ShashChess 42.1 — What's New

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Overview

ShashChess 42.1 is a live book release on top of ShashChess 42. The search, the evaluation and the network are the same, so the playing strength does not change.

It brings three things: the working Lichess live books of Alexander, the new **LiveBook Width** option to vary the book moves, and fixes for crashes and wrong moves of the live books and the online tablebases.

It also adds the **Show Experience** button and fixes the persisted learning: Off now works without a restart, and changing Persisted learning or Experience Book no longer loses what was learned.

New: LiveBook Width

Until 42 the live books always played their top move, even when other moves were just as good. **LiveBook Width** (1–20, default 1) works like **Book N Width** of the CTG/BIN books: the engine picks at random, with the same probability, among the best move and up to Width − 1 moves equivalent to it.

Source	Equivalent moves	Order of the moves
ChessDB	The moves ChessDB ranks best (`!` , rank 2): a few centipawns from the best one at most	ChessDB score
Lichess Masters, Games, Player	Same Shashin zone of the success rate (wins + draws / 2 for the side to move) as the best move, and played in at least 0.5% of the games, as for the BIN books	Wins, then draws
Proxy	The proxy sends a single move (use LiveBook Proxy Diversity for variety)	—
Lichess and ChessDB tablebases	None: always the best move	Order of the server

The success rate of a move is its win probability in the sense of the Shashin zones, so two moves are equivalent when they fall in the same zone. A move with a clearly different result, or played in less than 0.5% of the games, is never chosen. With width 1 nothing changes: the best move is played, as before.

New: Show Experience

Show Experience is a new button among the UCI options: it lists in the GUI the experience of the current position, the one of the last `position` command, as the console command `showexp` does.

```
info string Experience file: <folder>/experience.exp, <n> entries in memory
info string Experience for the current position: <FEN>
info string   <move> depth <d> value <v> (cp <s>) win probability <p>%
info string   <move> played, not searched
```

- **Experience file**: the file the engine reads, next to the executable, marked *(not found)* if it does not exist yet, and the entries in memory.
- **Moves**: in the order of the Experience Book (depth, then win probability, then score), each with its depth, its value in internal units as in the file, the score in centipawns or mate as in the analysis, and its win probability. Only the moves legal in the position are listed.
- **Played, not searched**: a move of the game in progress that the engine never searched. It is not saved.
- **Learning Off**: with Persisted learning Off and Experience Book on, a line says that nothing is learned or written. With both off the experience file is not loaded, and the button says so.

Arena and Shredder show these lines in their engine window. The ChessBase GUIs do not show info strings: set **Debug Log File** and read them in the log.

Lichess live books work again

Since March 2026 the Lichess opening explorer answers only authenticated requests on lichess.org, while ShashChess 42 still called the old lichess.ovh addresses without a token. ShashChess 42.1 takes the live book code of Alexander 9:

- **Token**: set **LiveBook Lichess Token**. If it is missing or refused, an `info string` says so and the Lichess live books pause until the options change.
- **Hosts and timeout**: explorer.lichess.org and tablebase.lichess.org, with **LiveBook Timeout**. After an error a live book pauses for 30 s, after a rate limit (HTTP 429) for 60 s.

- **Castling**: the explorer writes castling as king takes rook (e1h1). It is now played; before, it was dropped.
- **Rating band**: **LiveBook Lichess Games** uses only the games of the players in the band of the engine: **UCI_Elo** with **UCI_LimitStrength**, otherwise Expert (2500 and more).
- **Lichess Player**: the streamed answer is read correctly (the last complete snapshot), and names with spaces or symbols are encoded.
- **Lichess Tablebase**: the result of each move refers to the opponent. ShashChess 42 read it reversed and could prefer a drawing or losing move: in KQ vs K it chose Qb3+?? Kxb3 instead of Qb2+.

