Comparitive Performance Report for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt-1stAug-4k-o01-6+2-ecopt2

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Comparison summary for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt-1stAug-4k-o01-6+2-ecopt2

Sequential Read	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	cbt_1stAug_4k_o01_6+2_ecopt2	%change throughput	%change latency
4.0K	63542 IOps@4.5ms	170576 IOps@2.2ms	168%	-51%
8.0K	58143 IOps@4.9ms	106311 IOps@3.6ms	83%	-27%
16.0K	50688 IOps@5.7ms	60772 IOps@4.7ms	20%	-18%
32.0K	40688 IOps@4.7ms	40981 IOps@4.7ms	1%	0%
64.0K	2421 MB/s@6.9ms	2464 MB/s@5.1ms	2%	-26%
256.0K	5012 MB/s@3.3ms	5273 MB/s@3.2ms	5%	-3%
512.0K	5526 MB/s@3.0ms	5761 MB/s@2.9ms	4%	-3%
1024.0K	5406 MB/s@3.9ms	5626 MB/s@3.7ms	4%	-5%

Sequential Write	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	cbt_1stAug_4k_o01_6+2_ecopt2	%change throughput	%change latency
4.0K	97052 IOps@10.5ms	254838 IOps@6.0ms	163%	-43%
8.0K	117214 IOps@10.9ms	202469 IOps@7.6ms	73%	-30%
16.0K	50666 IOps@10.1ms	117574 IOps@8.7ms	132%	-14%
32.0K	49274 IOps@15.6ms	69393 IOps@11.0ms	41%	-29%
64.0K	2149 MB/s@15.6ms	2487 MB/s@13.5ms	16%	-13%
256.0K	2923 MB/s@22.8ms	3241 MB/s@20.6ms	11%	-10%
512.0K	3062 MB/s@21.7ms	3282 MB/s@20.2ms	7%	-7%
1024.0K	3948 MB/s@42.0ms	4251 MB/s@38.9ms	8%	-7%

Random Read	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	cbt_1stAug_4k_o01_6+2_ecopt2	%change throughput	%change latency
4.0K	38657 IOps@15.2ms	105380 IOps@5.6ms	173%	-63%
8.0K	36919 IOps@15.9ms	69652 IOps@11.0ms	89%	-31%
16.0K	36869 IOps@15.9ms	45014 IOps@13.1ms	22%	-18%
32.0K	34752 IOps@7.4ms	32212 IOps@7.9ms	-7%	7%
64.0K	2135 MB/s@7.8ms	1945 MB/s@8.6ms	-9%	10%
256.0K	4631 MB/s@7.2ms	5047 MB/s@6.6ms	9%	-8%
512.0K	6174 MB/s@5.4ms	6343 MB/s@5.3ms	3%	-2%
1024.0K	6308 MB/s@5.3ms	6376 MB/s@5.2ms	1%	-2%

Random Write	cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal	cbt_1stAug_4k_o01_6+2_ecopt2	%change throughput	%change latency
4.0K	12902 IOps@59.5ms	23536 IOps@32.6ms	82%	-45%
8.0K	12643 IOps@60.7ms	18250 IOps@28.0ms	44%	-54%
16.0K	11848 IOps@43.2ms	14361 IOps@26.7ms	21%	-38%
32.0K	11463 IOps@44.6ms	11475 IOps@33.4ms	0%	-25%
64.0K	689 MB/s@36.5ms	762 MB/s@33.0ms	11%	-10%
256.0K	2002 MB/s@33.4ms	2333 MB/s@28.6ms	17%	-14%
512.0K	2718 MB/s@9.0ms	2975 MB/s@11.0ms	9%	22%
1024.0K	3502 MB/s@13.9ms	4053 MB/s@11.9ms	16%	-14%

Comparison summary for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt-1stAug-4k-o01-6+2-ecopt2

Random Read/Write	cbt_3rdApr_4k_squid192_6+2_o01	cbt_1stAug_4k_o01_6+2_ecopt2	%change throughput	%change latency
4.0K_70/30	24691 IOps@15.5ms	48122 IOps@8.0ms	95%	-48%
16.0K_70/30	22661 IOps@11.3ms	25859 IOps@9.9ms	14%	-12%
64.0K_30/70	833 MB/s@20.1ms	876 MB/s@19.1ms	5%	-5%
64.0K_70/30	1315 MB/s@12.7ms	1208 MB/s@13.9ms	-8%	9%

