Comparitive Performance Report for cbt-23rdFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff vs cbt-4thMar-ecoptmain-4k-8vol-cacheon-rbdoff-isalplugin

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Comparison summary for cbt-23rdFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff vs cbt-4thMar-ecoptmain-4k-8vol-cacheon-rbdoff-isalplugin

Sequential Read	cbt_23rdFeb_ecoptmain_8vol_finegrain_cacheon_rbdoff	cbt_4thMar_ecoptmain_4k_8vol_cacheon_rbdoff_isalplugin	% change throughput	% change latency
4K	63953 IOps@3.0ms	63334 IOps@3.0ms	-1%	0%
8K	38382 IOps@5.0ms	38240 IOps@5.0ms	-0%	0%
16K	21589 IOps@8.9ms	21835 IOps@8.8ms	1%	-1%
32K	18794 IOps@10.2ms	18646 IOps@10.3ms	-1%	1%
64K	1157 MB/s@14.5ms	1147 MB/s@14.6ms	-1%	1%
256K	1563 MB/s@10.7ms	1554 MB/s@10.8ms	-1%	1%
512K	1562 MB/s@10.7ms	1560 MB/s@10.7ms	-0%	0%
1024K	1569 MB/s@13.4ms	1569 MB/s@13.4ms	0%	0%

Sequential Write	cbt_23rdFeb_ecoptmain_8vol_finegrain_cacheon_rbdoff	cbt_4thMar_ecoptmain_4k_8vol_cacheon_rbdoff_isalplugin	% change throughput	% change latency
4K	8962 IOps@85.6ms	7294 IOps@140.4ms	-19%	64%
8K	7374 IOps@104.1ms	5578 IOps@183.8ms	-24%	77%
16K	6653 IOps@76.9ms	5336 IOps@95.9ms	-20%	25%
32K	8658 IOps@59.1ms	9529 IOps@80.5ms	10%	36%
64K	237 MB/s@70.9ms	249 MB/s@135.0ms	5%	90%
256K	349 MB/s@48.0ms	452 MB/s@74.1ms	30%	54%
512K	343 MB/s@97.5ms	302 MB/s@222.2ms	-12%	128%
1024K	399 MB/s@125.8ms	442 MB/s@381.1ms	11%	203%

Random Read	cbt_23rdFeb_ecoptmain_8vol_finegrain_cacheon_rbdoff	cbt_4thMar_ecoptmain_4k_8vol_cacheon_rbdoff_isalplugin	% change throughput	% change latency
4K	70068 IOps@5.5ms	68677 IOps@5.6ms	-2%	2%
8K	47698 IOps@8.0ms	46743 IOps@8.2ms	-2%	2%
16K	30151 IOps@12.7ms	28860 IOps@8.9ms	-4%	-30%
32K	26910 IOps@9.5ms	26116 IOps@9.8ms	-3%	3%
64K	1515 MB/s@11.1ms	1473 MB/s@5.7ms	-3%	-49%
256K	1725 MB/s@19.5ms	1709 MB/s@9.8ms	-1%	-50%
512K	1777 MB/s@14.2ms	1777 MB/s@14.2ms	0%	0%
1024K	1774 MB/s@16.5ms	1771 MB/s@16.6ms	-0%	1%

Random Write	cbt_23rdFeb_ecoptmain_8vol_finegrain_cacheon_rbdoff	cbt_4thMar_ecoptmain_4k_8vol_cacheon_rbdoff_isalplugin	% change throughput	% change latency
4K	2769 IOps@46.2ms	4775 IOps@161.2ms	72%	249%
8K	2558 IOps@50.0ms	4417 IOps@173.6ms	73%	247%
16K	2384 IOps@53.7ms	4564 IOps@112.1ms	91%	109%
32K	2000 IOps@63.9ms	3930 IOps@130.2ms	96%	104%
64K	106 MB/s@79.0ms	213 MB/s@118.3ms	101%	50%
256K	226 MB/s@148.3ms	293 MB/s@229.4ms	30%	55%

Comparison summary for cbt-23rdFeb-ecoptmain-8vol-finegrain-cacheon-rbdoff vs
cbt-4thMar-ecoptmain-4k-8vol-cacheon-rbdoff-isalplugin

Random Write	cbt_23rdFeb_ecoptmain_8vol_finegrain_cacheon_rbdoff	cbt_4thMar_ecoptmain_4k_8vol_cacheon_rbdoff_isalplugin	% changed throughput	% changed latency
512K	210 MB/s@99.4ms	268 MB/s@125.0ms	28%	26%
1024K	273 MB/s@76.3ms	371 MB/s@135.2ms	36%	77%

Random Read/Write	cbt_23rdFeb_ecoptmain_8vol_finegrain_cacheon_rbdoff	cbt_4thMar_ecoptmain_4k_8vol_cacheon_rbdoff_isalplugin	% changed throughput	% changed latency
16K_70/30	4447 IOps@28.8ms	4692 IOps@54.5ms	6%	89%
64K_30/70	142 MB/s@59.1ms	165 MB/s@101.9ms	16%	72%
64K_70/30	208 MB/s@40.3ms	209 MB/s@80.3ms	0%	99%

