Comparitive Performance Report for cbt-17thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-7thJan-alexls13-4k

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Comparison summary for cbt-17thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-7thJan-alexls13-4k

Sequential Read	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_7thJan_alexls13_4k
4K	25339 IOps@7.6ms	24109 IOps@8.0ms	24765 IOps@7.7ms
8K	17196 IOps@11.2ms	16069 IOps@11.9ms	16476 IOps@11.6ms
16K	10428 IOps@18.4ms	10917 IOps@17.6ms	11084 IOps@17.3ms
32K	11409 IOps@16.8ms	10925 IOps@17.6ms	11215 IOps@17.1ms
64K	977 MB/s@17.2ms	970 MB/s@17.3ms	971 MB/s@17.3ms
256K	1495 MB/s@11.2ms	1482 MB/s@11.3ms	1474 MB/s@11.4ms
512K	1501 MB/s@11.2ms	1502 MB/s@11.2ms	1494 MB/s@11.2ms
1024K	1533 MB/s@13.7ms	1527 MB/s@13.7ms	1518 MB/s@13.8ms

Sequential Write	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_7thJan_alexls13_4k
4K	2024 IOps@126.4ms	3764 IOps@68.0ms	822 IOps@310.7ms
8K	2019 IOps@126.6ms	3599 IOps@71.1ms	1600 IOps@2.5ms
16K	5117 IOps@37.5ms	4895 IOps@39.2ms	4786 IOps@40.1ms
32K	3621 IOps@35.3ms	5601 IOps@22.8ms	5703 IOps@22.4ms
64K	196 MB/s@42.8ms	200 MB/s@42.0ms	189 MB/s@44.3ms
256K	400 MB/s@31.3ms	517 MB/s@8.0ms	467 MB/s@8.9ms
512K	439 MB/s@28.5ms	432 MB/s@29.0ms	417 MB/s@7.5ms
1024K	472 MB/s@26.3ms	505 MB/s@28.7ms	524 MB/s@31.7ms

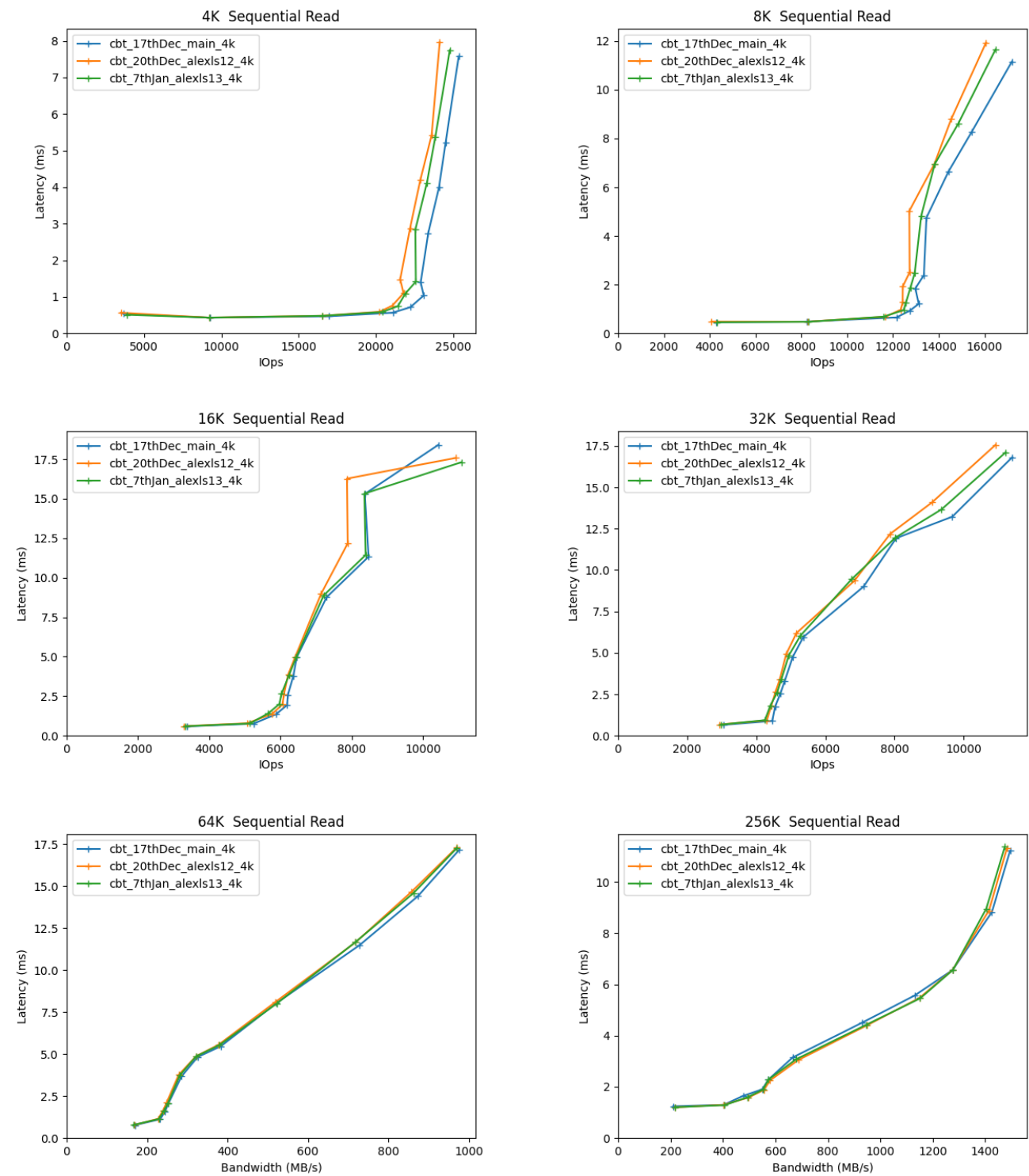| Random Read	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_7thJan_alexls13_4k
4K	95501 IOps@4.0ms	94377 IOps@4.1ms	92303 IOps@4.2ms
8K	60546 IOps@6.3ms	59367 IOps@6.5ms	56565 IOps@6.8ms
16K	34618 IOps@11.1ms	33414 IOps@7.7ms	31265 IOps@8.2ms
32K	31326 IOps@4.1ms	30473 IOps@4.2ms	29166 IOps@8.8ms
64K	1642 MB/s@10.2ms	1623 MB/s@10.3ms	1607 MB/s@10.4ms
256K	1680 MB/s@20.0ms	1694 MB/s@19.8ms	1697 MB/s@19.8ms
512K	1698 MB/s@19.8ms	1699 MB/s@19.8ms	1701 MB/s@19.7ms
1024K	1709 MB/s@19.6ms	1707 MB/s@19.7ms	1709 MB/s@19.6ms