Response Curves

Sequential Read

512.0K Sequential Read

1024.0K Sequential Read

Sequential Write

4.0K Sequential Write

8.0K Sequential Write

16.0K Sequential Write

32.0K Sequential Write

64.0K Sequential Write

256.0K Sequential Write

512.0K Sequential Write
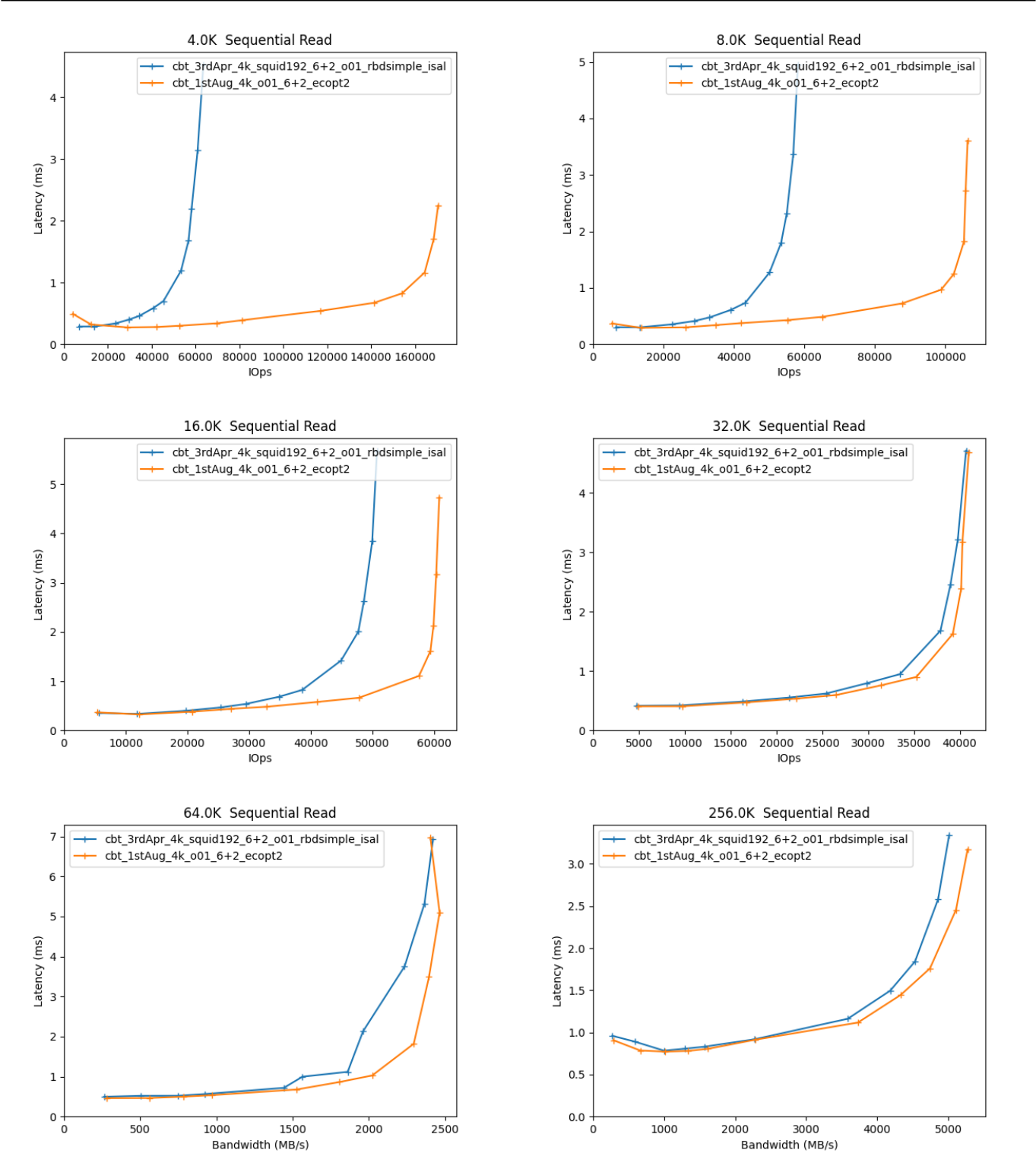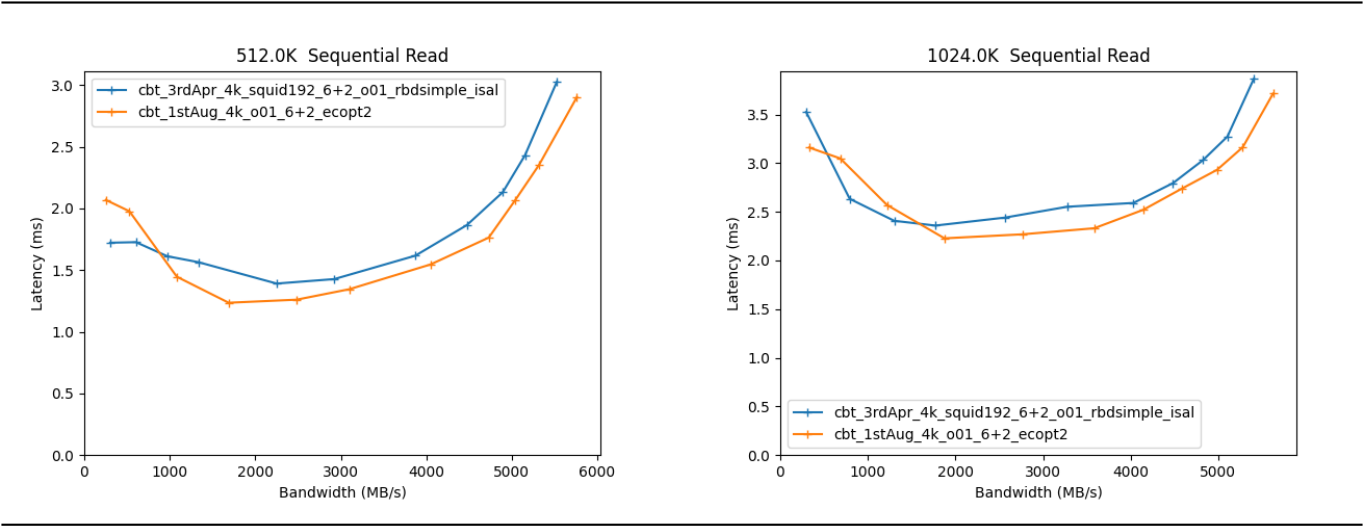
1024.0K Sequential Write

