



# Slow Query Log



# What is Slow Query Log ?

- The slow query log consists of SQL statements that take more than `long_query_time` seconds to execute and require at least `min_examined_row_limit` rows to be examined.
- The slow query log can be used to find queries that take a long time to execute and are therefore candidates for optimization. However, examining a long slow query log can be a time-consuming task.
- To make this easier, we can use the `mysqldumpslow` command to process a slow query log file and summarize its contents.
- The time to acquire the initial locks is not counted as execution time.
- `mysqld` writes a statement to the slow query log after it has been executed and after all locks have been released, so log order might differ from execution order.
- The minimum value of `long_query_time` is 0 sec.
- The default value of `long_query_time` is 10 sec.
- By default, administrative statements are not logged, nor are queries that do not use indexes for lookups. This behavior can be changed using `log_slow_admin_statements` and `log_queries_not_using_indexes`



# What is Slow Query Log ? (contd...)

- By default, the slow query log is disabled.
- To specify the initial slow query log state explicitly, use `--slow_query_log[={0|1}]`. With no argument or an argument of 1, `--slow_query_log` enables the log. With an argument of 0, this option disables the log.
- To specify a log file name, use `--slow_query_log_file=file_name`.
- To specify the log destination, use the `log_output` system variable.
- If you specify no name for the slow query log file, the default name is `host_name-slow.log`.
- The server creates the file in the data directory unless an absolute path name is given to specify a different directory.



# Slow Query Log Contents

- When the slow query log is enabled, the server writes output to any destinations specified by the `log_output` system variable.
- If you enable the log, the server opens the log file and writes startup messages to it.
- However, further logging of queries to the file does not occur unless the FILE log destination is selected.
- If the destination is NONE, the server writes no queries even if the slow query log is enabled.
- Setting the log file name has no effect on logging if FILE is not selected as an output destination.
- each statement written to the log is preceded by a line that begins with a # character and has these fields (with all fields on a single line):
- **Query\_time:** duration The statement execution time in seconds.
- **Lock\_time:** duration The time to acquire locks in seconds.
- **Rows\_sent:** N The number of rows sent to the client.
- **Rows\_examined:** The number of rows examined by the server layer (not counting any processing internal to storage engines).



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- **Thread\_id:** ID The statement thread identifier.
- **Errno:** error\_number The statement error number, or 0 if no error occurred.
- **Killed:** N If the statement was terminated, the error number indicating why, or 0 if the statement terminated normally.
- **Created\_tmp\_tables:** N The Created\_tmp\_tables value for the statement.
- **Start:** timestamp The statement execution start time.
- **End:** timestamp The statement execution end time.