Comparitive Performance Report for cbt-17thDec-main-4k vs cbt-30thJan-alexls19-econ-4k-1vol vs cbt-9thJan-alexls14-4k

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Comparison summary for cbt-17thDec-main-4k vs cbt-30thJan-alexls19-econ-4k-1vol vs cbt-9thJan-alexls14-4k

Sequential Read	cbt_17thDec_main_4k	cbt_30thJan_alexls19_econ_4k_1vol	%change	cbt_9thJan_alexls14_4k	%change
4K	25339@7.6ms	23842@8.0	-6%	24645@7.8	-3%
8K	17196@11.2ms	16387@11.7	-5%	16376@11.7	-5%
16K	10428@18.4ms	10335@18.6	-1%	10620@18.1	2%
32K	11409@16.8ms	11432@16.8	0%	11335@16.9	-1%
64K	977@17.2ms	970@17.3	-1%	980@17.1	0%
256K	1495@11.2ms	1479@11.3	-1%	1483@11.3	-1%
512K	1501@11.2ms	1500@11.2	-0%	1499@11.2	-0%
1024K	1533@13.7ms	1529@13.7	-0%	1522@13.8	-1%

Sequential Write	cbt_17thDec_main_4k	cbt_30thJan_alexls19_econ_4k_1vol	%change	cbt_9thJan_alexls14_4k	%change
4K	2024@126.4ms	3847@66.5	90%	3949@64.8	95%
8K	2019@126.6ms	3722@68.7	84%	3698@69.2	83%
16K	5117@37.5ms	4862@39.5	-5%	4987@38.5	-3%
32K	3621@35.3ms	5707@22.4	58%	5759@22.2	59%
64K	196@42.8ms	184@45.5	-6%	189@44.5	-4%
256K	400@31.3ms	487@4.3	22%	503@6.2	26%
512K	439@28.5ms	410@7.6	-7%	419@7.4	-5%
1024K	472@26.3ms	501@20.6	6%	498@41.8	6%

Random Read	cbt_17thDec_main_4k	cbt_30thJan_alexls19_econ_4k_1vol	%change	cbt_9thJan_alexls14_4k	%change
4K	95501@4.0ms	93436@4.1	-2%	95363@4.0	-0%
8K	60546@6.3ms	57270@6.7	-5%	60957@6.3	1%
16K	34618@11.1ms	32522@11.8	-6%	34589@11.1	-0%
32K	31326@4.1ms	29930@4.3	-4%	29325@8.7	-6%
64K	1642@10.2ms	1638@10.2	-0%	1605@5.2	-2%
256K	1680@20.0ms	1705@19.7	1%	1699@19.8	1%
512K	1698@19.8ms	1702@19.7	0%	1701@19.7	0%
1024K	1709@19.6ms	1711@19.6	0%	1707@19.7	-0%

Random Write	cbt_17thDec_main_4k	cbt_30thJan_alexls19_econ_4k_1vol	%change	cbt_9thJan_alexls14_4k	%change
4K	2897@44.2ms	4896@26.1	69%	5024@25.5	73%
8K	2791@45.9ms	4709@27.2	69%	4831@26.5	73%
16K	5726@22.3ms	4640@27.6	-19%	4829@26.5	-16%
32K	3245@39.4ms	3520@36.3	8%	3592@35.6	11%
64K	193@21.7ms	182@23.0	-6%	186@22.6	-4%
256K	335@100.2ms	343@98.0	2%	353@95.0	5%

Comparison summary for cbt-17thDec-main-4k vs cbt-30thJan-alexls19-econ-4k-1vol vs cbt-9thJan-alexls14-4k

Random Write	cbt__17thDec__main_4k	cbt__30thJan__alexls19__econ__4k-1vol	%change	cbt_9thJan__alexls14__4k	%change
512K	464@72.2ms	470@71.2	1%	478@70.1	3%
1024K	472@35.2ms	501@24.8	6%	506@32.9	7%

Random Read/Write	cbt__17thDec__main_4k	cbt__30thJan__alexls19__econ__4k-1vol	%change	cbt_9thJan__alexls14__4k	%change
16K__70/30	6191@20.7ms	6475@19.8	5%	7351@17.4	19%
64K__70/30	288@29.2ms	272@30.9	-6%	278@30.2	-3%
64K__30/70	166@12.6ms	202@7.8	22%	209@20.0	26%

