Which databases to compare? And why?

A comparison of the performance of tow open-source NoSQL database, Cassandra and MongoDB will be shown in next paragraph. The reason why particularly Cassandara and MongoDB is that the two databases have different characteristics such as the data model, query language and scalability.

Which test tool? And why?

The tool used in performing the comparison is YCSB. It is standardized benchmarking tool for evaluating the performance of NoSQL databases. It provides a common framework for comparing different database systems, making it easier to obtain consistent and comparable results.

Test strategy:

The two databases will be tested by applying tow workloads from ycsb benchmarking tool. The first workload is workload A: which is for update heavy workload ; 50/50% mix of reads/writes

Workload C: Read-only: 100%. Both workloads have the default settings with number of operations =1000, number of record =1000 and a Zipfian distribution.

**Set metrics for workloada:**

MongoDB:

Average Latency(us): 770.414, Runtime (MS): 1362, Throughput(ops/sec): 734.2143906020558

Cassandra:

Average Latency(us): 2456.127, Runtime (MS): 6150, Throughput(ops/sec): 162.60162601626016

**Set metrics for workloadb:**

MongoDB:

Average Latency(us): 671.494, Runtime (MS): 1297, Throughput(ops/sec): 771.0100231303007

Cassandra:

Average Latency(us):1609.546, Runtime (MS):4494, Throughput(ops/sec): 222.51891410769915

Perform quantitative analysis: