Comparitive Performance Report for cbt-19thJan-main-4k-8vol vs cbt-24thJan-alexls17-4k-8vol vs cbt-18thJan-alex-ec-switcher-4k-8vols

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Comparison summary for cbt-19thJan-main-4k-8vol vs cbt-24thJan-alexls17-4k-8vol vs cbt-18thJan-alex-ec-switcher-4k-8vols

Sequential Read	cbt_19thJan_main_c4k	t_ 2√4 6hJan_alexls17_4	4k_8%khange	cbt_18thJan_alex_ec	_switch@ch4kgevols
$\overline{ m 4K}$	67664@2.8ms	66534@2.9	-2%	66865@2.9	-1%
8K	40485@4.7ms	39530@4.8	-2%	40612@4.7	0%
16K	23113@8.3ms	22579@8.5	-2%	23020@8.3	-0%
32K	19243@10.0 ms	18929@10.1	-2%	19338@9.1	0%
64K	1165@14.4 ms	1156@14.5	-1%	1160@14.5	-0%
256K	1532@15.1 ms	1553@14.9	1%	1535@15.0	0%
512K	1560@26.9 ms	1573@29.3	1%	1560@29.6	0%
1024K	1573@58.7 ms	1581@58.4	1%	1572@58.8	-0%

Sequential Write	cbt_19thJan_main_c4	kt_ 246 hJan_alexls17_4	k_8%thange	cbt_18thJan_alex_ed	c_switch@ch4kgevols
4K	3077@52.1ms	5651@45.3	84%	3311@67.6	8%
8K	2694@83.5 ms	5358@47.8	99%	2749@81.5	2%
16K	7338@26.1ms	6651@28.8	-9%	7984@24.0	9%
32K	9342@13.7ms	8737@11.0	-6%	9080@14.1	-3%
64K	217@14.5 ms	240@15.3	11%	232@15.8	7%
256K	565@7.3 ms	406@15.4	-28%	560@7.3	-1%
512K	483@95.4ms	469@98.2	-3%	472@97.5	-2%
1024K	$513@64.9\mathrm{ms}$	479@139.8	-7%	498@185.1	-3%

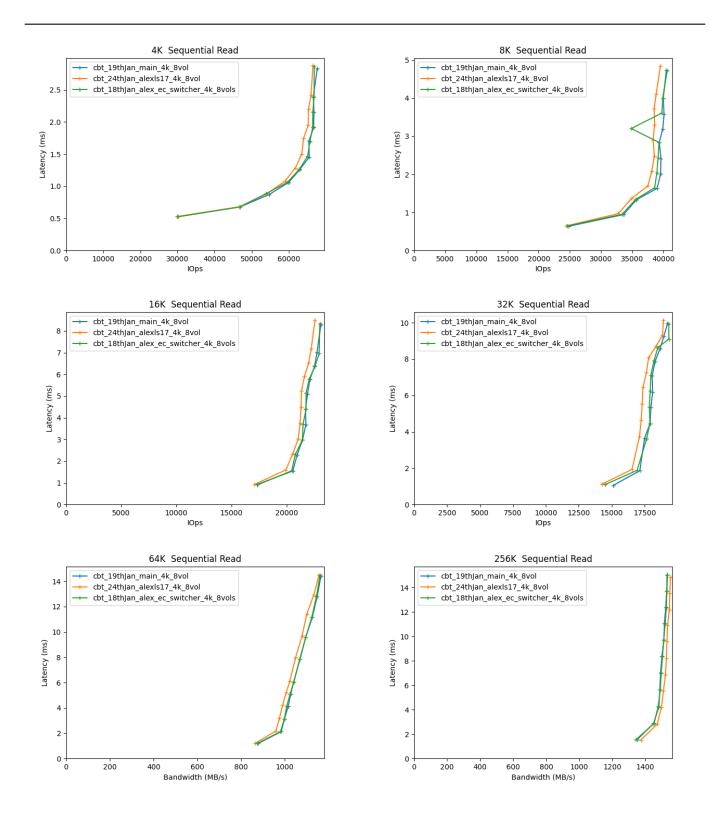
Random Read	cbt_19thJan_main_c4b	t_ 246 hJan_alexls17_4	k_8%thange	cbt_18thJan_alex_ed	switchardakgevols
4K	82195@4.7ms	81659@4.7	-1%	81855@4.7	-0%
8K	53162@7.2 ms	52453@7.3	-1%	52978@7.2	-0%
16K	31401@12.2 ms	30717@5.2	-2%	31398@12.2	-0%
32K	28500@6.7ms	28152@6.8	-1%	28640@6.7	0%
64K	1552@8.1 ms	1554@6.7	0%	1552@10.8	0%
256K	1704@14.8ms	1703@19.7	-0%	1708@19.6	0%
512K	1702@27.1 ms	1695@27.2	-0%	1702@27.1	0%
1024K	1710@54.1ms	1707@54.2	-0%	1710@54.0	0%

