Performance Report for cbt-lee-test1

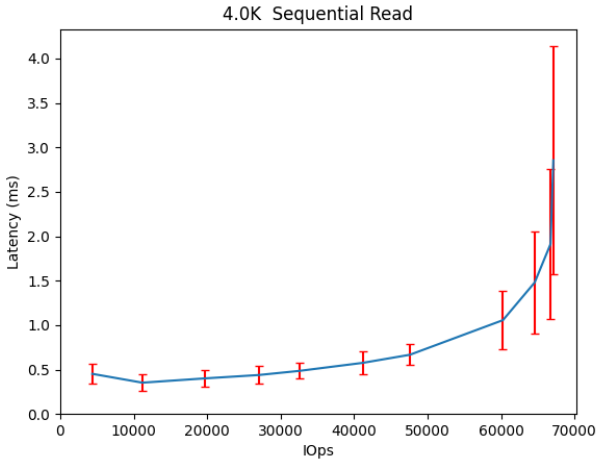
Table of contents

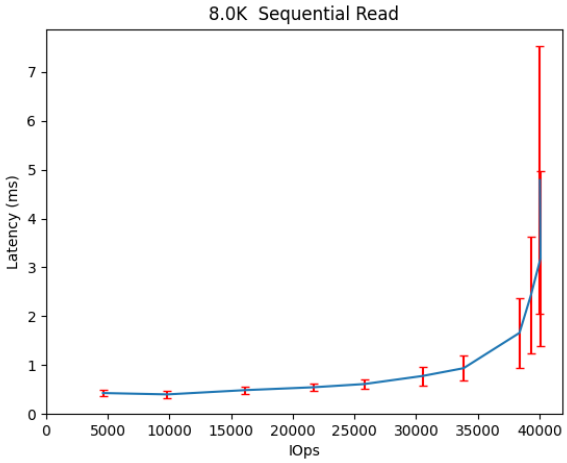
Summary of results for cbt-lee-test1

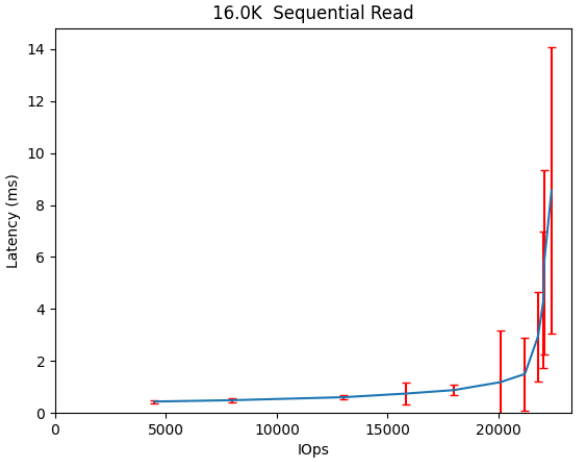
Workload Name	Maximum Throughput	Latency (ms)
4096_read	67122 IOps	2.9
8192_read	40093 IOps	3.2
16384_read	22398 IOps	8.6
32768_read	19546 IOps	9.8
65536_read	1166 MB/s	14.4
262144_read	1616 MB/s	10.4
524288_read	1619 MB/s	10.4
1048576_read	1619 MB/s	12.9
4096_write	22215 IOps	46.1
8192_write	21483 IOps	59.6
16384_write	10250 IOps	49.9
32768_write	10149 IOps	75.6
65536_write	259 MB/s	129.6
262144_write	465 MB/s	144.3
524288_write	315 MB/s	213.2
1048576_write	379 MB/s	443.5
4096_randread	76267 IOps	5.0
8192_randread	49124 IOps	7.8
16384_randread	30461 IOps	12.6
32768_randread	27967 IOps	9.1
65536_randread	1512 MB/s	11.1
262144_randread	1735 MB/s	9.7
524288_randread	1773 MB/s	9.5
1048576_randread	1773 MB/s	16.5
4096_randwrite	7048 IOps	109.0
8192_randwrite	6352 IOps	80.5
16384_randwrite	6384 IOps	80.1
32768_randwrite	5136 IOps	99.6
65536_randwrite	247 MB/s	101.7
262144_randwrite	352 MB/s	190.8
524288_randwrite	302 MB/s	110.9
1048576_randwrite	347 MB/s	144.7
4096_70_30_randrw	13506 IOps	18.9
16384_70_30_randrw	7178 IOps	35.7
65536_70_30_randrw	226 MB/s	74.4
65536_30_70_randrw	191 MB/s	87.7

