

**Performance Test Report**  
On  
**(Bangla Sahayata Kendra Portal)**  
**Version V-1.0**

Customer Name & Address:

**Department of Personnel & Administrative Reforms and e-Governance (e-Governance Cell),**  
**Govt. of West Bengal**  
7th Floor Nabanna, 325 Sarat Chatterjee Road Howrah  
West Bengal Pin Code 711102



**STQC IT SERVICES, Kolkata**  
**ERTL (EAST)**  
**STQC DIRECTORATE, GOVT. OF INDIA**  
Ministry of Electronics & Information Technology  
63, DN Block, Sector V, Salt Lake City  
Kolkata-700091, India

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| 1.0 Client Details  |   |  |
|---|---|--|
| 1.1   | <b>Name of Client</b>                                 | <b>Department of Personnel &amp; Administrative Reforms and e-Governance (e-Governance Cell), Govt. of West Bengal</b>   |
| 1.2   | <b>Address of Client</b>                              | 7th Floor Nabanna, 325 Sarat Chatterjee Road Howrah<br>West Bengal Pin Code 711102   |
| 2.0 Description / Identification of Software Product under Test |   |  |
| 2.1   | <b>Product Nomenclature</b>                           | <b>Bangla Sahayata Kendra ( BSK) Portal</b>  |
| 2.2   | <b>Version Number</b>                                 | V-1.0  |
| 2.3   | <b>Date of Release</b>                                | NA   |
| 2.4   | <b>Product Description</b>                            | The Bangla Sahayata Kendra( BSK) Portal provides a virtual platform for citizens to avail creation different Services available in West Bengal through designated Operators.   |
| 2.5   | <b>Applicable Specifications</b>                      | <ul style="list-style-type: none"><li>• Memo No. GO2122005987HR Dated 27/11/2021</li><li>• Sanction-Cum-Allotment Order ; Memo No: 231(Sanction)-PAR-13011(11)/31/2021 dated 30/12/2021</li><li>• Memo No. :14-Par(BSK)/BSK-05/2031 dated 01.10.2021 stating the requirement.</li></ul>  |
| 2.6   | <b>Product Development Organization &amp; Address</b> | <b>M/s. Webel Technology Limited, Kolkata</b>  |
| 2.7   | <b>Media Supplied</b>                                 | <b><a href="https://bsk.wb.gov.in">https://bsk.wb.gov.in</a></b>   |
| 2.8   | <b>Documents Supplied</b>                             | <ul style="list-style-type: none"><li>• SUT Environment Details Form - Performance Testing.doc</li><li>• Memo No. GO2122005987HR Dated 27/11/2021</li><li>• Sanction-Cum-Allotment Order ; Memo No: 231(Sanction)-PAR-13011(11)/31/2021 dated 30/12/2021</li><li>• Memo No. :14-Par(BSK)/BSK-05/2031 dated 01.10.2021 stating the requirement.</li><li>• bsk_userlist.xls</li><li>• BSK_Admin_DM_SDO_BDO_Department_Users.xls</li></ul>  |
| 2.9   | <b>Date of Receipt of Product</b>                     | 11 <sup>th</sup> March, 2022   |
| 3.0 Test Description  |   |  |
| 3.1   | <b>Name &amp; Address of Testing Agency</b>           | <b>STQC IT SERVICES, KOLKATA</b><br>ERTL(E), Block - DN, Sector - V, Salt Lake<br>Kolkata – 700091, India  |
| 3.2   | <b>Scope of Testing</b>                               | Performance evaluation (measurement of server response time) was done for the following scenarios with <b>2000, 5000</b> and <b>7000</b> concurrent virtual users. Following actions were taken by each user.<br><br>Scenario 1 BSK Operator (Login - Logout) <ul style="list-style-type: none"><li>• User visits the Homepage.</li><li>• User clicks on the Login Button available on the homepage</li><li>• User fills-in user credentials and clicks on the Login Button.</li><li>• Loading of the Dashboard</li><li>• User Logs out.</li></ul> |



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|     |                         |   |
|-----|-------------------------|---|
|     |                         | <p>Scenario 2 BSK Operator (Creating the Services)</p> <ul style="list-style-type: none"><li>• User visits the Homepage.</li><li>• User clicks on Login Button available on the homepage</li><li>• User fills-in user credential and clicks on Login Button</li><li>• Loading of Dashboard</li><li>• User clicks on “Create” Link against the required Service to be created.</li><li>• User enters Citizen Phone no and Click on “Search” Button.</li><li>• User fills mandatory information and clicks on “Submit” Button.</li><li>• User logs out.</li></ul> <p>Scenario 3 Admin User (Login - Logout)</p> <ul style="list-style-type: none"><li>• Admin User visits the Homepage.</li><li>• Admin User clicks on the Login Button available on the homepage</li><li>• Admin User fills-in user credentials and clicks on the Login Button.</li><li>• Loading of the Dashboard</li><li>• Admin User Logs out.</li></ul> <p>Technical details of scenarios are provided in section 4.2.2. Tool used was Apache JMeter v5.4.3. A concurrency of <b>2000, 5000, 7000</b> virtual users was reached and the readings thus obtained were recorded as in section 4.2.3.</p> <p>Admin Users were accessing the application as given in scenario 3 simultaneously with 7000 BSK Operators.</p> <p>Captcha and OTP were disabled in the application for the sake of recording and replaying the script.</p> |
| 3.3 | <b>Test Methodology</b> |   |
|     | <b>General</b>          | <p>Apache JMETER v5.4.3 was executed in GUI mode to generate the load from load generating machine.</p> <p>Summary of steps</p> <ol style="list-style-type: none"><li>1. Jmeter Script (.jmx file) was recorded for the scenarios mentioned in clause 3.2.</li><li>2. Script was modified to extract all the dynamic data sent from server then pass them through variables.</li><li>3. All the user data required for authentication were passed through a csv file.</li><li>3. Final Script was run for varying user loads.</li></ol> <p><b>2000, 5000 and 7000</b> concurrent virtual users were created from the load generating machines( LGMs) to simulate the scenarios as described in section 3.2</p> <p>To achieve the concurrency of 2000, 5000 and 7000 virtual users JMETER was executed in Master-Slave fashion, where user load were distributed equally into three LGMs (salves) and a Fourth machine was used as master to send the instructions to the LGMs (slaves).</p>   |



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|     |                                      |   |
|-----|--------------------------------------|---|
|     |                                      | <p>Additional 100 nos. of Admin Users were accessing the application from another machine during the Peak Load.</p> <p>The location of the load-generating machines was at STQC IT Services, ERTL (East), Kolkata having the IP address: <b>14.139.200.91</b>.</p> <p><b>The performance testing was done on the production server.</b></p> |
|     | <b>Procedure /Method used</b>        | OP-04   |
| 3.4 | <b>Date of Start of Testing</b>      | 15-03-2022  |
| 3.5 | <b>Date of Completion of Testing</b> | 18-04-2022  |
| 3.6 | <b>Test Data</b>                     | <ul style="list-style-type: none"> <li>URL: <a href="https://bsk.wb.gov.in">https://bsk.wb.gov.in</a></li> <li>Final Submit Production 17_04.jmx (Jmeter script file)</li> <li>Admin Login-Logout.jmx (Jmeter script file)</li> <li>bsk_userlist.xls</li> <li>BSK_Admin_DM_SDO_BDO_Department_Users.xls</li> </ul>                          |

|     |                                      |   |                                    |  |
|-----|--------------------------------------|---|------------------------------------|--|
| 3.7 | Test Environment                     |   |                                    |  |
|     | <b>Test Location</b>                 | STQC IT SERVICES, KOLKATA<br>ERTL(E), Block - DN, Sector - V, Salt Lake<br>Kolkata – 700091   |                                    |  |
|     | <b>b)<br/>Hardware Configuration</b> | <b>Web Server</b>   |                                    |  |
|     |                                      | Processor:  | 16 VCPU, 16 VCPU, 16 VCPU, 16 VCPU |  |
|     |                                      | RAM   | 64 GB, 64 GB, 64 GB, 64 GB         |  |
|     |                                      | HDD   | 500 GB, 500 GB, 500 GB, 500 GB     |  |
|     |                                      | <b>Application Server</b>   |                                    |  |
|     |                                      | Processor:  | 16 VCPU, 16 VCPU, 16 VCPU, 16 VCPU |  |
|     |                                      | RAM   | 64 GB, 64 GB, 64 GB, 64 GB         |  |
|     |                                      | HDD   | 500 GB, 500 GB, 500 GB, 500 GB     |  |
|     |                                      | <b>Database Server</b>  |                                    |  |
|     |                                      | Processor:  | 16 VCPU, 16 VCPU                   |  |
|     |                                      | RAM   | 64 GB, 64 GB                       |  |
|     |                                      | HDD   | 500 GB, 500 GB                     |  |
|     |                                      | <b>Load Generating Machine (at STQC, Kolkata)</b>   |                                    |  |
|     | Processor:                           | Master PC : Intel Core i7<br>Slave PC1 : Intel Core i3<br>Slave PC2: Intel Core i3<br>Slave PC3: Intel Core i3<br>Laptop: Intel Core i5 |                                    |  |
|     | RAM                                  | Master PC : 16 GB<br>Slave PC1 : 32 GB<br>Slave PC2: 16 GB<br>Slave PC3: 16 GB<br>Laptop: 8 GB  |                                    |  |
|     | HDD                                  | Master PC : 1 TB<br>Slave PC1 : 1 TB<br>Slave PC2 : 500 GB<br>Slave PC2 : 1 TB<br>Laptop: 1 TB  |                                    |  |
|     | Network Bandwidth : 1 Gbps           |   |                                    |  |