Response Curves

Sequential Read

512K Sequential Read

1024K Sequential Read

Sequential Write

4K Sequential Write

8K Sequential Write

16K Sequential Write
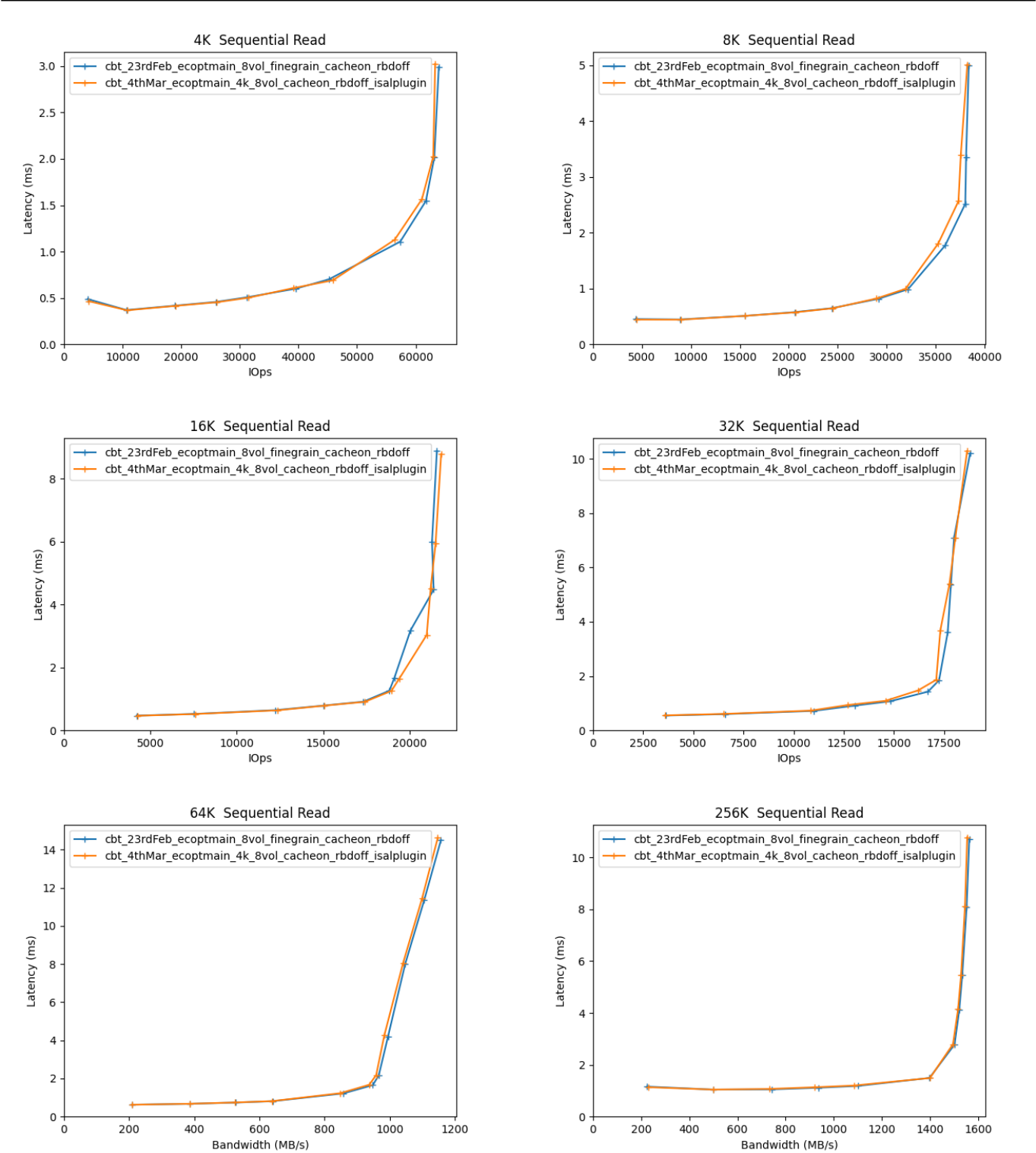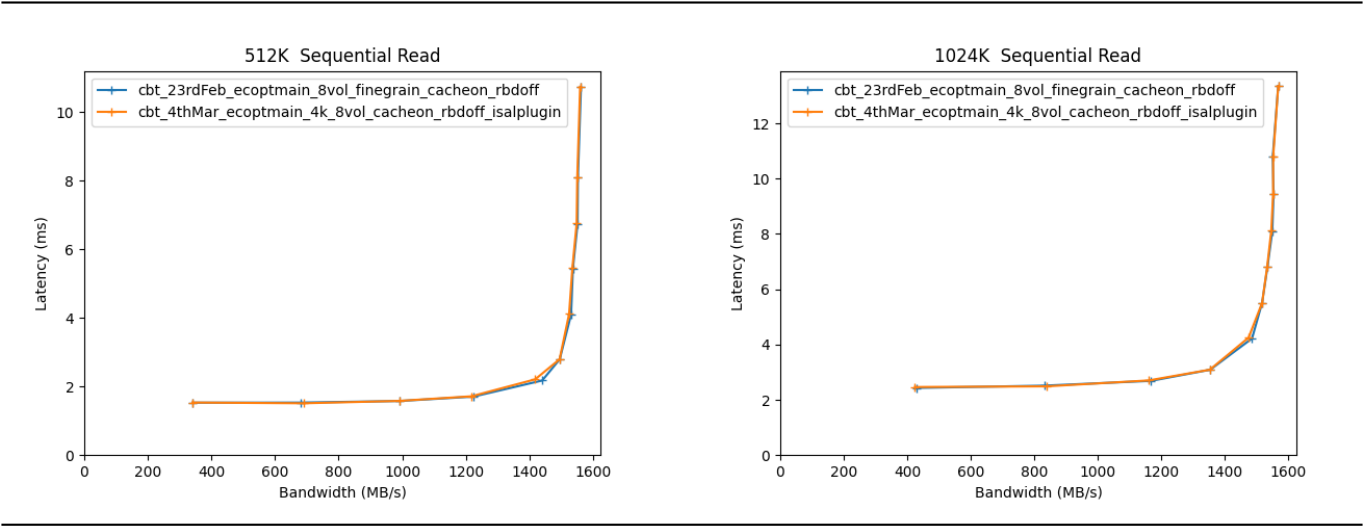
32K Sequential Write

