Assignment – 5

Which components have you used in J-meter.

J-Meter offers a variety of components used to design and execute test plans. Common components include:

1. **Thread Group**: Controls the number of threads (virtual users) and their behaviour.
2. **Samplers**: Send requests to the server (e.g., HTTP Request, FTP Request).
3. **Listeners**: Display test results (e.g., Graph Results, Summary Report).
4. **Timers**: Introduce delays between requests.
5. **Assertions**: Validate the response from the server.
6. **Pre-processors and Postprocessors**: Modify requests or extract data from responses.
7. **Config Elements**: Define default settings for Samplers (e.g., HTTP Header Manager).

How can you set the number of Virtual users in J-meter?

The number of virtual users is controlled using the **Thread Group** component:

1. Navigate to the **Thread Group** in your test plan.
2. Set the following parameters:
    - **Number of Threads (users)**: The total number of virtual users.
    - **Ramp-up Period (seconds)**: The time to start all users gradually.
    - **Loop Count**: The number of iterations for each user.

How J-Meter interacts with the application?

J-Meter simulates real-world user behaviour by sending requests (HTTP, HTTPS, FTP, JDBC, etc.) to the application under test. It measures the application's response times, throughput, and other metrics to evaluate performance.

Number of VUsers Required for Load Testing

The number of VUsers depends on:

- Application size and user base.
- Expected traffic levels.
- Test objectives (e.g., stress testing vs. load testing). A baseline often involves 1-2% of the actual user base for moderate load testing.

Relationship between Response Time and Throughput

- **Response Time**: The time taken for a request to complete.
- **Throughput**: The number of requests processed per unit time.

  Formula: throughput: number of request processed / unit time.

  - As throughput increases, response time decrease.
  - Ex. If 20 request process in per minute, the capacity to handle requests per minute is 25 request. So we increase the throughput capacity 25 to 50 the response time is decrease.

What is Automation Testing?

Automation testing involves using tools or scripts to execute test cases automatically, reducing manual effort. It improves accuracy, speed, and test coverage.

- **Which Are The Browsers Supported By Selenium Ide?**

- Google Chrome
- Mozilla Firefox

- **What are the benefits of Automation Testing?**

1. Faster execution compared to manual testing.
2. Consistent and repeatable tests.
3. Supports regression testing.
4. Increases test coverage.
5. Reduces human error.
6. Enables continuous integration (CI/CD).

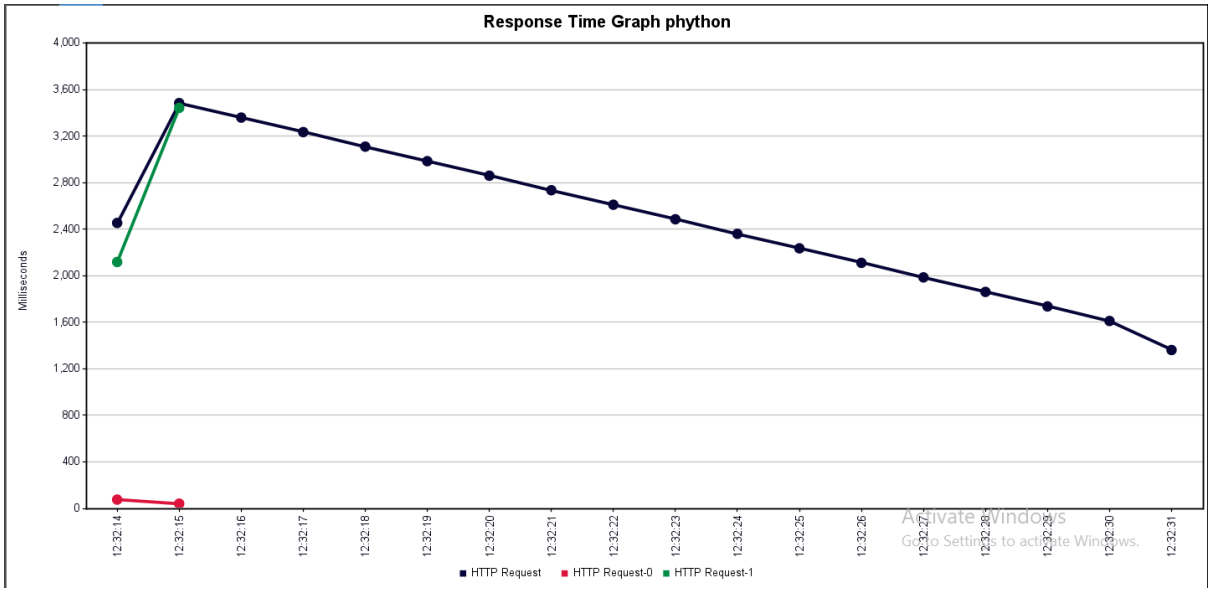
- **What are the advantages of Selenium?**