Random Read
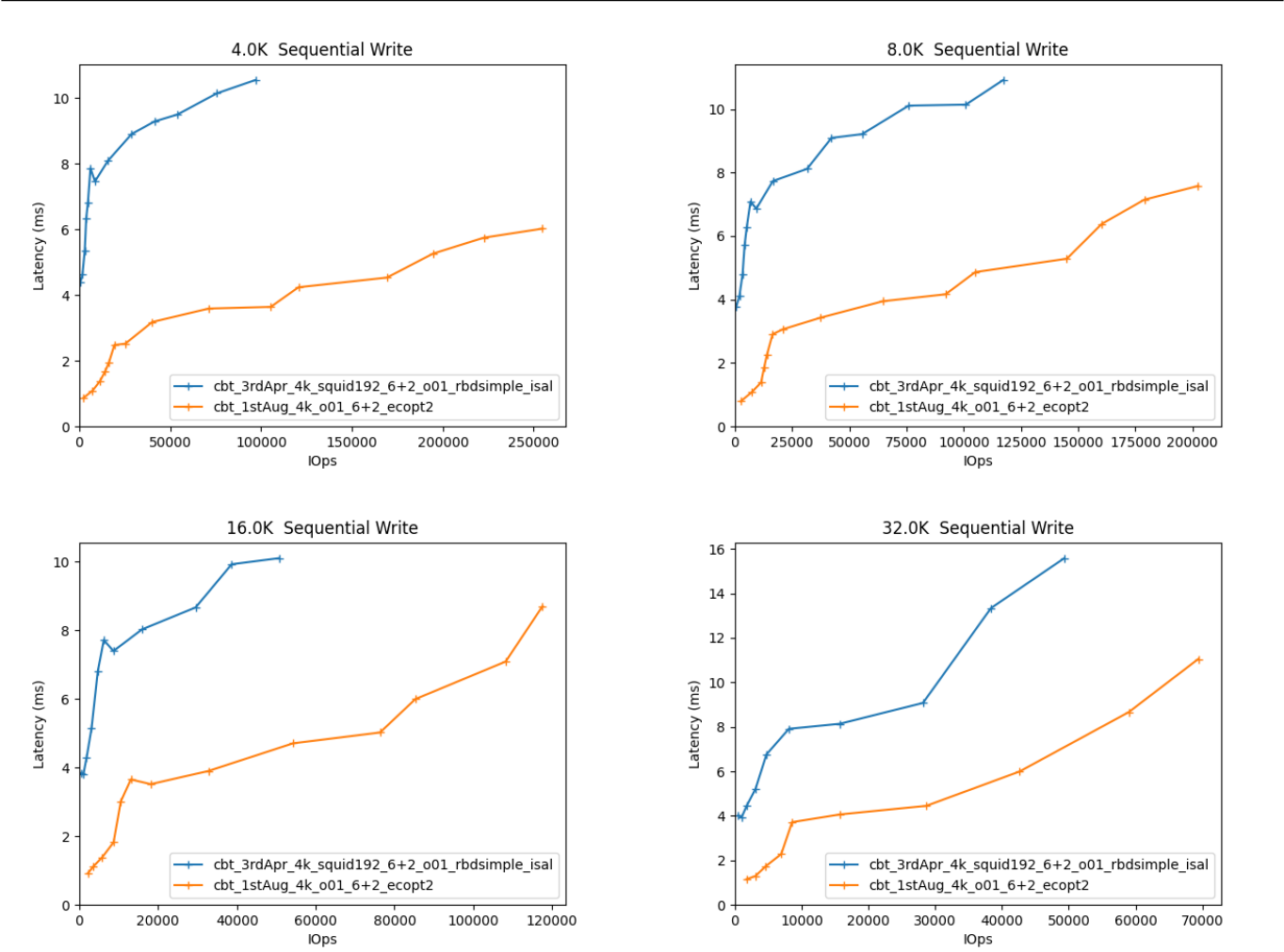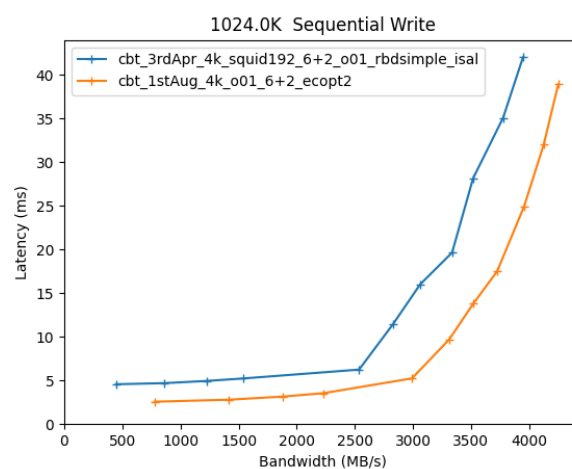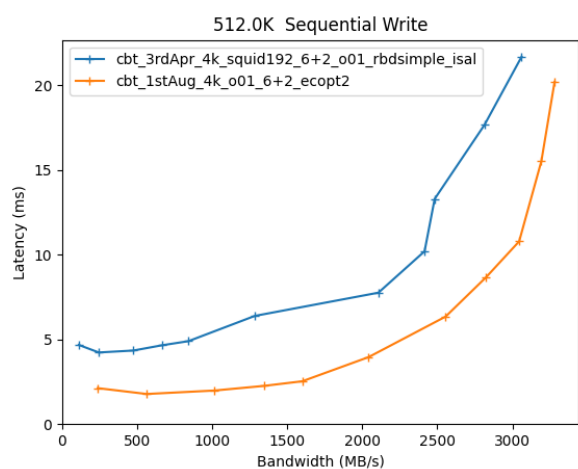