Random Write	cbt_19thJan_main_c4k	t_ 246 hJan_alexls17	_4k8%change	cbt_18thJan_alex_e	c_switch@ch4kgesvols
$\overline{4\mathrm{K}}$	2708@35.4ms	5748@11.1	112%	2912@44.0	8%
8K	2758@46.4ms	5788@22.1	110%	3085@41.5	12%
16K	$5674@22.5\mathrm{ms}$	5189@24.6	-9%	5750@22.2	1%
32K	$3530@36.3\mathrm{ms}$	3469@36.9	-2%	3495@36.6	-1%
64K	199@31.5 ms	194@43.3	-3%	195@32.2	-2%
256K	$415@50.4\mathrm{ms}$	352@59.5	-15%	412@35.5	-1%

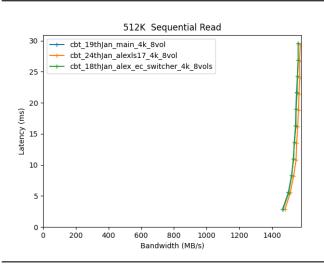
Random Write	cbt_19thJan_main_e4	t_ 246 hJan_alexls17_4	4k_8%change	cbt_18thJan_alex_ec	c_switch@ch4kgevol
512K	466@80.7ms	460@54.5	-1%	469@98.2	1%
1024K	478@139.8ms	485@190.3	1%	490@153.9	3%
Random					
Random Read/Write	cbt_19thJan_main_cb	t_ 24 thJan_alexls17_4	4k_8%khange	cbt_18thJan_alex_ed	c_switch&ch4kg&vol
	cbt_19thJan_main_c44 7664@7.3ms	t_ 2046 hJan_alexls17_4	4k_8%thange -1%	cbt_18thJan_alex_ec 7917@6.0	c_switcherch4hge8vol
Read/Write					

