Comparitive Performance Report for cbt-19thDec-main-256k vs cbt-21stDec-alexls12-256k vs cbt-27thDec-squid1920-256k

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Comparison summary for cbt-19thDec-main-256k vs cbt-21stDec-alexls12-256k vs cbt-27thDec-squid1920-256k

Sequential Read	cbt_19thDec_main_256k	cbt_21stDec_alexls12_256k	cbt_27thDec_squid1920_256k
4K	20139 IOps@9.5ms	23979 IOps@8.0ms	7112 IOps@3.4ms
8K	21907 IOps@8.8ms	21091 IOps@9.1ms	6780 IOps@2.4ms
16K	25012 IOps@7.7ms	21940 IOps@8.7ms	7392 IOps@26.0ms
32K	26205 IOps@7.3ms	22718 IOps@8.4ms	8528 IOps@22.5ms
64K	1552 MB/s@10.8ms	1476 MB/s@11.4ms	642 MB/s@26.2ms
256K	1618 MB/s@10.4ms	1620 MB/s@10.4ms	1598 MB/s@10.5ms
512K	1614 MB/s@10.4ms	1612 MB/s@10.4ms	1611 MB/s@10.4ms
1024K	1618 MB/s@13.0ms	1616 MB/s@13.0ms	1617 MB/s@13.0ms

Sequential Write	cbt_19thDec_main_256k	cbt_21stDec_alexls12_256k	cbt_27thDec_squid1920_256k
4K	538 IOps@475.7ms	3491 IOps@73.3ms	546 IOps@468.4ms
8K	567 IOps@449.1ms	4070 IOps@62.8ms	541 IOps@473.8ms
16K	522 IOps@367.3ms	3851 IOps@49.8ms	516 IOps@371.5ms
32K	476 IOps@268.7ms	3184 IOps@40.2ms	456 IOps@280.5ms
64K	32 MB/s@260.5ms	116 MB/s@72.4ms	32 MB/s@263.3ms
256K	112 MB/s@74.6ms	130 MB/s@129.5ms	117 MB/s@143.7ms
512K	211 MB/s@49.6ms	272 MB/s@61.6ms	203 MB/s@82.6ms
1024K	541 MB/s@15.2ms	463 MB/s@44.9ms	529 MB/s@31.4ms

Random Read	cbt_19thDec_main_256k	cbt_21stDec_alexls12_256k	cbt_27thDec_squid1920_256k
4K	6581 IOps@9.7ms	94215 IOps@4.1ms	1621 IOps@9.9ms
8K	6880 IOps@18.6ms	88241 IOps@4.3ms	1698 IOps@18.8ms
16K	6849 IOps@9.3ms	79992 IOps@4.8ms	1695 IOps@9.4ms
32K	6841 IOps@37.5ms	53617 IOps@4.8ms	1692 IOps@14.2ms
64K	442 MB/s@38.0ms	1784 MB/s@4.7ms	109 MB/s@7.2ms
256K	1781 MB/s@18.8ms	1769 MB/s@19.0ms	445 MB/s@75.7ms
512K	1773 MB/s@18.9ms	1782 MB/s@18.8ms	885 MB/s@28.4ms
1024K	1753 MB/s@12.0ms	1748 MB/s@14.4ms	1772 MB/s@9.5ms

Random Write	cbt_19thDec_main_256k	cbt_21stDec_alexls12_256k	cbt_27thDec_squid1920_256k
4K	349 IOps@22.9ms	5855 IOps@21.8ms	352 IOps@22.7ms
8K	331 IOps@385.7ms	4586 IOps@27.9ms	363 IOps@352.4ms
16K	336 IOps@379.9ms	3146 IOps@40.7ms	357 IOps@44.7ms
32K	352 IOps@362.8ms	2326 IOps@55.0ms	344 IOps@371.4ms
64K	23 MB/s@68.1ms	98 MB/s@85.7ms	24 MB/s@354.3ms
256K	90 MB/s@46.6ms	134 MB/s@251.1ms	91 MB/s@45.9ms

Comparison summary for cbt-19thDec-main-256k vs cbt-21stDec-alexls12-256k vs cbt-27thDec-squid1920-256k

Random Write	cbt__19thDec__main__256k	cbt__21stDec__alexls12__256k	cbt__27thDec__squid1920__256k
512K	185 MB/s@90.4ms	266 MB/s@47.1ms	197 MB/s@106.2ms
1024K	551 MB/s@53.0ms	462 MB/s@72.3ms	539 MB/s@38.6ms

Random Read/Write	cbt__19thDec__main__256k	cbt__21stDec__alexls12__256k	cbt__27thDec__squid1920__256k
16K_70/30	1119 IOps@114.6ms	7468 IOps@17.1ms	820 IOps@19.5ms
64K_70/30	80 MB/s@104.4ms	262 MB/s@16.0ms	50 MB/s@168.8ms
64K_30/70	33 MB/s@16.0ms	149 MB/s@56.3ms	34 MB/s@46.9ms

