

Kernel Performance Test Report For Execution of Cryptomanager APIs – 100 users

Date: 21 March 2019

Author: Shankar N

Summary

This report presents the observations and findings of the load test conducted for a load of 100 users accessing all the two API Endpoints sequentially running for a duration of 15 minutes.

The objective of this load test was to observe and record the behavior of the application when users access all the different end points concurrently.

Below are the scenario details:

Sprint/Report Name	Sprint 9 Kernel Cryptomanager
Run Date	21-March-2019
Period	03:45 PM to 04:00 PM
Number of concurrent users	100
Ramp up	50 user per 50 seconds
Run Duration	15 minutes
Ramp down	50 user per 50 seconds

The transaction response times observed were as below:

API Name	No of Requests	Average Response Time	90% line(ms)	Min(ms)	Max(ms)	Error %	Throughput/Sec
mosip_kernel_CryptoManager_Encrypt	16400	47	74	26	542	0.00 %	14.70
mosip_kernel_CryptoManager_Decrypt	16351	50	75	25	662	0.00 %	14.72

Performance Test Execution Details

The transaction response time is below the SLA of 300ms. There were no high response time found during the test.

During the test, it was observed that all the resources were utilized close to 5% by cryptomanager API in the integration server and 15% by Keymanager service API.

There were no errors identified in the test.

Test Environment

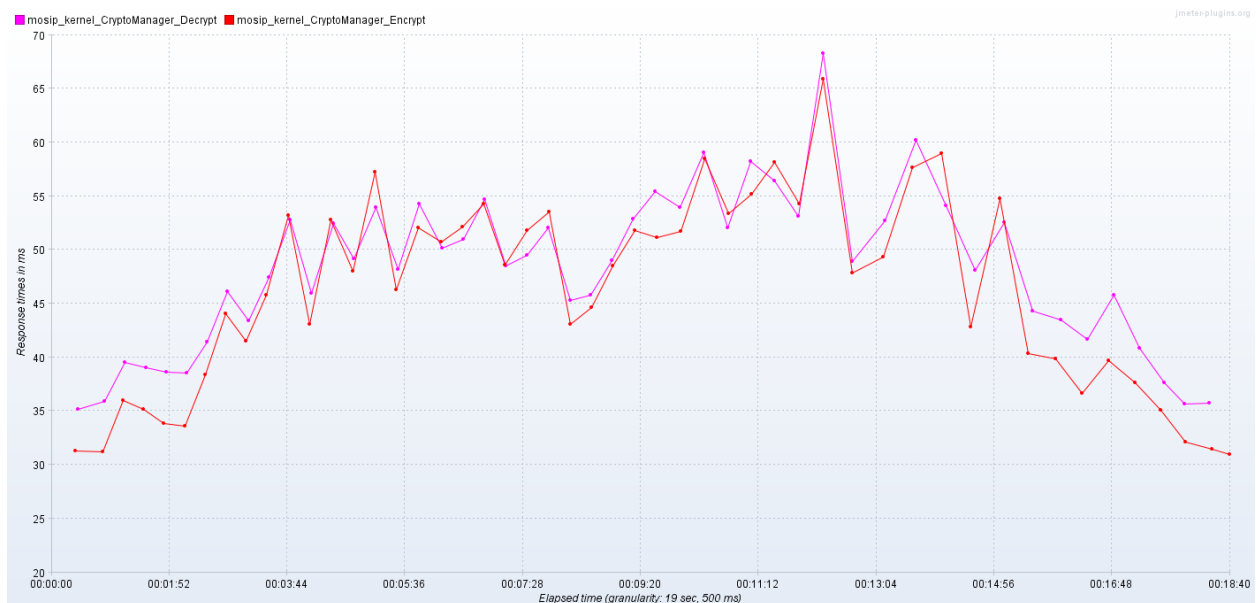
The Integration test environment used for test execution.

