Comparitive Performance Report for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt

Table of contents

Comparison summary for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt

Sequential Read	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	%change throughput	%change latency
4K	39660 IOps@4.5ms	106341 IOps@1.1ms	168%	-76%
8K	36440 IOps@4.9ms	65926 IOps@1.8ms	81%	-63%
16K	31632 IOps@5.7ms	37932 IOps@3.2ms	20%	-44%
32K	25426 IOps@4.7ms	25584 IOps@4.7ms	1%	0%
64K	1508 MB/s@6.9ms	1222 MB/s@2.1ms	-19%	-70%
256K	3131 MB/s@3.3ms	3116 MB/s@3.4ms	-0%	3%
512K	3773 MB/s@2.5ms	3743 MB/s@2.5ms	-1%	0%
1024K	4032 MB/s@2.6ms	4006 MB/s@2.6ms	-1%	0%

Sequential Write	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	%change throughput	%change latency
4K	60783 IOps@10.5ms	60009 IOps@10.7ms	-1%	2%
8K	73313 IOps@10.9ms	74238 IOps@10.8ms	1%	-1%
16K	31663 IOps@10.1ms	32299 IOps@9.9ms	2%	-2%
32K	30857 IOps@15.5ms	35487 IOps@13.5ms	15%	-13%
64K	1346 MB/s@15.5ms	1320 MB/s@15.9ms	-2%	3%
256K	1830 MB/s@22.8ms	1812 MB/s@23.0ms	-1%	1%
512K	1911 MB/s@21.7ms	1838 MB/s@22.6ms	-4%	4%
1024K	2475 MB/s@41.9ms	2289 MB/s@45.3ms	-8%	8%

Random Read	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	%change throughput	%change latency
4K	24443 IOps@15.1ms	74779 IOps@3.2ms	206%	-79%
8K	23197 IOps@15.9ms	48127 IOps@5.0ms	107%	-69%
16K	23161 IOps@16.0ms	31063 IOps@7.7ms	34%	-52%
32K	21703 IOps@7.4ms	22222 IOps@7.2ms	2%	-3%
64K	1337 MB/s@7.8ms	1319 MB/s@7.9ms	-1%	1%
256K	2907 MB/s@7.2ms	2864 MB/s@7.3ms	-1%	1%
512K	4167 MB/s@3.5ms	4091 MB/s@3.6ms	-2%	3%
1024K	4377 MB/s@4.8ms	4349 MB/s@4.8ms	-1%	0%

Random Write	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	%change throughput	%change latency
4K	8127 IOps@59.0ms	7292 IOps@65.8ms	-10%	12%
8K	7923 IOps@60.6ms	7233 IOps@66.3ms	-9%	9%
16K	7438 IOps@43.0ms	6864 IOps@46.6ms	-8%	8%
32K	7212 IOps@44.3ms	6543 IOps@48.9ms	-9%	10%
64K	431 MB/s@36.4ms	392 MB/s@40.1ms	-9%	10%
256K	1250 MB/s@33.4ms	1108 MB/s@37.7ms	-11%	13%
512K	1730 MB/s@5.3ms	1695 MB/s@5.4ms	-2%	2%
1024K	2404 MB/s@7.4ms	2298 MB/s@7.8ms	-4%	5%

Comparison summary for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt

Random Read/Write	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal		%change throughput	%change latency
4K_70/30	15414 IOps@15.6ms	17869 IOps@4.5ms	16%	-71%
16K_70/30	14187 IOps@11.3ms	15120 IOps@10.6ms	7%	-6%
64K_70/30	825 MB/s@12.7ms	770 MB/s@13.6ms	-7%	7%
64K_30/70	517 MB/s@20.3ms	477 MB/s@21.9ms	-8%	8%

Random Read/Write	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal		%change throughput	%change latency
4K_70/30	15414 IOps@15.6ms	17869 IOps@4.5ms	16%	-71%
16K_70/30	14187 IOps@11.3ms	15120 IOps@10.6ms	7%	-6%
64K_70/30	825 MB/s@12.7ms	770 MB/s@13.6ms	-7%	7%
64K_30/70	517 MB/s@20.3ms	477 MB/s@21.9ms	-8%	8%