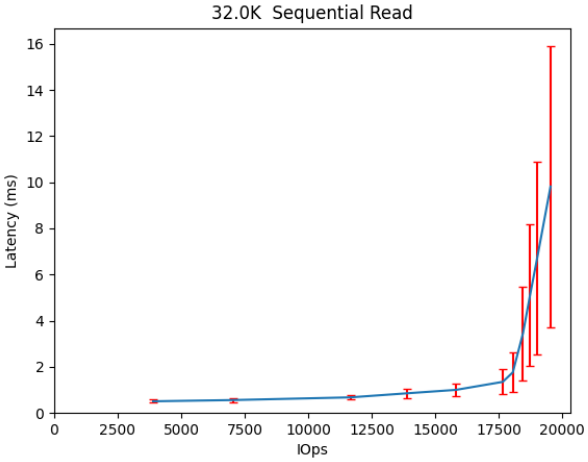
Response Curves

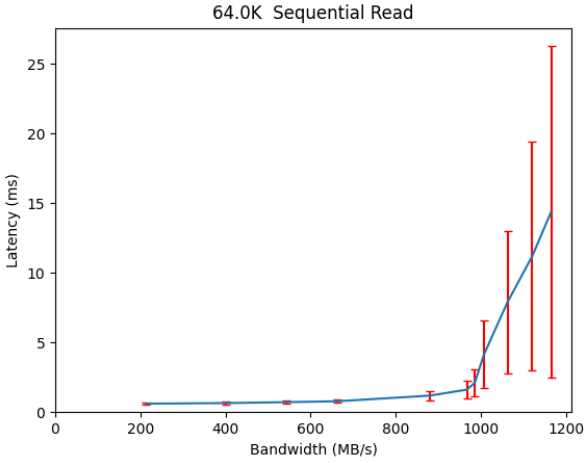
Sequential Read

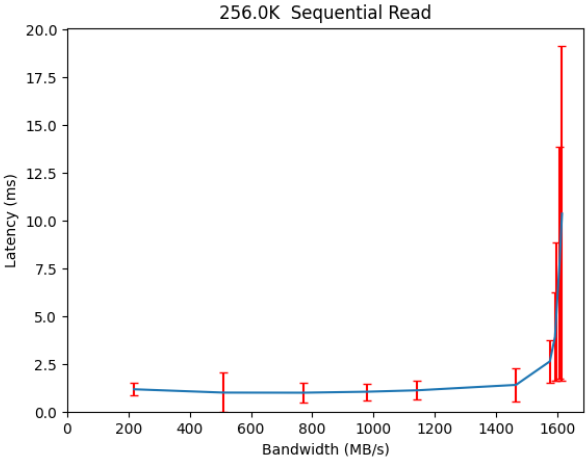


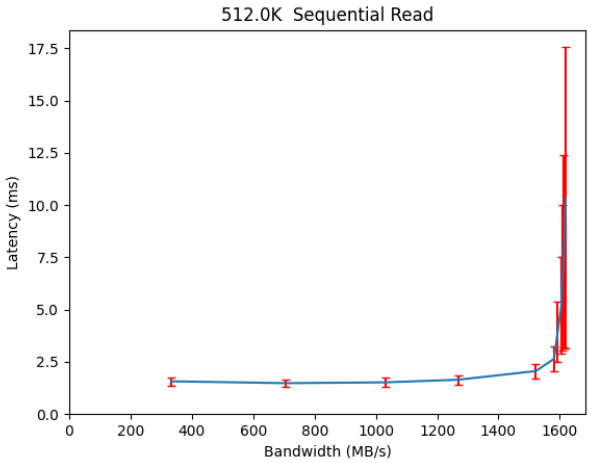


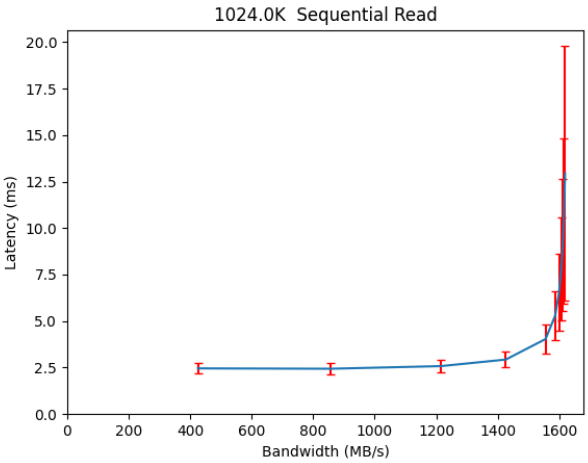




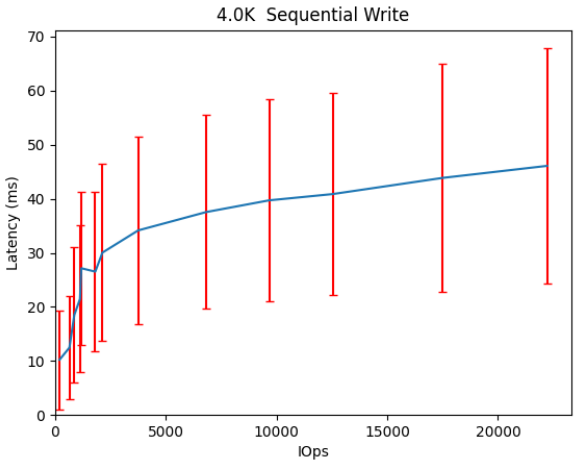


