# Performance Test Report

# For

# Execution of

# PreRegistration module – 400 users (Run1)

Date: 9th Aug 2019

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## Summary

This report presents the observations and findings of the load test conducted for a load of 400 users performing booking appointments full flow planned for 1-hour duration

The objective of this load test was to observe and record the behavior of the application when users are booking appointments for 400 concurrent users with 100K preregistration applications already created in DB

Below are the scenario details:

| | |
|---|---|
| **Sprint/Report Name** | Booking appointments |
| **Run Date** | 9-Aug-2019 |
| **Period** | 10:23 AM to 11:33 AM (UTC) |
| **Number of concurrent users** | 400 |
| **Ramp up** | 4 min |
| **Run Duration** | 60 minutes |
| **Ramp down** | 4min |

The transaction response times observed were as below:

| Label | # Samples | Average (ms) | 90% Line (ms) | Min (ms) | Max (ms) | Error % | Throughput (sec) |
|---|---|---|---|---|---|---|---|
| TR_prereg_homepage | 9188 | 170 | 257 | 60 | 3952 | 0.00% | 2.25698 |
| TR_prereg_sendotp | 9154 | 286 | 481 | 67 | 15535 | 1.02% | 2.25199 |
| TR_prereg_validateotp | 9045 | 378 | 621 | 83 | 5698 | 0.27% | 2.22667 |
| TR_prereg_viewbasicdetails | 8987 | 1844 | 6357 | 167 | 21514 | 0.00% | 2.21338 |
| TR_prereg_submitdemographic | 8972 | 4288 | 12935 | 82 | 36152 | 0.00% | 2.21241 |
| TR_prereg_uploadpoidocument | 8946 | 1744 | 6238 | 51 | 25705 | 0.11% | 2.21879 |
| TR_prereg_uploadpoadocument | 8922 | 584 | 409 | 29 | 20272 | 0.38% | 2.21304 |
| TR_prereg_searchregcenter | 8879 | 70 | 84 | 18 | 3062 | 0.00% | 2.20136 |
| TR_prereg_openbookappointmentpage | 8851 | 34925 | 50626 | 745 | 107780 | 2.25% | 2.19507 |
| TR_prereg_bookappointment | 8597 | 45900 | 69784 | 295 | 128934 | 1.05% | 2.13267 |
| TR_prereg_notify | 8411 | 38057 | 60023 | 86 | 109508 | 3.16% | 2.08878 |
| TR_prereglogout | 8092 | 286 | 410 | 109 | 5425 | 0.00% | 2.01632 |

## Performance Test Execution Details

We have executed the booking appointment user flow, which has transactions mentioned in above table.

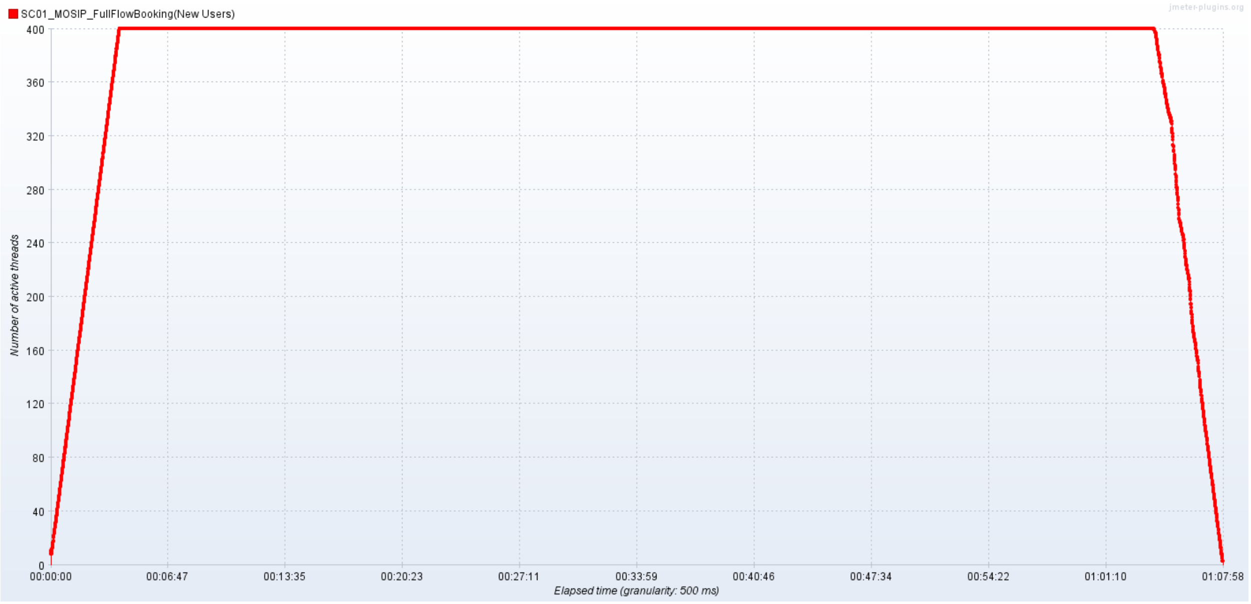
All the transactions average response times were less than 3sec except below:

1. Submit demographic - 4.2 sec
2. Open book appointment page -34.925 sec
3. Book appointment page – 18.777 sec
4. Notification request -38.057 sec

## Test Environment

| | Common proxy server (NGINX) | (Kubernets cluster) apache Tomcat 8.5.31 | DB Postgress SQL 10.2 |
|---|---|---|---|
| **Number Of nodes** | 1 | 4 | 1 |
| **RAM** | 4 GB | 112 GB | 16GB |
| **PROCESSOR** | 2 cores | 16 core | 4 cores |

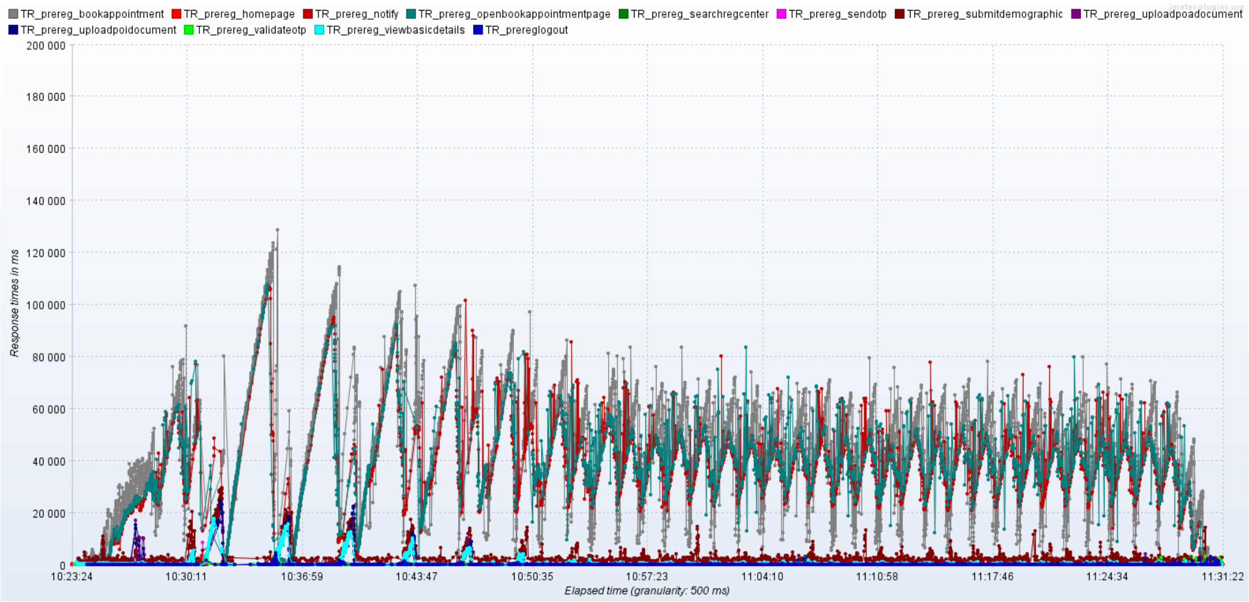
## Active threads over Time:



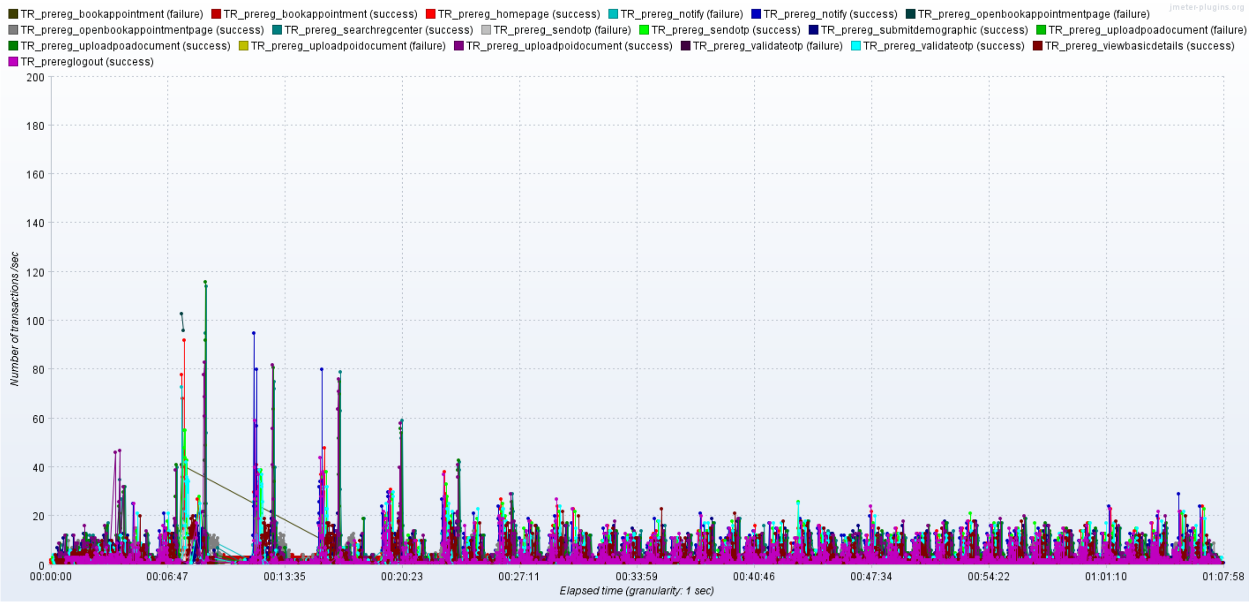
## Response Time Graph

All the transactions average response times were less than 3sec except below:

1. Submit demographic - 4.2 sec
2. Open book appointment page -34.925 sec
3. Book appointment page – 18.777 sec
4. Notification request -38.057 sec



## Transactions per second:



All key transactions error rate is less than 1% except below

TR_prereg_openbookappointmentpage – 2.25%

TR_prereg_bookappointment – 1.05%

TR_prereg_notify -3.16%

Below are few error messages:

**Book appointment error response:**

{"id":null,"version":null,"responsetime":"2019-08-09T05:24:56.495Z","metadata":null,"response":null,"errors":[{"errorCode":"PRG_CORE_REQ_016","message":"Could not open JPA EntityManager for transaction; nested exception is org.hibernate.exception.JDBCConnectionException: Unable to acquire JDBC Connection"}]}

**Notification request error response:**

{"id":"mosip.pre-registration.notification.notify","version":"1.0","responsetime":"2019-08-09T05:00:59.983","response":null,"errors":null}