Response Curves

Sequential Read

4K Sequential Read

8K Sequential Read

16K Sequential Read

32K Sequential Read

64K Sequential Read

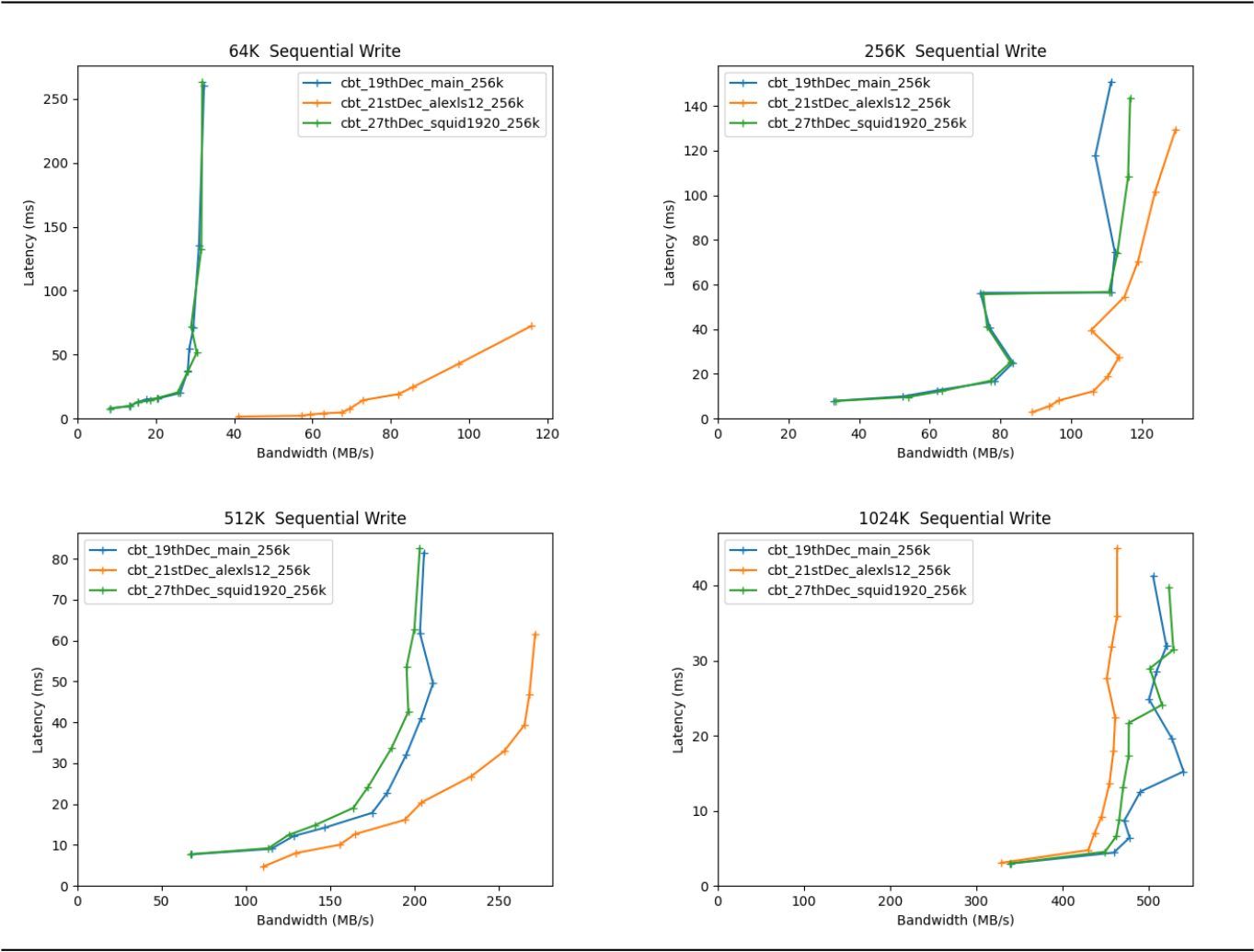### 256K Sequential Read