Response Curves

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
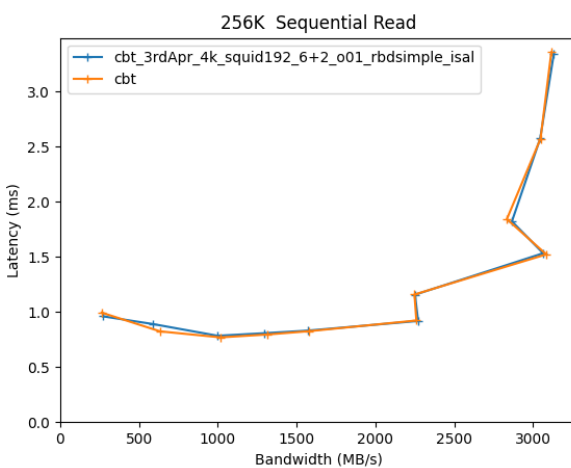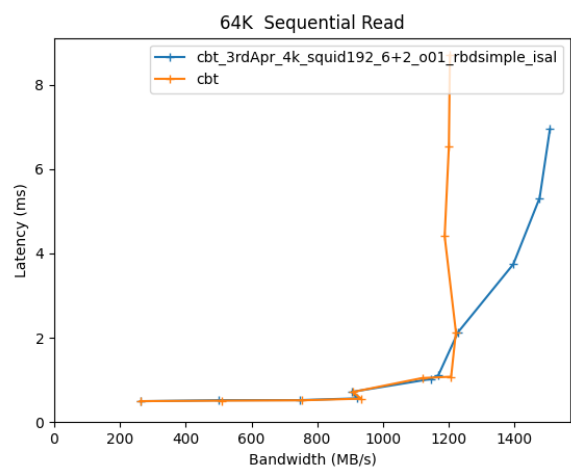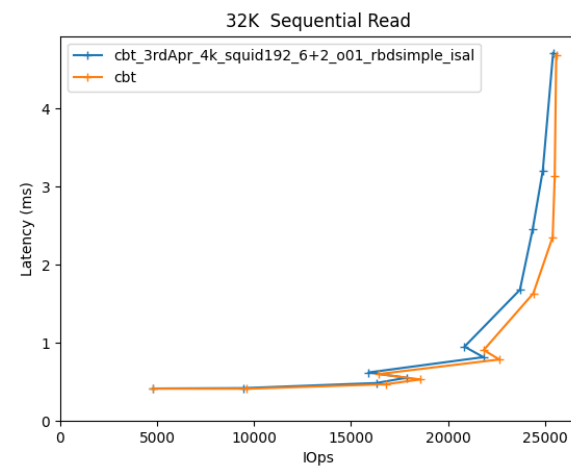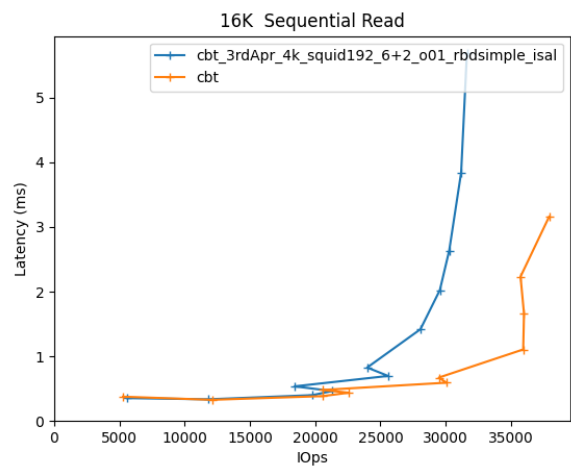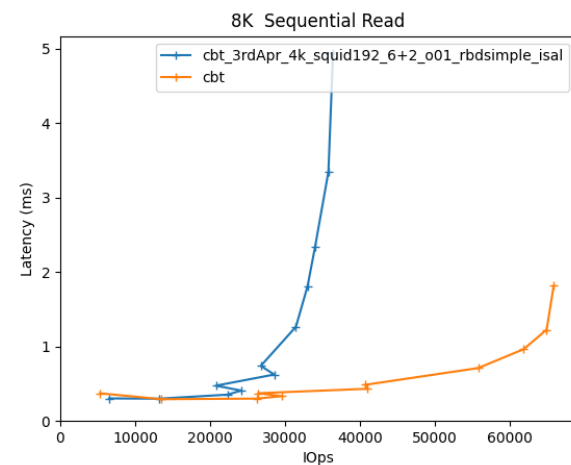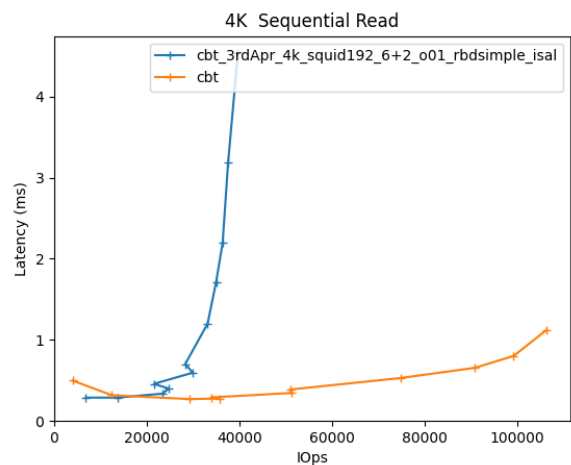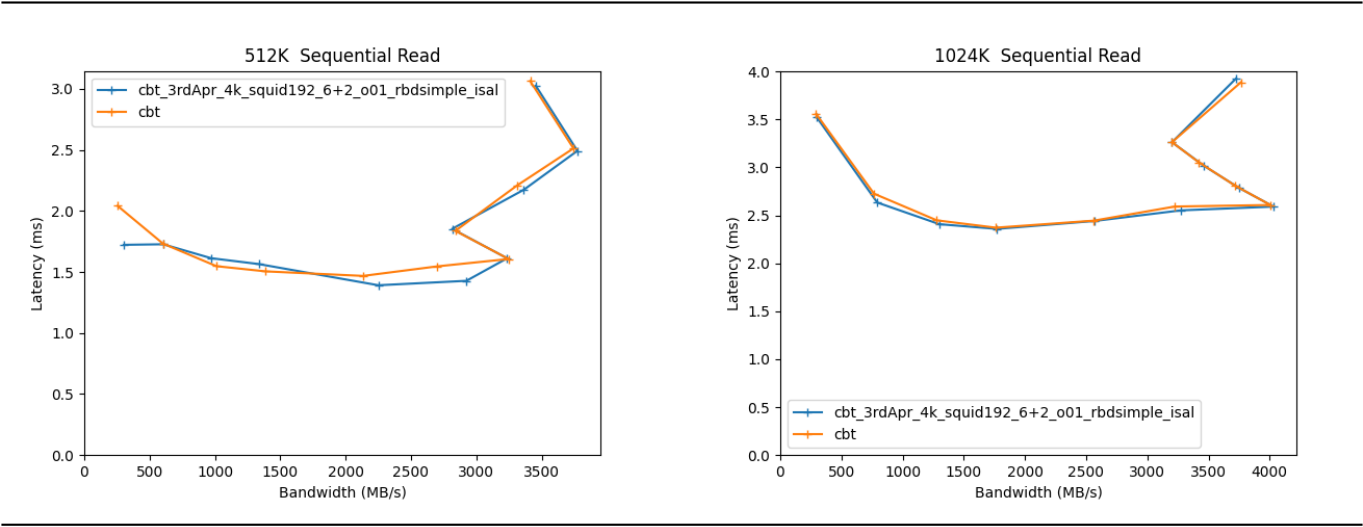
1024K Sequential Write

