



# Load and Stress Testing

- 1) Apache Bench
- 2) Apache JMeter
- 3) NBomber
- 4) NetLing

# Apache Bench

```
ab -c 50 -n 10000 -f TLS1.2 -H "Accept-Encoding: gzip,deflate" https://somesite.com/
```

# Проверка максимального количества запросов с TLS

Команда выполнит 10 000 запросов в 50 потоков и выведет скорость и обработанное количество запросов:

Total transferred: 59560000 bytes

HTML transferred: 52160000 bytes

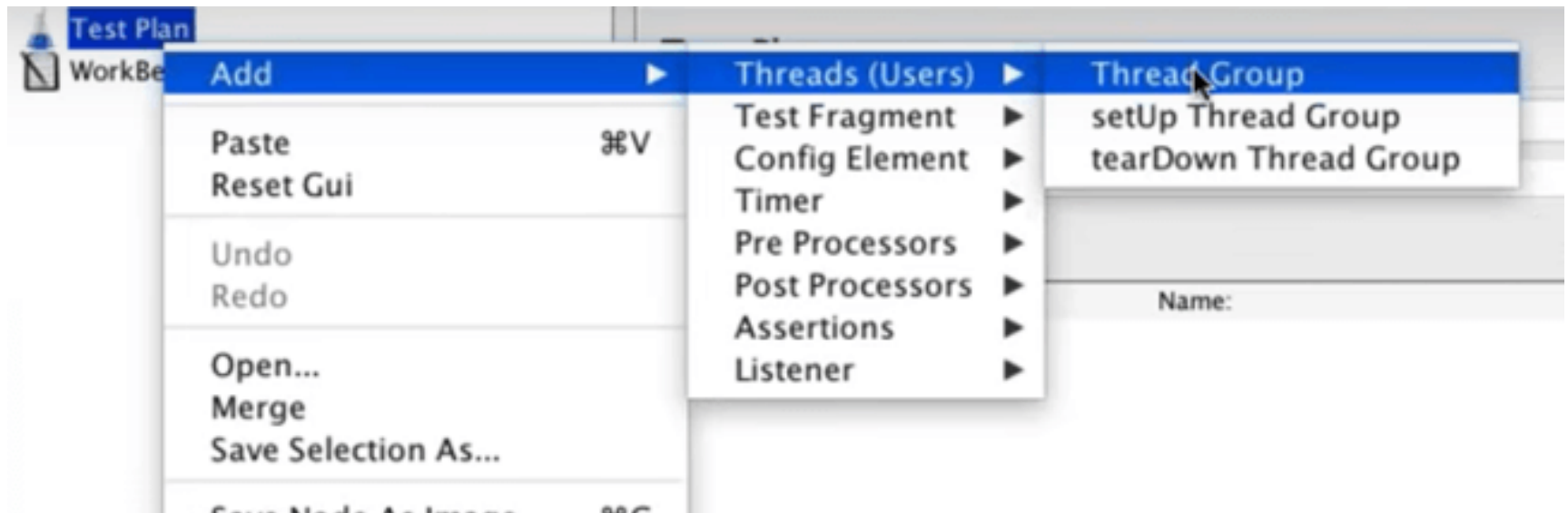
Requests per second: 816.77 [# /sec] (mean)

Time per request: 122.434 [ms] (mean)

