Comparitive Performance Report for cbt-4thFeb-main-4k-8vol vs cbt-7thFeb-alexls22-econ-4k-8vol-finegrain

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Comparison summary for cbt-4thFeb-main-4k-8vol vs cbt-7thFeb-alexls22-econ-4k-8vol-finegrain

Sequential Read	cbt_4thFeb_main_4k_8vol	cbt_7thFeb_alexls22_econ_4k_8vol_finegrain	%change throughput	%change latency
4K	68314 IOps@2.3ms	63795 IOps@3.0ms	-7%	30%
8K	40450 IOps@2.4ms	38951 IOps@0.6ms	-4%	-75%
16K	22810 IOps@5.6ms	30087 IOps@0.6ms	32%	-89%
32K	18772 IOps@6.8ms	26670 IOps@0.7ms	42%	-90%
64K	1095 MB/s@9.6ms	1795 MB/s@0.7ms	64%	-93%
256K	1536 MB/s@15.0ms	4956 MB/s@1.2ms	223%	-92%
512K	1566 MB/s@29.5ms	6903 MB/s@2.1ms	341%	-93%
1024K	1574 MB/s@53.4ms	8766 MB/s@4.3ms	457%	-92%

Sequential Write	cbt_4thFeb_main_4k_8vol	cbt_7thFeb_alexls22_econ_4k_8vol_finegrain	%change throughput	%change latency
4K	3074 IOps@52.0ms	7072 IOps@2.5ms	130%	-95%
8K	2707 IOps@47.4ms	5670 IOps@3.2ms	109%	-93%
16K	7408 IOps@17.3ms	7934 IOps@2.3ms	7%	-87%
32K	9111 IOps@14.0ms	15345 IOps@1.5ms	68%	-89%
64K	245 MB/s@12.8ms	585 MB/s@2.6ms	139%	-80%
256K	568 MB/s@7.2ms	1643 MB/s@3.6ms	189%	-50%
512K	479 MB/s@87.4ms	2220 MB/s@6.5ms	363%	-93%
1024K	495 MB/s@84.3ms	3057 MB/s@12.0ms	518%	-86%

Random Read	cbt_4thFeb_main_4k_8vol	cbt_7thFeb_alexls22_econ_4k_8vol_finegrain	%change throughput	%change latency
4K	81023 IOps@4.7ms	80041 IOps@4.8ms	-1%	2%
8K	52986 IOps@7.2ms	51367 IOps@5.0ms	-3%	-31%
16K	31191 IOps@12.3ms	31203 IOps@12.3ms	0%	0%
32K	28234 IOps@9.1ms	32382 IOps@0.7ms	15%	-92%
64K	1559 MB/s@5.4ms	1871 MB/s@0.8ms	20%	-85%
256K	1695 MB/s@14.8ms	4773 MB/s@1.3ms	182%	-91%
512K	1697 MB/s@27.2ms	4924 MB/s@1.9ms	190%	-93%
1024K	1706 MB/s@54.1ms	6186 MB/s@3.7ms	263%	-93%

Random Write	cbt_4thFeb_main_4k_8vol	cbt_7thFeb_alexls22_econ_4k_8vol_finegrain	%change throughput	%change latency
4K	2746 IOps@46.6ms	7087 IOps@3.2ms	158%	-93%
8K	2917 IOps@43.8ms	7378 IOps@3.1ms	153%	-93%
16K	5957 IOps@16.1ms	11607 IOps@2.0ms	95%	-88%
32K	3629 IOps@35.2ms	9772 IOps@2.3ms	169%	-93%
64K	191 MB/s@32.9ms	617 MB/s@2.4ms	223%	-93%
256K	421 MB/s@39.7ms	1280 MB/s@4.6ms	204%	-88%
512K	472 MB/s@61.9ms	1883 MB/s@4.9ms	299%	-92%
1024K	478 MB/s@52.1ms	2239 MB/s@10.1ms	368%	-81%

Comparison summary for cbt-4thFeb-main-4k-8vol vs cbt-7thFeb-alexls22-econ-4k-8vol-finegrain

Random Read/Write	cbt_4thFeb_main_4k_8vol	cbt_7thFeb_alexls22_econ_4k_8vol_finegrain	%change throughput	%change latency
16K_70/30	7501 IOps@8.5ms	12552 IOps@1.8ms	67%	-79%
64K_30/70	277 MB/s@13.2ms	516 MB/s@2.9ms	86%	-78%

Random Read/Write	cbt_4thFeb_main_4k_8vol	cbt_7thFeb_alexls22_econ_4k_8vol_finegrain	%change throughput	%change latency
16K_70/30	7501 IOps@8.5ms	12552 IOps@1.8ms	67%	-79%
64K_30/70	277 MB/s@13.2ms	516 MB/s@2.9ms	86%	-78%