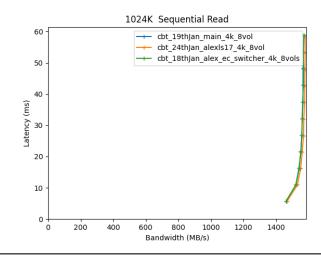
Response Curves

Sequential Read

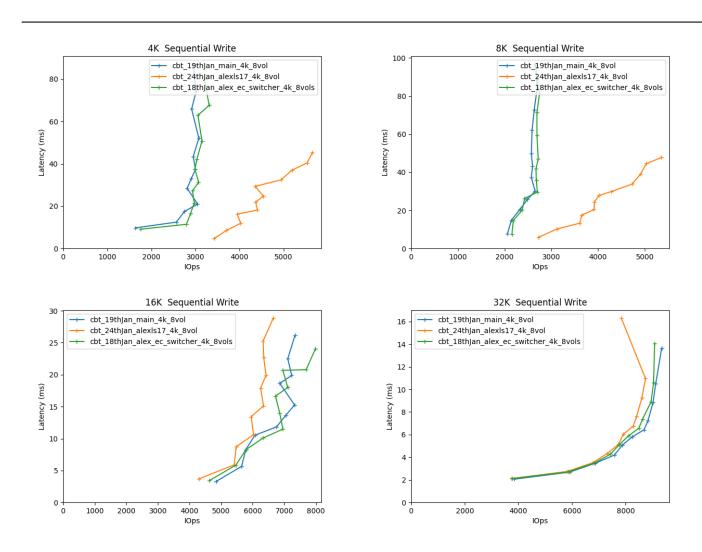


Response Curves Sequential Write

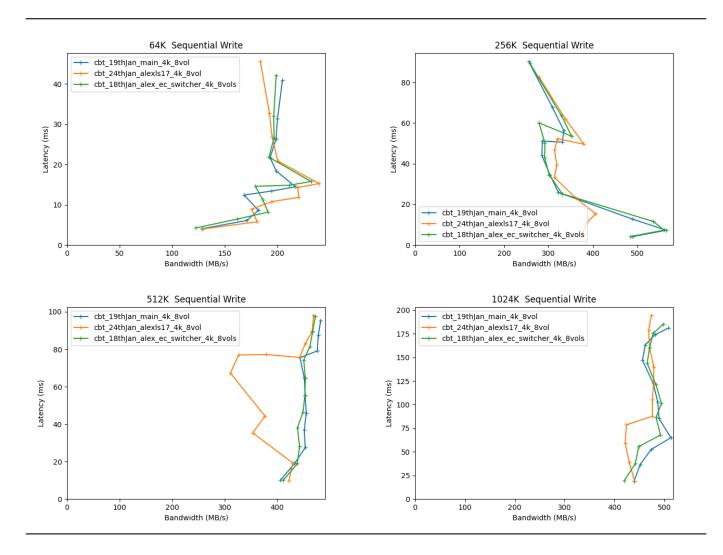




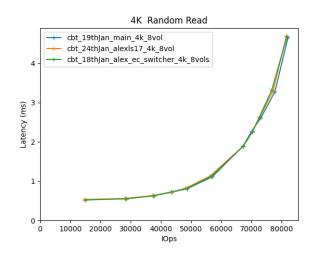
Sequential Write

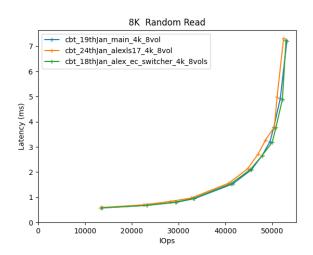


Response Curves Random Read

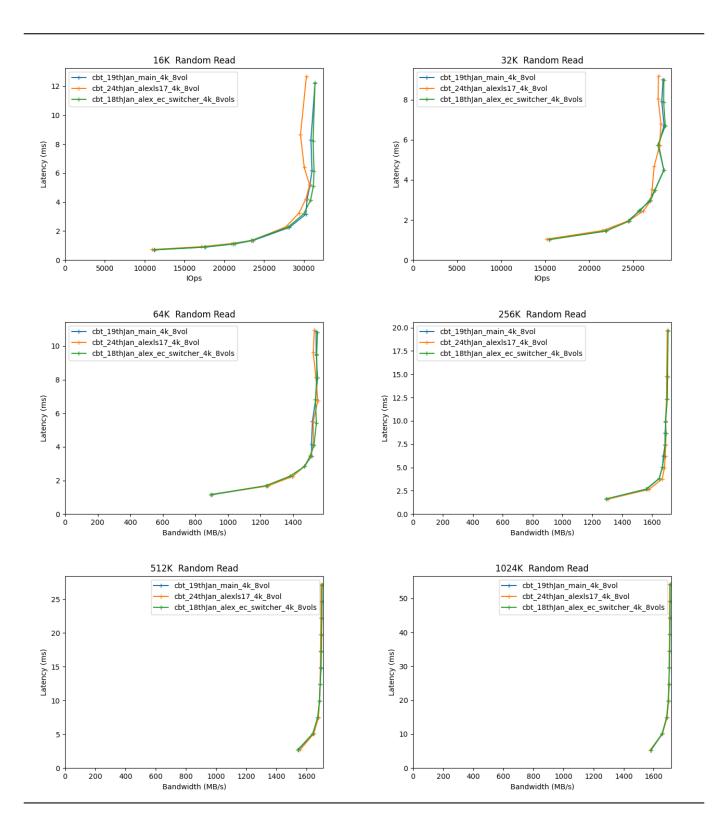


Random Read



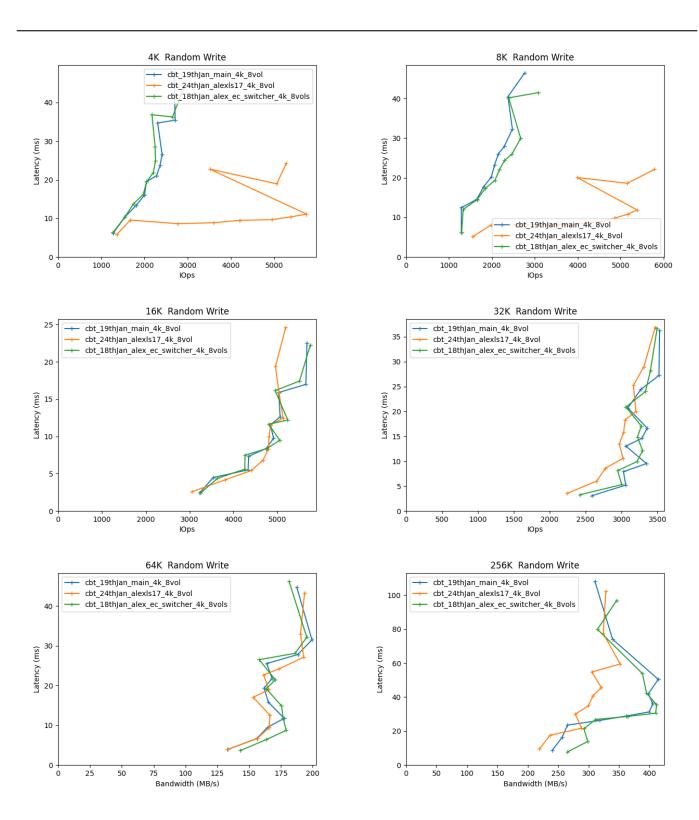


Response Curves Random Write

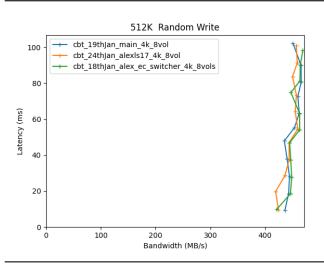


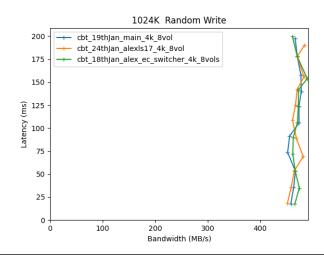
Random Write

Response Curves Random Write

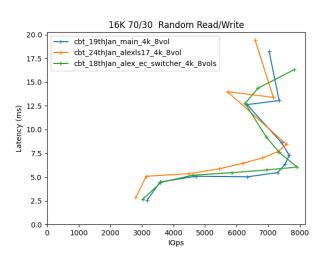


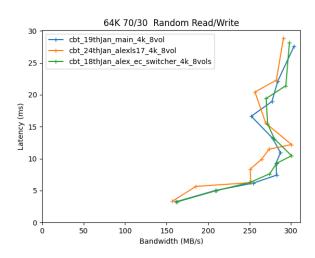
Response Curves Random Read/Write

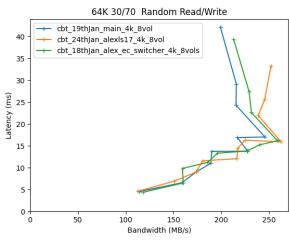




Random Read/Write







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

```
mode: randread
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
 op_size: 1048576
1Mrandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - 11
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 1048576
1Mseqread:
 iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
 - 10
 - 11
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
```

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

256krandomwrite: iodepth: - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 - 12 - 16 jobname: randwrite mode: randwrite numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 262144 32krandomread: iodepth: - 2 - 4 - 6 - 8 - 10 - 12 - 16 - 20 - 24 - 28 - 32 jobname: randread mode: randread numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 32768 32krandomwrite: iodepth: - 1 - 2 - 3 - 4 - 5

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

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

```
- 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 524288
512kseqread:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
 - 11
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
 op_size: 524288
512kseqwrite:
 iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
 - 9
  - 10
  - 11
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 524288
```

64k3070: iodepth: - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 - 12 - 16 jobname: randmix mode: randrw numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 65536 rwmixread: 30 64k7030: iodepth: - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 - 12 - 16 jobname: randmix mode: randrw numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 65536 rwmixread: 70 64krandomread: iodepth: - 2 - 4 - 6

```
- 8
  - 10
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
  jobname: randread
  mode: randread
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
64krandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
64kseqread:
  \verb"iodepth":
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 16
  - 20
  - 24
  - 28
```