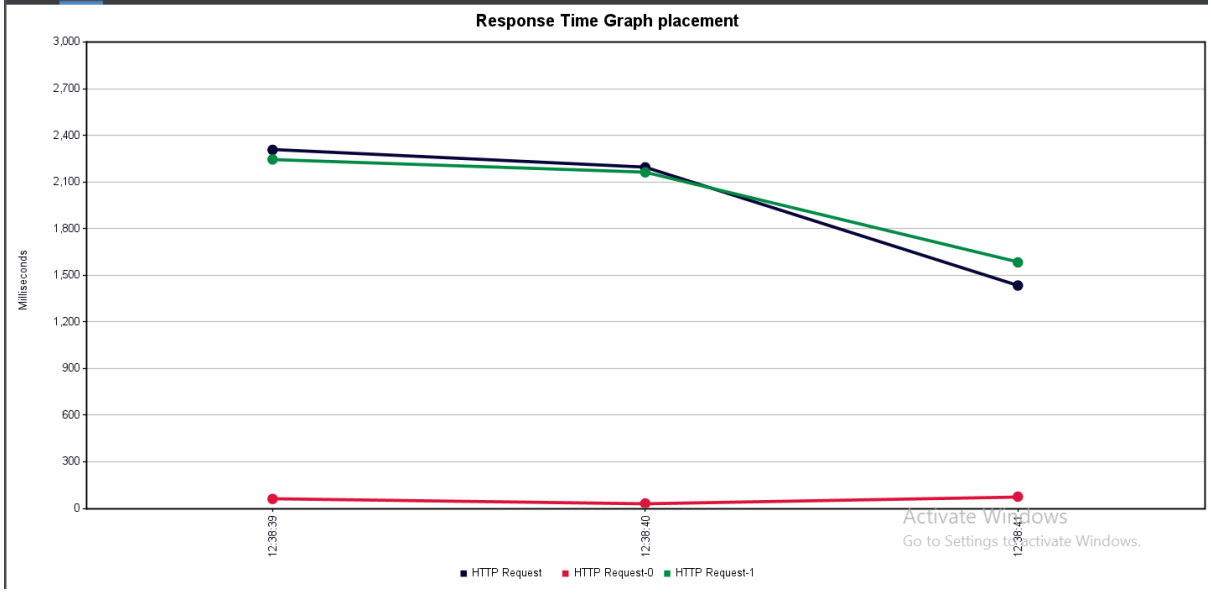
1. Open-source and free to use.
2. Supports multiple programming languages (e.g., Java, Python, C#).
3. Cross-platform compatibility.
4. Extensive browser support (Chrome, Firefox, Safari, Edge, etc.).
5. Integrates well with CI/CD tools.

- **Why testers should opt for Selenium and not QTP?**

1. **Cost**: Selenium is free, while QTP (now UFT) is commercial.
2. **Platform Support**: Selenium supports Windows, Mac, and Linux; QTP is Windows-only.
3. **Browser Support**: Selenium supports more browsers than QTP.
4. **Flexibility**: Selenium supports multiple programming languages, while QTP mainly uses VBScript.
5. **Community**: Selenium has a larger, active community for support.
6.

- **To test the Performance testing on “Tops Technologies website”**





Response Time Graph

Name: Response Time Graph location

Comments:

Write results to file / Read from file

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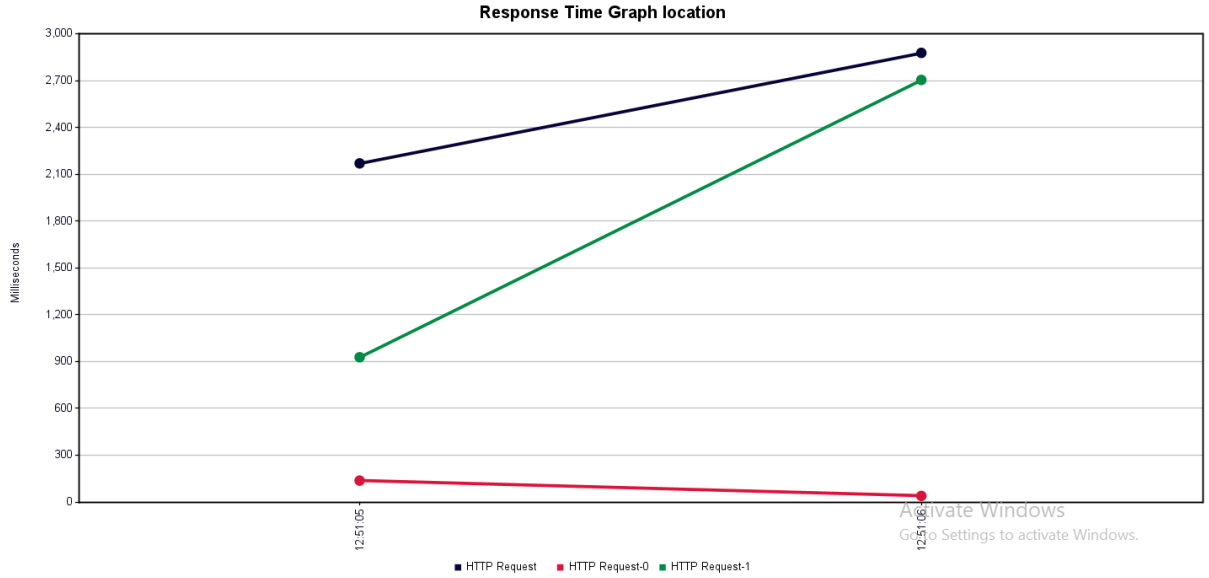
Settings Graph



Response Time Graph

Name: Response Time Graph webinar

Comments:

Write results to file / Read from file

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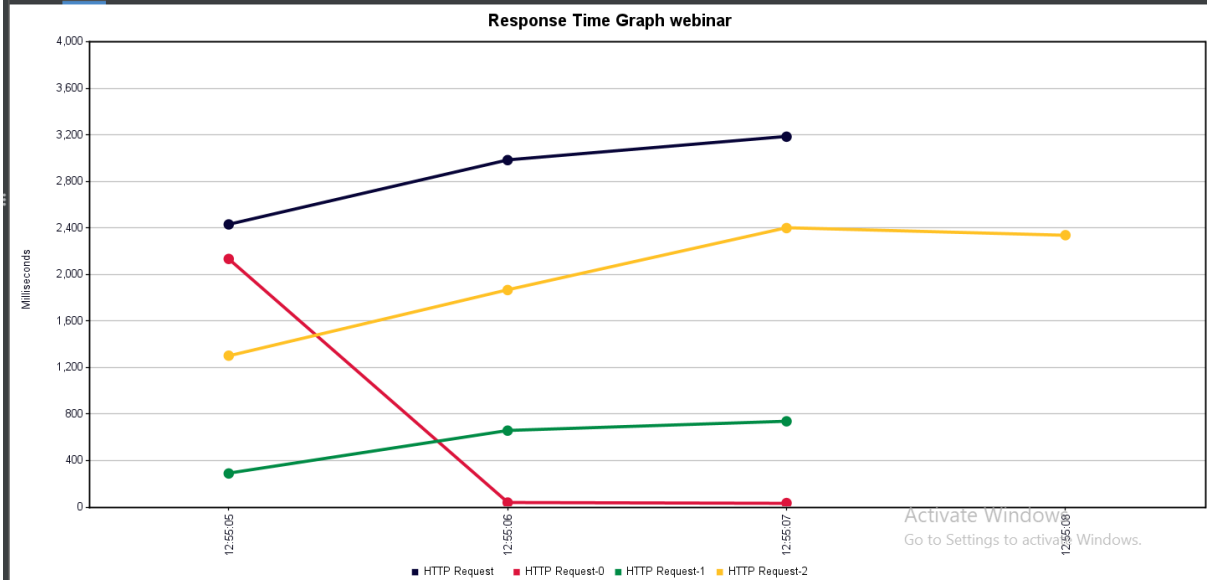
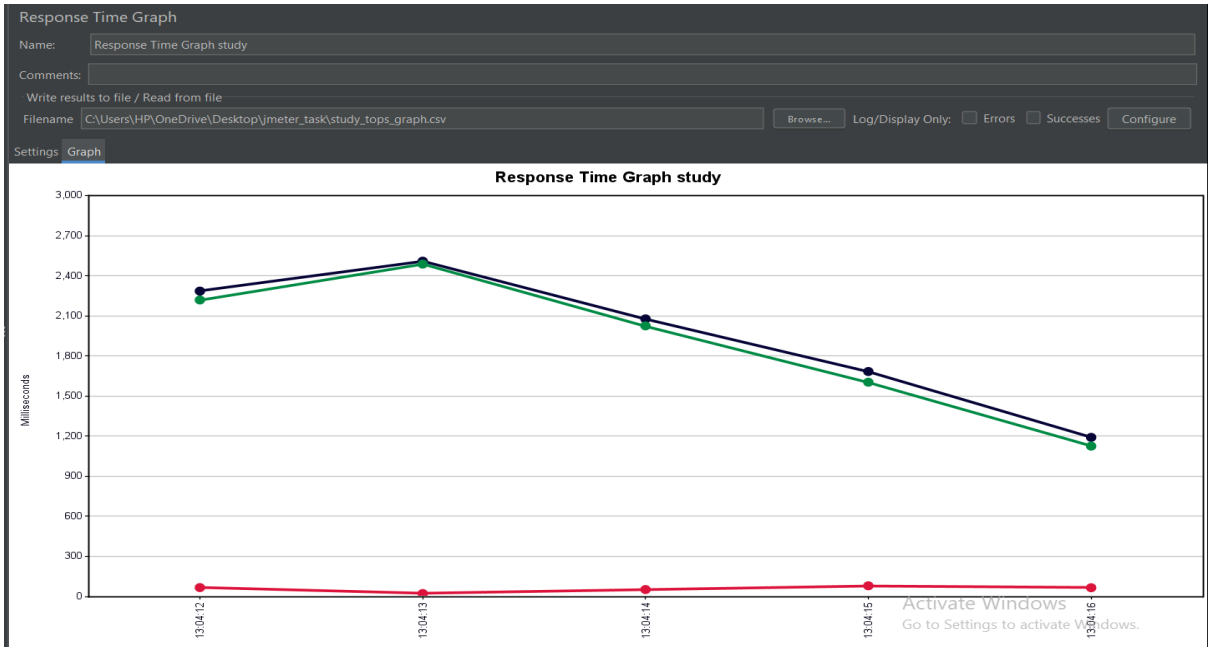
Settings Graph