Random Read

16K Random Read

32K Random Read

64K Random Read

256K Random Read

512K Random Read
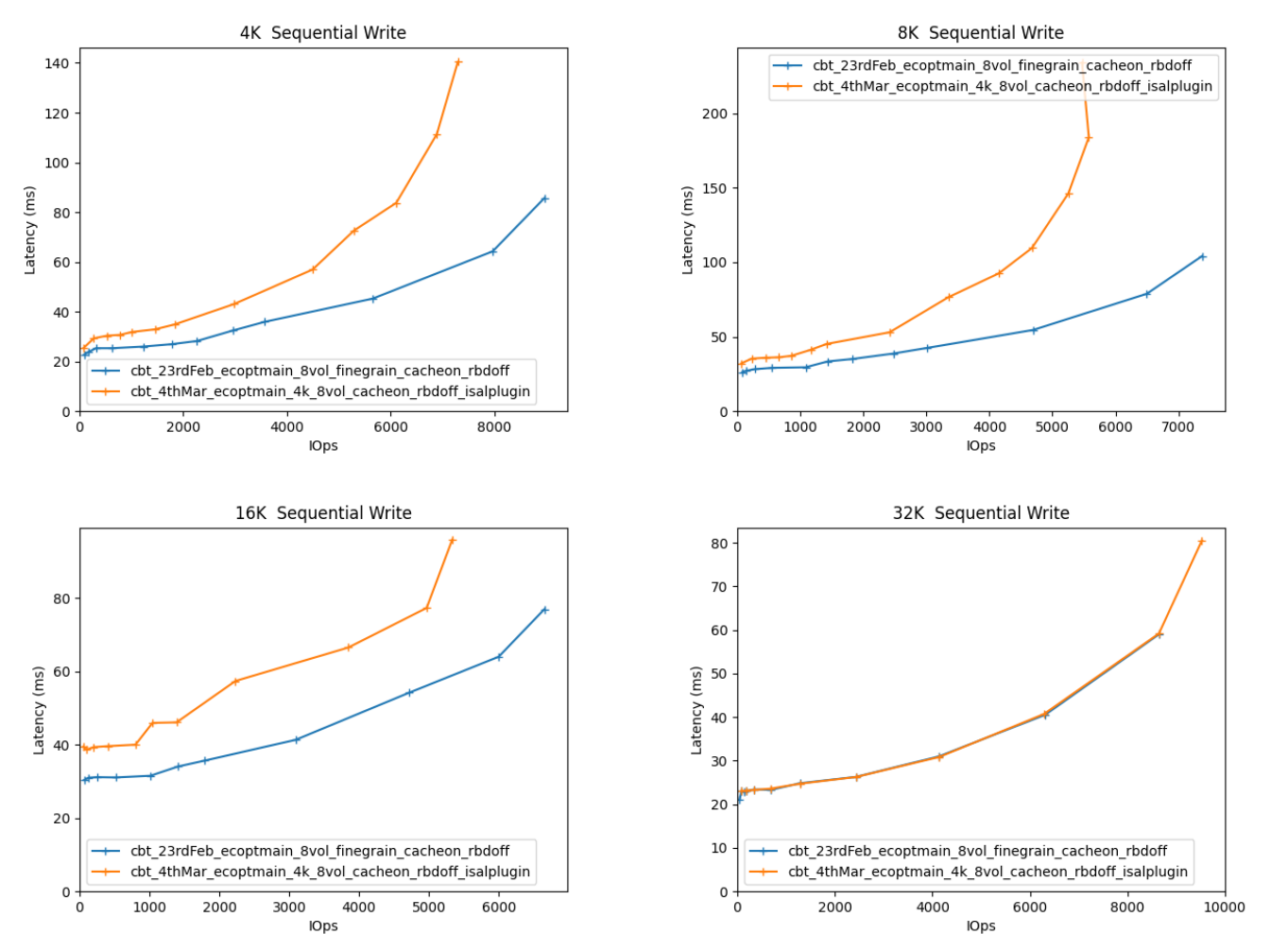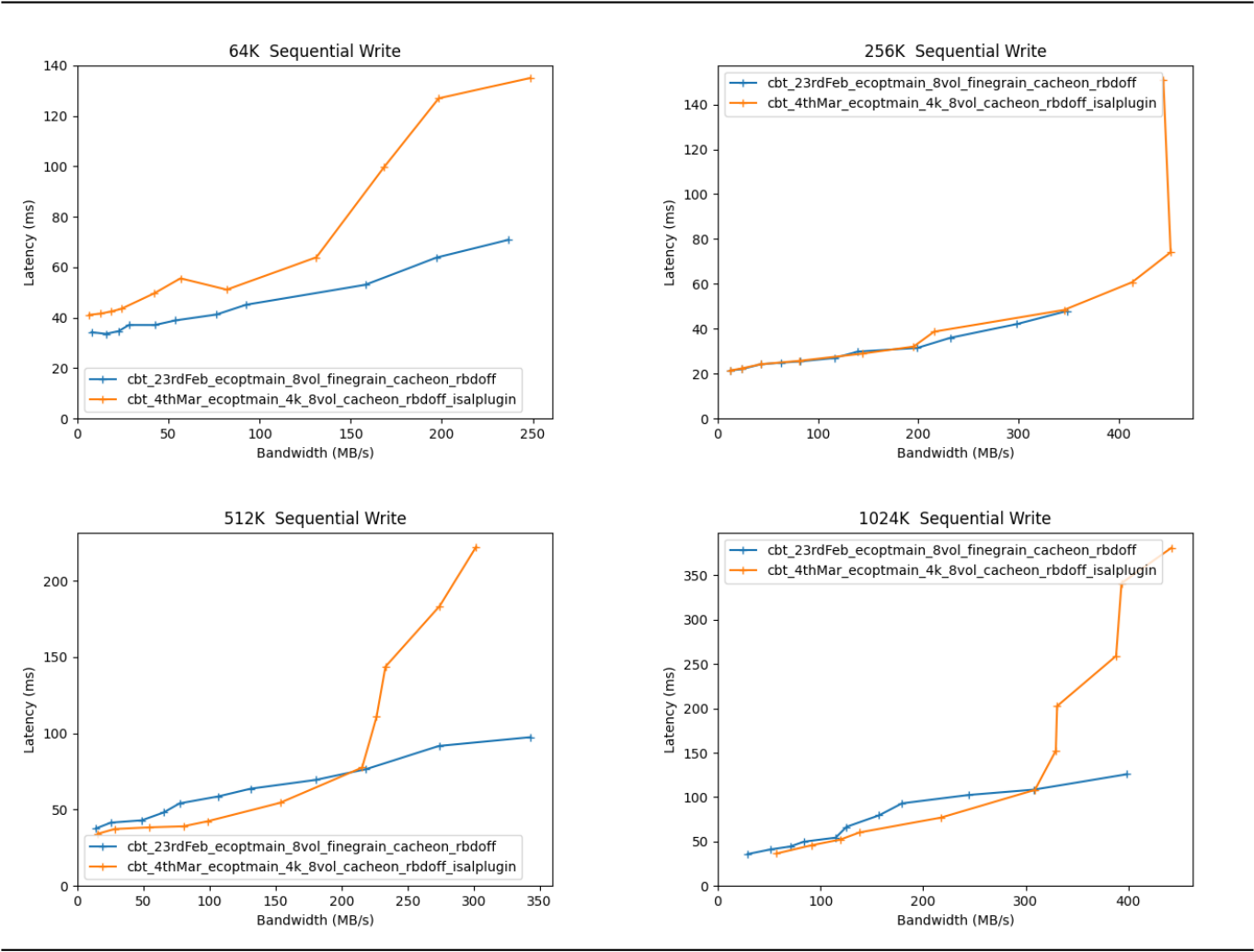
1024K Random Read

