

Performance Testing with JMeter

Sep 13, 2019

Suppose you built a web service

Analyze Sentiment

Language
english ▾

Enter text
great movie

Enter up to 50000 characters

Analyze

Tokenize Text

Enter text
In Düsseldorf I took my hat off. But I can't put it back on.

Enter up to 50000 characters

Tokenize

Stem Text

Choose stemmer
Porter ▾

Enter text
Stemming is funnier than a bummer says the sushi loving computer scientist

Enter up to 50000 characters

Stem

Tag and Chunk Text

Choose tagger/chunker
Default Tagger & NE Chunker ▾

Enter text
San Francisco is very foggy.

Enter up to 50000 characters

Tag & Chunk

Can your service handle 2000 users at the same time?

Can your service handle a lot of users in a short period of time?

How many concurrent users can your service deal with?

.....

Setup Local Web Service

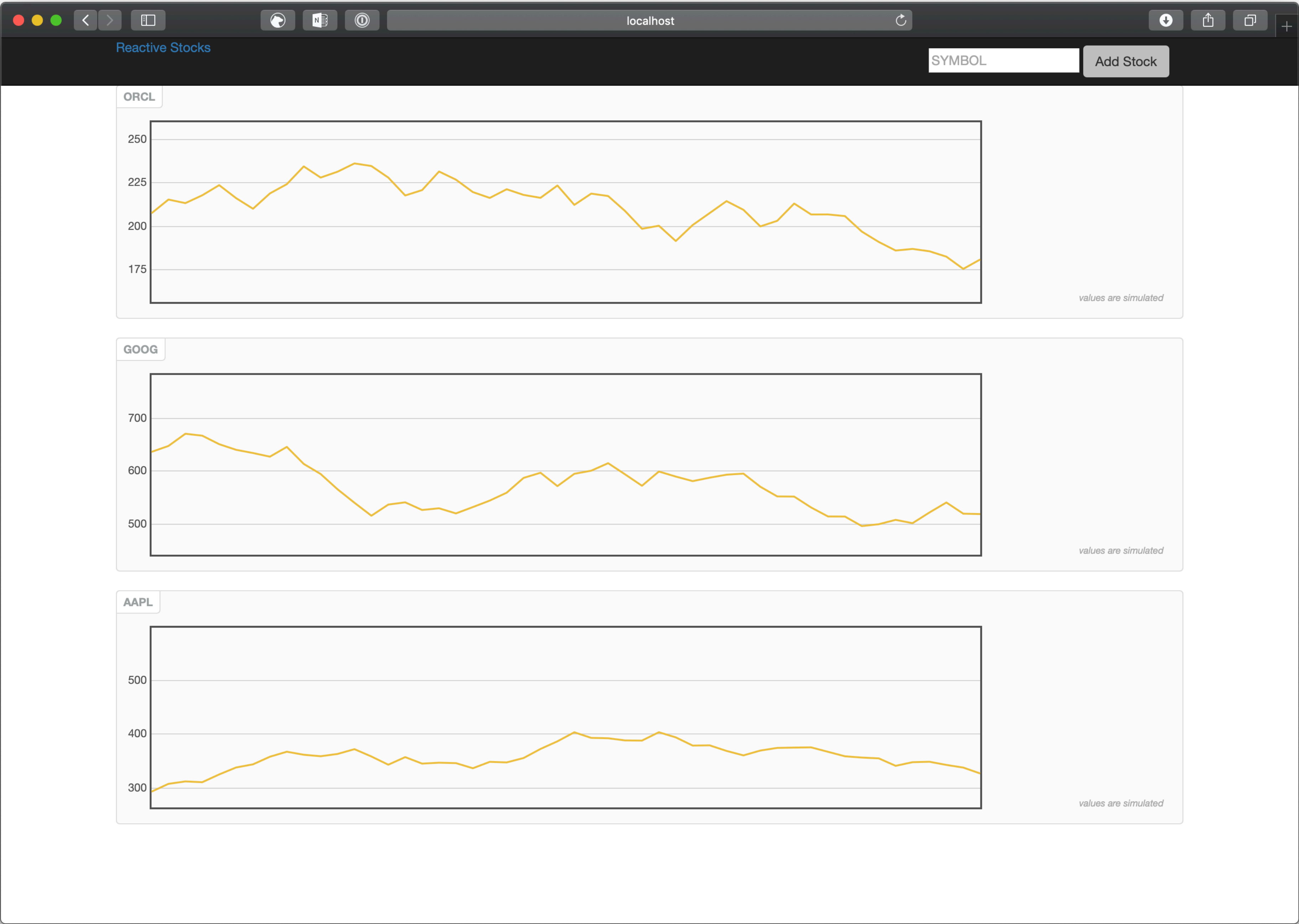
- Download webservice-1.0.zip from Box: <https://cmu.box.com/s/4ya8tol7sm6p37o0x8h2jumpa63m9kz9>
- Unzip and go into the unzipped folder in console (or cmd if using Windows)
- Execute the following

```
./webservice -Dplay.http.secret.key=abcdefghijklmn
```

