

Performance Testing Jmeter Report

Introduction

This report presents the performance test results of the Petstore OctoPerf website (<https://petstore.octoperf.com>). The primary goal of these tests is to measure the system's ability to handle different levels of user load, ranging from 1 to 100 concurrent users, and to monitor the website's response time, throughput, and error rates.

The specific focus was on two core pages:

1. **Home Page:** The main landing page of the Petstore.
2. **Category Page:** The "Cats" category page, which lists products under the cat category.

Test Plan

The performance testing was conducted using **Apache JMeter**. The following configuration was used:

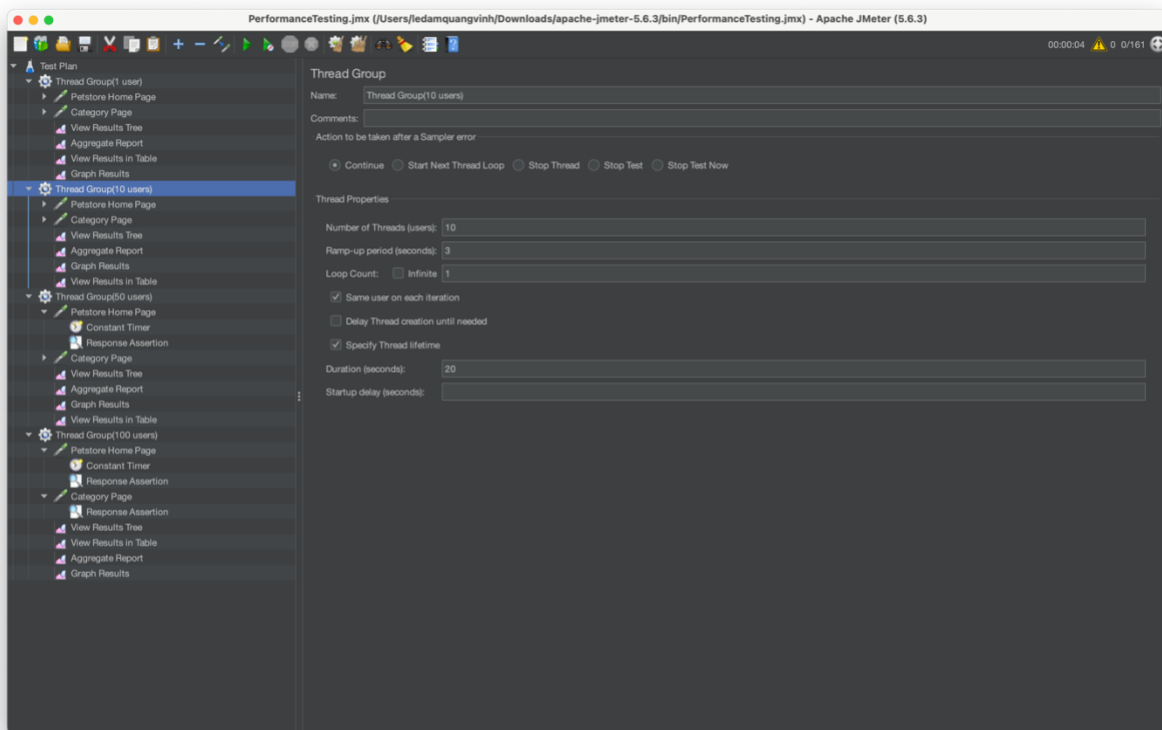
Thread Groups