Random Write	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_7thJan_alexls13_4k
4K	2897 IOps@44.2ms	5072 IOps@25.2ms	5193 IOps@24.6ms
8K	2791 IOps@45.9ms	4734 IOps@27.0ms	5302 IOps@24.1ms
16K	5726 IOps@22.3ms	4757 IOps@26.9ms	4416 IOps@29.0ms
32K	3245 IOps@39.4ms	3674 IOps@34.8ms	3621 IOps@35.3ms
64K	193 MB/s@21.7ms	178 MB/s@23.6ms	185 MB/s@22.7ms
256K	335 MB/s@100.2ms	387 MB/s@21.6ms	374 MB/s@44.7ms

Comparison summary for cbt-17thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-7thJan-alexls13-4k

Random Write	cbt__17thDec__main__4k	cbt__20thDec__alexls12__4k	cbt__7thJan__alexls13__4k
512K	464 MB/s@72.2ms	472 MB/s@70.9ms	484 MB/s@43.2ms
1024K	472 MB/s@35.2ms	517 MB/s@32.1ms	515 MB/s@24.0ms

Random Read/Write	cbt__17thDec__main__4k	cbt__20thDec__alexls12__4k	cbt__7thJan__alexls13__4k
16K_70/30	6191 IOps@20.7ms	6580 IOps@9.7ms	6413 IOps@19.9ms
64K_70/30	288 MB/s@29.2ms	275 MB/s@30.5ms	277 MB/s@30.3ms
64K_30/70	166 MB/s@12.6ms	191 MB/s@43.8ms	198 MB/s@21.2ms

