Comparitive Performance Report for cbt-3rdAug-4k-o01-6+2-squid vs cbt-2ndAug-4k-o01-6+2-ecopt2-optoff vs cbt-31stJul-16k-o01-6+2-ecopt2

Table of contents

- $\bullet \ \ Comparison \ summary \ for \ cbt-3rdAug-4k-o01-6+2-squid \ vs \ cbt-2ndAug-4k-o01-6+2-ecopt2-optoff \ vs \ cbt-31stJul-16k-o01-6+2-ecopt2$
- Response Curves
 - Sequential Read
 - Sequential Write
 - Random Read
 - Random Write
 - Random Read/Write
- Configuration yaml files
 - results

Comparison summary for cbt-3rdAug-4k-o01-6+2-squid vs cbt-2ndAug-4k-o01-6+2-ecopt2-optoff vs cbt-31stJul-16k-o01-6+2-ecopt2

Sequential Read	cbt_3rdAug_4k_o0tl	o <u>6+22ndsAquigd_</u> 4ko01_	_6+2_e%cohtalgeptoffit	_31stJul_16k_o01	6+2_ %clpat2 ge
4.0K	58638@6.5ms	174037@2.2	197%	165897@2.3	183%
8.0K	53638@5.4ms	108076@2.7	101%	155175@2.5	189%
16.0K	46954@6.1ms	63433@4.5	35%	140148@2.0	198%
32.0 K	38463@5.0ms	40230@4.8	5%	71375@0.9	86%
64.0K	2255@7.4ms	2045@2.0	-9%	3172@5.3	41%
256.0K	4536@3.7ms	5269@3.2	16%	5330@3.1	18%
512.0K	5135@3.3ms	5629@3.0	10%	6067@2.8	18%
1024.0 K	$5217@4.0\mathrm{ms}$	5510@3.8	6%	6186@3.4	19%

Sequential Write	cbt_3rdAug_4k_o0t	b <u>6+22ndsAquigd_</u> 4ko01_	_6+2_e%optaligeptofft	_31stJul_16k_o01	6+2_ @cdpat2 1ge
4.0K	136232@11.3ms	135437@11.3	-1%	252680@6.1	85%
8.0K	130892@11.7ms	133837@11.5	2%	198909@7.7	52%
16.0K	86109@11.9ms	87833@11.6	2%	121584@8.4	41%
32.0 K	50412@15.2ms	57179@13.4	13%	73998@10.4	47%
64.0K	2095@16.0ms	2167@15.5	3%	2668@12.5	27%
256.0K	2797@23.9ms	3081@21.7	10%	3346@19.9	20%
512.0 K	2870@23.2 ms	3153@21.0	10%	3453@19.2	20%
1024.0K	3689@45.0 ms	4127@40.1	12%	4218@39.2	14%

Random Read	cbt_3rdAug_4k_o0b	b 6+2 nds 4qu ġd_4k_o01_	6+2_exaptangeptaffit	_31stJul16ko0	1_6+2_&cclpat2lge
4.0K	36952@10.4ms	109572@7.0	197%	104960@7.3	184%
8.0K	36424@21.1ms	77106@10.0	112%	99102@7.7	172%
16.0K	35473@16.6ms	47678@12.3	34%	90721@4.2	156%
32.0K	32165@7.9ms	33365@7.7	4%	61724@4.1	92%
64.0K	$1897@8.8\mathrm{ms}$	2116@7.9	12%	2610@6.4	38%
256.0K	$4363@3.8\mathrm{ms}$	5031@6.7	15%	4839@6.9	11%
512.0K	5493@4.6ms	6185@5.4	13%	6387@5.2	16%
1024.0 K	$5846@5.7\mathrm{ms}$	6375@5.2	9%	7048@4.7	21%

Random Write	cbt_3rdAug_4k_o0bl	o <u>6+22ndsAquigd_</u> 4ko01_	_6+2_exceptaffit	_31stJul_16ko01	1_6+2_ %cdpat2 ge
4.0K	10725@71.6ms	12633@60.8	18%	23646@21.6	120%
8.0K	10706@71.7ms	12534@61.3	17%	22343@34.4	109%
16.0 K	10123@50.5 ms	12246@41.8	21%	20872@24.5	106%
32.0K	10117@50.6ms	11819@43.3	17%	15269@16.7	51%
64.0K	$596@42.2\mathrm{ms}$	717@35.0	20%	827@30.4	39%
256.0K	1785@37.5ms	2188@30.5	23%	2105@31.7	18%