Or

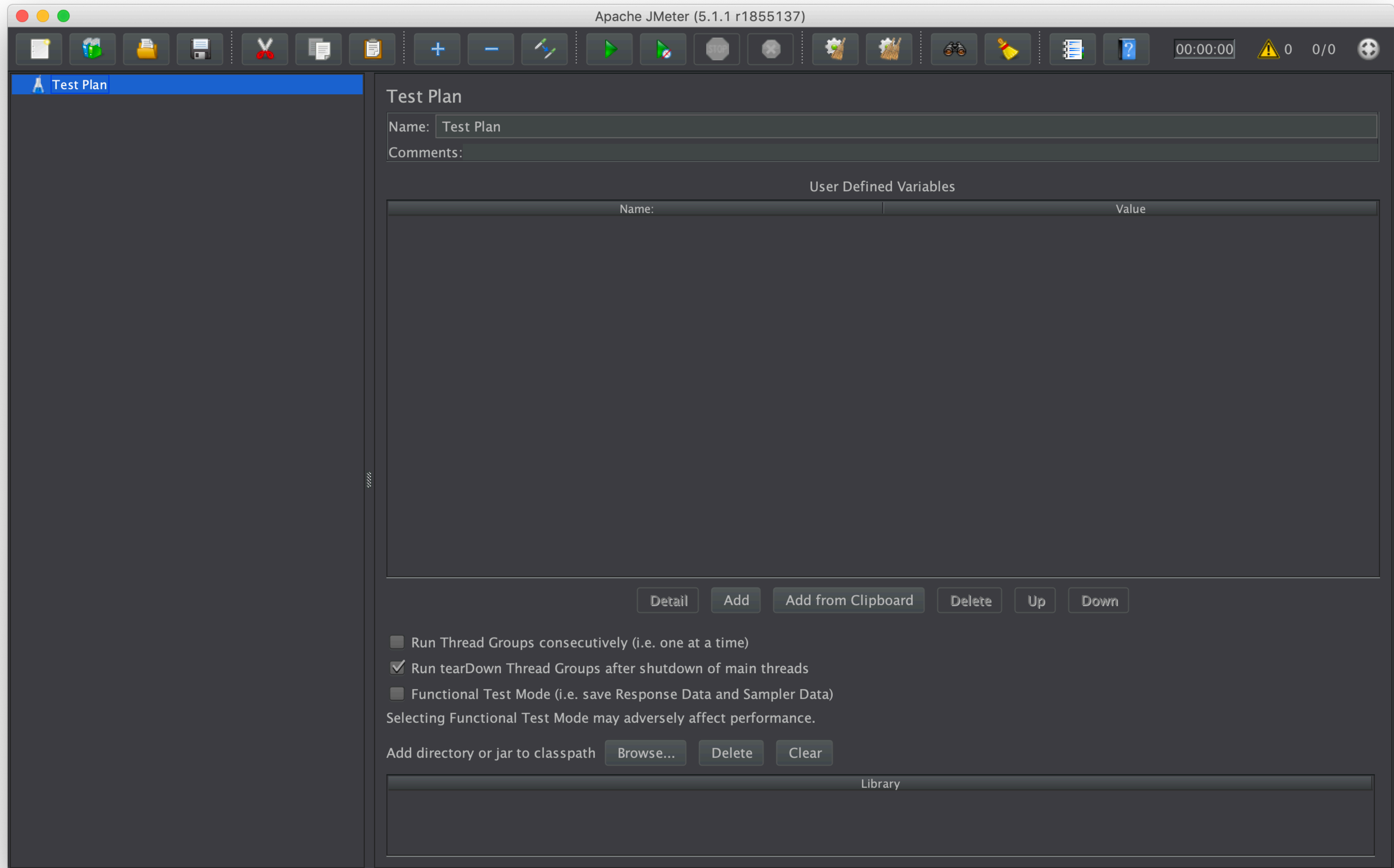
```
webservice.bat -Dplay.http.secret.key=abcdefghijklmn
```

