Comparitive Performance Report for cbt-25thJan-alexls17-econ-4k-8vol-reverse vs cbt-28thJan-alexls17-econ-4k-8vol-reverse-3min

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# Comparison summary for cbt-25thJan-alexls17-econ-4k-8vol-reverse vs cbt-28thJan-alexls17-econ-4k-8vol-reverse-3min

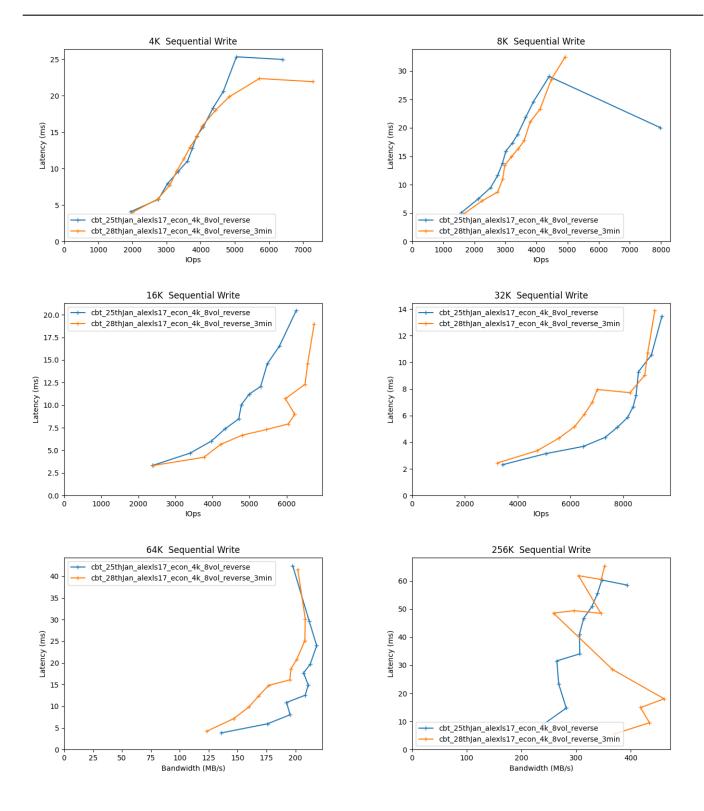
Sequential Write	cbt_25thJan_alexls17_	eton 28kh Swol atexts ?	e‰h <u>a4kge</u> 8hoob <u>ug</u> hqouste	_3min%change latency
4K	6403 IOps@25.0ms	7292 IOps@21.9ms	14%	-12%
8K	7979  IOps@20.0ms	4923  IOps@32.5ms	-38%	62%
16K	6256  IOps@20.4ms	6740  IOps@19.0ms	8%	-7%
32K	9468  IOps@13.5ms	9196  IOps@13.9ms	-3%	3%
64K	218  MB/s@24.0 ms	208  MB/s@30.1ms	-5%	25%
256K	$394~\mathrm{MB/s@58.5ms}$	461  MB/s@18.1 ms	17%	-69%
512K	458  MB/s = 82.2 ms	465  MB/s@53.9 ms	2%	-34%
1024K	477  MB/s@158.0 ms	475  MB/s@87.7 ms	-0%	-44%

Random Write	cbt_25thJan_alexls17	ectotn 28kh_Bwol atextsts?	e‰h <u>a4dge</u> 8hoo <u>bug</u> hyeuste	_3min%change latency
4K	5448 IOps@11.7ms	3296 IOps@38.8ms	-40%	232%
8K	5182  IOps@15.4ms	3734  IOps@34.3ms	-28%	123%
16K	5227  IOps@18.3ms	$4827 \; \mathrm{IOps@13.2ms}$	-8%	-28%
32K	3676  IOps@26.1ms	3579  IOps@26.8ms	-3%	3%
64K	184  MB/s@45.4ms	240  MB/s@10.8 ms	30%	-76%
256K	394  MB/s@15.8 ms	421  MB/s@14.8 ms	7%	-6%
512K	464  MB/s@99.1 ms	466  MB/s@80.8 ms	0%	-18%
1024K	477  MB/s@193.5 ms	472  MB/s@177.5 ms	-1%	-8%

