Mindtree

Performance Test Report

For

Execution of

OTP-Manager APIs – 1000 users

Date: 23 March 2020

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Summary

This report presents the observations and findings of the load test conducted for a load of 1000 users on generate OTP and validate OTP APIs of kernel OTP manager.

The objective of this load test was to observe and record behavior of the application when users have been ramped up from 0 to 1000 step by step. Users were ramped up to 500 in first 250 seconds. Then ramp up happened from 500 to 1000 after a step pause of 900 seconds.

Below are the scenario details:

Script/Report Name	Kernel OTP Manager
Run Date	23-March-2020
Period	06:26 UTC to 07:44 UTC
Number of concurrent users	0 to 500 to 1000
Ramp up	02 users per second
Run Duration	60 minutes peak load
Ramp down	NA

The transaction response times observed were as below:

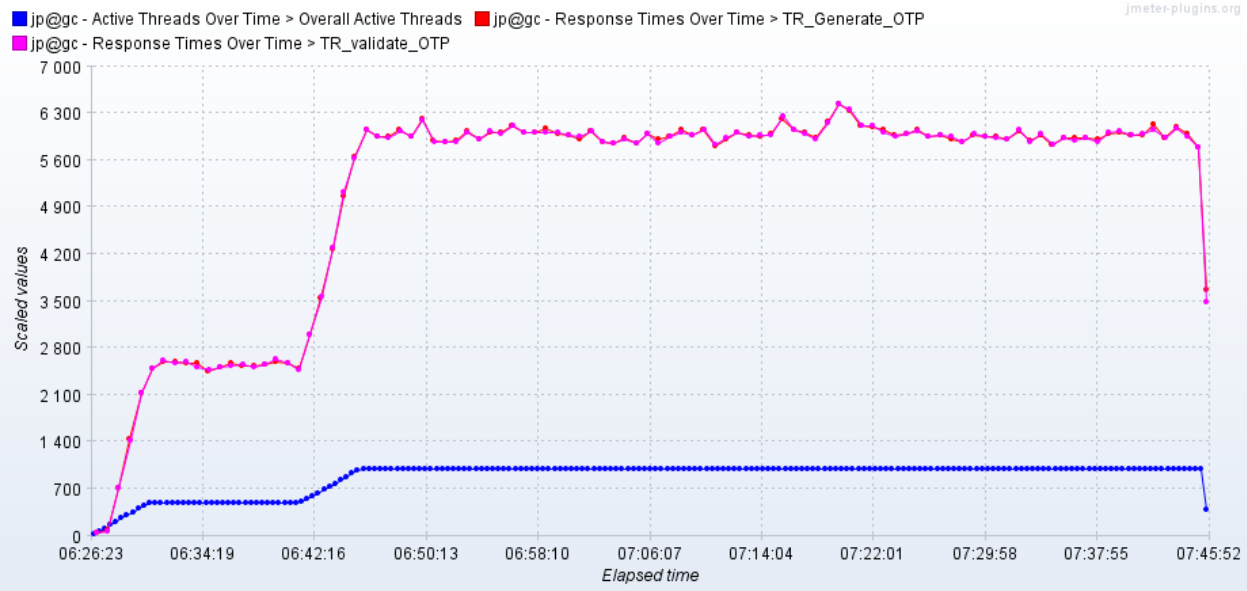
Label	# Samples	Average(ms)	90% Line(ms)	Min(ms)	Max(ms)	Error %	Throughput
TR_Generate_OTP	337430	5202	6739	9	21496	0.38%	70.75213
TR_Validate_OTP	336931	5200	6742	9	15728	0.04%	70.6647
TOTAL	674361	5201	6741	9	21496	0.21%	141.3996

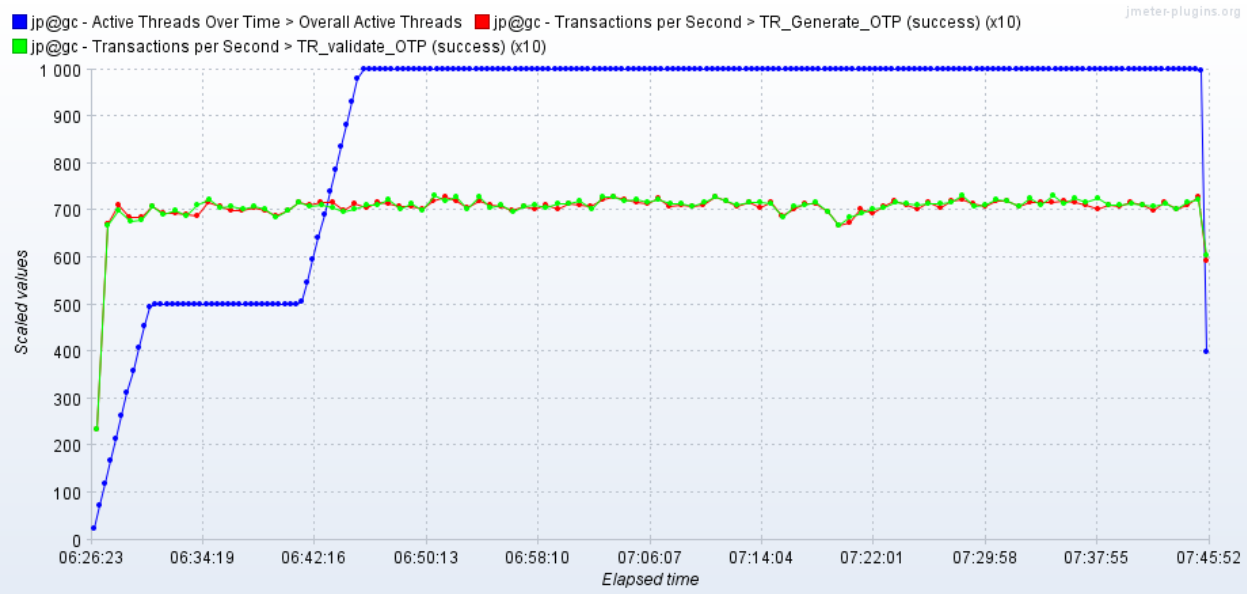
Performance Test Execution Details

We have executed JMeter script for kernel OTP-manager service, which has transactions mentioned in the above table.