Response Curves

Sequential Read

512K Sequential Read

1024K Sequential Read

Sequential Write

4K Sequential Write

8K Sequential Write

16K Sequential Write

32K Sequential Write

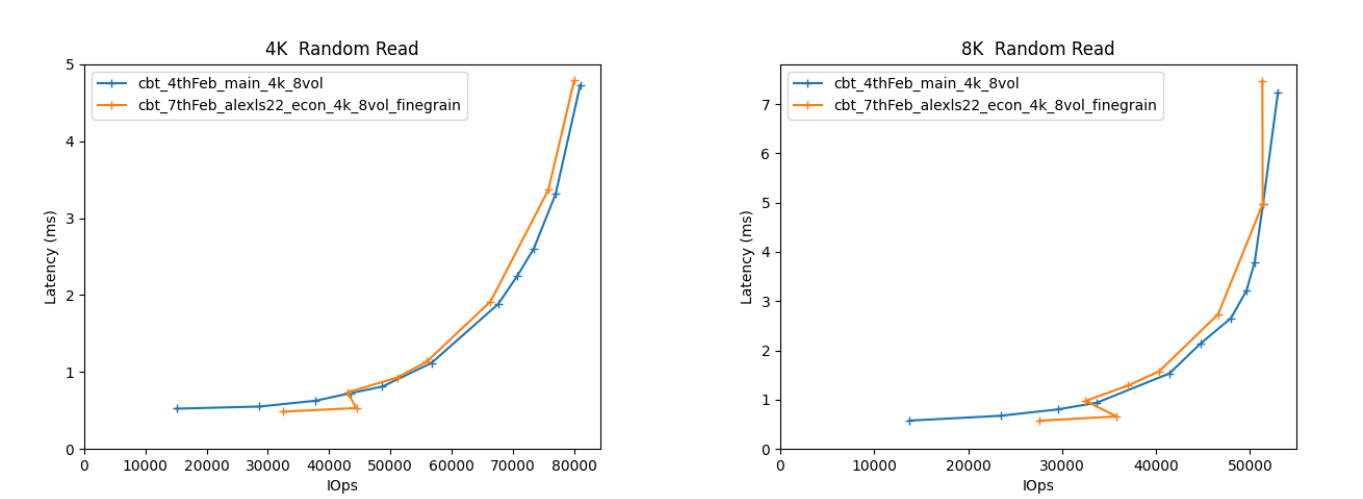## 64K Sequential Write

256K Sequential Write

512K Sequential Write
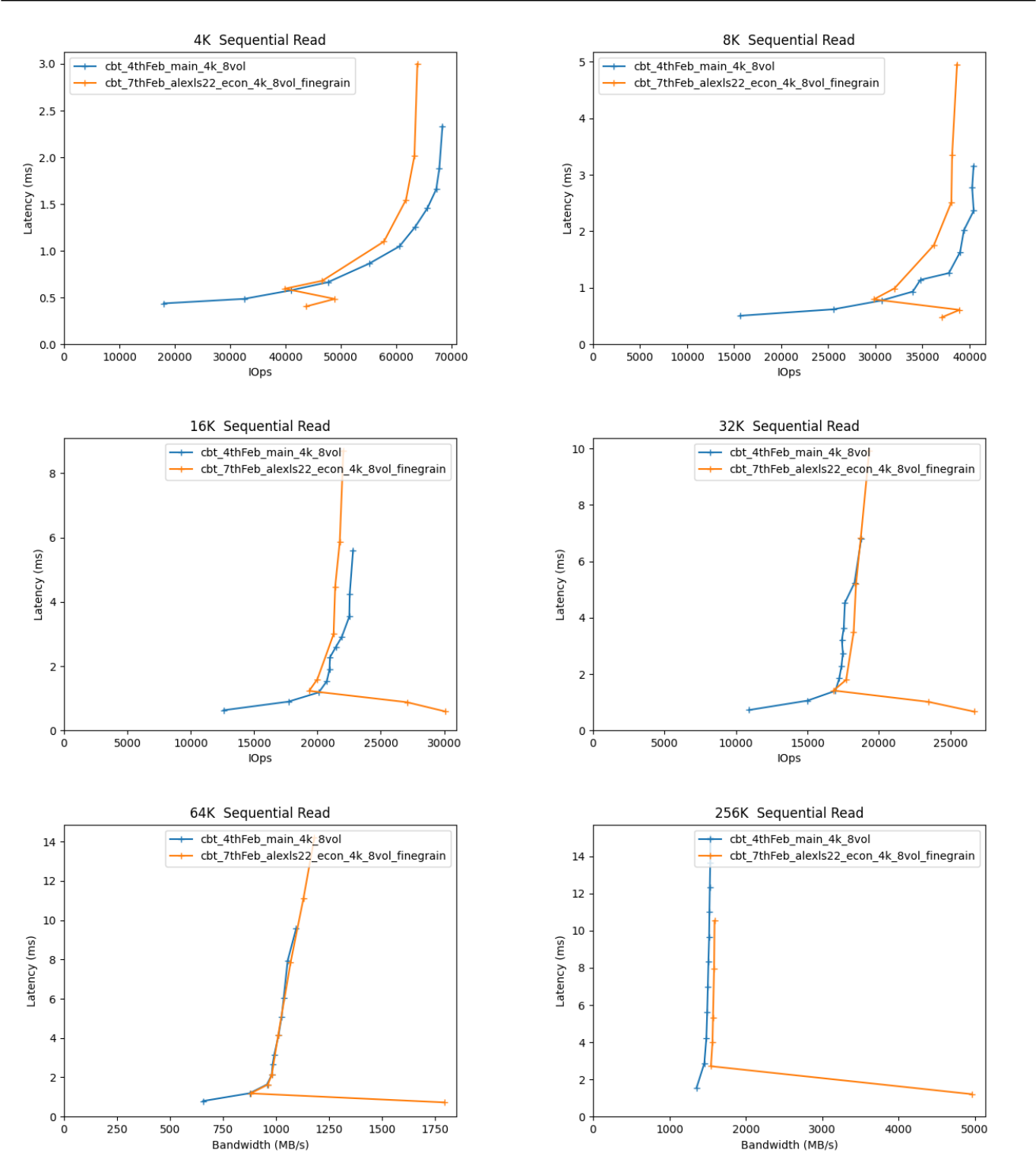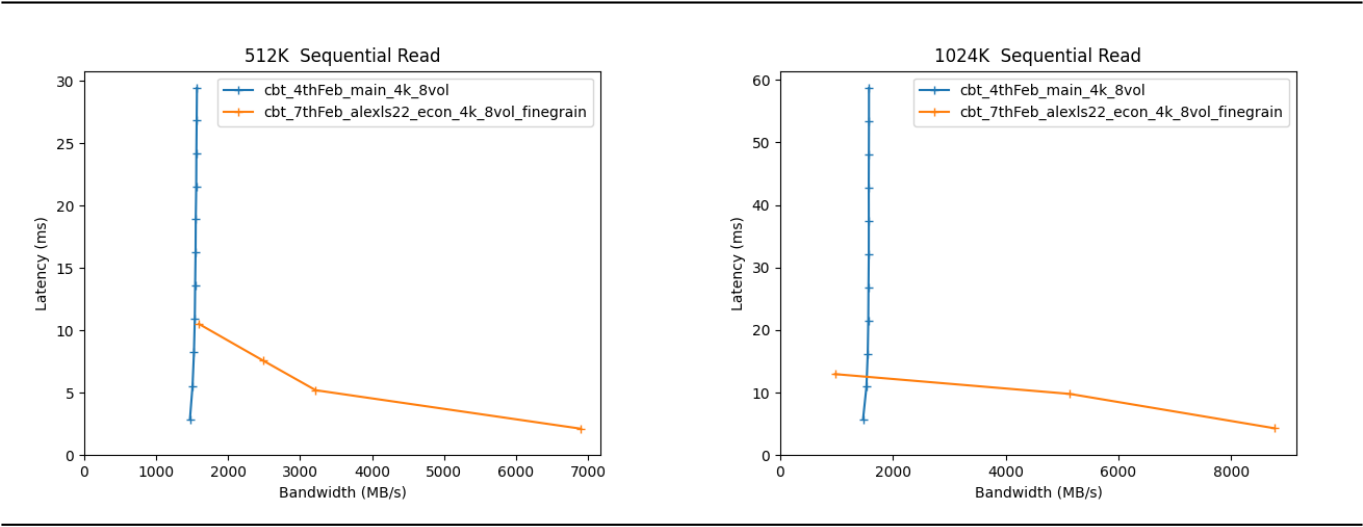
1024K Sequential Write

