

I run PerformanceEvaluation tool on our cluster which has 50+ nodes. It is running hdfs and hbase. To simplify the test, I only start one RS so that all the regions are on one RS and I can test the write throughput per RS. (datanodes are running on all the 50+ nodes)

Original case: it is configured with 6 threads that is shared between read and write traffic. I tested the cases with and without read traffic impact:

- Write only traffic. We can see the write throughput is very steady up to 35k/sec.
- Generating heavy read request at the same time using 50 read client threads. We can see the write throughput can only go up to 14k/sec, even when I increase the write client threads to 100.

After fixed case: I still use total of 6 threads, but assign 4 to writer pool and 2 to read pool.

- Write only traffic. Only 4 threads are used for the write requests.
- Large read traffic generated the same way as for the original case above. We can see the write throughput is not impacted, and can still keep at the 32k/sec.

| # of write client thread | After fix | | Original | |
|--------------------------|--------------------|-------------------------|--------------------|-------------------------|
| | Write only traffic | With large read traffic | Write only traffic | With large read traffic |
| 1 | 5.88235 | 5.6338 | 3.93082 | 0.512623 |
| 5 | 28.9778 | 26.1901 | 32.9145 | 2.90894 |
| 10 | 34.2575 | 31.3551 | 30.8559 | 5.52995 |
| 15 | 31.3272 | 32.1894 | 33.3006 | 7.9688 |
| 20 | 34.7778 | 32.733 | 33.4492 | 11.2739 |
| 30 | 33.9563 | 33.0369 | 34.212 | 13.7353 |
| 40 | 35.6357 | 31.9733 | 32.4189 | 14.6948 |
| 50 | 35.7793 | 31.3109 | 36.1704 | 14.0027 |
| 100 | 37.2343 | 32.5468 | 37.0535 | 14.4268 |