Random Write

4K Random Write

8K Random Write

16K Random Write

32K Random Write

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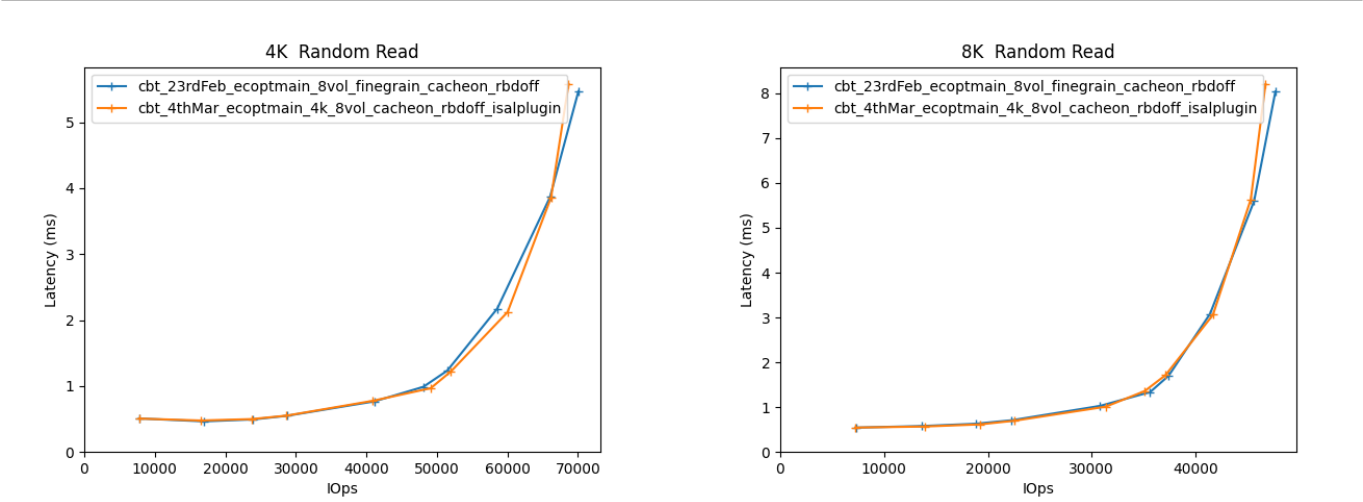