Random Read

4K Random Read

8K Random Read

16K Random Read

32K Random Read

64K Random Read

256K Random Read

512K Random Read
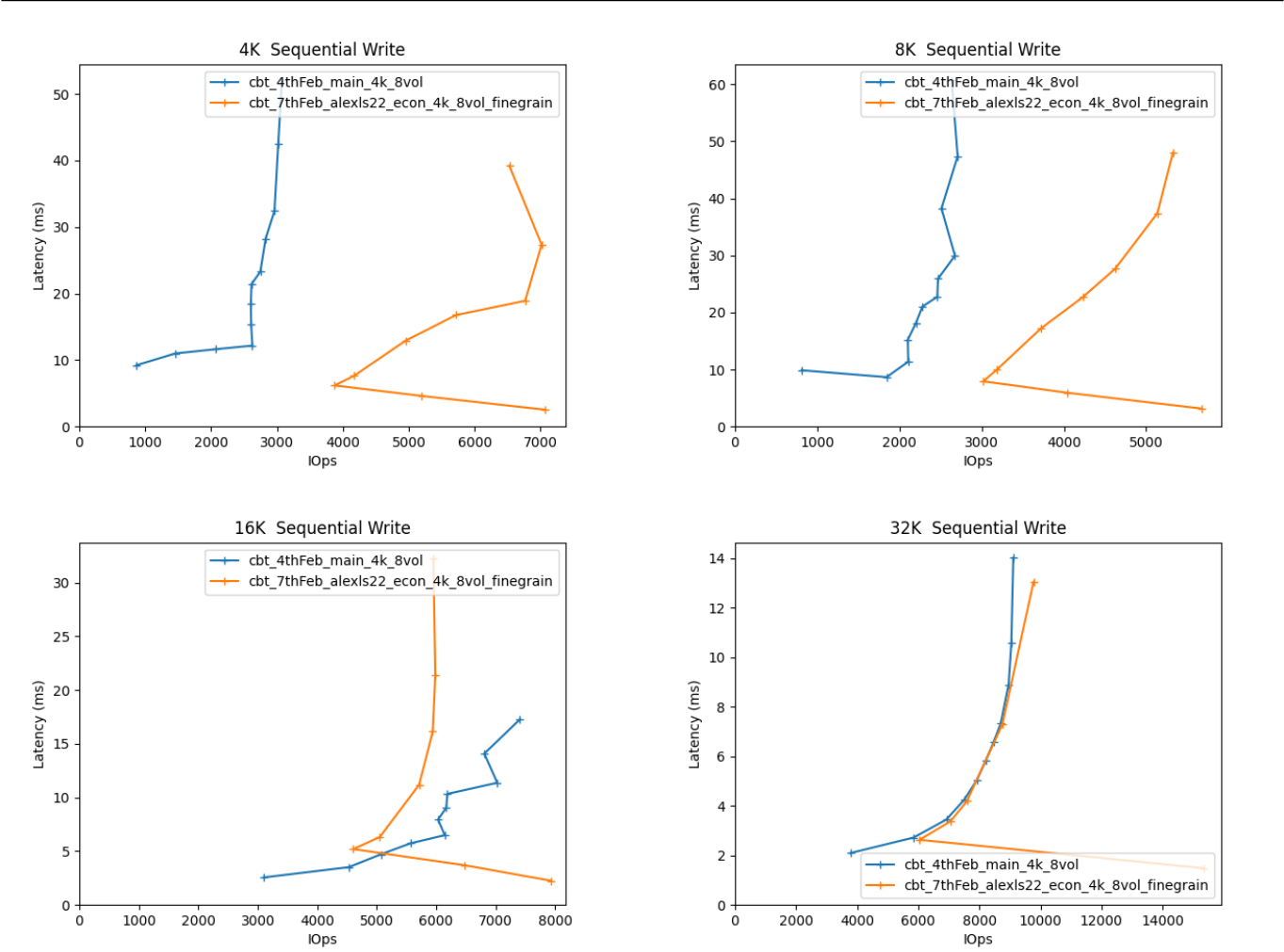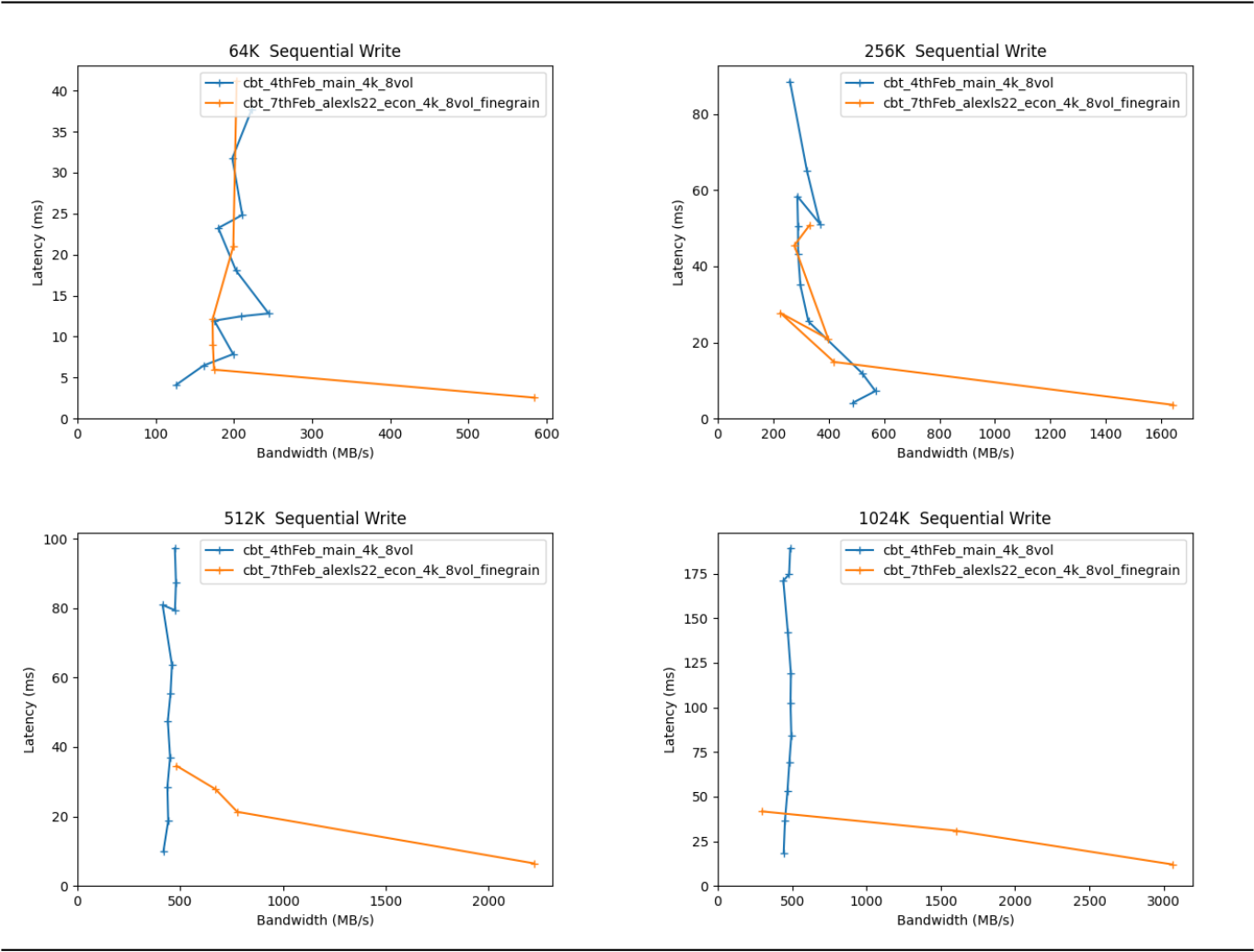
1024K Random Read