Response Curves

Sequential Read

512K Sequential Read

1024K Sequential Read

Sequential Write

4K Sequential Write

8K Sequential Write
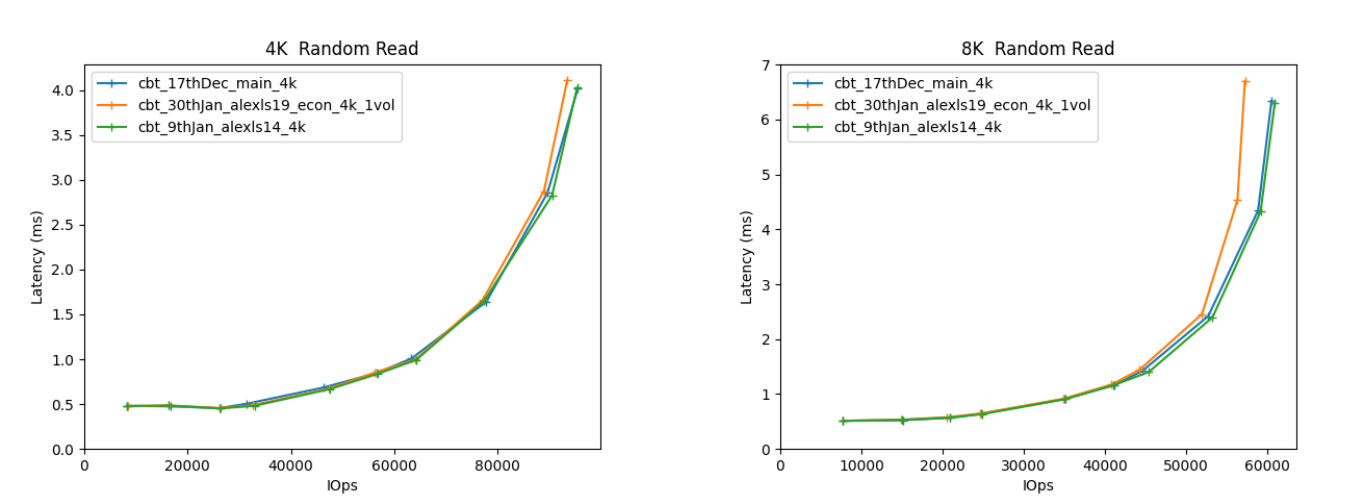

16K Sequential Write
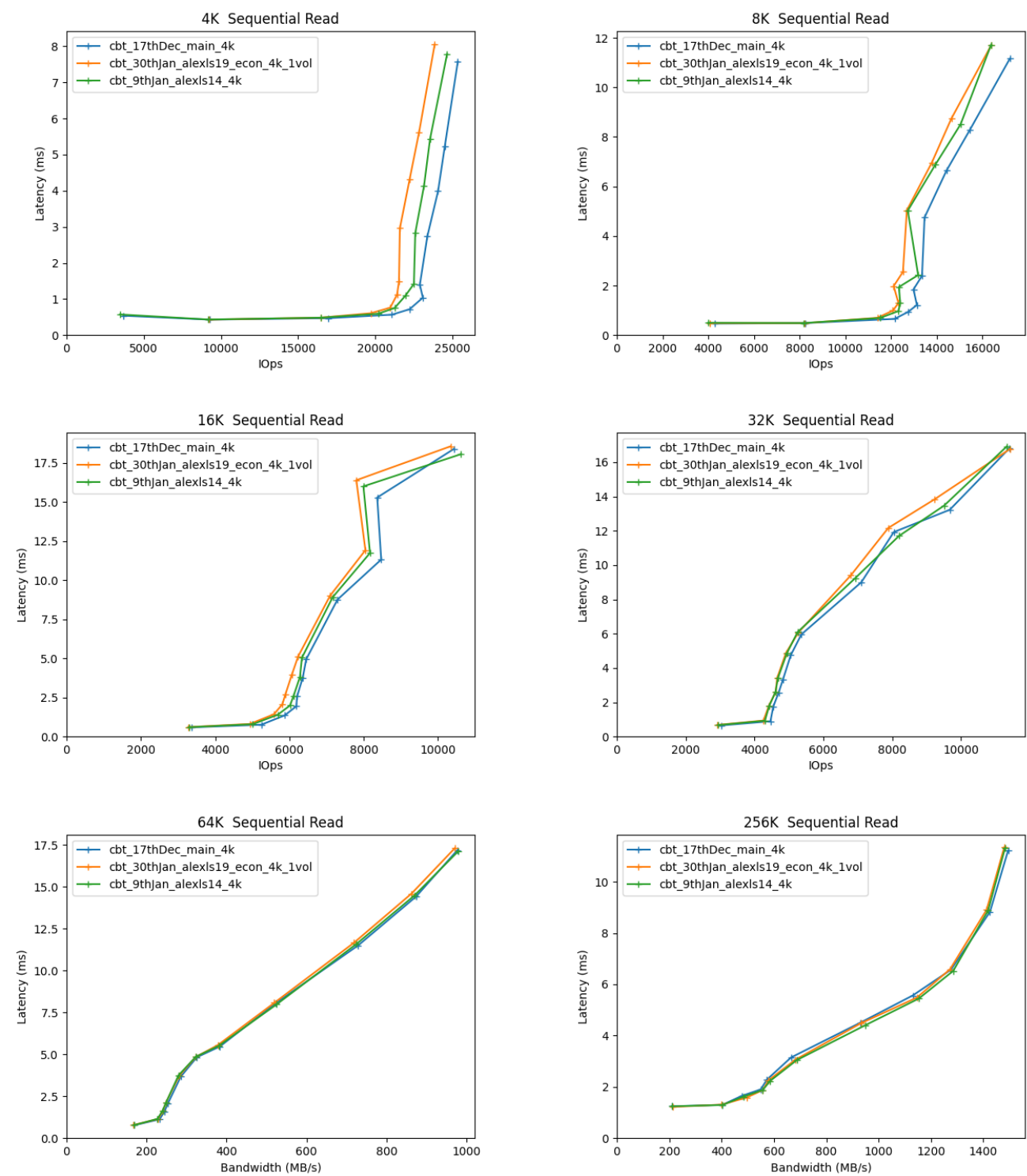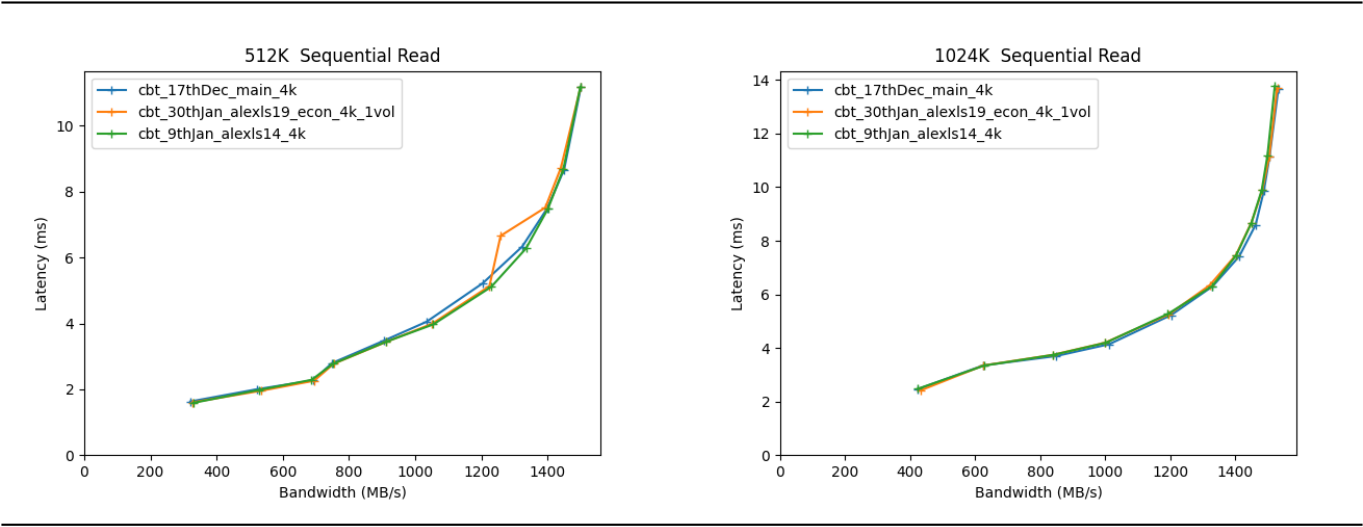