- 32

jobname: read

```
mode: read
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
64kseqwrite:
  {\tt iodepth:}\\
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: write
  mode: write
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
8krandomread:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 32
  - 48
  jobname: randread
  mode: randread
  numjobs:
  - 1
  - 1
  - 1
```

```
- 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 8192
8krandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 8192
precondition:
  iodepth:
  jobname: precond1rw
  mode: randwrite
  monitor: false
  numjobs:
  - 1
  op_size: 65536
  precond: true
seq16kread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 24
  jobname: seqread
  mode: read
  numjobs:
```

```
- 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 16384
seq16kwrite:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 24
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 16384
{\tt seq256kread:}
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - 11
  jobname: seqread
  mode: read
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
```

```
- 1
  - 1
  - 1
  - 1
 op_size: 262144
seq256kwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
 - 9
  - 10
  - 11
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
  - 1
 op_size: 262144
seq32kread:
  iodepth:
  - 2
  - 4
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 22
  - 24
  jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 32768
seq32kwrite:
  iodepth:
```

```
- 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
 - 8
  - 10
  - 12
  - 16
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 32768
seq4kread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
 - 12
 - 14
  - 16
  - 18
  - 20
 - 24
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 4096
seq4kwrite:
  iodepth:
  - 2
  - 4
  - 6
 - 8
 - 10
  - 12
  - 14
```

```
- 16
  - 20
  - 24
  - 28
  - 32
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 4096
seq8kread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
 - 16
  - 18
  - 20
 - 24
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
  - 1
 op_size: 8192
seq8kwrite:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
 - 20
 - 24
  - 28
```

```
jobname: seqwrite
        mode: write
        numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 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 -1%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
    - 10
    - 12
    - 16
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 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
    - 1
    - 1
    - 1
    - 1
```

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

1Mrandomwrite: iodepth: - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 jobname: randwrite mode: randwrite numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 1048576 1Mseqread: iodepth: - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 jobname: seqread mode: read numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 1048576 1Mseqwrite: iodepth: - 1 - 2 - 3 - 4 - 5

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

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

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

op_size: 4096

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

```
- 6
  - 7
  - 8
  - 9
  - 10
  - 11
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 524288
512kseqwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
 - 11
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
 op_size: 524288
64k3070:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: randmix
```

```
mode: randrw
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 65536
 rwmixread: 30
64k7030:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: randmix
 mode: randrw
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 65536
 rwmixread: 70
64krandomread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 16
 - 20
  - 24
  - 28
  - 32
 jobname: randread
 mode: randread
 numjobs:
  - 1
  - 1
  - 1
```

- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 65536 64krandomwrite: iodepth: - 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 10 - 12 - 16 jobname: randwrite mode: randwrite numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 op_size: 65536 64kseqread: iodepth: - 2 - 4 - 6 - 8 - 10 - 12 - 16 - 20 - 24 - 28 - 32 jobname: read mode: read numjobs: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1

```
- 1
  op_size: 65536
64kseqwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: write
  mode: write
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
{\tt 8krandomread:}
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 32
  - 48
  jobname: randread
  mode: randread
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 8192
8krandomwrite:
  iodepth:
  - 1
  - 2
```

```
- 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  - 16
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 8192
precondition:
  iodepth:
  jobname: precond1rw
 mode: randwrite
 monitor: false
 numjobs:
  - 1
 op_size: 65536
 precond: true
seq16kread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 24
  jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 16384
seq16kwrite:
  iodepth:
```

```
- 2
  - 4
  - 6
  - 8
  - 10
 - 12
 - 14
 - 16
 - 18
  - 20
 - 24
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 16384
seq256kread:
 iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
 - 11
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
 op_size: 262144
seq256kwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
```

```
- 8
  - 9
  - 10
 - 11
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
 op_size: 262144
seq32kread:
  iodepth:
  - 2
  - 4
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 22
  - 24
  jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 32768
seq32kwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
  - 10
  - 12
  jobname: seqwrite
 mode: write
 numjobs:
```

```
- 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 32768
seq4kread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 18
  - 20
  - 24
  jobname: seqread
  mode: read
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 4096
{\tt seq4kwrite:}
  \verb"iodepth":
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 20
  - 24
  - 28
  - 32
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
```

```
- 1
  - 1
  - 1
  - 1
  - 1
  - 1
 op_size: 4096
seq8kread:
  iodepth:
  - 4
  - 6
  - 8
  - 10
 - 12
 - 14
 - 16
  - 18
  - 20
 - 24
 jobname: seqread
 mode: read
 numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
 op_size: 8192
seq8kwrite:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 10
  - 12
 - 14
 - 16
 - 20
 - 24
  - 28
  - 32
 jobname: seqwrite
 mode: write
 numjobs:
  - 1
  - 1
 - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
```

```
- 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
    --- 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}
```