Random Write

4K Random Write

Legend:
- cbt_4thFeb_main_4k_8vol
- cbt_7thFeb_alexls22_econ_4k_8vol_finegrain

8K Random Write

Legend:
- cbt_4thFeb_main_4k_8vol
- cbt_7thFeb_alexls22_econ_4k_8vol_finegrain

16K Random Write

Legend:
- cbt_4thFeb_main_4k_8vol
- cbt_7thFeb_alexls22_econ_4k_8vol_finegrain

32K Random Write

Legend:
- cbt_4thFeb_main_4k_8vol
- cbt_7thFeb_alexls22_econ_4k_8vol_finegrain

64K Random Write

Legend:
- cbt_4thFeb_main_4k_8vol
- cbt_7thFeb_alexls22_econ_4k_8vol_finegrain

256K Random Write

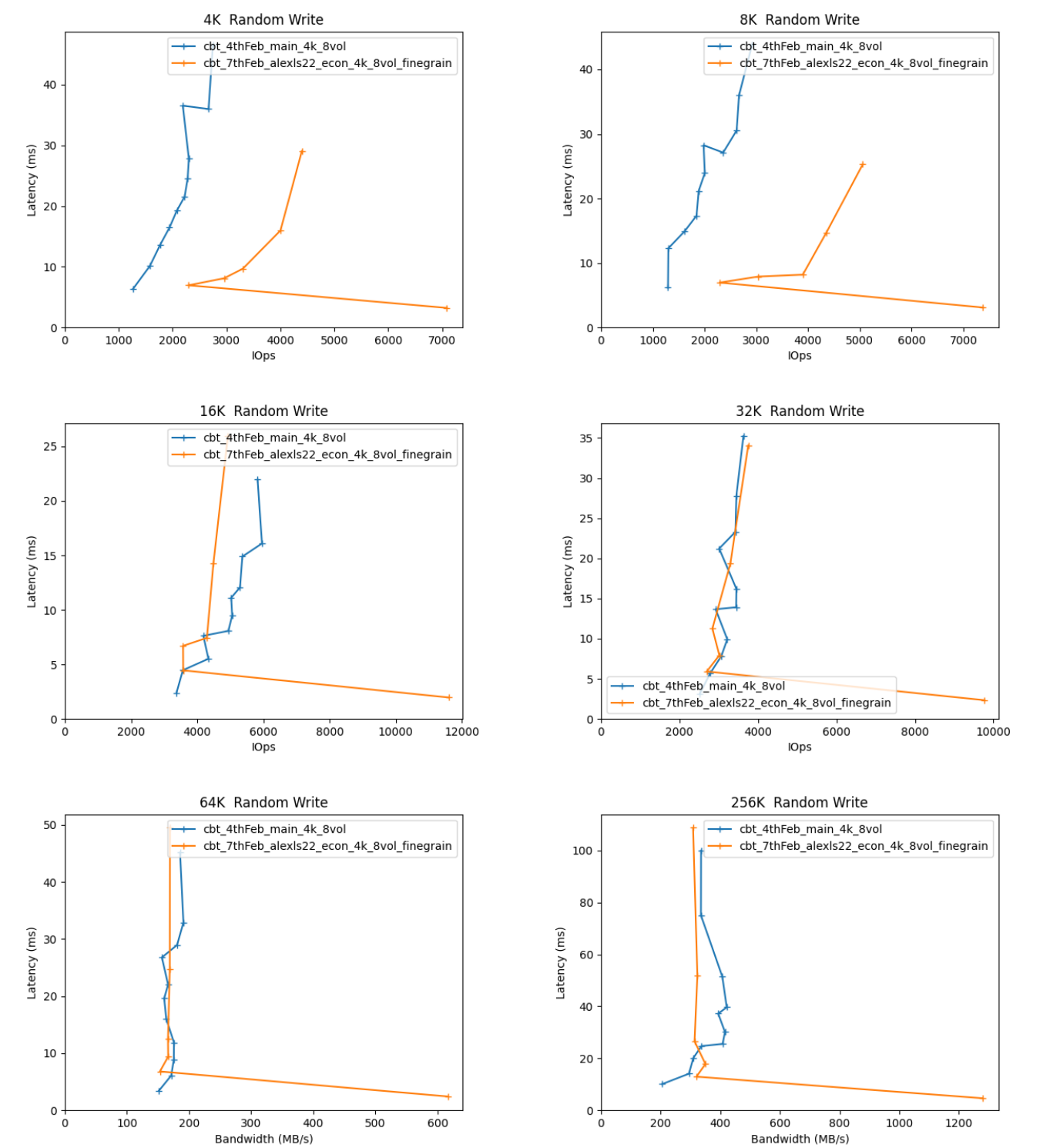Legend:
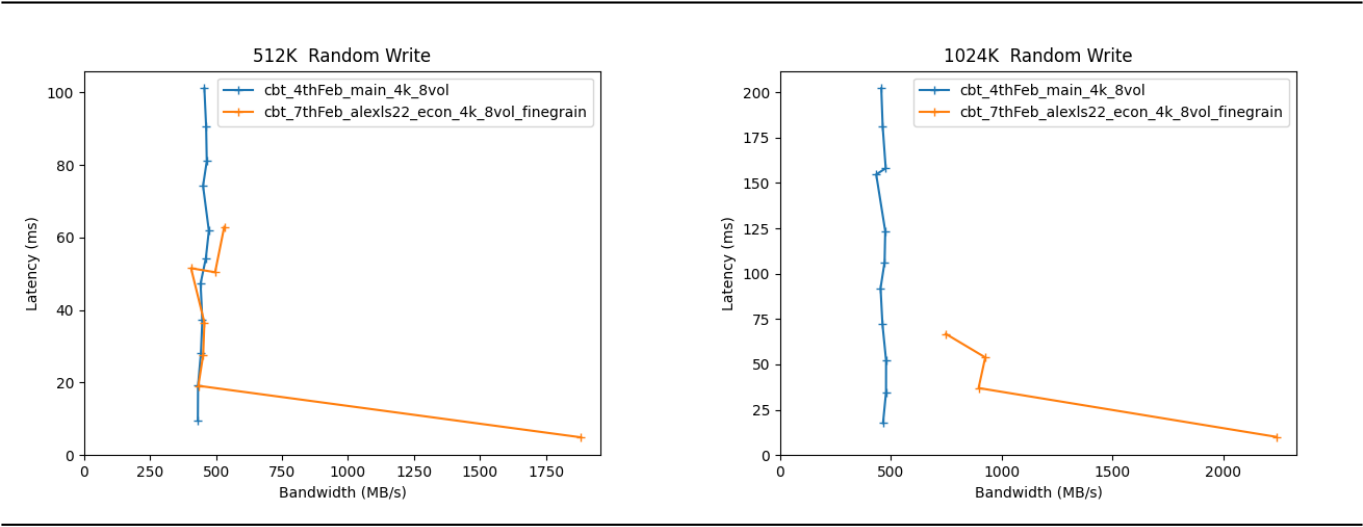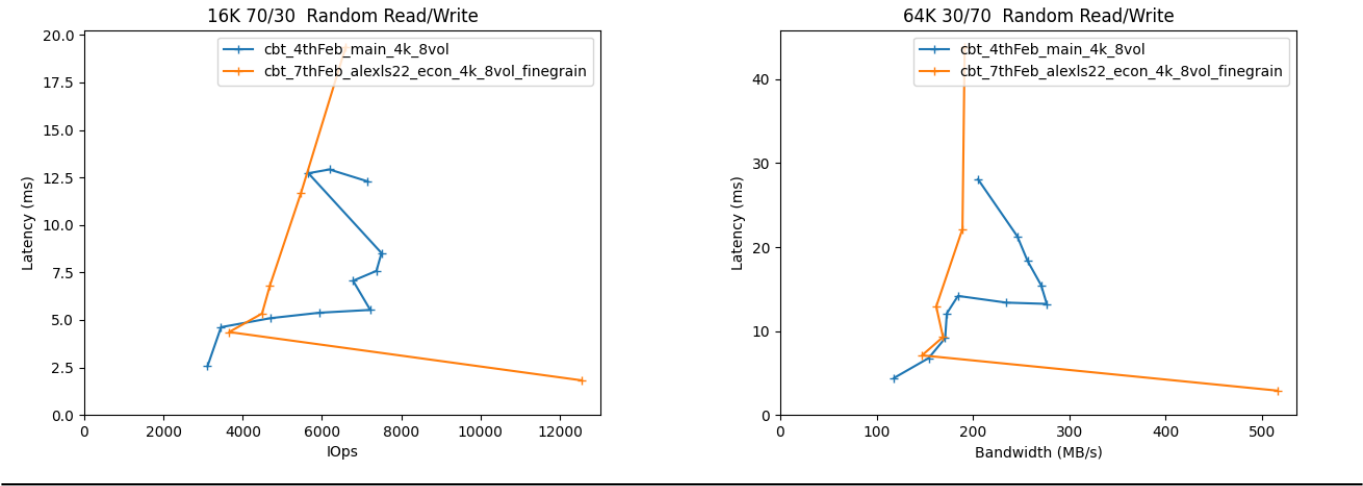- cbt_4thFeb_main_4k_8vol
- cbt_7thFeb_alexls22_econ_4k_8vol_finegrain

