# Usage: memtier\_benchmark [options]

A memcache/redis NoSQL traffic generator and performance benchmarking tool.

#### **Connection and General Options:**

-s, --server=ADDR Server address (default: localhost)

-p, --port=PORT Server port (default: 6379)

-S, --unix-socket=SOCKET UNIX Domain socket name (default: none)
-P, --protocol=PROTOCOL Protocol to use (default: redis). Other

supported protocols are memcache text,

memcache binary.

-a, --authenticate=CREDENTIALS Authenticate using specified credentials.

A simple password is used for memcache\_text and Redis <= 5.x. <USER>:<PASSWORD> can be

specified for memcache binary or Redis 6.x

or newer with ACL user support.

--tls Enable SSL/TLS transport security
--cert=FILE Use specified client certificate for TLS
--key=FILE Use specified private key for TLS
--cacert=FILE Use specified CA certs bundle for TLS

--tls-skip-verify Skip verification of server certificate

--sni=STRING Add an SNI header

-x, --run-count=NUMBER Number of full-test iterations to perform

-D, --debug Print debug output

--client-stats=FILE Produce per-client stats file

--out-file=FILE Name of output file (default: stdout)

--json-out-file=FILE Name of JSON output file, if not set, will not print to json

--hdr-file-prefix=FILE Prefix of HDR Latency Histogram output files, if not set, will not save latency histogram files

--show-config Print detailed configuration before running

--hide-histogram Don't print detailed latency histogram

--print-percentiles Specify which percentiles info to print on the results table (by default prints percentiles: 50,99,99.9) --cluster-mode Run client in cluster mode Display this help --help Display version information --version **Test Options:** -n, --requests=NUMBER Number of total requests per client (default: 10000) use 'allkeys' to run on the entire key-range -c, --clients=NUMBER Number of clients per thread (default: 50) Number of threads (default: 4) -t. --threads=NUMBER --test-time=SECS Number of seconds to run the test --ratio=RATIO Set:Get ratio (default: 1:10) --pipeline=NUMBER Number of concurrent pipelined requests (default: 1) --reconnect-interval=NUM Number of requests after which re-connection is performed --multi-key-get=NUM Enable multi-key get commands, up to NUM keys (default: 0) --select-db=DB DB number to select, when testing a redis server Use a different random seed for each client --distinct-client-seed random seed based on timestamp (default is constant value) --randomize **Arbitrary command:** --command=COMMAND Specify a command to send in guotes. Each command that you specify is run with its ratio and key-pattern options. For example: --command="set key 5" --command-ratio=2 --command-key-pattern=G To use a generated key or object, enter: \_\_key\_\_: Use key generated from Key Options. data: Use data generated from Object Options. The number of times the command is sent in sequence.(default: 1) --command-ratio Key pattern for the command (default: R): --command-key-pattern G for Gaussian distribution.

R for uniform Random.

S for Sequential.

P for Parallel (Sequential were each client has a subset of the key-range).

## **Object Options:**

-d --data-size=SIZE Object data size (default: 32)

--data-offset=OFFSET Actual size of value will be data-size + data-offset

Will use SETRANGE / GETRANGE (default: 0)

-R --random-data Indicate that data should be randomized

--data-size-list=LIST Use sizes from weight list (size1:weight1,..sizeN:weightN)

when set to R, a random size from the defined data sizes will be used, when set to S, the defined data sizes will be evenly distributed across

the key range, see --key-maximum (default R)

## **Imported Data Options:**

--data-import=FILE Read object data from file

--data-verify Enable data verification when test is complete --verify-only Only perform --data-verify, without any other test

--generate-keys Generate keys for imported objects

--no-expiry Ignore expiry information in imported data

### **Key Options:**

--key-prefix=PREFIX Prefix for keys (default: "memtier-")
--key-minimum=NUMBER Key ID minimum value (default: 0)

--key-maximum=NUMBER Key ID maximum value (default: 10000000)

-PATTERN Set:Get pattern (default: R:R)

G for Gaussian distribution. R for uniform Random.

S for Sequential.

P for Parallel (Sequential were each client has a subset of the key-range).

--key-stddev The standard deviation used in the Gaussian distribution

(default is key range / 6)

--key-median The median point used in the Gaussian distribution

(default is the center of the key range)

**WAIT Options:** 

--wait-ratio=RATIO Set:Wait ratio (default is no WAIT commands - 1:0)

--num-slaves=RANGE WAIT for a random number of slaves in the specified range

--wait-timeout=RANGE WAIT for a random number of milliseconds in the specified range (normal

distribution with the center in the middle of the range)