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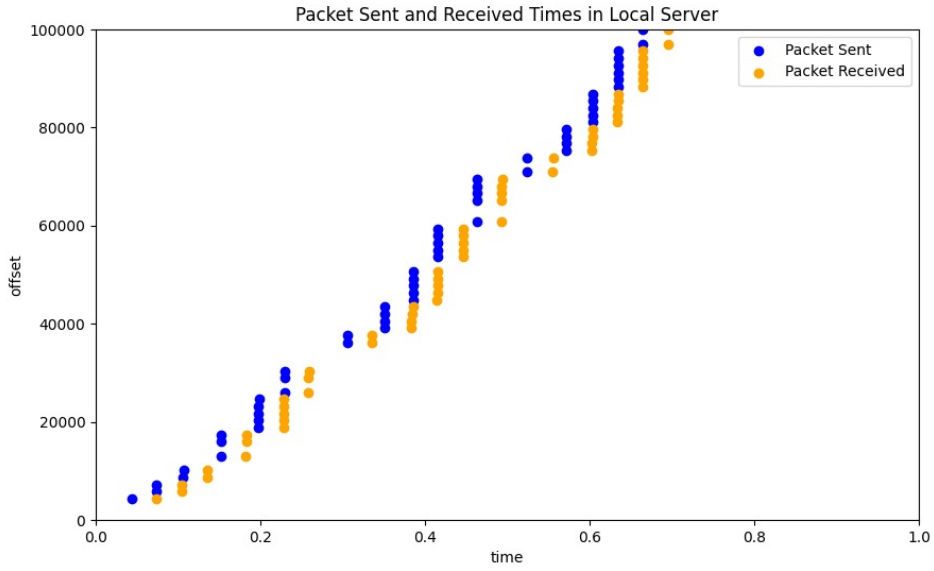
1 Implementation

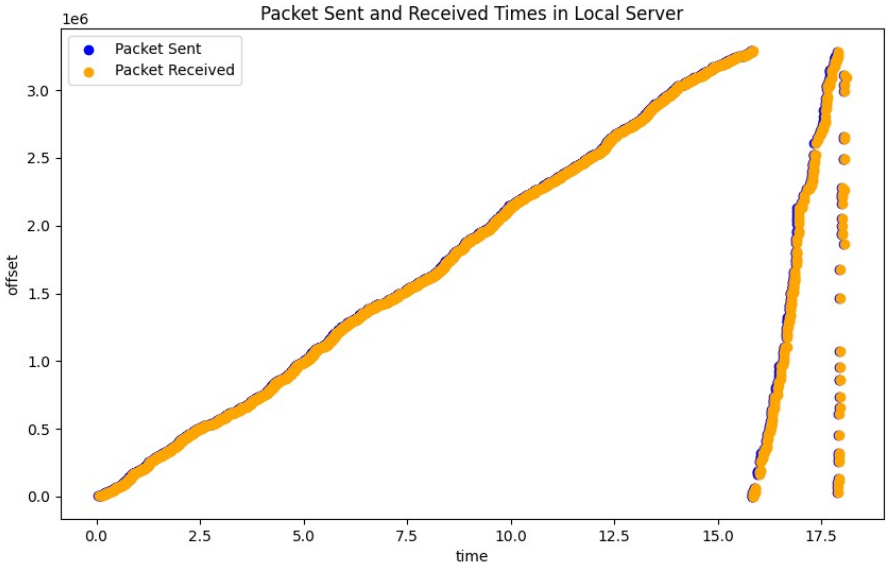
- In this algorithm we sent requests in bursts of a certain burst-size,the bursts-sizes are maintained using AIMD approach.
- Intial Burst size is decided by running with various values and taking the best value.
- For each burst if all the requests in this burst get served thyen the burst-size would get incremented by 1 for the next burst.
- If for some of requests did not receive a reply,we halve the burst -size
- Initially when we send the sendsize request we also noted the RTT(round trip time) after getting the sendsize response.
- All offsets which have to be sent are stored in an array (name requests)
- We keep sending the bursts (burst size is decided via AIMD approach) until the requests array becomes empty ,we will pop the first few requests from the requests array based on the burst-size and after receiveing the responses those requests for which there is no response will again get appended to requests array.
- We maintained a time gap of RTT after sending the each burst(i.e sleep.time(RTT) after sending each burst) and RTT will get updated from the RTT's of the requests send in the burst.
- RTT value is updated based on the EWMA technique i.e after receiveing the responses for the burst we note the RTT value of the request whose RTT is minimum of all the requests in the burst. newRTT = 0.2*oldRTT + 0.8*(noted RTT)
- Also,We number of squishes,skipes are noted for each burst and if number of squishes or skipes ¿= 1 then time.sleep(1 sec).
- Finally all the responses are added in the order and submitted to the server.