Random Read/Write

Configuration yaml files

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

results

```
librbdfio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
  osd_ra:
  - 4096
  poolname: rbd_replicated
  precond_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 52500
  volumes_per_client:
  - 8
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      - 48
      jobname: randread
      mode: randread
      numjobs:
      - 1
```

```
      op_size: 16384
    16krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 16384
    1Mrandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 1048576
    1Mrandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 1048576
    1Mseqread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
```

```
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 1048576
    1Mseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 1048576
    256krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 262144
    256krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
```

```
      op_size: 262144
    32krandomread:
      iodepth:
      - 1
      - 2
      - 4
      - 6
      - 8
      - 10
      - 12
      - 16
      - 20
      - 28
      - 32
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 32768
    32krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 32768
    4krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 20
      - 24
      - 32
      - 48
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 4096
    4krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
```

```
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 4096
    512krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 524288
    512krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 524288
    512kseqread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqread
      mode: read
      numjobs:
      - 1
```

```
        op_size: 524288
    512kseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 524288
    64k3070:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 30
    64k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 70
    64krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
```

```
        - 6
        - 8
        - 10
        - 12
        - 16
        - 20
        - 28
      jobname: randread
      mode: randread
      numjobs:
        - 1
      op_size: 65536
    64krandomwrite:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 7
        - 8
        - 10
        - 12
        - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
        - 1
      op_size: 65536
    64kseqread:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 8
        - 10
        - 12
        - 16
        - 20
      jobname: read
      mode: read
      numjobs:
        - 1
      op_size: 65536
    64kseqwrite:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 7
        - 8
        - 10
        - 12
        - 16
      jobname: write
      mode: write
```

```
      numjobs:
      - 1
      op_size: 65536
    8krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      - 48
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 8192
    8krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 8192
    precondition:
      iodepth:
      - 2
      jobname: precond1rw
      mode: randwrite
      monitor: false
      numjobs:
      - 1
      op_size: 65536
      precond: true
    seq16kread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: seqread
```

```
    mode: read
    numjobs:
    - 1
    op_size: 16384
  seq16kwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 10
    - 12
    - 16
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 16384
  seq256kread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 9
    - 10
    - 11
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 262144
  seq256kwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 9
    - 10
    - 11
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 262144
  seq32kread:
    iodepth:
    - 1
    - 2
    - 3
```

```
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 32768
    seq32kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 32768
    seq4kread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 6
      - 8
      - 10
      - 12
      - 14
      - 16
      - 20
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 4096
    seq4kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      - 20
```

```
          jobname: seqwrite
          mode: write
          numjobs:
          - 1
          op_size: 4096
        seq8kread:
          iodepth:
          - 1
          - 2
          - 3
          - 4
          - 5
          - 6
          - 8
          - 10
          - 12
          - 14
          - 16
          jobname: seqread
          mode: read
          numjobs:
          - 1
          op_size: 8192
        seq8kwrite:
          iodepth:
          - 1
          - 2
          - 3
          - 4
          - 5
          - 6
          - 7
          - 8
          - 10
          - 12
          - 16
          - 20
          jobname: seqwrite
          mode: write
          numjobs:
          - 1
          op_size: 8192
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
      a: null
  mkfs_opts: -f -i size=2048
  mons:
    --- server1 ---:
      a: --- IP Address --:6789
```

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

  librbdfio:
    cmd_path: /usr/local/bin/fio
    fio_out_format: json
    log_avg_msec: 100
    log_bw: true
    log_iops: true
    log_lat: true
    norandommap: true
    osd_ra:
    - 4096
    poolname: rbd_replicated
    precond_time: 600
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 60
    time_based: true
    use_existing_volumes: true
    vol_size: 52500
    volumes_per_client:
    - 8
    workloads:
      16k7030:
        iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 7
        - 8
        - 9
        - 10
        - 11
        jobname: randmix
        mode: randrw
        numjobs:
        - 1
        op_size: 16384
        rwmixread: 70
      16krandomread:
        iodepth:
        - 1
        - 2
        - 3
```

```
      - 4
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      - 48
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
    16krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 16384
    1Mrandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 1048576
    1Mrandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randwrite
```

```yaml
    mode: randwrite
    numjobs:
    - 1
    op_size: 1048576
1Mseqread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 9
    - 10
    - 11
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 1048576
1Mseqwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 9
    - 10
    - 11
    jobname: seqwrite
    mode: write
    numjobs:
    - 1
    op_size: 1048576
256krandomread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 10
    - 12
    - 16
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 262144
256krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
```

```
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 262144
    32krandomread:
      iodepth:
      - 1
      - 2
      - 4
      - 6
      - 8
      - 10
      - 12
      - 16
      - 20
      - 28
      - 32
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 32768
    32krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 32768
    4krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 20
      - 24
      - 32
      - 48
      jobname: randread
```

```
    mode: randread
    numjobs:
    - 1
    op_size: 4096
  4krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 10
    - 12
    - 16
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 4096
  512krandomread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 9
    - 10
    - 11
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 524288
  512krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 9
    - 10
    - 11
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 524288
  512kseqread:
    iodepth:
    - 1
    - 2
    - 3
```

```
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 524288
    512kseqwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 524288
    64k3070:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 65536
      rwmixread: 30
    64k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
```

