Performance Test Report

For

Execution of

Registration-Processor Packet Upload – 50 users

Date: 15 July 2019

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Summary

This report presents the observations and findings of the load test conducted for a load of 50 users performing sync and upload of packets to registration processor packet receiver module for 30 minutes.

The objective of this load test was to observe and record the behavior of the application when 50 concurrent users upload packets to the registration processor packet receiver component. Test was stopped at 20 minutes interval seeing approx. 45% error in packet upload.

Below are the scenario details:

Sprint/Report Name	Reg-Processor Packet Upload
Run Date	15-July-2019
Period	10:08 AM to 10:28 AM (UTC)
Number of concurrent users	50
Ramp up	1 min
Run Duration	20 minutes
Ramp down	NA

The transaction response times observed were as below:

Label	# Samples	Average(ms)	90% Line(ms)	Min(ms)	Max(ms)	Error %	Throughput
TR_regproc_authentication	904	1649	6713	29	7185	0.00%	0.75824
TR_regproc_validate_token	904	32	49	17	485	0.00%	0.75848
TR_regproc_encrypt	896	41	59	20	284	0.00%	0.75941
TR_regproc_sync_reg_packets	885	11348	15280	255	60030	1.58%	0.75379
TR_regproc_upload_registration_packet	865	18765	31358	464	60098	45.55%	0.73652
TR_regproc_check_packet_upload_status	854	5394	10022	151	47687	0.00%	0.73617

Performance Test Execution Details

We have executed the packet upload flow, which has transactions mentioned in above table.

Response times for most of the transactions started exceeding the SLA (3 sec) after certain duration of time

The error rate for sync request is 1.6% and error rate for packet upload request is more than 45%.

After the ramp up of users gets stable, average response time for critical transactions like sync and packet upload can be seen in the response times over time graph as more than 5 seconds.

Below listed transactions are the highest time taking:

1. TR_regproc_upload_registration_packet (187.6 sec)
2. TR_regproc_sync_reg_packets (113.4 sec)

Transactions having most erroneous responses are as below table:

1. TR_regproc_upload_registration_packet (45.55%)
2. TR_regproc_sync_reg_packets (1.58%)

Test Environment

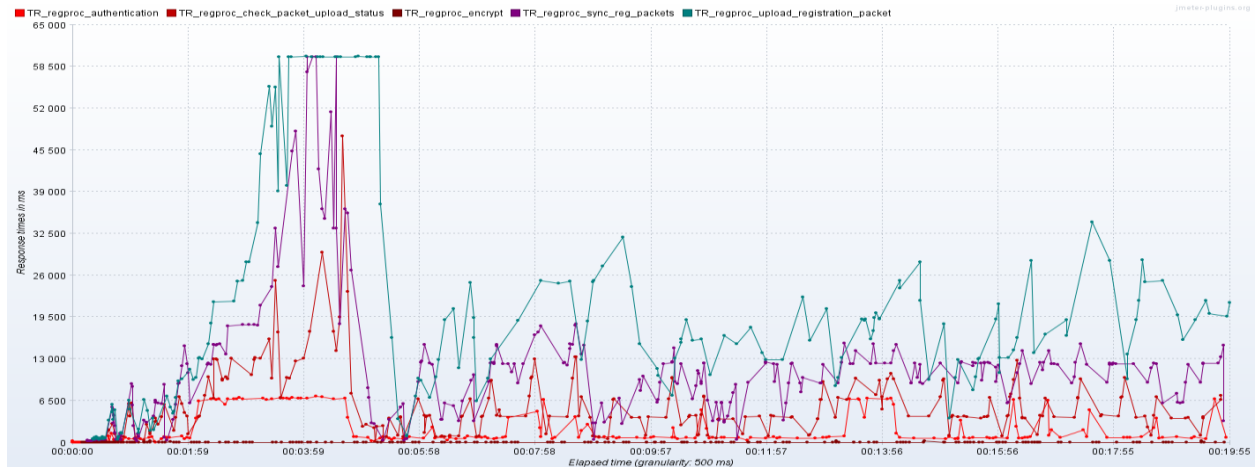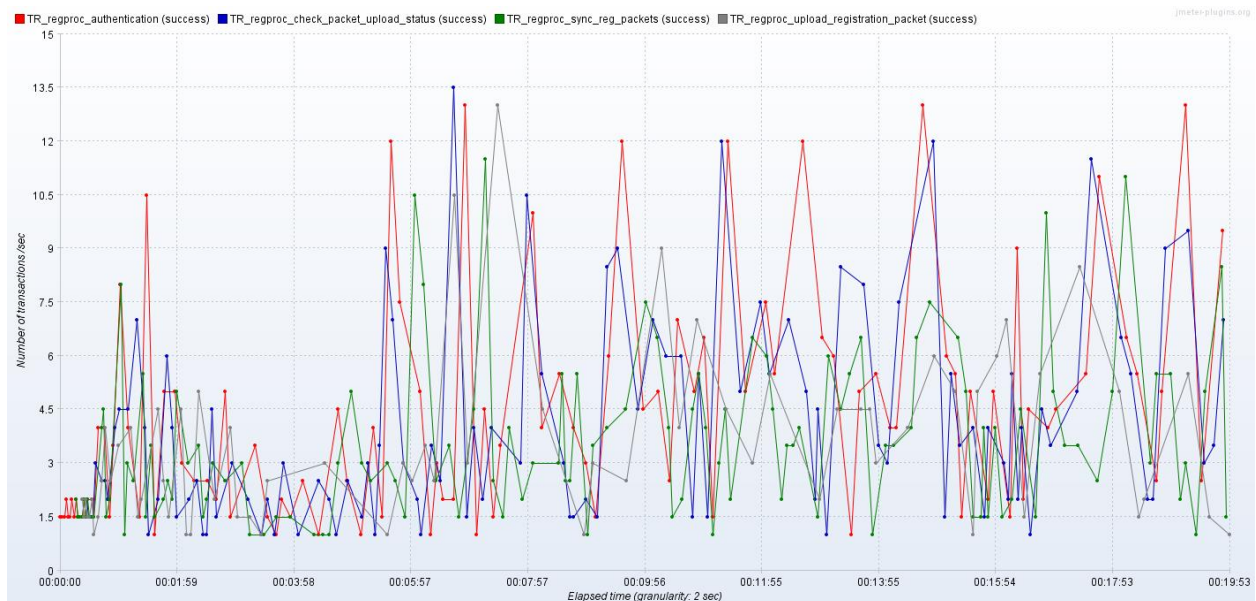|	Common proxy server (NGINX)	(Kubernets cluster) apache Tomcat 8.5.31	DB Postgress SQL 10.2
Number Of nodes	1	4	1
RAM	4 GB	112 GB	16GB
PROCESSOR	2 cores	16 core	4 cores

Active Threads Over Time

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Response Time Graph

Most of the transactions have response time above the SLA (3 sec). Response time has raised high with arrival of users.
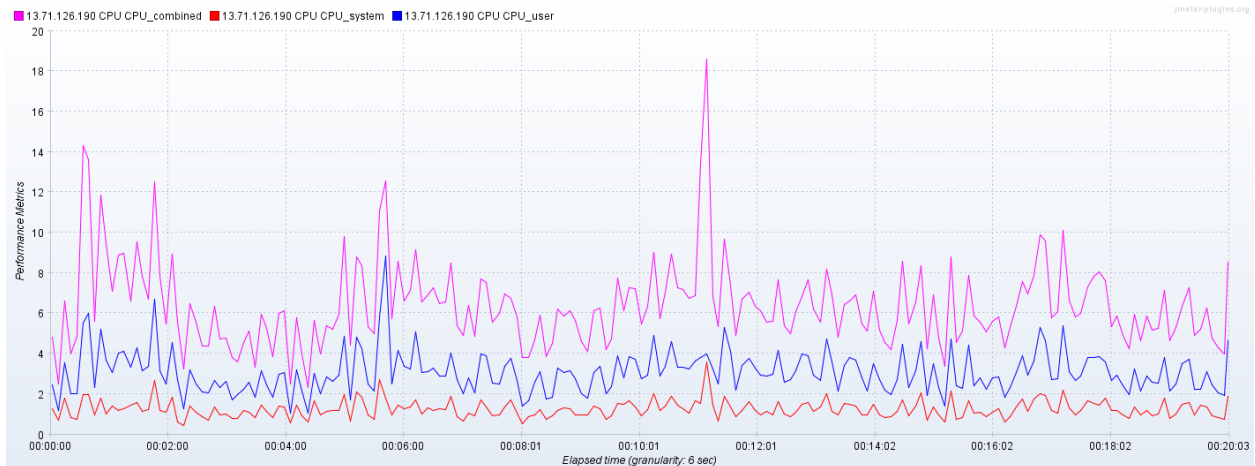