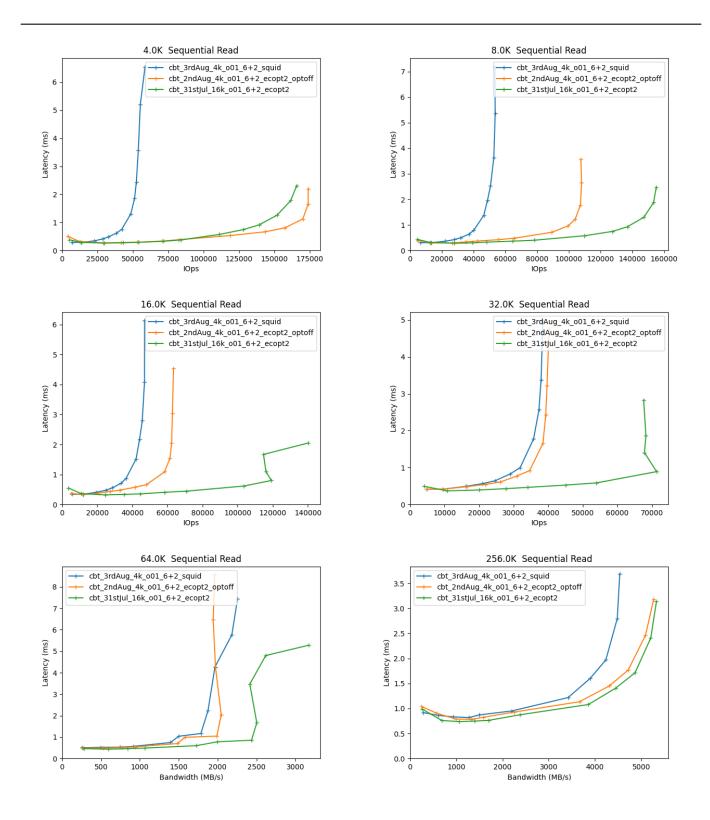
 $\label{lem:comparison} Comparison summary for cbt-3rdAug-4k-o01-6+2-squid vs cbt-2ndAug-4k-o01-6+2-ecopt2-optoff vs cbt-31stJul-16k-o01-6+2-ecopt2$

Random Write	$cbt_3rdAug_4k_o0tb$	<u>6+22ndsAquigd</u> 4k_o01_6+	-2_e‰ptangeptofbt	_31stJul_16k_o01	1_6+2_ ©cclpat2 ge
512.0K 1024.0K	$2534@9.7ms \ 3217@15.2ms$	2850@11.5 $3765@12.9$	12% $17%$	2910@11.3 3905@12.4	$15\% \\ 21\%$

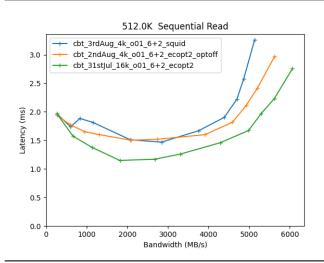
Random Read/Write	cbt_3rdAug_4k_o0b	b 6+22 ndsAquigd_4k_o01_	_6+2_eachtangeptofft	_31stJul16ko01	6+2_ %cl pat2lge
4.0K_70/30 16.0K_70/30 64.0K_70/30	21146@18.1ms 19770@12.9ms 1147@14.6ms	31748@12.1 $25760@9.9$ $1261@13.3$	50% $30%$ $10%$	46650@8.2 41239@6.2 1438@5.8	121% 109% 25%
$64.0 \text{K}_30/70$	$739@22.7\mathrm{ms}$	878@19.1	19%	982@17.0	33%