Response Curves

Sequential Read

4K Sequential Read

8K Sequential Read

16K Sequential Read

32K Sequential Read

64K Sequential Read

256K Sequential Read

512K Sequential Read

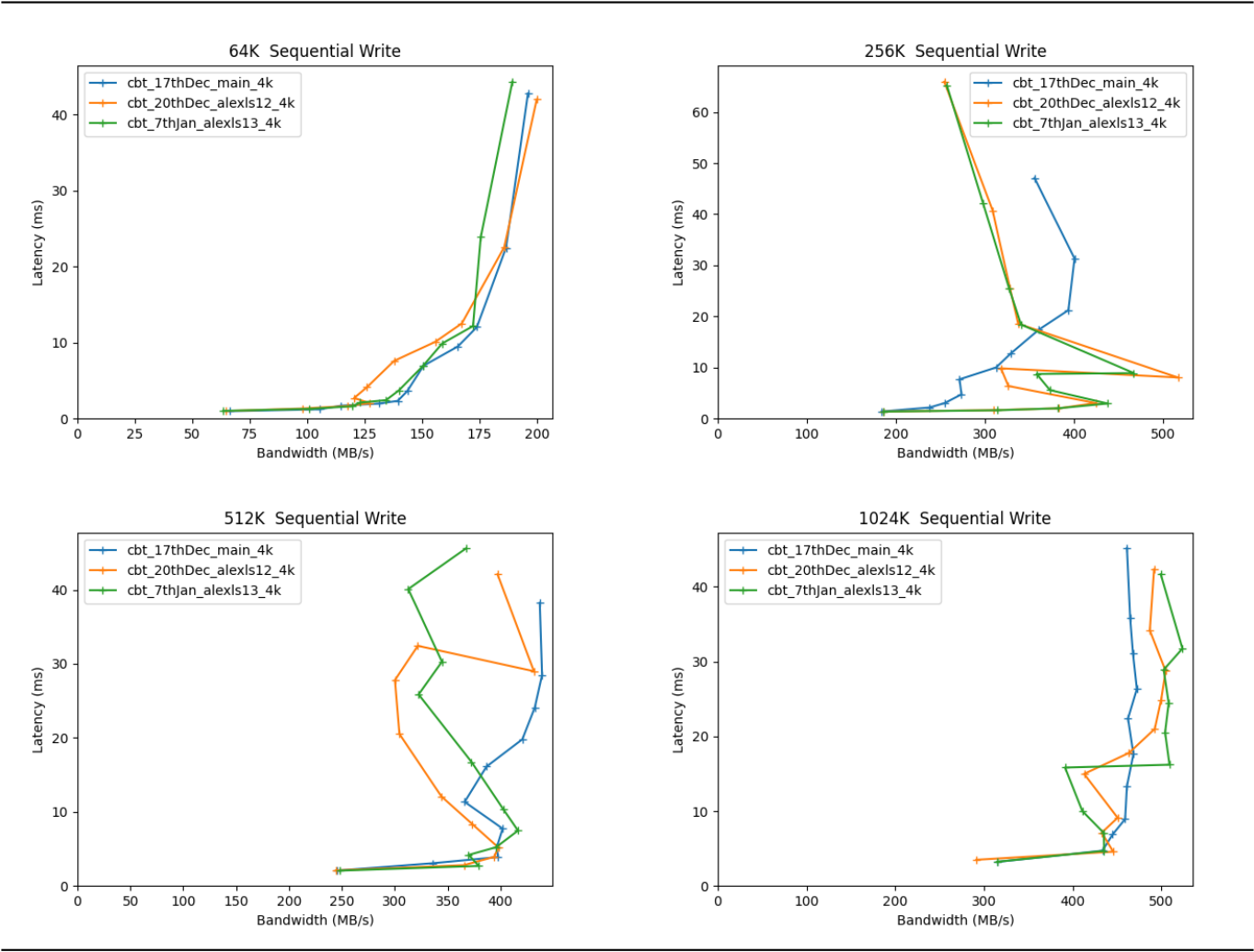1024K Sequential Read

Sequential Write

4K Sequential Write

8K Sequential Write

16K Sequential Write

32K Sequential Write

64K Sequential Write

256K Sequential Write

512K Sequential Write
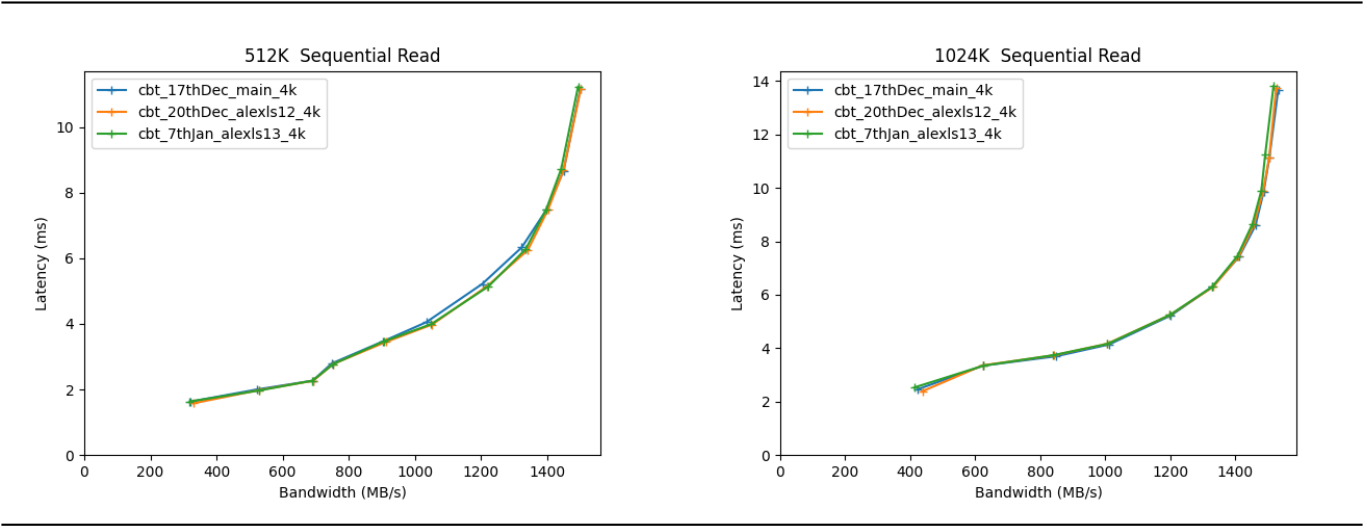
1024K Sequential Write