- Open a browser and go to localhost:9000



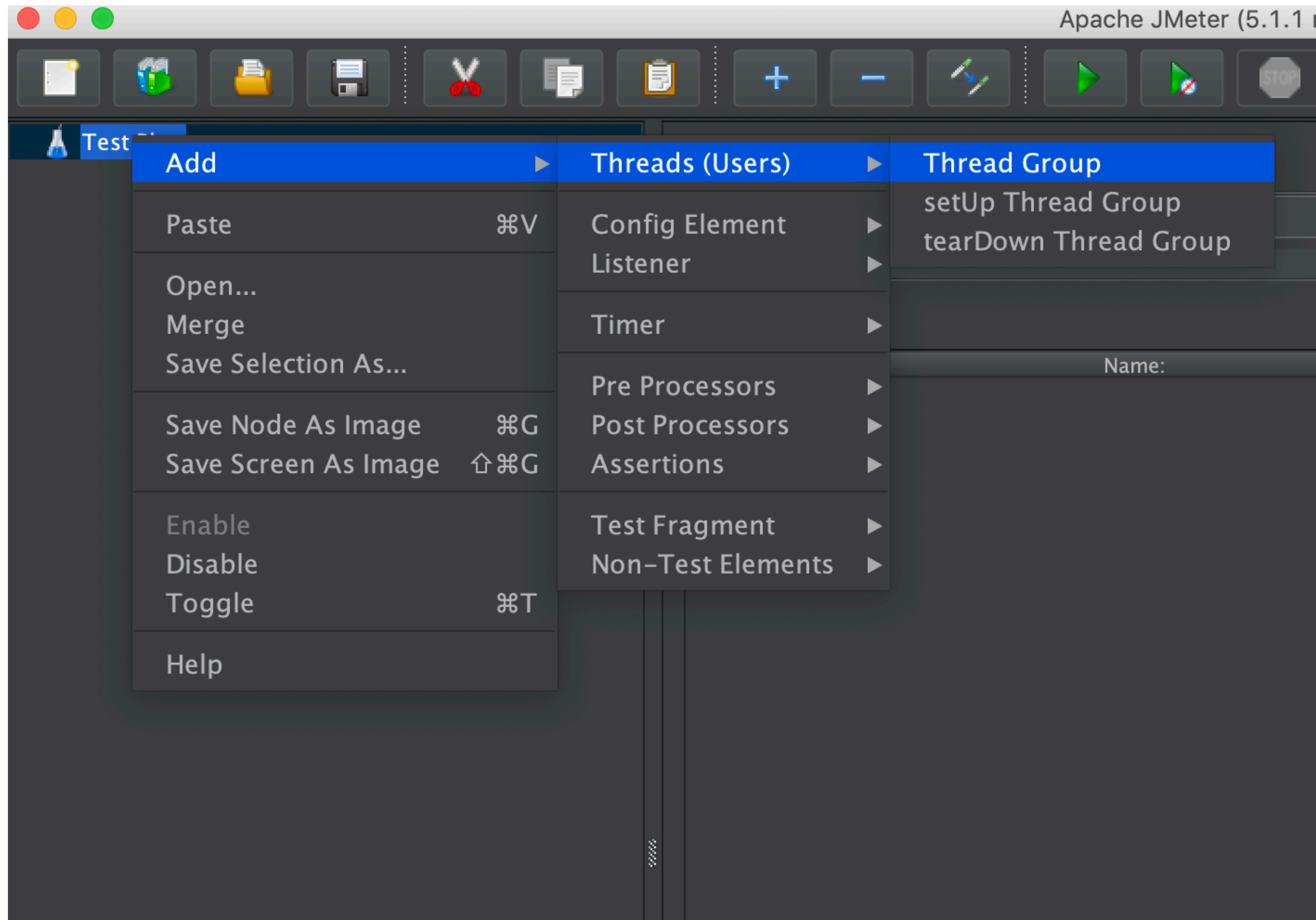
Run JMeter

- Download latest JMeter following this link:
 - https://jmeter.apache.org/download_jmeter.cgi