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Log/Display Only: Errors Successes
Configure
Settings Graph
Response Time Graph study
Milliseconds
3,000
2,700
2,400
2,100
1,800
1,500
1,200
900
600
300
0
13:04:12
13:04:13
13:04:14
13:04:15
13:04:16
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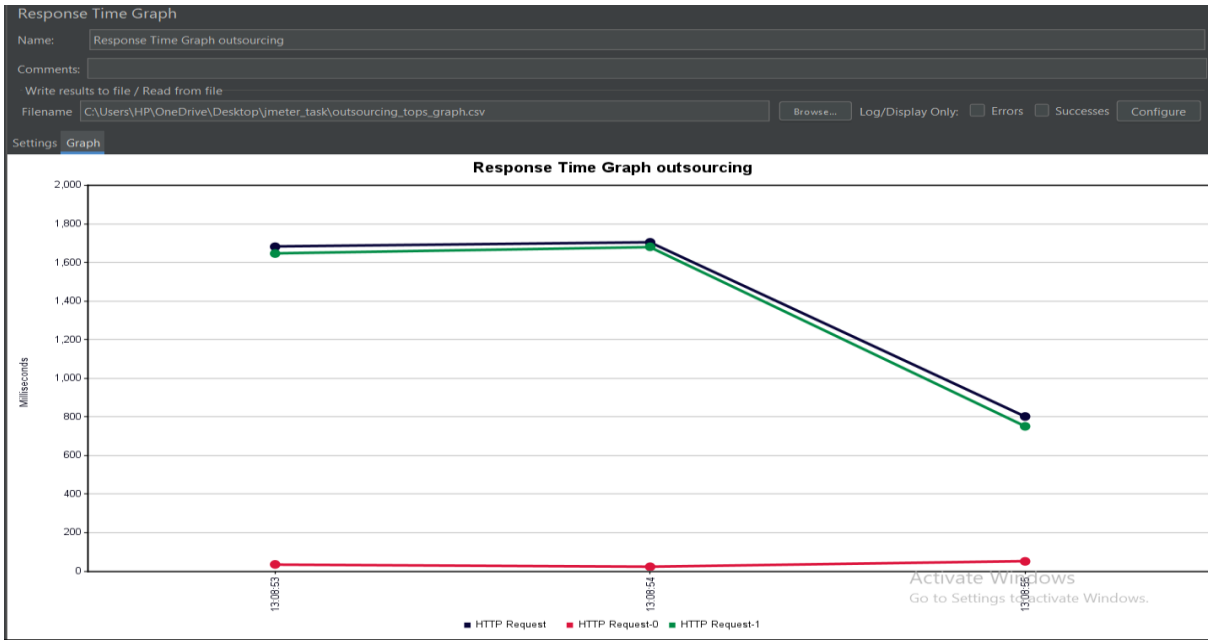
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Browse...
Log/Display Only: Errors Successes
Configure
Settings Graph
Response Time Graph outsourcing
Milliseconds
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
13:08:53
13:08:54
13:08:55
HTTP Request
HTTP Request-0
HTTP Request-1
Activate Windows
Go to Settings to activate Windows.