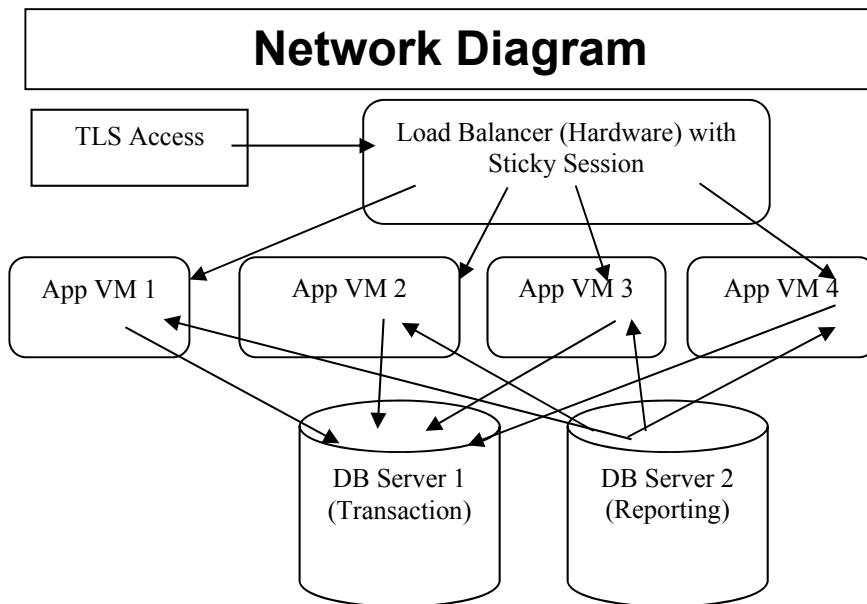
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|  |   |   |
|--|---|---|
| <b>c)</b><br><br><b>Software Configuration</b> | <b>Web Server</b>                                 |   |
|  | Operating System                                  | <b>Linux CentOS 7</b>   |
|  | SP/Patch  |   |
|  | Web server  | Node JS   |
|  | Other Applications if any                         |   |
|  | <b>Application Server</b>                         |   |
|  | Operating System                                  | <b>Linux CentOS 7</b>   |
|  | SP/Patch  |   |
|  | Application server                                | Node JS   |
|  | <b>Database Server</b>                            |   |
|  | Operating System                                  | <b>Linux CentOS 7</b>   |
|  | SP/Patch  |   |
|  | Database  | PostgreSQL  |
|  | <b>Load Generating Machine (at STQC, Kolkata)</b> |   |
|  | Operating System                                  | Master PC : Microsoft Windows 10 Professional<br>Slave PC1 : Microsoft Windows 10 Professional<br>Slave PC2 : Ubuntu 18.04.6 LTS<br>Slave PC3 : Microsoft Windows 10 Professional<br>Laptop : Microsoft Windows 10 Professional |
| SP/Patch                                       | -   |   |

### Network Configuration for Testing





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### 4.0 Test Results

#### 4.1 Executive Summary

Department of Personnel & Administrative Reforms and e-Governance (e-Governance Cell), Govt. of West Bengal has engaged STQC IT Services, Kolkata, as 3<sup>rd</sup> party audit/testing agency to perform Performance/Load testing of web application for “Bangla Sahayata Kendra Portal”. The main objective of testing was to ensure the proper functioning of the website with adequate load.

The testing was conducted from **STQC IT Services, ERTL (East), Kolkata**, center over Internet on the server hosted by **State Data Centre, Kolkata**.

**M/s Webel Technology Limited** provided the URL: <https://bsk.wb.gov.in> of the test site along with user credentials.

Performance testing tool Apache JMETER v5.4.3 was used to create scripts and simulate a workload very similar to actual production as described in section 3.2 and 3.3.

Captcha and OTP were disabled in the application for the sake of recording and replaying the script.

The result obtained after the test demonstrates measurement of server response time for approx. **7000** concurrent virtual users. Details of the steps are given in section 3.2; technical details for the executed scenarios are as mentioned in section 4.2.2

**The results for server response time have been tabulated under section 4.2.3. Though Response Time is high but error percentage is under 6%. The test result shows that the web application under test is able to respond to requests of 7000 concurrent virtual BSK Operator users. Application is able to handle additional 100 Admin Users. Web server’s CPU utilization is very high during the peak load and sometimes it reaches to 100%. Average response time of the 95 % of the 7000 concurrent users for both the scenarios as mentioned in clause 3.2 has following response times:**

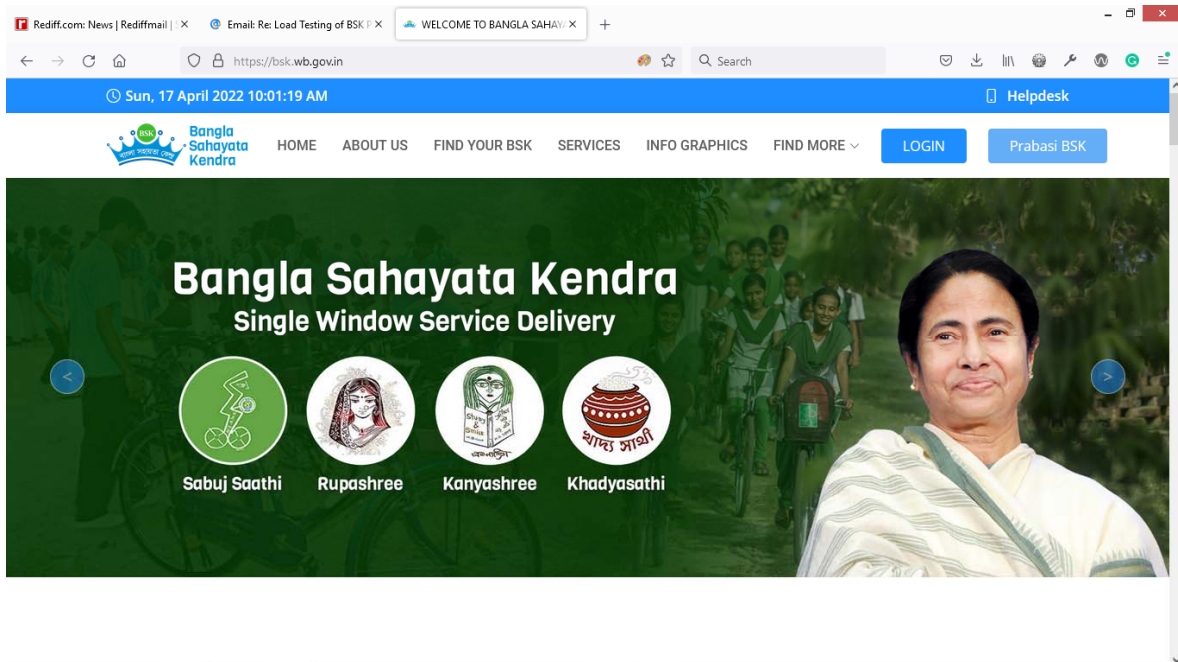
| Sr. No. | Activity  | Scenario 1<br>Run 3<br>(Login-Logout)<br>95% Response Time<br>In milliseconds | Scenario 2<br>Run 6<br>(Create Service)<br>95% Response Time<br>In milliseconds |
|---------|---|---|---|
| 1       | User visits the Homepage  | 255660  | 270835  |
| 2       | User clicks on Login Button available on the homepage               | 65130   | 63916   |
| 3       | User fills-in user credential and clicks on Login Button for login. | 8207  | 8209  |
| 4       | Loading of Dashboard  | 202880  | 223033  |
| 5       | User clicks on “Create” Link for create Service                     | NA  | 68164   |
| 6       | User enter Citizen Phone no and Click on “Search” Button.           | NA  | 3776  |
| 7       | User fills mandatory information and clicks on “Submit” Button.     | NA  | 2599  |
| 8       | User logs out.  | 38173   | 27882   |

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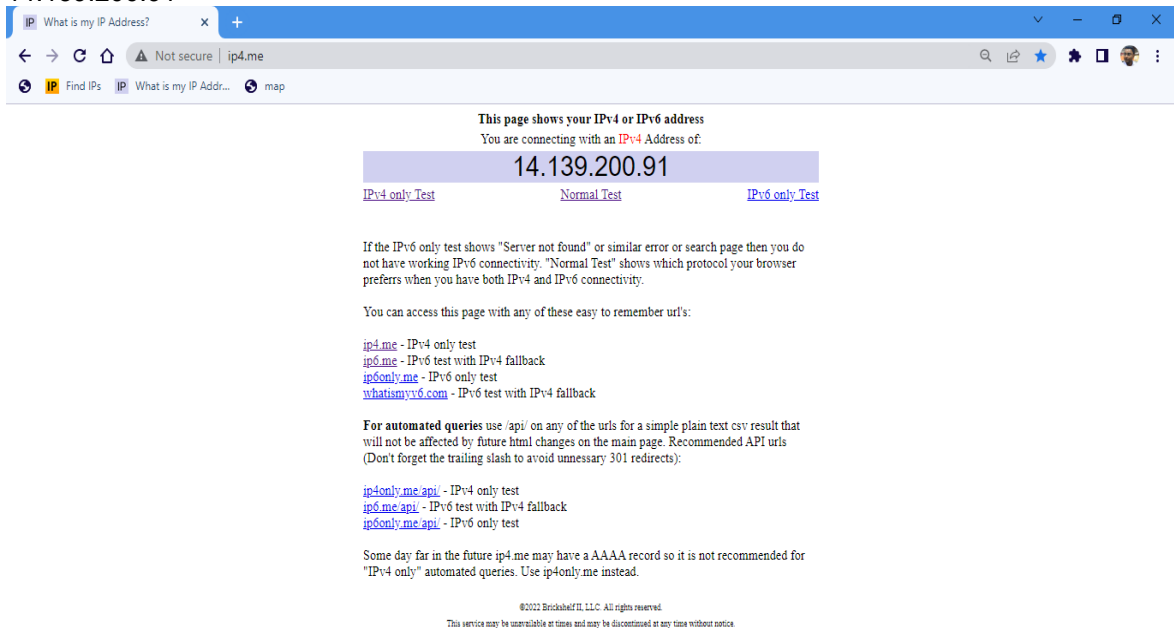
## 4.2 Detail Test Results:

### 4.2.1 Test Data used

- The following website was accessed (**Version V-1.0**): <https://bsk.wb.gov.in>



- The location of the load generating machine was at STQC Kolkata having the IP address: 14.139.200.91



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3. Following is the log of TRACERT command when the production server of "Bangla Sahayata Kendra" website was accessed from the load generating machine. The IP address of the "Bangla Sahayata Kendra Portal" production website was found to be 103.38.190.113

