Comparitive Performance Report for cbt-26thAug-o01-16k-6+2-directreads-balanced-all vs cbt-1stSep-o01-16k-6+2-directreads-balanced-pg128

Table of contents

- $\bullet \ \ Comparison \ \ summary \ \ for \ \ cbt-26th Aug-o01-16k-6+2-direct reads-balanced-all \ \ vs \ \ cbt-1st Sep-o01-16k-6+2-direct reads-balanced-pg 128$
- Response Curves
 - Sequential Read
 - Sequential Write
 - Random Read
 - Random Write
 - Random Read/Write
- Configuration yaml files
 - results

Comparison summary for cbt-26thAugo01-16k-6+2-directreads-balanced-all vs cbt-1stSep-o01-16k-6+2-directreadsbalanced-pg128

Sequential Read	cbt_26thAug_o01_16k	<u>c6#21sdSequetre0.ds 16kala6</u>	itedhelilgetthaduglqalutneed_	_pg128ange latency
4.0K	284943 IOps@1.3ms	302600 IOps@1.3ms	6%	0%
8.0K	279082 IOps@1.4ms	285802 IOps@1.3ms	2%	-7%
16.0K	249329 IOps@1.1ms	250445 IOps@1.1ms	0%	0%
32.0 K	133535 IOps@1.4ms	134988 IOps@1.4ms	1%	0%
64.0K	4651 MB/s@3.6ms	4692 MB/s@3.6ms	1%	0%
256.0K	8309 MB/s@2.0 ms	8302 MB/s@2.0 ms	-0%	0%
512.0 K	10794 MB/s@1.5ms	10736 MB/s@1.6ms	-1%	7%
1024.0 K	$12045~\mathrm{MB/s@1.7ms}$	11711 MB/s@1.8ms	-3%	6%

Sequential Write	cbt_26thAug_001_16k	<u>c6#21sdSequetrocalls 16kala6</u>	& Alleringe tith and a glapalist noed_	_p %1&8 ange latency
4.0K	255638 IOps@6.0ms	256463 IOps@6.0ms	0%	0%
8.0K	199584 IOps@7.7ms	202731 IOps@7.6ms	2%	-1%
16.0K	121202 IOps@8.4ms	122696 IOps@8.3ms	1%	-1%
32.0 K	74550 IOps@10.3ms	75753 IOps@10.1ms	2%	-2%
64.0K	2571 MB/s@13.0ms	2576 MB/s@13.0 ms	0%	0%
256.0K	3258 MB/s = 20.5 ms	3371 MB/s@19.8 ms	3%	-3%
512.0 K	3467 MB/s@19.1 ms	3524 MB/s@18.8 ms	2%	-2%
1024.0K	4245 MB/s@38.9 ms	4420 MB/s@37.3 ms	4%	-4%

Random Read	cbt_26thAug_o01_16k	<u>c6#21sdSequetro@ds 16kala6</u>	itedhelilgetthaduglqalutneed	_pg128ange latency
4.0K	190240 IOps@3.1ms	190949 IOps@3.1ms	0%	0%
8.0K	176827 IOps@4.3ms	177448 IOps@3.3ms	0%	-23%
16.0 K	166120 IOps@2.3ms	159932 IOps@3.7ms	-4%	61%
32.0K	86252 IOps@4.4ms	85287 IOps@6.0ms	-1%	36%
64.0K	2971 MB/s@5.6ms	2948 MB/s @ 8.5 ms	-1%	52%
256.0K	$6331 \text{ MB/s} \odot 5.3 \text{ms}$	6155 MB/s = 5.4 ms	-3%	2%
512.0K	9526 MB/s@3.5ms	8796 MB/s@3.8ms	-8%	9%
1024.0 K	11826 MB/s@2.5 ms	$11197~\mathrm{MB/s@3.0ms}$	-5%	20%

Random Write	cbt_26thAug_001_16k	c6#21sdSequetroads 16kla6r	<u>lhelilgetthaduglqalat</u> nced_	_p §1@ ange latency
4.0K	23679 IOps@21.6ms	24785 IOps@31.0ms	5%	44%
8.0K	22616 IOps@33.9ms	23083 IOps@33.3ms	2%	-2%
16.0K	20764 IOps@24.6ms	21777 IOps@23.5ms	5%	-4%
32.0K	15280 IOps@25.1ms	$14507 \; \mathrm{IOps@26.4ms}$	-5%	5%
64.0K	843 MB/s@29.8 ms	779 MB/s@32.3ms	-8%	8%
256.0K	2160 MB/s@30.9 ms	2054 MB/s@32.5 ms	-5%	5%