32K Sequential Write
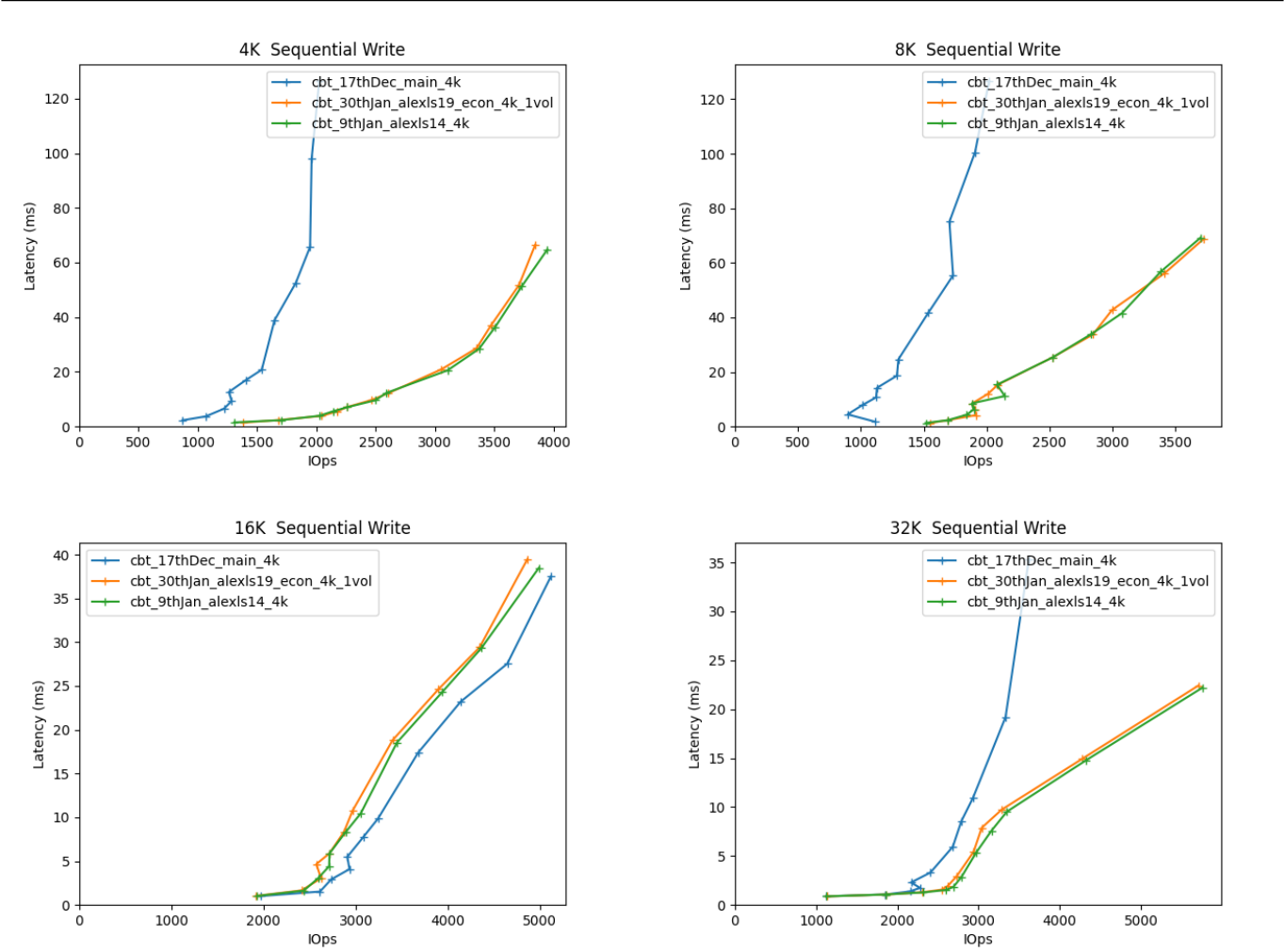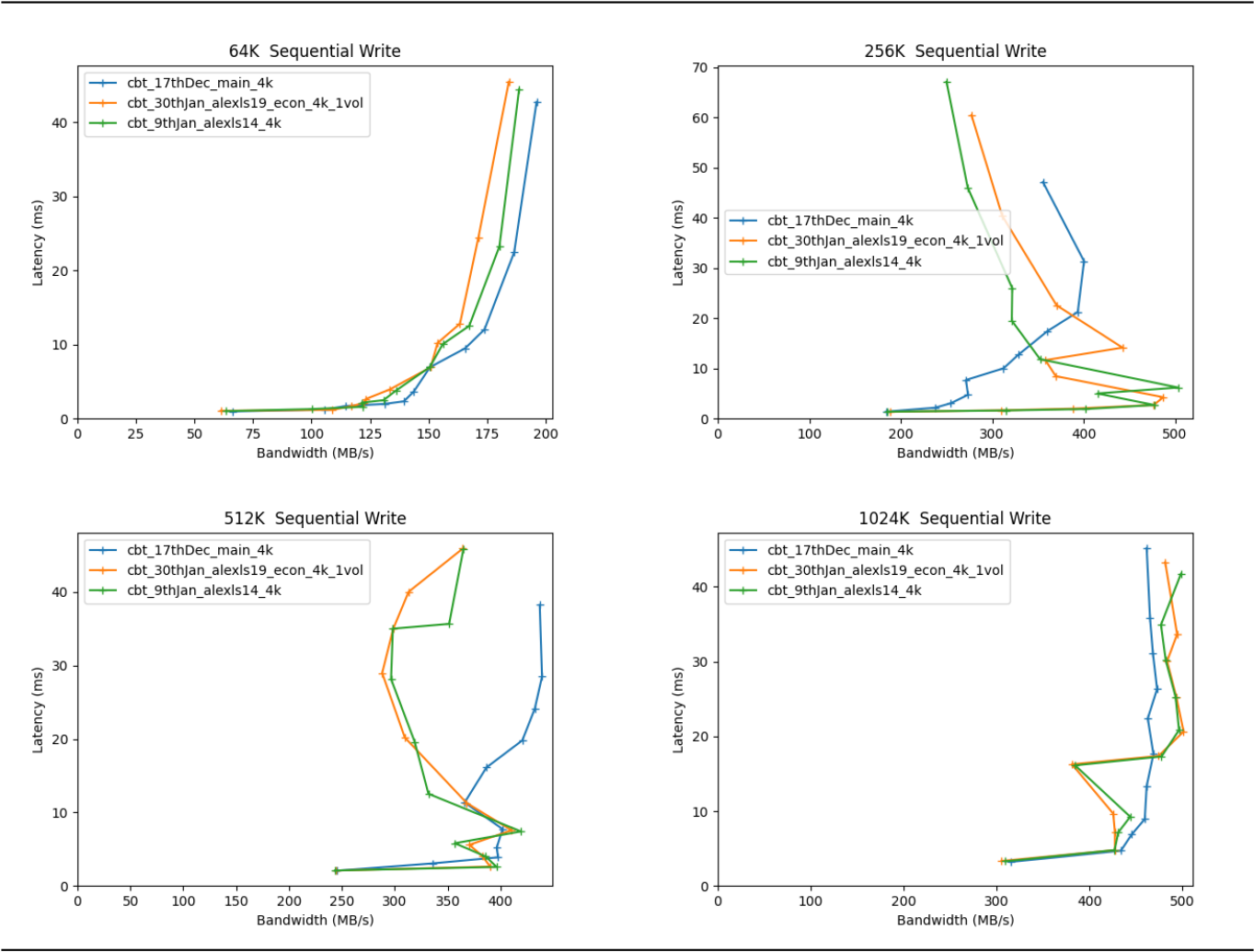
Random Read