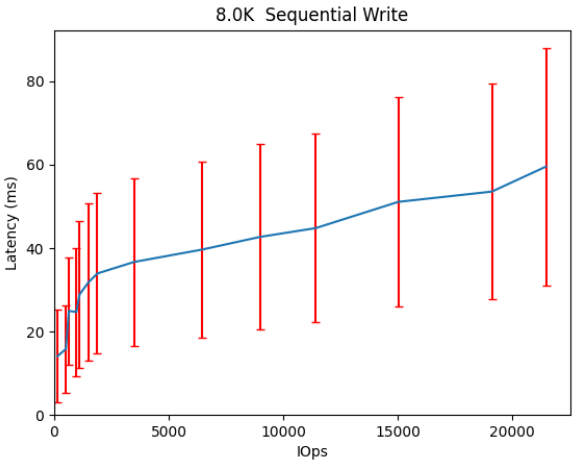


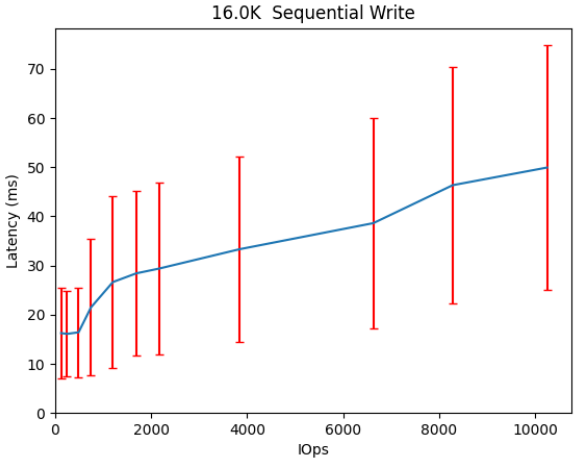


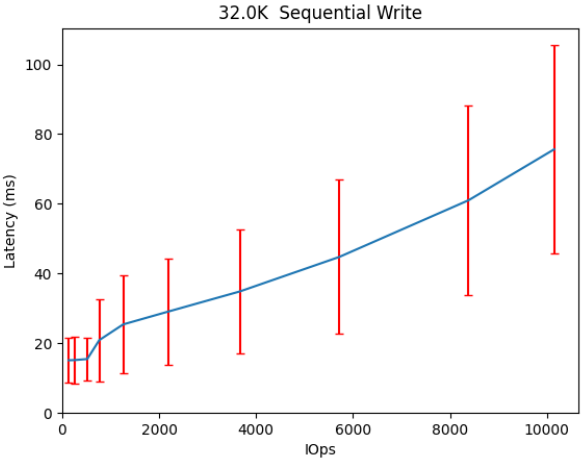


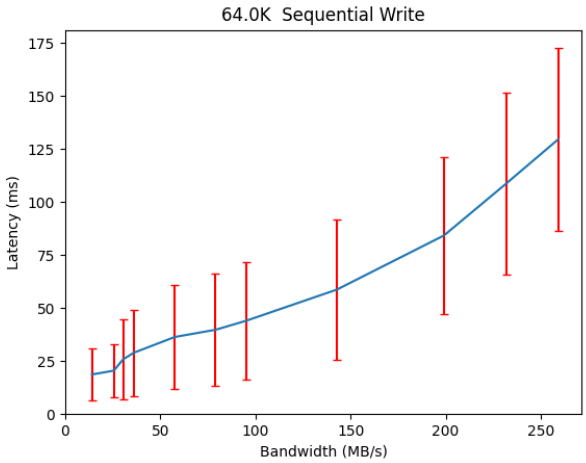
Sequential Write

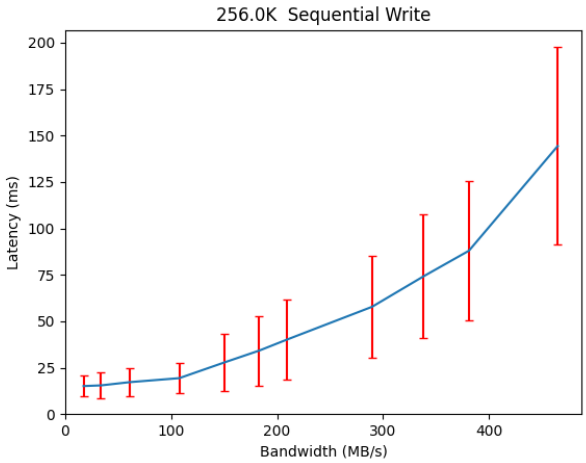


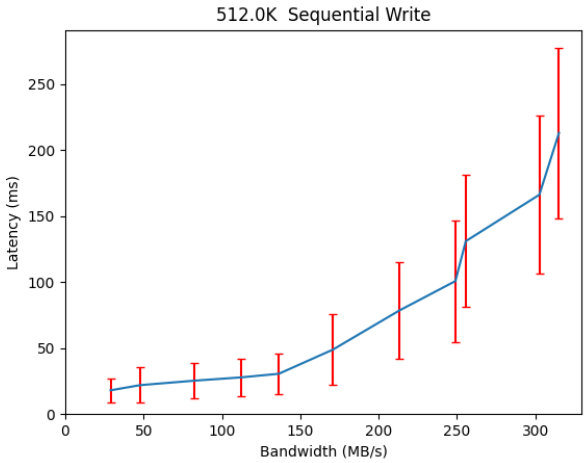


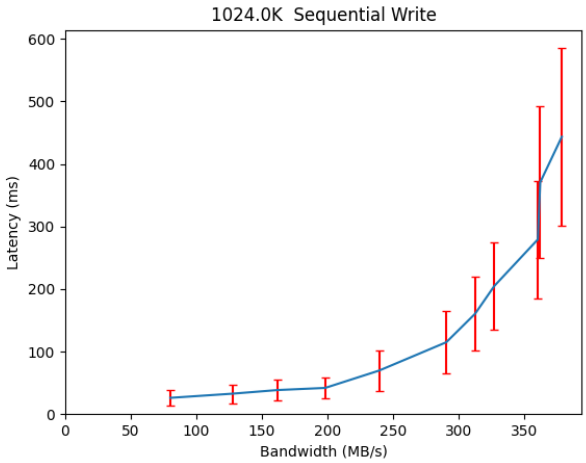