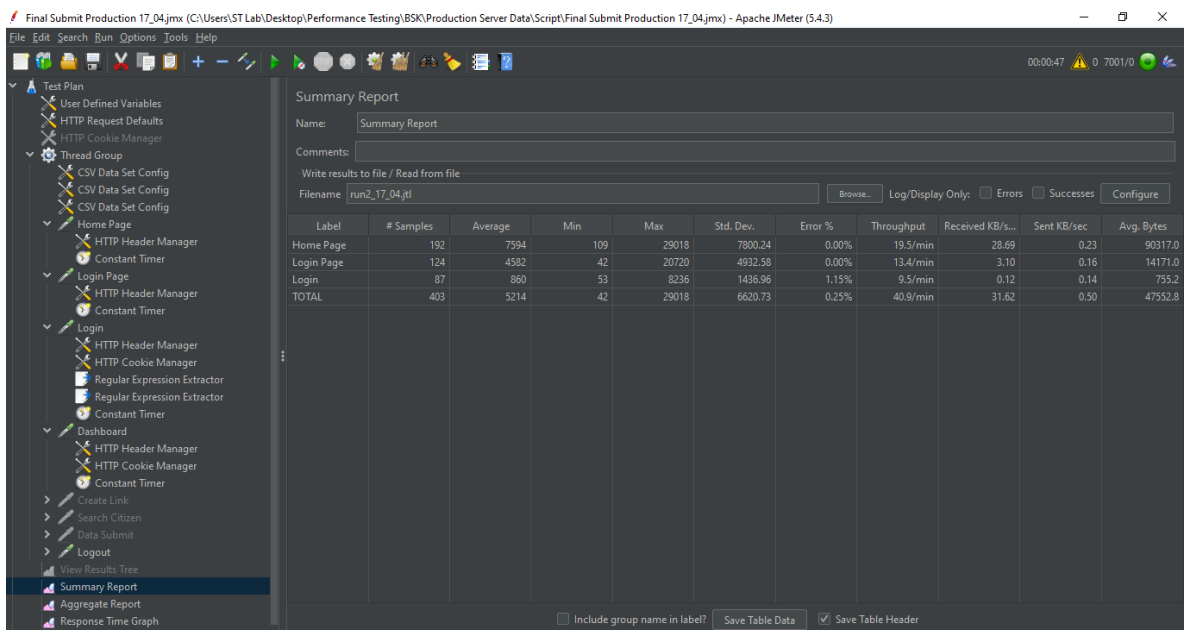
```

C:\Users\ST Lab\Desktop>tracert studentinternship.wb.gov.in
Tracing route to studentinternship.wb.gov.in [103.38.190.113]
over a maximum of 30 hops:
  0  <1 ms  <1 ms  <1 ms  192.168.2.254
  1  0 ms  1 ms  1 ms  10.119.254.17
  2  0 ms  0 ms  0 ms  10.119.254.17
  3  1 ms  1 ms  1 ms  10.119.254.17
  4  5 ms  5 ms  5 ms  10.171.36.129
  5  5 ms  5 ms  5 ms  10.119.247.149
  6  5 ms  5 ms  5 ms  10.119.247.150
  7  * * * Request timed out.
  8  * * * Request timed out.
  9  * * * Request timed out.
 10  * * * Request timed out.
 11  * * * Request timed out.
 12  * * * Request timed out.
 13  * * * Request timed out.
 14  * * * Request timed out.
 15  * * * Request timed out.
 16  * * * Request timed out.
 17  * * * Request timed out.
 18  * * * Request timed out.
 19  * * * Request timed out.
 20  * * * Request timed out.
 21  * * * Request timed out.
 22  * * * Request timed out.
 23  * * * Request timed out.
 24  * * * Request timed out.
 25  * * * Request timed out.
 26  * * * Request timed out.
 27  * * * Request timed out.
 28  * * * Request timed out.
 29  * * * Request timed out.
 30  * * * Request timed out.

Trace complete.
  
```

Thus we can conclude that the Load generating machine and the target server was hosted on different networks.

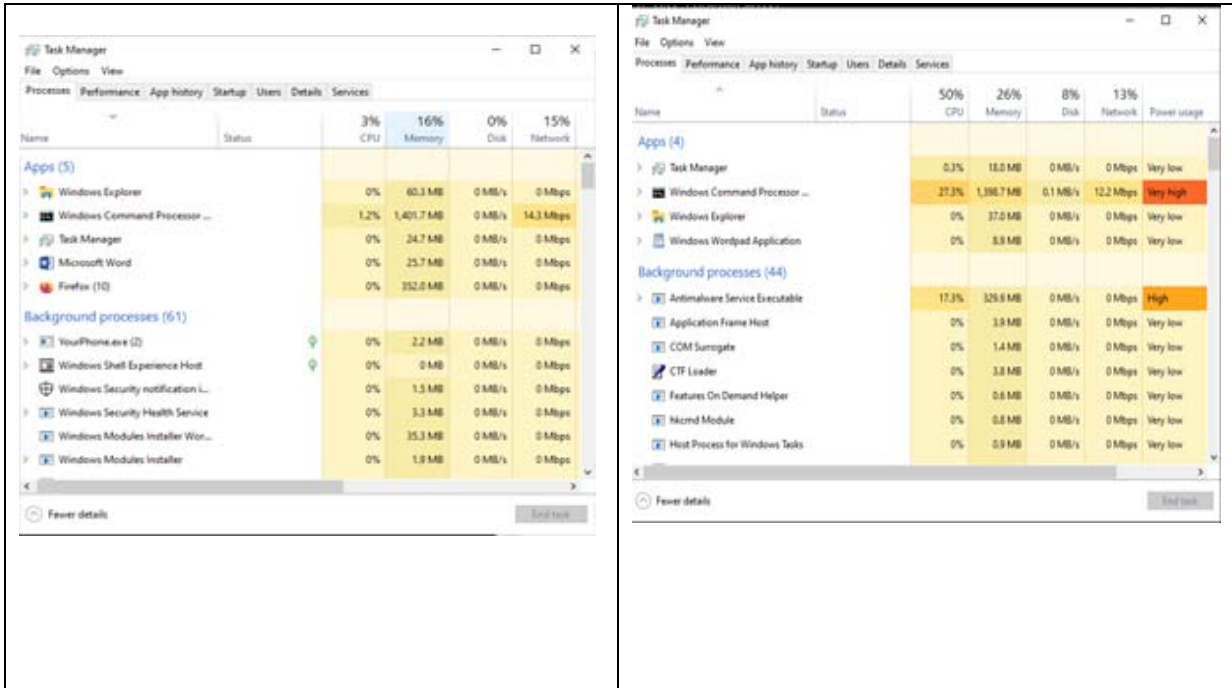
4. Apache JMeter v5.4.3 was executed in GUI mode. The following execution log shows that a concurrency of approx. **7000** concurrent virtual users was reached at some point of time:



| Label        | # Samples  | Average     | Min       | Max          | Std. Dev.      | Error %      | Throughput      | Received KB/s... | Sent KB/sec | Avg. Bytes     |
|--------------|------------|-------------|-----------|--------------|----------------|--------------|-----------------|------------------|-------------|----------------|
| Home Page    | 192        | 7594        | 109       | 29018        | 7800.24        | 0.00%        | 19.5/min        | 28.69            | 0.23        | 90317.0        |
| Login Page   | 124        | 4582        | 42        | 20720        | 4932.58        | 0.00%        | 13.4/min        | 3.10             | 0.16        | 14171.0        |
| Login        | 87         | 860         | 53        | 8236         | 1436.96        | 1.15%        | 9.5/min         | 0.12             | 0.14        | 755.2          |
| <b>TOTAL</b> | <b>403</b> | <b>5214</b> | <b>42</b> | <b>29018</b> | <b>6620.73</b> | <b>0.25%</b> | <b>40.9/min</b> | <b>31.62</b>     | <b>0.50</b> | <b>47592.8</b> |

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5. Following screenshots shows the CPU, Memory and Network utilization of the load generating machine at STQC , Kolkata office when a peak load of 7000 concurrent virtual users was being generated:



| Resource | Utilization LGM1 | Utilization LGM2 | Utilization LGM3 |
|----------|------------------|------------------|------------------|
| CPU      | 3%               | 50%              | 16%              |
| Memory   | 16%              | 26%              | 20%              |
| Network  | 15%              | 13%              | 17%              |

**Remarks:** We can conclude from the above figure that the Load Generating Machine was comfortably able to generate the peak Load of 7000 concurrent virtual users.



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6. Target Server Resource Utilization Report (CPU and Memory) is as follow:

| Resource | Server 1     | Server 2     | Server 3     | Server 4     |
|----------|--------------|--------------|--------------|--------------|
| CPU      | <b>100%</b>  | <b>79.1%</b> | <b>100%</b>  | <b>100%</b>  |
| Memory   | <b>75.2%</b> | <b>36.4%</b> | <b>78.9%</b> | <b>81.9%</b> |

**Remarks: Web server's CPU utilization is very high during the peak load and sometimes it reaches to 100%**



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### 4.2.2 Load Test Scenario:

Technical details of Scenarios described in section 3.2

#### Scenario

| Step | Action   | Relative path accessed (server being: bsk.wb.gov.in) |
|------|--|--|
| 1.   | User visits the Homepage                                       | /  |
| 2.   | User clicks on Login Button available on the homepage          | /login   |
| 3.   | User fills-in user credential and clicks on Login Button       | /deo/login   |
| 4.   | Loading of Dashboard   | /bskoperator   |
| 5.   | User clicks on "Create" Link for create Service                | /create/90   |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | /deo/searchcitizen                                   |
| 7.   | User fills mandatory information and clicks on "Submit" Button | /deo/saveProv  |
| 8.   | User logs out  | /logout  |



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#### 4.2.3 Test Result:

Following are the reports downloaded from Apache JMETER after completion of the load test scenario execution (detailed documentation reference for format of the “**Apache JMETER** Summary report and Aggregate Report” is given in Annexure):

#### A. Tabular Result

a) Execution log for Run 1 (**Only Login Log out**) (**No. of Virtual Users:2000**, Concurrency Achieved: 2000, Ramp-up time 20 seconds)

| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                 | 2001                    | 21995                                 | 93                                | 81070                             | 14131.88                 | 0.00%   | 3.00112    | 264.7           | 2.1         | 90317      |
| 2.   | User clicks on Login Button available on the homepage    | 2001                    | 3600                                  | 29                                | 42404                             | 4011.59                  | 0.00%   | 3.00157    | 41.54           | 2.15        | 14171      |
| 3.   | User fills-in user credential and clicks on Login Button | 2001                    | 479                                   | 27                                | 13257                             | 1028.7                   | 0.75%   | 3.00155    | 2.24            | 2.6         | 764.3      |
| 4.   | Loading of Dashboard                                     | 2001                    | 25049                                 | 37                                | 72336                             | 11008.54                 | 0.75%   | 3.00155    | 359.67          | 3.69        | 122703.2   |
| 5.   | User Log-out   | 2001                    | 2793                                  | 29                                | 35928                             | 3296.46                  | 0.75%   | 3.00295    | 45.11           | 6           | 15382.9    |



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| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                 | 2001                    | 21995                                 | 23069                                | 38761                                  | 43944                                  | 59396                                  | 93                                | 81070                             | 0.00%   | 3.00112    |
| 2.   | User clicks on Login Button available on the homepage    | 2001                    | 3600                                  | 2301                                 | 8508                                   | 10979                                  | 18128                                  | 29                                | 42404                             | 0.00%   | 3.00157    |
| 3.   | User fills-in user credential and clicks on Login Button | 2001                    | 479                                   | 78                                   | 1085                                   | 2564                                   | 4836                                   | 27                                | 13257                             | 0.75%   | 3.00155    |
| 4.   | Loading of Dashboard                                     | 2001                    | 25049                                 | 24516                                | 38933                                  | 44191                                  | 55328                                  | 37                                | 72336                             | 0.75%   | 3.00155    |
| 5.   | User Log-out   | 2001                    | 2793                                  | 1405                                 | 7099                                   | 9067                                   | 14471                                  | 29                                | 35928                             | 0.75%   | 3.00295    |

### Interpretation summary for Run 1:

- Server is able to handle 2000 concurrent request with error 0.75%
- 95% Line Response time is within **44191** milliseconds.



