Mindtree

Performance Test Report

For

Execution of

Kernel UIN Generator API – 200 to 400 users

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Summary

This report presents the observations and findings of the load test conducted for a load of 200 to 400 users on kernel UIN generator service.

Kernel database's uin table was emptied before start of the test and around 1 Lakh UIN records were created in the table before starting script execution. Another 1 lakh UINs were created in the uin table in course of the script execution.

The objective of this load test was to observe and record behavior of the application when user load is scaled from 200 to 400 in steps in 1 hour duration of run.

UIN generaor API is hosted on local Windows machine and Glowroot is configured with it to collect profiling metrics.

Below are the scenario details:

Script/Report Name	Kernel UIN Generator
Run Date	04-May-2020
Period	09:15 UTC to 10:17 UTC
Number of concurrent users	200 to 400
Ramp up	01 users per second
Run Duration	----
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_kernel_generate-uin	119142	8268	1894	56	2171157	0.00%	31.9/Sec

Performance Test Execution Details

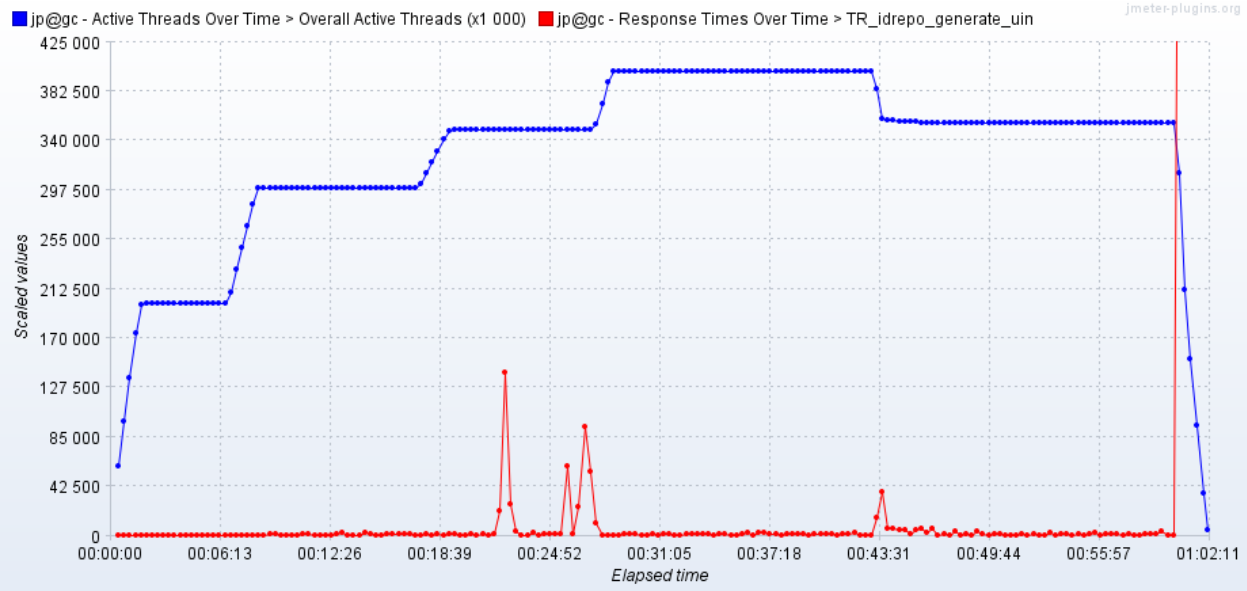
We have executed JMeter script for kernel UIN generator service, which has transactions mentioned in the above table.