Random Read
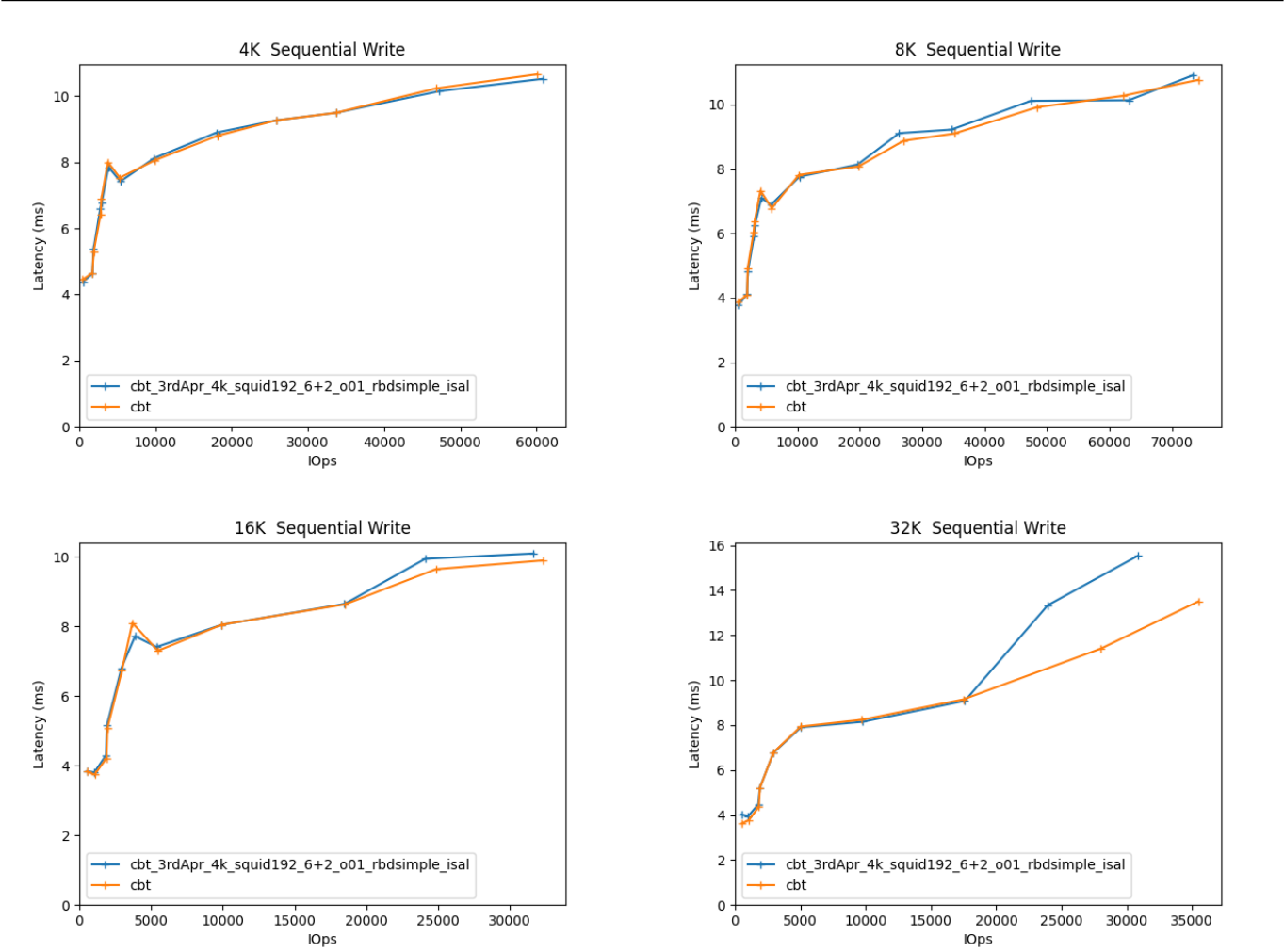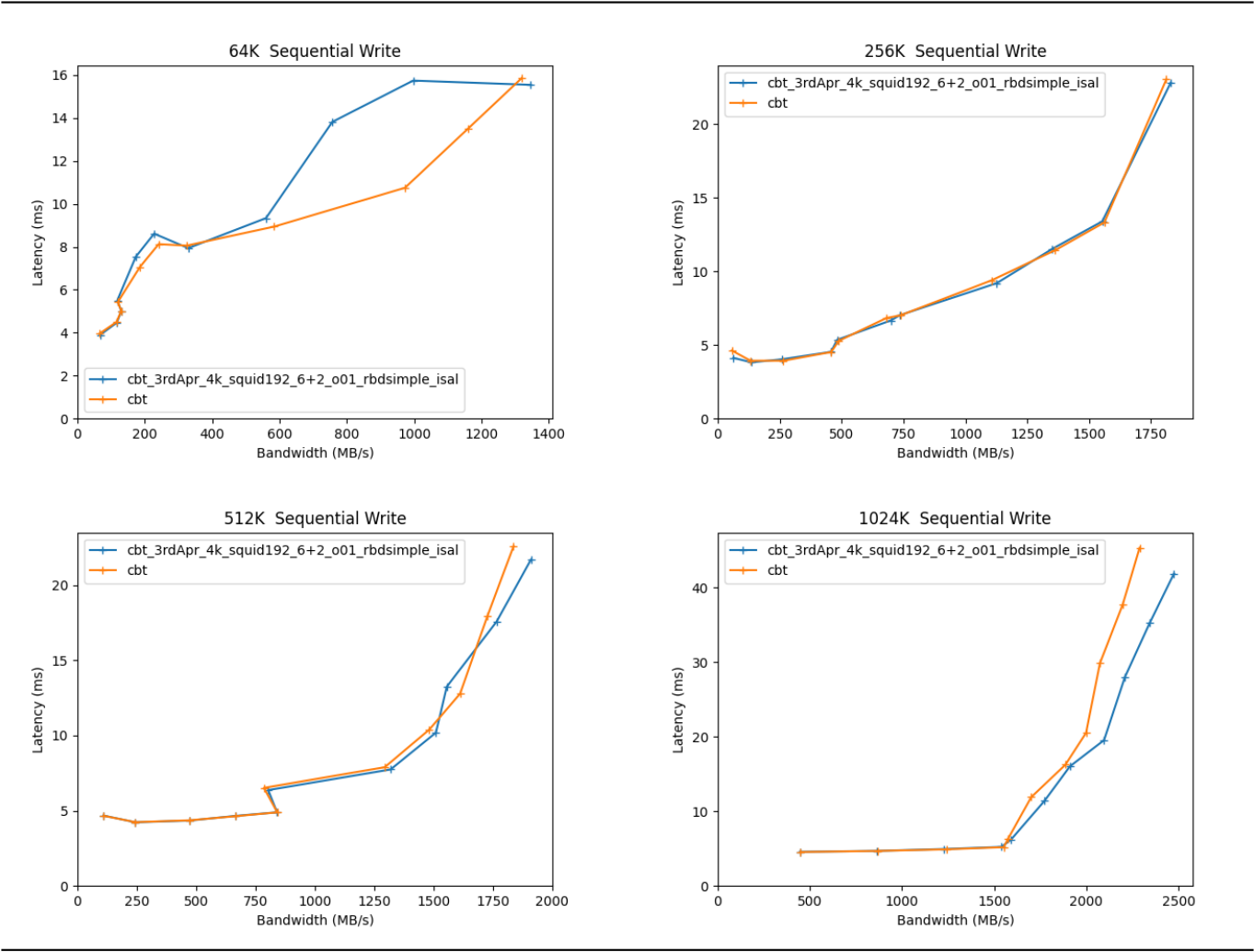
4K Random Read