Random Read
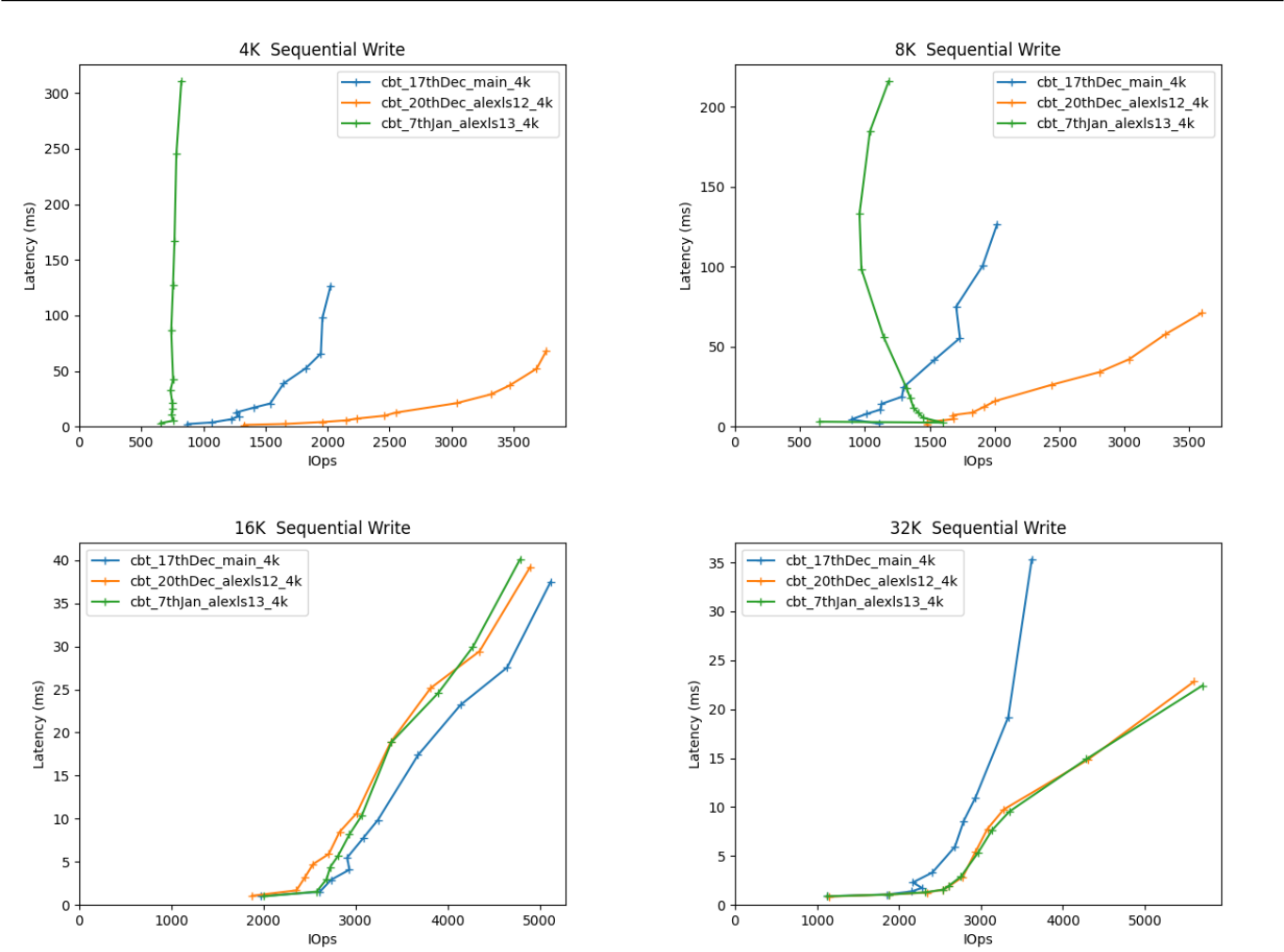
4K Random Read