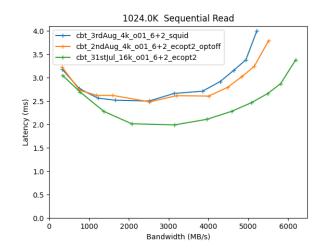
Response Curves

Sequential Read

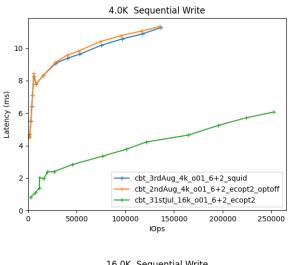


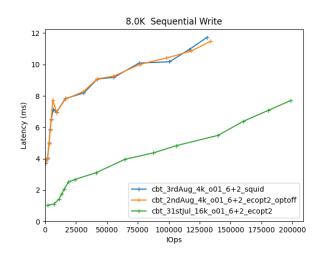
Response Curves Sequential Write

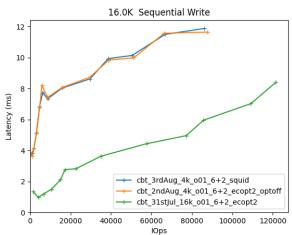


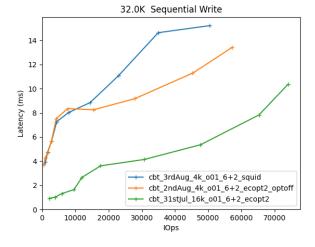


Sequential Write

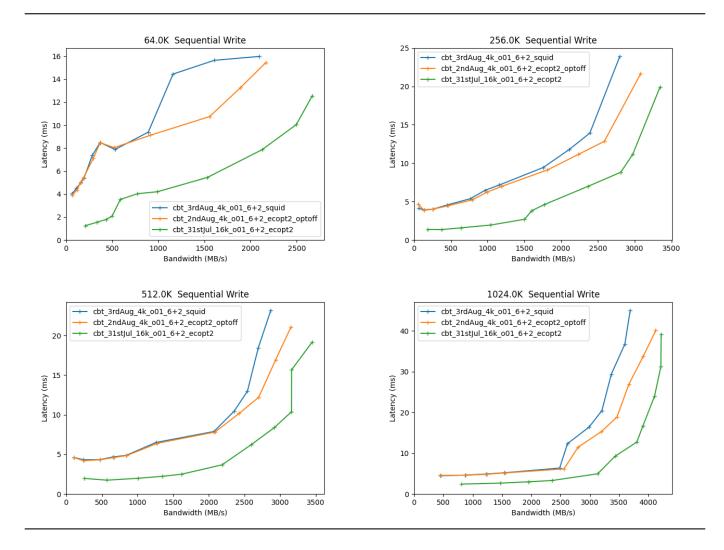




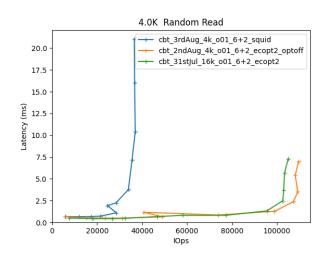


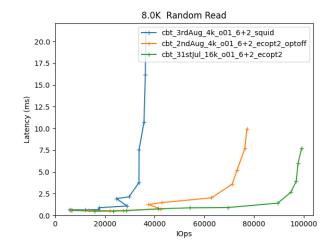


Response Curves Random Read

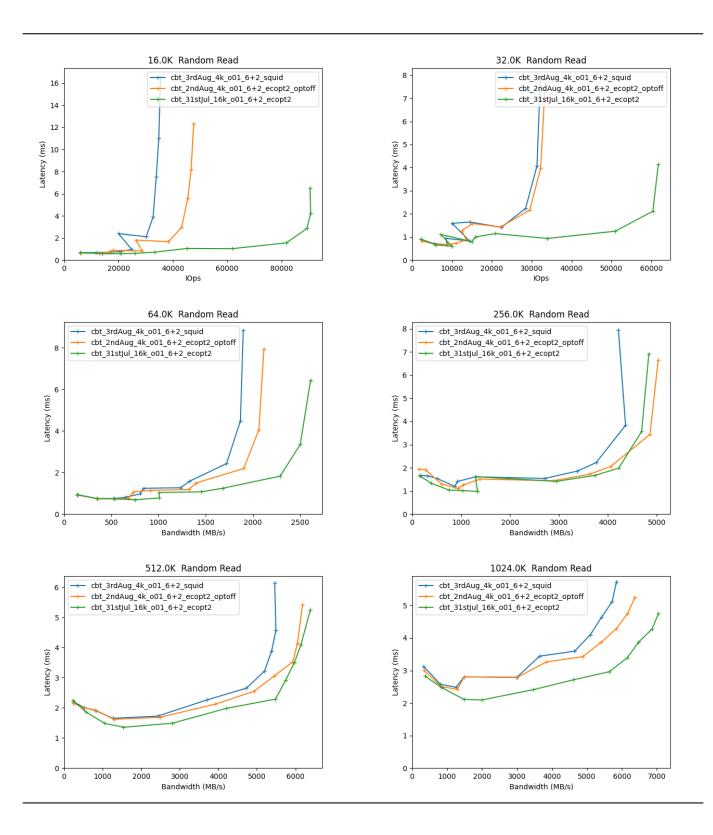


Random Read



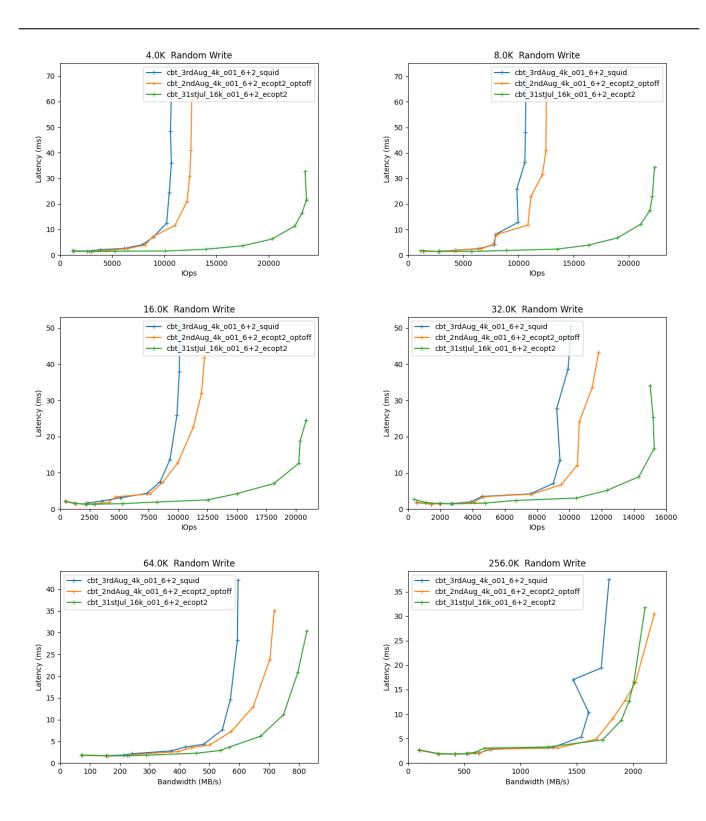


Response Curves Random Write

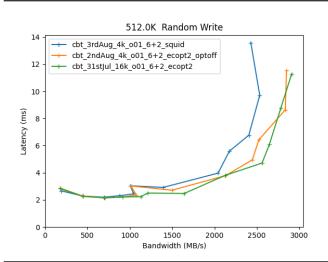


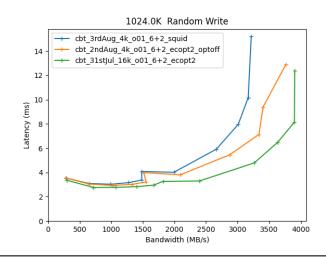
Random Write

Response Curves Random Write

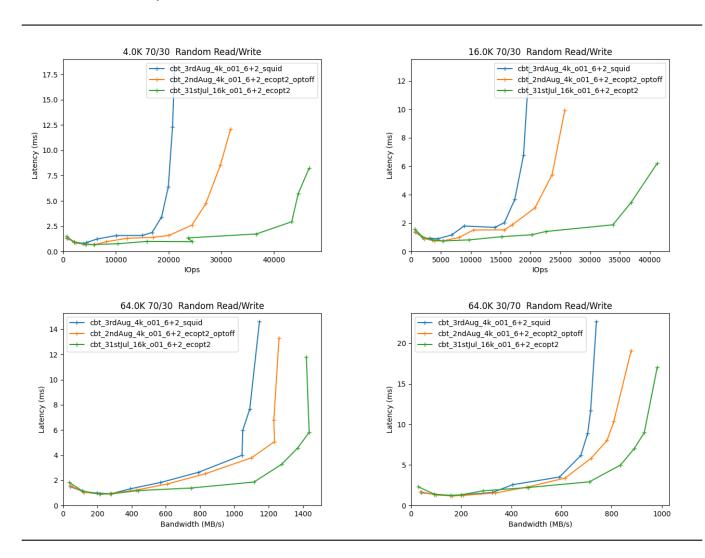


Response Curves Random Read/Write





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
  rbdname: cbt-librbdfio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 1368750
  volumes_per_client:
  - 16
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
    16krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
```

```
- 588
16krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
 op_size: 16384
  total_iodepth:
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
  - 384
 - 512
1Mrandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
 op_size: 1048576
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
1Mrandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 1048576
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 8
  - 16
 - 24
  - 32
  - 48
1Mseqread:
 jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 1048576
  total_iodepth:
```

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

- 96 - 128 - 256 32krandomread: jobname: randread mode: randread numjobs: - 1 op_size: 32768 total_iodepth: - 2 - 4 - 6 - 8 - 12 - 16 - 24 - 32 - 64 - 128 - 256 32krandomwrite: jobname: randwrite mode: randwrite numjobs: - 1 op_size: 32768 total_iodepth: - 1 - 2 - 3 - 4 - 8 - 16 - 32 - 64 - 128 - 256 - 384 - 512 4k7030: jobname: randmix mode: randrw numjobs: - 1 op_size: 4096 rwmixread: 70 total_iodepth: - 1 - 2 - 3 - 4 - 8 - 16 - 24 - 32 - 64 - 128 - 256 - 384 4krandomread: jobname: randread mode: randread