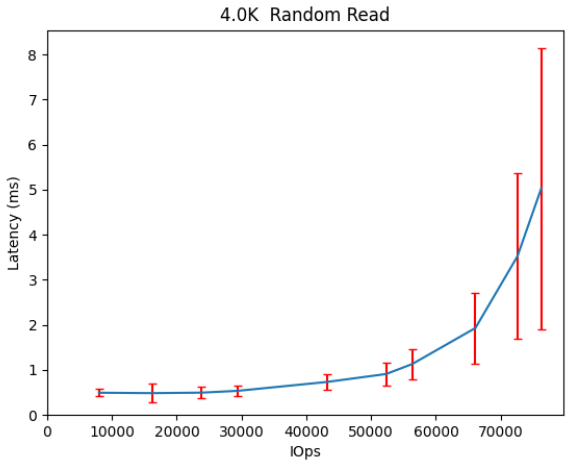

64.0K Sequential Write
Latency (ms)
Bandwidth (MB/s)

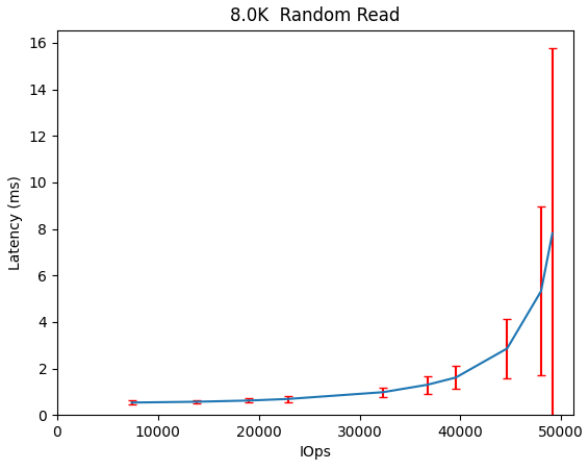

256.0K Sequential Write
Latency (ms)
Bandwidth (MB/s)

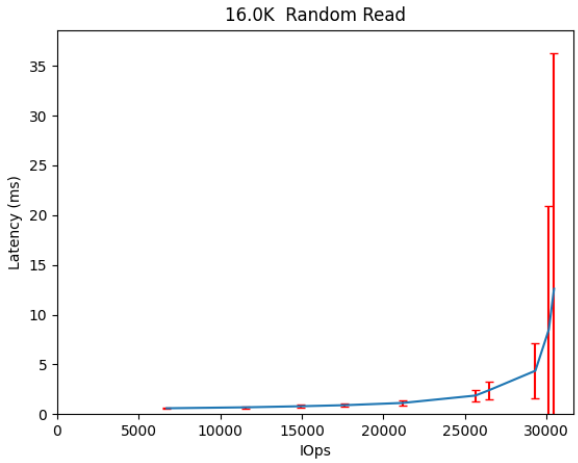

512.0K Sequential Write
Latency (ms)
Bandwidth (MB/s)