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**b) Execution log for Run 2 (Only Login Log out) (No. of Virtual Users:5000, Concurrency Achieved: 5000, Ramp-up time 25 seconds)**

| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                 | 5001                    | 90029                                 | 102                               | 352546                            | 43790.2                  | 0.06%   | 5.40208    | 476.19          | 3.77        | 90264.4    |
| 2.   | User clicks on Login Button available on the homepage    | 4998                    | 15590                                 | 43                                | 186345                            | 16441.29                 | 0.00%   | 5.72509    | 79.23           | 4.1         | 14171      |
| 3.   | User fills-in user credential and clicks on Login Button | 4998                    | 1644                                  | 23                                | 77652                             | 3877.82                  | 1.78%   | 5.72514    | 4.25            | 4.96        | 759.5      |
| 4.   | Loading of Dashboard                                     | 4998                    | 83952                                 | 33                                | 259786                            | 35595.68                 | 1.78%   | 5.72925    | 679.51          | 7.04        | 121451.1   |
| 5.   | User Log-out   | 4998                    | 8862                                  | 28                                | 154018                            | 10177.22                 | 1.82%   | 6.18649    | 92.07           | 12.3        | 15238.9    |



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| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                 | 5001                    | 90029                                 | 82984                                | 145174                                 | 170602                                 | 231719                                 | 102                               | 352546                            | 0.06%   | 5.40208    |
| 2.   | User clicks on Login Button available on the homepage    | 4998                    | 15590                                 | 10984                                | 32390                                  | 43218                                  | 79900                                  | 43                                | 186345                            | 0.00%   | 5.72509    |
| 3.   | User fills-in user credential and clicks on Login Button | 4998                    | 1644                                  | 92                                   | 4828                                   | 8187                                   | 16416                                  | 23                                | 77652                             | 1.78%   | 5.72514    |
| 4.   | Loading of Dashboard                                     | 4998                    | 83952                                 | 83685                                | 127243                                 | 141924                                 | 177029                                 | 33                                | 259786                            | 1.78%   | 5.72925    |
| 5.   | User Log-out   | 4998                    | 8862                                  | 6151                                 | 20135                                  | 25883                                  | 49679                                  | 28                                | 154018                            | 1.82%   | 6.18649    |

### Interpretation summary for Run 2:

- Server is able to handle 5000 concurrent request with error 1.82%
- 95% Line Response time is within **170602** milliseconds.



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**c) Execution log for Run 3 (Only Login Log out) (No. of Virtual Users:7000, Concurrency Achieved: 7000, Ramp-up time 35 seconds)**

| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                 | 7002                    | 131570                                | 109                               | 532073                            | 80504.11                 | 3.84%   | 6.36377    | 540.39          | 4.27        | 86954.4    |
| 2.   | User clicks on Login Button available on the homepage    | 6858                    | 22554                                 | 42                                | 388314                            | 26208.25                 | 0.19%   | 6.86005    | 94.79           | 4.91        | 14150      |
| 3.   | User fills-in user credential and clicks on Login Button | 6855                    | 1840                                  | 26                                | 258226                            | 6126.44                  | 2.67%   | 6.85688    | 5.07            | 5.94        | 756.8      |
| 4.   | Loading of Dashboard                                     | 6854                    | 116896                                | 33                                | 519017                            | 53387.16                 | 2.76%   | 6.31409    | 741.56          | 7.73        | 120263.3   |
| 5.   | User Log-out   | 6849                    | 11552                                 | 28                                | 258238                            | 14912.61                 | 3.26%   | 6.95884    | 102.28          | 13.69       | 15050.6    |



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| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                 | 7002                    | 131570                                | 119265                               | 213205                                 | 255660                                 | 510327                                 | 109                               | 532073                            | 3.84%   | 6.36377    |
| 2.   | User clicks on Login Button available on the homepage    | 6858                    | 22554                                 | 14608                                | 48864                                  | 65130                                  | 120590                                 | 42                                | 388314                            | 0.19%   | 6.86005    |
| 3.   | User fills-in user credential and clicks on Login Button | 6855                    | 1840                                  | 88                                   | 4828                                   | 8207                                   | 22070                                  | 26                                | 258226                            | 2.67%   | 6.85688    |
| 4.   | Loading of Dashboard                                     | 6854                    | 116896                                | 115145                               | 183180                                 | 202880                                 | 253227                                 | 33                                | 519017                            | 2.76%   | 6.31409    |
| 5.   | User Log-out   | 6849                    | 11552                                 | 7498                                 | 25838                                  | 38173                                  | 70887                                  | 28                                | 258238                            | 3.26%   | 6.95884    |

### Interpretation summary for Run 3:

- Server is able to handle 7000 concurrent request with error 3.84%
- 95% Line Response time is within **255660** milliseconds.



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**d)** Execution log for Run 4 (**Creating the Services**) (No. of Virtual Users:2000, Concurrency Achieved: 2000, Ramp-up time 20 seconds)

| Step | Activities performed on the website (Label)                    | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                       | 2001                    | 22694                                 | 101                               | 131127                            | 19818.25                 | 4.10%   | 3.03159    | 256.78          | 2.03        | 86733.3    |
| 2.   | User clicks on Login Button available on the homepage          | 2001                    | 3603                                  | 26                                | 52512                             | 4430.63                  | 0.15%   | 3.02687    | 41.84           | 2.17        | 14153.7    |
| 3.   | User fills-in user credential and clicks on Login Button       | 1999                    | 540                                   | 32                                | 13265                             | 1000.97                  | 0.70%   | 3.02373    | 2.25            | 2.62        | 762.8      |
| 4.   | Loading of Dashboard   | 1999                    | 27746                                 | 11                                | 101488                            | 11856.55                 | 0.80%   | 3.00051    | 359.36          | 3.69        | 122642.1   |
| 5.   | User clicks on "Create" Link for create Service                | 1998                    | 5983                                  | 13                                | 95049                             | 6595.36                  | 2.05%   | 3.00096    | 93.38           | 3.65        | 31862.2    |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | 1995                    | 469                                   | 13                                | 21030                             | 1461.87                  | 1.00%   | 2.99644    | 1.15            | 3.61        | 394.7      |
| 7.   | User fills mandatory information and clicks on "Submit" Button | 1995                    | 299                                   | 12                                | 23687                             | 1008.64                  | 0.80%   | 2.99619    | 0.96            | 5.54        | 327.2      |
| 8.   | User logs out  | 1995                    | 1821                                  | 17                                | 32323                             | 3160.67                  | 0.80%   | 2.99621    | 44.99           | 5.98        | 15377.6    |



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| Step | Activities performed on the website (Label)                    | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                       | 2001                    | 22694                                 | 21701                                | 39470                                  | 46935                                  | 130224                                 | 101                               | 131127                            | 4.10%   | 3.03159    |
| 2.   | User clicks on Login Button available on the homepage          | 2001                    | 3603                                  | 2336                                 | 8141                                   | 10544                                  | 20966                                  | 26                                | 52512                             | 0.15%   | 3.02687    |
| 3.   | User fills-in user credential and clicks on Login Button       | 1999                    | 540                                   | 80                                   | 1101                                   | 2573                                   | 4827                                   | 32                                | 13265                             | 0.70%   | 3.02373    |
| 4.   | Loading of Dashboard   | 1999                    | 27746                                 | 27431                                | 41557                                  | <b>47487</b>                           | 59811                                  | 11                                | 101488                            | 0.80%   | 3.00051    |
| 5.   | User clicks on "Create" Link for create Service                | 1998                    | 5983                                  | 4507                                 | 13290                                  | 16995                                  | 23354                                  | 13                                | 95049                             | 2.05%   | 3.00096    |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | 1995                    | 469                                   | 61                                   | 1228                                   | 2555                                   | 5008                                   | 13                                | 21030                             | 1.00%   | 2.99644    |
| 7.   | User fills mandatory information and clicks on "Submit" Button | 1995                    | 299                                   | 121                                  | 476                                    | 1153                                   | 2681                                   | 12                                | 23687                             | 0.80%   | 2.99619    |
| 8.   | User logs out  | 1995                    | 1821                                  | 162                                  | 5837                                   | 8190                                   | 13516                                  | 17                                | 32323                             | 0.80%   | 2.99621    |

### Interpretation summary for Run 4:

- Server is able to handle 2000 concurrent request with error 4.10%
- 95% Line Response time is within **47487** milliseconds.