Sequential Write

64K Sequential Write

256K Sequential Write

512K Sequential Write
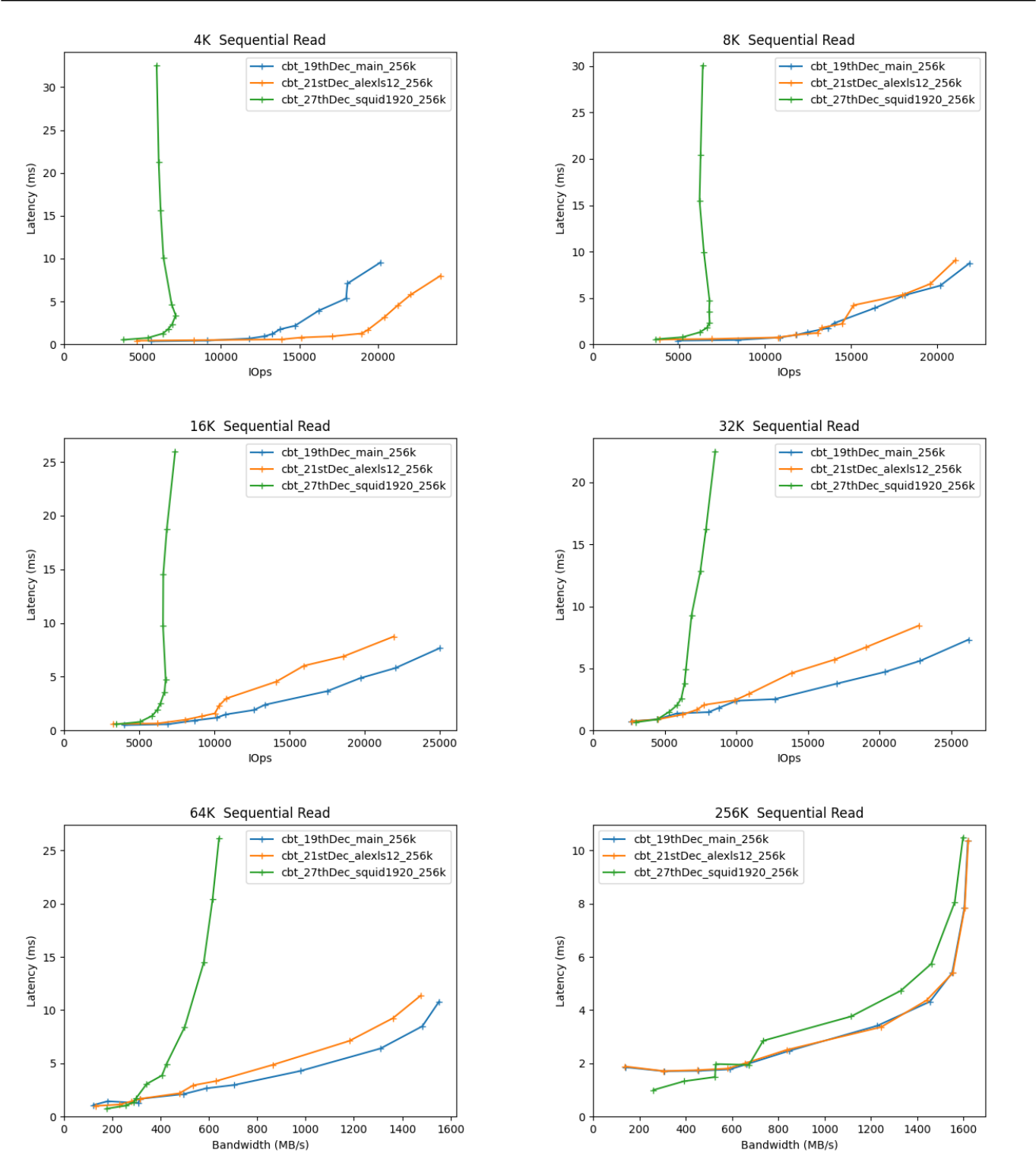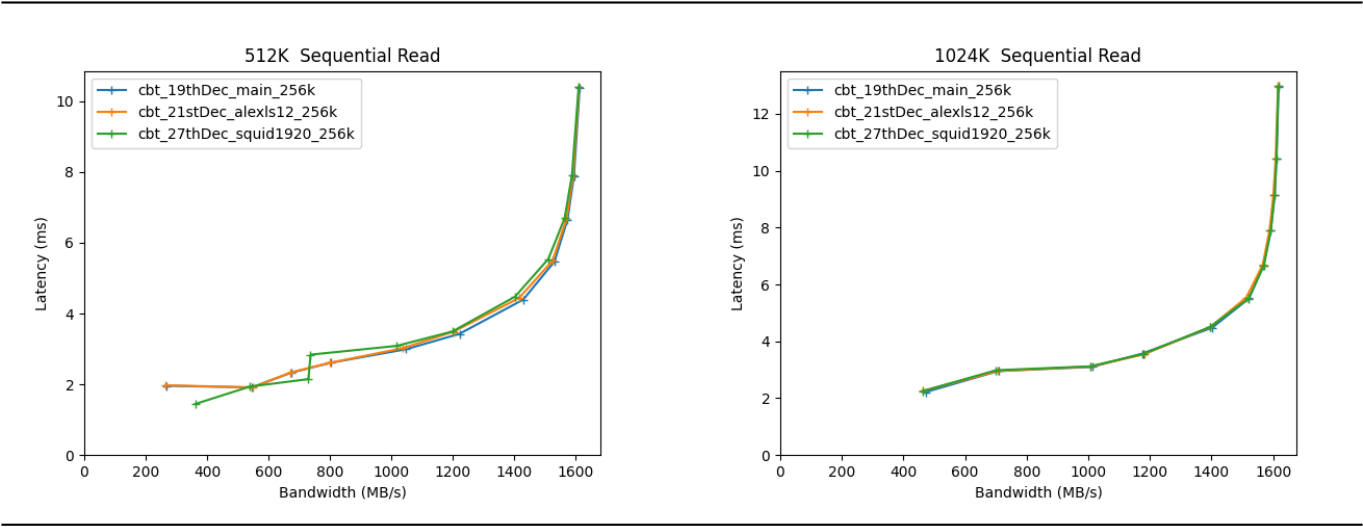
1024K Sequential Write