Transactions per second:

Resource Usage Pattern of DB Server:
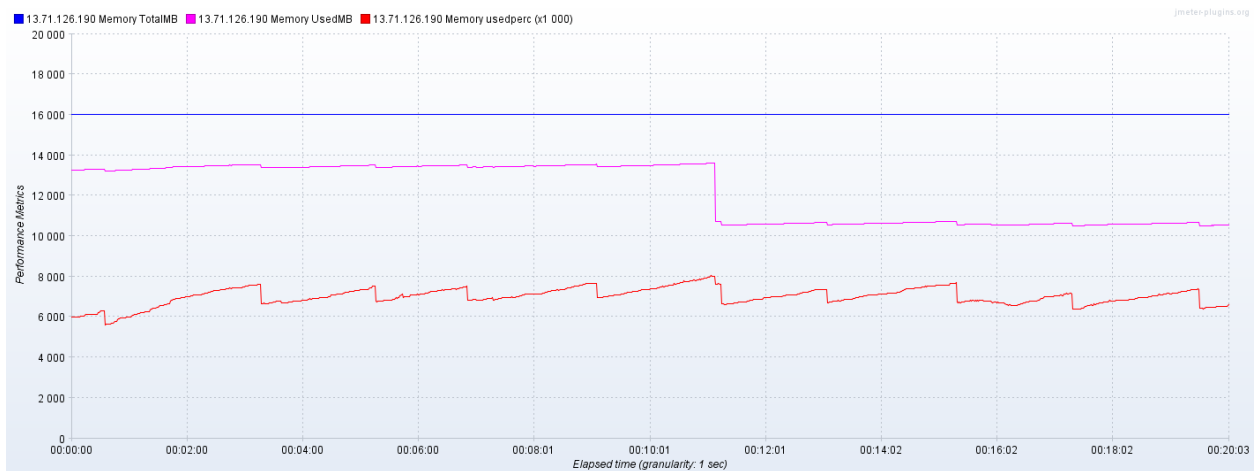
CPU Usage

CPU usage on DB server has been around 5% in user mode and system mode as well.

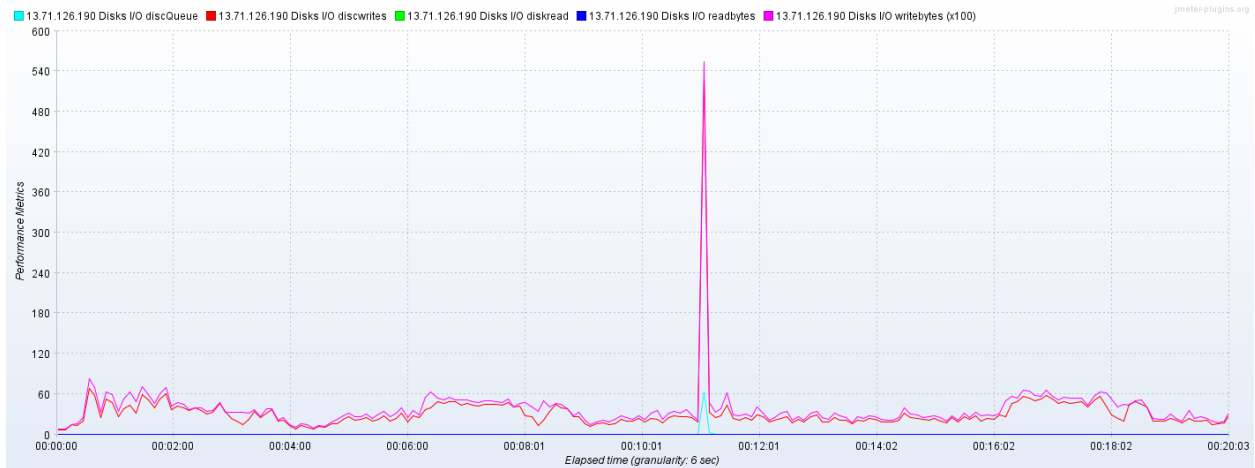Overall CPU usage is around 10%.

