

Performance Report for 6th-oct-ec-direct-reads-3way

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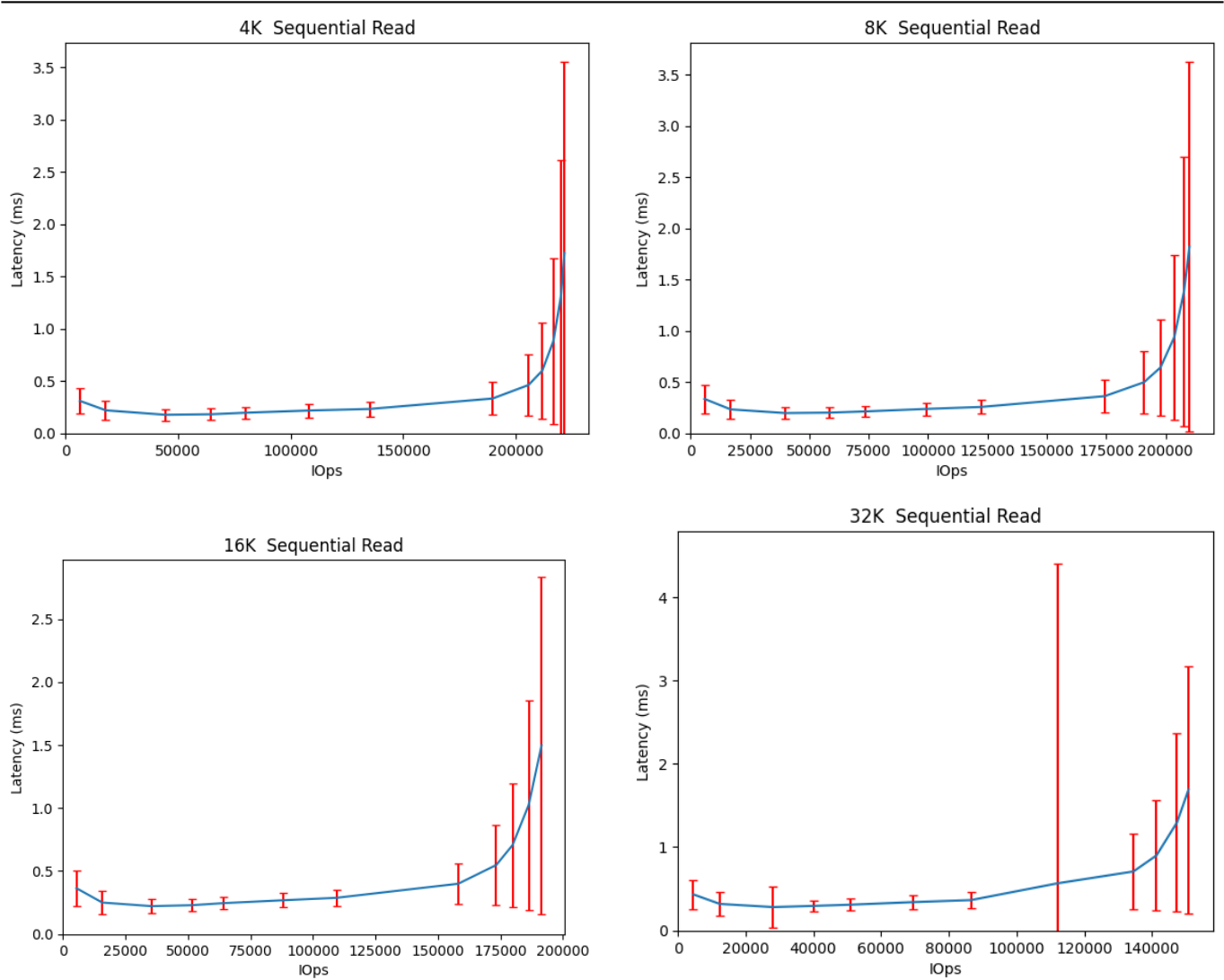
Summary of results for 6th-oct-ec-direct-reads-3way

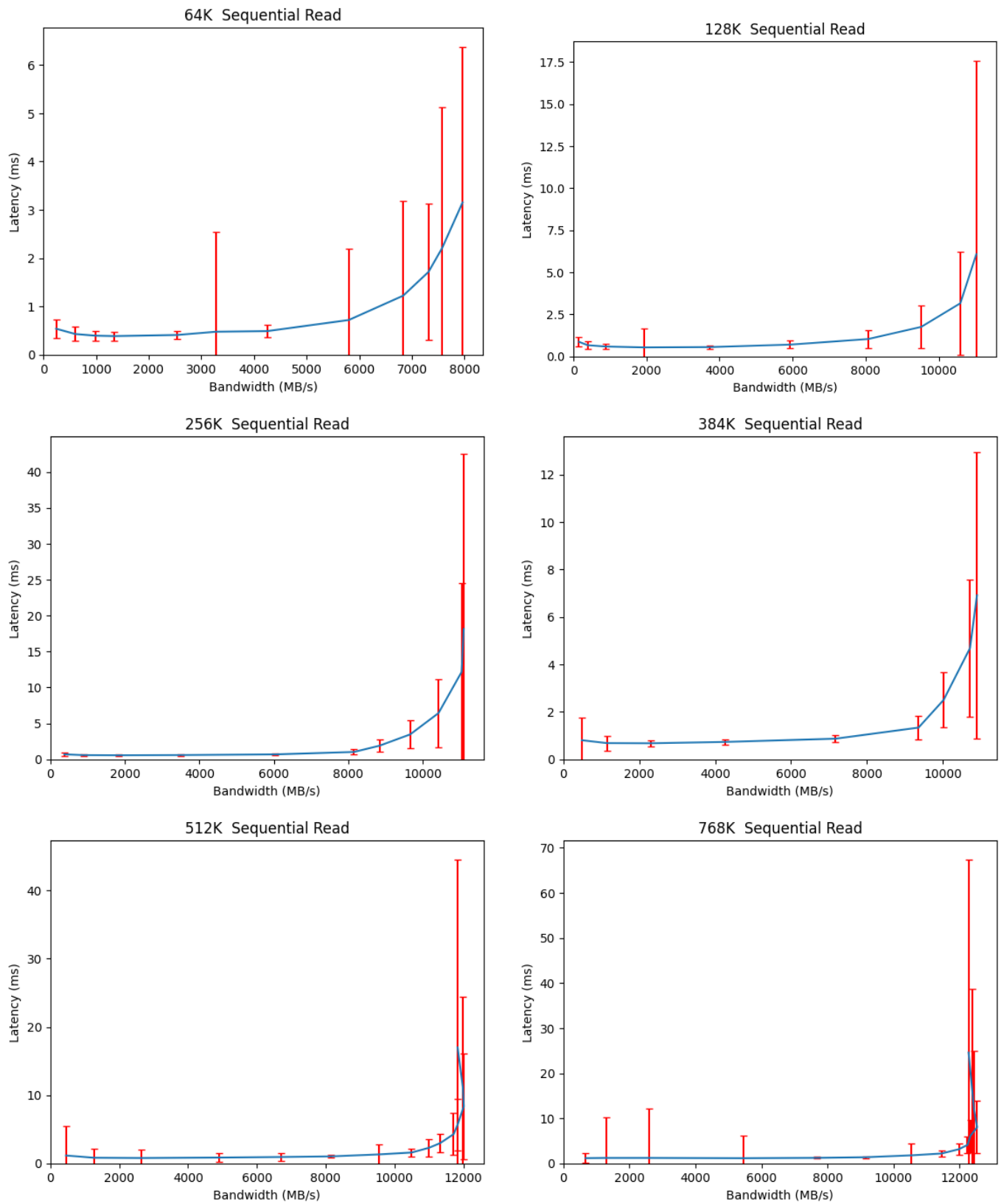
Workload Name	Maximum Throughput	Latency (ms)
4096_read	221740 IOps	1.7
8192_read	210088 IOps	1.8
16384_read	191516 IOps	1.5
32768_read	150833 IOps	1.7
65536_read	7963 MB/s	3.2
131072_read	11028 MB/s	6.1
262144_read	11097 MB/s	18.1
393216_read	10900 MB/s	6.9
524288_read	12014 MB/s	8.4
786432_read	12535 MB/s	8.0
1048576_read	12597 MB/s	5.3
2097152_read	12244 MB/s	5.5
4194304_read	11455 MB/s	11.7
4096_write	501326 IOps	3.1
8192_write	330849 IOps	4.6
16384_write	182236 IOps	5.6
32768_write	101850 IOps	7.5
65536_write	3513 MB/s	9.5
131072_write	3701 MB/s	13.5
262144_write	3938 MB/s	16.9
393216_write	3956 MB/s	25.2
524288_write	4096 MB/s	8.0
786432_write	4142 MB/s	5.7
1048576_write	4169 MB/s	15.6
2097152_write	4165 MB/s	30.9
4194304_write	3834 MB/s	32.6
4096_randread	203928 IOps	3.8
8192_randread	195725 IOps	3.9
16384_randread	180744 IOps	3.2
32768_randread	151599 IOps	3.4
65536_randread	7798 MB/s	3.2
131072_randread	11352 MB/s	2.9
262144_randread	11488 MB/s	4.4
393216_randread	11292 MB/s	8.9
524288_randread	12009 MB/s	5.6
786432_randread	12105 MB/s	3.1
1048576_randread	12567 MB/s	4.0
2097152_randread	12236 MB/s	5.5
4194304_randread	11442 MB/s	11.7
4096_randwrite	48980 IOps	7.8
8192_randwrite	46931 IOps	16.4
16384_randwrite	44675 IOps	8.6
32768_randwrite	42428 IOps	9.0
65536_randwrite	2378 MB/s	10.5
262144_randwrite	4041 MB/s	4.0
524288_randwrite	4535 MB/s	7.1

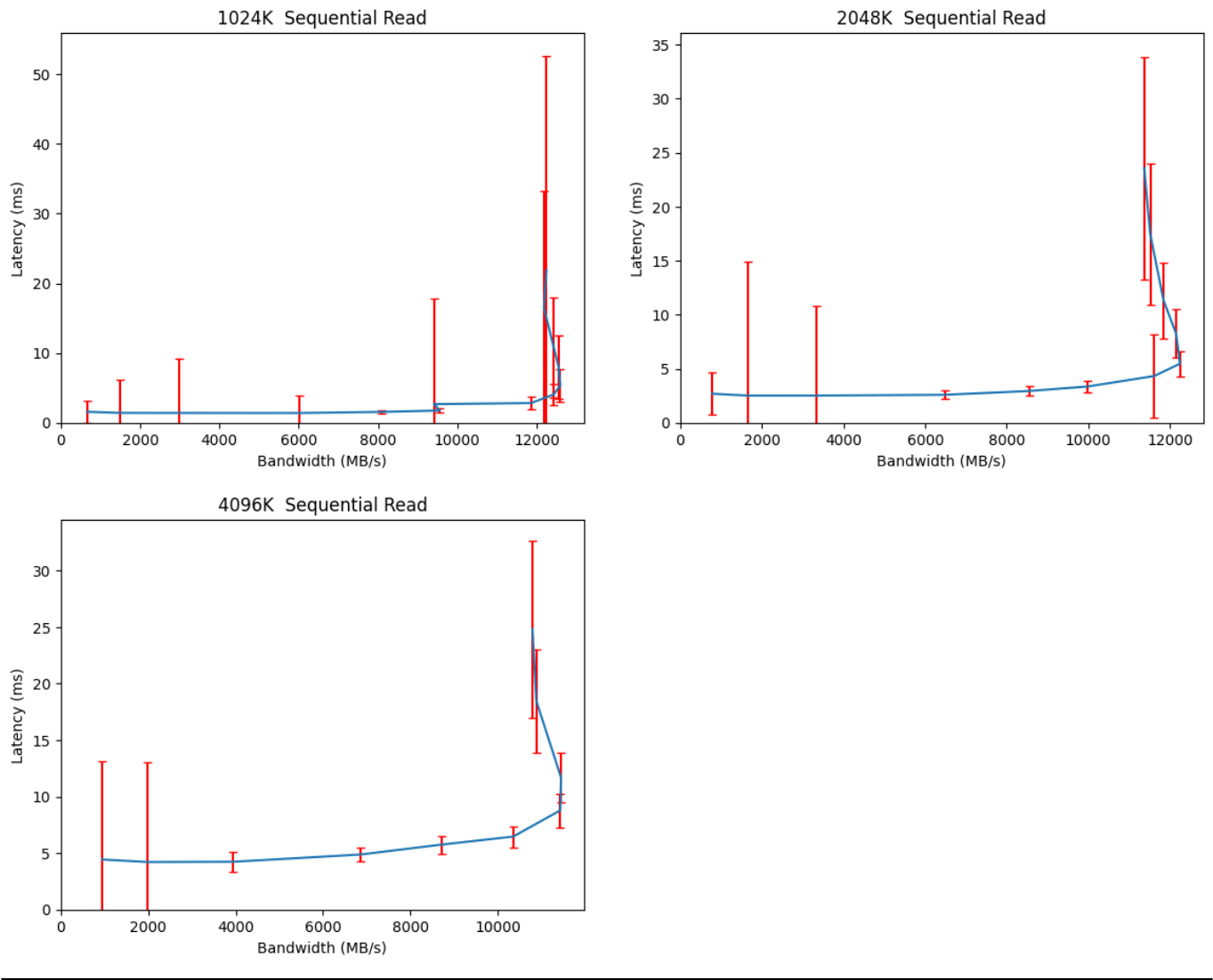
Workload Name	Maximum Throughput	Latency (ms)
1048576_randwrite	4197 MB/s	7.5
4096_70_30_randrw	89854 IOps	2.8
16384_70_30_randrw	85302 IOps	3.0
65536_30_70_randrw	2830 MB/s	5.9
65536_70_30_randrw	4085 MB/s	4.1

Response Curves

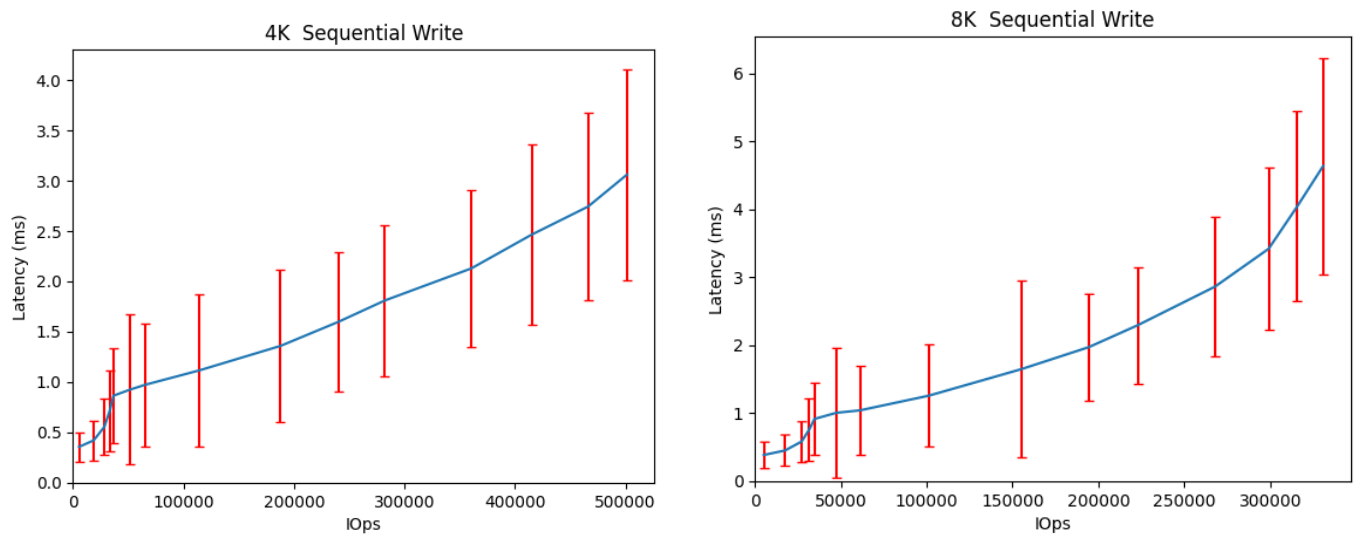
Sequential Read

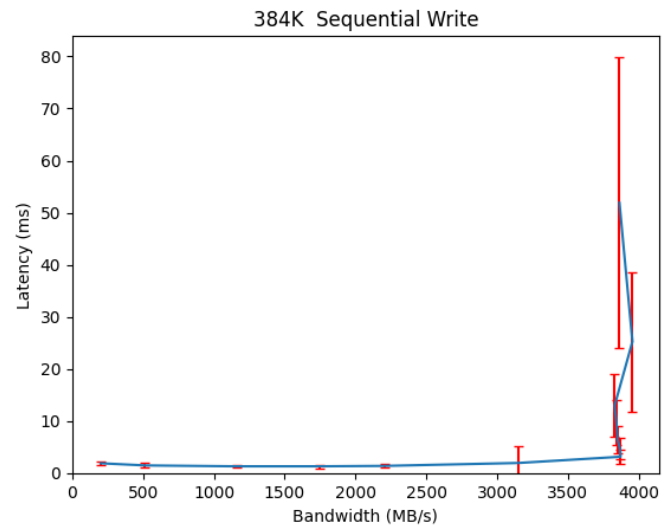
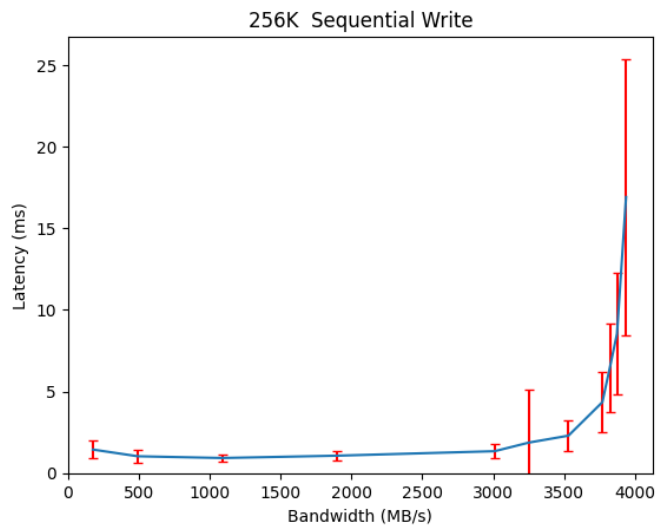
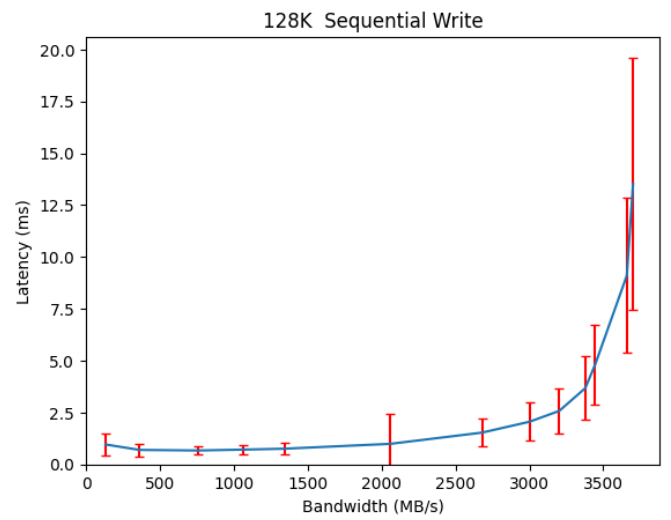
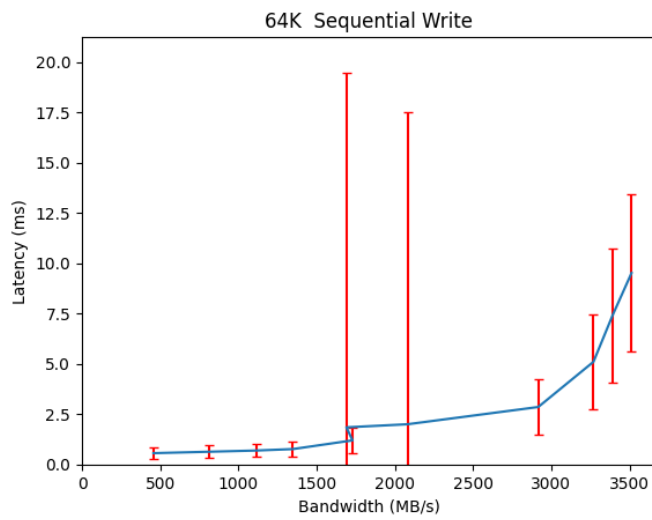
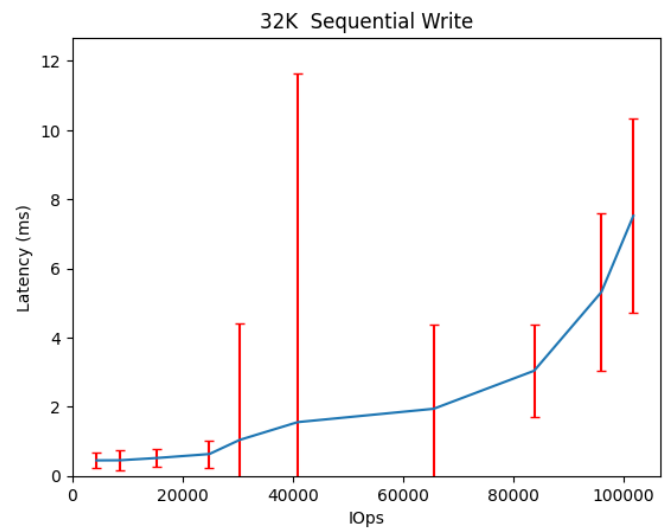
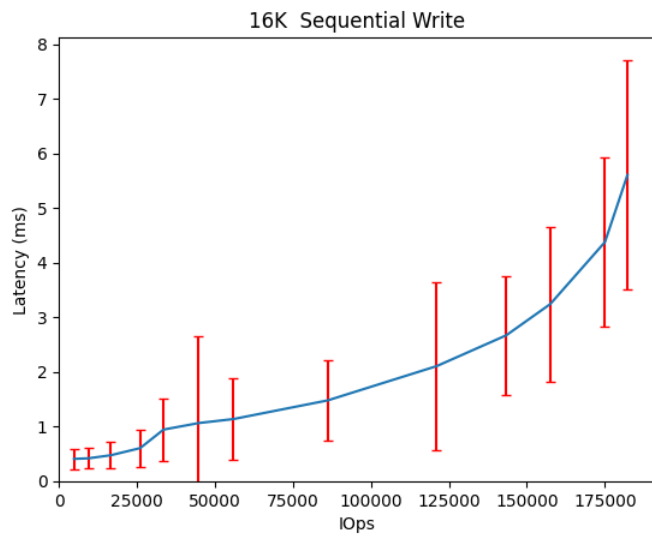


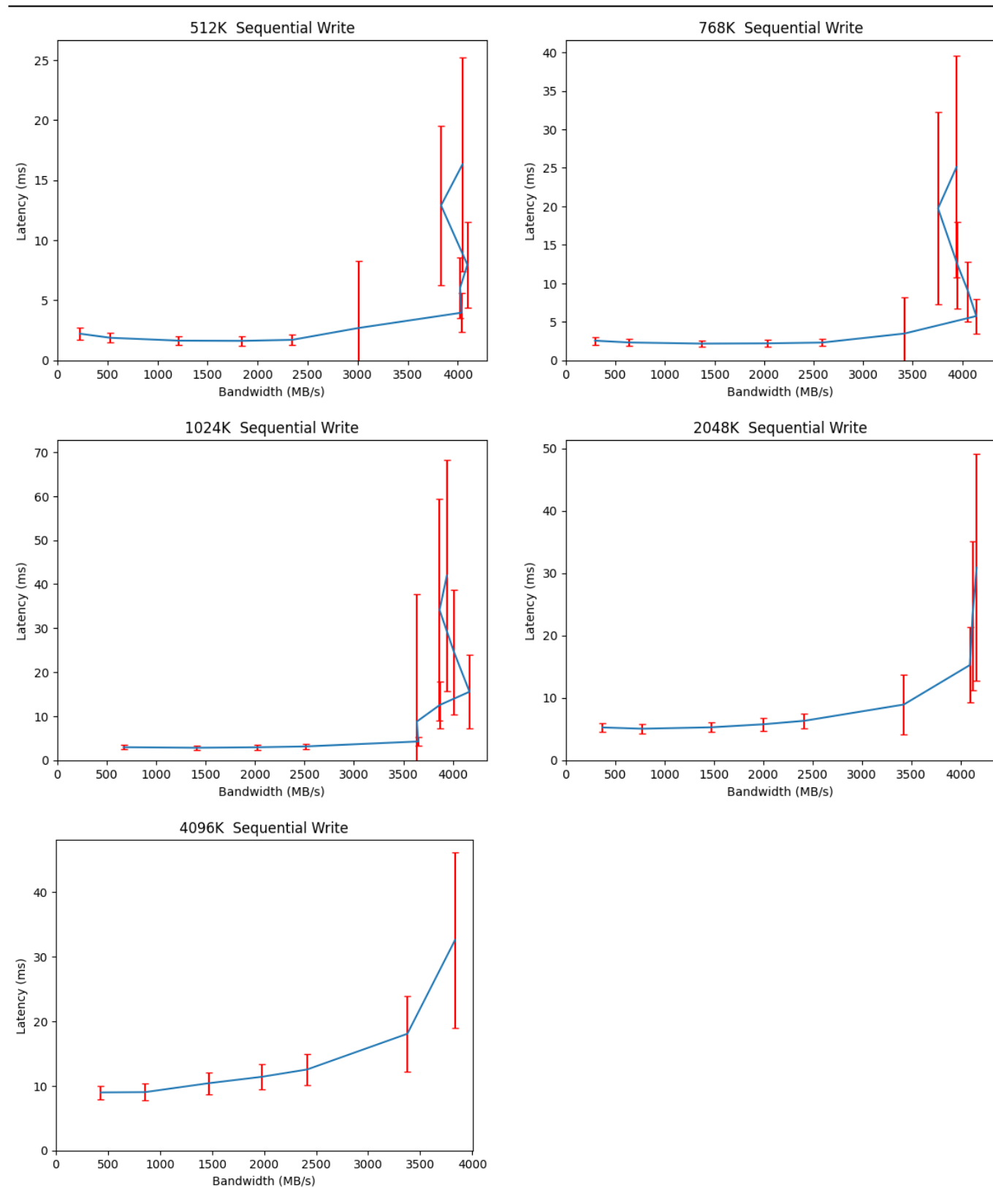




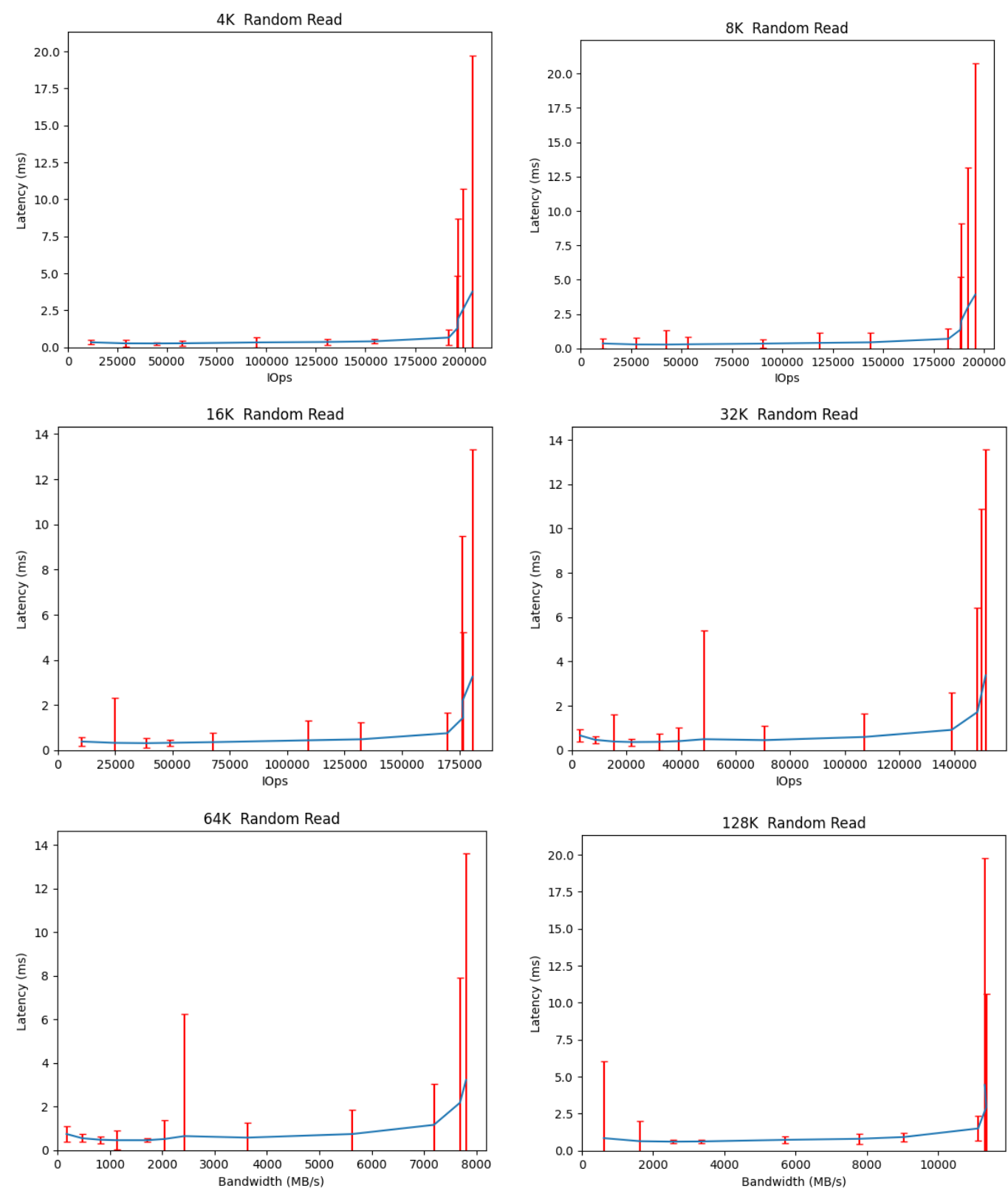
Sequential Write

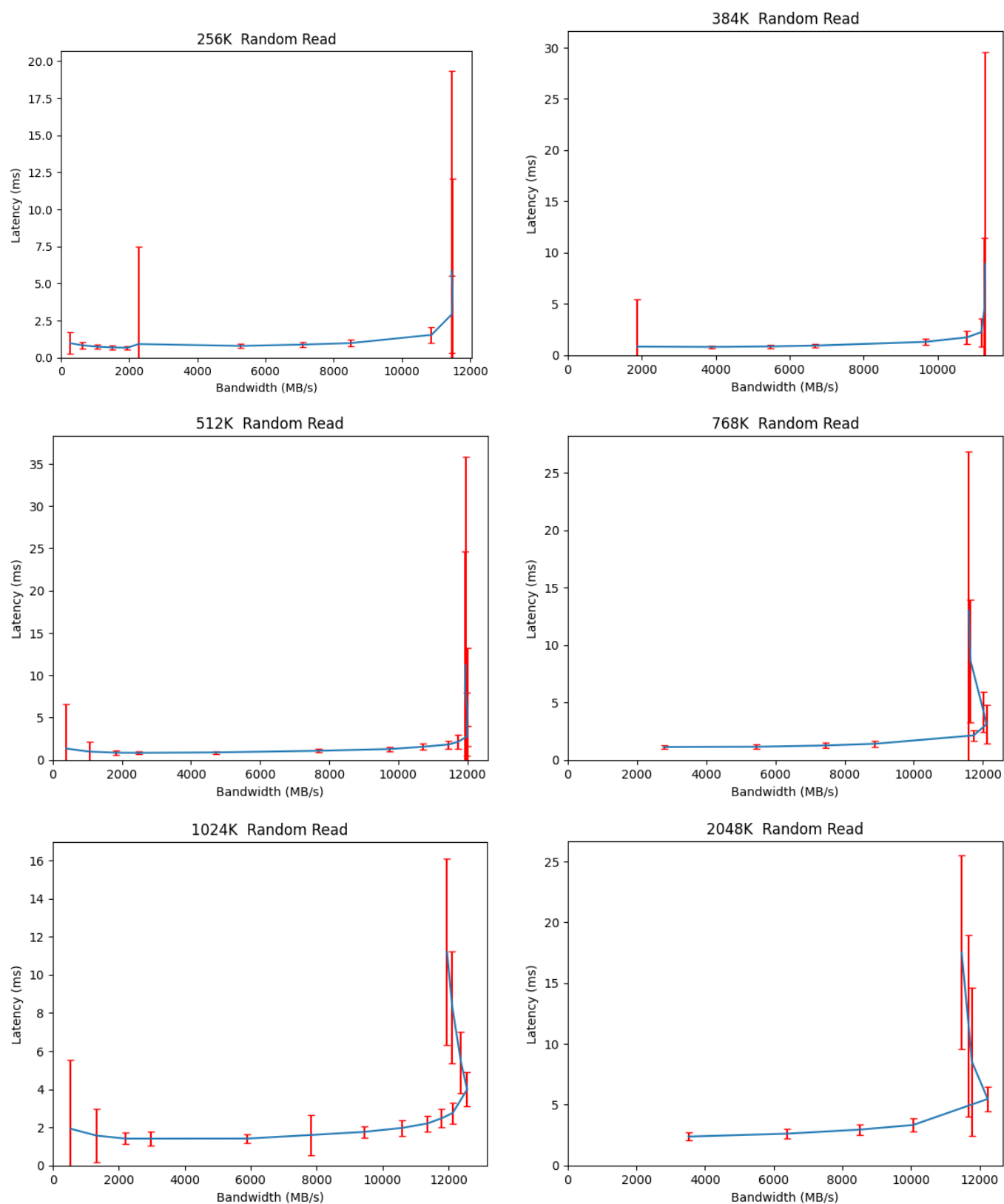


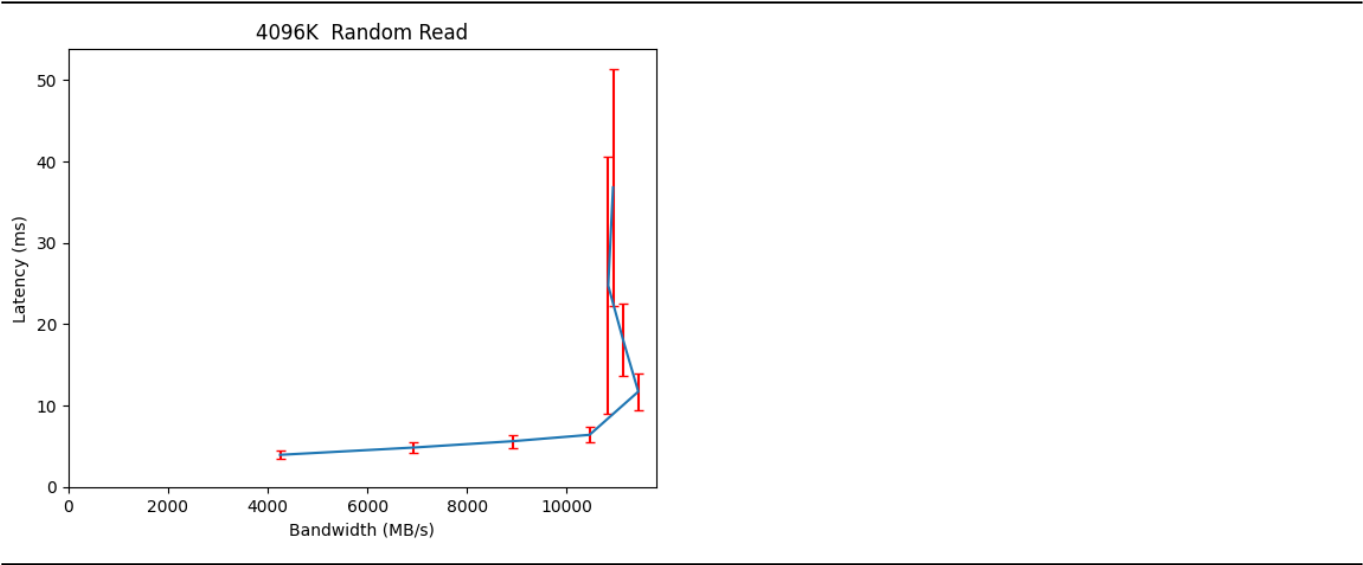




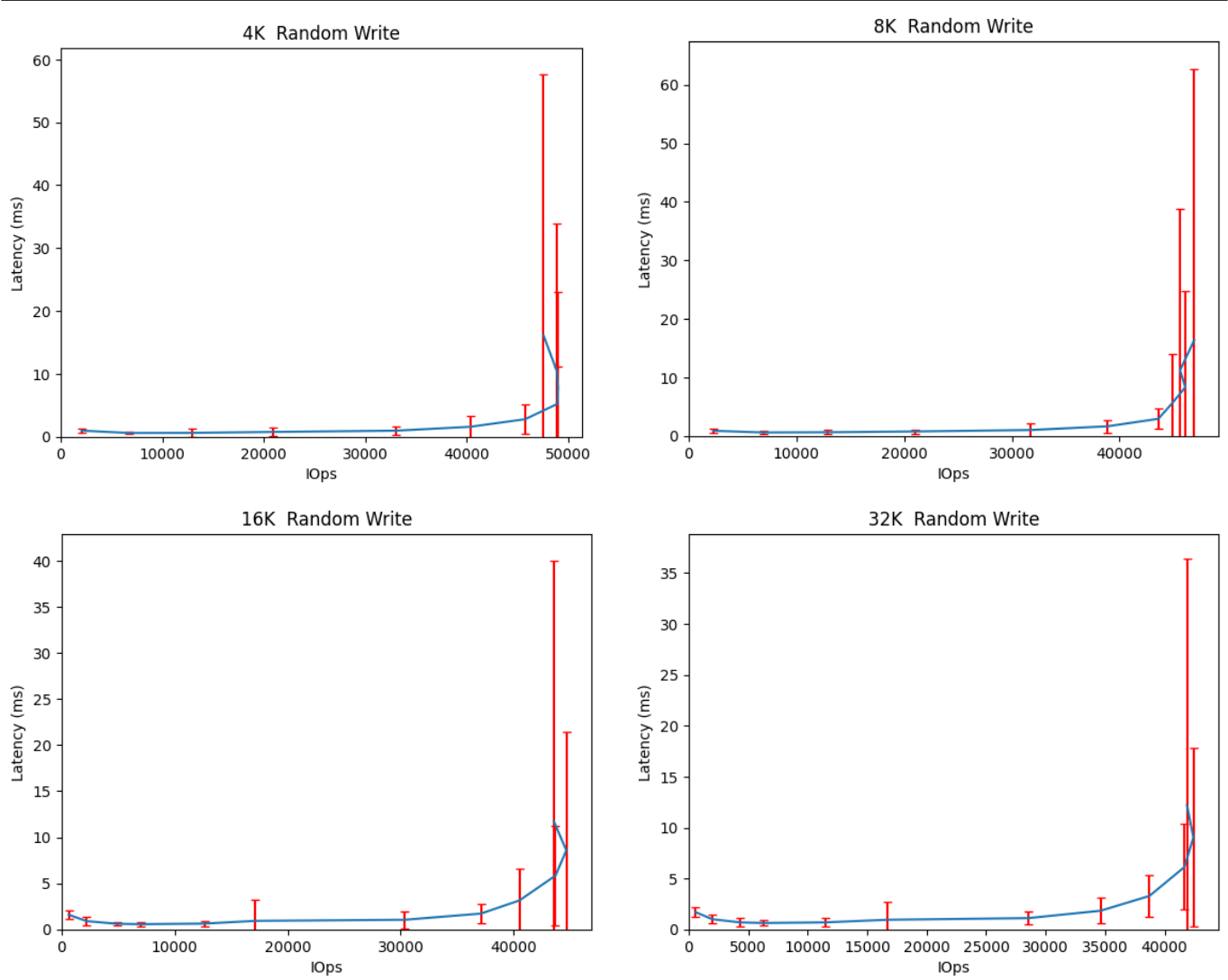
Random Read

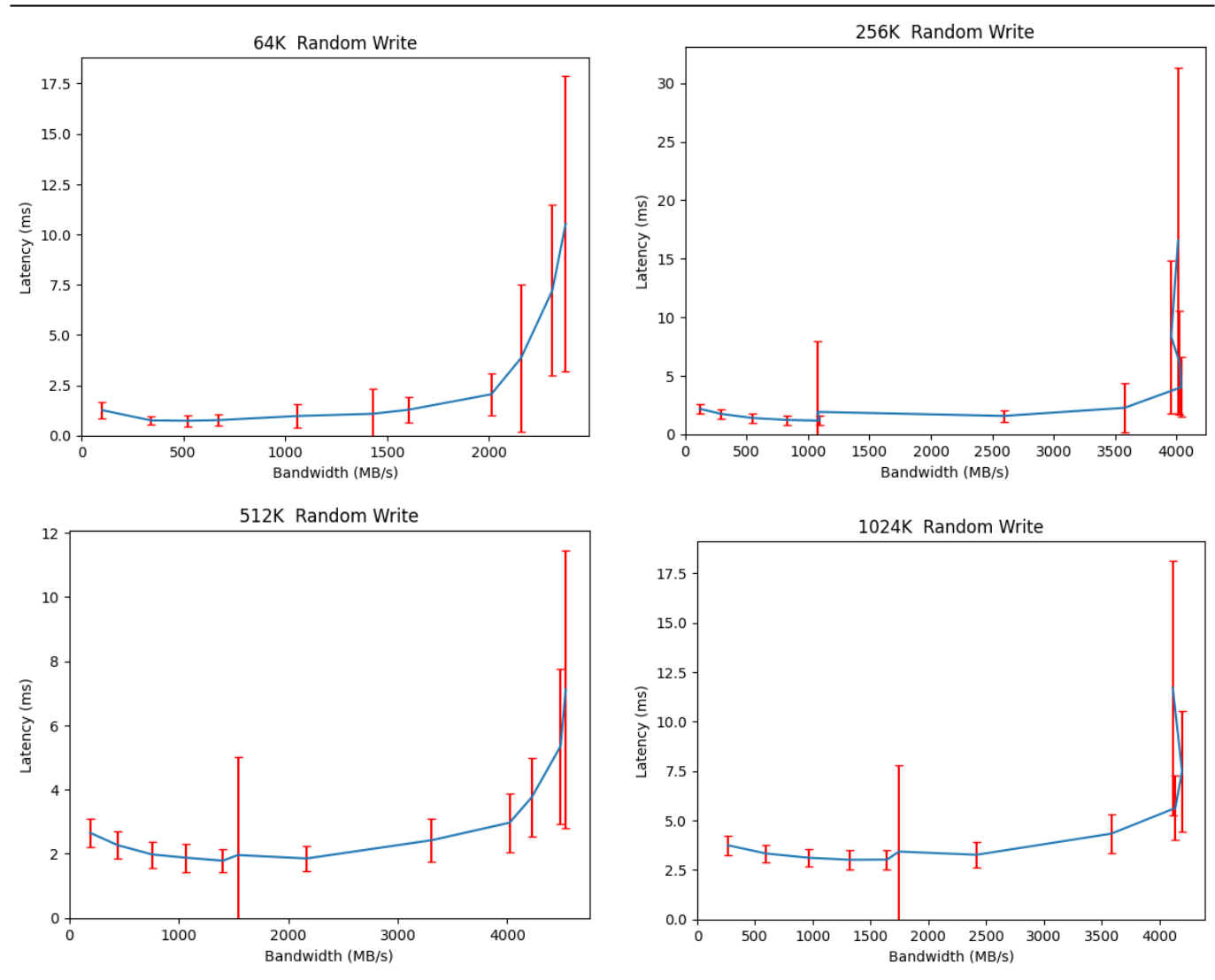




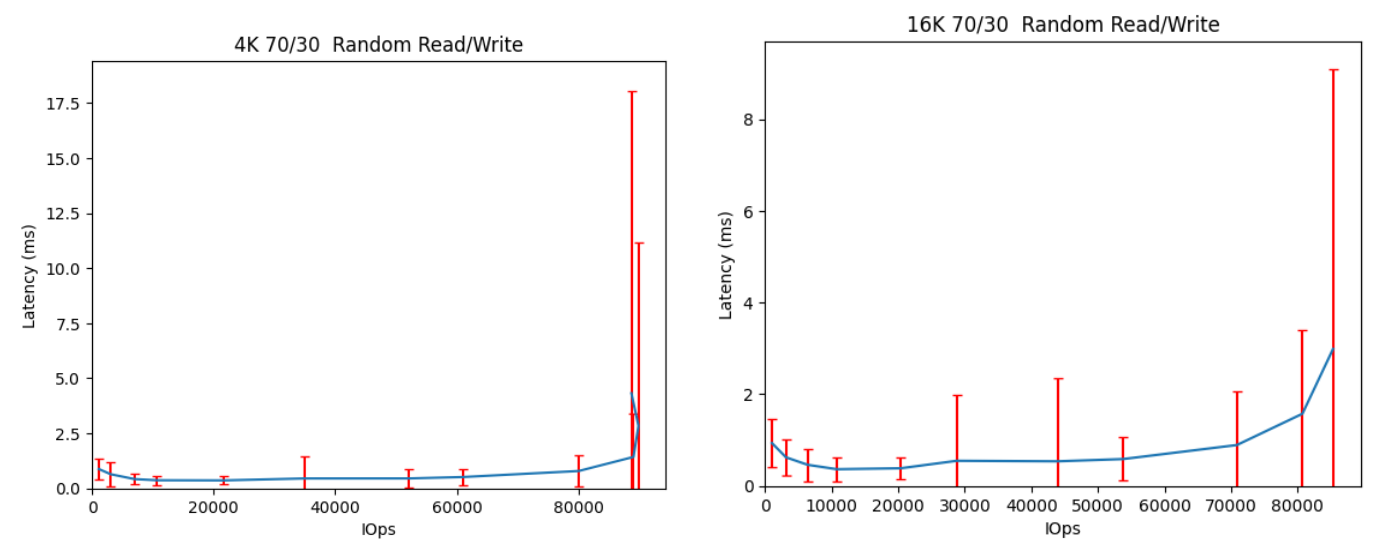


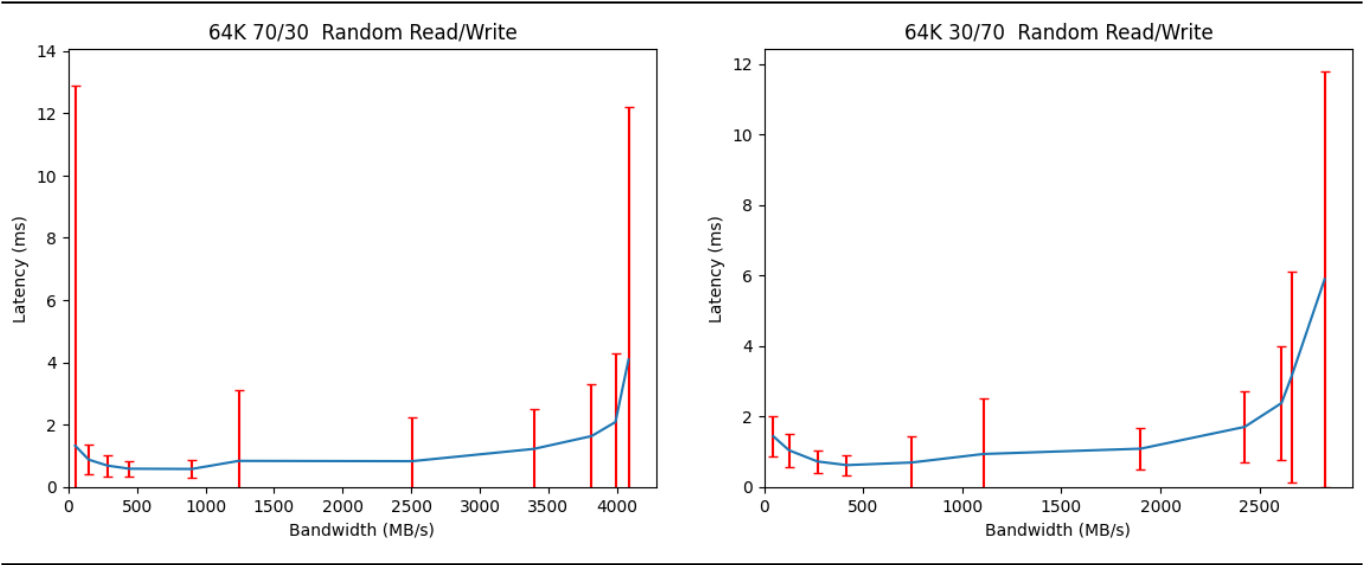
Random Write





Random Read/Write





Configuration yaml

```

librbd fio:
  cmd_path: /usr/local/bin/fio2
  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-librbd fio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 608333
  volumes_per_client:
    - 16
  workloads:
    128k randomread:
      jobname: randread
      mode: randread
      numjobs:
        - 1
      op_size: 131072
      total_iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
    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
    - 588
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
- 48
- 64
- 96
- 128
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
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
    - 96
    - 128
    - 192
    - 256
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
    - 192
    - 256
256krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
  op_size: 262144
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 32
    - 64
    - 96
    - 128
    - 256
2Mrandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 2097152
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 96
2Mseqread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 2097152
  total_iodepth:
    - 1
    - 2

```

```

- 4
- 8
- 12
- 16
- 24
- 32
- 48
- 64
- 96
- 128
2Mseqwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 2097152
  total_iodepth:
    - 1
    - 2
    - 4
    - 6
    - 8
    - 16
    - 32
    - 48
    - 64
32krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
32krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256

```

```

- 384
- 512
384krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 393216
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
4Mrandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 4194304
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 96
4Mseqread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 4194304
  total_iodepth:
    - 1
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
4Mseqwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 4194304
  total_iodepth:
    - 1
    - 2
    - 4
    - 6
    - 8
    - 16

```

```

- 32
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
    - 384
4krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 4096
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
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
      - 96
      - 128
      - 192
      - 256
  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
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 48
      - 64
      - 96
      - 128
      - 192
      - 256
      - 384
  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
- 384
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: seqread
  mode: read
  numjobs:
    - 1
  op_size: 65536
  total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
    - 384
64kseqwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 65536
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
768krandomread:

```



```

  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 786432
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 192
8krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 8192
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 588
    - 768
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
seq128kread:

```

```

  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 131072
  total_iodepth:
    - 1
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
seq128kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 131072
  total_iodepth:
    - 1
    - 2
    - 4
    - 6
    - 8
    - 16
    - 32
    - 48
    - 64
    - 96
    - 128
    - 256
    - 384
seq16kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 16384
  total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    - 288
seq16kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 16384
  total_iodepth:
    - 2

```

```

- 4
- 8
- 16
- 32
- 48
- 64
- 128
- 256
- 384
- 512
- 768
- 1024
seq256kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 262144
  total_iodepth:
    - 1
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
    - 768
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
- 256
seq32kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
    - 768
seq384kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 393216
  total_iodepth:
    - 1
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 192
seq384kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 393216
  total_iodepth:
    - 1
    - 2
    - 4
    - 6
    - 8
    - 16
    - 32
    - 48
    - 64
    - 96
    - 128
    - 256
    - 512
seq4kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 4096

```

```

    total_iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 288
      - 384
  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
      - 1280
      - 1536
  seq768kread:
    jobname: seqread
    mode: read
    numjobs:
      - 1
    op_size: 786432
    total_iodepth:
      - 1
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 48
      - 64
      - 96
      - 128
      - 192
      - 256
      - 384
  seq768kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
      - 1

```

```

    op_size: 786432
    total_iodepth:
      - 1
      - 2
      - 4
      - 6
      - 8
      - 16
      - 32
      - 48
      - 64
      - 96
      - 128
  seq8kread:
    jobname: seqread
    mode: read
    numjobs:
      - 1
    op_size: 8192
    total_iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 288
      - 384
  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
      - 1536
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: 8
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: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -FO --rawtoo --sep ";" -f {collectl_dir}

```