CPU Cores: 8 cores

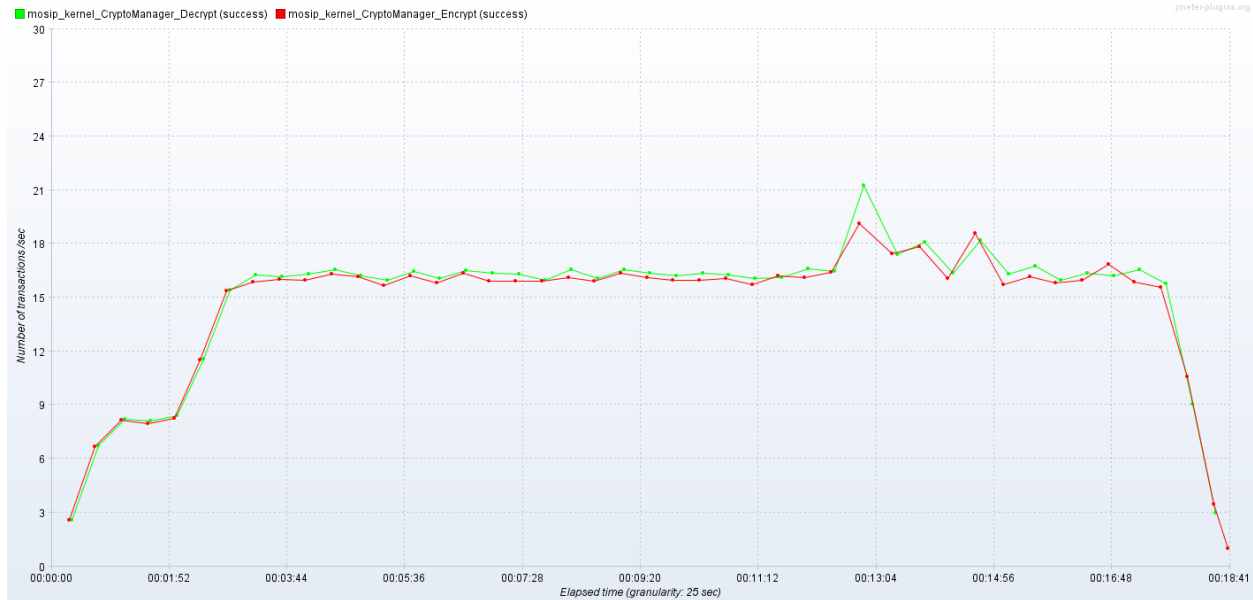
Memory: 16 GB

Response Time Graph

The response times of all the transactions were fluctuating throughout the duration of the test. There were no very high response time noticed during the test.



Transactions per second: for 2 API Endpoints:

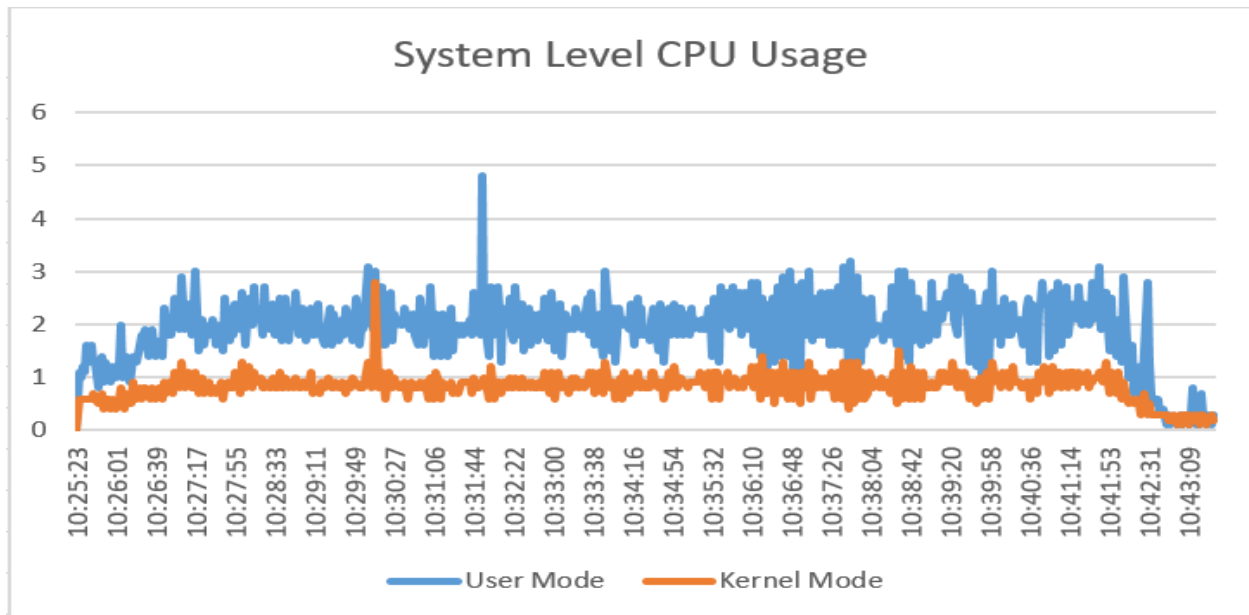


Resource Usage Metrics

Top command of Linux was used to monitor and record the resource usage. System level and process level data for CPU and memory usage is demonstrated in below graphs.