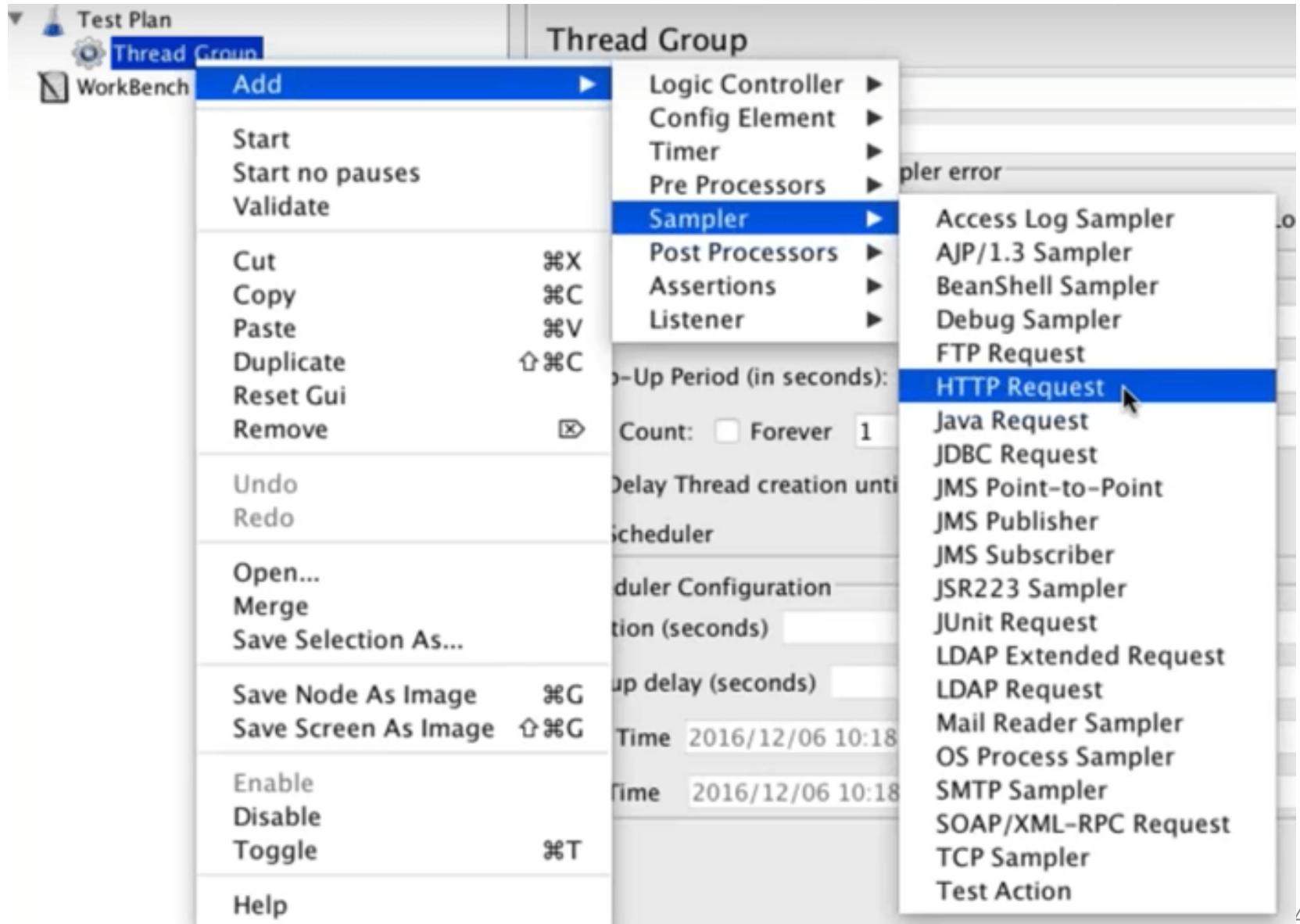
Time per request: 2.449 [ms] (mean, across all concurrent requests)

Transfer rate: 2375.33 [Kbytes/sec] received

# Apache JMeter



# Apache JMeter



# Apache JMeter

**HTTP Request**

Name:

Comments:

**Basic** **Advanced**


**Web Server**

Server Name or IP:  Port Number:

Timeouts (milliseconds)

Connect:  Response:

**HTTP Request**

Implementation:   Protocol [http]:  Method:  Content encoding:

Path:

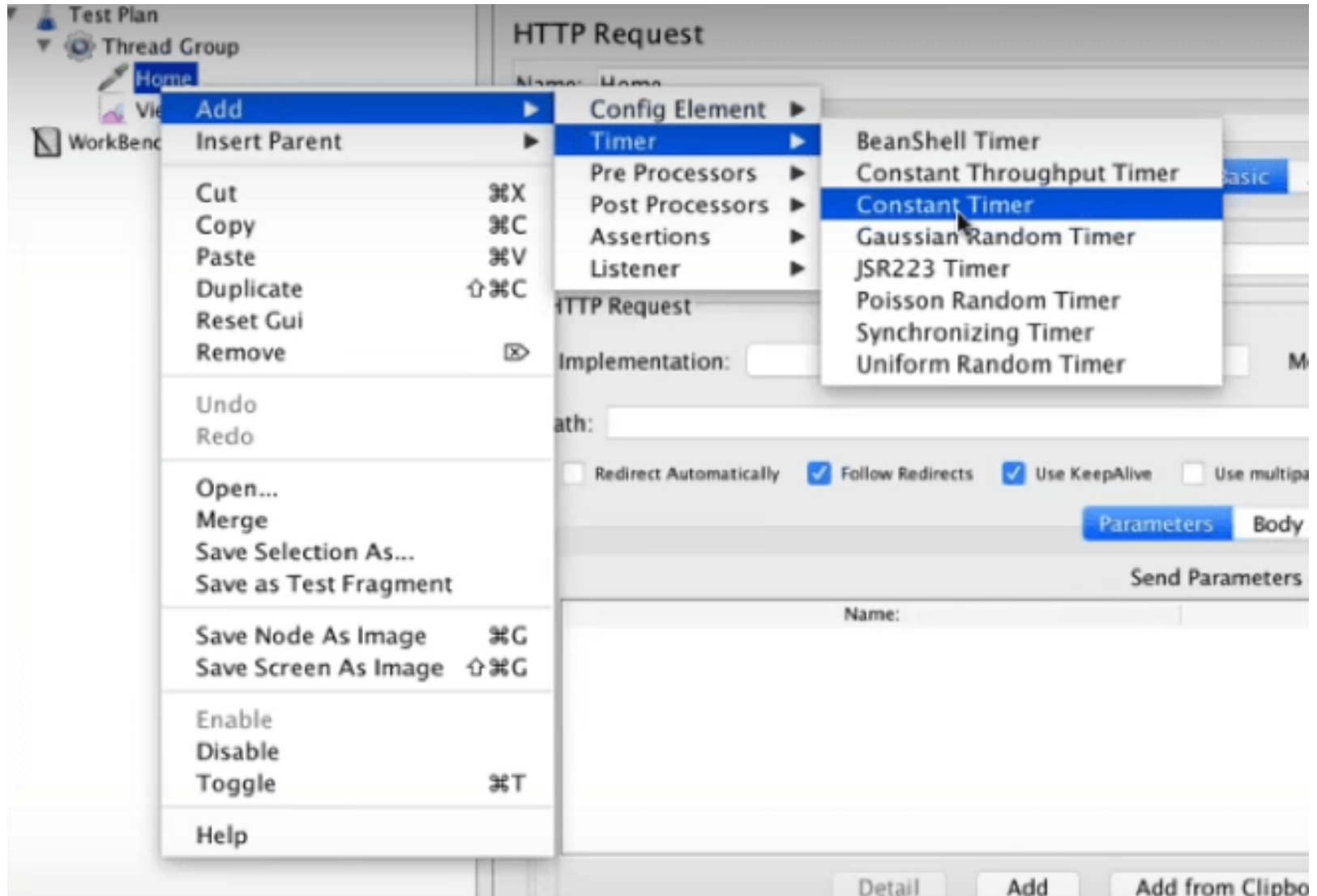
☐ Redirect Automatically ☒ Follow Redirects ☒ Use KeepAlive ☐ Use multipart/form-data for POST ☐ Browser-compatible headers

