Performance Test Report

For

Execution of

Identity-Authentication – 300 users

Date: 10 Sept 2019

Author: Gaurav Sharan

Summary

This report presents the observations and findings of the load test conducted for a load of 300 users performing OTP generation and authentication planned for 60 minutes duration, but test was stopped after 15 minutes due to error(s).

The objective of this load test was to observe and record the behavior of the application when users are authenticating using OTP.

The Kernel APIs being used by IDA module were also tested as part of this test, summary of which is included in this report.

Below are the scenario details:

Sprint/Report Name	OTP generation and authentication
Run Date	10-Sept-2019
Period	18:44 PM to 19:00 PM UTC
Number of concurrent users	300 : 100 was achieved
Ramp up	100 users per 50 seconds
Run Duration	15 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_ida_generate_otp	7922	946	1837	0	15870	**50.32%**	8.42646
TR_ida_otp_authenticate	3867	448	735	156	2139	0.28%	5.373

The transaction times observed for Kernel authmanager send OTP request is as:

Label	# Samples	Average(ms)	90% Line(ms)	Min(ms)	Max(ms)	Error %	Throughput
TR_kernel_authenticate	78603	1543	3350	76	30665	0.03%	13.77204
TR_authmanager_sendOTP	78432	2177	5344	83	61494	0.05%	13.75128

The transaction times observed for Kernel APIs are as:

Label	# Samples	Average(ms)	90% Line(ms)	Min(ms)	Max(ms)	Error %	Throughput
TR_kernel_authenticate	42428	196	392	75	5580	0.00%	7.43506
TR_kernel_generateOTP	42359	30	62	7	5022	0.00%	7.42962
TR_kernel_validateOTP	42311	35	77	10	5083	0.00%	7.42893
TR_kernel_digital_sign	42256	25	33	9	5010	0.08%	7.42495
TR_kernel_tokenidgenerator	42150	8	6	2	4941	0.00%	7.41351

Performance Test Execution Details

We have executed JMeter script for OTP authentication API, which has transactions mentioned in the above table.

Average response time of generate_OTP request is 1 second, but error rate is very high in 15 minutes of run itself.
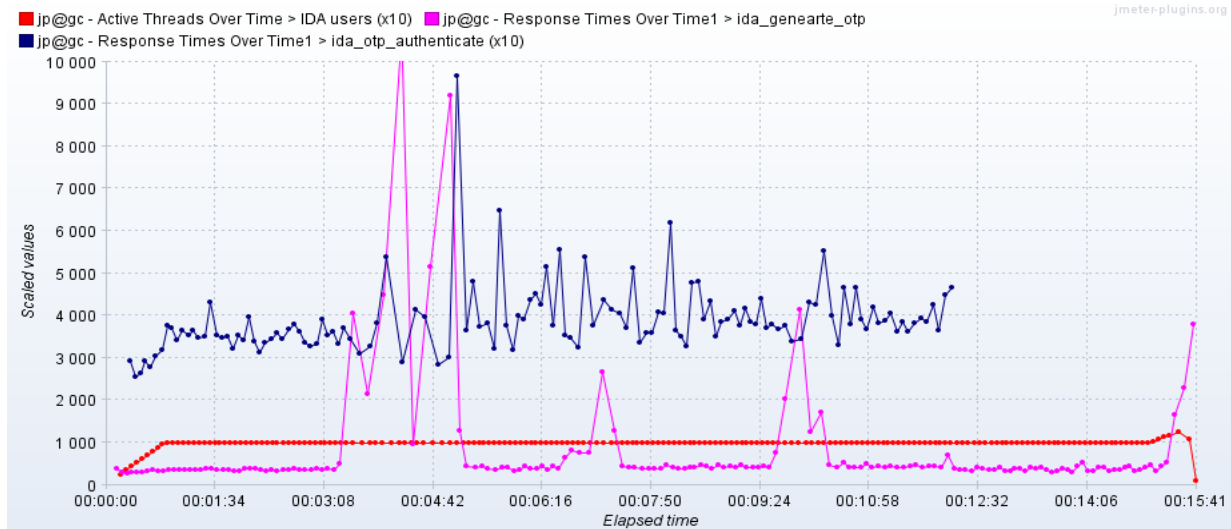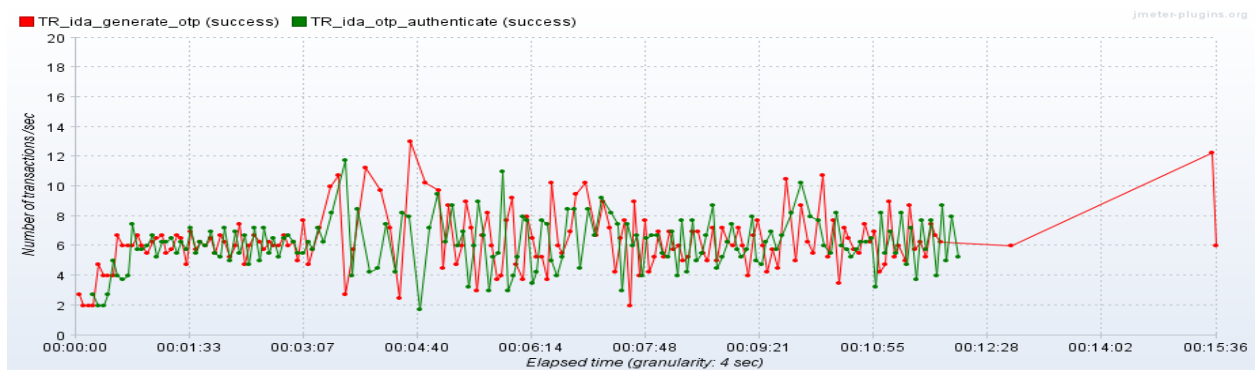
Test Environment