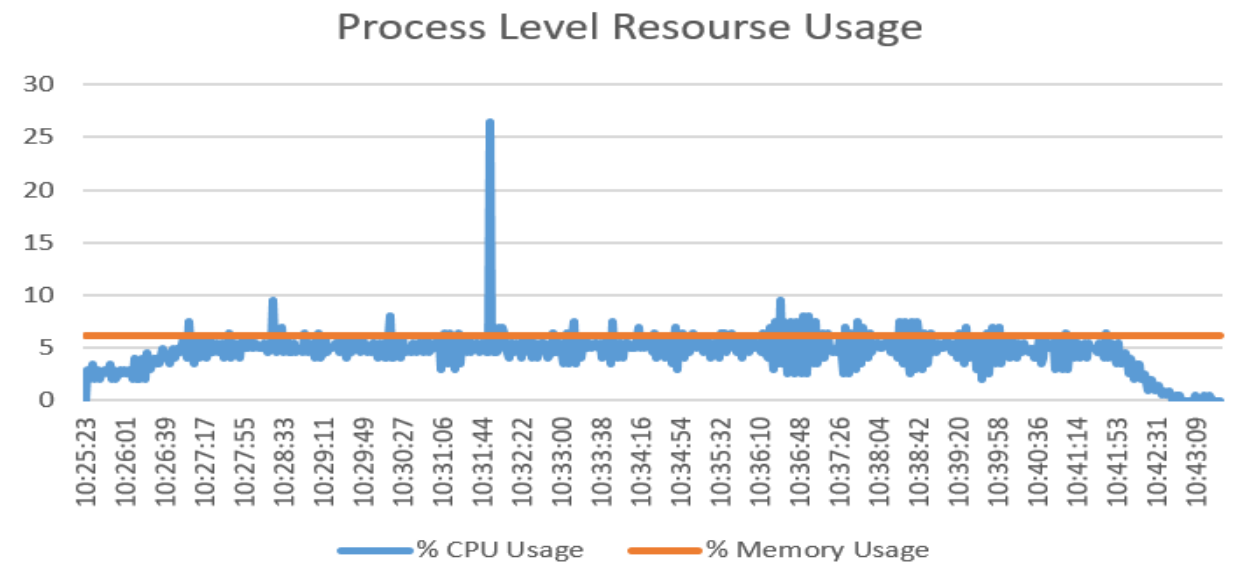


CPU Usage at System and User level:



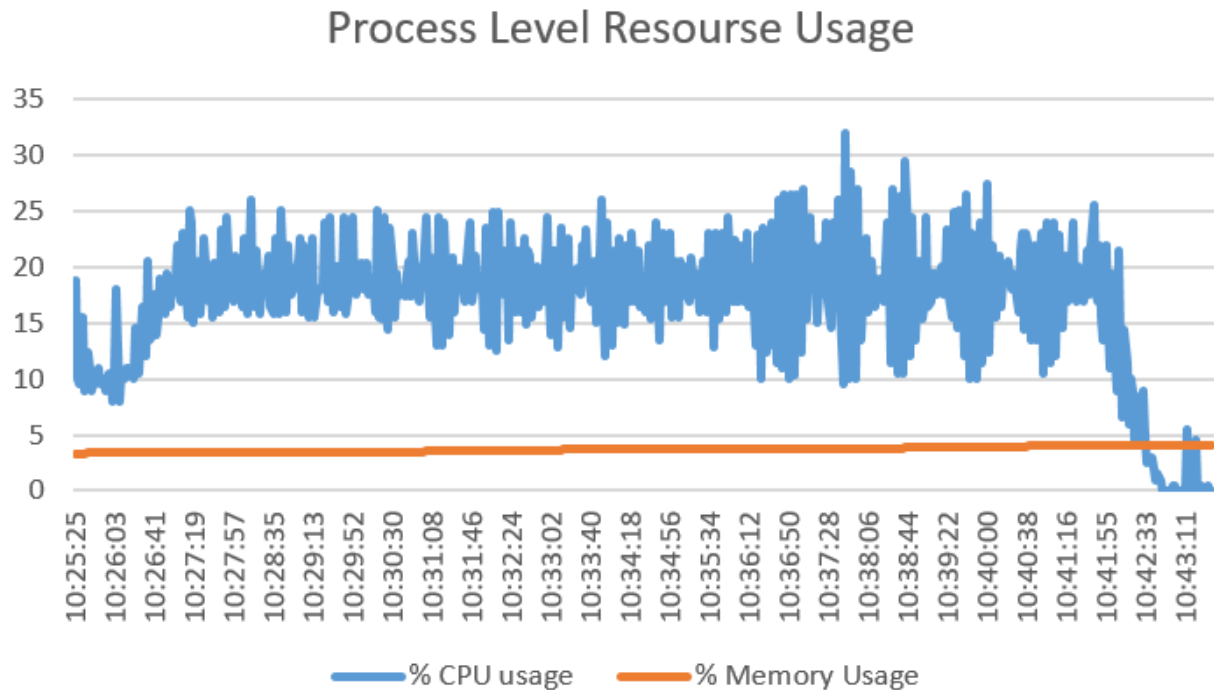
Process Level CPU and Memory Usage

Cryptomanager API





Kernel Keymanager API:



Conclusion and Next Steps

There were no issues found in the test environment during the test. The response time of the transactions was within the expected SLA of 300milliseconds for each APIs.