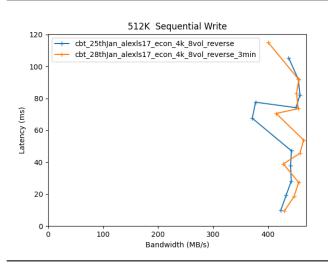
Random Read/Write	$cbt\_25thJan\_alexls17\_$	ectotn 28kh_Swol atextsrse	$_{ m e}$ & $_{ m e}$ $_{ m e}$ $_{ m e}$ $_{ m e}$	$_3$ min%change latency
16K_70/30	7935  IOps@8.1ms	5639  IOps@14.2ms	-29%	75%
$64K_{20}/30$	295  MB/s@16.0ms	282  MB/s@20.5ms	-4%	28%
$64K_30/70$	$233~\mathrm{MB/s@13.5ms}$	245  MB/s@17.1 ms	5%	27%

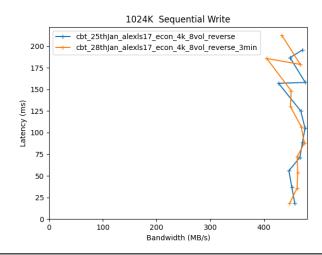
# Response Curves

## Sequential Write

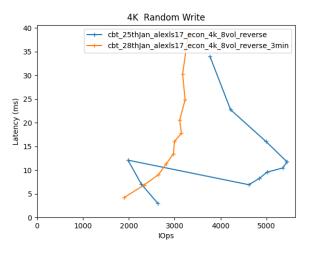


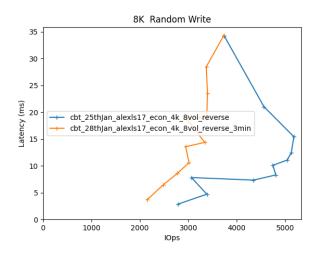
Response Curves Random Write

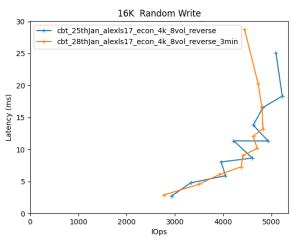


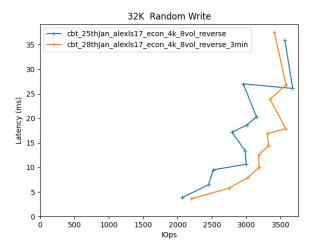


#### Random Write

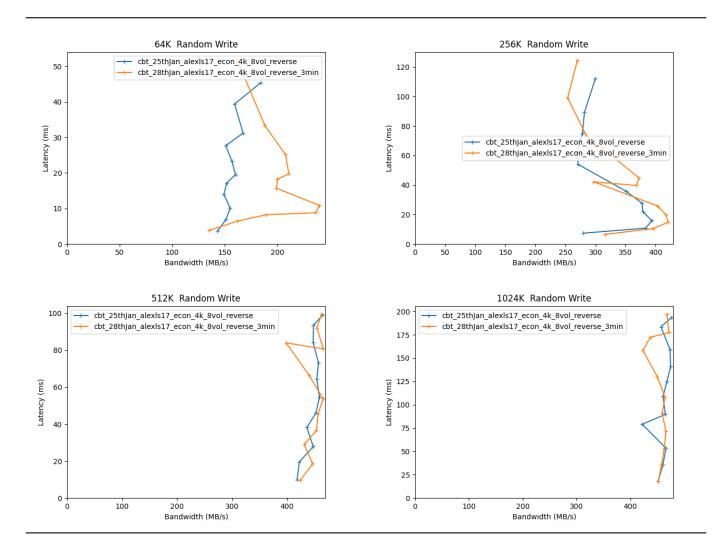




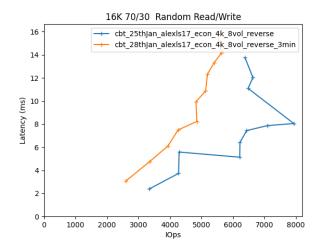


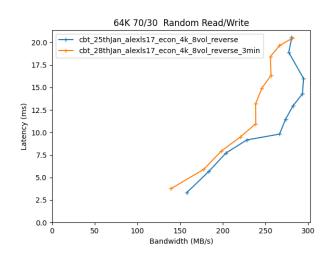


Response Curves Random Read/Write

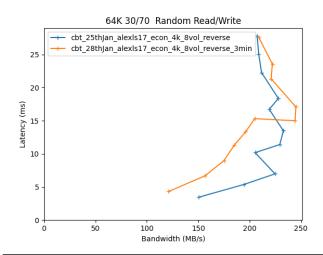


## Random Read/Write





Response Curves 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:
  workloads:
    16k7030:
      iodepth:
      - 11
      - 10
      - 9
      - 8
      - 7
      - 6
      - 5
      - 4
      - 3
      - 2
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 48
      - 32
      - 24
      - 20
      - 16
      - 12
      - 8
      - 4
      - 3
      - 2
      - 1
      jobname: randread
      mode: randread
      numjobs:
      - 1
```

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

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

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

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

```
op_size: 524288
512kseqwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 524288
64k3070:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randmix
 mode: randrw
 numjobs:
 - 1
 op_size: 65536
 rwmixread: 30
64k7030:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
 jobname: randmix
 mode: randrw
 numjobs:
  - 1
 op_size: 65536
  rwmixread: 70
64 krandomread:
 iodepth:
  - 28
  - 20
  - 16
  - 12
```

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

mode: write

 $\verb|cbt-25thJan-alexls| 17-econ-4k-8vol-reverse | vs. | \verb|cbt-28thJan-alexls| 17-econ-4k-8vol-reverse-3min | vs. |$ 

```
numjobs:
  op_size: 65536
8krandomread:
  iodepth:
  - 48
  - 32
  - 24
  - 20
  - 16
  - 12
  - 8
  - 4
  - 3
  - 2
  - 1
  jobname: randread
 mode: randread
 numjobs:
 - 1
 op_size: 8192
8krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  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:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqread
```

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

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

```
jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 4096
      seq8kread:
        iodepth:
        - 16
        - 14
        - 12
        - 10
        - 8
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 8192
      seq8kwrite:
        iodepth:
        - 20
        - 16
        - 12
        - 10
        - 8
        - 7
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        jobname: seqwrite
        mode: write
        numjobs:
        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
  - --- 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:
        - 11
        - 10
        - 9
        - 8
        - 7
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        jobname: randmix
        mode: randrw
        numjobs:
        - 1
        op_size: 16384
        rwmixread: 70
      16krandomread:
        iodepth:
        - 48
        - 32
        - 24
```

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

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

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

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

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

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

```
- 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: write
 mode: write
 numjobs:
  - 1
  op_size: 65536
8krandomread:
  iodepth:
  - 48
  - 32
  - 24
  - 20
  - 16
  - 12
  - 8
  - 4
  - 3
  - 2
  - 1
  jobname: randread
 mode: randread
 numjobs:
  - 1
  op_size: 8192
8krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  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:
```

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

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

```
- 20
        - 16
        - 12
        - 10
        - 8
        - 7
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 4096
      seq8kread:
        iodepth:
        - 16
        - 14
        - 12
        - 10
        - 8
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 8192
      seq8kwrite:
        iodepth:
        - 20
        - 16
        - 12
        - 10
        - 8
        - 7
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        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}
```

### $results\_old$

```
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: 180
  time_based: true
  use_existing_volumes: true
  vol_size: 52500
  volumes_per_client:
  workloads:
    16k7030:
      iodepth:
      - 11
      - 10
      - 9
      - 8
      - 7
      - 6
      - 5
      - 4
      - 3
      - 2
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomwrite:
      iodepth:
      - 16
      - 12
      - 10
      - 8
      - 7
      - 6
      - 5
      - 4
      - 3
      - 2
      - 1
      jobname: randwrite
      mode: randwrite
      numjobs:
      - 1
```