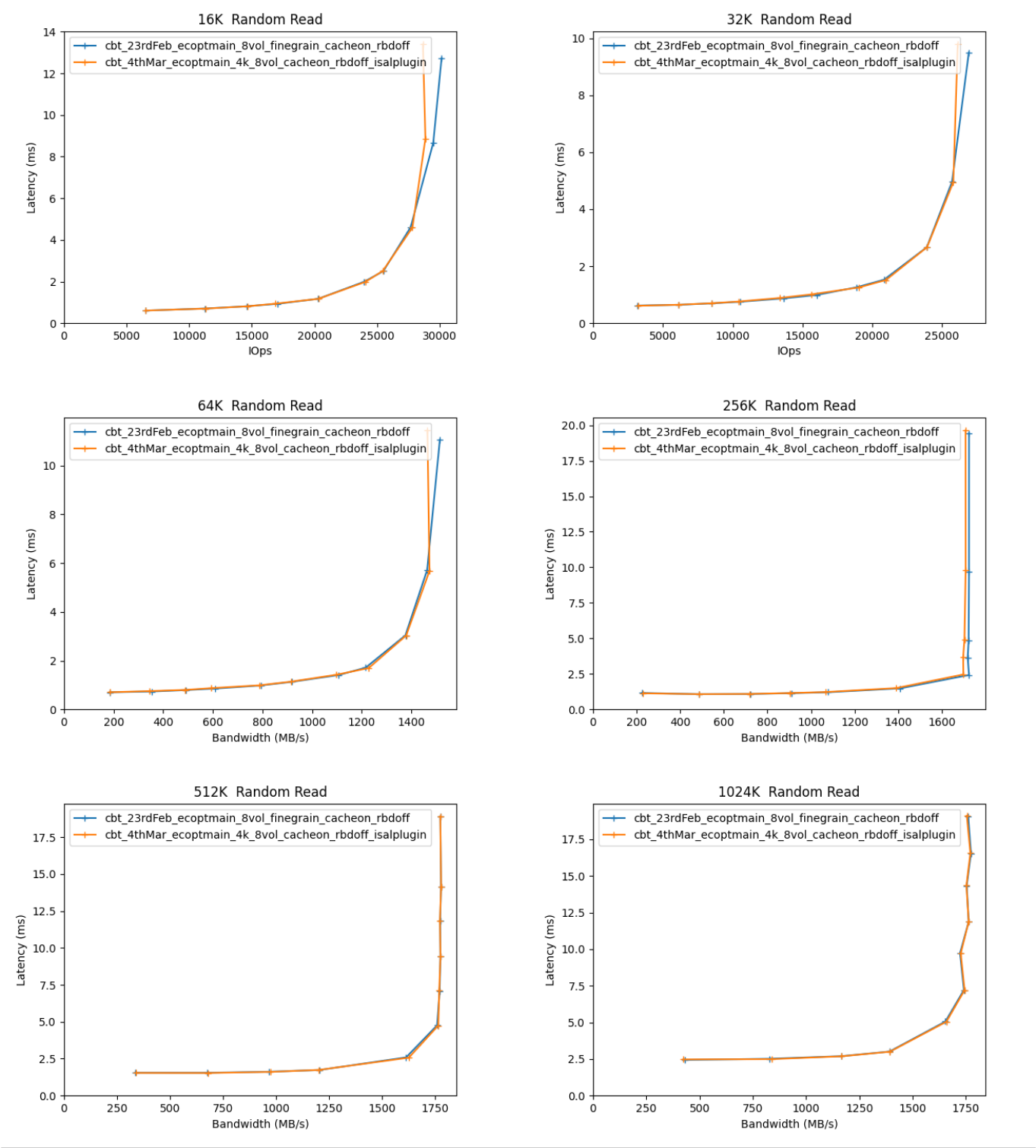
256K Random Write
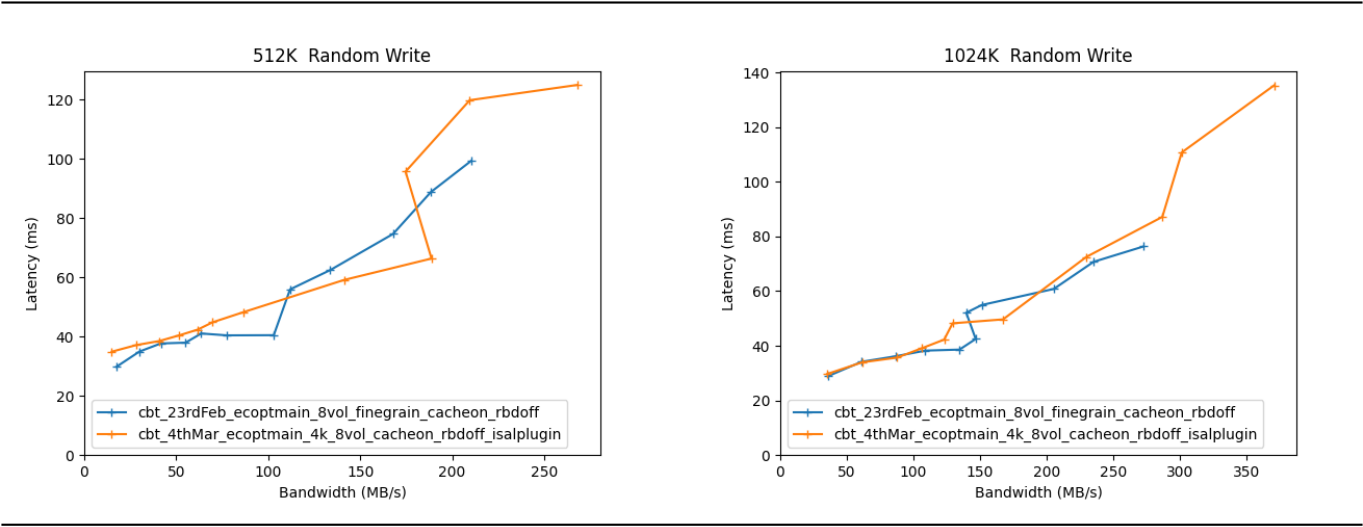
Random Read/Write
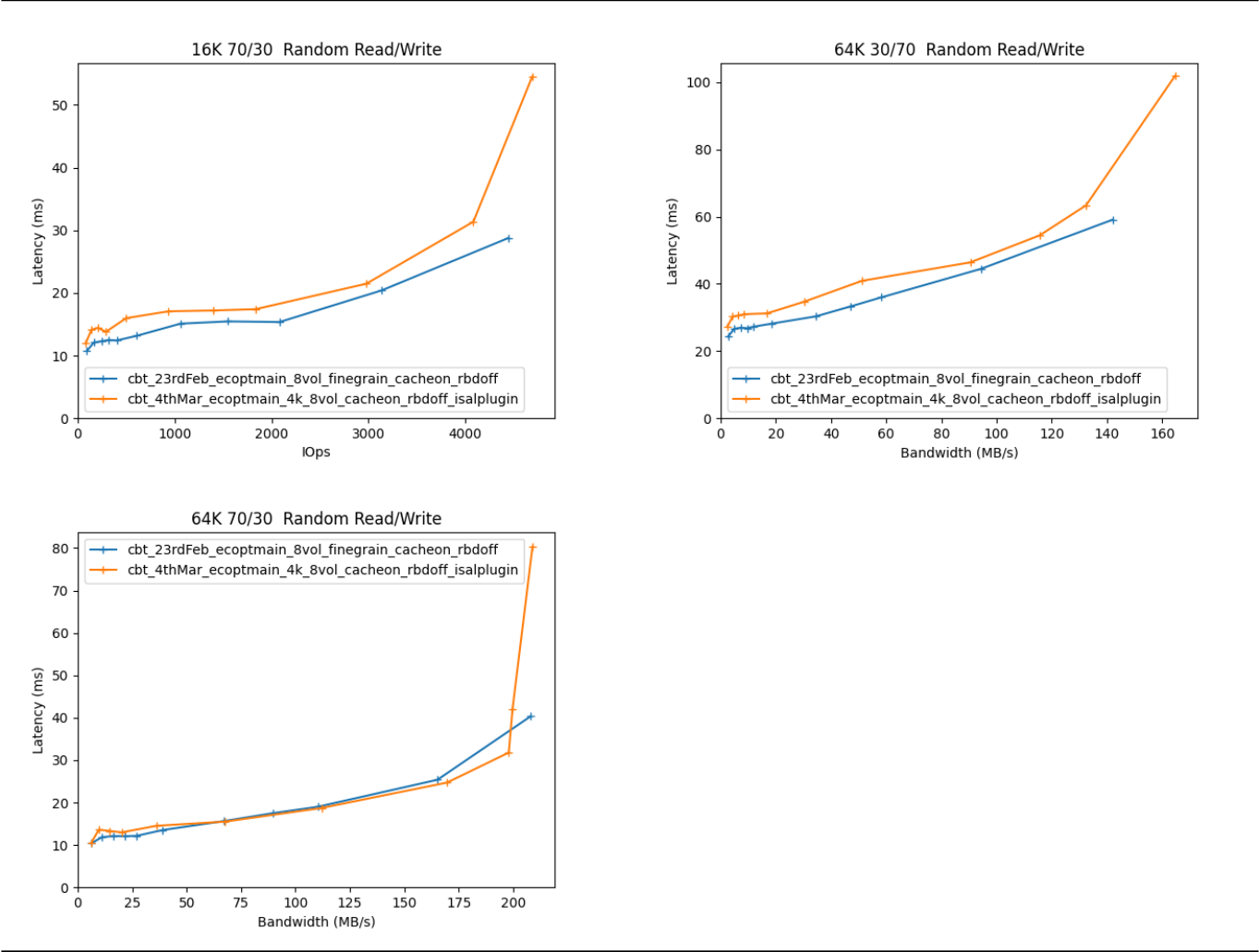
Configuration yaml files