**Parameters** **Body Data** **Files Upload**

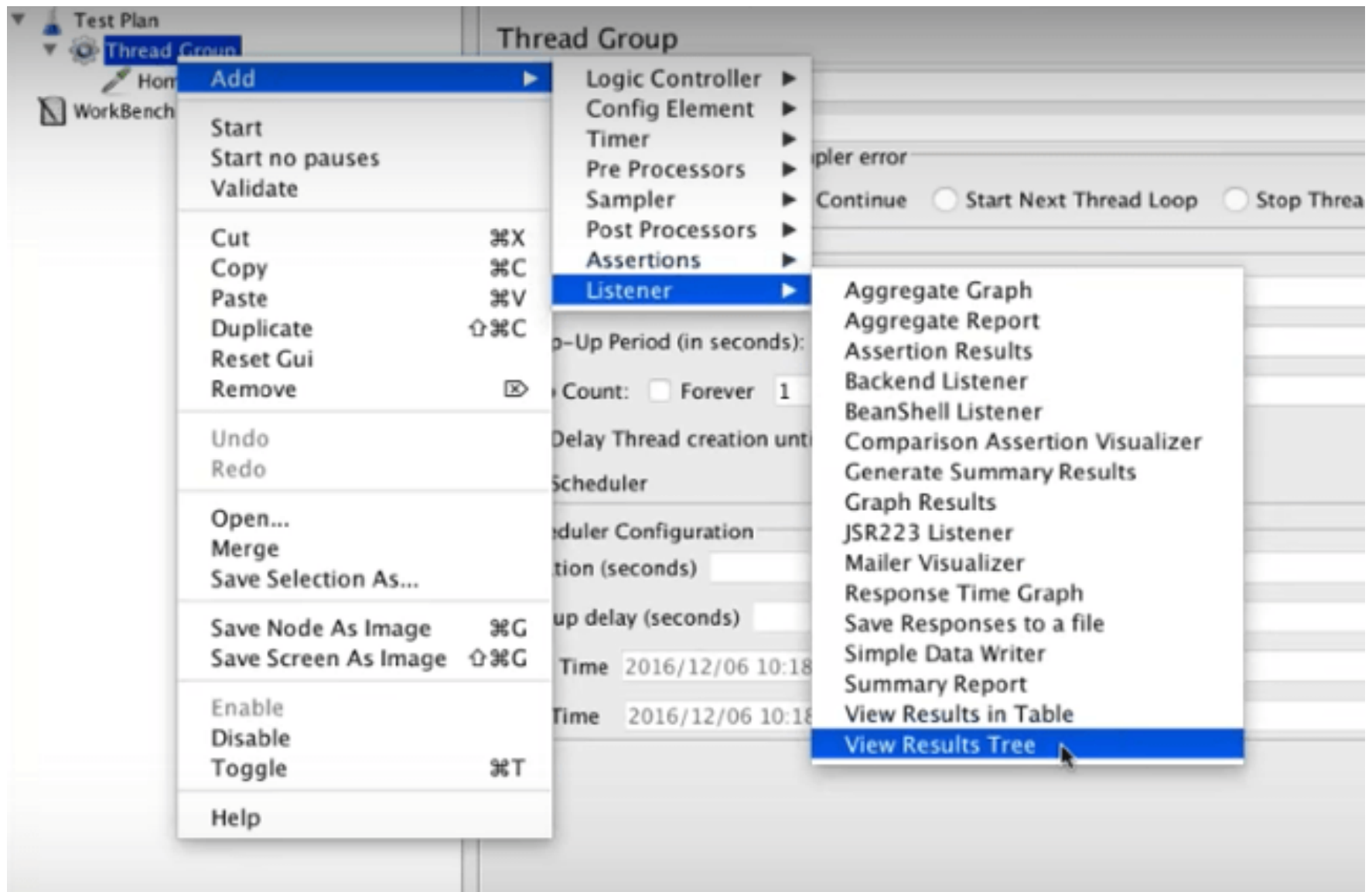
Send Parameters With the Request:

Name:	Value	Encode?	Include Equals?
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

# Apache JMeter



# Apache JMeter



# Apache JMeter

**View Results Tree**

Name: View Results Tree

Comments:

Write results to file / Read from file

Filename  Browse.... Log/Display Only: ☐ Errors ☐ Success

Search:  ☐ Case sensitive ☐ Regular exp. Search Reset

Text   Request Response data

- ✓ Home
- ✓ Home
- ✓ Home

Thread Name: Thread Group 1-1  
Sample Start: 2016-12-06 10:21:15 PST  
Load time: 753  
Connect Time: 511  
Latency: 753  
Size in bytes: 7574  
Sent bytes: 181  
Headers size in bytes: 183  
Body size in bytes: 7391  
Sample Count: 1  
Error Count: 0  
Data type ("text"|"bin"|""): text  
Response code: 200  
Response message: OK

Response headers:  
HTTP/1.1 200 OK  
Cache-Control: no-cache  
Content-Type: text/html; charset=UTF-8  
Date: Tue, 06 Dec 2016 18:21:15 GMT  
Server: Apache  
Content-Length: 7391