Random Write

4K Random Write

8K Random Write

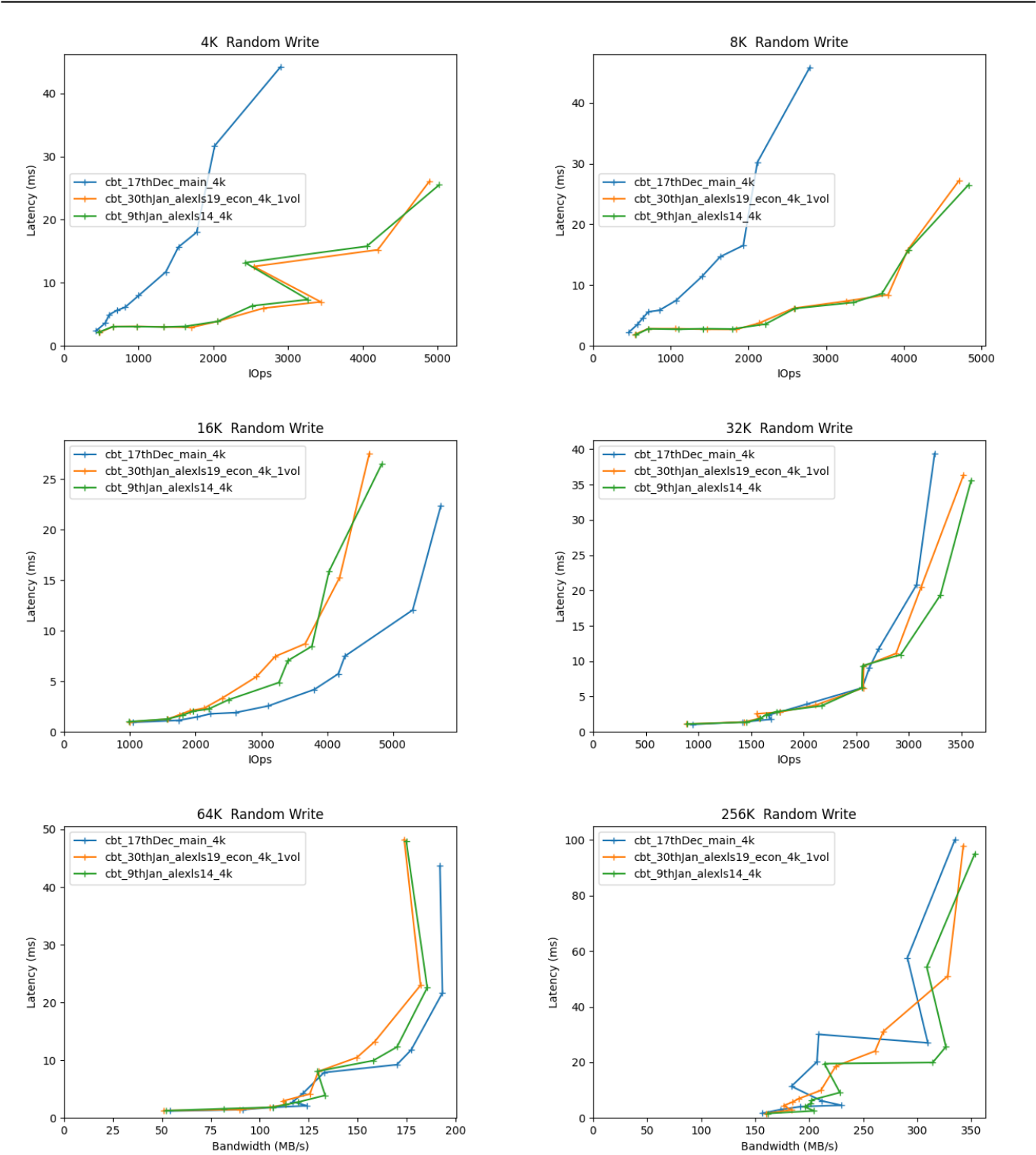16K Random Write

32K Random Write