```
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 65536
    rwmixread: 70
64krandomread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 16
    - 20
    - 28
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 65536
64krandomwrite:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 7
    - 8
    - 10
    - 12
    - 16
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 65536
64kseqread:
    iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 8
    - 10
    - 12
    - 16
    - 20
    jobname: read
    mode: read
    numjobs:
    - 1
    op_size: 65536
64kseqwrite:
    iodepth:
    - 1
```

```
        - 2
        - 3
        - 4
        - 5
        - 6
        - 7
        - 8
        - 10
        - 12
        - 16
      jobname: write
      mode: write
      numjobs:
      - 1
      op_size: 65536
    8krandomread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
      - 48
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 8192
    8krandomwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
      op_size: 8192
    precondition:
      iodepth:
      - 2
      jobname: precond1rw
      mode: randwrite
      monitor: false
      numjobs:
      - 1
      op_size: 65536
      precond: true
    seq16kread:
      iodepth:
```

```
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 7
        - 8
        - 10
        - 12
        - 16
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 16384
    seq16kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 16384
    seq256kread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
      - 10
      - 11
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 262144
    seq256kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 9
```

```
   - 10
   - 11
   jobname: seqwrite
   mode: write
   numjobs:
   - 1
   op_size: 262144
 seq32kread:
   iodepth:
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 10
   - 12
   - 16
   jobname: seqread
   mode: read
   numjobs:
   - 1
   op_size: 32768
 seq32kwrite:
   iodepth:
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7
   - 8
   - 10
   - 12
   - 16
   jobname: seqwrite
   mode: write
   numjobs:
   - 1
   op_size: 32768
 seq4kread:
   iodepth:
   - 1
   - 2
   - 3
   - 4
   - 6
   - 8
   - 10
   - 12
   - 14
   - 16
   - 20
   jobname: seqread
   mode: read
   numjobs:
   - 1
   op_size: 4096
 seq4kwrite:
   iodepth:
```

```
        - 1
        - 2
        - 3
        - 4
        - 5
        - 6
        - 7
        - 8
        - 10
        - 12
        - 16
        - 20
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 4096
    seq8kread:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 8
      - 10
      - 12
      - 14
      - 16
      jobname: seqread
      mode: read
      numjobs:
      - 1
      op_size: 8192
    seq8kwrite:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 6
      - 7
      - 8
      - 10
      - 12
      - 16
      - 20
      jobname: seqwrite
      mode: write
      numjobs:
      - 1
      op_size: 8192
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
```

```
   clusterid: ceph
   conf_file: /cbt/ceph.conf.4x1x1.fs
   fs: xfs
   head: --- server1 ---
   iterations: 1
   mgrs:
     --- server1 ---:
       a: null
   mkfs_opts: -f -i size=2048
   mons:
     --- server1 ---:
       a: --- IP Address --:6789
   mount_opts: -o inode64,noatime,logbsize=256k
   osds:
   - --- server1 ---
   osds_per_node: 6
   pdsh_ssh_args: -a -x -l%u %h
   rados_cmd: /usr/bin/rados
   rbd_cmd: /usr/bin/rbd
   tmp_dir: /tmp/cbt
   use_existing: true
   user: root
monitoring_profiles:
   collectl:
     args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```

results

```
librbdfio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
  osd_ra:
  - 4096
  poolname: rbd_replicated
  precond_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 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
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
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
      - 10
      - 12
      - 14
      - 16
      - 20
    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
      - 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
      - 8
      - 16
      - 24
      - 32
      - 40
      - 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
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
  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:
          - 1
          - 2
          - 3
          - 4
          - 5
          - 8
          - 16
          - 24
          - 32
          - 64
```

```
        - 128
    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
      precond: true
      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
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 192
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
  - 3
  - 5
  - 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
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    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
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
```

```
        - 192
        - 256
      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
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
        - 256
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
      a: null
  mkfs_opts: -f -i size=2048
  mons:
    --- server1 ---:
      a: --- IP Address --:6789
  mount_opts: -o inode64,noatime,logbsize=256k
  osds:
  - --- server1 ---
```

```
  osds_per_node: 6
  pdsh_ssh_args: -a -x -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}

  librbdfio:
    cmd_path: /usr/local/bin/fio
    fio_out_format: json
    log_avg_msec: 100
    log_bw: true
    log_iops: true
    log_lat: true
    norandommap: true
    osd_ra:
    - 4096
    poolname: rbd_replicated
    precond_time: 600
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 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
          - 8
          - 12
          - 16
          - 20
          - 24
          - 28
          - 32
```

```
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
  - 10
  - 12
  - 14
  - 16
  - 20
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
        - 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
            - 8
            - 16
            - 24
            - 32
            - 40
            - 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
      - 3
      - 4
      - 6
      - 8
      - 12
      - 16
      - 20
      - 24
      - 32
    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:
      - 1
```

```
            - 2
            - 3
            - 4
            - 5
            - 8
            - 16
            - 24
            - 32
            - 64
            - 128
        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
          precond: true
          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
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    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
      - 3
      - 5
      - 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
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    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
                - 12
                - 16
                - 24
                - 32
                - 64
                - 96
                - 128
                - 192
                - 256
          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
            - 12
            - 16
            - 24
            - 32
            - 64
            - 96
            - 128
            - 192
            - 256
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}
```