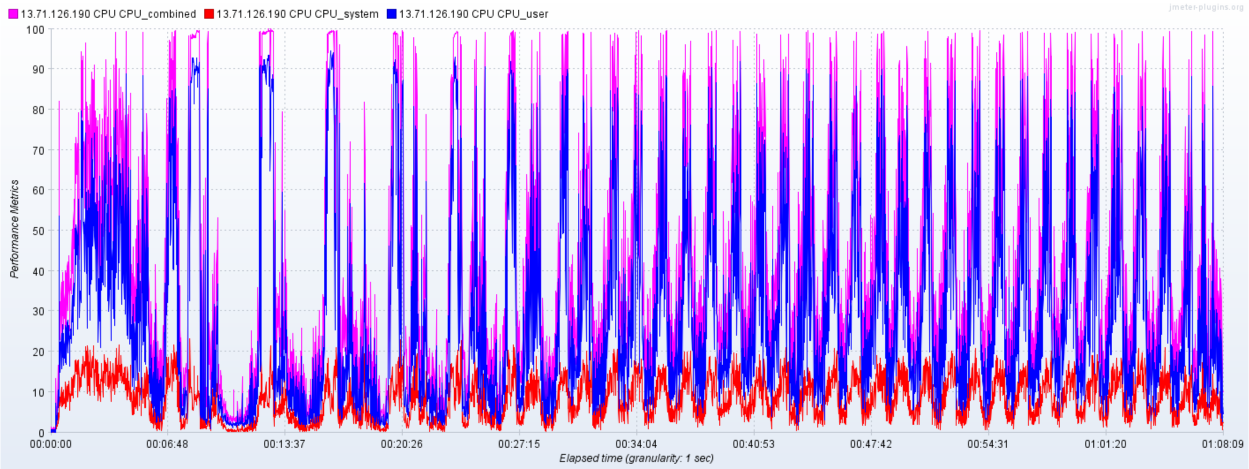
**Openbookappointmentpage error response:**

```
Sorry, the page you are looking for is currently unavailable.
Please try again later.
If you are the system administrator of this resource then you should check the error log for details.
Faithfully yours, nginx.
```

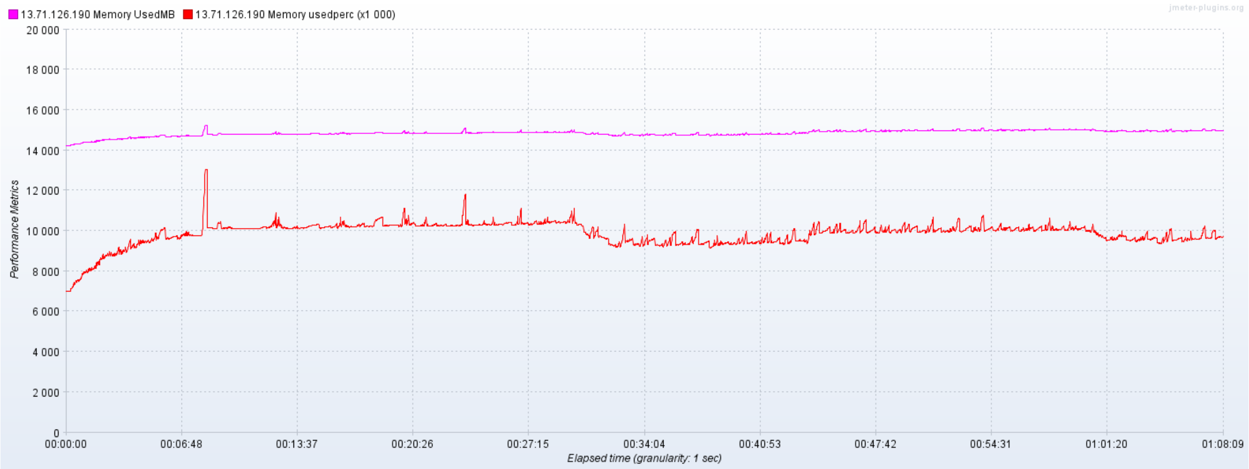
## Resource usage pattern of DB Server:

CPU Usage:

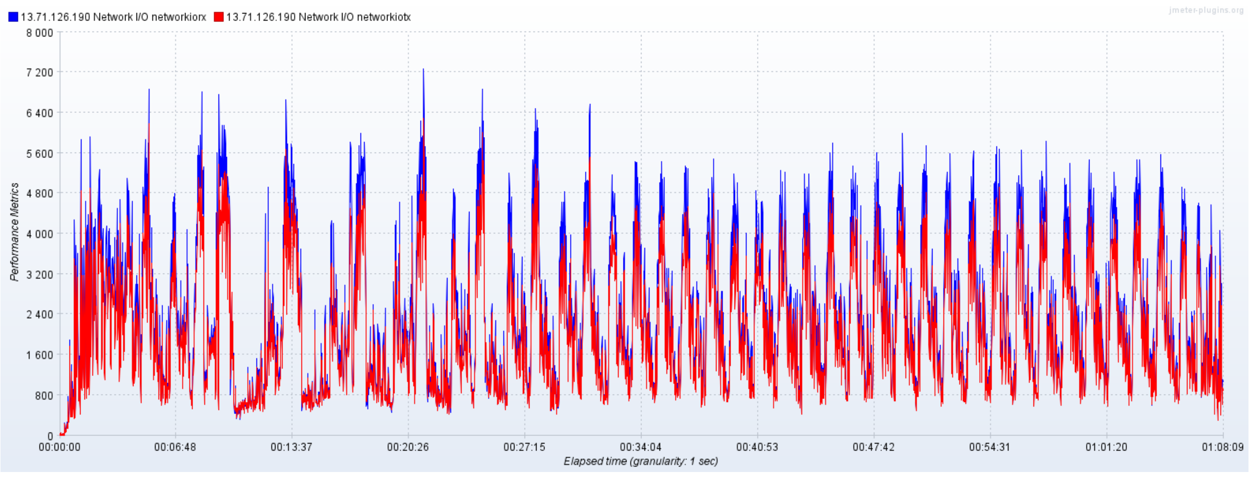
There were intermittent spikes observed in overall CPU usage



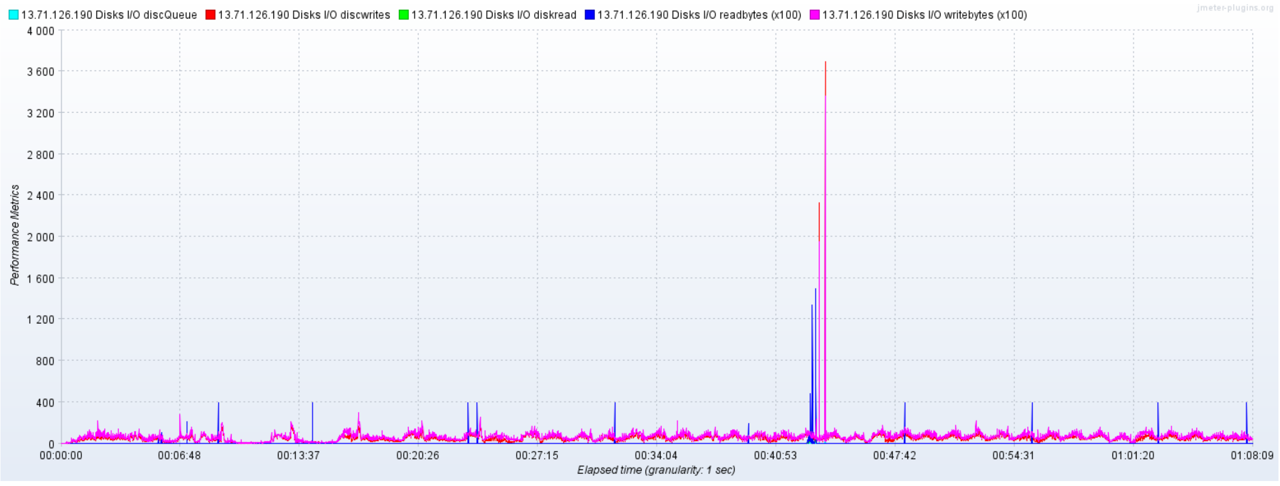
## Memory utilization:



## Network io:



## Disc Read/writes:



## Conclusion and Next Steps

Raised a defect MOS-28389 for booking appointment request error and we will be retesting defect after the defect fix deployed in pt environment