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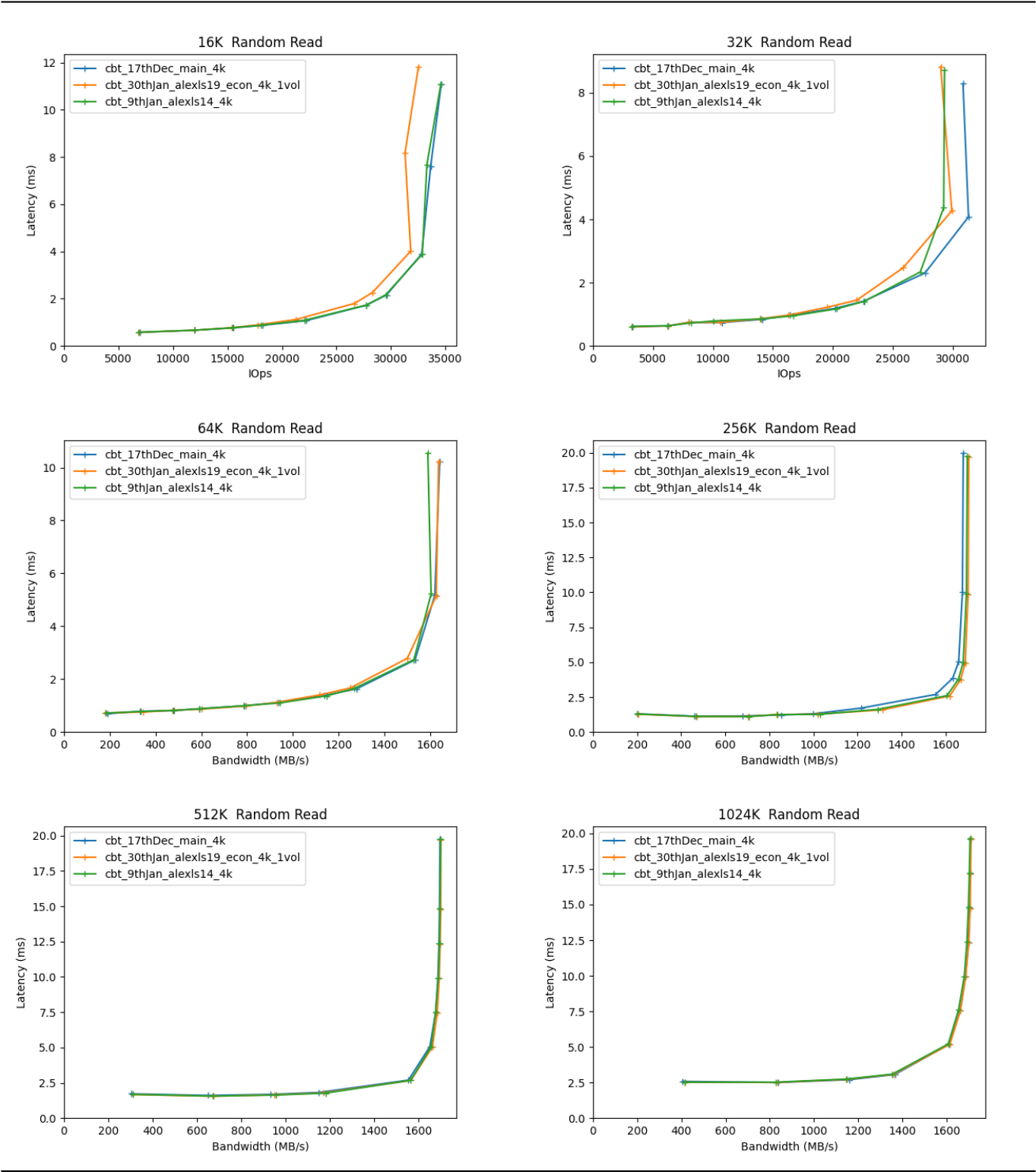
256K Random Write