- Unzip
- Execute `bin/jmeter` (Mac/Linux) or `bin\jmeter.bat` (Windows)



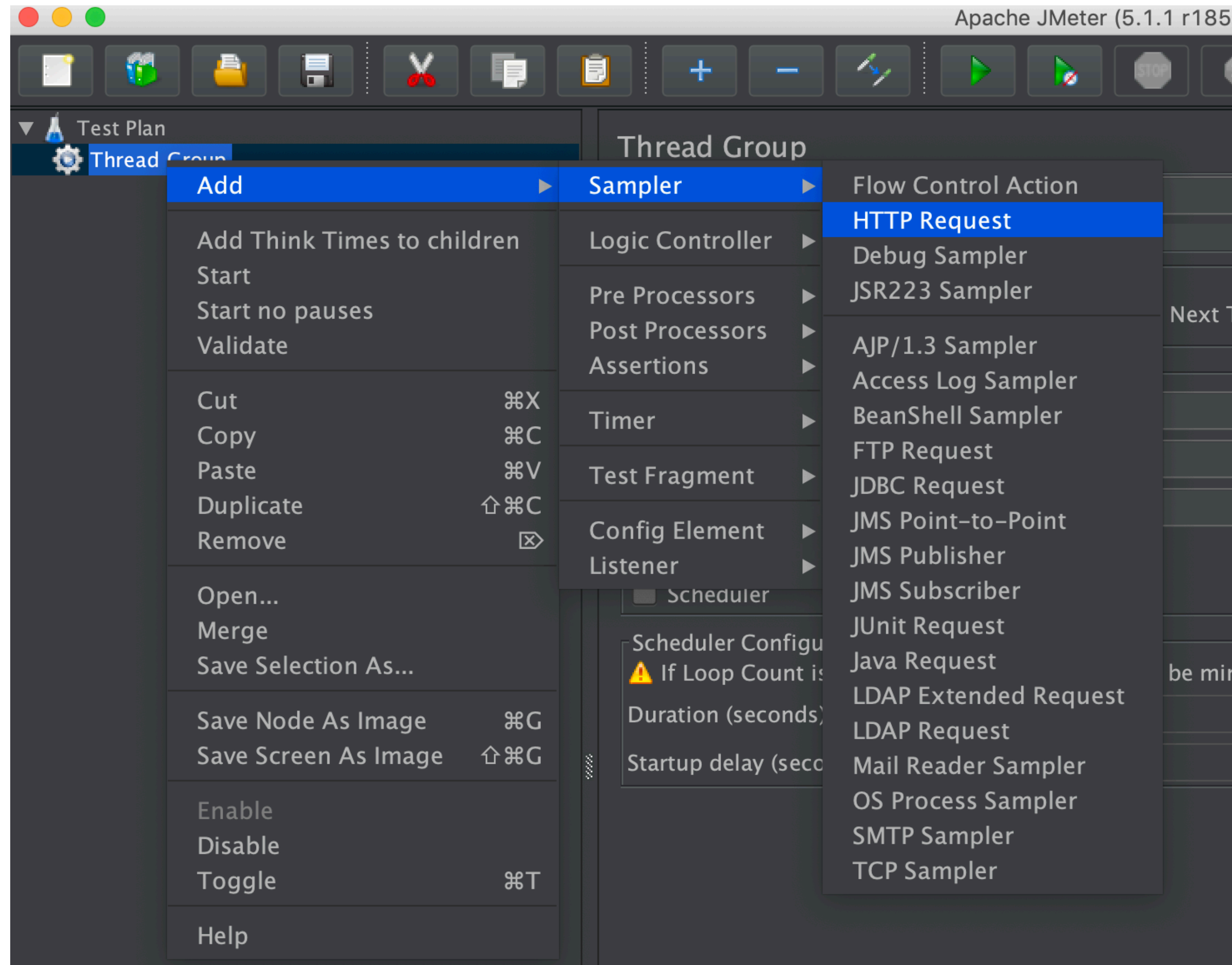
Can your service handle 2000 users at the same time?