New and changed options

Option	Type, default	What it does
LiveBook Width	Integer 1–20, default 1	Random choice among the best move and the equivalent ones (see above)
LiveBook Lichess Token	String, empty	Lichess API token, required by Masters, Games and Player
LiveBook Timeout	Integer 100–60000 ms, default 5000	Maximum duration of a request; never more than half of the optimum time of the move
LiveBook Proxy Diversity	Check, default false	Random best move of the proxy (query instead of querybest); documented before, now available
LiveBook Lichess Games	Check, default false	Now limited to the rating band of the engine
ChessDB Tablebase, Lichess Tablebase	Check, default false	Used only when the Syzygy tablebases cannot probe the position
Show Experience	Button	New: lists in the GUI the experience of the current position (see above)
Persisted learning	Combo Off/Standard/Self, default Off	Off now applies at once; a change saves the experience before reloading it

Option	Type, default	What it does
Experience Book	Check, default false	A change saves the experience before reloading it; with Persisted learning on, nothing is reloaded

Bug fixes

- **Crash on ChessDB**: an answer with an unknown score (`score:??`), possible in tablebase positions, stopped the engine.
- **ChessDB filter**: the rank filter discarded nothing; now only the moves ChessDB ranks best are kept. Tablebase moves (`egtb:`) sent by a proxy are accepted.
- **go depth and go nodes**: the live books answered and the engine played without searching. Now they follow the rules of the CTG/BIN books; when pondering they still work, and on a ponderhit the book move comes at once.
- **Endgames up to 7 pieces**: the online tablebases are used only when the Syzygy tablebases cannot probe the position (missing files, SyzygyProbeLimit, castling rights). The opening live books are no longer queried there.
- **Time**: a slow or hanging server could cost the game on time. A request now takes at most half of the optimum time of the move, and the HTTP connection is reused between requests.
- **go searchmoves**: a CTG/BIN or experience book move outside searchmoves made the engine play an unsearched move. Now it searches.
- **Memory**: the live book analyses no longer leak memory, and the comparison of game results no longer counts losses the wrong way.
- **Build**: incremental builds could mix objects compiled with different versions of the live book classes.

Persisted learning fixes

- **Off ignored**: switching Persisted learning back to Off without restarting did nothing: the engine kept learning, reading and writing experience.exp, until it was restarted. Now Off applies at once.
- **Learning lost on option changes**: changing Persisted learning or Experience Book reloaded the experience file and discarded everything learned since the last save. Now the experience is saved first, unless Read only learning is on. Leaving Self in the middle of a game saves what was learned in that game, as `quit` does. With Persisted learning on, Experience Book no longer reloads the file, already in memory.

- **Failed saves**: when the new file could not be written completely (disk full, no permission), experience.exp was deleted anyway and the experience was lost. Now the old file stays, and an info string says that the experience was not saved.
- **Empty experience file**: an experience.exp of 0 bytes, written when no move had been searched, was read past its end at the next start. Now it counts as an empty experience.
- **Recovery file**: experience_new.exp, left by an interrupted save, was looked for in the working folder instead of the engine folder, so with some GUIs it was not recovered and was then overwritten. Now it is read from the engine folder, like experience.exp; `quickresetexp` reads from there too.
- **Memory**: every `position` command allocated again all the moves of the game, so with learning on the memory grew for the whole session. Now only new moves take memory.
- **File content**: the 2 padding bytes of each entry were written with whatever was in memory. Now they are 0: the format does not change, and the same experience gives the same file.

Upgrade notes

1. With the default options ShashChess 42.1 plays like 42: LiveBook Width is 1 and the search is unchanged.
2. For the Lichess live books, create a token at lichess.org/account/oauth/token without selecting any scope, then paste it in **LiveBook Lichess Token**. The Lichess Tablebase needs no token.
3. The live books are no longer used with `go depth` and `go nodes`. With at most 7 pieces they give way to the local Syzygy tablebases when these can probe the position.
4. With very little time (an optimum under about 200 ms per move) the live books are skipped, so that a request cannot cost the game on time.
5. The experience files of ShashChess 42 are read and written as before. Changing **Persisted learning** or **Experience Book** now writes experience.exp, unless **Read only learning** is on.