```
op_size: 16384
1Mrandomwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 1048576
1Mseqwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
 - 1
 op_size: 1048576
256krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 1
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 262144
32krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
```

```
- 5
  - 4
  - 3
  - 2
  - 1
 jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 32768
4krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
  mode: randwrite
 numjobs:
  - 1
  op_size: 4096
512krandomwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
 jobname: randwrite
 mode: randwrite
 numjobs:
  op_size: 524288
512kseqwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
```

```
op_size: 524288
64k3070:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randmix
 mode: randrw
 numjobs:
  - 1
 op_size: 65536
 rwmixread: 30
64k7030:
 iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randmix
 mode: randrw
 numjobs:
 - 1
 op_size: 65536
 rwmixread: 70
64krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
 op_size: 65536
64kseqwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
```

```
- 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: write
  mode: write
 numjobs:
  - 1
  op_size: 65536
8krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  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
seq16kwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
 op_size: 16384
seq256kwrite:
 iodepth:
  - 11
  - 10
  - 9
```

```
- 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 262144
seq32kwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 32768
seq4kwrite:
  iodepth:
  - 20
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 4096
seq8kwrite:
  iodepth:
  - 20
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
```

```
- 1
        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
  - --- 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: 180
    time_based: true
    use_existing_volumes: true
    vol_size: 52500
```

```
volumes_per_client:
- 8
workloads:
  16k7030:
    iodepth:
    - 11
    - 10
    - 9
    - 8
    - 7
    - 6
    - 5
    - 4
    - 3
    - 2
    - 1
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 16384
    rwmixread: 70
  16krandomwrite:
    iodepth:
    - 16
    - 12
    - 10
    - 8
    - 7
    - 6
    - 5
    - 4
    - 3
    - 2
    - 1
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 16384
  1Mrandomwrite:
    iodepth:
    - 11
    - 10
    - 9
    - 8
    - 7
    - 6
    - 5
    - 4
    - 3
    - 2
    - 1
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 1048576
  1Mseqwrite:
    iodepth:
    - 11
    - 10
    - 9
```

```
- 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  op_size: 1048576
256krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 262144
32krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 32768
{\tt 4krandomwrite:}
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
```

```
mode: randwrite
 numjobs:
  - 1
  op_size: 4096
512krandomwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
 mode: randwrite
 numjobs:
 - 1
 op_size: 524288
512kseqwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
 op_size: 524288
64k3070:
 iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
 jobname: randmix
 mode: randrw
 numjobs:
  - 1
 op_size: 65536
 rwmixread: 30
64k7030:
 iodepth:
  - 11
  - 10
```

```
- 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randmix
 mode: randrw
 numjobs:
  - 1
 op_size: 65536
 rwmixread: 70
64krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 65536
64kseqwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: write
 mode: write
 numjobs:
  - 1
  op_size: 65536
8krandomwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
```

 $cbt-25thJan-alexls17-econ-4k-8vol-reverse\ vs\ cbt-28thJan-42exls17-econ-4k-8vol-reverse-3min$ 

```
- 1
  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
seq16kwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 16384
seq256kwrite:
  iodepth:
  - 11
  - 10
  - 9
  - 8
  - 7
  - 6
  - 5
  - 4
  - 3
  - 2
  - 1
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 262144
seq32kwrite:
  iodepth:
  - 16
  - 12
  - 10
  - 8
  - 7
  - 6
  - 5
  - 4
```

```
- 2
        - 1
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 32768
      {\tt seq4kwrite:}
        iodepth:
        - 20
        - 16
        - 12
        - 10
        - 8
        - 7
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        jobname: seqwrite
        mode: write
        numjobs:
        - 1
        op_size: 4096
      seq8kwrite:
        iodepth:
        - 20
        - 16
        - 12
        - 10
        - 8
        - 7
        - 6
        - 5
        - 4
        - 3
        - 2
        - 1
        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}
```