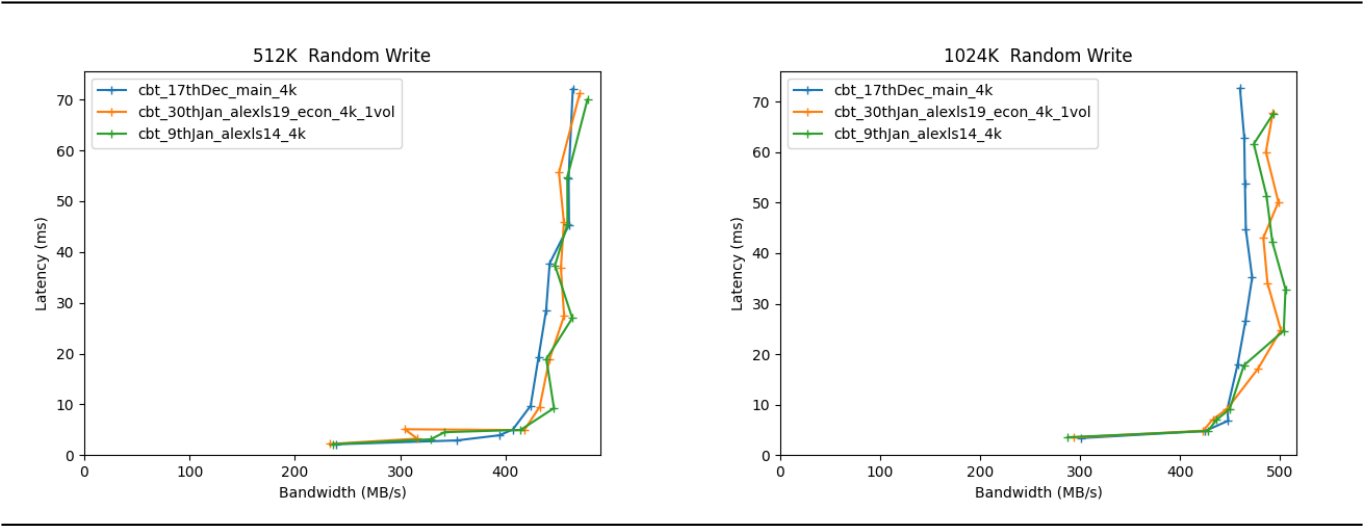
Random Read/Write
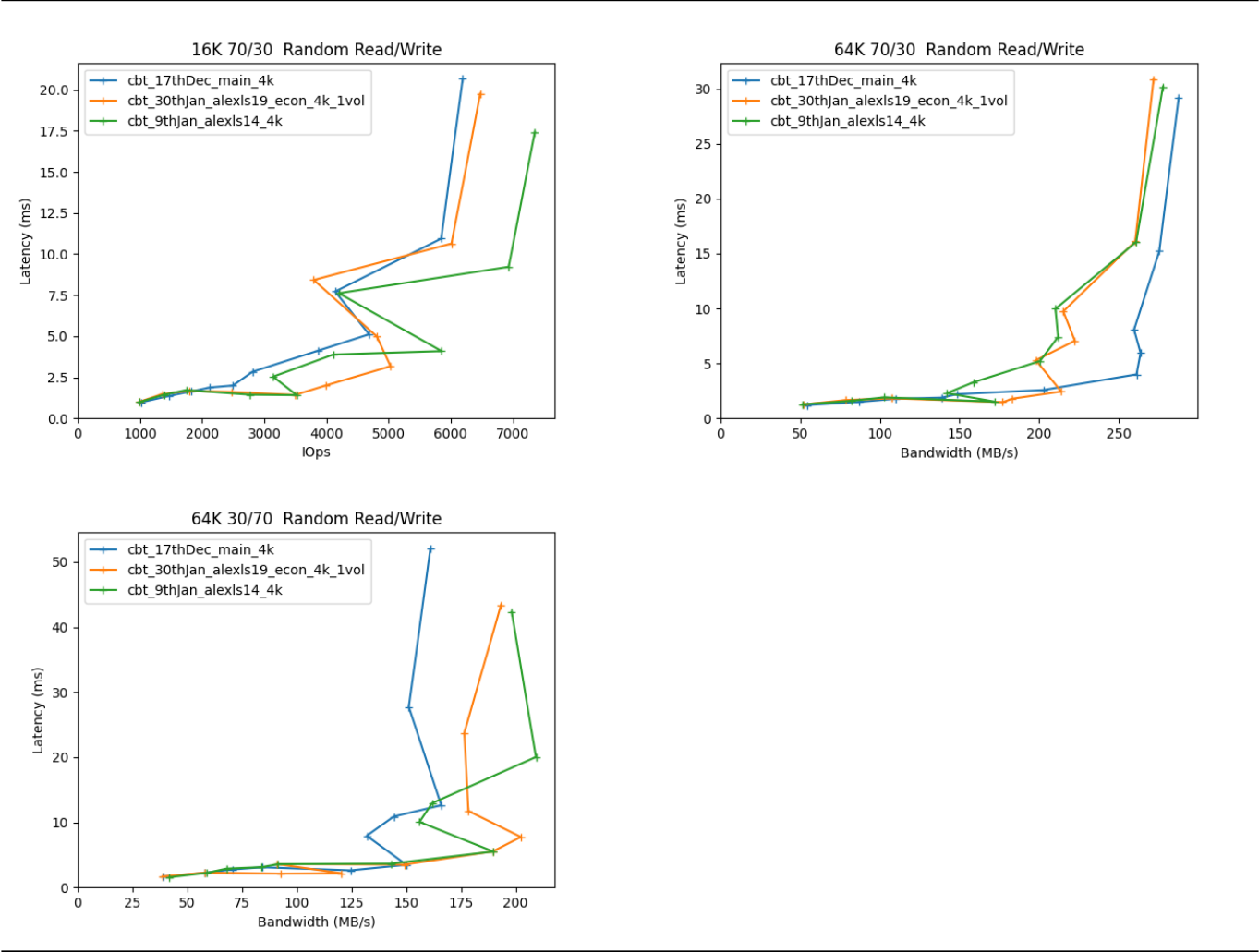
Configuration yaml files