Step 1: Adding a Test Group



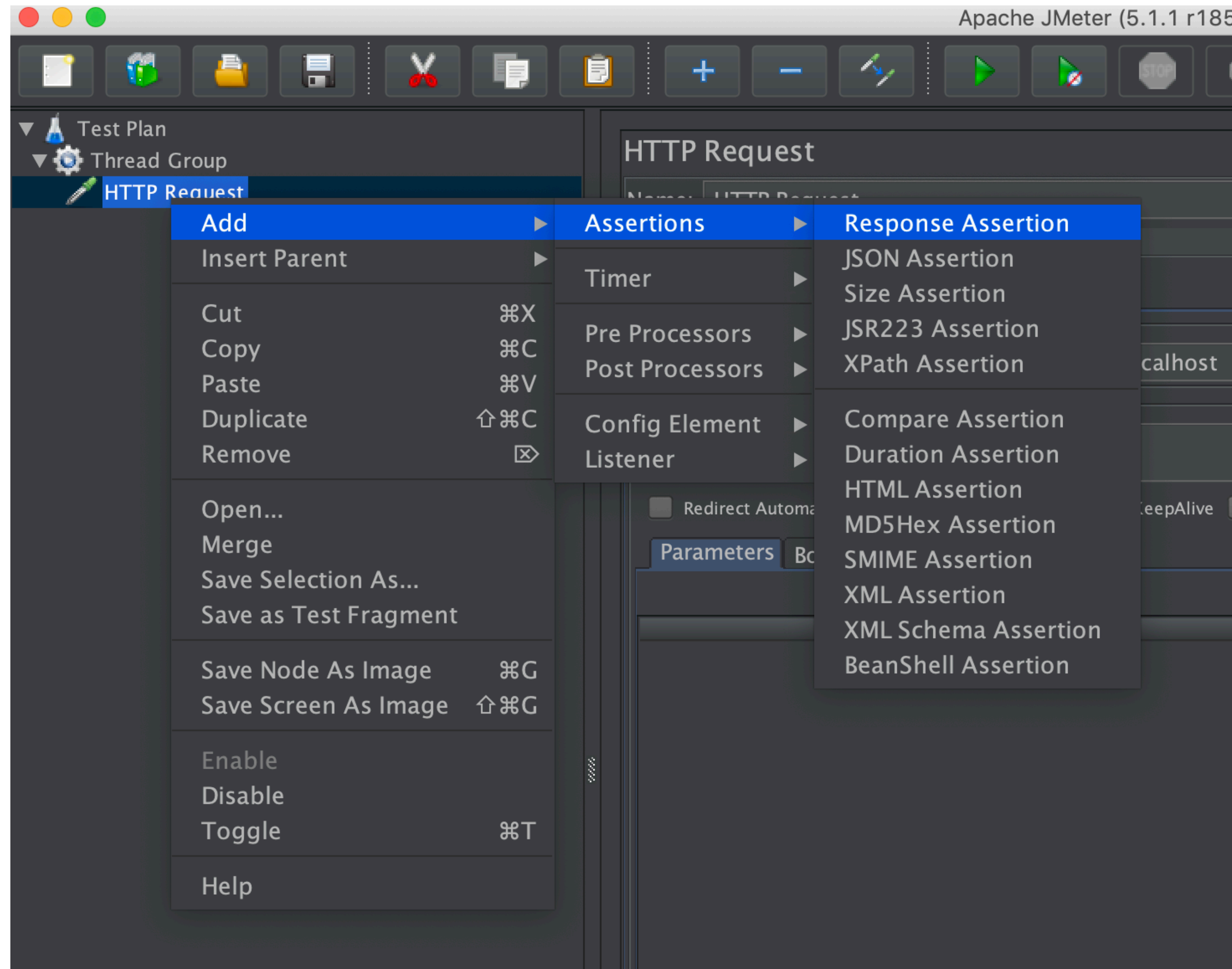
Number of threads: 2000
(simulating 2000 users)
Ramp-up Period: 20
(increasing load, create 100
users per second)
Loop count: 1
(repeat once)