8K Random Read

Random Write

4K Random Write

8K Random Write

16K Random Write

32K Random Write

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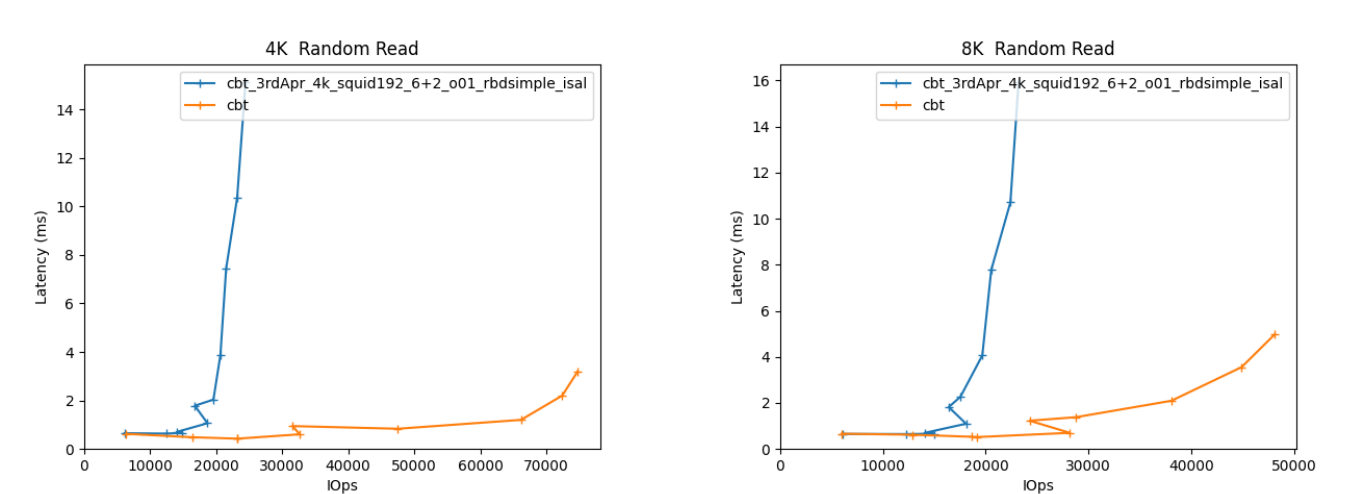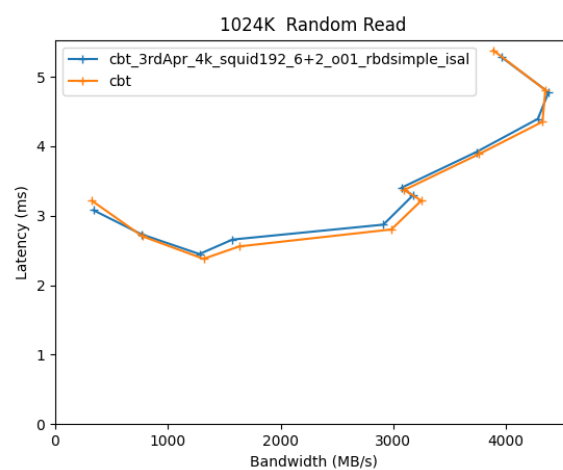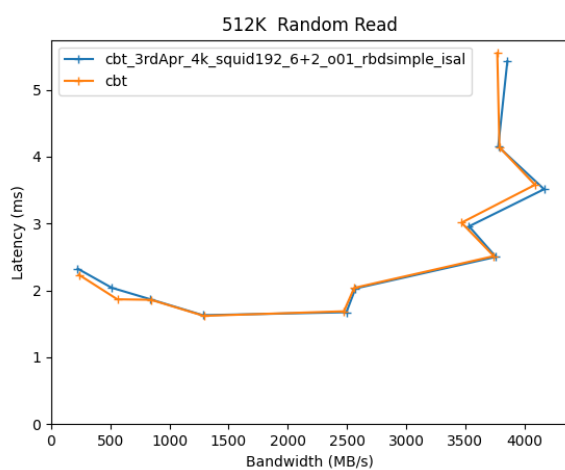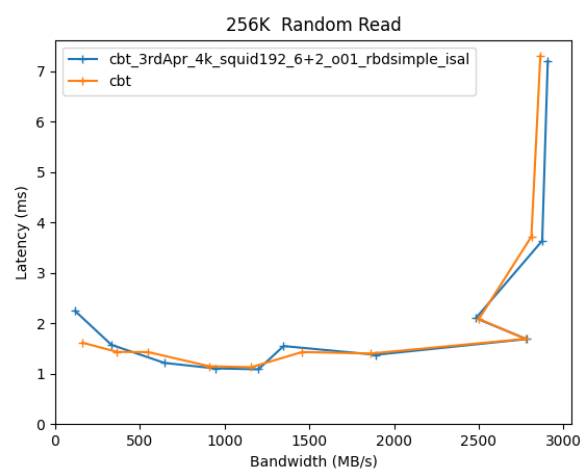