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: 52500
  volumes_per_client:
  - 8
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    16krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
    16krandomwrite:
```
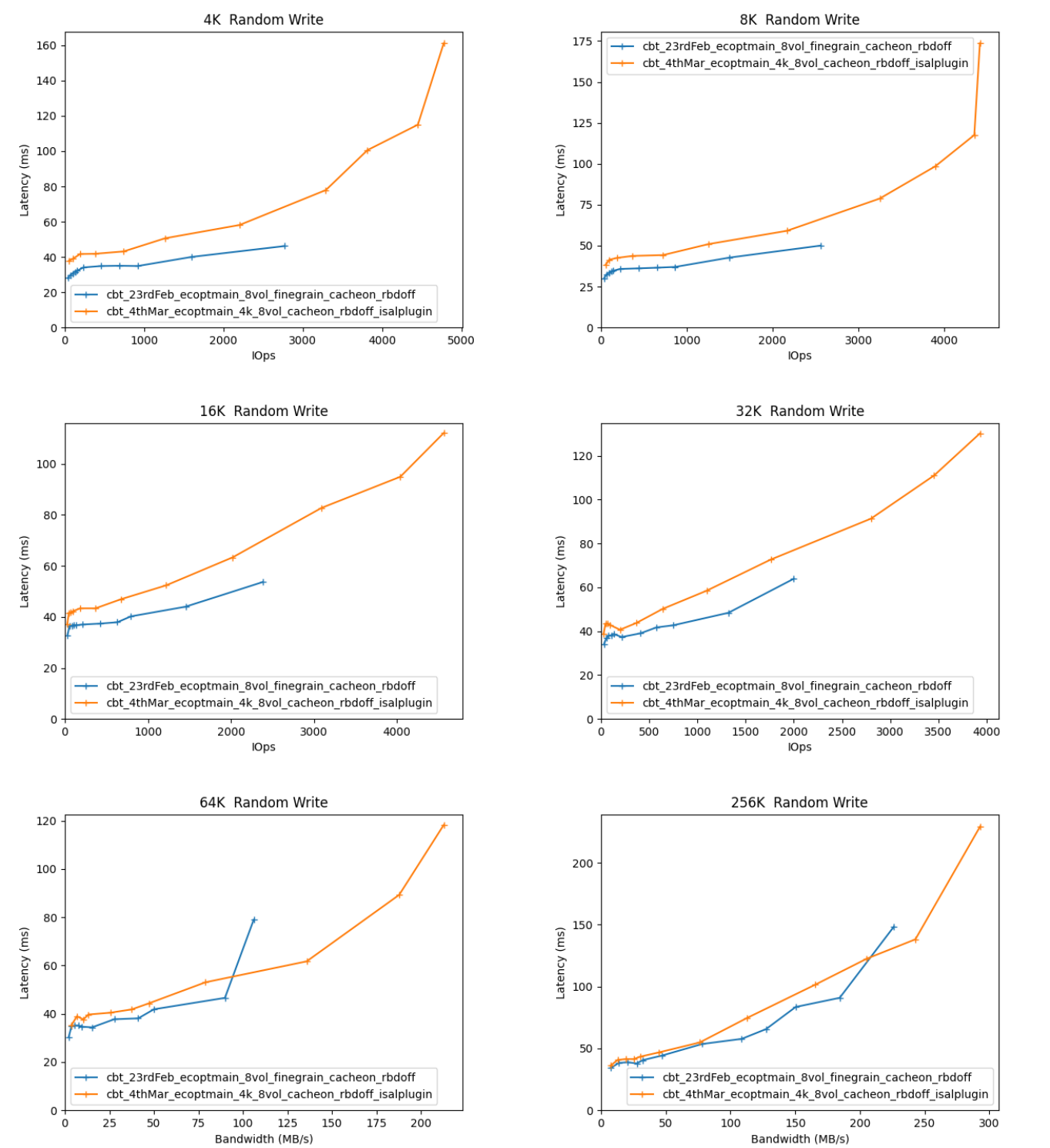
```
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        op_size: 16384
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
    1Mrandomread:
        jobname: 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
        - 7
        - 8
        - 12
        - 16
        - 20
    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:
          - 1
          - 2
          - 3
          - 4
          - 6
          - 8
          - 12
          - 16
          - 24
          - 32
          - 48
        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
          - 24
          - 32
          - 48
          - 64
          - 128
```

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