Step 2: HTTP Request



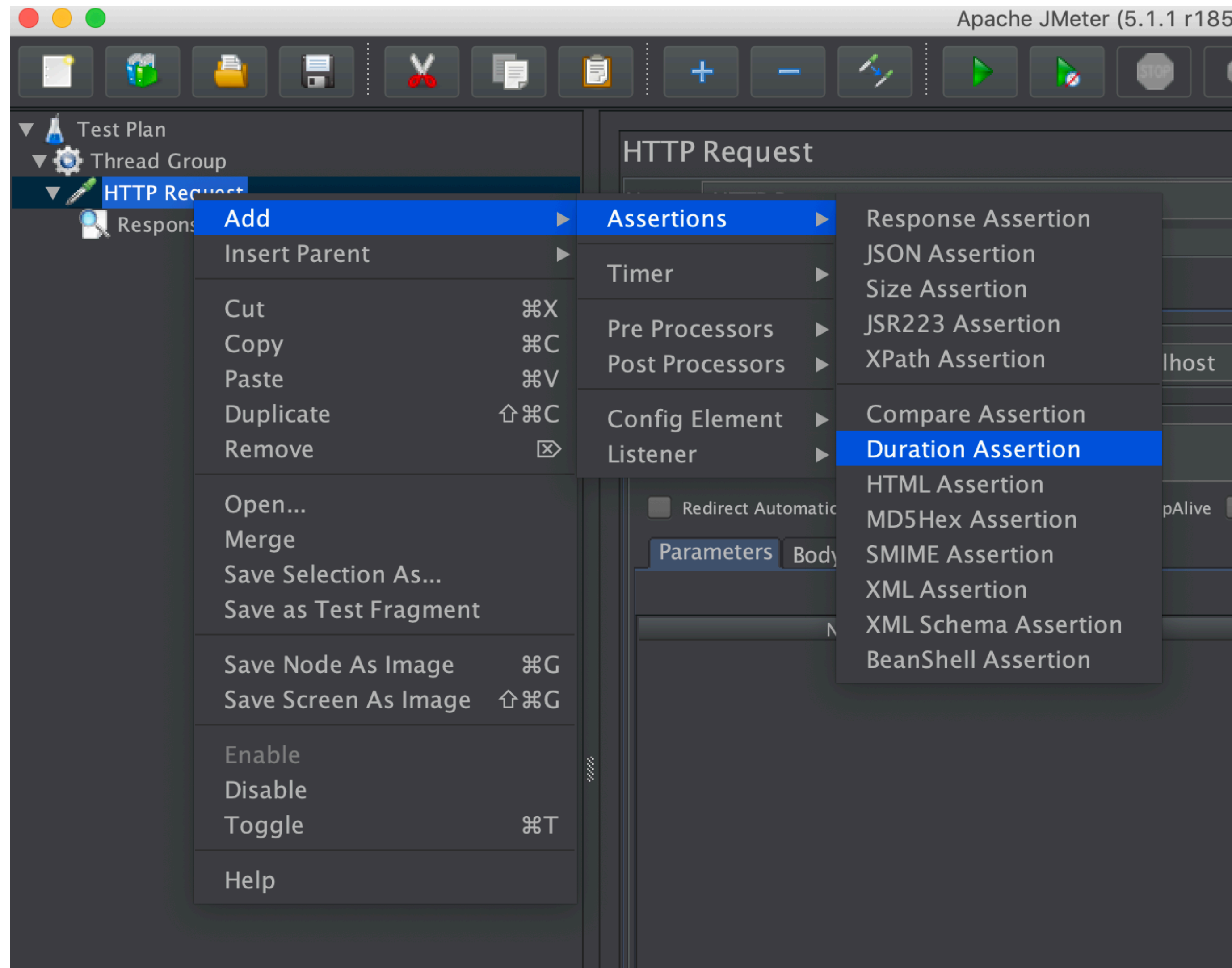
Server Name or IP: localhost
Port Number: 9000