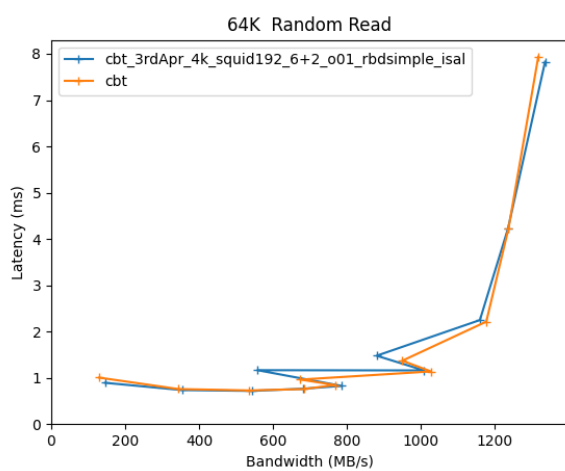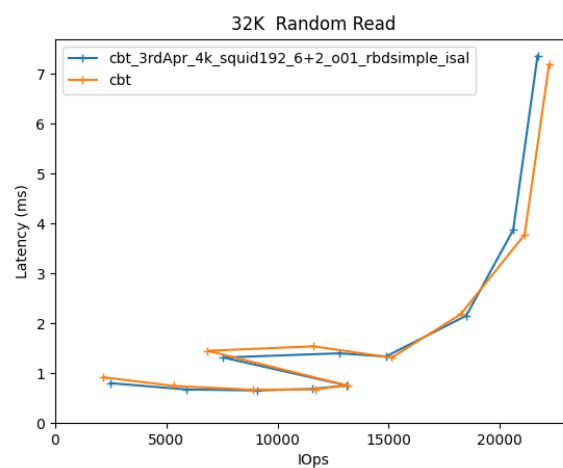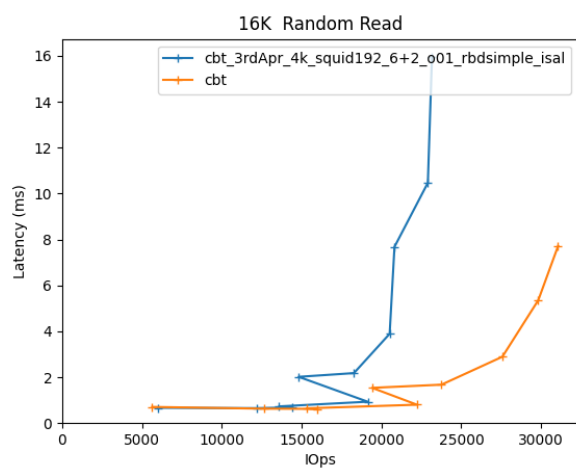
256K Random Write
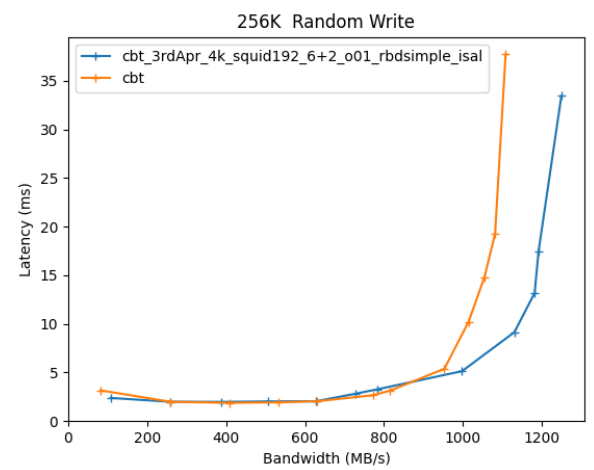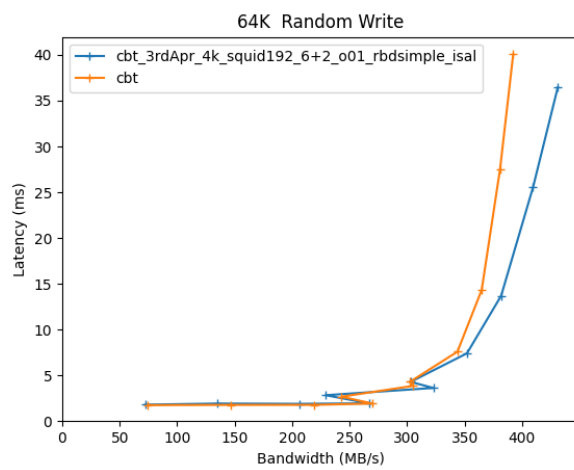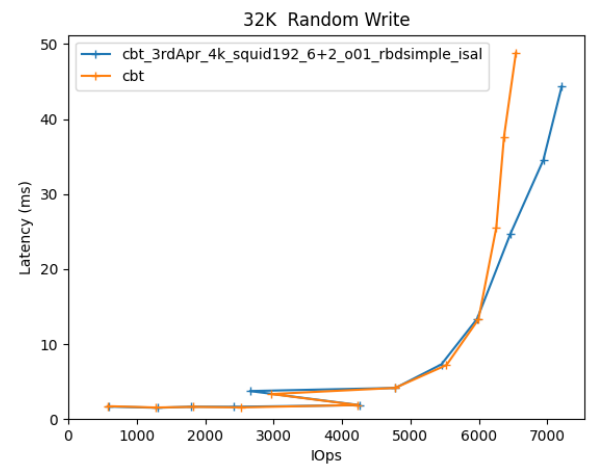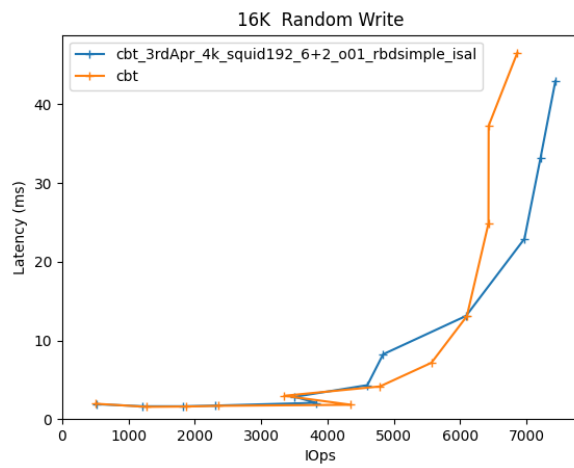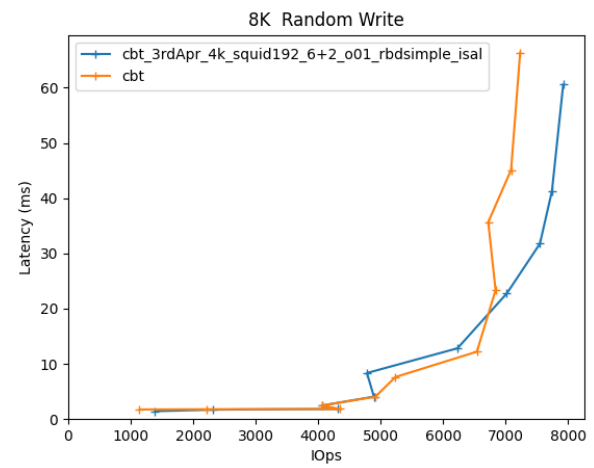