```
numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
 - 256
 - 384
 - 588
  - 768
4krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
 op_size: 4096
 total_iodepth:
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
 - 256
  - 384
  - 512
  - 768
512krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
 op_size: 524288
  {\tt 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:
  - 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
64 krandom write:\\
  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:
  op_size: 65536
  total_iodepth:
  - 2
```

- 4 - 6 - 8 - 16 - 24 - 32 - 64 - 128 - 192 - 256 64kseqwrite: jobname: write mode: write numjobs: - 1 op_size: 65536 total_iodepth: - 4 - 8 - 12 - 16 - 32 - 48 - 64 - 128 - 256 - 384 - 512 8krandomread: jobname: randread mode: randread numjobs: - 1 op_size: 8192 total_iodepth: - 4 - 8 - 12 - 16 - 32 - 48 - 64 - 128 - 256 - 384 - 588 - 768 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
  {\tt total\_iodepth:}
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 192
  - 288
seq16kwrite:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 16384
  total_iodepth:
  - 2
  - 4
  - 8
  - 16
  - 32
  - 48
 - 64
 - 128
 - 256
  - 384
  - 512
 - 768
  - 1024
seq256kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
 op_size: 262144
 total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
```

```
- 8
  - 16
  - 24
  - 32
  - 48
  - 64
seq256kwrite:
  jobname: seqwrite
  mode: write
 numjobs:
  - 1
  op_size: 262144
  total_iodepth:
  - 1
  - 2
  - 4
  - 8
  - 16
  - 24
  - 32
  - 64
  - 96
 - 128
  - 256
seq32kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
 op_size: 32768
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 192
seq32kwrite:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  op_size: 32768
  total_iodepth:
  - 2
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
  - 512
  - 768
seq4kread:
  jobname: seqread
 mode: read
 numjobs:
```

```
- 1
  op_size: 4096
 total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
 - 128
 - 192
 - 288
  - 384
seq4kwrite:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
 op_size: 4096
 total_iodepth:
  - 8
  - 16
  - 24
  - 32
  - 48
 - 64
 - 128
  - 256
  - 384
 - 512
 - 768
 - 1024
 - 1280
  - 1536
seq8kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
 - 64
 - 96
 - 128
  - 192
  - 288
  - 384
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
        - 1536
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: 8
  pdsh_ssh_args: -a -x -1%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
  librbdfio:
    cmd_path: /usr/local/bin/fio
    fio_out_format: json
    log_avg_msec: 100
    log_bw: true
    log_iops: true
    log_lat: true
   norandommap: true
   osd ra:
    - 4096
    poolname: rbd_replicated
```

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

```
- 16
  - 32
  - 64
  - 128
  - 256
  - 384
  - 512
1Mrandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
  op_size: 1048576
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
1Mrandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 1048576
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 8
  - 16
  - 24
  - 32
  - 48
1Mseqread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
 op_size: 1048576
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 20
1Mseqwrite:
  jobname: seqwrite
```

```
mode: write
 numjobs:
  - 1
 op_size: 1048576
 total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 16
  - 32
  - 48
  - 64
  - 96
 - 128
  - 160
256krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
 op_size: 262144
 total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
256krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
 op_size: 262144
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 32
  - 64
 - 96
  - 128
  - 256
32 krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
  op_size: 32768
 total_iodepth:
  - 2
  - 4
  - 6
```

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

- 384 - 588 - 768 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:
  op_size: 65536
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
 - 256
  - 384
 - 512
8krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
 op_size: 8192
 total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 588
  - 768
8krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
 op_size: 8192
  {\tt total\_iodepth:}
  - 2
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
 - 384
 - 512
 - 768
precondition:
  jobname: precond1rw
 mode: randwrite
 monitor: false
 numjobs:
  - 1
 op_size: 65536
 time: 600
 total_iodepth:
  - 16
seq16kread:
```

```
jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 16384
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
 - 96
 - 128
  - 192
  - 288
seq16kwrite:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
 op_size: 16384
 total_iodepth:
  - 4
  - 8
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
 - 384
 - 512
 - 768
  - 1024
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
  {\tt total\_iodepth:}
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
```

```
- 192
  - 288
  - 384
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
  - 1280
  - 1536
seq8kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
 - 128
  - 192
  - 288
  - 384
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
        - 1536
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: 8
  pdsh_ssh_args: -a -x -1%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```