```
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
    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
      - 12
      - 16
      - 24
      - 32
      - 40
    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
  - 12
  - 16
  - 24
  - 32
  - 48
  - 64
64k3070:
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  op_size: 65536
  rwmixread: 30
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
64k7030:
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  op_size: 65536
  rwmixread: 70
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
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:
          - 1
          - 2
          - 3
          - 4
          - 5
          - 8
          - 16
          - 24
          - 32
          - 64
          - 128
        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
          - 24
          - 32
          - 48
          - 64
          - 128
```

```
        - 192
        - 256
    8krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 8192
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
    8krandomwrite:
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 8192
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    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
  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
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
  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:
        - 1
        - 2
        - 3
        - 4
        - 8
        - 16
        - 32
        - 64
        - 128
        - 256
        - 512
      seq4kread:
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 4096
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
      seq4kwrite:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 4096
        total_iodepth:
        - 2
        - 4
        - 8
        - 16
        - 32
        - 48
        - 64
        - 96
        - 128
```

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

```yaml
    - --- 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
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 90
    time_based: true
    use_existing_volumes: true
    vol_size: 52500
    volumes_per_client:
    - 8
    workloads:
      16k7030:
        jobname: randmix
        mode: randrw
        numjobs:
        - 1
        op_size: 16384
        rwmixread: 70
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      16krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 16384
        total_iodepth:
        - 4
```

```
          - 8
          - 12
          - 16
          - 24
          - 48
          - 64
          - 128
          - 256
          - 384
      16krandomwrite:
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        op_size: 16384
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      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
        - 7
        - 8
        - 12
        - 16
        - 20
```

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

```
4krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
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
  - 12
  - 16
  - 24
  - 32
  - 40
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
      - 12
      - 16
      - 24
      - 32
      - 48
      - 64
    64k3070:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 30
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    64k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
```

```
        - 32
        - 64
        - 128
    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:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    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
        - 24
        - 32
        - 48
        - 64
        - 128
        - 192
        - 256
      8krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
      8krandomwrite:
        jobname: randwrite
        mode: randwrite
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      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
```

```yaml
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
      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
        - 6
        - 8
        - 12
        - 16
        - 24
```

```
      - 32
      - 48
      - 64
    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:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 32
      - 64
      - 128
      - 256
      - 512
    seq4kread:
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 4096
      total_iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    seq4kwrite:
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 4096
```

```
        total_iodepth:
        - 2
        - 4
        - 8
        - 16
        - 32
        - 48
        - 64
        - 96
        - 128
        - 256
        - 512
        - 768
      seq8kread:
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
      seq8kwrite:
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 2
        - 4
        - 8
        - 16
        - 32
        - 48
        - 64
        - 96
        - 128
        - 256
        - 512
        - 768
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
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 52500
  volumes_per_client:
  - 8
  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
    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
    4krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 4096
```

```
          total_iodepth:
          - 4
          - 8
          - 12
          - 16
          - 32
          - 48
          - 64
          - 128
          - 256
          - 384
      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
      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
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
        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
        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: 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
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 90
    time_based: true
    use_existing_volumes: true
    vol_size: 52500
    volumes_per_client:
    - 8
    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
    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
      4krandomread:
        jobname: randread
        mode: randread
        numjobs:
        - 1
        op_size: 4096
        total_iodepth:
        - 4
        - 8
        - 12
        - 16
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
      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
      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
      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
    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
      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: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```

```
  user: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```