Response Time Graph

Name: Response Time Graph certificate

Comments:

Write results to file / Read from file

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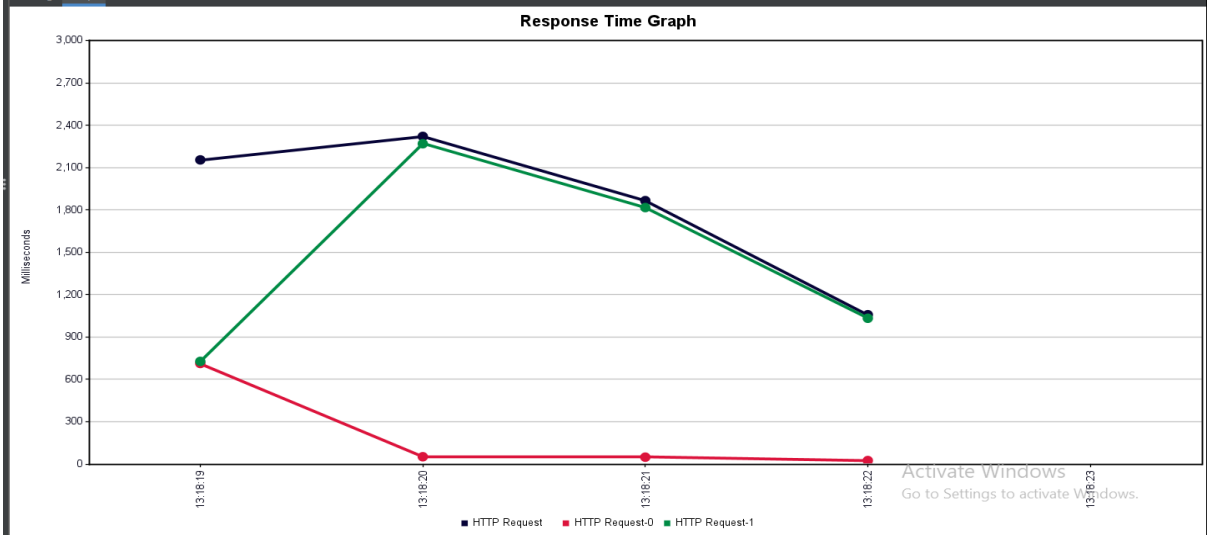
Settings Graph



Response Time Graph

Name: Response Time Graph contactus

Comments:

Write results to file / Read from file

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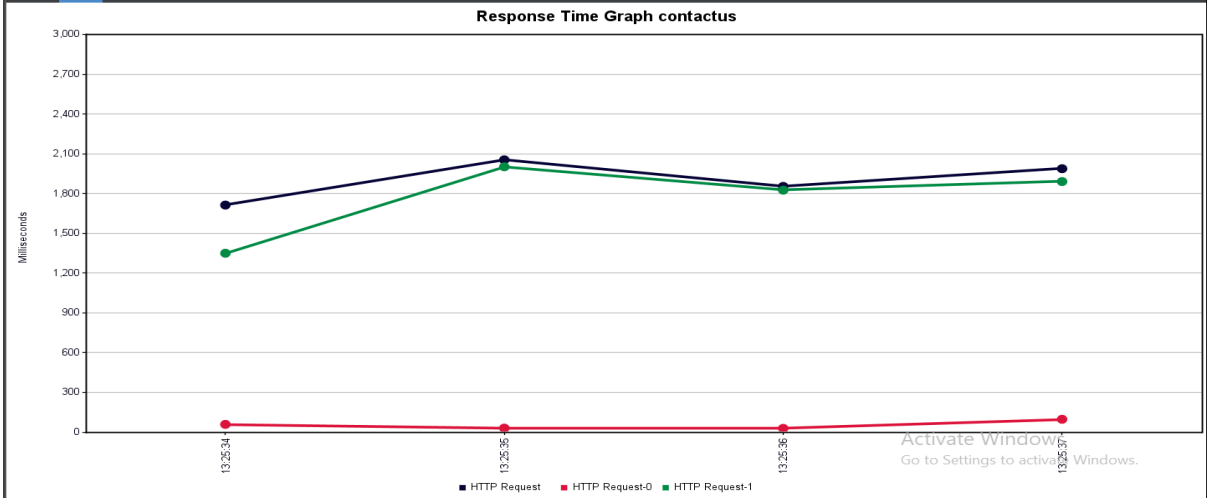
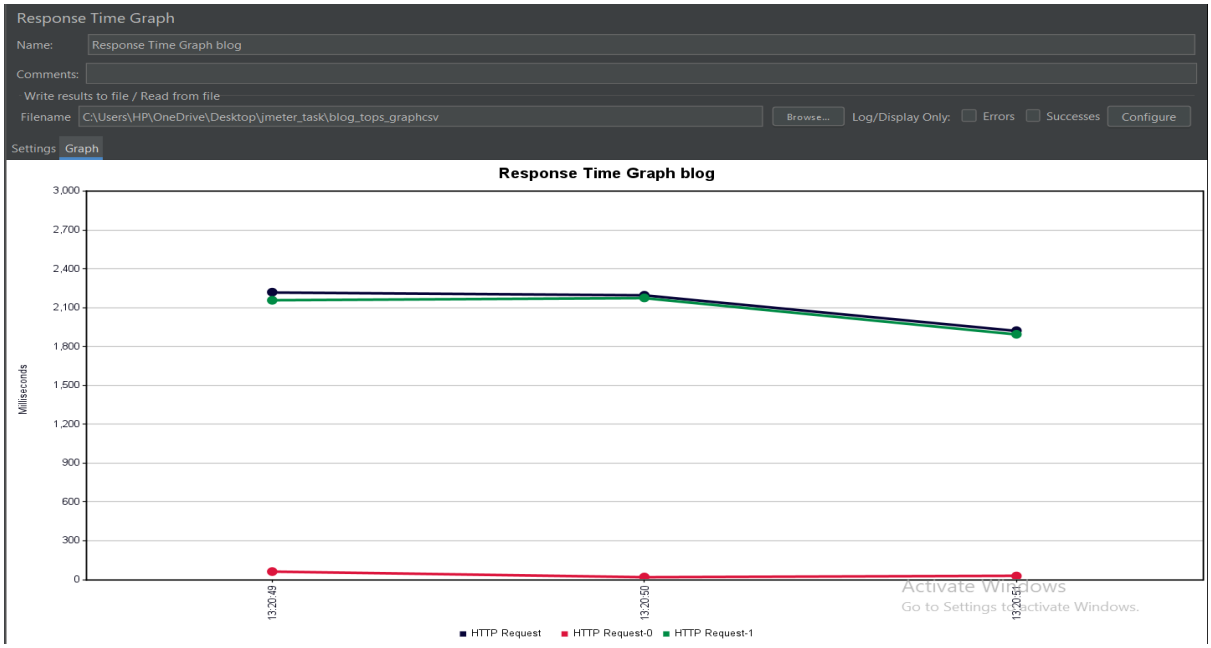
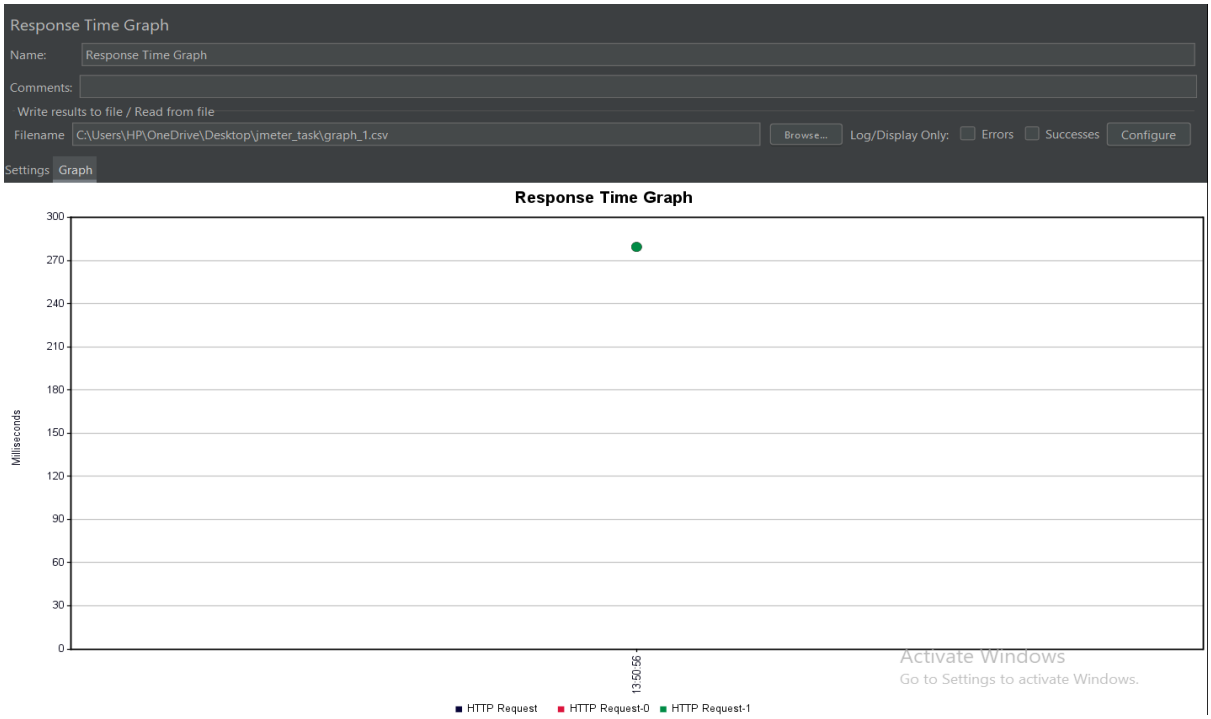
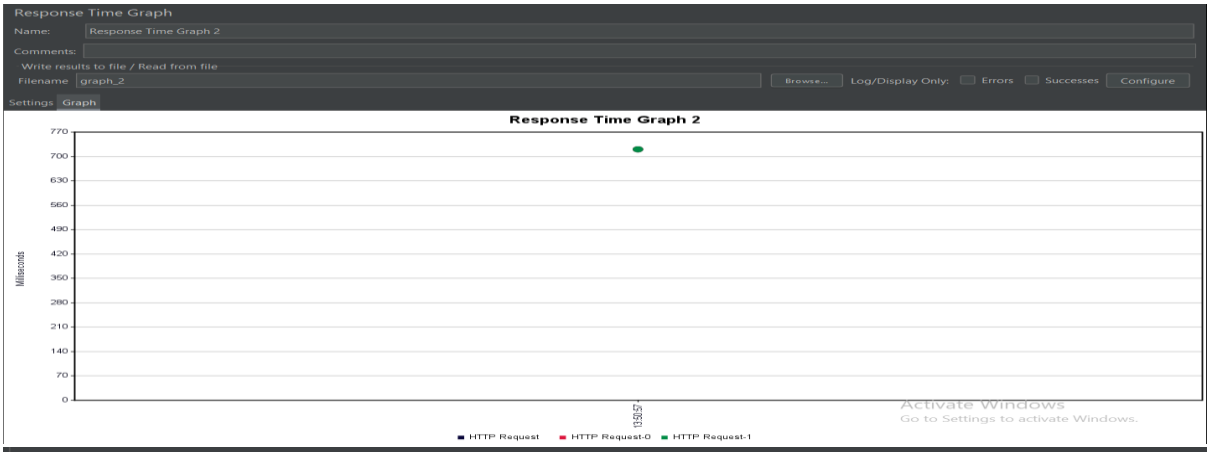
Settings Graph