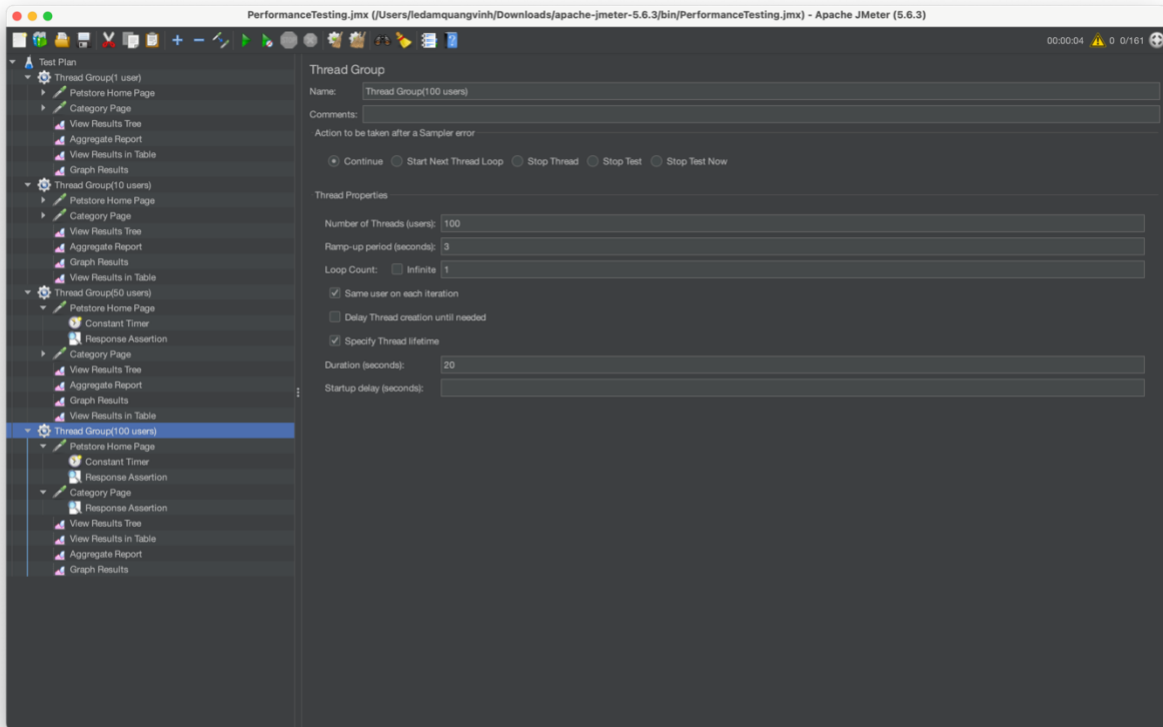
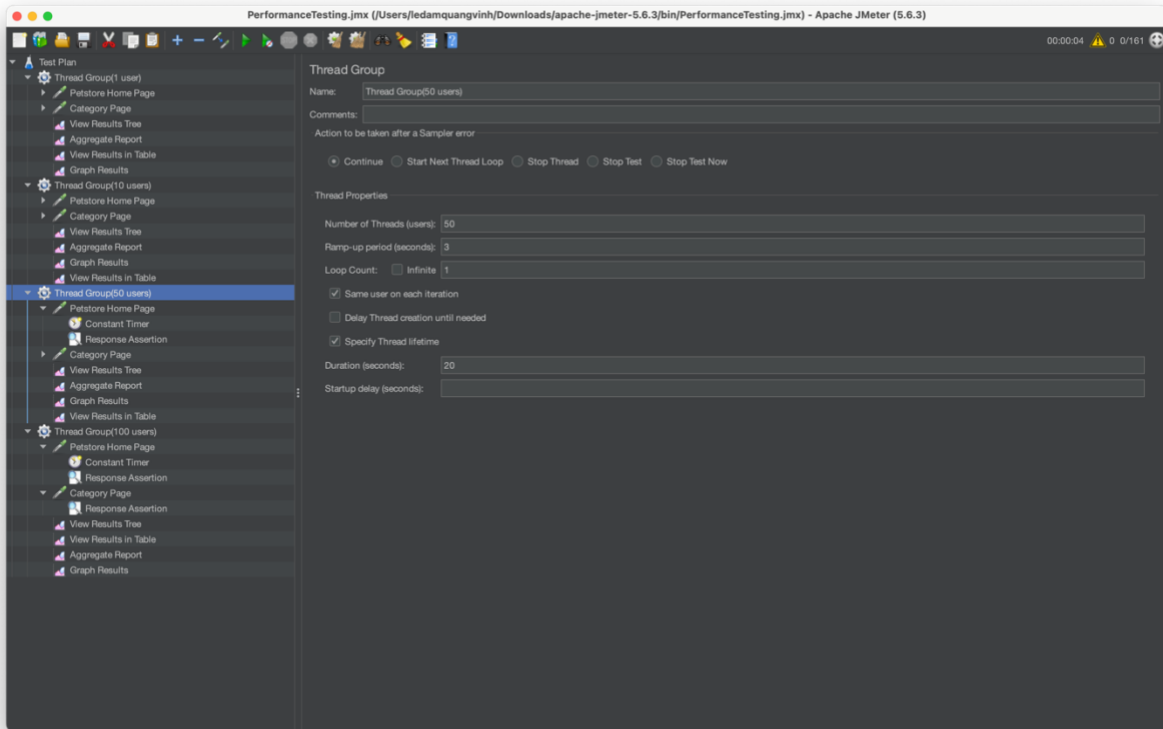
Four thread groups were created to simulate different numbers of users:

- **1 User:** Simulated a single user accessing the site.
- **10 Users:** Simulated 10 concurrent users.
- **50 Users:** Simulated 50 concurrent users.
- **100 Users:** Simulated 100 concurrent users.

Ramp-Up Time: Each thread group had a ramp-up time of **3 seconds**.

Duration: Each test was scheduled to run for **20 seconds**.





HTTP Requests

The following HTTP requests were added for each thread group:

1. **Petstore Home Page:** A GET request to the home page.
2. **Category Page (Cats):** A GET request to the "Cats" category page.

Timers

A **300ms Constant Timer** was added to simulate a delay in loading the home page.