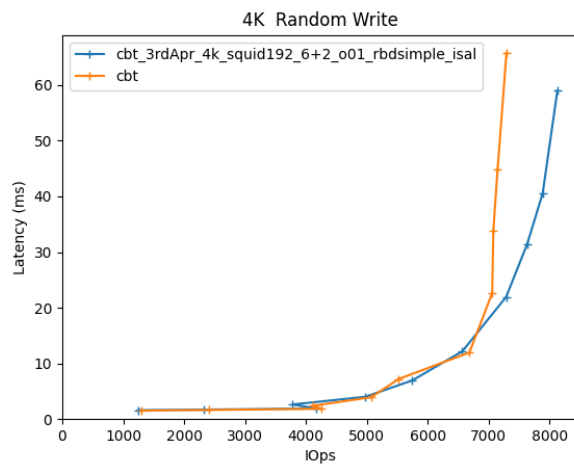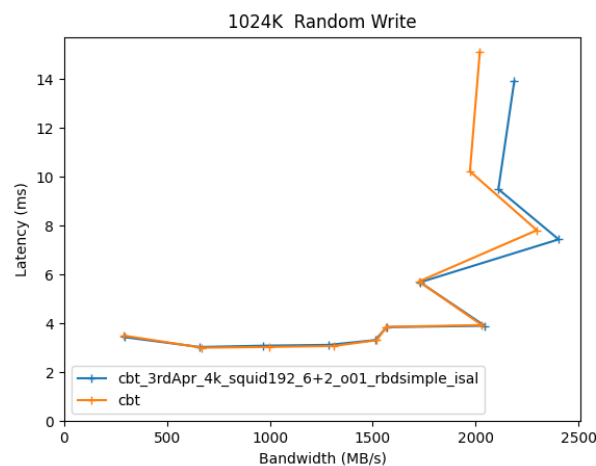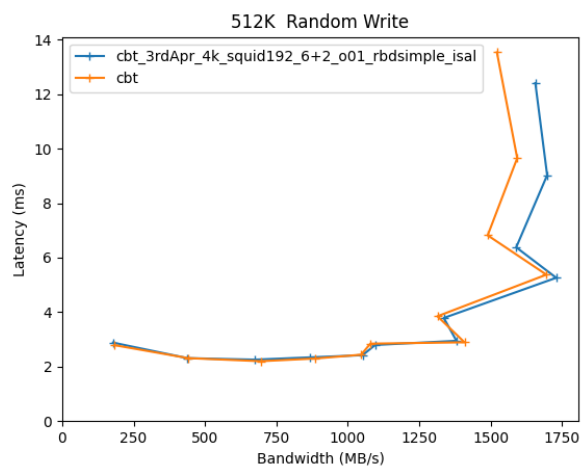
Random Read/Write
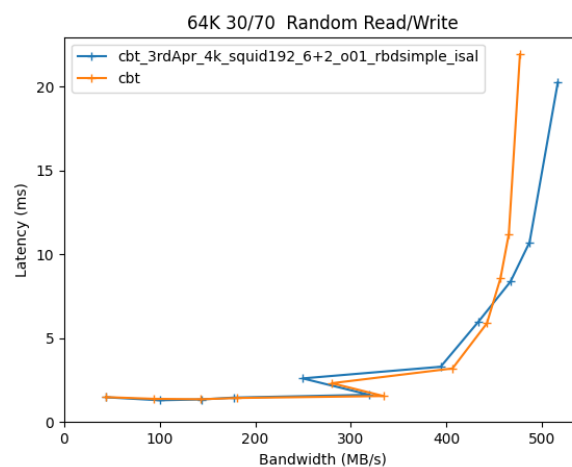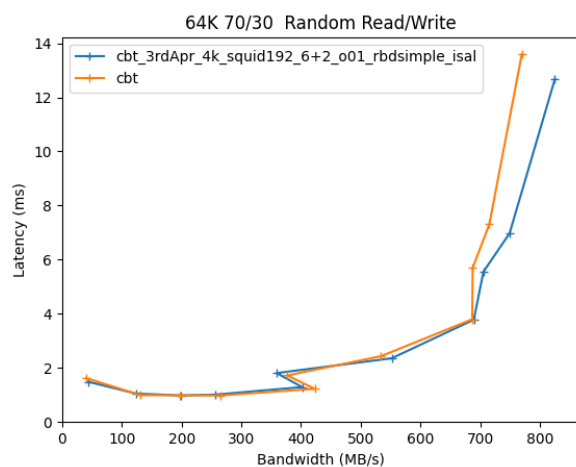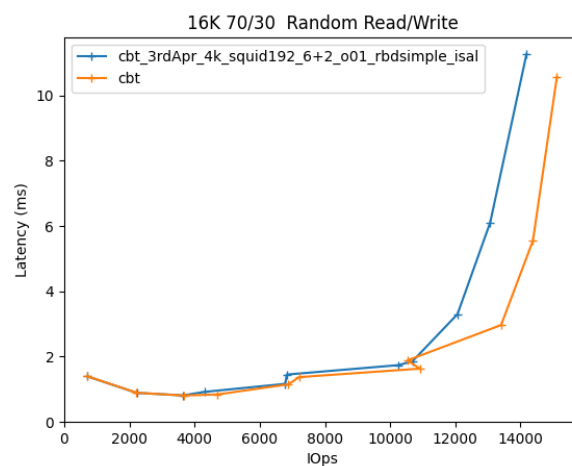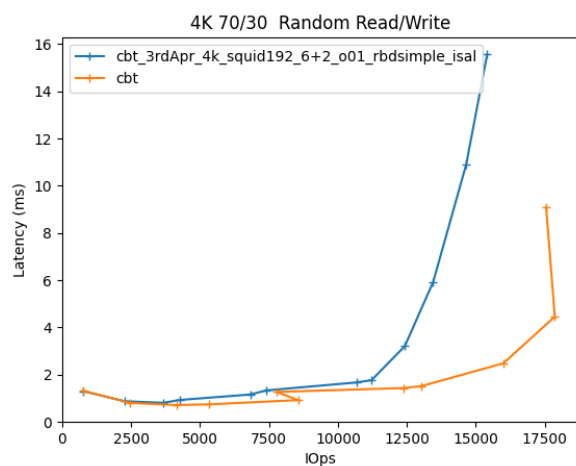
Configuration yaml files