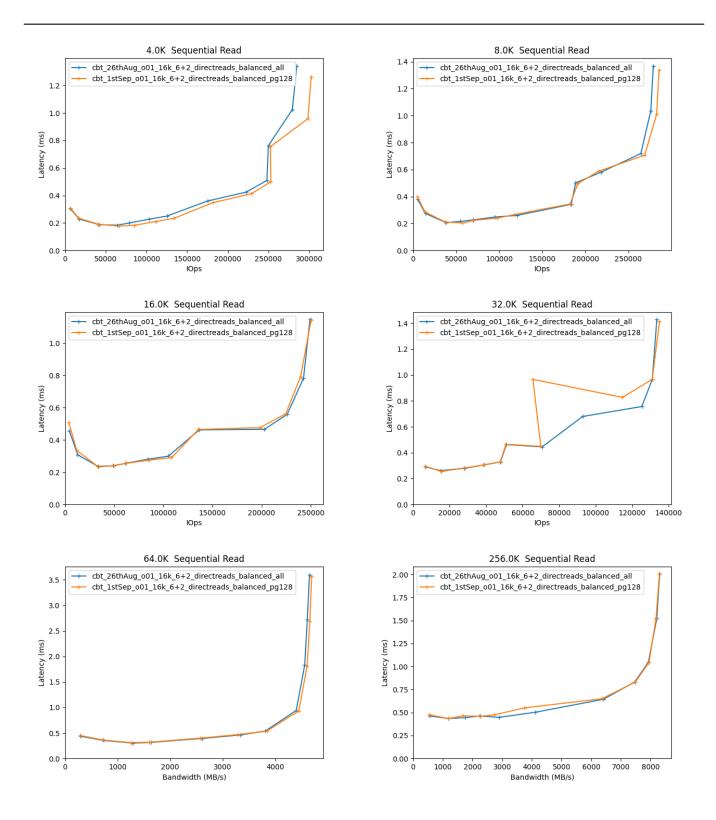
 $Comparison\ summary\ for\ cbt-26th Aug-o01-16k-6+2-direct$ $reads-balanced-all\ vs\ cbt-1st Sep-o01-16k-6+2-direct$ reads-balanced-pg128

	Random Write	cbt_26thAug_o01_16k	c6#21sdSequetroodls 16kla6i&	<u>alhelitheettrhadughqadat</u> nced_	_p §128 ange latency
1024.0K 3694 MD/8@6.3llis 3943 MD/8@6.1llis 276 -2		,	,		-1% -2%
	1024.0K	3854 MB/S@8.5ms	3943 MB/S@8.1ms	Ζ%	-270

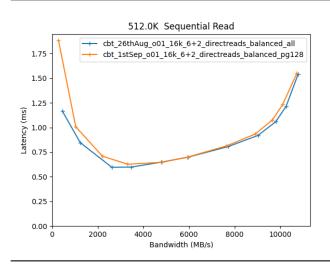
Random Read/Write	cbt_26thAug_o01_16k	c 6# $\underline{21s}$ dSeq \overline{c} tro a 1 \underline{ds} 1 $\underline{6}$ ka \underline{la} 6 \overline{s} 6	<u>Adhe</u> lilgettrhaduglqadatnced_	_p §128 ange latency
4.0K_70/30	57882 IOps@6.6ms	57189 IOps@6.7ms	-1%	2%
$16.0 \mathrm{K}_{-}70/30$	48516 IOps@5.3ms	47854 IOps@5.3ms	-1%	0%
$64.0 \text{K}_{-}70/30$	1550 MB/s@10.8ms	1339 MB/s@12.5 ms	-14%	16%
$64.0 \mathrm{K}_{30} / 70$	$1019~\mathrm{MB/s@16.4ms}$	$929~\mathrm{MB/s@18.0ms}$	-9%	10%

