WBB Performance Test

Approach

- To test the performance of the WBB in order to find out the number of requests can be made per hour
- Website API & Mobile API will be triggered in parallel to simulate the actual user load which will be run by multiple virtual users
- Measure request response time.
- A unique set of test data will to be used by each virtual user (without caching).
- Leverage a Production Load Model to determine what regression load should also be considered for execution during the performance tests
- Scripts will be generated to simulate user interaction with WBB API using VisualStudio/JMeter and parameterized for multiple users.
- Test to evaluate the stability, reliability and availability of the application will be conducted on the system.

Dependencies:

- The environment will be available for performance testing in a stable state when no other activity is going on.
- Test data

WBB Load Test Report

Summary:

Performance testing was conducted on WBB (Website & Mobile Dashboard) APIs in the UAT environment for the purpose of determining the baseline performance of the application. Testing was done with a basic set of tools configured in the performance testing machine. The system was loaded with the variable load to achieve more than 450 requests per hour during the burst of tests. Concurrent user testing began with a small number of users and gradually increased to support more and more users.

KPI:

David Maris 5 days ago

Good idea..

So I can't do clever stuff with time slicing but looking at a random week 73,720 views on the dashboard. 438 per hour - but that's an even spread rather than what happens at the peak

API details:

Website API Service – https://tpwapimgmtqa.azure-api.net/customerwebsiteapi/uqa/WirelessBroadband/{accountNo}/Service

Mobile Dashboard API – https://tpwapimgmtqa.azure-api.net/customermobileapi/tnt2-sp-wbb/MobileDashboard/{accountNo}

Script:

WBB.jmx

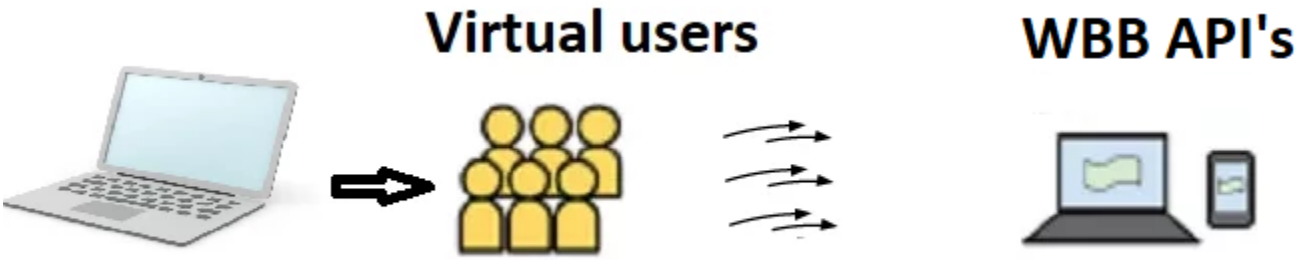
Overall Results:

1. Multiple tests ran with the rate of 3500 requests per hours.
2. There were few failures encountered during the test but the error rate was very less – 0.45%

API	Average Response time (in seconds)
Website API Service	**2.3**
Mobile Dashboard API	**5.92**