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
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 1368750
  volumes_per_client:
  - 16
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
    16krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
      - 588
```

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

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

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

```
    - 1
    op_size: 4096
    total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 588
  4krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
  512krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  512krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
```

```
            - 8
            - 16
            - 24
            - 32
            - 48
            - 64
    512kseqread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 524288
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
    512kseqwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 524288
      total_iodepth:
      - 1
      - 2
      - 4
      - 6
      - 8
      - 16
      - 32
      - 48
      - 64
      - 96
      - 128
    64k3070:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 30
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 32
      - 64
      - 96
      - 128
      - 256
    64k7030:
      jobname: randmix
```

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

```
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        - 192
        - 256
    64kseqwrite:
      jobname: write
      mode: write
      numjobs:
      - 1
      op_size: 65536
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      - 512
    8krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 8192
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      - 588
    8krandomwrite:
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 8192
      total_iodepth:
      - 2
      - 4
      - 8
      - 16
      - 32
      - 64
      - 128
      - 256
      - 384
      - 512
      - 768
    precondition:
```

```
      jobname: precond1rw
      mode: randwrite
      monitor: false
      numjobs:
      - 1
      op_size: 65536
      time: 600
      total_iodepth:
      - 16
    seq16kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 288
    seq16kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 2
      - 4
      - 8
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      - 512
    seq256kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 262144
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 48
```