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e) Execution log for Run 5 (Creating the Service) (No. of Virtual Users:5000, Concurrency Achieved: 5000, Ramp-up time 25 seconds)

| Step | Activities performed on the website (Label)                    | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                       | 5001                    | 90388                                 | 94                                | 390492                            | 46142.86                 | 1.38%   | 5.21578    | 453.89          | 3.59        | 89110.6    |
| 2.   | User clicks on Login Button available on the homepage          | 4986                    | 16503                                 | 36                                | 298499                            | 19182.61                 | 1.73%   | 5.43975    | 74.25           | 3.83        | 13976.4    |
| 3.   | User fills-in user credential and clicks on Login Button       | 4983                    | 1901                                  | 42                                | 306590                            | 6184.29                  | 2.15%   | 5.43641    | 4.07            | 4.7         | 766.7      |
| 4.   | Loading of Dashboard   | 4982                    | 97746                                 | 33                                | 293633                            | 38539.83                 | 2.13%   | 5.35138    | 632.49          | 6.57        | 121029.2   |
| 5.   | User clicks on "Create" Link for create Service                | 4982                    | 19602                                 | 33                                | 215477                            | 17315.53                 | 4.04%   | 5.72517    | 174.82          | 6.92        | 31268.9    |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | 4969                    | 711                                   | 29                                | 236301                            | 4620.18                  | 2.29%   | 5.71706    | 2.31            | 6.88        | 414.3      |
| 7.   | User fills mandatory information and clicks on "Submit" Button | 4966                    | 456                                   | 26                                | 32280                             | 1194.18                  | 2.14%   | 5.72965    | 1.95            | 10.58       | 348.7      |
| 8.   | User logs out  | 4966                    | 6250                                  | 16                                | 113502                            | 8511.41                  | 2.14%   | 5.7909     | 85.94           | 11.49       | 15196      |



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| Step | Activities performed on the website (Label)                    | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                       | 5001                    | 90388                                 | 81567                                | 144289                                 | 173001                                 | 250457                                 | 94                                | 390492                            | 1.38%   | 5.21578    |
| 2.   | User clicks on Login Button available on the homepage          | 4986                    | 16503                                 | 11923                                | 31864                                  | 42933                                  | 85685                                  | 36                                | 298499                            | 1.73%   | 5.43975    |
| 3.   | User fills-in user credential and clicks on Login Button       | 4983                    | 1901                                  | 94                                   | 4831                                   | 8204                                   | 21025                                  | 42                                | 306590                            | 2.15%   | 5.43641    |
| 4.   | Loading of Dashboard   | 4982                    | 97746                                 | 96740                                | 144841                                 | 160651                                 | 198013                                 | 33                                | 293633                            | 2.13%   | 5.35138    |
| 5.   | User clicks on "Create" Link for create Service                | 4982                    | 19602                                 | 16541                                | 40392                                  | 50298                                  | 83105                                  | 33                                | 215477                            | 4.04%   | 5.72517    |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | 4969                    | 711                                   | 68                                   | 1087                                   | 2572                                   | 8036                                   | 29                                | 236301                            | 2.29%   | 5.71706    |
| 7.   | User fills mandatory information and clicks on "Submit" Button | 4966                    | 456                                   | 144                                  | 1140                                   | 1192                                   | 4864                                   | 26                                | 32280                             | 2.14%   | 5.72965    |
| 8.   | User logs out  | 4966                    | 6250                                  | 3399                                 | 15461                                  | 21733                                  | 38665                                  | 16                                | 113502                            | 2.14%   | 5.7909     |

### Interpretation summary for Run 5:

- Server is able to handle 5000 concurrent request with error 4.04%
- 95% Line Response time is within 173001 milliseconds.



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f) Execution log for Run 6 (**Creating the Services**) (No. of Virtual Users:7000, Concurrency Achieved: 7000, Ramp-up time 35 seconds)

| Step | Activities performed on the website (Label)                    | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                       | 7002                    | 134204                                | 95                                | 630077                            | 101111.8                 | 5.96%   | 5.8418     | 485.5           | 3.84        | 85102      |
| 2.   | User clicks on Login Button available on the homepage          | 6801                    | 23509                                 | 41                                | 605784                            | 31980.12                 | 0.96%   | 5.694      | 78.2            | 4.04        | 14063.4    |
| 3.   | User fills-in user credential and clicks on Login Button       | 6793                    | 1947                                  | 42                                | 326971                            | 7932.21                  | 2.72%   | 6.80594    | 5.04            | 5.89        | 758        |
| 4.   | Loading of Dashboard   | 6792                    | 130468                                | 30                                | 609830                            | 57587.75                 | 2.87%   | 5.74081    | 673.45          | 7.03        | 120125.5   |
| 5.   | User clicks on "Create" Link for create Service                | 6781                    | 24336                                 | 23                                | 426806                            | 24365.97                 | 3.92%   | 7.17656    | 219.34          | 8.72        | 31297.5    |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | 6780                    | 861                                   | 12                                | 130889                            | 3643.71                  | 2.85%   | 7.1756     | 2.96            | 8.62        | 423.1      |
| 7.   | User fills mandatory information and clicks on "Submit" Button | 6780                    | 588                                   | 11                                | 74951                             | 2348.89                  | 2.91%   | 7.18324    | 2.52            | 13.23       | 359.6      |
| 8.   | User logs out.   | 6780                    | 7238                                  | 13                                | 178510                            | 12259.78                 | 2.80%   | 7.20244    | 106.26          | 14.24       | 15106.9    |



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| Step | Activities performed on the website (Label)                    | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                       | 7002                    | 134204                                | 114531                               | 212817                                 | 270835                                 | 616550                                 | 95                                | 630077                            | 5.96%   | 5.8418     |
| 2.   | User clicks on Login Button available on the homepage          | 6801                    | 23509                                 | 15308                                | 48154                                  | 63916                                  | 131242                                 | 41                                | 605784                            | 0.96%   | 5.694      |
| 3.   | User fills-in user credential and clicks on Login Button       | 6793                    | 1947                                  | 90                                   | 4831                                   | 8209                                   | 22071                                  | 42                                | 326971                            | 2.72%   | 6.80594    |
| 4.   | Loading of Dashboard   | 6792                    | 130468                                | 127338                               | 200255                                 | 223033                                 | 274853                                 | 30                                | 609830                            | 2.87%   | 5.74081    |
| 5.   | User clicks on "Create" Link for create Service                | 6781                    | 24336                                 | 18448                                | 53880                                  | 68164                                  | 116680                                 | 23                                | 426806                            | 3.92%   | 7.17656    |
| 6.   | User enter Citizen Phone no and Click on "Search" Button       | 6780                    | 861                                   | 67                                   | 2515                                   | 3776                                   | 10858                                  | 12                                | 130889                            | 2.85%   | 7.1756     |
| 7.   | User fills mandatory information and clicks on "Submit" Button | 6780                    | 588                                   | 138                                  | 1154                                   | 2599                                   | 8173                                   | 11                                | 74951                             | 2.91%   | 7.18324    |
| 8.   | User logs out  | 6780                    | 7238                                  | 3296                                 | 18905                                  | 27882                                  | 53073                                  | 13                                | 178510                            | 2.80%   | 7.20244    |

### Interpretation summary for Run 6:

- Server is able to handle 7000 concurrent request with error 5.96%
- 95% Line Response time is within **270835** milliseconds.



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- g) Execution log for Run 7 (**Only Login Log out for Admin User**) (**No. of Virtual Users:100**, Concurrency Achieved: 100, Ramp-up time 5 seconds, Loop Count 32) when 7000 BSK operator users were already logged in the system.

| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Std. Dev in milliseconds | Error % | Throughput | Received KB/sec | Sent KB/sec | Avg. Bytes |
|------|--|-------------------------|---------------------------------------|-----------------------------------|-----------------------------------|--------------------------|---------|------------|-----------------|-------------|------------|
| 1.   | User visits the Homepage                                 | 3209                    | 1171                                  | 168                               | 6880                              | 889.89                   | 0.00%   | 29.92437   | 2639.39         | 25.16       | 90319      |
| 2.   | User clicks on Login Button available on the homepage    | 3154                    | 266                                   | 78                                | 3114                              | 327.08                   | 0.00%   | 30.01351   | 413.65          | 25.79       | 14112.9    |
| 3.   | User fills-in user credential and clicks on Login Button | 3142                    | 197                                   | 106                               | 2880                              | 117.28                   | 0.00%   | 30.40773   | 64.39           | 28.69       | 2168.5     |
| 4.   | Loading of Dashboard                                     | 3130                    | 320                                   | 81                                | 4231                              | 371.96                   | 0.00%   | 30.0047    | 580.44          | 38.83       | 19809.2    |
| 5.   | User Log-out   | 3123                    | 338                                   | 147                               | 5119                              | 300.84                   | 0.00%   | 30.07685   | 454.79          | 65.14       | 15484      |



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| Step | Activities performed on the website (Label)              | Virtual users # Samples | Average response time in milliseconds | Median response time in milliseconds | 90% Line response time in milliseconds | 95% Line response time in milliseconds | 99% Line response time in milliseconds | Min response time in milliseconds | Max response time in milliseconds | Error % | Throughput |
|------|--|-------------------------|---------------------------------------|--------------------------------------|--|--|--|-----------------------------------|-----------------------------------|---------|------------|
| 1.   | User visits the Homepage                                 | 3209                    | 1171                                  | 854                                  | 2409                                   | 2982                                   | 4282                                   | 168                               | 6880                              | 0.00%   | 29.92437   |
| 2.   | User clicks on Login Button available on the homepage    | 3154                    | 266                                   | 176                                  | 464                                    | 1169                                   | 1621                                   | 78                                | 3114                              | 0.00%   | 30.01351   |
| 3.   | User fills-in user credential and clicks on Login Button | 3142                    | 197                                   | 184                                  | 234                                    | 257                                    | 705                                    | 106                               | 2880                              | 0.00%   | 30.40773   |
| 4.   | Loading of Dashboard                                     | 3130                    | 320                                   | 209                                  | 490                                    | 1291                                   | 1856                                   | 81                                | 4231                              | 0.00%   | 30.0047    |
| 5.   | User Log-out   | 3123                    | 338                                   | 264                                  | 446                                    | 795                                    | 1629                                   | 147                               | 5119                              | 0.00%   | 30.07685   |