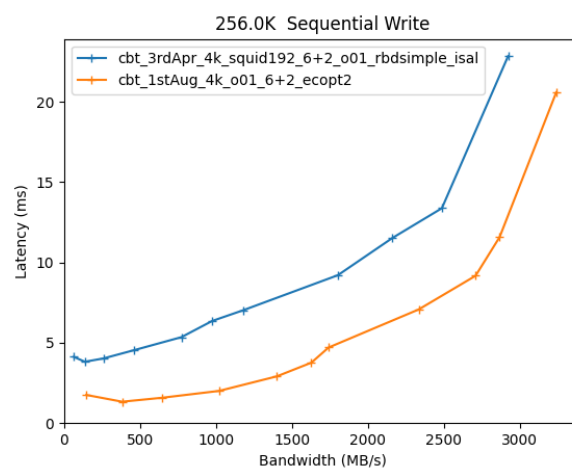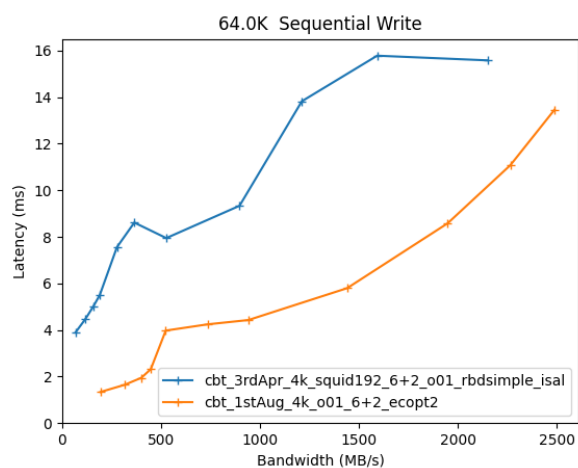
4.0K Random Read