```
        - 64
    seq256kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 262144
      total_iodepth:
      - 1
      - 2
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 256
    seq32kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 32768
      total_iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    seq32kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 32768
      total_iodepth:
      - 2
      - 4
      - 8
      - 16
      - 32
      - 64
      - 128
      - 256
      - 512
      - 768
    seq4kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 4096
      total_iodepth:
      - 2
      - 4
```

```
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 288
  seq4kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 2
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
    - 1024
  seq8kread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    - 288
  seq8kwrite:
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 2
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
```

```
            - 128
            - 256
            - 384
            - 512
            - 768
            - 1024
            - 1280
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
      a: null
  mkfs_opts: -f -i size=2048
  mons:
    --- server1 ---:
      a: --- IP Address --:6789
  mount_opts: -o inode64,noatime,logbsize=256k
  osds:
  - --- server1 ---
  osds_per_node: 6
  pdsh_ssh_args: -a -x -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: ljsanders
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
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 90
    time_based: true
    use_existing_volumes: true
    vol_size: 1368750
```

```
    volumes_per_client:
    - 16
    workloads:
      16k7030:
        jobname: randmix
        mode: randrw
        numjobs:
        - 1
        op_size: 16384
        rwmixread: 70
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
        - 256
      16krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 16384
        total_iodepth:
        - 4
        - 8
        - 12
        - 16
        - 24
        - 48
        - 64
        - 128
        - 256
        - 384
        - 588
      16krandomwrite:
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        op_size: 16384
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 16
        - 32
        - 64
        - 128
        - 256
        - 384
        - 512
      1Mrandomread:
        jobname: randread
        mode: randread
        numjobs:
```

```
        - 1
      op_size: 1048576
      total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 12
        - 16
        - 20
        - 24
        - 28
        - 32
    1Mrandomwrite:
      jobname: randwrite
      mode: randwrite
      numjobs:
        - 1
      op_size: 1048576
      total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 8
        - 16
        - 24
        - 32
        - 48
    1Mseqread:
      jobname: seqread
      mode: read
      numjobs:
        - 1
      op_size: 1048576
      total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 6
        - 8
        - 10
        - 12
        - 14
        - 16
        - 20
    1Mseqwrite:
      jobname: seqwrite
      mode: write
      numjobs:
        - 1
      op_size: 1048576
      total_iodepth:
        - 2
        - 4
        - 6
        - 8
        - 16
        - 32
```

```
          - 48
          - 64
          - 96
          - 128
          - 160
      256krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 262144
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      256krandomwrite:
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        op_size: 262144
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 32
        - 64
        - 96
        - 128
        - 256
      32krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 32768
        total_iodepth:
        - 2
        - 4
        - 6
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 128
        - 256
      32krandomwrite:
        jobname: randwrite
        mode: randwrite
```

```
    numjobs:
    - 1
    op_size: 32768
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
  4k7030:
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 4096
    rwmixread: 70
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    - 384
  4krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 588
  4krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 4096
    total_iodepth:
    - 2
    - 4
```

```
        - 8
        - 16
        - 32
        - 64
        - 128
        - 256
        - 384
        - 512
        - 768
    512krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 524288
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 40
      - 48
      - 64
    512krandomwrite:
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 524288
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 8
      - 16
      - 24
      - 32
      - 48
      - 64
    512kseqread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 524288
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
```

```
      - 32
    512kseqwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 524288
      total_iodepth:
      - 1
      - 2
      - 4
      - 6
      - 8
      - 16
      - 32
      - 48
      - 64
      - 96
      - 128
    64k3070:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 30
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 32
      - 64
      - 96
      - 128
      - 256
    64k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 32
      - 64
      - 96
      - 128
      - 256
    64krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 65536
```

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

```
        - 256
        - 384
        - 512
      8krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
        - 588
      8krandomwrite:
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 2
        - 4
        - 8
        - 16
        - 32
        - 64
        - 128
        - 256
        - 384
        - 512
        - 768
      precondition:
        jobname: precond1rw
        mode: randwrite
        monitor: false
        numjobs:
        - 1
        op_size: 65536
        time: 600
        total_iodepth:
        - 16
      seq16kread:
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 16384
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
```

```
      - 64
      - 96
      - 128
      - 192
      - 288
    seq16kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 2
      - 4
      - 8
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      - 512
    seq256kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 262144
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 48
      - 64
    seq256kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 262144
      total_iodepth:
      - 1
      - 2
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 256
    seq32kread:
      jobname: seqread
      mode: read
      numjobs:
```

```
        - 1
        op_size: 32768
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
    seq32kwrite:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 32768
        total_iodepth:
        - 2
        - 4
        - 8
        - 16
        - 32
        - 64
        - 128
        - 256
        - 512
        - 768
    seq4kread:
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 4096
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
        - 288
    seq4kwrite:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 4096
        total_iodepth:
        - 2
        - 8
        - 16
        - 24
        - 32
        - 48
```

```
        - 64
        - 128
        - 256
        - 384
        - 512
        - 768
        - 1024
    seq8kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 8192
      total_iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
      - 288
    seq8kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 8192
      total_iodepth:
      - 2
      - 8
      - 16
      - 24
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
      - 512
      - 768
      - 1024
      - 1280
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
```

```
      a: null
  mkfs_opts: -f -i size=2048
  mons:
    --- server1 ---:
      a: --- IP Address --:6789
  mount_opts: -o inode64,noatime,logbsize=256k
  osds:
  - --- server1 ---
  osds_per_node: 6
  pdsh_ssh_args: -a -x -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```