### Interpretation summary for Run 7:

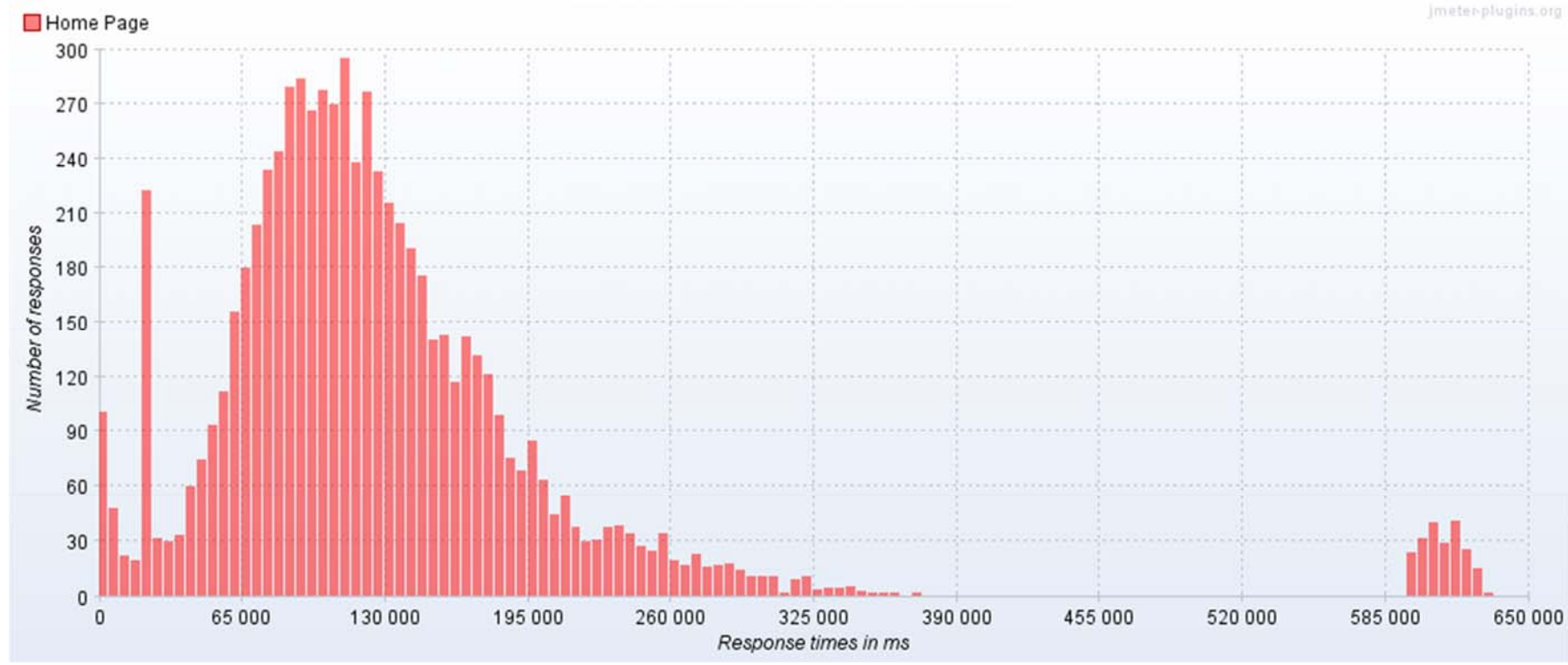
- Server is able to handle 100 concurrent request of Admin User with error 0.00%
- 95% Line Response time is within **2982** milliseconds.



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## B. Graphical Data of Run 6 (No. of Virtual Users 7000) a) User visits the Homepage

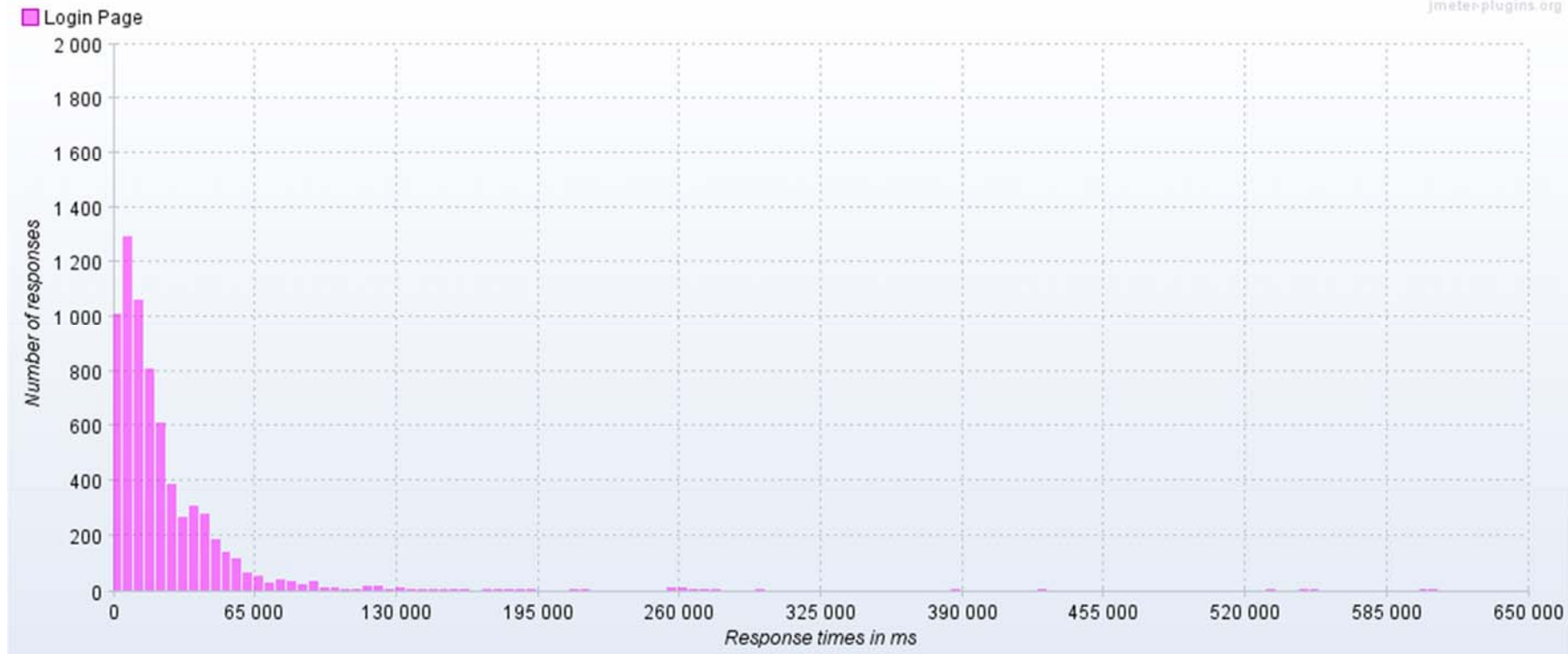




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b) User clicks on Login Button available on the homepage

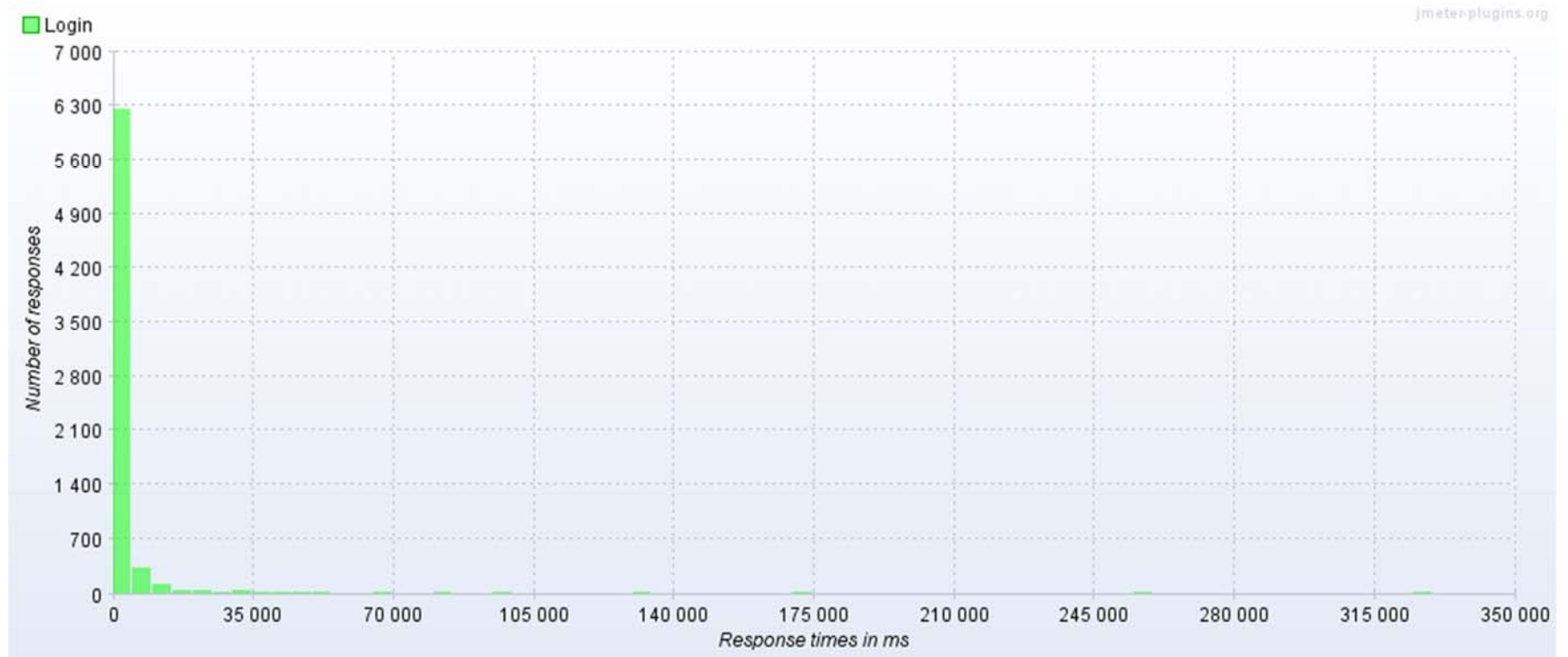




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c) User fills-in user credential and clicks on Login Button.

