

NAME

mysqlslap - load emulation client

SYNOPSIS

mysqlslap [*options*]

DESCRIPTION

mysqlslap is a diagnostic program designed to emulate client load for a MySQL server and to report the timing of each stage. It works as if multiple clients are accessing the server.

Invoke **mysqlslap** like this:

```
shell> mysqlslap [options]
```

Some options such as **--create** or **--query** enable you to specify a string containing an SQL statement or a file containing statements. If you specify a file, by default it must contain one statement per line. (That is, the implicit statement delimiter is the newline character.) Use the **--delimiter** option to specify a different delimiter, which enables you to specify statements that span multiple lines or place multiple statements on a single line. You cannot include comments in a file; **mysqlslap** does not understand them.

mysqlslap runs in three stages:

1. Create schema, table, and optionally any stored programs or data to use for the test. This stage uses a single client connection.
2. Run the load test. This stage can use many client connections.
3. Clean up (disconnect, drop table if specified). This stage uses a single client connection.

Examples:

Supply your own create and query SQL statements, with 50 clients querying and 200 selects for each (enter the command on a single line):

```
mysqlslap --delimiter=;
--create=CREATE TABLE a (b int);INSERT INTO a VALUES (23)
--query=SELECT * FROM a --concurrency=50 --iterations=200
```

Let **mysqlslap** build the query SQL statement with a table of two INT columns and three VARCHAR columns. Use five clients querying 20 times each. Do not create the table or insert the data (that is, use the previous tests schema and data):

```
mysqlslap --concurrency=5 --iterations=20
--number-int-cols=2 --number-char-cols=3
--auto-generate-sql
```

Tell the program to load the create, insert, and query SQL statements from the specified files, where the create.sql file has multiple table creation statements delimited by ; and multiple insert statements delimited by ;. The **--query** file will have multiple queries delimited by ;. Run all the load statements, then run all the queries in the query file with five clients (five times each):

```
mysqlslap --concurrency=5
--iterations=5 --query=query.sql --create=create.sql
--delimiter=;
```

mysqlslap supports the following options, which can be specified on the command line or in the [mysqlslap] and [client] groups of an option file. For information about option files used by MySQL programs, see Section 4.2.6, “Using Option Files”.

- **--help, -?**

Display a help message and exit.

- **--auto-generate-sql, -a**

Generate SQL statements automatically when they are not supplied in files or using command options.

- **--auto-generate-sql-add-autoincrement**
Add an AUTO_INCREMENT column to automatically generated tables.
- **--auto-generate-sql-execute-number=*N***
Specify how many queries to generate automatically.
- **--auto-generate-sql-guid-primary**
Add a GUID-based primary key to automatically generated tables.
- **--auto-generate-sql-load-type=*type***
Specify the test load type. The permissible values are read (scan tables), write (insert into tables), key (read primary keys), update (update primary keys), or mixed (half inserts, half scanning selects). The default is mixed.
- **--auto-generate-sql-secondary-indexes=*N***
Specify how many secondary indexes to add to automatically generated tables. By default, none are added.
- **--auto-generate-sql-unique-query-number=*N***
How many different queries to generate for automatic tests. For example, if you run a key test that performs 1000 selects, you can use this option with a value of 1000 to run 1000 unique queries, or with a value of 50 to perform 50 different selects. The default is 10.
- **--auto-generate-sql-unique-write-number=*N***
How many different queries to generate for **--auto-generate-sql-write-number**. The default is 10.
- **--auto-generate-sql-write-number=*N***
How many row inserts to perform. The default is 100.
- **--commit=*N***
How many statements to execute before committing. The default is 0 (no commits are done).
- **--compress, -C**
Compress all information sent between the client and the server if both support compression.
- **--concurrency=*N*, -c *N***
The number of parallel clients to simulate.
- **--create=*value***
The file or string containing the statement to use for creating the table.
- **--create-schema=*value***
The schema in which to run the tests.
Note
If the **--auto-generate-sql** option is also given, **mysqlslap** drops the schema at the end of the test run. To avoid this, use the **--no-drop** option as well.
- **--csv[=*file_name*]**
Generate output in comma-separated values format. The output goes to the named file, or to the standard output if no file is given.
- **--debug[=*debug_options*], -# [*debug_options*]**
Write a debugging log. A typical *debug_options* string is d:t:o,*file_name*. The default is d:t:o,/tmp/mysqlslap.trace.
- **--debug-check**
Print some debugging information when the program exits.
- **--debug-info, -T**
Print debugging information and memory and CPU usage statistics when the program

exits.

- **--default-auth=plugin**

A hint about the client-side authentication plugin to use. See Section 6.3.6, “Pluggable Authentication”.

This option was added in MySQL 5.5.10.

- **--defaults-extra-file=file_name**

Read this option file after the global option file but (on Unix) before the user option file. If the file does not exist or is otherwise inaccessible, an error occurs. Before MySQL 5.5.8, *file_name* must be the full path name to the file. As of MySQL 5.5.8, the name is interpreted relative to the current directory if given as a relative path name.