8.0K Random Read

Random Write

512.0K Random Write
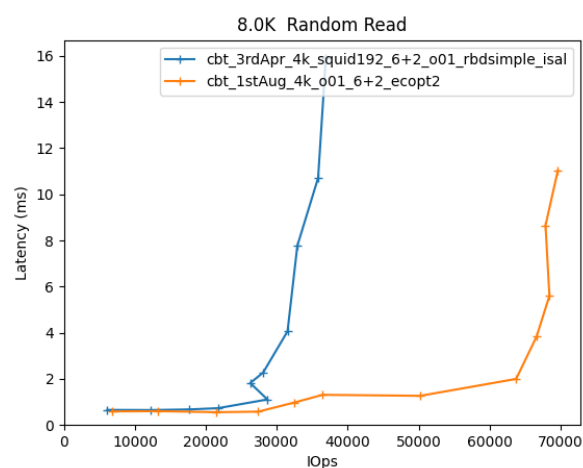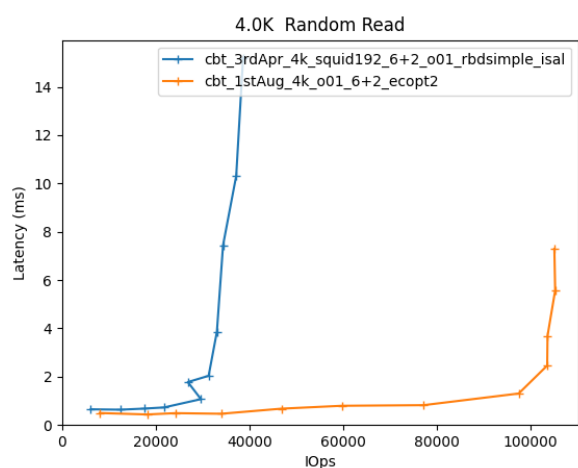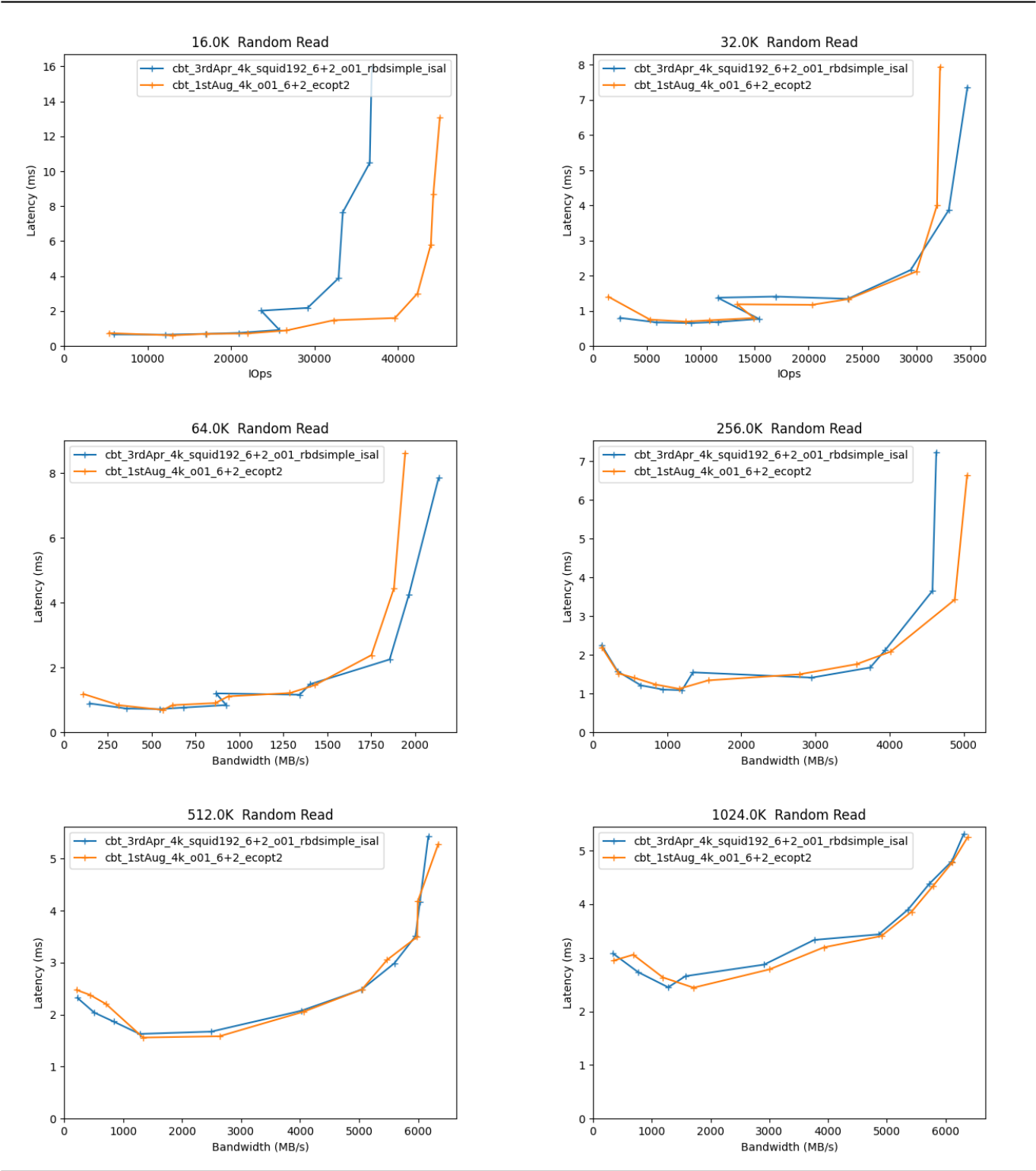
1024.0K Random Write