Note/Assumptions –

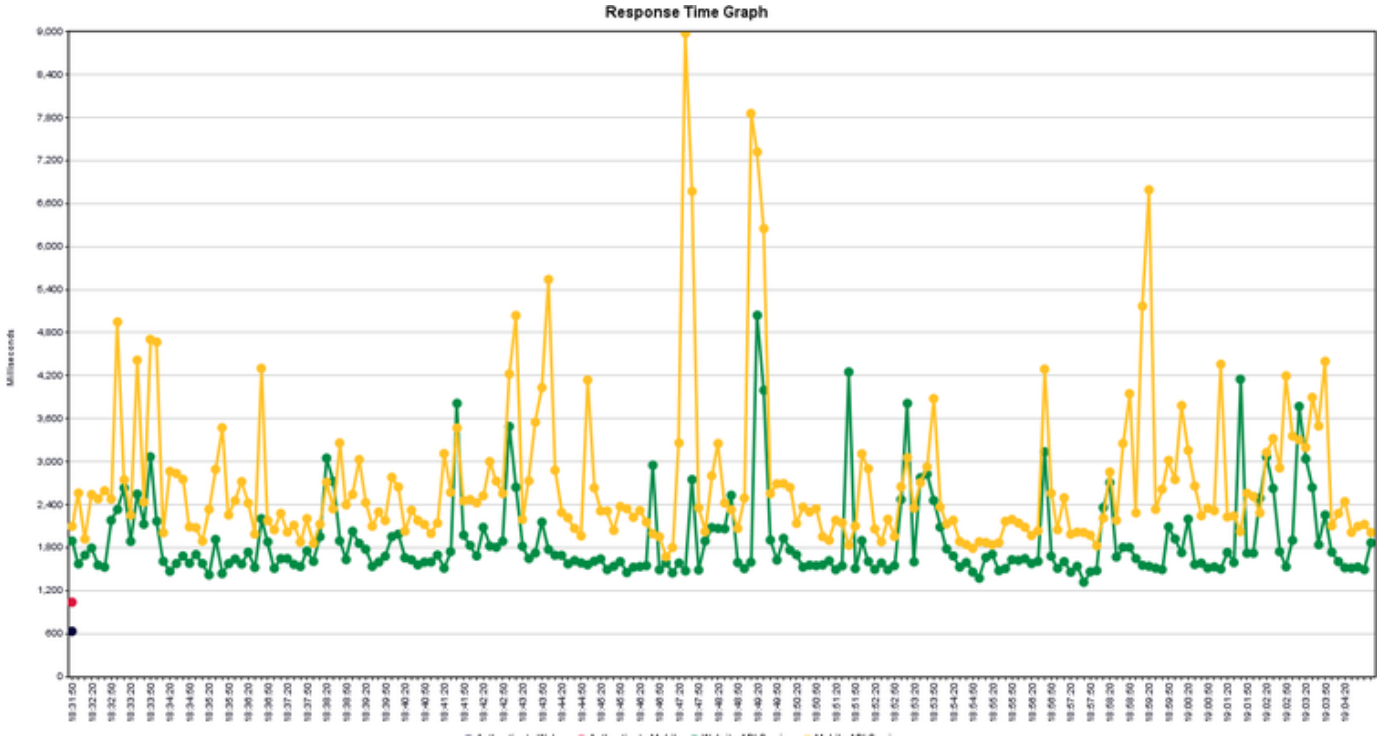
1. Every virtual user calls the WBB API's in iteration (loop)
2. To simulate the real user there is a thread delay of 2secs after every API's call by the virtual user.
3. The test was conducted with 2 API's - Website API & Mobile Dashboard API.



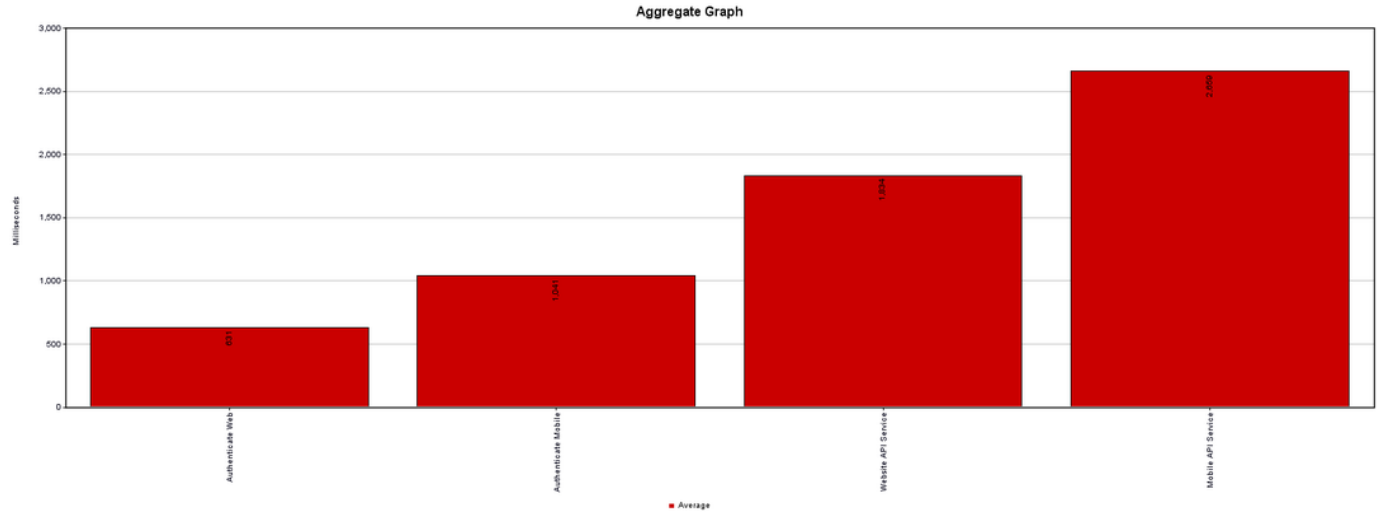
Test Setup Activity :

1. JMeter was used to generate the test scripts.
2. All the dynamic server parameters and session values were correlated.
3. The Script was verified by running the test with one user.