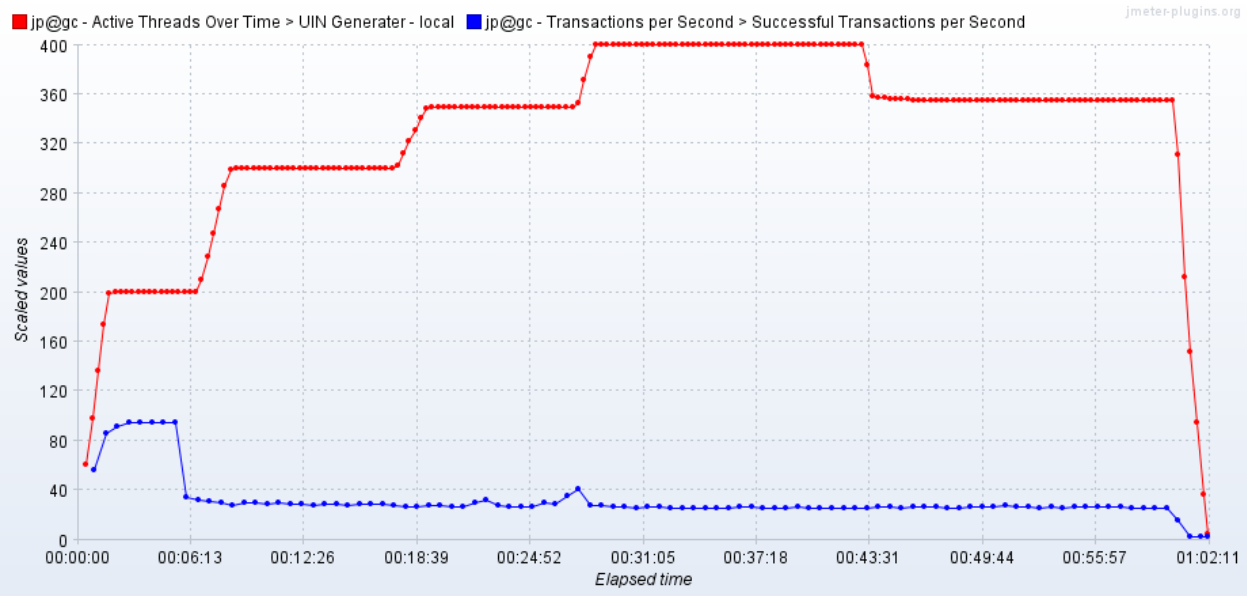
Average response time of the APIs is 8268 ms with 0% error rate.

Response time of the API is approx. 327 milli seconds when 50 users are active, it increases with increase in number of users. It reaches 2.5 seconds when 150 users are active and gets to 4.3 second when 300 users are accessing the API.

TPS of the API is approx. 24 when 100 users are active and stays almost at same level.

Response Time and TPS Graph:





Resource Usage Pattern:

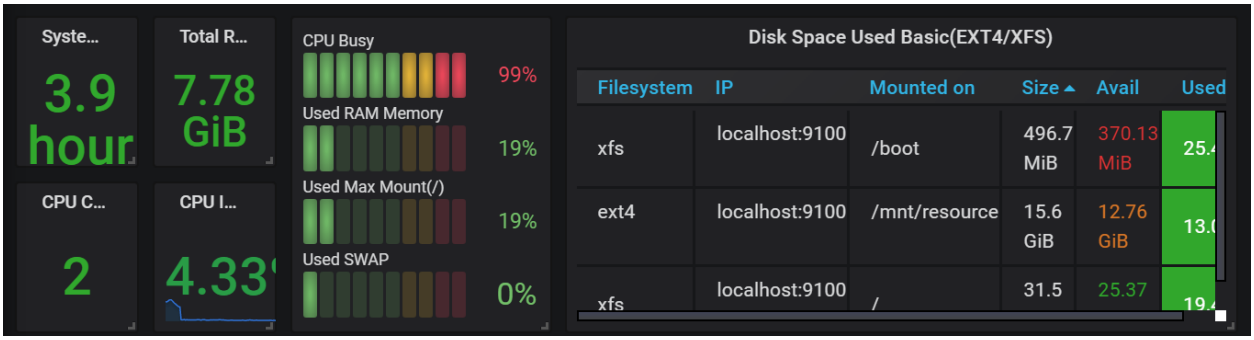
UIN Generater service jar was hosted on local Windows machine.