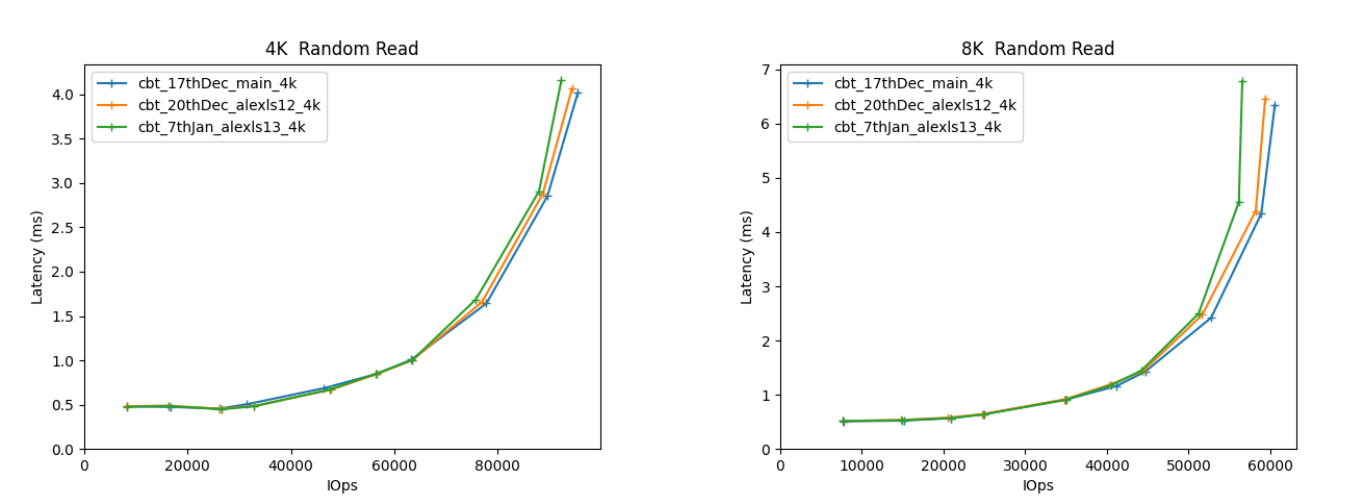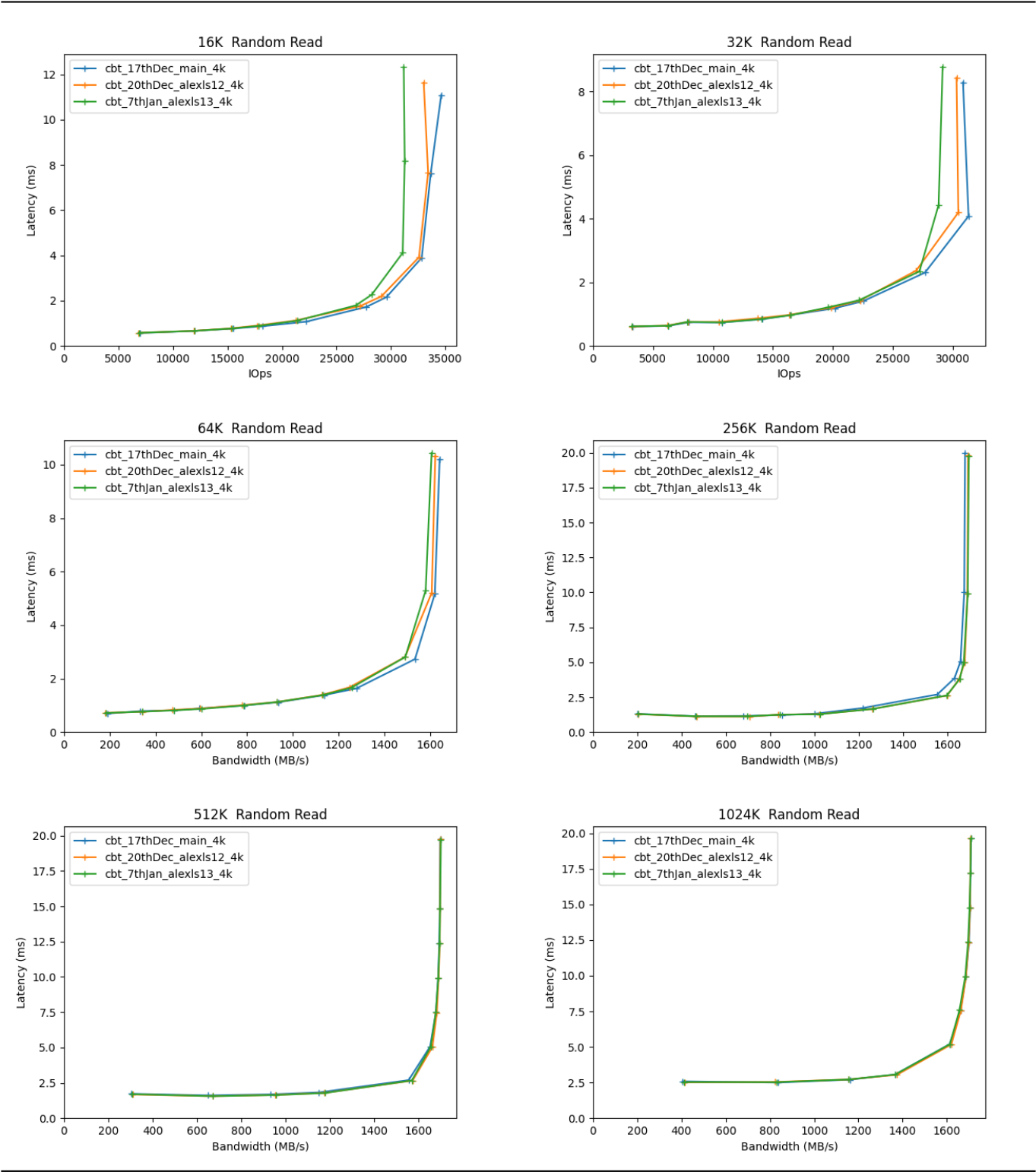
8K Random Read