Random Read/Write

4.0K 70/30 Random Read/Write

16.0K 70/30 Random Read/Write

64.0K 30/70 Random Read/Write
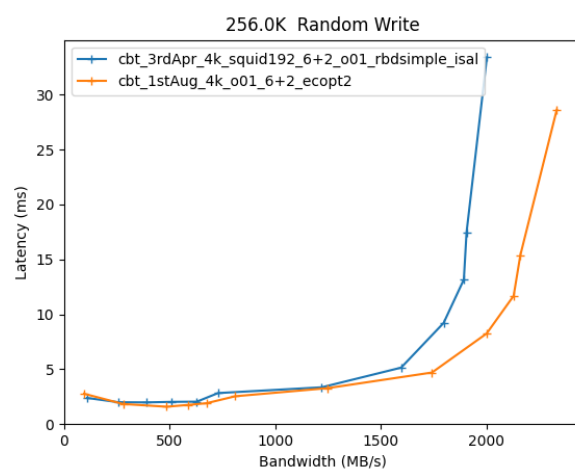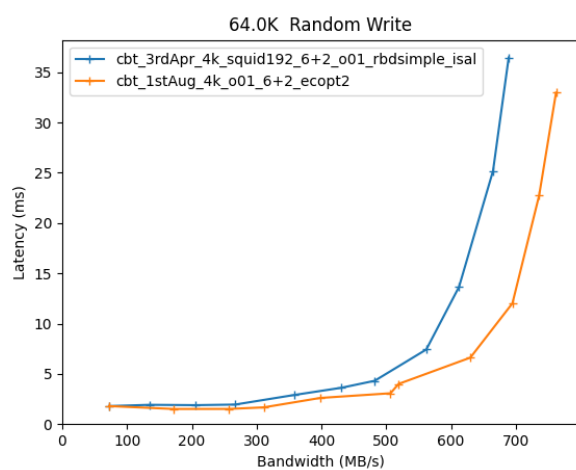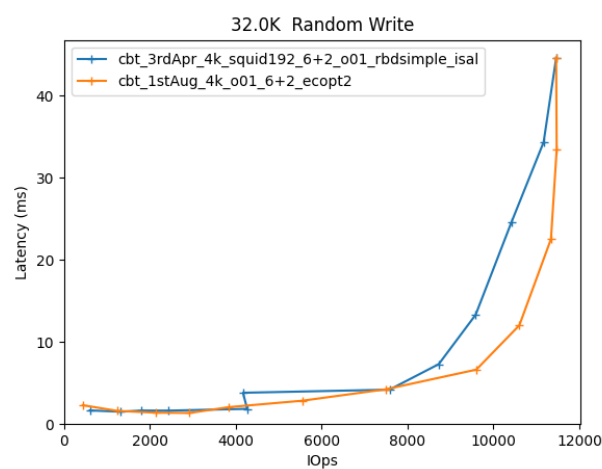