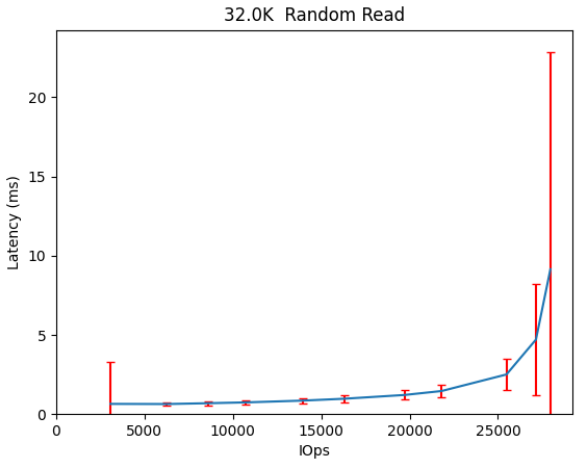

1024.0K Sequential Write
Latency (ms)
Bandwidth (MB/s)

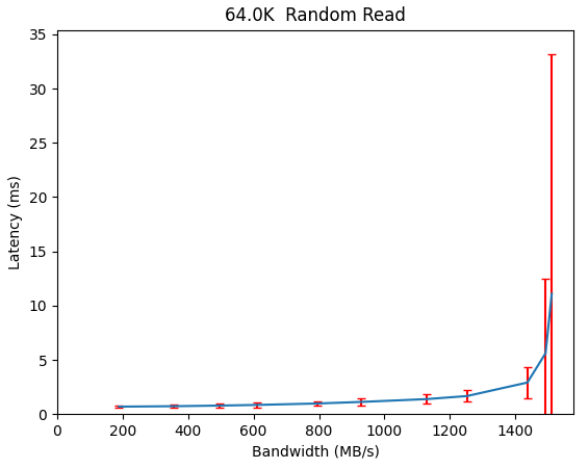
Random Read

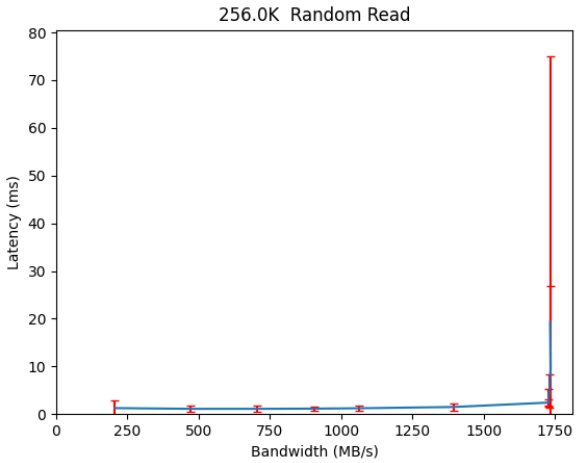

4.0K Random Read
Latency (ms)
IOps

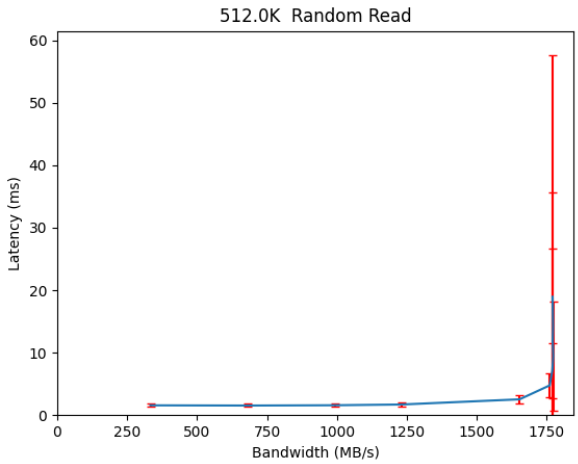

8.0K Random Read
Latency (ms)
IOps

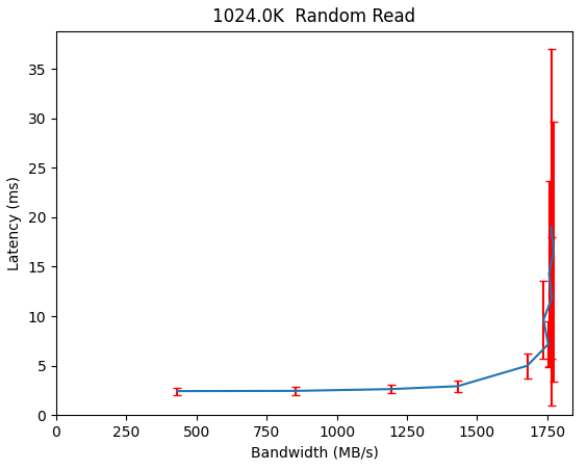