Random Read
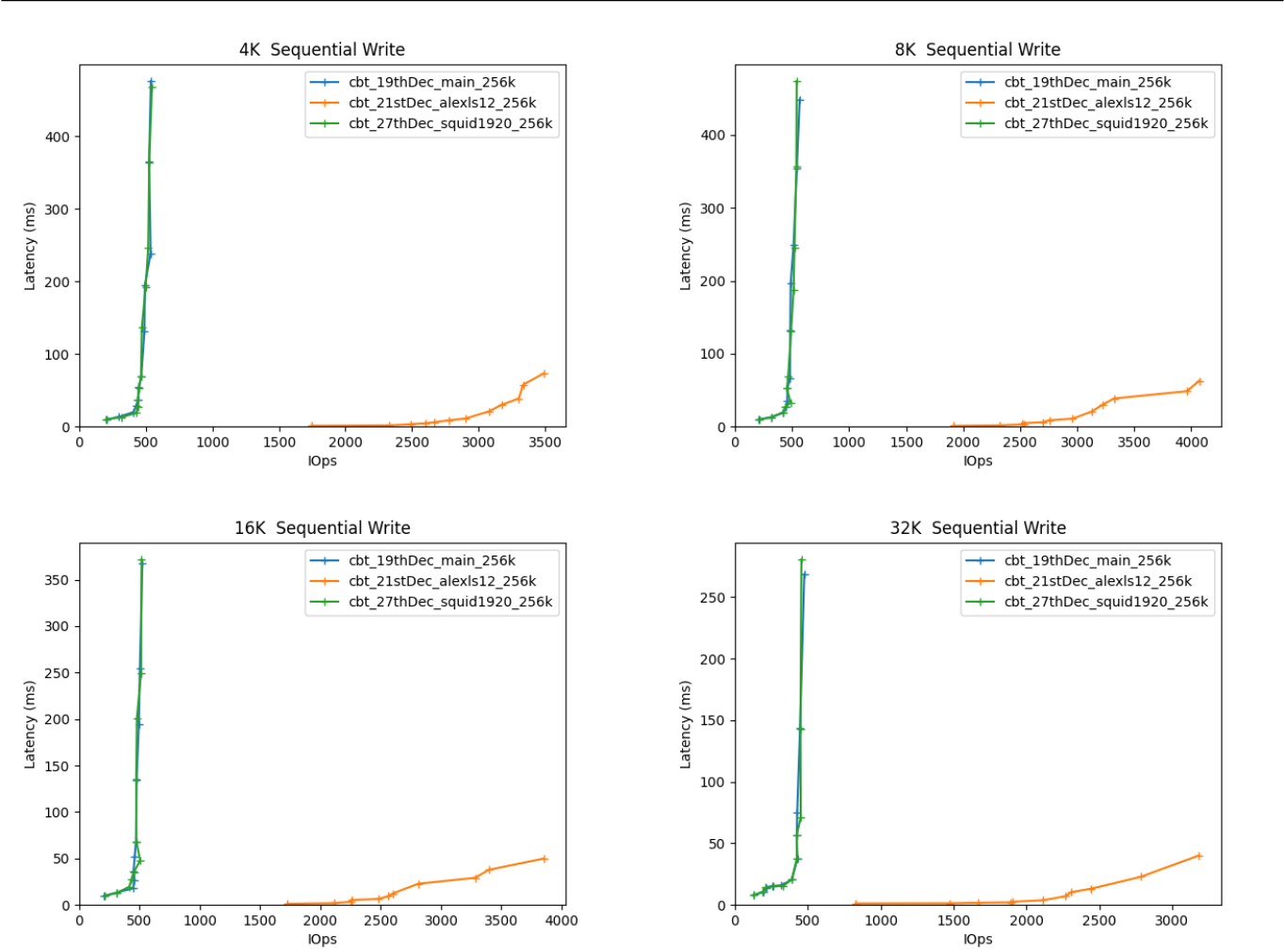
4K Random Read

8K Random Read

Random Write

4K Random Write

8K Random Write

16K Random Write