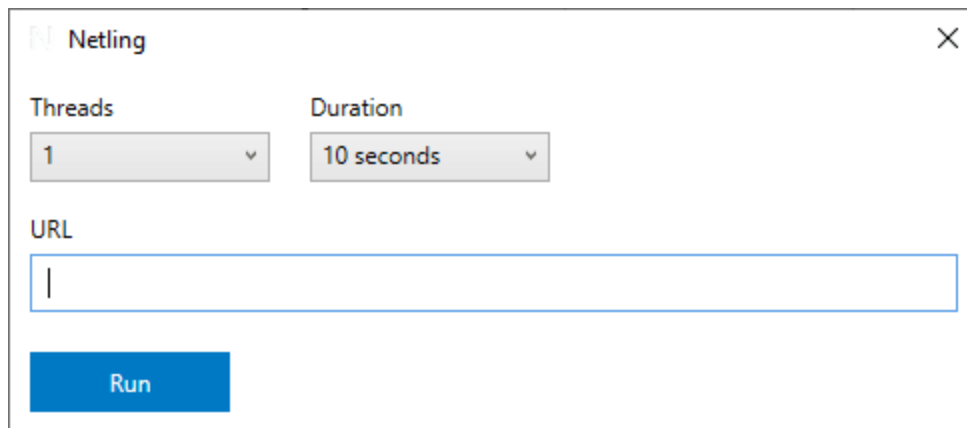
☐ Scroll automatically?

Raw Parsed

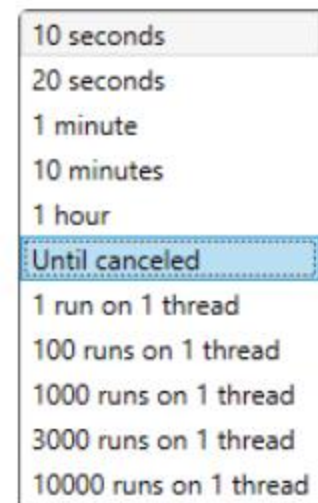


# Netling

- Threads
  - You can configure up to 80 (20 per core)
- Duration
  - You can configure based on your needs



The image shows a window titled "Netling" with a close button (X) in the top right corner. Inside the window, there are two dropdown menus: "Threads" and "Duration". The "Threads" dropdown is set to "1" and the "Duration" dropdown is set to "10 seconds". Below these is a text input field labeled "URL" which is currently empty. At the bottom left of the window is a blue button labeled "Run".