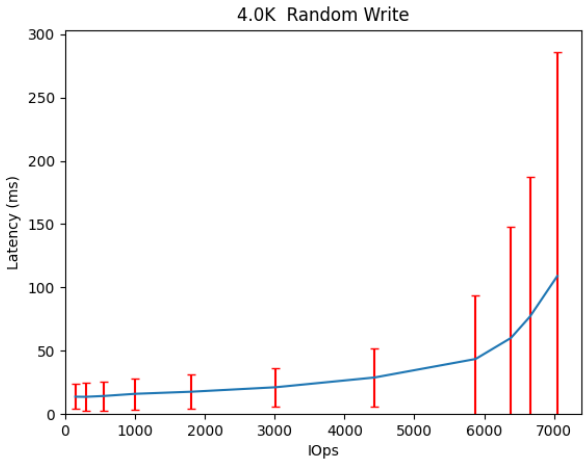


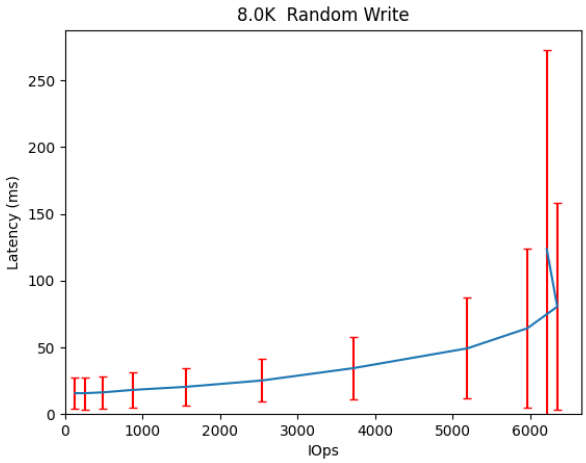


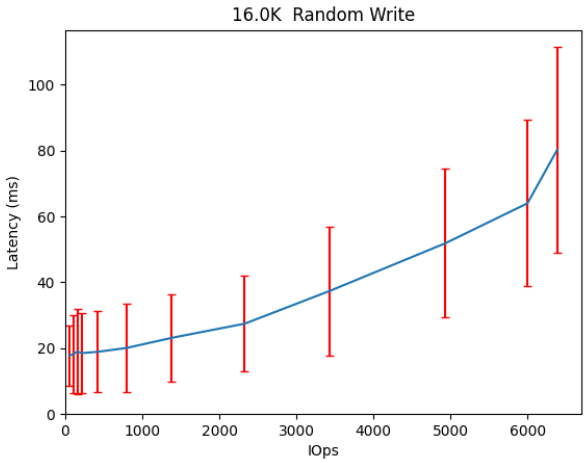


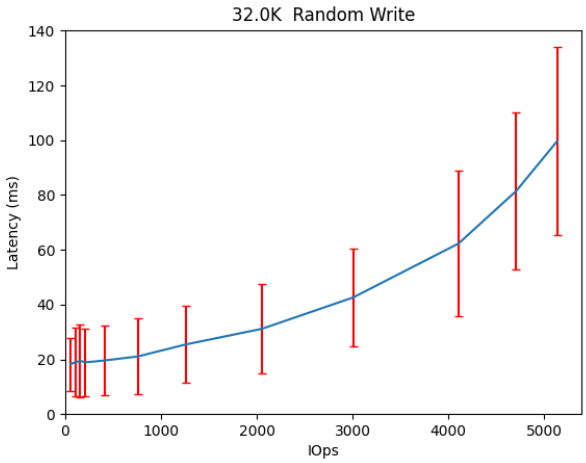


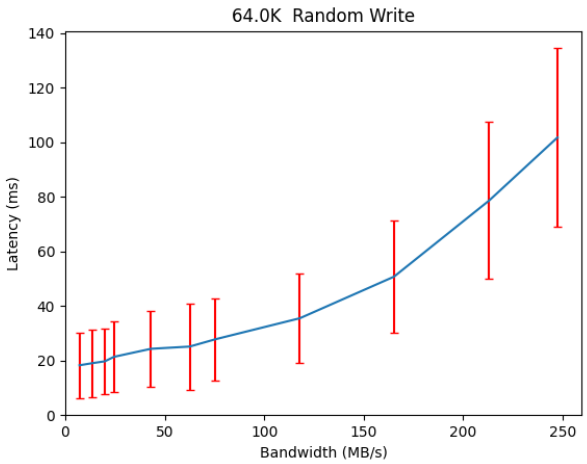
Random Write

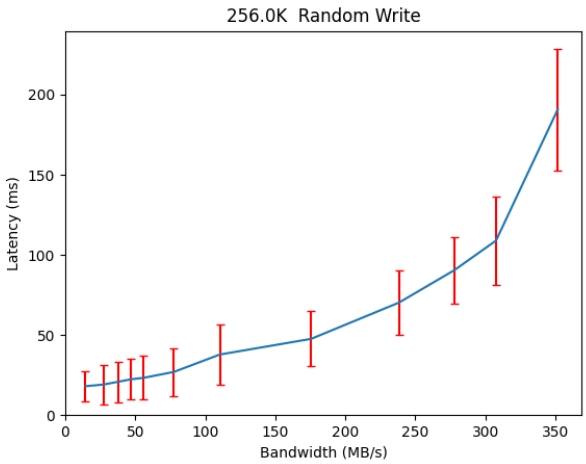

4.0K Random Write
Latency (ms)
IOps
0
50
100
150
200
250
300
0
1000
2000
3000
4000
5000
6000
7000

