Steps to execute the benchmark

1. Build `client-benchmark-noop-api-plugin` with `./gradlew :client:client-benchmark-noop-api-pl`
2. Install it on the target host with `bin/elasticsearch-plugin install file:///full/path/to/client-benchmark-noop-api-plugin.zip`.
3. Start Elasticsearch on the target host (ideally *not* on the machine that runs the benchmarks)
4. Run the benchmark with

```
./gradlew -p client/benchmark run --args ' params go here'
```

Everything in the ' gets sent on the command line to JMH. The leading inside the 's is important. Without it parameters are sometimes sent to gradle.

See below for some example invocations.

Example benchmark

In general, you should define a few GC-related settings `-Xms8192M -Xmx8192M -XX:+UseConcMarkSweepGC -verbose:gc -XX:+PrintGCDetails` and keep an eye on GC activity. You can also define `-XX:+PrintCompilation` to see JIT activity.

Bulk indexing Download benchmark data from http://benchmarks.elasticsearch.org.s3.amazonaws.com/corpo and decompress them.

Example invocation:

```
wget http://benchmarks.elasticsearch.org.s3.amazonaws.com/corpora/geonames/documents-2.json.
bzip2 -d documents-2.json.bz2
mv documents-2.json client/benchmark/build
gradlew -p client/benchmark run --args ' rest bulk localhost build/documents-2.json geonames
```

The parameters are all in the 's and are in order:

- Client type: Use either “rest” or “transport”
- Benchmark type: Use either “bulk” or “search”
- Benchmark target host IP (the host where Elasticsearch is running)
- full path to the file that should be bulk indexed
- name of the index
- name of the (sole) type in the index
- number of documents in the file
- bulk size

Search Example invocation:

```
./gradlew -p client/benchmark run --args ' rest search localhost geonames {"query":{"match_p
```

The parameters are in order:

- Client type: Always “rest”

- Benchmark type: Use either “bulk” or “search”
- Benchmark target host IP (the host where Elasticsearch is running)
- name of the index
- a search request body (remember to escape double quotes).
- A comma-separated list of target throughput rates