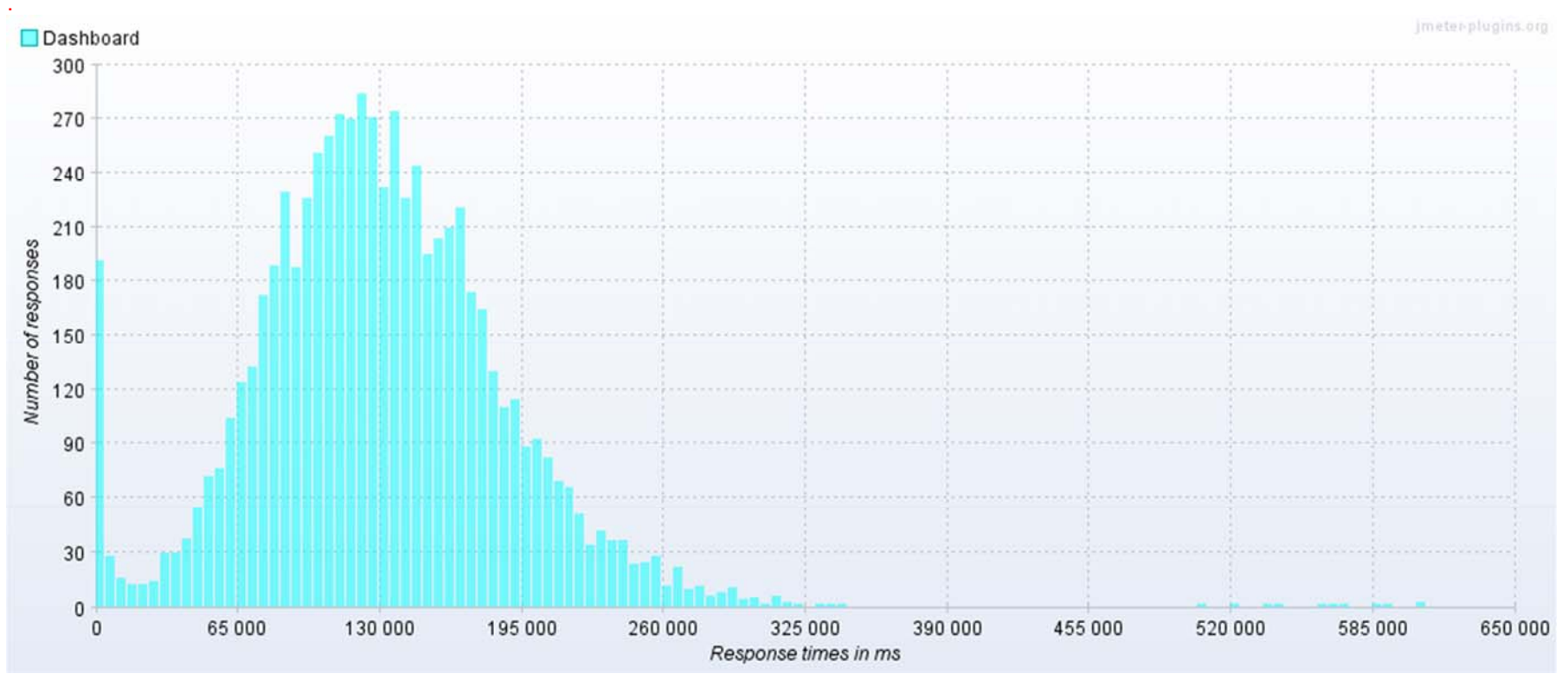




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## d) Loading of Dashboard

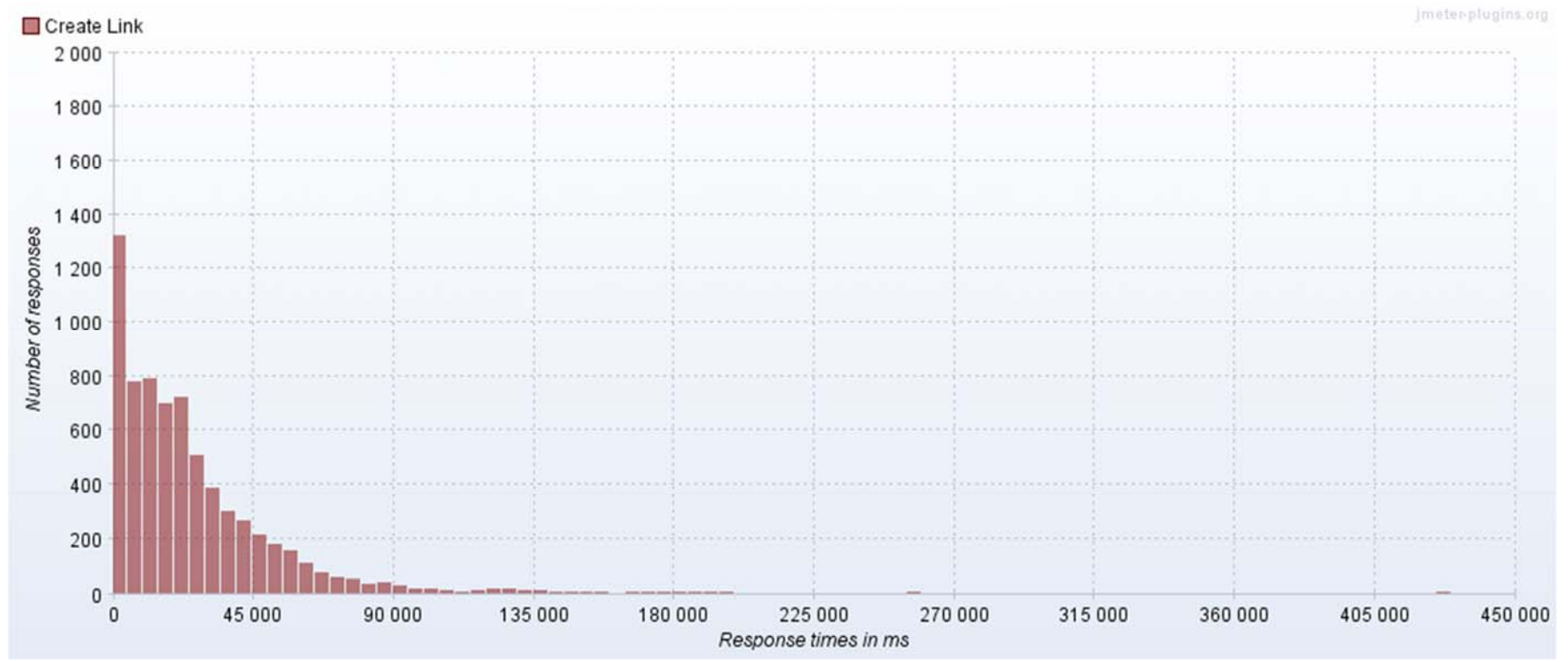




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e) User clicks on "Create" Link for create Service

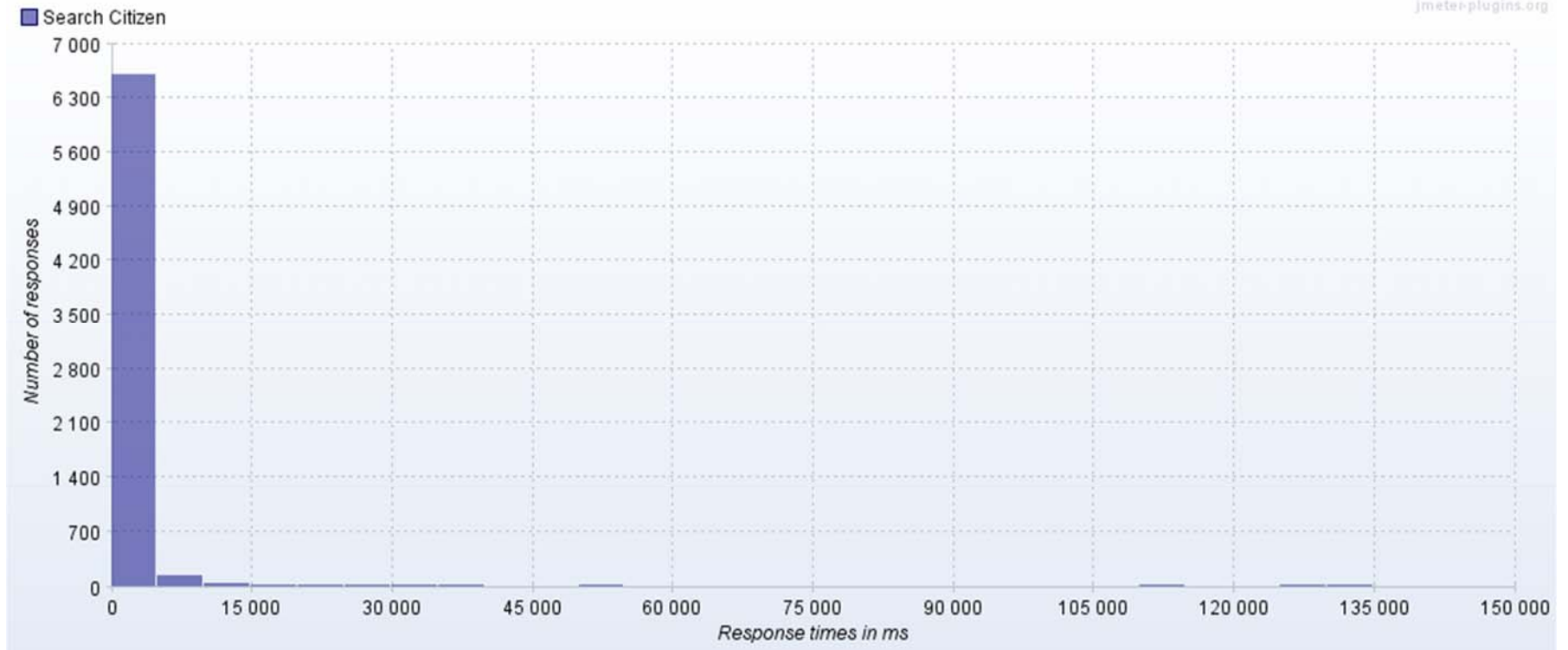




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f) User enter Citizen Phone no and Click on “Search” Button.