Assertions

- **Response Code Assertion:** Each HTTP request was expected to return a status code of **200**.
- **Text Response Assertions:** For the "Cats" category page, text assertions were added to ensure the response contained the product names **"Manx"** and **"Persian"**.
- **Response Time Assertion:** The response time was expected to remain within **1000 milliseconds** for most requests.

The screenshot displays two instances of the JMeter HTTP Request configuration window. The top window is for the 'Petstore Home Page' request, and the bottom window is for the 'Category Page' request. Both windows are set to the 'Basic' tab and show the following configuration:

- Name:** Petstore Home Page (top) / Category Page (bottom)
- Comments:** (Empty)
- Web Server:**
 - Protocol [http]:** https
 - Server Name or IP:** petstore.octoperf.com
 - Port Number:** (Empty)
- HTTP Request:**
 - Method:** GET
 - Path:** /actions/Catalog.action (top) /actions/Catalog.action?viewCategory=&categoryId=CATS (bottom)
 - Content encoding:** (Empty)
- Options:**
 - ☐ Redirect Automatically
 - ☒ Follow Redirects
 - ☒ Use KeepAlive
 - ☐ Use multipart/form-data
 - ☐ Browser-compatible headers
- Parameters:** (Tab selected, showing an empty table with headers: Name, Value, URL Encode?, Content-Type, Include Equals?)

Listeners

The following listeners were used to capture and analyze the test data:

- **Aggregate Report:** To view a summary of the performance metrics.
- **View Results Tree:** To inspect individual request responses.
- **Graph Results:** To visualize response time trends over the duration of the test.

Test Results

The results for each user group are presented below.

3.1 1 User Test Results

- **Average Response Time:** 515 ms.

- **Median Response Time:** 248 ms.
- **90% Line:** 783 ms.
- **Throughput:** 1.9 requests/second.
- **Error Rate:** 0%.

Aggregate Report

Name:

Aggregate Report

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only:

☐ Errors

☐ Successes

Configure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB...	Sent KB/sec
Petstore Ho...	1	783	783	783	783	783	783	783	0.00%	1.3/sec	7.09	0.18
Category Pa...	1	248	248	248	248	248	248	248	0.00%	4.0/sec	16.89	0.69
TOTAL	2	515	248	783	783	783	248	783	0.00%	1.9/sec	9.45	0.30

3.2 10 User Test Results

- **Average Response Time:** 483 ms.
- **Median Response Time:** 256 ms.
- **90% Line:** 738 ms.
- **Throughput:** 5.5 requests/second.
- **Error Rate:** 0%.

Aggregate Report

Name:

Aggregate Report

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only:

☐ Errors

☐ Successes

Configure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB...	Sent KB/sec
Petstore Ho...	10	725	728	750	750	758	694	758	0.00%	2.9/sec	16.35	0.42
Category Pa...	10	241	240	255	255	256	227	256	0.00%	3.5/sec	14.62	0.60
TOTAL	20	483	256	738	750	758	227	758	0.00%	5.5/sec	26.89	0.86

3.3 50 User Test Results

- **Average Response Time:** 474 ms.
- **Median Response Time:** 264 ms.
- **90% Line:** 732 ms.
- **Throughput:** 25.7 requests/second.
- **Error Rate:** 0%.

Aggregate Report

Name:

Aggregate Report

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only:

☐ Errors

☐ Successes

Configure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB...	Sent KB/sec
Petstore Ho...	50	712	709	744	752	777	668	777	0.00%	13.6/sec	75.79	1.93
Category Pa...	50	236	234	246	247	264	219	264	0.00%	15.7/sec	65.90	2.69
TOTAL	100	474	264	732	744	767	219	777	0.00%	25.7/sec	125.31	4.02

3.4 100 User Test Results

- **Average Response Time:** 472 ms.
- **Median Response Time:** 262 ms.
- **90% Line:** 724 ms.
- **Throughput:** 51.3 requests/second.

- **Error Rate: 0%.**

Aggregate Report

Name:

Aggregate Report

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only:

☐ Errors

☐ Successes

Configure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB...	Sent KB/sec
Petstore Ho...	100	708	707	740	747	769	662	773	0.00%	27.3/sec	151.41	3.86
Category Pa...	100	236	235	250	254	261	220	262	0.00%	31.9/sec	133.40	5.44
TOTAL	200	472	262	724	740	769	220	773	0.00%	51.3/sec	249.97	8.02

Conclusion

Key Findings:

1. **Scalability:** The website demonstrates excellent scalability, with response times remaining relatively stable even as the number of concurrent users increased from 1 to 100.
2. **Throughput:** The throughput increased proportionally with the number of users, indicating that the server is capable of handling concurrent requests efficiently.
3. **Zero Errors:** No errors were encountered during the testing, which suggests that the server and application are robust and stable under the test conditions.