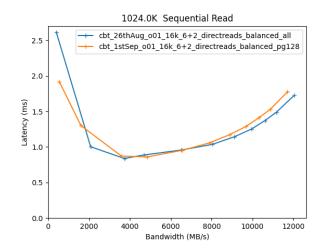
Response Curves

Sequential Read

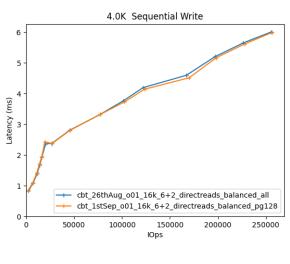


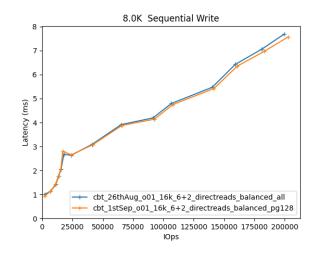
Response Curves Sequential Write

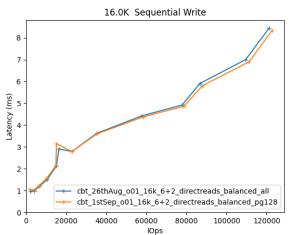


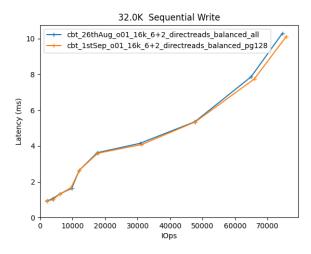


Sequential Write

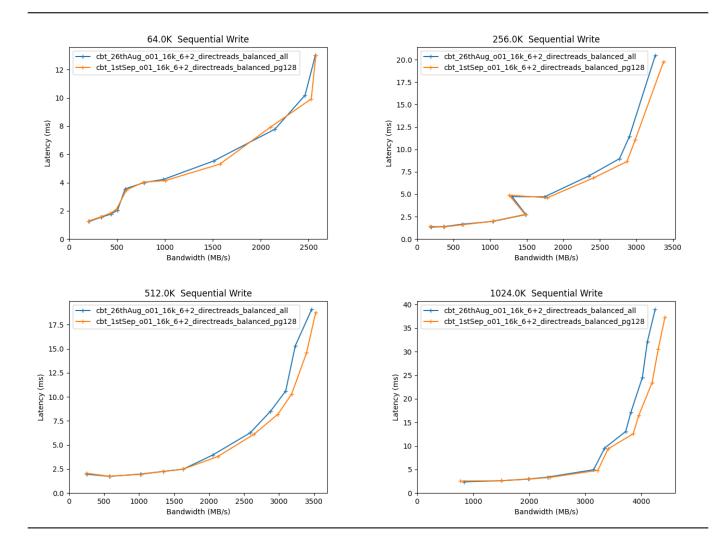




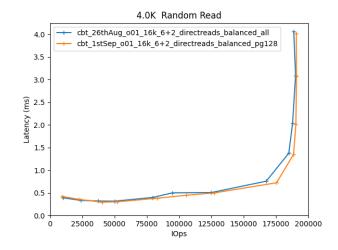


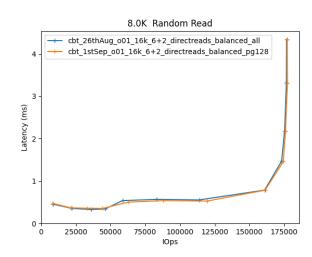


Response Curves Random Read

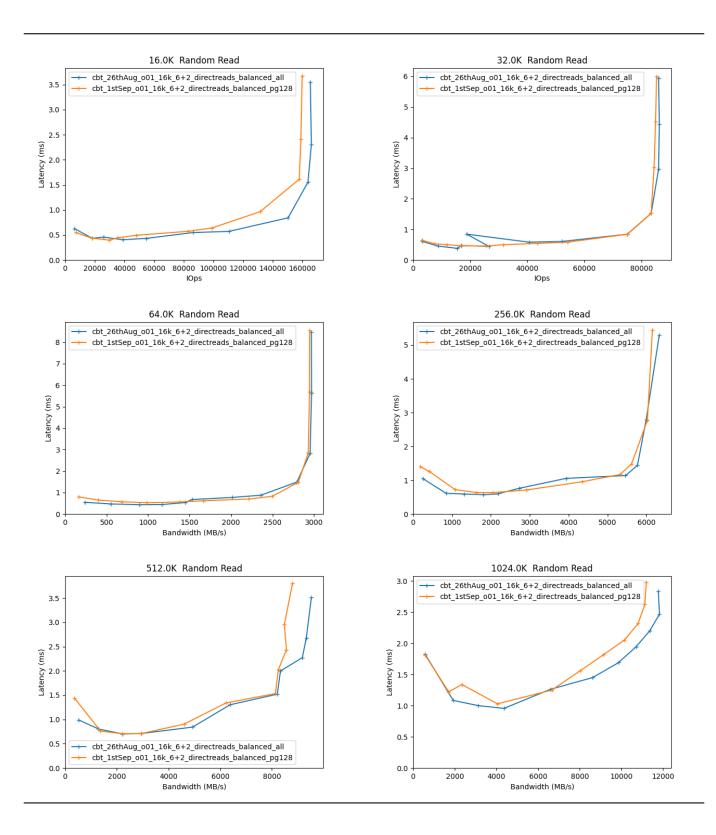


Random Read



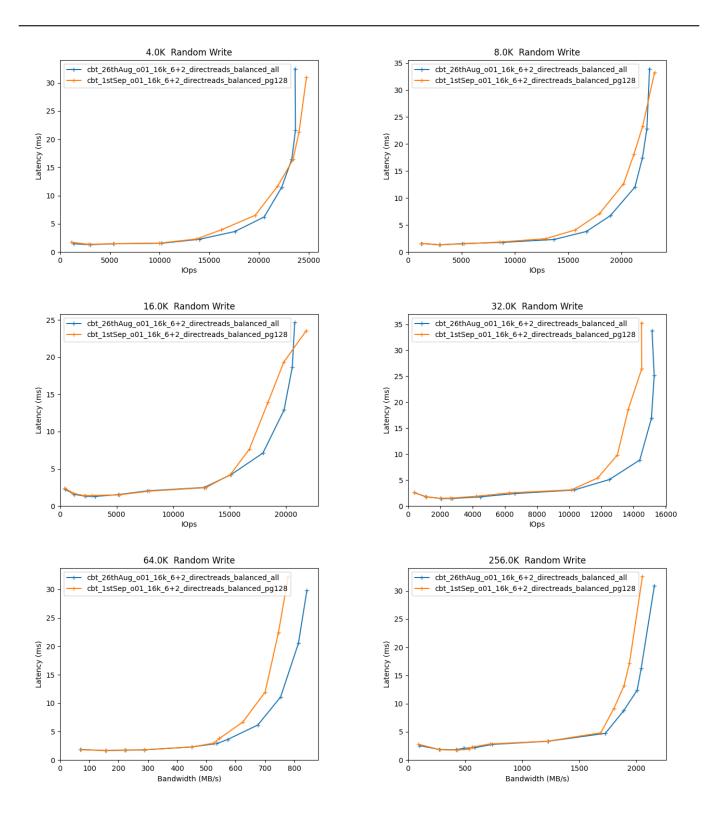


Response Curves Random Write

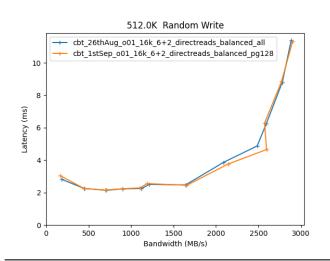


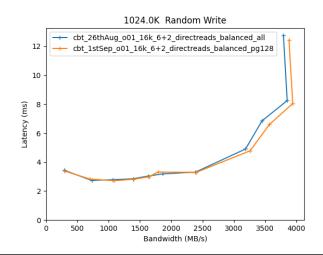
Random Write

Response Curves Random Write

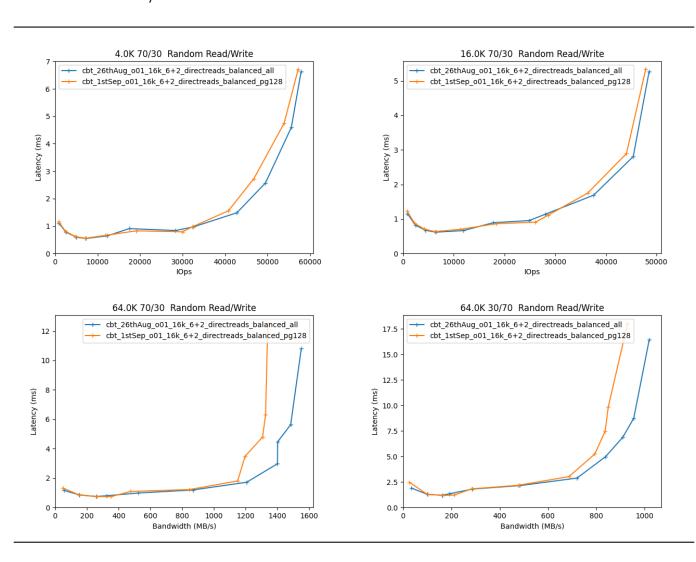


Response Curves Random Read/Write





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/fio2
  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 32krandomread: jobname: randread mode: randread numjobs: - 1 op_size: 32768 total_iodepth: - 2 - 4 - 6 - 8 - 12 - 16 - 24 - 32 - 64 - 128 - 256 - 384 - 512 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
{\tt 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
  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
  - 384
64krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 16
  - 24
 - 32
  - 64
  - 128
  - 256
  - 384
64kseqread:
  jobname: read
 mode: read
 numjobs:
  - 1
```

```
op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  - 192
  - 256
64kseqwrite:
  jobname: write
 mode: write
 numjobs:
  - 1
 op_size: 65536
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 512
8krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
 - 128
 - 256
  - 384
  - 588
  - 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
  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:
  - 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
  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: 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/fio2
    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:
    - 4
    - 8
    - 12
    - 16
    - 24
    - 48
    - 64
    - 128
    - 256
    - 384
    - 588
  16krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 16384
    total_iodepth:
    - 1
    - 2
```

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

```
- 20
1Mseqwrite:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
 op_size: 1048576
  total_iodepth:
  - 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
  - 384
  - 512
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: - 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 - 384 $64 krandom \verb|write|:$ 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: - 1 op_size: 65536 total_iodepth: - 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
  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: - 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 -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```