- **To test the Performance testing on “Saucedemo website”**




Response Time Graph
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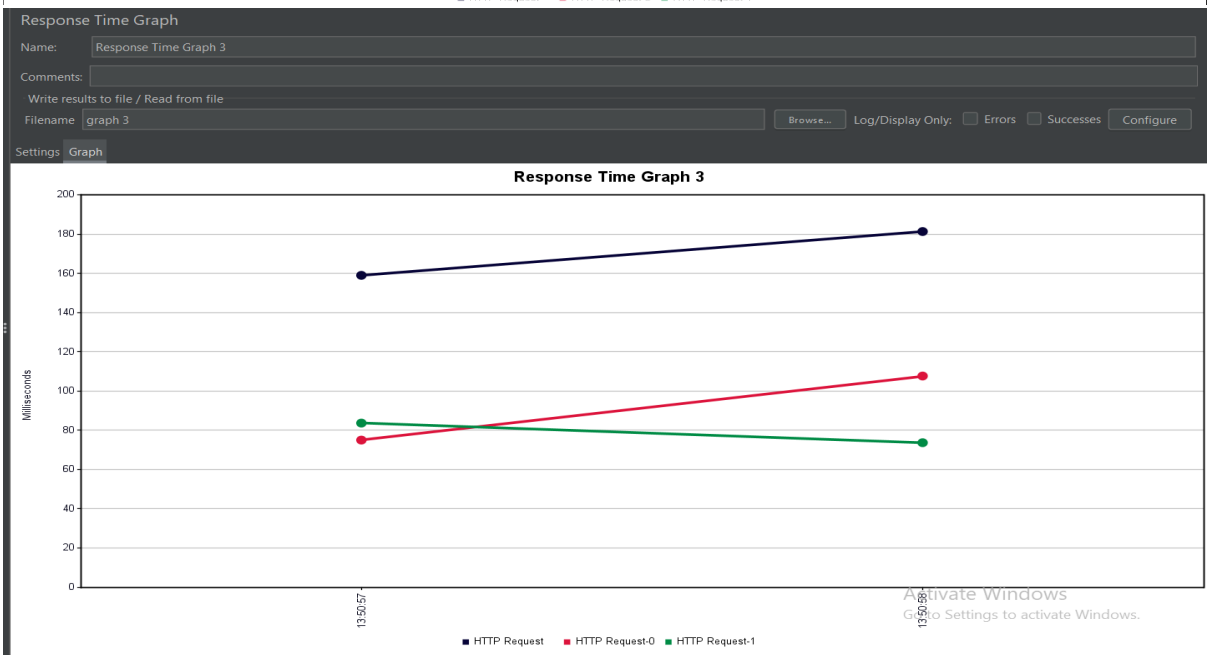
Comments:
Write results to file / Read from file
Filename graph_2
Browse... Log/Display Only: Errors Successes Configure
Settings Graph
Response Time Graph 2
Milliseconds
770
700
630
560
490
420
350
280
210
140
70
0
13:50:57
HTTP Request HTTP Request-0 HTTP Request-1
Activate Windows
Go to Settings to activate Windows.


