

Tmgr version 1.03, October 11, 2020

Tmgr is a tournament manager for 10x10 draughts programs. It works with programs that use the Hub 2.1 interface protocol. At this time there are only two programs that support this interface, Kingsrow and Scan. Because of this small number of Hub engines, Tmgr is presently only a 2-engine match manager, and does not yet implement round-robin tournaments.

Draughts programs already have DXP for match control, but Tmgr improves on DXP in several ways:

- Tmgr can run N matches in parallel and aggregate the results of all the matches. For example, if you have a quad-core PC with sufficient memory, it can manage 4 simultaneous matches of engine A vs. engine B.
- Tmgr uses a .PDN file of start positions, and allows you to set the number of games played for each match of N parallel matches.
- Tmgr has flexible time controls.
 - Fischer clock control with an initial time and increment.
 - X moves in Y seconds (similar to DXP).
 - Entire game in X seconds.
- Tmgr detects draws by 3-fold repetition, and by the 25 king-moves rule.
- Tmgr can use the Kingsrow 8-piece db for game adjudication.
- Tmgr stops a game if an engine's clock goes negative.

Installation Note

Tmgr reads and writes files in the current directory. Do not install it under \Program Files, as this usually causes problems writing files.

Running Tmgr

Tmgr does not have a graphical UI. It is run from a command-line console window.

All settings for Tmgr and the two engines are defined in the file **tmgr.ini** in the current directory. Match results are written to **tmstats.txt**. Match games are written to file **match1.pdn**. If parallel-matches is set > 1 then additional matches are written to **match2.pdn**, **match3.pdn**, ...

Command-line options

- f filename** Use **filename** instead of the default **tmgr.ini** for the match settings.
- h** Help. Display a summary of options.
- l** Log option. Log all communications between Tmgr and the engines to log files. Filenames are **comm1.log** for engine 1, **comm2.log** for engine 2, etc. This option should only be used for debugging, as it might add a few milliseconds to the engine clocks at each move.
- r** Resume option. Resume the previous unfinished tournament from where it was interrupted. By default, Tmgr starts a new tournament and clears any previous results files.
- t** Time option. Include search time and remaining clock time as comments after each move in the match PDN files.
- v** Verbose option. More status is output to the console during the tournament.

Tmgr.ini commands

You can edit tmgr.ini to set the parameters of the matches. The file has a [General] section and two [Engine] sections.

[General] settings

start-pos-file	The full pathname of a pdn file of start positions for the match. A required setting.
parallel-matches	The number of matches that will be played in parallel. Optional, defaults to 1.
games	The number of games that will be played in each match. The total number of games in a tournament is (games * parallel-matches). A required setting.
time	The initial clock time in seconds.
inc	The time increment in seconds, added before each move.
moves	The maximum number of moves in a game. “Moves” must be combined with “time”, but not with “inc”.
egdb-wld-path	The path to the Kingsrow WLD database, used for adjudication. This adds 1.5 Gib to the memory usage of Tmgr. Optional.

[Engine] settings

engine-dir	The path to the engine files
engine-command	The path and filename of the engine program file, plus command-line arguments. Enclose in quotes if there are spaces, as for arguments.
draw-pieces	The max number of pieces in positions that can be declared a draw using this engine's search score. Optional, defaults to 6.
draw-count	The number of consecutive searches returning draw scores that are needed to declare the game a draw using this engine's search scores. Optional, defaults to 5.
draw-score	The max score that can be considered a draw. For most engines this is probably 0, but Kingsrow-hub uses 0.01, 0.03, and 0.05 for db draw, and 0.07 for draw by repetition. Optional, defaults to 0.
win-score	The minimum score that indicates a certain win. Optional, defaults to 20.
set-param	Any engine-specific Hub set-param settings can be given. The syntax, which is a little different from the Hub syntax, is: set-param name = value.

Adjudication

Tmgr writes a Termination header in the PDN of every game with the reason for the conclusion of the game, and how the game result was determined. After each engine's search, Tmgr checks for the following conditions:

- If an engine's clock time goes negative, Tmgr will end the game. It does not declare a loss on time. Instead, it tries to determine the game result based on the last position in the game. Negative clock events are noted in tmstats.txt.
- If the side with the turn to play has no legal moves, Tmgr declares that side has lost.
- If the engine sent a search score then:
 - If the number of pieces on the board is \leq draw-pieces, and the $|\text{score}| \leq$ draw-score, then the draw count is incremented, else it is reset to 0. If draw count \geq "draw-count" set in the .ini file, the game is declared to be a draw.
- If a position is reached 3 times during a game, the game is declared to be a draw by 3-fold repetition.
- If there are 25 consecutive non-capture king moves by each side, the game is declared to be a draw by the 25 king-move rule.
- If the game reaches a move count limit then
 - If there is a setting for egdb-wld-path and the number of pieces is \leq the maximum for the database found at that path, then the result is looked up in the Kingsrow egdb.
 - If the engine returned a $|\text{score}| \leq 0.5$, the game is declared to be a draw.
 - If the engine returned a score $>$ the "win-score" setting, the game is declared a win.
 - If there is no result from the above 3 tests then the game result is declared "unknown".