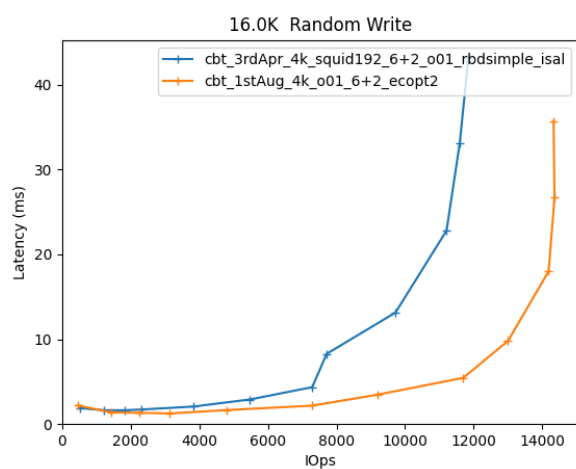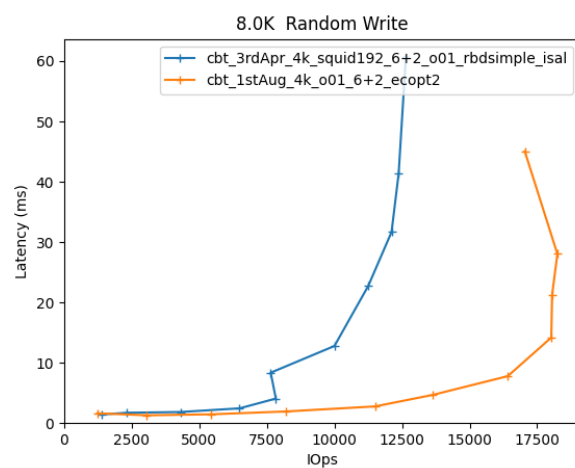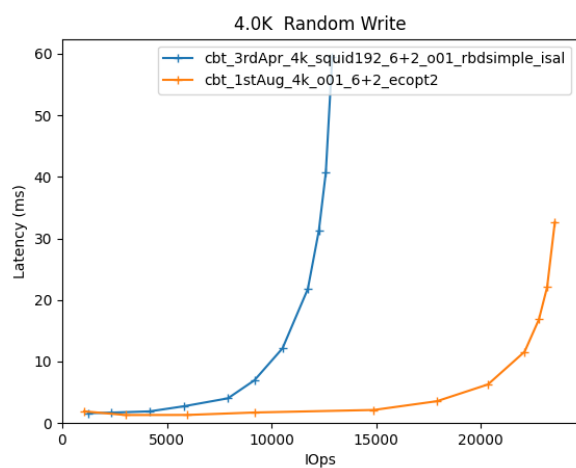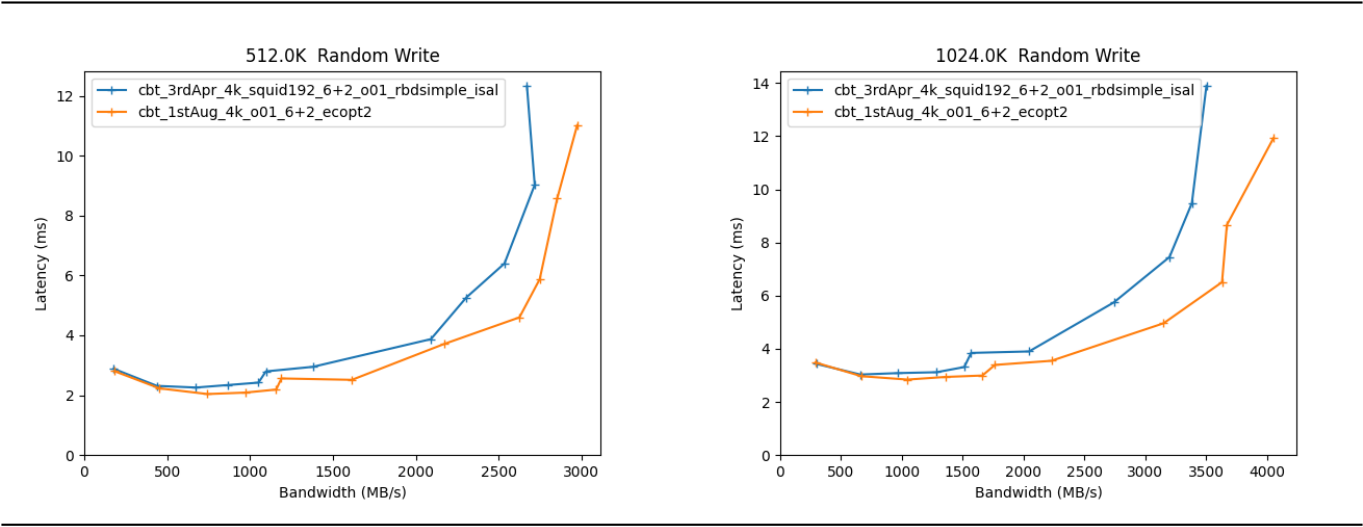
64.0K 70/30 Random Read/Write
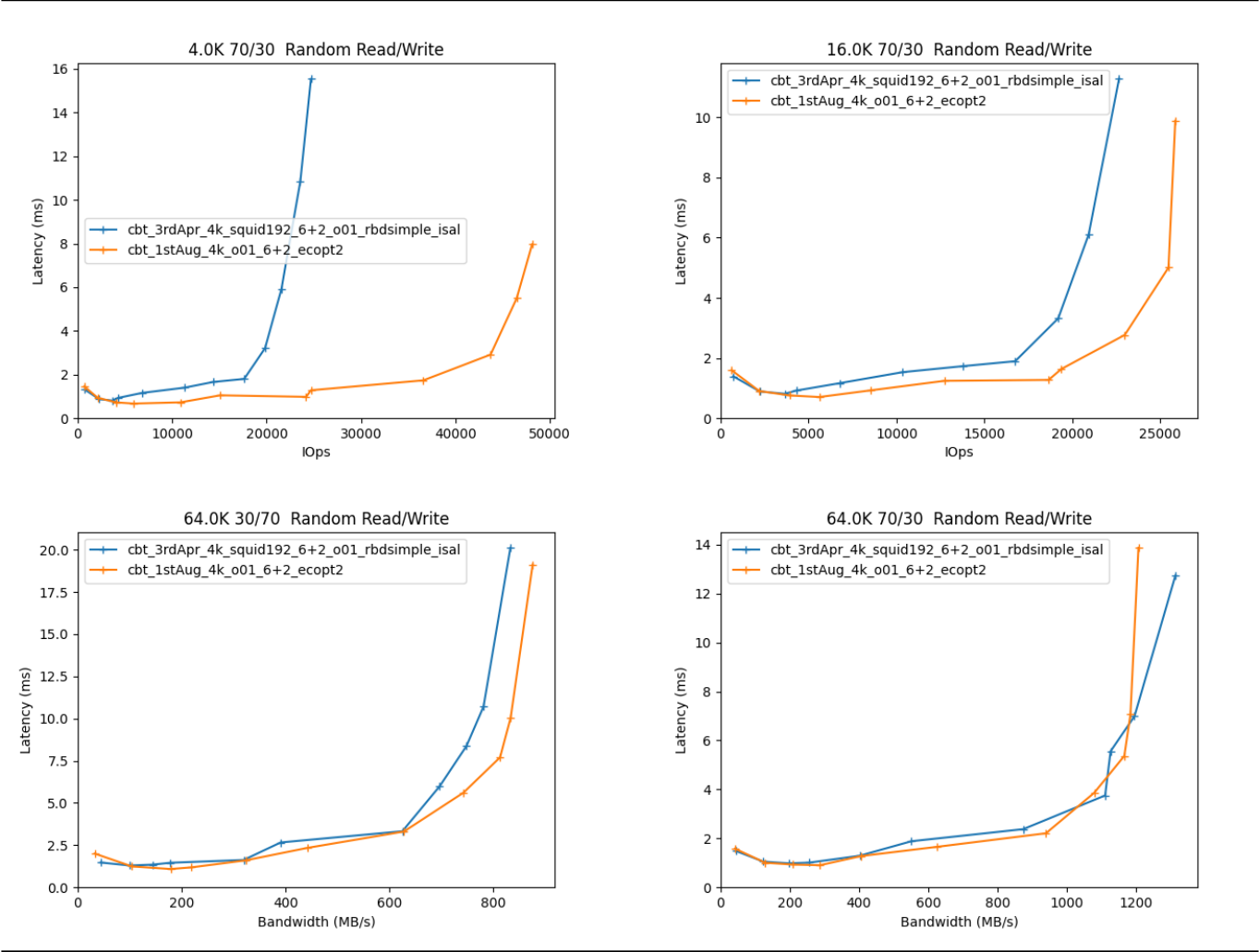
Configuration yaml files

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
```

```yaml
      - 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:
```

```yaml
    - 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}
```