MOSIP_deployment_
architecture_1.png

Proprietary and Confidential © MindTree Limited

Response Time Graph:
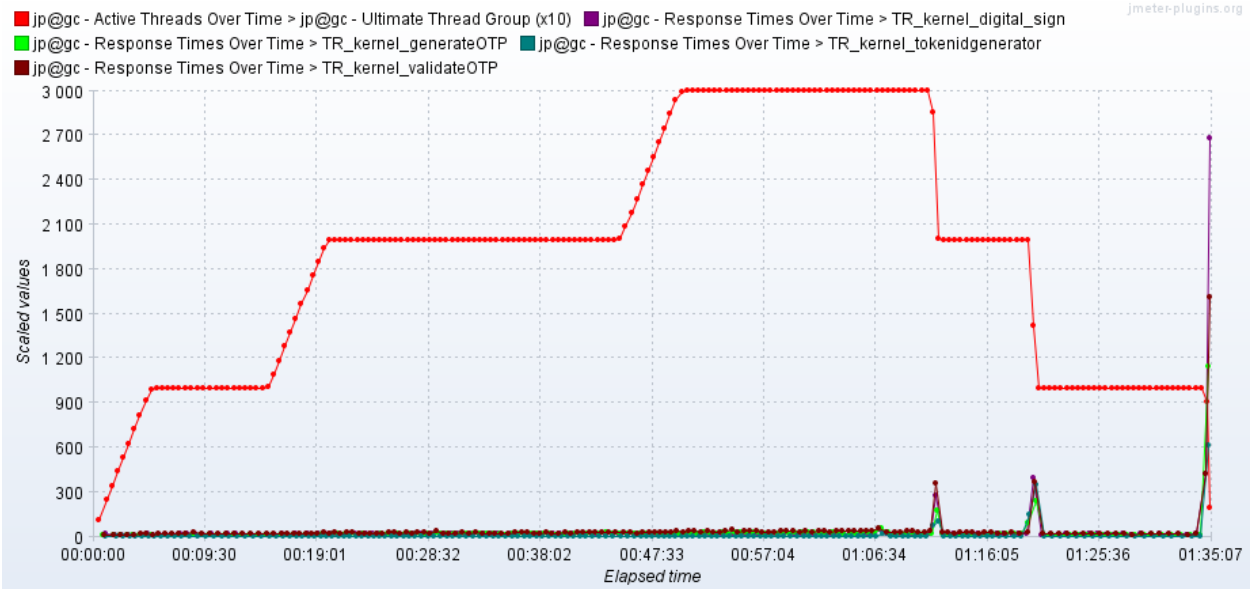

Transactions per second:

Response Time Graph of Kernel APIs:
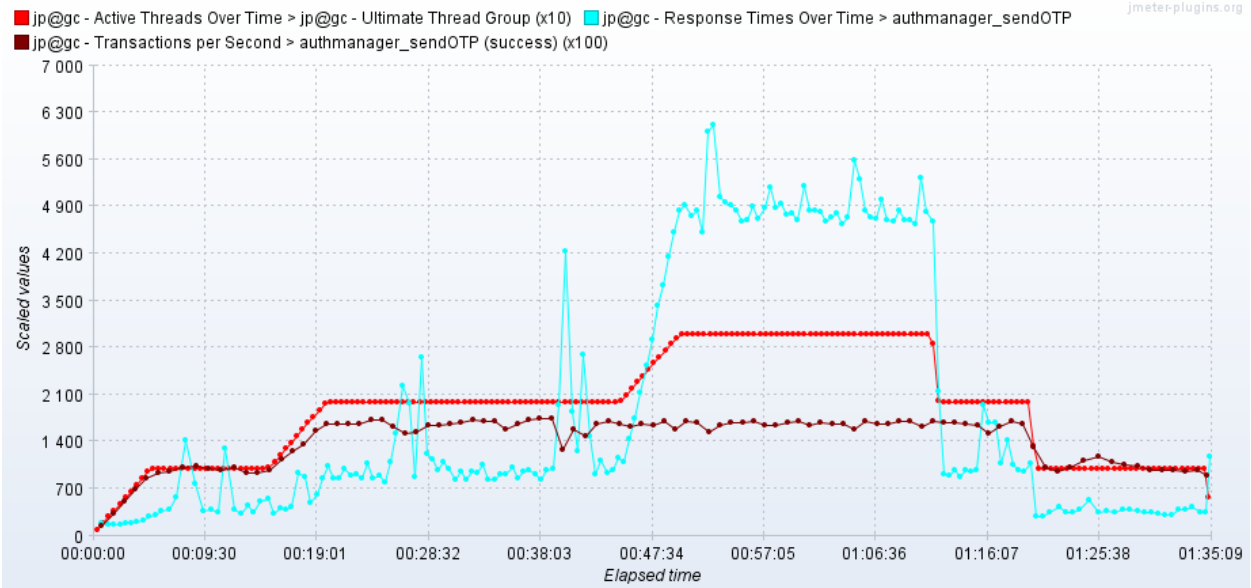
The APIs covered are

- OTP Manager generate OTP

- OTP Manager validate OTP
- Kernel digital sign
- Kenel tokened generator

Response Time and TPS Graph of Kernel Authmanager APIs:

Some Error Responses:

Erroneous responses of the transactions having failure rate above 1% are given below for further debugging.

TR_ida_generateOTP:

{"id":"mosip.identity.otp","version":"1.0","transactionID":"1090242311","responseTime":"2019-09-10T19:00:02.424Z","errors":[{"errorCode":"IDA-MLC-007","errorMessage":"Request could not be processed. Please try again"}],"response":null}

Conclusion and Next Steps

We will repeat the test for 100 users and observe the behavior once developer confirms the issue is fixed. The erroneous responses obtained during the load test will be shared with the developer team for further analysis.