraggeber* table, if the same manufacturer name is listed with two different addresses, it will create an incongruity in the spreadsheets.

Test Result Insertion

Alongside the database maintenance page, the other page for editing the database is that of inserting new heat pump test results at <http://wpz.energienerkbank.ch/pruefresultate>. This page includes a number of dropdowns that are automatically populated from table rows. Due to this automatic population, changes to the tables *Auftraggeber*, *Bauarten*, *Heizungstyp*, *Kategorie*, *Normen*, and *Prüfbedingung* will also cause a change to the lists of possible options within their correspondingly-named dropdowns.

Editing Data

Once logged in to the main page, all the tables in the database are available for editing. Clicking on the name of the table to be edited will bring up the maintenance interface for that table. Some measure of form validation exists to protect the database from errors, but it is not a substitute for familiarity with the table structure, and it is recommended to review the *Database Breakdown* guide before editing a table, especially when removing rows. Data integrity relies on the caution of the maintainer.

Adding a Row

New rows may be added to the table by scrolling to the bottom of the table and clicking the “Einfügen” button. A pop-up modal window will appear providing text entry fields for all the columns of the table, except for when the table uses auto-incrementing of row IDs.

Removing a Row

Rows may be removed from a table by clicking the ✕ symbol on the right side of the interface. Be particularly careful when removing rows; many foreign keys exist within the database structure and link the tables together. Since each foreign key in the database is set to have a cascading deletion effect, deleting a row will also delete any rows which reference it. All foreign key references are described in the *Database Breakdown* guide.

Editing Fields

Rows may be edited by clicking the ✎ symbol on the far right side of the interface. A pop-up modal window will appear displaying the table fields, automatically populated with the current values of the row.