Random Write
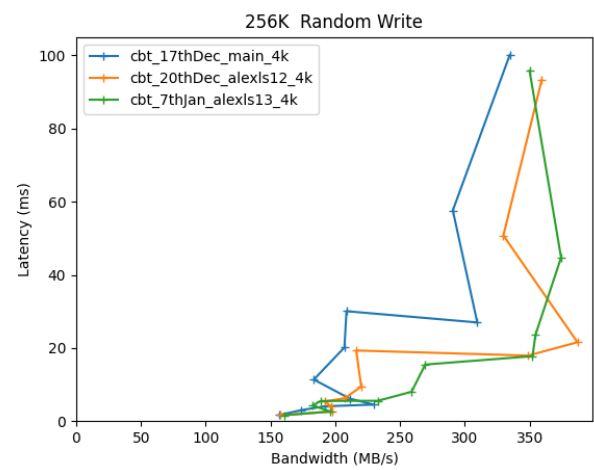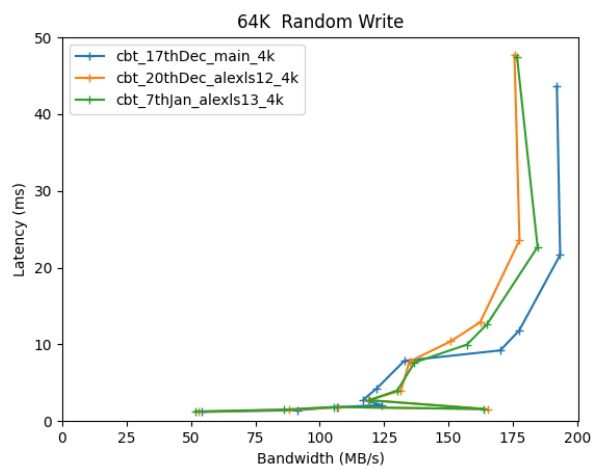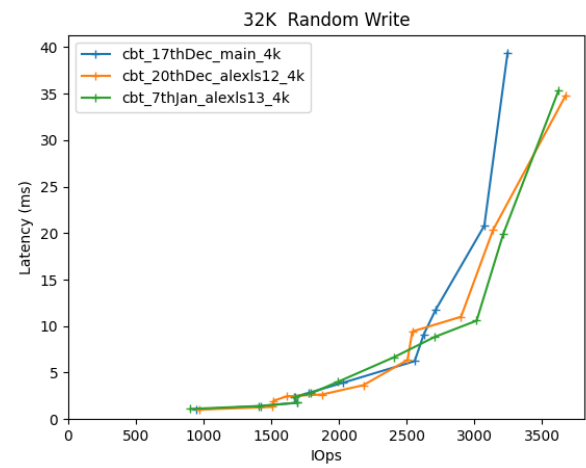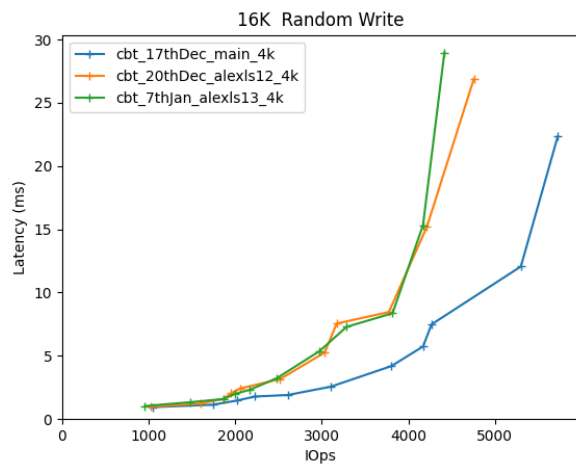