- **--defaults-file=file_name**

Use only the given option file. If the file does not exist or is otherwise inaccessible, an error occurs. Before MySQL 5.5.8, *file_name* must be the full path name to the file. As of MySQL 5.5.8, the name is interpreted relative to the current directory if given as a relative path name.

- **--defaults-group-suffix=str**

Read not only the usual option groups, but also groups with the usual names and a suffix of *str*. For example, **mysqlslap** normally reads the [client] and [mysqlslap] groups. If the **--defaults-group-suffix=_other** option is given, **mysqlslap** also reads the [client_other] and [mysqlslap_other] groups.

- **--delimiter=str, -F str**

The delimiter to use in SQL statements supplied in files or using command options.

- **--detach=N**

Detach (close and reopen) each connection after each *N* statements. The default is 0 (connections are not detached).

- **--enable-cleartext-plugin**

Enable the `mysql_clear_password` cleartext authentication plugin. (See Section 6.5.1.3, “Client-Side Cleartext Pluggable Authentication”.) This option was added in MySQL 5.5.27.

- **--engine=engine_name, -e engine_name**

The storage engine to use for creating tables.

- **--host=host_name, -h host_name**

Connect to the MySQL server on the given host.

- **--iterations=N, -i N**

The number of times to run the tests.

- **--no-drop**

Prevent **mysqlslap** from dropping any schema it creates during the test run. This option was added in MySQL 5.5.12.

- **--no-defaults**

Do not read any option files. If program startup fails due to reading unknown options from an option file, **--no-defaults** can be used to prevent them from being read.

- **--number-char-cols=N, -x N**

The number of VARCHAR columns to use if **--auto-generate-sql** is specified.

- **--number-int-cols=N, -y N**

The number of INT columns to use if **--auto-generate-sql** is specified.

- **--number-of-queries=N**

Limit each client to approximately this many queries. Query counting takes into account the statement delimiter. For example, if you invoke **mysqlslap** as follows, the ; delimiter is

recognized so that each instance of the query string counts as two queries. As a result, 5 rows (not 10) are inserted.

```
shell> mysqlslap --delimiter=; --number-of-queries=10
--query=use test;insert into t values(null)
```

- **--only-print**

Do not connect to databases. **mysqlslap** only prints what it would have done.

- **--password[=*password*], -p[*password*]**

The password to use when connecting to the server. If you use the short option form (**-p**), you *cannot* have a space between the option and the password. If you omit the *password* value following the **--password** or **-p** option on the command line, **mysqlslap** prompts for one.

Specifying a password on the command line should be considered insecure. See Section 6.1.2.1, “End-User Guidelines for Password Security”. You can use an option file to avoid giving the password on the command line.

- **--pipe, -W**

On Windows, connect to the server using a named pipe. This option applies only if the server supports named-pipe connections.

- **--plugin-dir=*dir_name***

The directory in which to look for plugins. Specify this option if the **--default-auth** option is used to specify an authentication plugin but **mysqlslap** does not find it. See Section 6.3.6, “Pluggable Authentication”.

This option was added in MySQL 5.5.10.

- **--port=*port_num*, -P *port_num***

The TCP/IP port number to use for the connection.

- **--post-query=*value***

The file or string containing the statement to execute after the tests have completed. This execution is not counted for timing purposes.

- **--post-system=*str***

The string to execute using `system()` after the tests have completed. This execution is not counted for timing purposes.

- **--pre-query=*value***

The file or string containing the statement to execute before running the tests. This execution is not counted for timing purposes.

- **--pre-system=*str***

The string to execute using `system()` before running the tests. This execution is not counted for timing purposes.

- **--print-defaults**

Print the program name and all options that it gets from option files.

- **--protocol={TCP|SOCKET|PIPE|MEMORY}**

The connection protocol to use for connecting to the server. It is useful when the other connection parameters normally would cause a protocol to be used other than the one you want. For details on the permissible values, see Section 4.2.2, “Connecting to the MySQL Server”.

- **--query=*value*, -q *value***

The file or string containing the SELECT statement to use for retrieving data.

- **--shared-memory-base-name=*name***

On Windows, the shared-memory name to use, for connections made using shared memory to a local server. This option applies only if the server supports shared-memory

connections.

- **--silent, -s**

Silent mode. No output.

- **--socket=***path*, **-S** *path*

For connections to localhost, the Unix socket file to use, or, on Windows, the name of the named pipe to use.

- **--ssl***

Options that begin with **--ssl** specify whether to connect to the server using SSL and indicate where to find SSL keys and certificates. See Section 6.4.2, “Command Options for Encrypted Connections”.

- **--user=***user_name*, **-u** *user_name*

The MySQL user name to use when connecting to the server.

- **--verbose, -v**

Verbose mode. Print more information about what the program does. This option can be used multiple times to increase the amount of information.

- **--version, -V**

Display version information and exit.

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SEE ALSO

For more information, please refer to the MySQL Reference Manual, which may already be installed locally and which is also available online at <http://dev.mysql.com/doc/>.

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