Average response time of the APIs is 5.2 seconds with below 1% error rate

Response Time and TPS Graph:





As seen in the graph, response time of the APIs is 2.8 seconds for 500 users and it increases to ~6 seconds when 1000 users are there.

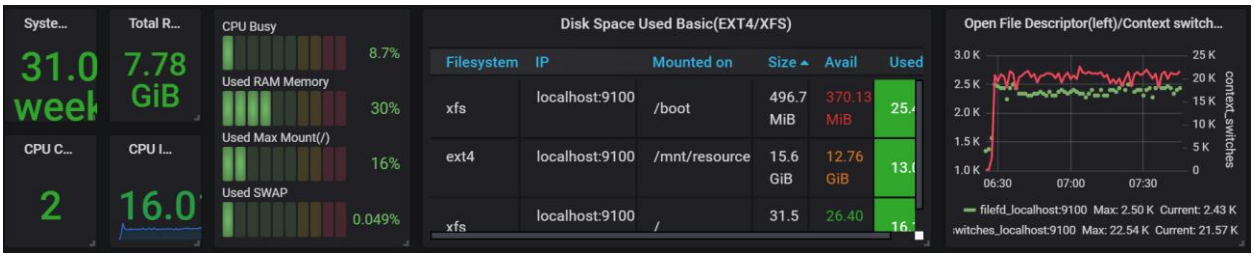
Throughput (TPS) of the APIs approxes 70 when 450 users are active. Throughput remains at the almost same level for later level of users.

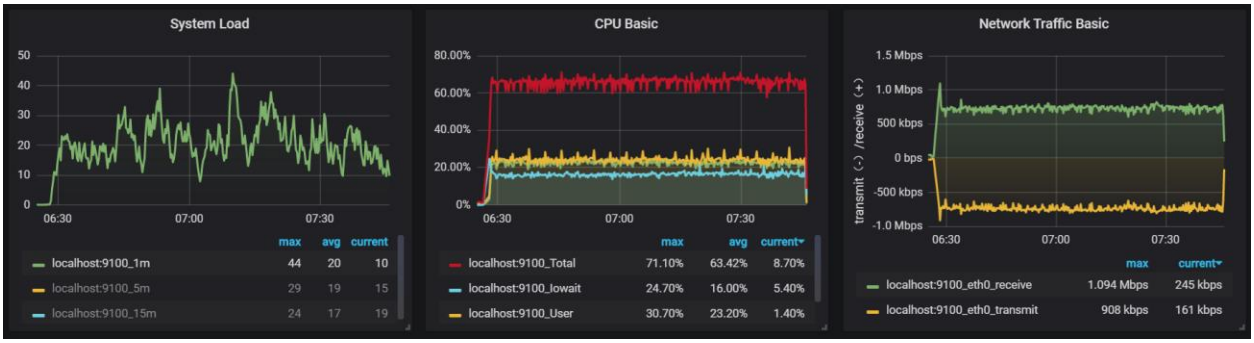
Think time used is 1 sec (1000 ms).

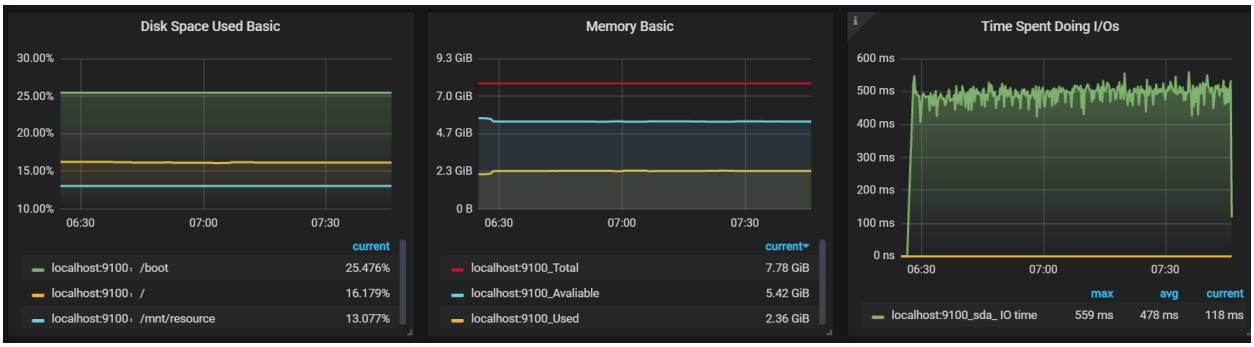
Resource Usage Pattern:

Kernel cluster resource usage:

Kernel DB resource usage:







Glowroot Metrics:

Below SQL queries are observed to take more time:

```
update kernel.otp_transaction set cr_dtimes=?, cr_by=?, del_dtimes=?,
expiry_dtimes=?, generated_dtimes=?, is_deleted=?, lang_code=?, otp=?,
ref_id=?, ref_id_type=?, status_code=?, upd_by=?, upd_dtimes=?,
validation_retry_count=? where id=?
```

```
update kernel.otp_transaction set validation_retry_count=?, upd_dtimes=?
where id=?
```

```
update kernel.otp_transaction set status_code=?, upd_dtimes=?,
validation_retry_count=? where id=?
```