Step 3: Assert Response Code



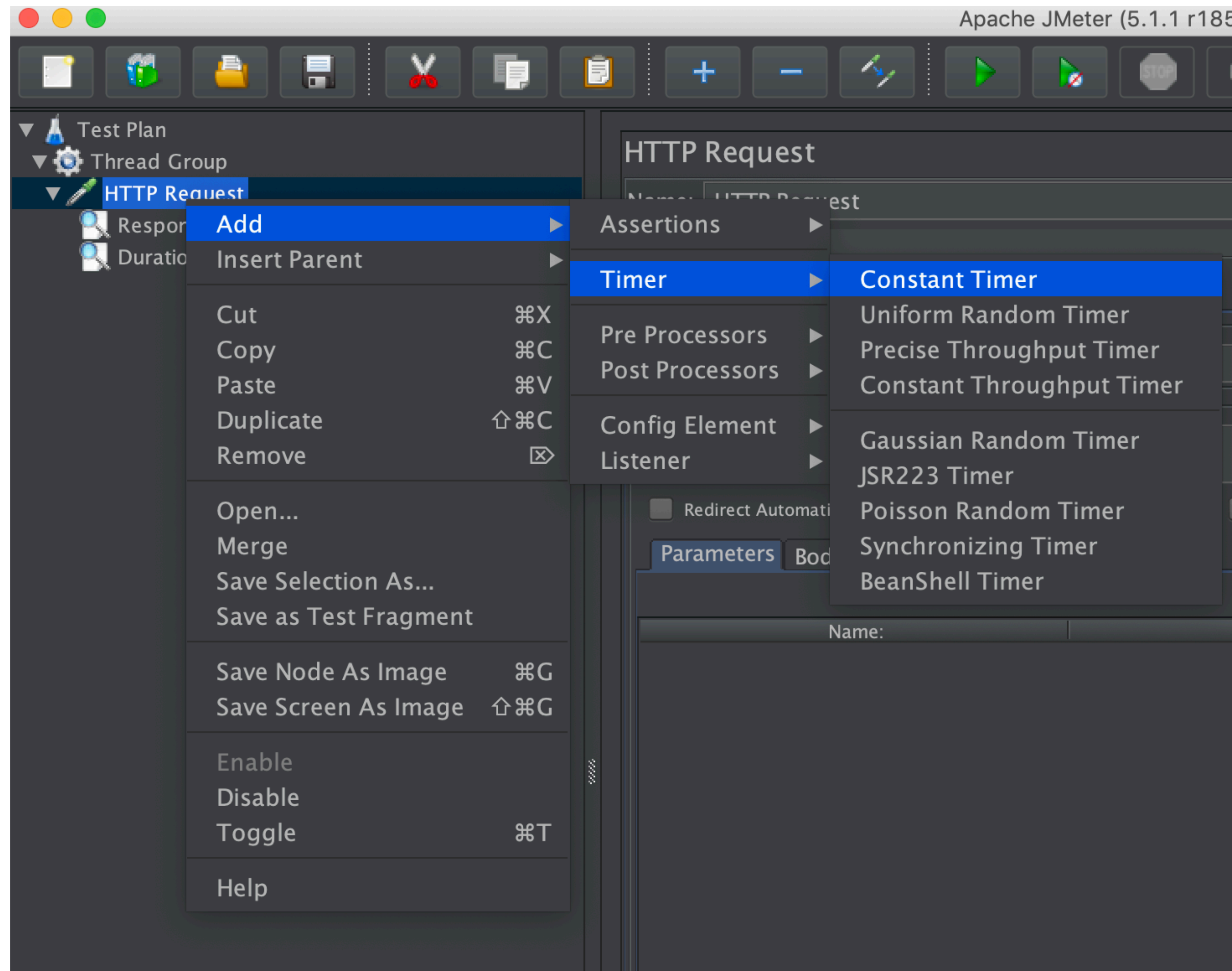
Field to Test: Response Code
Pattern Matching Rule:
Equals
Patterns to Test: 200

