

HttpClient3vsHttpClient4vsHttpCore

Client side HTTP micro-benchmark

Benchmark source code

<https://svn.apache.org/repos/asf/httpcomponents/benchmark/httpclient/trunk/>

Hardware specs of the system used to execute the benchmark

Intel(R) Core(TM) i7-3517U CPU @ 1.90GHz
Processor cache size: 4096 KB
RAM MemTotal: 3933112 kB

Components versions

- Benchmark revision r1594594
- Apache HttpCore: 4.3.2
- Apache HttpClient: 4.3.4-SNAPSHOT, r1597031
- Apache HttpAsyncClient: 4.0.2-SNAPSHOT, r1597034
- Jetty: 8.1.15.v20140411
- Ning AHC: 1.8.8

Benchmark results

Linux ubuntu 3.13.0-24-generic #47-Ubuntu SMP Fri May 2 23:30:00 UTC 2014 x86_64 x86_64 x86_64 GNU/Linux

java version "1.7.0_21"
Java(TM) SE Runtime Environment (build 1.7.0_21-b11)
Java HotSpot(TM) 64-Bit Server VM (build 23.21-b01, mixed mode)

1'000'000 requests / up to 50 concurrent connections

```
=====
HTTP agent: JRE HTTP 1.7.0_21
-----
1000000 POST requests
-----
Document URI:          http://localhost:44000/echo
Document Length:       2048 bytes

Concurrency level:      50
Time taken for tests:    63.966 seconds
Complete requests:      1000000
Failed requests:         0
Content transferred:    2048000000 bytes
Requests per second:    15633.306 [#/sec] (mean)
-----
=====
HTTP agent: Apache HttpClient 3.1
-----
1000000 POST requests
-----
Document URI:          http://localhost:48602/echo
Document Length:       2048 bytes

Concurrency level:      50
Time taken for tests:    59.289 seconds
Complete requests:      1000000
Failed requests:         0
```

```
Content transferred:      2048000000 bytes
Requests per second:      16866.535 [#/sec] (mean)
=====
HTTP agent: Apache HttpClient (ver: 4.3.4-SNAPSHOT)
-----
1000000 POST requests
-----
Document URI:             http://localhost:53471/echo
Document Length:          2048 bytes

Concurrency level:         50
Time taken for tests:      45.177 seconds
Complete requests:         1000000
Failed requests:           0
Content transferred:       2048000000 bytes
Requests per second:       22135.158 [#/sec] (mean)
=====
HTTP agent: HttpCore NIO (ver: 4.3.2)
-----
1000000 POST requests
-----
Document URI:             http://localhost:43233/echo
Document Length:          2048 bytes

Concurrency level:         50
Time taken for tests:      51.83 seconds
Complete requests:         1000000
Failed requests:           0
Content transferred:       2048000000 bytes
Requests per second:       19293.844 [#/sec] (mean)
=====
HTTP agent: Apache HttpClient (ver: 4.0.2-SNAPSHOT)
-----
1000000 POST requests
-----
Document URI:             http://localhost:41274/echo
Document Length:          2048 bytes

Concurrency level:         50
Time taken for tests:      51.359 seconds
Complete requests:         1000000
Failed requests:           0
Content transferred:       2048000000 bytes
Requests per second:       19470.783 [#/sec] (mean)
=====
HTTP agent: Jetty 8.1.15.v20140411
-----
1000000 POST requests
-----
Document URI:             http://localhost:59923/echo
Document Length:          2048 bytes

Concurrency level:         50
Time taken for tests:      102.148 seconds
Complete requests:         1000000
Failed requests:           0
Content transferred:       2048000000 bytes
Requests per second:       9789.717 [#/sec] (mean)
=====
HTTP agent: Ning async HTTP client 1.8.8
-----
1000000 POST requests
-----
Document URI:             http://localhost:33588/echo
Document Length:          2048 bytes
```

```
Concurrency level:      50
Time taken for tests:    55.961 seconds
Complete requests:      1000000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    17869.588 [#/sec] (mean)
-----
```

100'000 requests / up to 50 concurrent connections (large message body)

```
=====
HTTP agent: JRE HTTP 1.7.0_21
-----
100000 POST requests
-----
Document URI:           http://localhost:50207/echo
Document Length:        204800 bytes

Concurrency level:      50
Time taken for tests:    34.201 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    2923.891 [#/sec] (mean)
-----
=====
HTTP agent: Apache HttpClient 3.1
-----
100000 POST requests
-----
Document URI:           http://localhost:59881/echo
Document Length:        204800 bytes

Concurrency level:      50
Time taken for tests:    36.824 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    2715.62 [#/sec] (mean)
-----
=====
HTTP agent: Apache HttpClient (ver: 4.3.4-SNAPSHOT)
-----
100000 POST requests
-----
Document URI:           http://localhost:60236/echo
Document Length:        204800 bytes

Concurrency level:      50
Time taken for tests:    33.737 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    2964.1047 [#/sec] (mean)
-----
=====
HTTP agent: HttpCore NIO (ver: 4.3.2)
-----
100000 POST requests
-----
Document URI:           http://localhost:55236/echo
Document Length:        204800 bytes

Concurrency level:      50
Time taken for tests:    30.707 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    3256.5864 [#/sec] (mean)
```

```
-----
=====
HTTP agent: Apache HttpClient (ver: 4.0.2-SNAPSHOT)
-----
100000 POST requests
-----
Document URI:          http://localhost:49116/echo
Document Length:       204800 bytes

Concurrency level:      50
Time taken for tests:    32.466 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    3080.1455 [#/sec] (mean)
-----
=====
HTTP agent: Jetty 8.1.15.v20140411
-----
100000 POST requests
-----
Document URI:          http://localhost:41482/echo
Document Length:       204800 bytes

Concurrency level:      50
Time taken for tests:    48.036 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    2081.772 [#/sec] (mean)
-----
=====
HTTP agent: Ning async HTTP client 1.8.8
-----
100000 POST requests
-----
Document URI:          http://localhost:49403/echo
Document Length:       204800 bytes

Concurrency level:      50
Time taken for tests:    41.687 seconds
Complete requests:      100000
Failed requests:        0
Content transferred:    2048000000 bytes
Requests per second:    2398.8293 [#/sec] (mean)
-----
```