Response Time Graph
Name: Response Time Graph 3
Comments:
Write results to file / Read from file
Filename graph 3
Browse... Log/Display Only: Errors Successes Configure
Settings Graph
Response Time Graph 3
Milliseconds
200
180
160
140
120
100
80
60
40
20
0
13:50:57
13:50:58
HTTP Request HTTP Request-0 HTTP Request-1
Activate Windows
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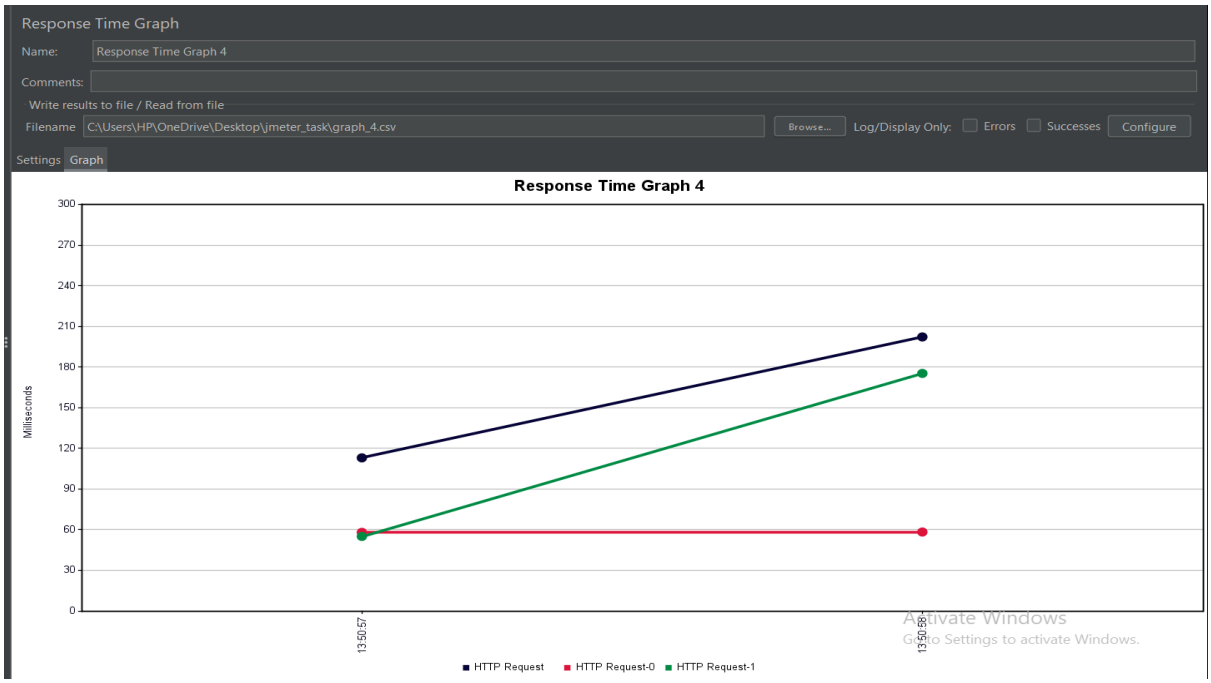
Response Time Graph
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Comments:
Write results to file / Read from file
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Browse... Log/Display Only: Errors Successes Configure
Settings Graph
Response Time Graph 4
Milliseconds
300
270
240
210
180
150
120
90
60
30
0
13:50:57
13:50:58
HTTP Request HTTP Request-0 HTTP Request-1
Activate Windows
Go to Settings to activate Windows.