32K Random Write

64K Random Write
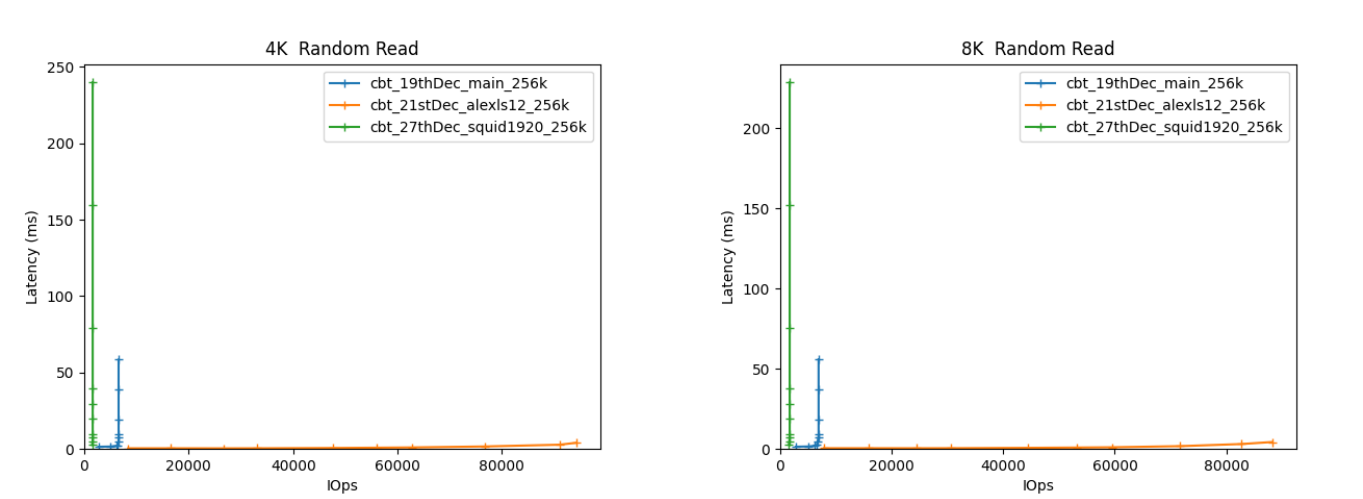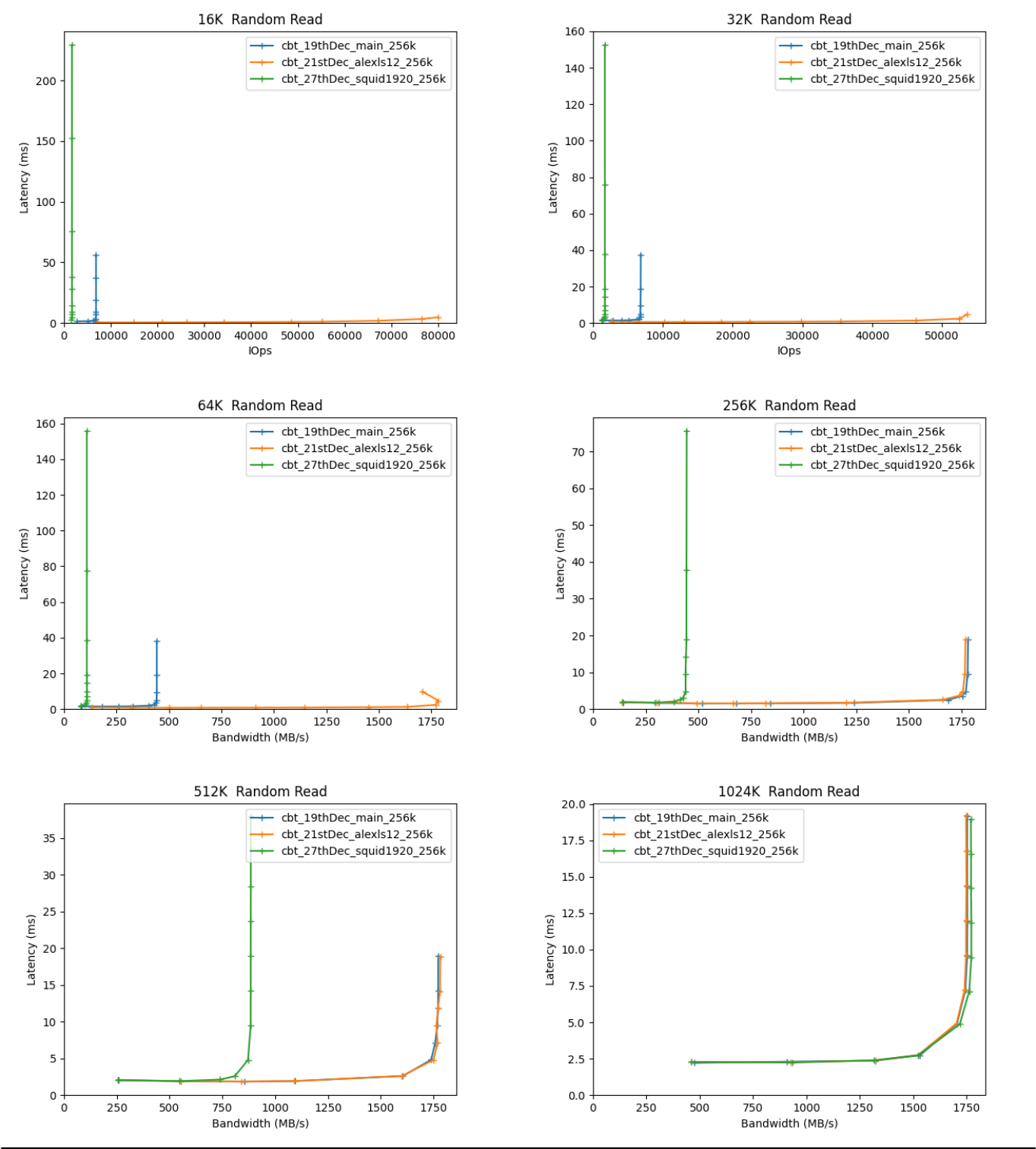
256K Random Write
