

# WMLUG February 2016

## KeePass Password Safe

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# KeePass Password Safe

KeePass Password Safe is a free, open source, cross platform password manager - <http://keepass.info/>

- runs on Mono/.Net
- uses only one file for the password database
- uses the AES/Rijndael (256-Bit key) or Twofish algorithms to encrypt the password database file, using a password and/or a keyfile
- can be run portable
- can export to TXT, HTML, XML and CSV Files



# KeePass vs KeePassX

The database-compatible KeePassX fork (originally called KeePass/L) uses Qt instead of Mono but has fewer features such as no password generator or plug-in support.



# Master Password and/or Keyfile

When creating a new password database, you can choose to use a password and/or a keyfile.

Using both gives you two-factor authentication since the master password is something you know while the key file is something you have.

**Note:** Don't forget the password or lose the keyfile because you won't be able to open the database since there is no backdoor.



# Multi-User

The database can be accessed by multiple users if stored at a shared location. When you save the file, if it was changed by someone else since you opened it, you are given the option to synchronize the changes or overwrite.



# Adding an Entry

When adding an entry, you get a form with 5 tabs:

- Entry – Main properties
- Advanced – Custom strings, attachments
- Properties – Custom colors, tags, override URL
- Auto-Type – Enable and configure
- History – List of previous versions; can revert



# Adding an Entry – Main Properties

When adding an entry, you can add data in these fields as well as specify an icon and optional expiration date:

- Title
- User name
- Password
- URL
- Notes



# Adding an Entry – Advanced Options

You can add custom string fields to the entry that are accessible by right-clicking the saved entry and choosing Copy String.

You can attach a file to the entry which is then stored encrypted in the database.





# Adding an Entry – Properties

You can set a custom foreground and/or background color for the entry, a search tag, as well as a URL override to use a specific browser.



# What is Auto-Type?

- Sends simulated key presses to other applications optionally using Two-Channel Auto-Type Obfuscation (TCATO)
- Uses the clipboard to transfer parts of the auto-typed text into the target application to avoid keyloggers; they can see the Ctrl-V presses, but do not log the actual contents pasted from the clipboard
- Because it doesn't work with all windows, it's an opt-in feature for each entry; enable it on the 'Auto-Type' tab page
- Performs text splitting using a hash of the string
- Clears the clipboard immediately after using it; restores what was there previously



# Adding an Entry – Auto-Type

You can enable or disable auto-type for each entry.

The sequence can be either inherited or custom. The default is “{USERNAME}{TAB}{PASSWORD}{ENTER}”.

If needed, a custom sequence can be entered for specific windows.

The Two-Channel Auto-Type Obfuscation (TCATO) option can be enabled here as well.



# Grouping Entries

You can use groups to put similar entries together (bill pay sites, banks, etc.) and arrange the entries within the group for a custom order.



# Templates

You can create templates to create new entries using predefined information (user name, etc.).

A group is used to store templates for creating new entries. Once you have a group with template entries, specify the template group under the database settings.

To use a template, choose the template from the Add Entry toolbar icon dropdown menu.



# Using an Entry

- Open URL
- Form Fill Options
  - Auto-Type
  - Drag and Drop
  - Copy/Paste



# Open URL

If the entry has the URL field populated, right-clicking the entry and choosing URL(s) > Open will open the link.



# Drag and Drop

You can drag and drop text from an entry into a text field.





# Copy/Paste

Double-clicking a field automatically copies it to the clipboard for pasting into text fields.

Alternatively, you can right-click an entry and choose Copy User Name or Copy Password.



# Noteworthy Tools

- Password Generator
- Triggers



# Password Generator

Tools > Generate Password...

You can generate random passwords using a set, pattern or custom algorithm by choosing the appropriate options under the Settings tab.

You can preview some sample passwords on the Preview tab.

Settings can be saved for reuse later.



# Password Generator - Set

You can choose the set of characters used as well as the length (defaults to 20).

Set options: Upper case, lower case, digits, minus, underline, space, special, brackets, high ANSI characters, and the option to specify characters to include.



# Password Generator - Pattern

You can use a string consisting of placeholders to define a pattern for the layout of the new password. There are several placeholders available. Here are a few:

a	Lower-Case Alphanumeric	abcdefghijklmnopqrstuvwxyz 0123456789
A	Mixed-Case Alphanumeric	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 0123456789
U	Upper-Case Alphanumeric	ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
d	Digit	0123456789
l	Lower-Case Letter	abcdefghijklmnopqrstuvwxyz
L	Mixed-Case Letter	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz



# Password Generator – Pattern, Cont.

Using a \ followed by a character will force that character to appear in the password.

If the "Randomly permute characters of password" option is used, the character positions will be randomized.

On the advanced tab, there are options to modify the password generation such as "Each character must occur at most once", "Exclude look-alike characters", and to restrict certain characters from being used. You are warned that these options generate less secure passwords (they reduce entropy/complexity and therefore reduce strength).



# Password Generator – Pattern Examples

$U\{3\}d\{4\} \rightarrow ERT8931, HYU6629, JWE2401$

$a\{4\} \backslash - A\{3\} \rightarrow 2sw5-aD2, 22d3-K3m, 7yxb-709$



# Triggers

You can set up triggers to perform actions such as syncing the password file when certain events occur.