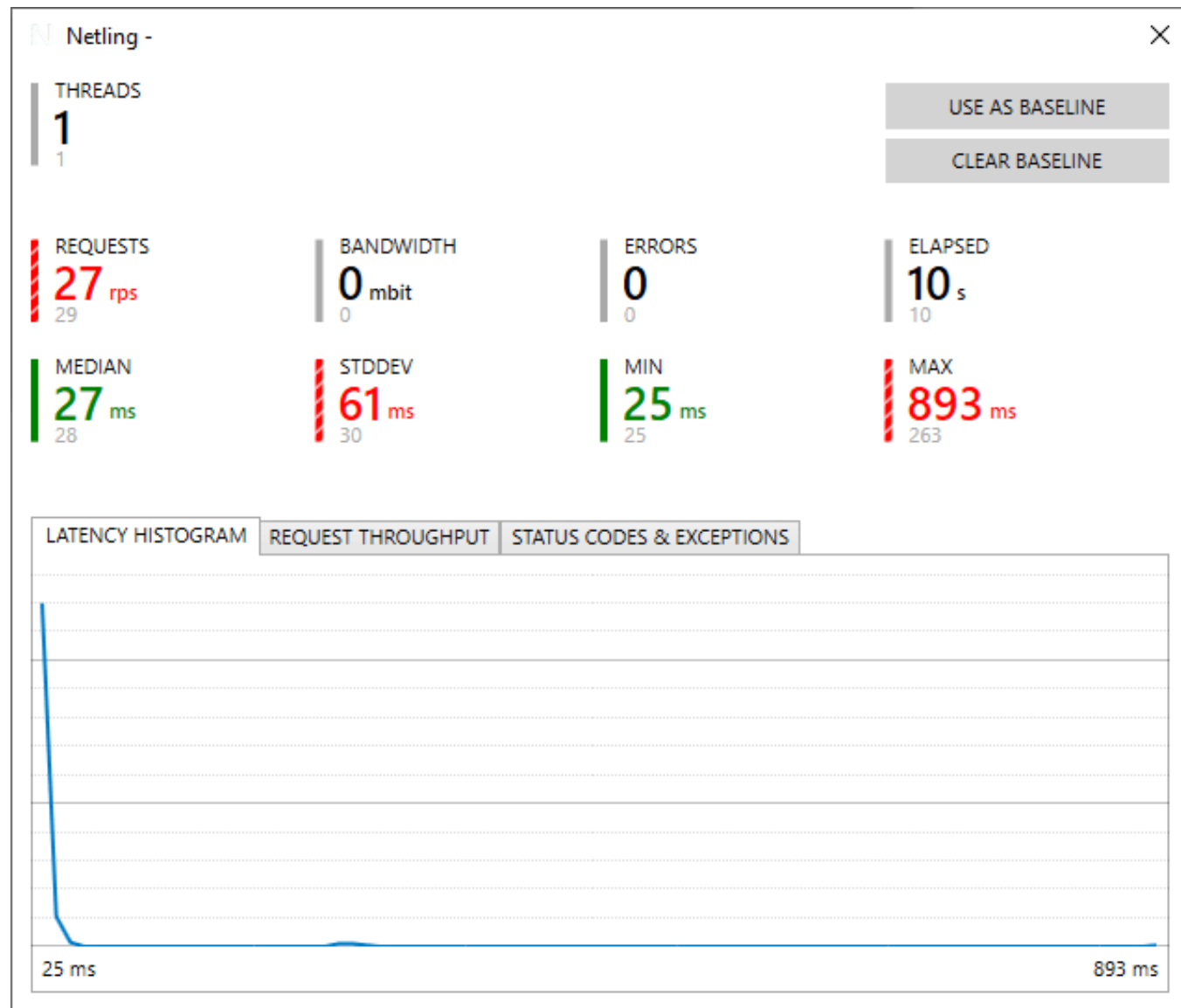


The image shows a dropdown menu for the "Duration" field. The menu is open, showing a list of options: "10 seconds", "20 seconds", "1 minute", "10 minutes", "1 hour", "Until canceled", "1 run on 1 thread", "100 runs on 1 thread", "1000 runs on 1 thread", "3000 runs on 1 thread", and "10000 runs on 1 thread". The "Until canceled" option is highlighted with a blue background.

*Duration*

- URL
  - Valid URL under test e.g. `https://example.com`

# Netling



# NBomber

```
var step = Step.Create("fetch_html_page",
    clientFactory: HttpClientFactory.Create(),
    execute: context =>
{
    var request = Http.CreateRequest("GET", "https://nbomber.com")
        .WithHeader("Accept", "text/html");

    return Http.Send(request, context);
}

var scenario = ScenarioBuilder
    .CreateScenario("simple_http", step)
    .WithWarmUpDuration(TimeSpan.FromSeconds(5))
    .WithLoadSimulations(
        Simulation.InjectPerSec(rate: 100, during: TimeSpan.FromSeconds(30))
    );

// creates ping plugin that brings additional reporting data
var pingPluginConfig = PingPluginConfig.CreateDefault(new[] {"nbomber.com"});
var pingPlugin = new PingPlugin(pingPluginConfig);

NBomberRunner
    .RegisterScenarios(scenario)
    .WithWorkerPlugins(pingPlugin)
    .Run();
```

# NBomber

PROBLEMS 6 OUTPUT DEBUG CONSOLE TERMINAL

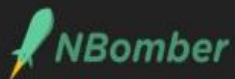
1: dotnet



anton.mo@UA1-2001-LT MINGW64 ~/Desktop/pet\_projects/NBomber.Http/examples/NBomber.Http.FSharp (master)