Only yaml files that differ by more than 20 lines from the yaml file for the baseline directory will be added here in addition to the baseline yaml

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
```

```yaml
    - 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}

  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
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
```

```
16krandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 16384
1Mrandomread:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 1048576
1Mrandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 1048576
1Mseqread:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 6
  - 8
  - 10
```

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

```
    32krandomread:
      iodepth:
      - 2
      - 4
      - 6
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 32768
    32krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 32768
    4krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 4096
    4krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
```

```
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 4096
    512krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 40
      - 48
      - 64
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 524288
    512krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 40
      - 48
      - 64
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 524288
    512kseqread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 524288
    512kseqwrite:
```

```
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 524288
  64k3070:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randmix
    mode: randrw
    numjobs:
    - 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
    op_size: 65536
    rwmixread: 70
  64krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
```

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

```
    op_size: 65536
8krandomread:
  iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 8192
8krandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 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
```

```
    op_size: 16384
  seq16kwrite:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 16384
  seq256kread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 262144
  seq256kwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 5
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 262144
  seq32kread:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
```

```
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 32768
    seq32kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 32768
    seq4kread:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 4096
    seq4kwrite:
      iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 256
      jobname: seqwrite
      mode: write
      numjobs:
```

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

  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
        op_size: 16384
        rwmixread: 70
      16krandomread:
        iodepth:
        - 4
        - 8
        - 12
        - 16
        - 24
        - 48
```

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

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

```
      - 24
      - 32
      - 64
      - 128
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 262144
  32krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 32768
  32krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 32768
  4krandomread:
    iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 4096
  4krandomwrite:
```

```
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 4096
  512krandomread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 524288
  512krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 524288
  512kseqread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
```

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

```
      rwmixread: 70
  64krandomread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 65536
  64krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 65536
  64kseqread:
    iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
    jobname: read
    mode: read
    numjobs:
    - 1
    op_size: 65536
  64kseqwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
```

```
        - 16
        - 24
        - 32
        - 64
        - 128
        jobname: write
        mode: write
        numjobs:
        - 1
        op_size: 65536
    8krandomread:
        iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 8192
    8krandomwrite:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 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
      op_size: 16384
    seq16kwrite:
      iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
      jobname: seqwrite
      mode: write
      numjobs:
        - 1
      op_size: 16384
    seq256kread:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 48
        - 64
      jobname: seqread
      mode: read
      numjobs:
        - 1
      op_size: 262144
    seq256kwrite:
      iodepth:
        - 1
        - 2
        - 3
        - 5
        - 8
        - 12
        - 16
        - 24
        - 32
        - 48
        - 64
      jobname: seqwrite
      mode: write
      numjobs:
        - 1
```

```
    op_size: 262144
  seq32kread:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 32768
  seq32kwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 32768
  seq4kread:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 4096
  seq4kwrite:
    iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
```

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