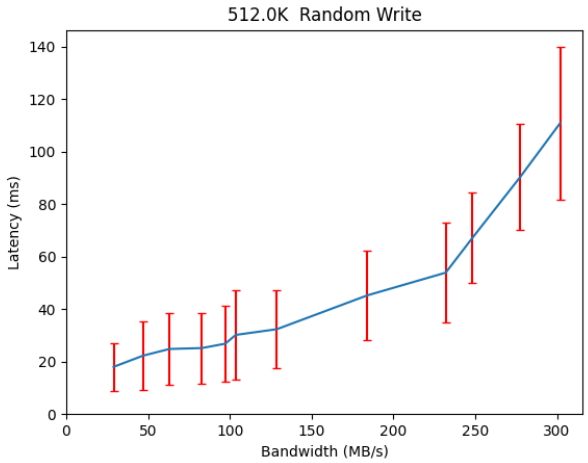

8.0K Random Write
Latency (ms)
IOps
0
50
100
150
200
250
0
1000
2000
3000
4000
5000
6000

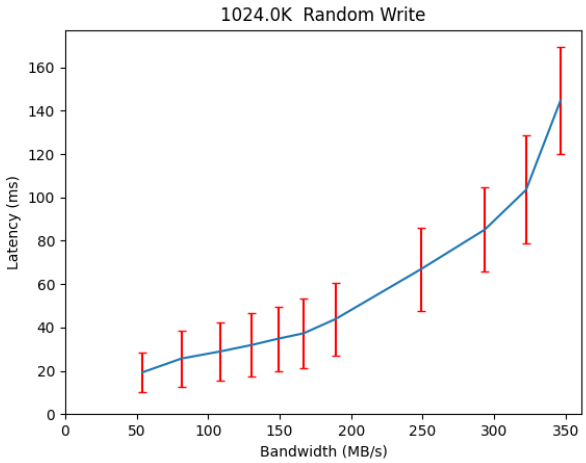

16.0K Random Write
Latency (ms)
IOps
0
20
40
60
80
100
0
1000
2000
3000
4000
5000
6000


32.0K Random Write
Latency (ms)
IOps
0
20
40
60
80
100
120
140
0
1000
2000
3000
4000
5000

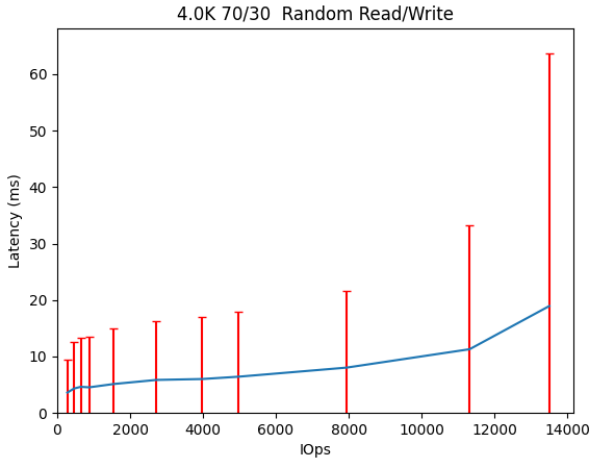

64.0K Random Write
Latency (ms)
Bandwidth (MB/s)
0
20
40
60
80
100
120
140
0
50
100
150
200
250

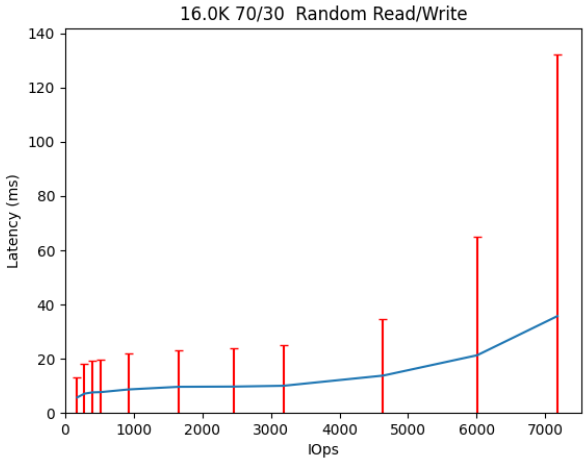

256.0K Random Write
Latency (ms)
Bandwidth (MB/s)
0
50
100
150
200
0
50
100
150
200
250
300
350