Memory Usage:

Memory usage during the load test duration stays at 50% and comes down often showing regular release of memory
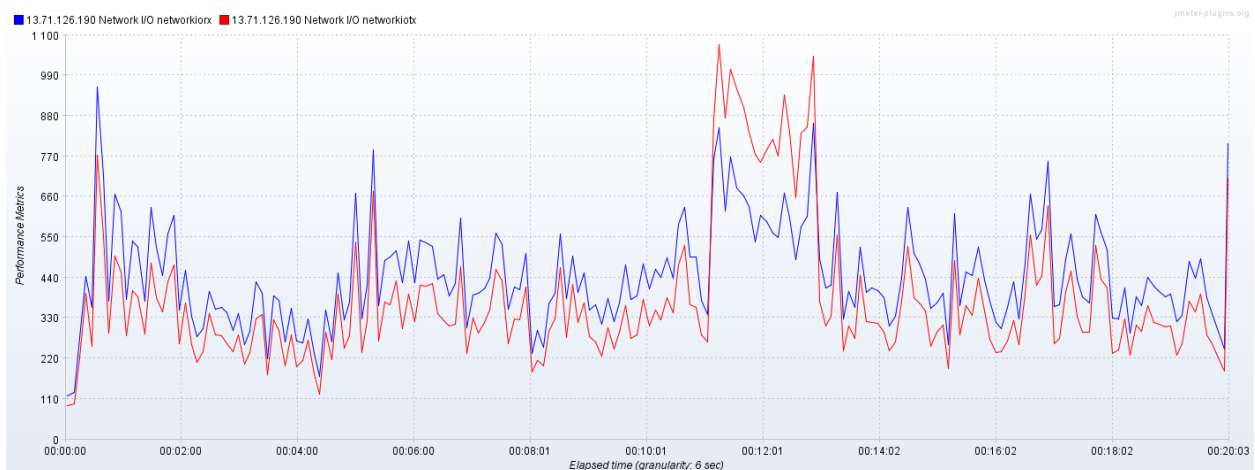
Disk usage:

The spike seen in DISK IO write graph may be due to the DB writing logs.

Network IO

Some Error Responses:

Packet upload and packet sync are the most failing requests.

Some of the packet upload request has failed due to NGINX issue as well.

 Error responses for both requests are marked below:-

Packet Sync –

```
{

        "timestamp": "2019-07-15T10:12:26.694+0000",

        "status": 500,

        "error": "Internal Server Error",

        "message": "RPR-UTL-003  --> RPR-RCT-001 --> Unknown resource provided; \nnested exception is
io.mosip.registration.processor.rest.client.exception.TokenGenerationFailedException; \nnested exception is
io.mosip.registration.processor.core.exception.ApisResourceAccessException: RPR-RCT-001 --> Unknown resource
provided; \nnested exception is
io.mosip.registration.processor.rest.client.exception.TokenGenerationFailedException",

        "path": "/registrationprocessor/v1/registrationstatus/sync"

}
```

Error response2 -

An error occurred.

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.

Upload document request –

```
{

 "id" : "mosip.registration.packet",

 "version" : "1.0",

 "responsetime" : "2019-07-15T10:09:32.715Z",

 "response" : null,

 "errors" : [ {

  "errorCode" : "RPR-PKR-009",

  "message" : "Packet HashSequence did not match"

 } ]

}
```

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Error response2 -

An error occurred.

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.

Conclusion and Next Steps

An issue has been logged in JIRA with ID MOS-27298, and the detail has been shared with the developer team to fix the issue. Test will be re-performed once the issue is looked into and fixed.