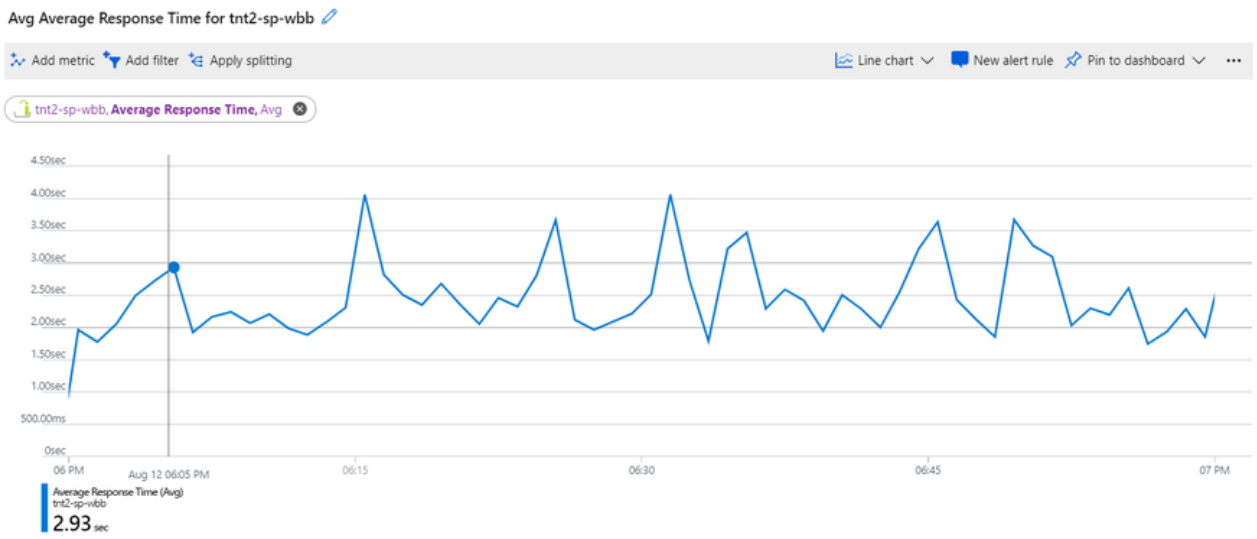
Test 1 Report



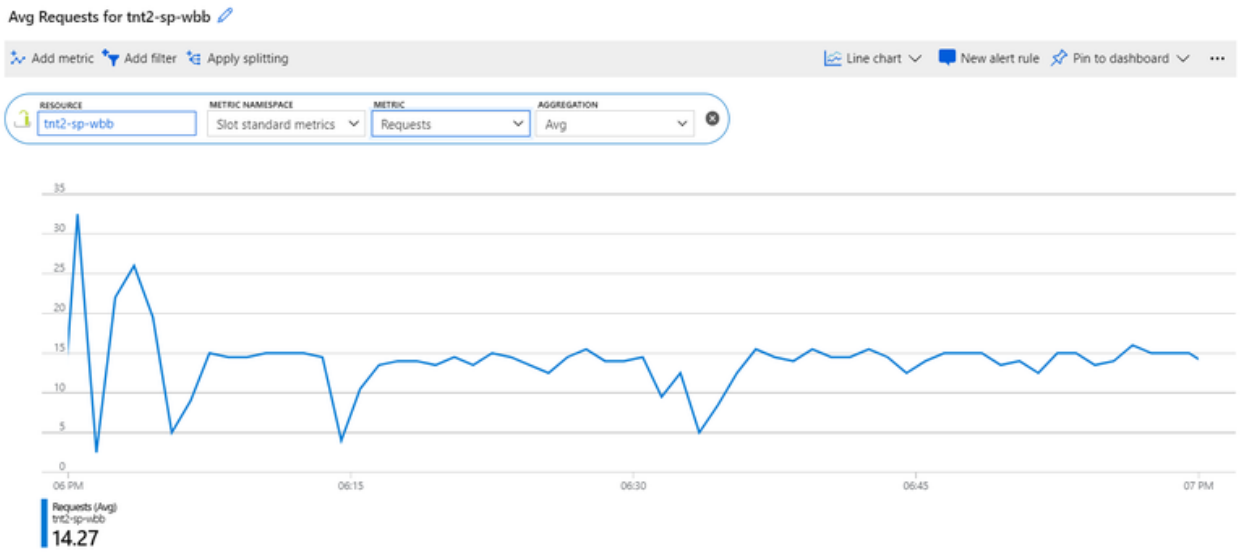
Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
Authenticate Web	1	631	631	631	0.00	0.00%	1.6/sec	2.23	0.54	1443.0
Authenticate Mobile	1	1041	1041	1041	0.00	0.00%	57.6/min	1.30	0.54	1385.0
Mobile API Service	934	2659	739	9233	1105.39	0.32%	28.1/min	3.10	0.39	6784.9
Website API Service	936	1834	550	6302	635.70	0.64%	28.1/min	1.03	0.44	2254.4
TOTAL	1872	2245	550	9233	991.93	0.48%	56.0/min	4.12	0.83	4513.9