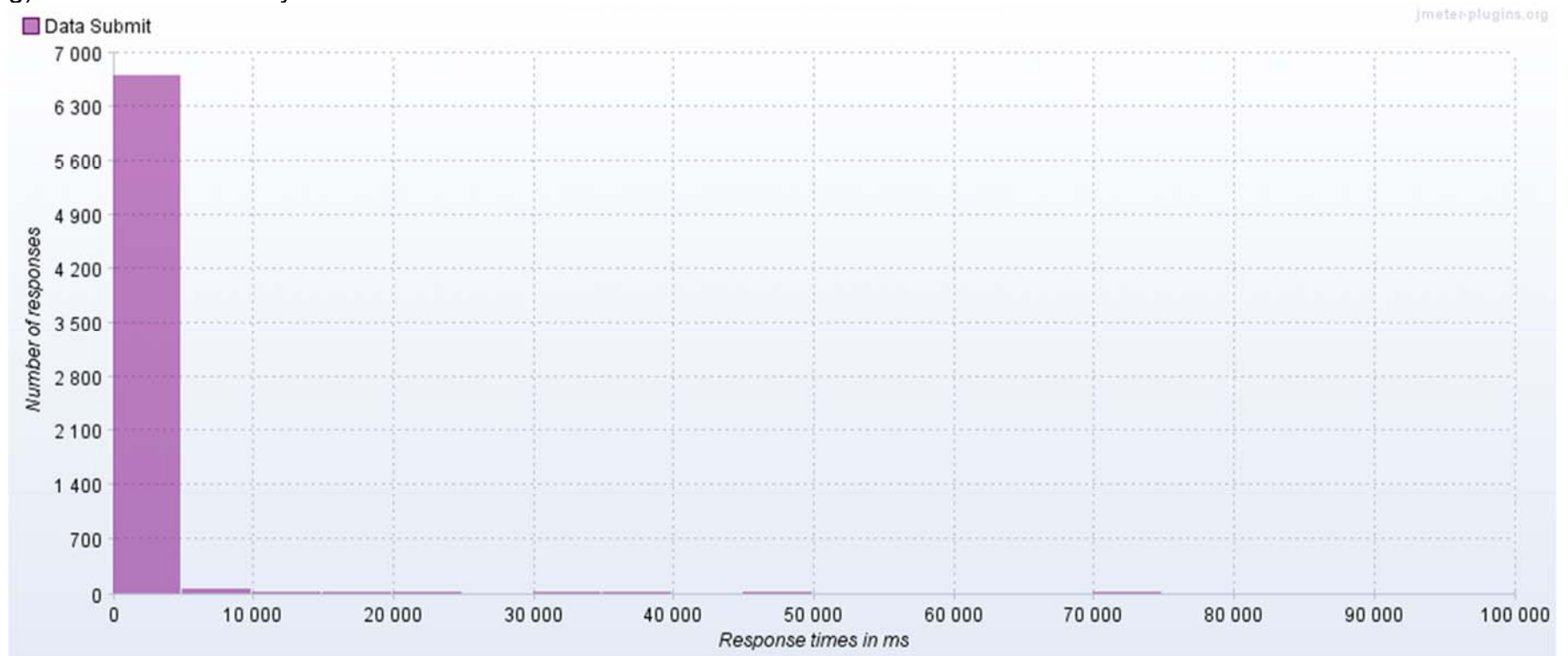




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g) User fills mandatory information and clicks on “Submit” Button.

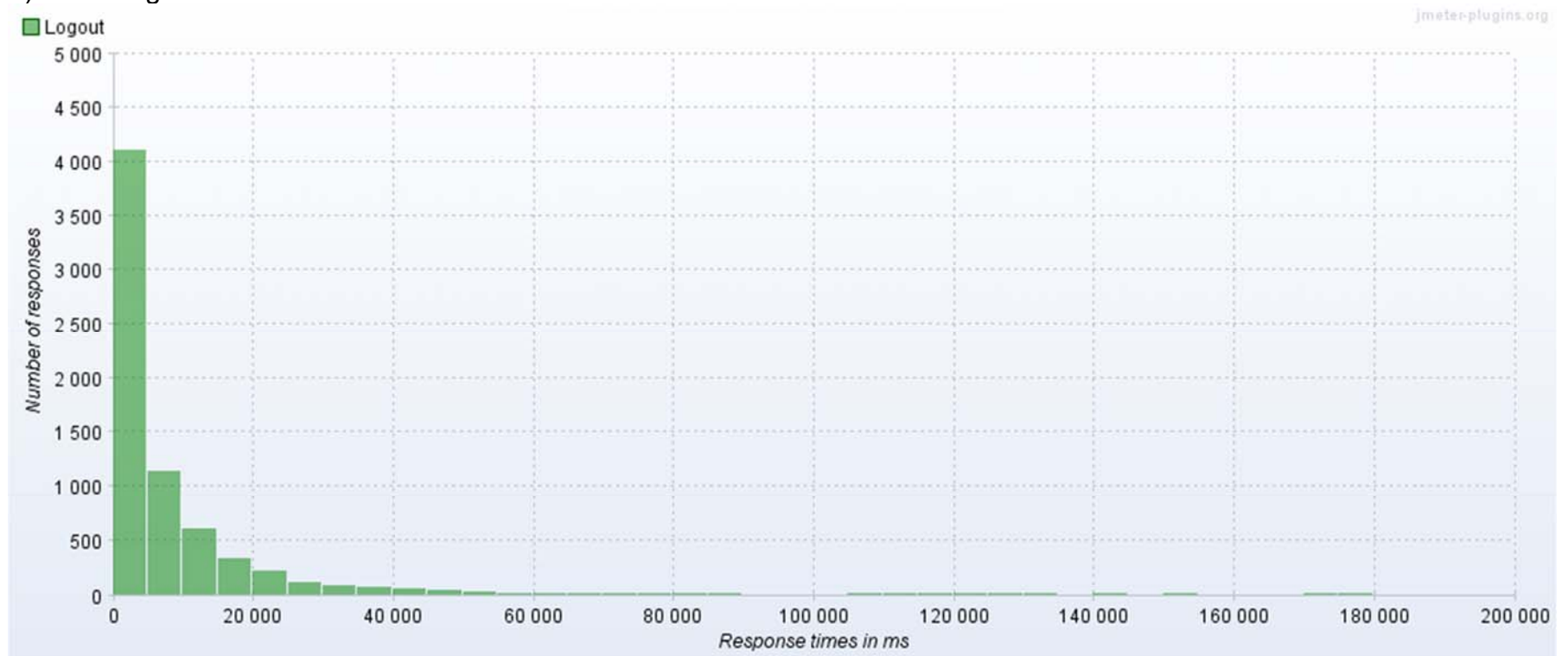




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h) User Logs out.





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### 5.0 Summary of Test Result:

- This Performance test report pertains to the software product '**Bangla Sahayata Kendra Portal**' as mentioned in clause 2.1 and 2.2
- The Software product '**Bangla Sahayata Kendra Portal**' at URL <https://bsk.wb.gov.in> has been tested for scope mentioned in section 3.2 and section 3.3
- The readings for server response time are as under section 4.2.3. The test result reveals that the web application under test is able to cater to almost requests of **7000** concurrent virtual users.
- Web server's CPU utilization is very high during the peak load and sometimes it reaches to 100%.
- Application and Database may be optimized to get better utilization of Resources in the production environment and obtain better response time.
- Department has not provided any specification w.r.t minimum and maximum Response Time, hence so conclusion was drawn against the results.
- The result obtained is valid at the time of measurement only. It may vary depending on delay attributed to load due to other applications sharing the resources, network delay and/or amount of data handled by the test conditions etc.

### 6.0 Approvals

| Tested by                  | Reviewed By                    | Approved By                        |
|----------------------------|--------------------------------|------------------------------------|
|                            |                                |                                    |
| Name: Md. Hussain Rabbani  | Name: Mr. Himadri Roy          | Name: Mr. Tapas Bandyopadhyay      |
| Designation: Test Engineer | Designation: Officer-in-charge | Designation: Head Software Testing |



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### Annexure A

Documentation of Apache JMeter aggregate report format as taken from [https://jmeter.apache.org/usermanual/component\\_reference.html](https://jmeter.apache.org/usermanual/component_reference.html)


- **Average** - The average elapsed time of a set of results
- **Median** - The median is the time in the middle of a set of results. 50 % of the samples took no more than this time; the remainder took at least as long.
- **90% Line** - 90 % of the samples took no more than this time. The remaining samples took at least as long as this. (90th percentile)
- **95% Line** - 95 % of the samples took no more than this time. The remaining samples took at least as long as this. (95th percentile)
- **99% Line** - 99 % of the samples took no more than this time. The remaining samples took at least as long as this. (99th percentile)
- **Min** - The lowest elapsed time for the samples with the same label
- **Max** - The longest elapsed time for the samples with the same label
- **Std. Dev.** - This shows the set of exceptional cases which were deviating from the average value of sample response time
- **Error %** - Percent of requests with errors
- **Throughput** - The throughput measured in requests served by the server per second.
- **Received KB/sec** - The throughput measured in Kilobytes per second
- **Sent KB/sec** - The throughput measured in Kilobytes per second
- **Avg. Bytes** - Average size of the sample response in bytes.

Times are in milliseconds.

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**Annexure B**

Department of Personnel & Administrative Reforms and e-Governance (e-Governance Cell),  
Govt. of West Bengal stating the requirement.

  
Government of West Bengal  
Department of Personnel & Administrative Reforms and e-Governance  
(e-Governance Cell)  
7th Floor, Nabanna, 325, Sarat Chatterjee Road  
Howrah-711102

Memo No.: 14-PAR (BSK)/BSK-05/2021 Date: 01.10.2021

To,  
Shri Himadri Roy, Scientist 'F',  
STQC IT Service, Govt. of India,  
Ministry of Electronics & Information Technology,  
ERTL(T), Block-DN, Sector-V, Salt Lake,  
Kolkata - 700 091.

Sub: Performance Testing/ Load Testing of Bangla Sahayata Kendra Web Portal (<https://bsk.wb.gov.in>)

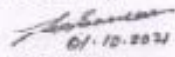
Sir,

It has been resolved in the meeting held on 30.10.2021 that, Load testing of BSK Portal (<https://bsk.wb.gov.in>) is required to be done. The details of the portal and concerned department are given below:

|                            |  |
|----------------------------|--|
| 1. Domain Name             | : <a href="https://bsk.wb.gov.in">https://bsk.wb.gov.in</a>  |
| 2. No. of Concurrent users | : 7000+  |
| 4. Name of the Department  | : Personnel & Administrative Reforms and e-Governance Department   |
| 5. Billing Address:        | : Department of Personnel & Administrative Reforms and e-Governance (e-Governance Cell), 7th Floor, Nabanna, 325, Sarat Chatterjee Road, Howrah-711102 |
| 6. GSTN of the Department  | : Nil  |

The name of concerned person for demo of the application is Prosenjit Paul, Sr. Software Developer, Mob. 9748877272, e-Mail: [id bskpmu@gmail.com](mailto:bskpmu@gmail.com).


Therefore, you are requested to kindly undertake the Performance Testing/ Load Testing of Bangla Sahayata Kendra Web Portal (<https://bsk.wb.gov.in>) at your earliest.

Yours faithfully,  
  
01.10.2021  
Joint Secretary  
Personnel & Administrative Reforms and e-Governance Department

Memo No.: 14/i(3)-PAR (BSK)/BSK-05/2021 Date: 30.09.2021

Copy forwarded for information to:

1. The State Nodal Officer, Bangla Sahayata Kendra & Secretary, Monitoring & Coordination, CMO, West Bengal, Upanna, Howrah-711102.
2. The Joint Secretary, IT & E Department, "Monibhandar" (5th and 6th floor), Premises of Webel Bhavan, Block-EP & GP, Sector-V, Salt Lake, Kolkata - 700 091.

  
07.10.21  
Joint Secretary  
Personnel & Administrative Reforms and e-Governance Department