2 Graphs

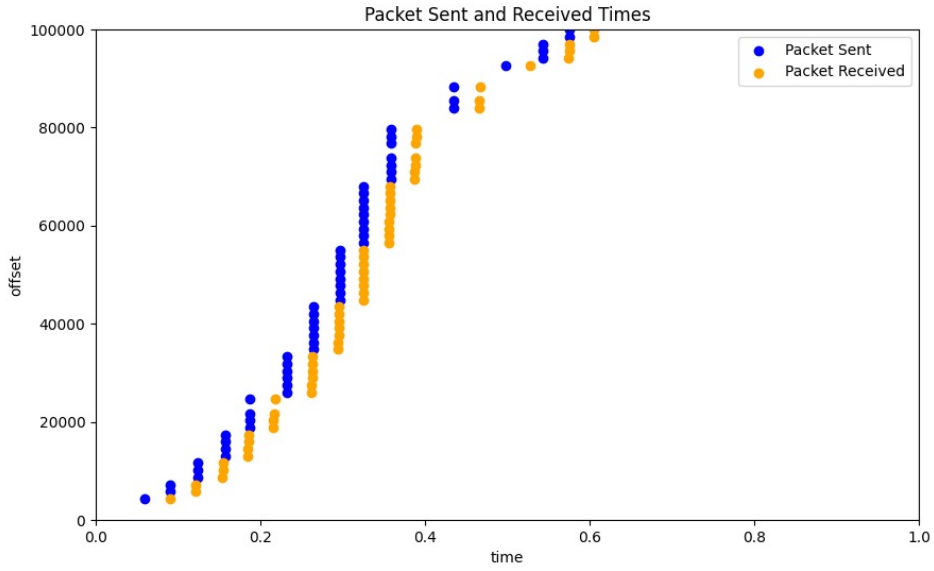
- Offset vs time graph for local server



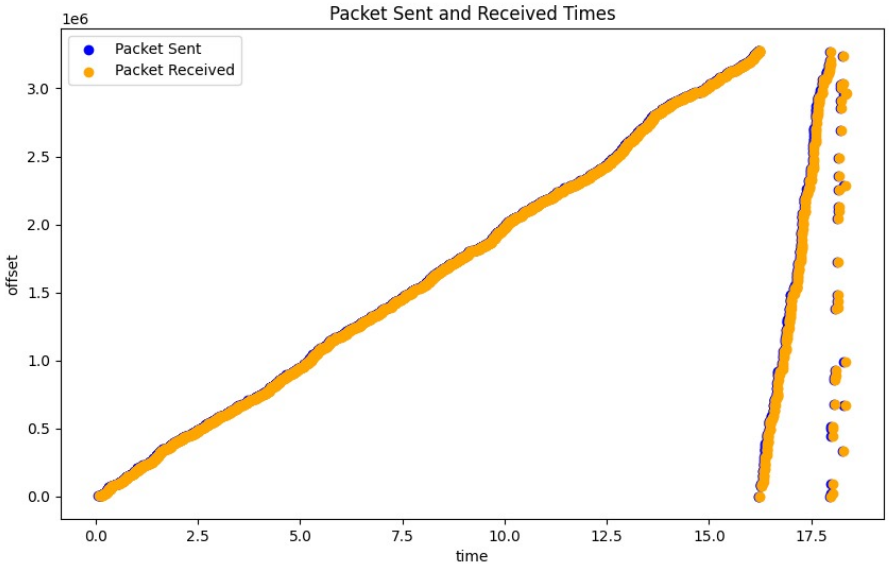
- zoom in of above graph.