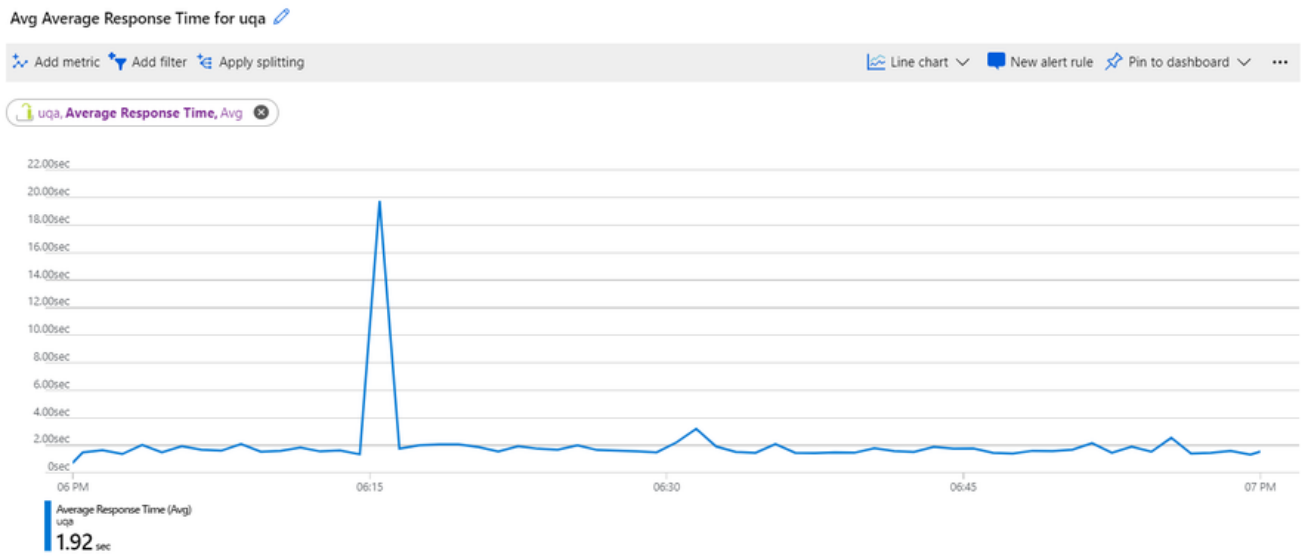
Mobile Average response time



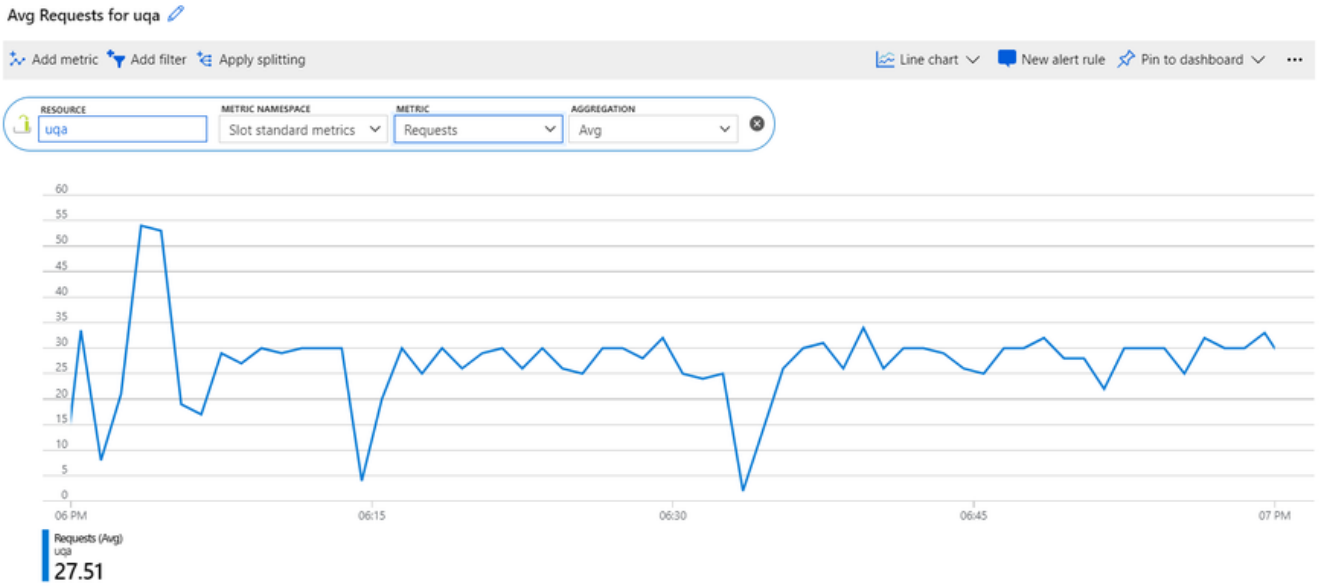
Mobile average request



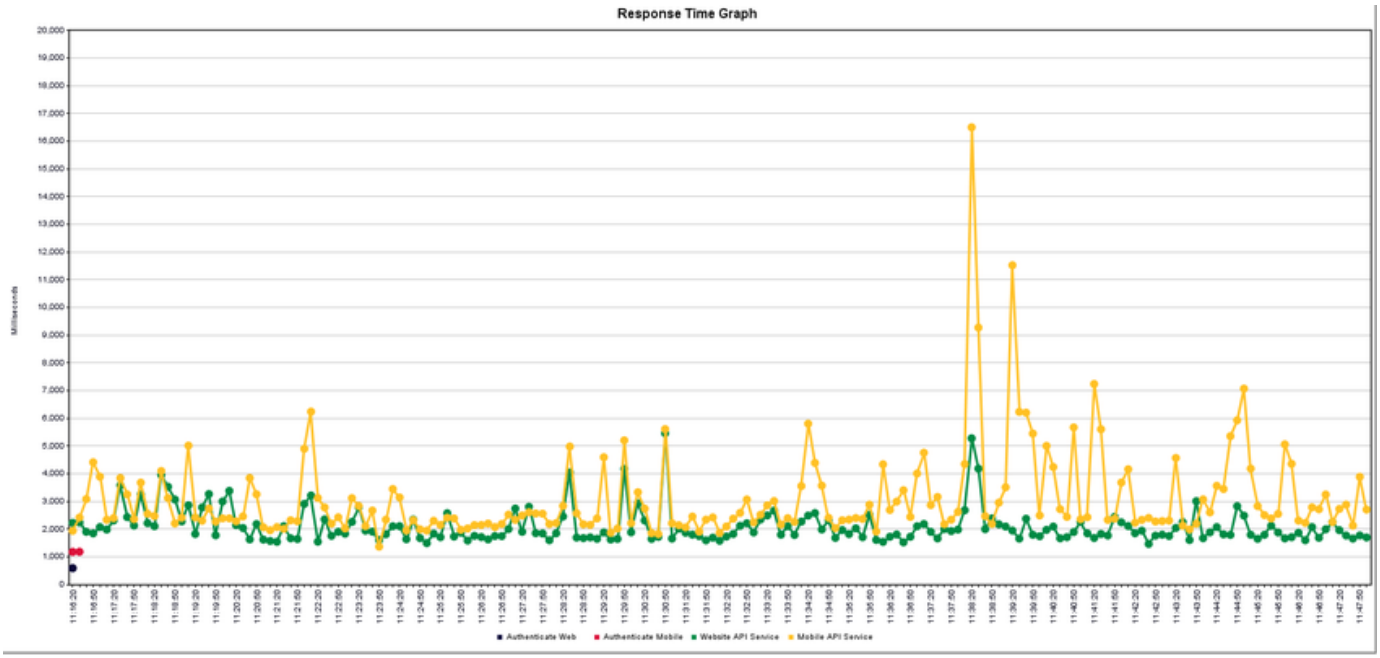
Website average response time



Website average requests

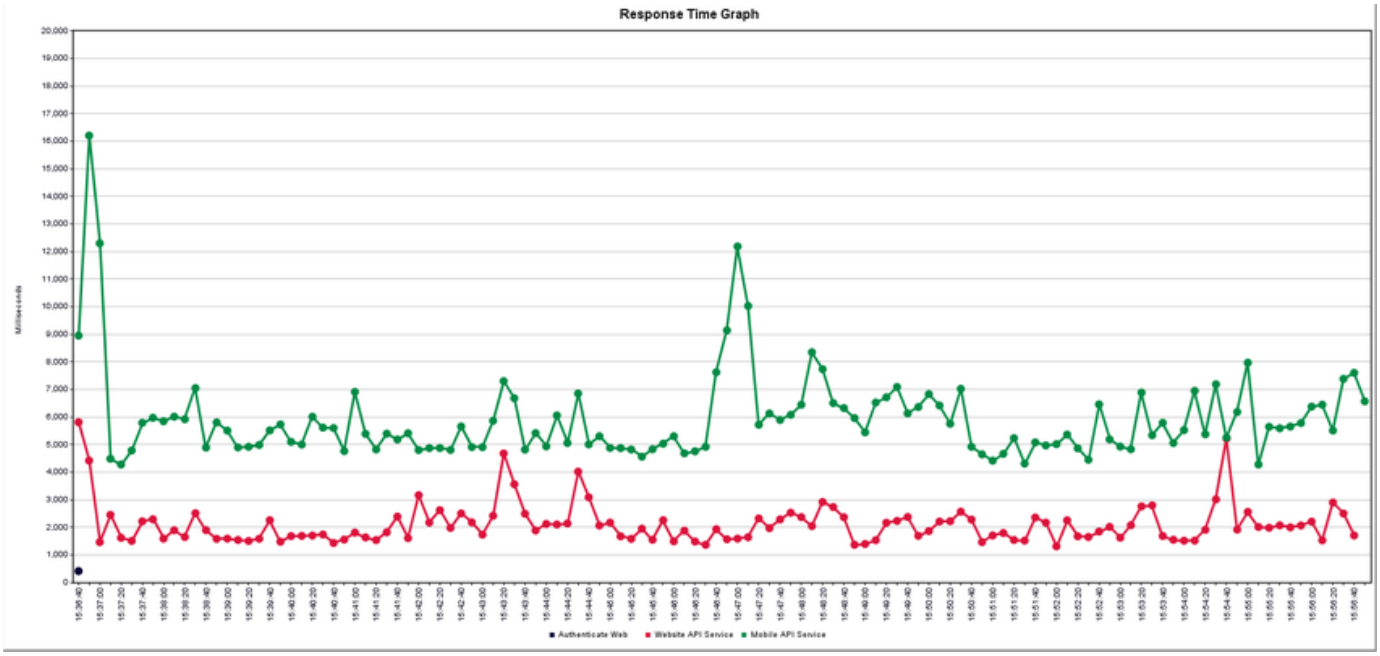


Test 2 Report:



Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
Authenticate Web	1	585	585	585	0.00	0.00%	1.7/sec	2.52	0.58	1508.0
Authenticate Mobile	1	1178	1178	1178	0.00	0.00%	50.9/min	1.15	0.48	1385.0
Mobile API Service	893	2935	713	16895	1585.45	0.45%	26.9/min	2.94	0.38	6725.2
Website API Service	896	2030	634	5970	648.40	0.78%	26.9/min	0.98	0.45	2229.1
TOTAL	1791	2480	585	16895	1292.76	0.61%	53.6/min	3.90	0.82	4470.0

Test 3 Report with TNT user:



Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
Authenticate Web	1	409	409	409	0.00	0.00%	2.4/sec	3.57	0.84	1495.0
Website API Service	440	2034	1290	6753	728.22	0.00%	21.1/min	0.78	0.35	2254.0
Mobile API Service	440	5820	4011	16200	1447.58	1.14%	21.2/min	2.96	0.30	8589.8
TOTAL	881	3923	409	16200	2214.66	0.57%	42.0/min	3.70	0.64	5417.5