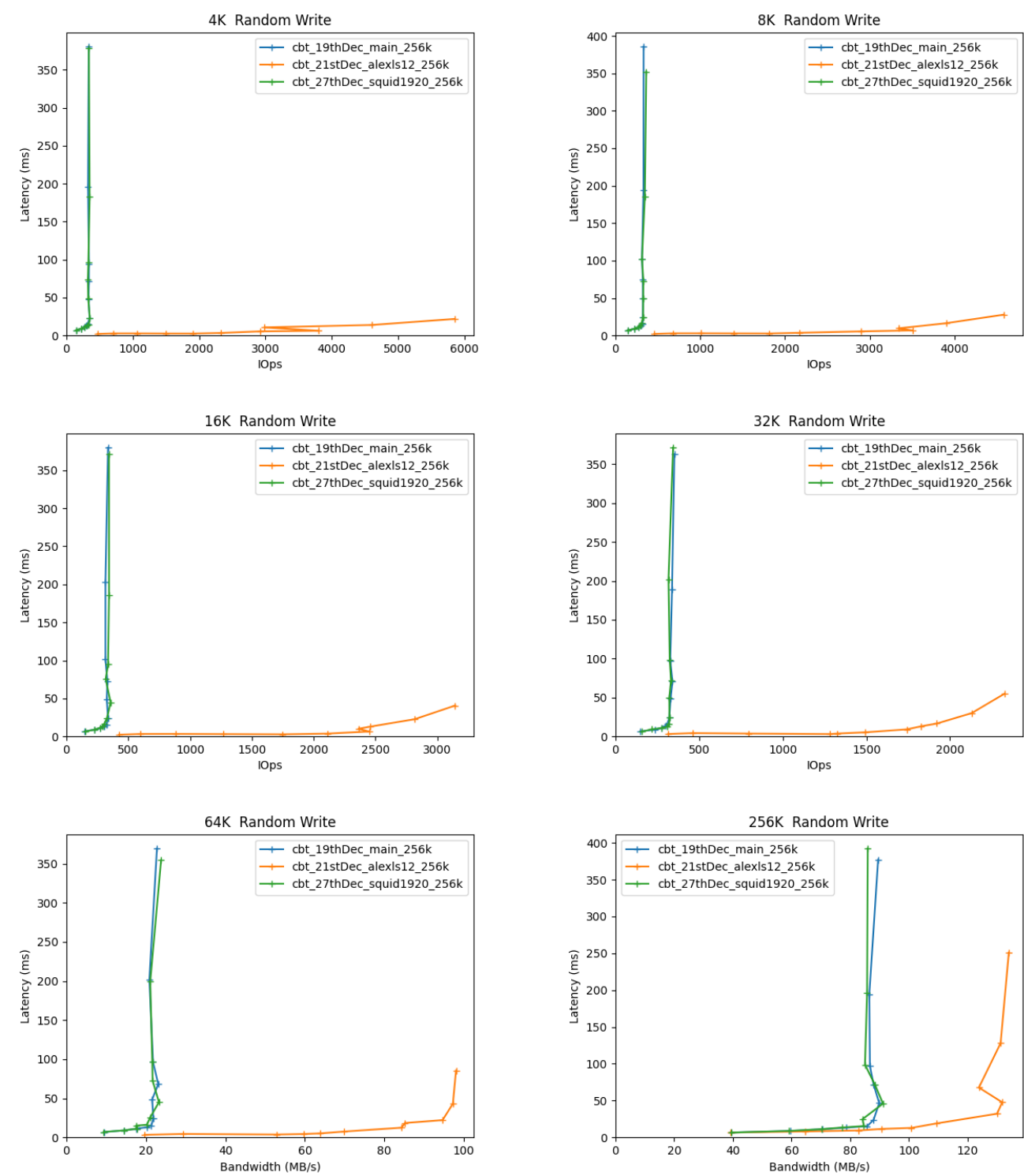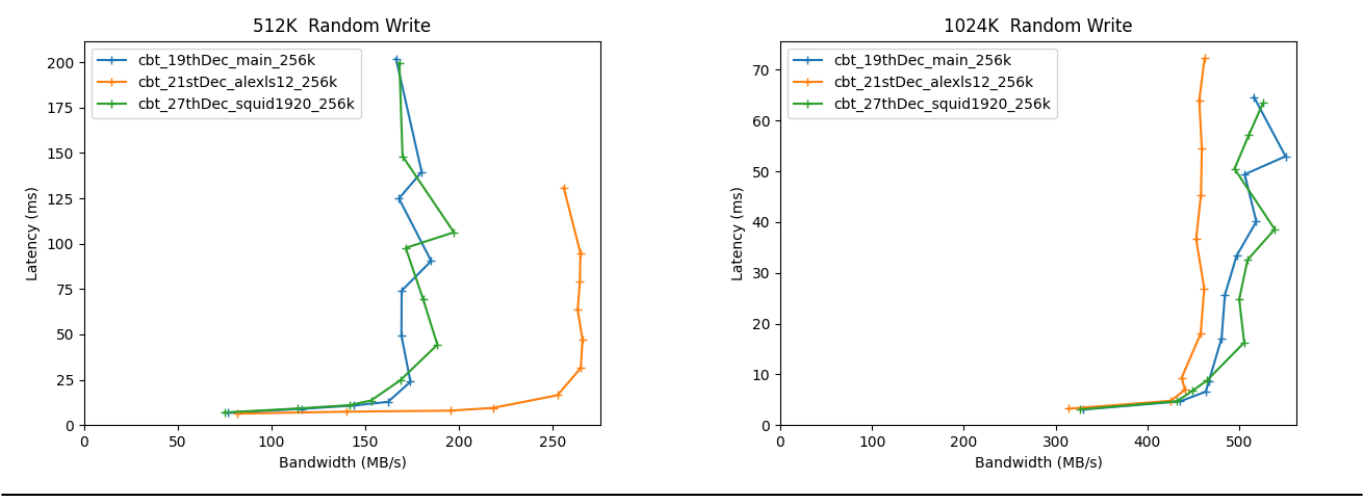
Random Read/Write
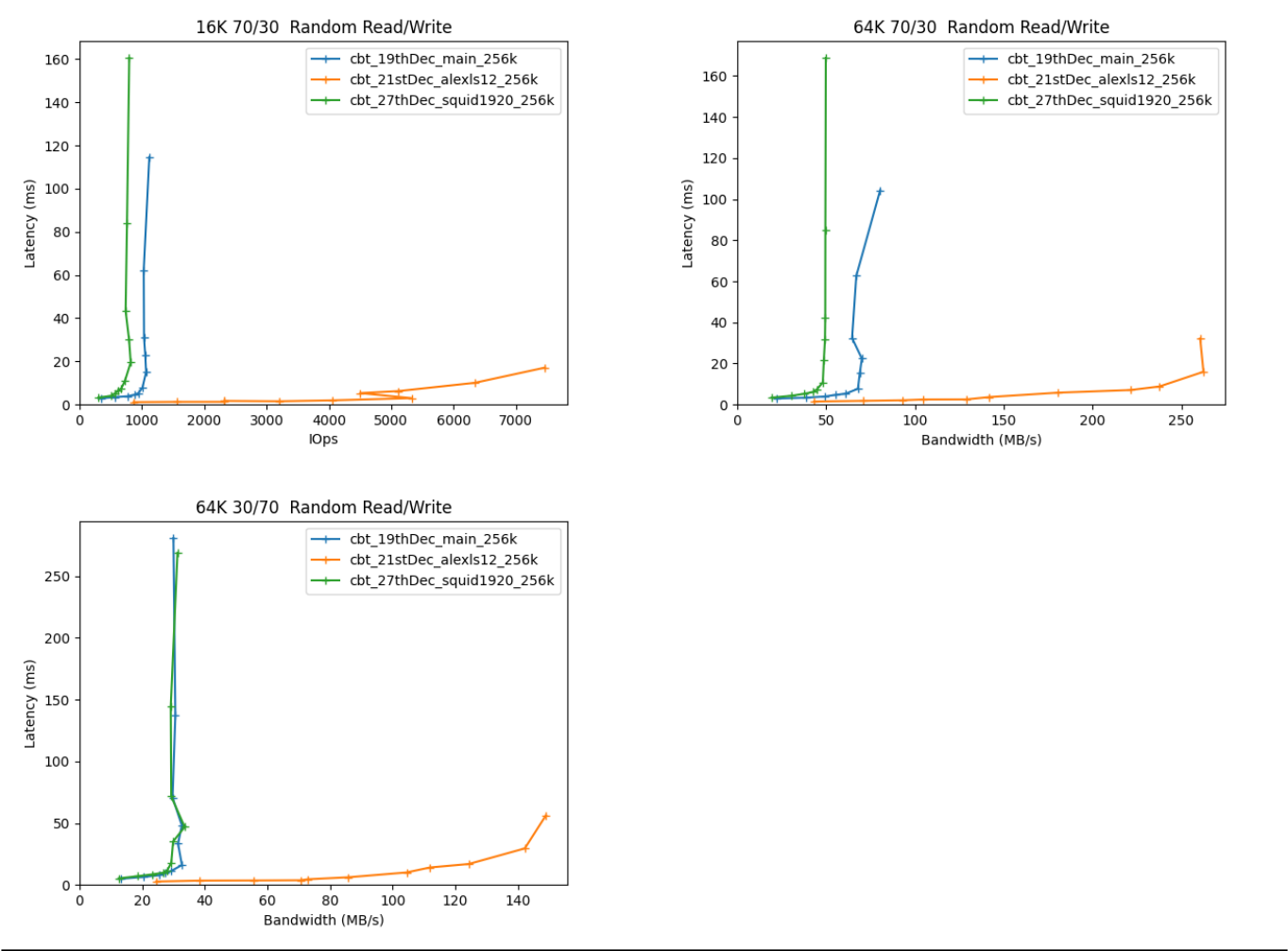
Configuration yaml files