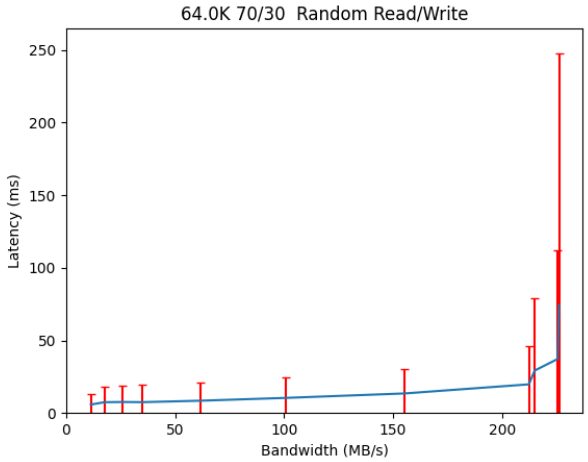


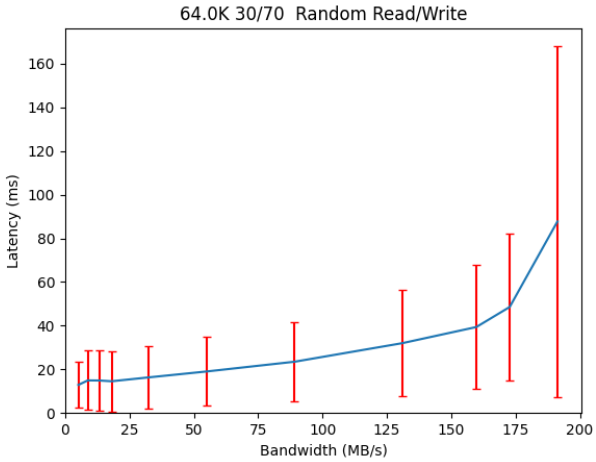


Random Read/Write









Configuration yaml

```
librbdfio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
  osd_ra:
  - 4096
  poolname: rbd_replicated
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  rbdname: cbt-librbdfio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 52500
  volumes_per_client:
  - 8
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
    16krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
```

```
    - 4
    - 8
    - 12
    - 16
    - 24
    - 48
    - 64
    - 128
    - 256
    - 384
  16krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 16384
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
  1Mrandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 1048576
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  1Mrandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 1048576
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 8
    - 16
    - 24
```

```
    - 32
    - 48
  1Mseqread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 1048576
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  1Mseqwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 1048576
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 32
    - 48
    - 64
    - 96
    - 128
    - 160
  256krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 262144
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  256krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 262144
    total_iodepth:
```

```
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 32
    - 64
    - 96
    - 128
    - 256
  32krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 32768
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
  32krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 32768
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
  4k7030:
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 4096
    rwmixread: 70
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
```

```
    - 24
    - 32
    - 64
    - 128
    - 256
  4krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
  4krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
  512krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  512krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
```

```
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  512kseqread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
  512kseqwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 4
    - 6
    - 8
    - 16
    - 32
    - 48
    - 64
    - 96
    - 128
  64k3070:
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 65536
    rwmixread: 30
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
```

```
    - 16
    - 32
    - 64
    - 96
    - 128
    - 256
  64k7030:
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 65536
    rwmixread: 70
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 96
    - 128
    - 256
  64krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 65536
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
  64krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 65536
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    - 384
  64kseqread:
    jobname: read
```

```
    mode: read
    numjobs:
    - 1
    op_size: 65536
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
  64kseqwrite:
    jobname: write
    mode: write
    numjobs:
    - 1
    op_size: 65536
    total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
  8krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
  8krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
```

```
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
  precondition:
    jobname: precond1rw
    mode: randwrite
    monitor: false
    numjobs:
    - 1
    op_size: 65536
    time: 600
    total_iodepth:
    - 16
  seq16kread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 16384
    total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  seq16kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 16384
    total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
  seq256kread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 262144
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
```

```
    - 5
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  seq256kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 262144
    total_iodepth:
    - 1
    - 2
    - 4
    - 8
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 256
  seq32kread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 32768
    total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  seq32kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 32768
    total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
    - 768
  seq4kread:
    jobname: seqread
    mode: read
```

```
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  seq4kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 2
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
    - 1024
  seq8kread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  seq8kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 2
    - 8
    - 16
```

```
        - 24
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
        - 512
        - 768
        - 1024
        - 1280
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
      a: null
  mkfs_opts: -f -i size=2048
  mons:
    --- server1 ---:
      a: --- IP Address --:6789
  mount_opts: -o inode64,noatime,logbsize=256k
  osds:
  - --- server1 ---
  osds_per_node: 6
  pdsh_ssh_args: -a -x -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```