\$ dotnet run

# NBomber reports



Menu



Environment



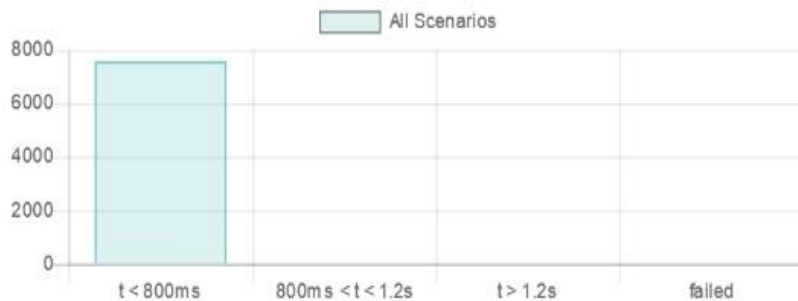
Global



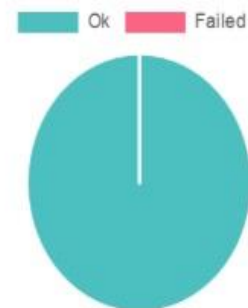
Statistics for Scenario: **test nbomber.com**, Duration: **00:00:05**, RPS: **1513**, Concurrent Copies: **50**

	Request count			Request time				Request time percentile				Data transfer			
step	All	OK	Failed	RPS	min	mean	max	50%	75%	95%	StdDev	min, Kb	mean, Kb	max, Kb	all, MB
GET request	7567	7567	0	1513	28	32	146	31	32	36	10	6.98	6.98	6.98	51.57

Indicators

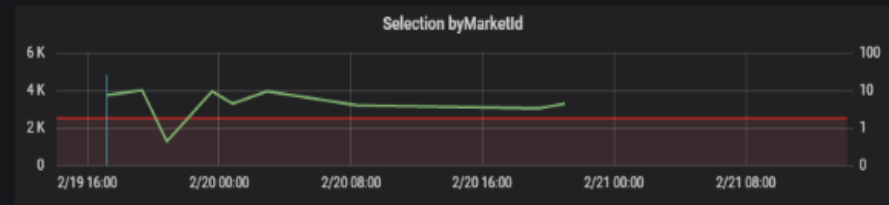
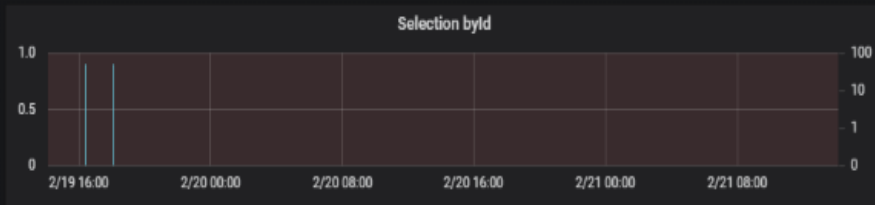
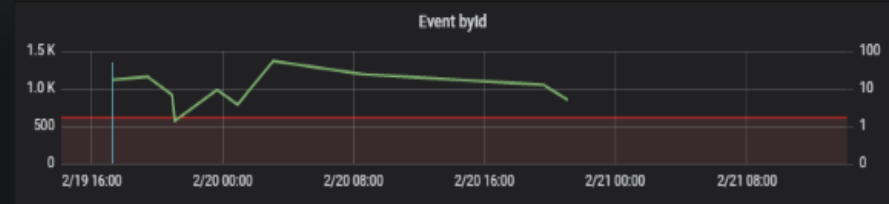
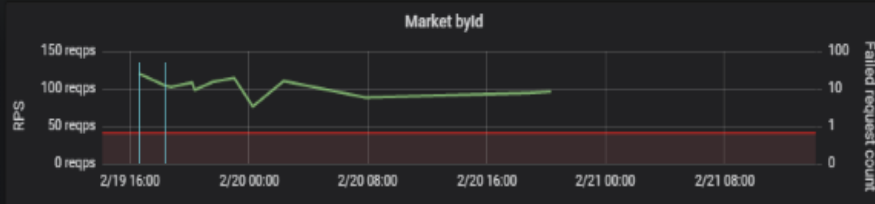


Number of requests



# NBomber reports

## ▼ Entities by Ids



## ▼ Entities \$top queries