results

```
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
  precond_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
  - 1
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
      - 1
      - 1
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
    16krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
    1Mrandomread:
      iodepth:
      - 1
```

```
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
    jobname: randread
    mode: randread
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 1048576
  1Mrandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 1048576
  1Mseqread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
```

```
       - 14
       - 16
       - 20
       jobname: seqread
       mode: read
       numjobs:
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       op_size: 1048576
     1Mseqwrite:
       iodepth:
       - 1
       - 2
       - 3
       - 4
       - 6
       - 8
       - 10
       - 12
       - 14
       - 16
       - 20
       jobname: seqwrite
       mode: write
       numjobs:
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       op_size: 1048576
     256krandomread:
       iodepth:
       - 1
       - 2
       - 3
       - 4
       - 5
       - 8
       - 16
       - 24
       - 32
       - 64
       - 128
       jobname: randread
       mode: randread
       numjobs:
       - 1
```

```
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 262144
    256krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 262144
    32krandomread:
      iodepth:
      - 2
      - 4
      - 6
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
      - 1
      - 1
      - 1
      op_size: 32768
    32krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 32768
    4krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 4096
    4krandomwrite:
      iodepth:
      - 1
      - 2
```

```
         - 3
         - 4
         - 5
         - 8
         - 16
         - 24
         - 32
         - 64
         - 128
         jobname: randwrite
         mode: randwrite
         numjobs:
         - 1
         - 1
         - 1
         - 1
         - 1
         - 1
         - 1
         - 1
         - 1
         - 1
         - 1
         op_size: 4096
     512krandomread:
       iodepth:
       - 1
       - 2
       - 3
       - 4
       - 8
       - 16
       - 24
       - 32
       - 40
       - 48
       - 64
       jobname: randread
       mode: randread
       numjobs:
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       - 1
       op_size: 524288
     512krandomwrite:
       iodepth:
       - 1
       - 2
       - 3
       - 4
       - 8
       - 16
       - 24
       - 32
       - 40
```

```
      - 48
      - 64
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 524288
    512kseqread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 524288
    512kseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
```

```
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 524288
    64k3070:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 65536
      rwmixread: 30
    64k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
      - 1
      - 1
      - 1
    op_size: 65536
    rwmixread: 70
  64krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    jobname: randread
    mode: randread
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 65536
  64krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 65536
  64kseqread:
    iodepth:
```

```
                - 2
                - 4
                - 6
                - 8
                - 16
                - 24
                - 32
                - 64
                - 128
                - 192
                - 256
                jobname: read
                mode: read
                numjobs:
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                op_size: 65536
            64kseqwrite:
                iodepth:
                - 1
                - 2
                - 3
                - 4
                - 5
                - 8
                - 16
                - 24
                - 32
                - 64
                - 128
                jobname: write
                mode: write
                numjobs:
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                - 1
                op_size: 65536
            8krandomread:
                iodepth:
                - 4
                - 8
                - 12
                - 16
                - 32
                - 48
                - 64
```

```
      - 128
      - 256
      - 384
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    8krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    precondition:
      iodepth:
      - 4
      jobname: precond1rw
      mode: randwrite
      monitor: false
      numjobs:
      - 1
      op_size: 65536
      precond: true
    seq16kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
```

```
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
    seq16kwrite:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
    seq256kread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 48
      - 64
      jobname: seqread
```

```
    mode: read
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 262144
  seq256kwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 5
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 262144
  seq32kread:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    jobname: seqread
    mode: read
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
```

```
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 32768
    seq32kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 32768
    seq4kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 4096
```