Step 4: Assert Duration



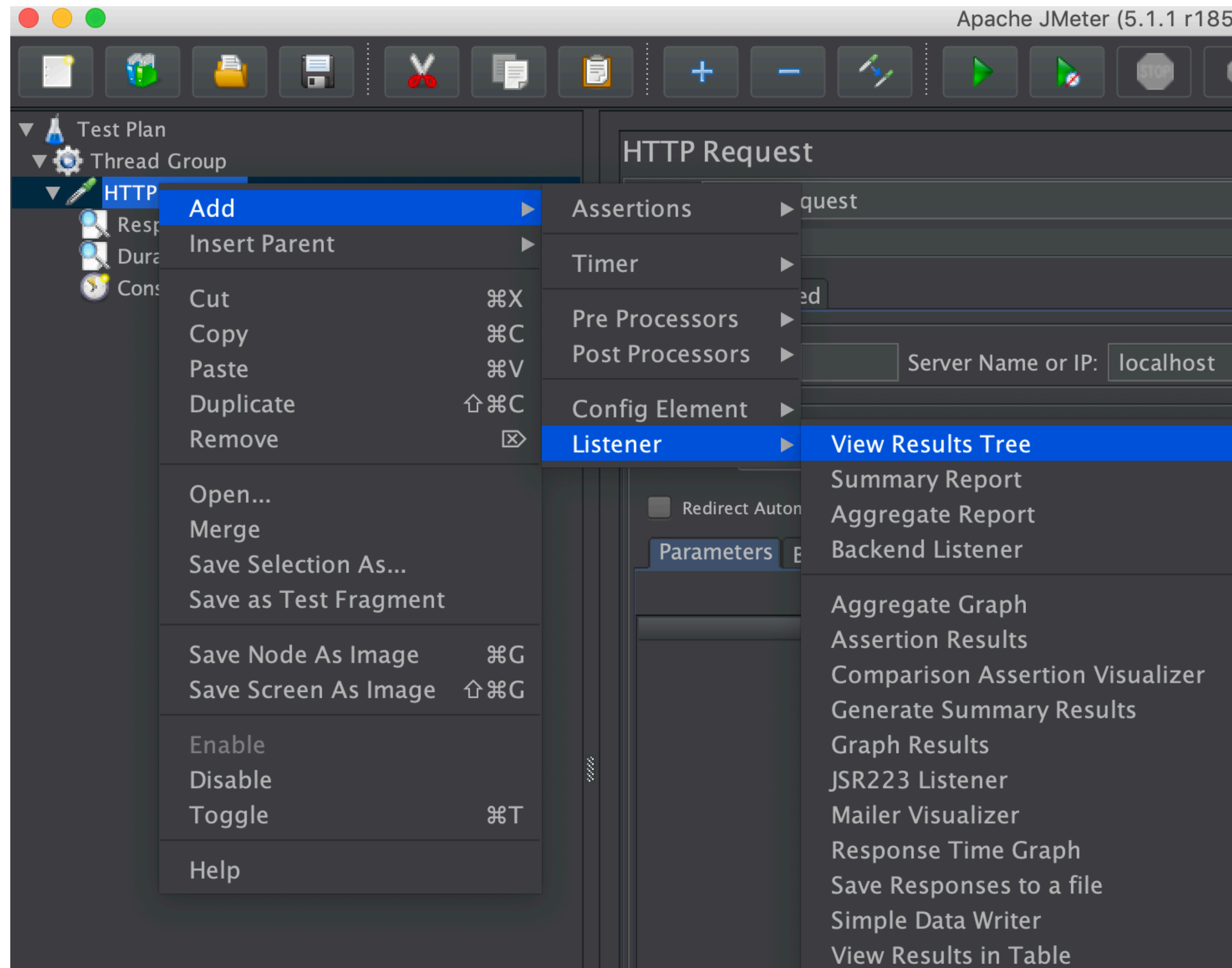
Duration in milliseconds: 100

Step 5: Timer



Thread Delay: 20000

Step 6: Report



Summary Report
View Results Tree
Response Time Graph

Step 7: Save and Run

- In general, use the GUI to setup a test plan.
- Use CLI for actual testing (why?)
- Remember to save! JMeter might crash.

Your turn...

Can your service handle a lot of users in a short period of time?

How many concurrent users can your service deal with?

More on JMeter

- Simulate user input
- Different connections other than HTTP
- <https://jmeter.apache.org/usermanual/index.html>