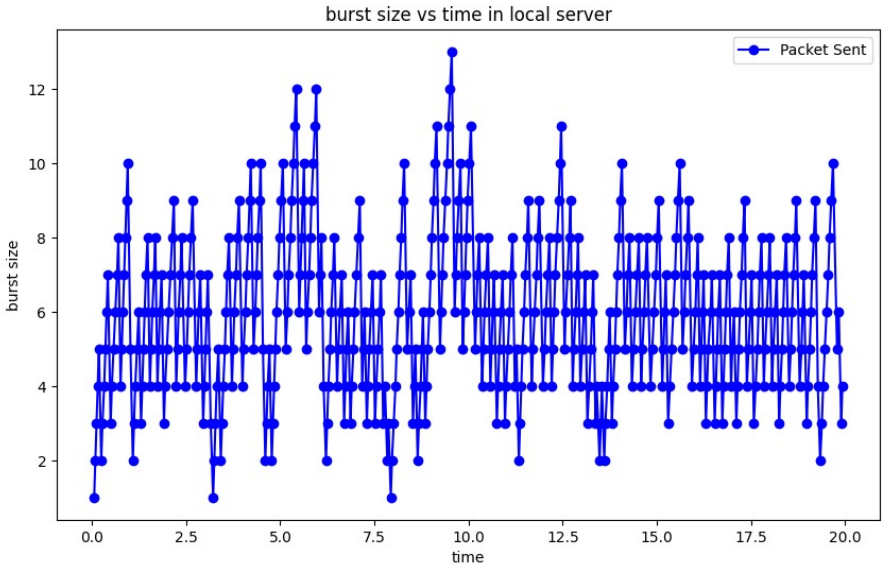
- Offset vs time graph for vayu server



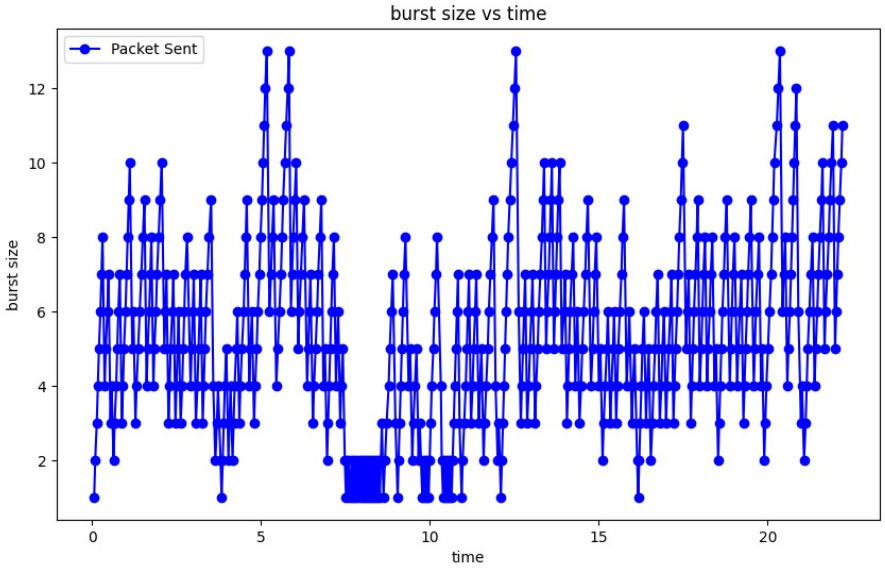
- zoom in of above graph



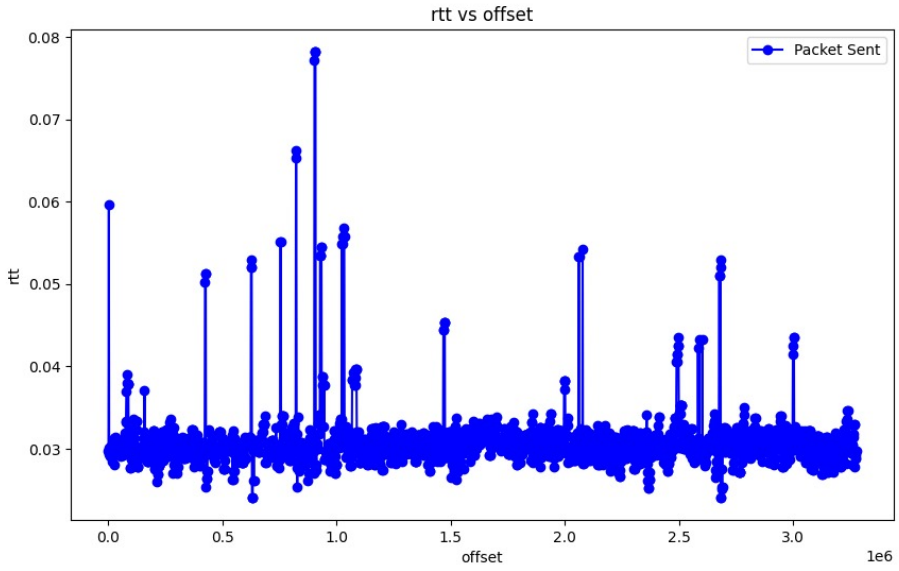
- Burstsize vs time



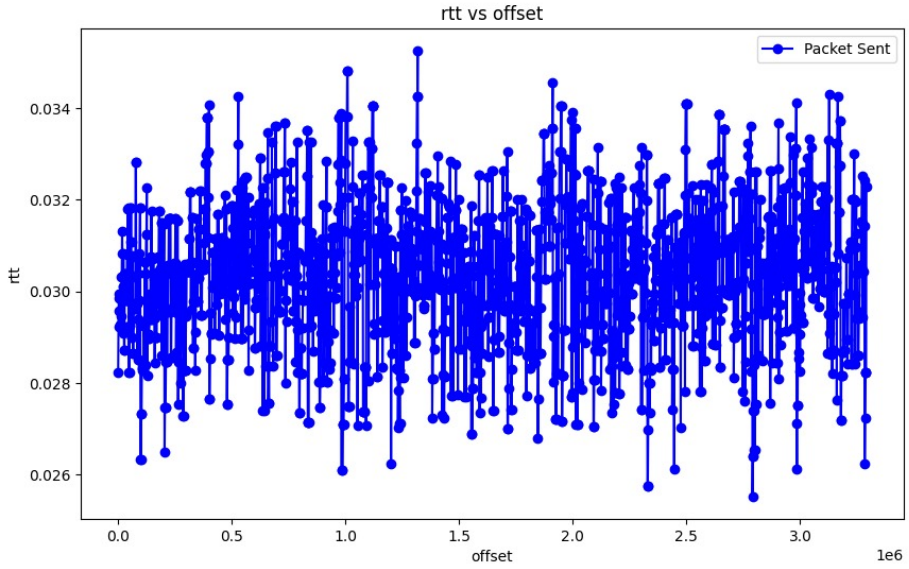
- for other server



- RTT vs offset
- local server


rtt vs offset
Packet Sent
rtt
offset
1e6
0.08
0.07
0.06
0.05
0.04
0.03
0.0
0.5
1.0
1.5
2.0
2.5
3.0

- vayu server


rtt vs offset
Packet Sent
rtt
offset
1e6
0.034
0.032
0.030
0.028
0.026
0.0
0.5
1.0
1.5
2.0
2.5
3.0