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

```
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
        - 256
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 8192
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}
```

results

```
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
  precond_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
  - 1
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
```

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

```yaml
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 1048576
    1Mrandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 12
      - 16
      - 20
      - 24
      - 28
      - 32
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 1048576
    1Mseqread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 10
      - 12
      - 14
      - 16
      - 20
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 1048576
  1Mseqwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 1048576
  256krandomread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randread
    mode: randread
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 262144
  256krandomwrite:
```

```
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 262144
  32krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    jobname: randread
    mode: randread
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 32768
  32krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
```

```
        - 16
        - 24
        - 32
        - 64
        - 128
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 32768
    4krandomread:
        iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
        jobname: randread
        mode: randread
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 4096
    4krandomwrite:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        jobname: randwrite
        mode: randwrite
        numjobs:
```

```
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 4096
    512krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 40
      - 48
      - 64
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 524288
    512krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 40
      - 48
      - 64
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
        - 1
        - 1
        - 1
        - 1
        op_size: 524288
      512kseqread:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 6
        - 8
        - 12
        - 16
        - 20
        - 24
        - 32
        jobname: seqread
        mode: read
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 524288
      512kseqwrite:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 6
        - 8
        - 12
        - 16
        - 20
        - 24
        - 32
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 524288
      64k3070:
        iodepth:
```

```
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      jobname: randmix
      mode: randrw
      numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 65536
      rwmixread: 30
    64k7030:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      jobname: randmix
      mode: randrw
      numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 65536
      rwmixread: 70
    64krandomread:
      iodepth:
        - 2
        - 4
        - 6
        - 8
        - 12
```

```
        - 16
        - 24
        - 32
        - 64
        - 128
        - 256
        jobname: randread
        mode: randread
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 65536
    64krandomwrite:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 65536
    64kseqread:
        iodepth:
        - 2
        - 4
        - 6
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        - 192
        - 256
        jobname: read
```

```
        mode: read
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 65536
      64kseqwrite:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        jobname: write
        mode: write
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 65536
      8krandomread:
        iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
        jobname: randread
        mode: randread
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
```

```
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    8krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    precondition:
      iodepth:
      - 4
      jobname: precond1rw
      mode: randwrite
      monitor: false
      numjobs:
      - 1
      op_size: 65536
      precond: true
    seq16kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
```

```
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        op_size: 16384
    seq16kwrite:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
    seq256kread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 48
      - 64
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
      - 1
      op_size: 262144
    seq256kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 5
      - 8
      - 12
      - 16
      - 24
      - 32
      - 48
      - 64
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 262144
    seq32kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 32768
    seq32kwrite:
      iodepth:
      - 1
      - 2
      - 3
```

```
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
     jobname: seqwrite
     mode: write
     numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
     op_size: 32768
   seq4kread:
     iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
     jobname: seqread
     mode: read
     numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
     op_size: 4096
   seq4kwrite:
     iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
```

```
    - 192
    - 256
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 4096
  seq8kread:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    jobname: seqread
    mode: read
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 8192
  seq8kwrite:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    - 256
    jobname: seqwrite
    mode: write
    numjobs:
```

```
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
        op_size: 8192
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}
```

results

```
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
  precond_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
  - 1
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
```

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

```
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 1048576
1Mrandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 1048576
1Mseqread:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 20
  jobname: seqread
  mode: read
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
```

```
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 1048576
    1Mseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 10
      - 12
      - 14
      - 16
      - 20
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 1048576
    256krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 262144
    256krandomwrite:
```

```
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 262144
  32krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    jobname: randread
    mode: randread
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 32768
  32krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
```

```
            - 16
            - 24
            - 32
            - 64
            - 128
            jobname: randwrite
            mode: randwrite
            numjobs:
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            op_size: 32768
        4krandomread:
          iodepth:
            - 4
            - 8
            - 12
            - 16
            - 32
            - 48
            - 64
            - 128
            - 256
            - 384
            jobname: randread
            mode: randread
            numjobs:
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            op_size: 4096
        4krandomwrite:
          iodepth:
            - 1
            - 2
            - 3
            - 4
            - 5
            - 8
            - 16
            - 24
            - 32
            - 64
            - 128
            jobname: randwrite
            mode: randwrite
            numjobs:
```

```
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 4096
    512krandomread:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 16
        - 24
        - 32
        - 40
        - 48
        - 64
      jobname: randread
      mode: randread
      numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 524288
    512krandomwrite:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 16
        - 24
        - 32
        - 40
        - 48
        - 64
      jobname: randwrite
      mode: randwrite
      numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
```

```
      - 1
      - 1
      - 1
      - 1
      op_size: 524288
    512kseqread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 524288
    512kseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 524288
    64k3070:
      iodepth:
```

```
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 65536
    rwmixread: 30
  64k7030:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 65536
    rwmixread: 70
  64krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
```

```
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    jobname: randread
    mode: randread
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 65536
  64krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    op_size: 65536
  64kseqread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
    jobname: read
```

```
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 65536
    64kseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: write
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 65536
    8krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      jobname: randread
      mode: randread
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
```

```
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    8krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    precondition:
      iodepth:
      - 4
      jobname: precond1rw
      mode: randwrite
      monitor: false
      numjobs:
      - 1
      op_size: 65536
      precond: true
    seq16kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
```

```
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
            - 1
          op_size: 16384
        seq16kwrite:
          iodepth:
          - 2
          - 4
          - 8
          - 12
          - 16
          - 24
          - 32
          - 64
          - 96
          - 128
          - 192
          jobname: seqwrite
          mode: write
          numjobs:
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          op_size: 16384
        seq256kread:
          iodepth:
          - 1
          - 2
          - 3
          - 4
          - 5
          - 8
          - 16
          - 24
          - 32
          - 48
          - 64
          jobname: seqread
          mode: read
          numjobs:
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
          - 1
```

```
      - 1
      op_size: 262144
    seq256kwrite:
     iodepth:
     - 1
     - 2
     - 3
     - 5
     - 8
     - 12
     - 16
     - 24
     - 32
     - 48
     - 64
     jobname: seqwrite
     mode: write
     numjobs:
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
      op_size: 262144
    seq32kread:
     iodepth:
     - 2
     - 4
     - 8
     - 12
     - 16
     - 24
     - 32
     - 64
     - 96
     - 128
     - 192
     jobname: seqread
     mode: read
     numjobs:
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
     - 1
      op_size: 32768
    seq32kwrite:
     iodepth:
     - 1
     - 2
     - 3
```

```
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 32768
    seq4kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 4096
    seq4kwrite:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
```

```
      - 192
      - 256
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 4096
    seq8kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 8192
    seq8kwrite:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 256
      jobname: seqwrite
      mode: write
      numjobs:
```

```
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 8192
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}
```