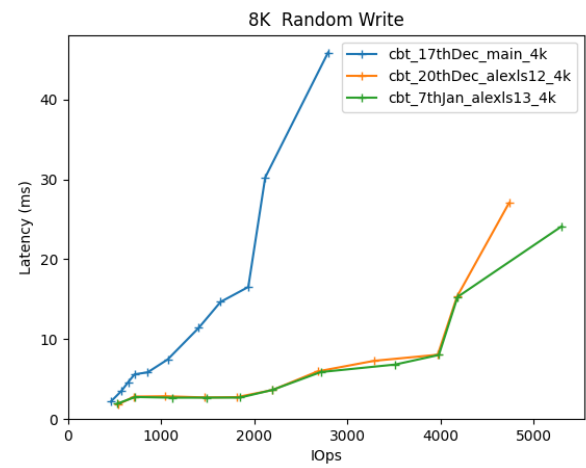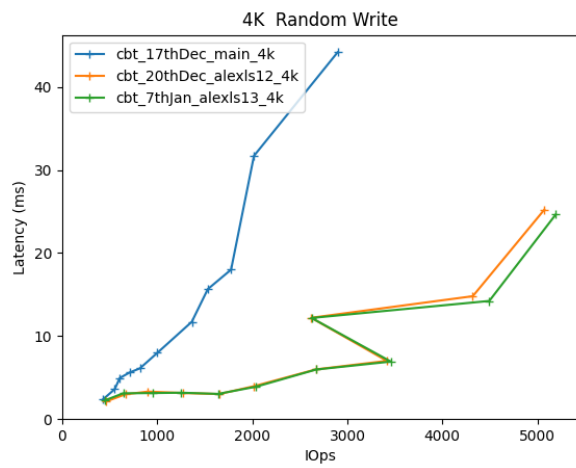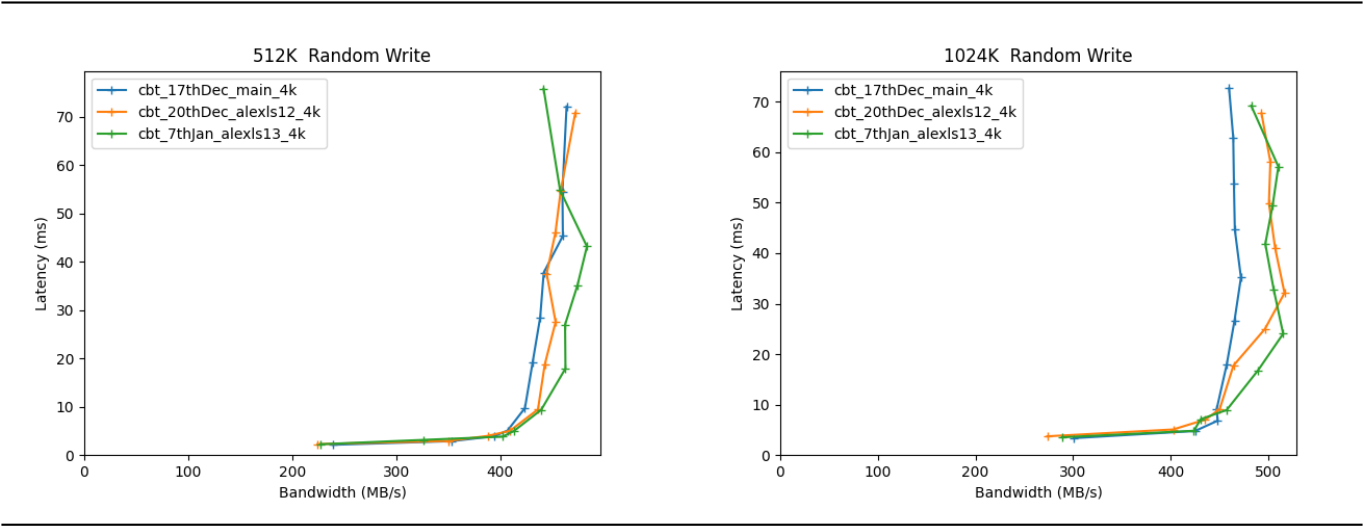
Random Read/Write
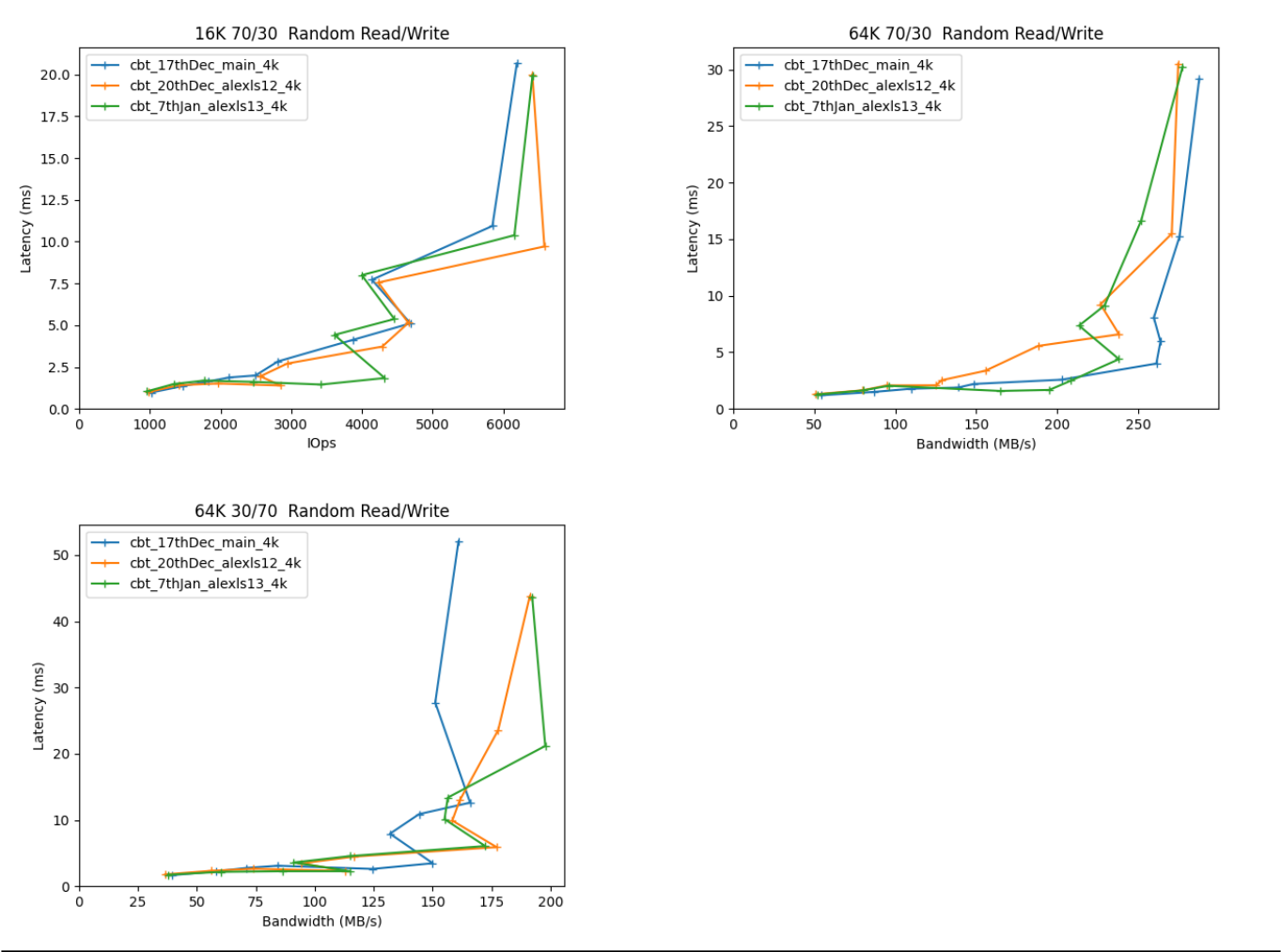
Configuration yaml files

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
```

```
        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}
```