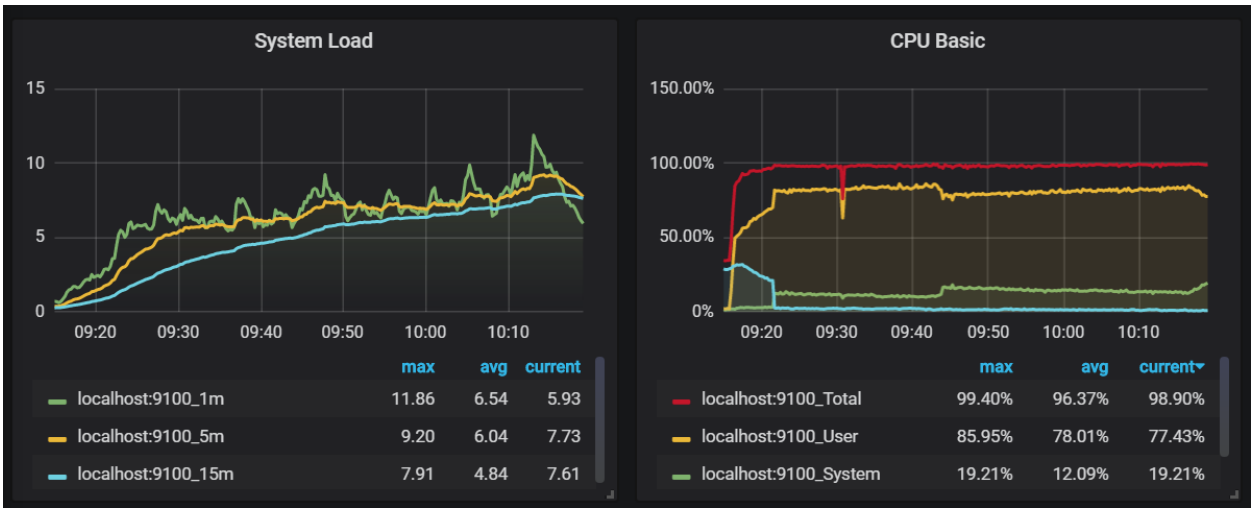
Kernel DB resource usage:

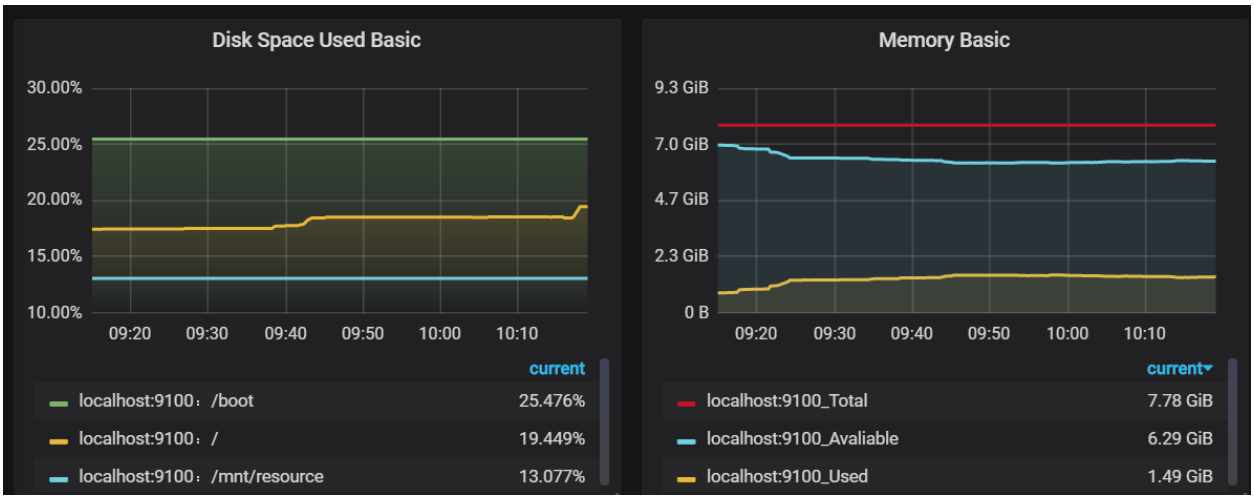
Average system load – 5.93 (2 cores); CPU usage continuously increases with increase in number of users

Average CPU usage – 78.01 % (user mode)

Memory used – 1.5 GB / 7.78 GB







DB Queries metrics from Glowroot:

Response time | Slow traces (5,047) | Queries | Service calls | Thread profile

	Total time (ms)	Total count	Avg time (ms)	Avg rows
`select uu.uin, uu.cr_by, uu.cr_dtimes, uu.del_dtimes, uu.is_deleted, uu.upd_b...`	377,634,425.3	44,897	8,411.1	1.0
`UPDATE kernel.uin SET uin_status=?, upd_by=?, upd_dtimes=? where uin=?`	347,306.8	44,897	7.7	1.0

The query with 8.4 second average time is

select uu.uin, uu.cr_by, uu.cr_dtimes, uu.del_dtimes, uu.is_deleted, uu.upd_by, uu.upd_dtimes, uu.uin_status from kernel.uin uu where uu.uin_status=? limit 1 FOR UPDATE