

Comparitive Performance Report for
cbt-17thDec-main-4k vs
cbt-20thDec-alexls12-4k vs
cbt-21stDec-alexls12-32k vs
cbt-22ndDec-alexls12-64k vs
cbt-21stDec-alexls12-256k

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Comparison summary for cbt-17thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-21stDec-alexls12-32k vs cbt-22ndDec-alexls12-64k vs cbt-21stDec-alexls12-256k

Sequential Read	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_21stDec_alexls12_32k	cbt_22ndDec_alexls12_64k	cbt_21stDec_alexls12_256k
4K	25339 IOps@7.6ms	24109 IOps@8.0ms	23979 IOps@8.0ms	26256 IOps@7.3ms	25430 IOps@7.5ms
8K	17196 IOps@11.2ms	16069 IOps@11.9ms	21091 IOps@9.1ms	23463 IOps@8.2ms	22923 IOps@8.4ms
16K	10428 IOps@18.4ms	10917 IOps@17.6ms	21940 IOps@8.7ms	24998 IOps@7.7ms	24881 IOps@7.7ms
32K	11409 IOps@16.8ms	10925 IOps@17.6ms	22718 IOps@8.4ms	27040 IOps@7.1ms	26500 IOps@7.2ms
64K	977 MB/s@17.2ms	970 MB/s@17.3ms	1476 MB/s@11.4ms	1389 MB/s@12.1ms	1564 MB/s@10.7ms
256K	1495 MB/s@11.2ms	1482 MB/s@11.3ms	1620 MB/s@10.4ms	1545 MB/s@10.9ms	1554 MB/s@10.8ms
512K	1501 MB/s@11.2ms	1502 MB/s@11.2ms	1612 MB/s@10.4ms	1586 MB/s@10.6ms	1610 MB/s@10.4ms
1024K	1533 MB/s@13.7ms	1527 MB/s@13.7ms	1616 MB/s@13.0ms	1595 MB/s@13.1ms	1615 MB/s@13.0ms

Sequential Write	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_21stDec_alexls12_32k	cbt_22ndDec_alexls12_64k	cbt_21stDec_alexls12_256k
4K	2024 IOps@126.4ms	3764 IOps@68.0ms	3491 IOps@73.3ms	3947 IOps@64.8ms	3851 IOps@66.4ms
8K	2019 IOps@126.6ms	3599 IOps@71.1ms	4070 IOps@62.8ms	4213 IOps@60.8ms	4248 IOps@60.3ms
16K	5117 IOps@37.5ms	4895 IOps@39.2ms	3851 IOps@49.8ms	3873 IOps@49.6ms	3658 IOps@35.0ms
32K	3621 IOps@35.3ms	5601 IOps@22.8ms	3184 IOps@40.2ms	4473 IOps@28.6ms	2305 IOps@55.5ms
64K	196 MB/s@42.8ms	200 MB/s@42.0ms	116 MB/s@72.4ms	153 MB/s@54.8ms	114 MB/s@73.4ms
256K	400 MB/s@31.3ms	517 MB/s@8.0ms	130 MB/s@129.5ms	585 MB/s@5.3ms	432 MB/s@38.7ms
512K	439 MB/s@28.5ms	432 MB/s@29.0ms	272 MB/s@61.6ms	450 MB/s@37.1ms	465 MB/s@26.9ms
1024K	472 MB/s@26.3ms	505 MB/s@28.7ms	463 MB/s@44.9ms	483 MB/s@43.1ms	465 MB/s@35.8ms

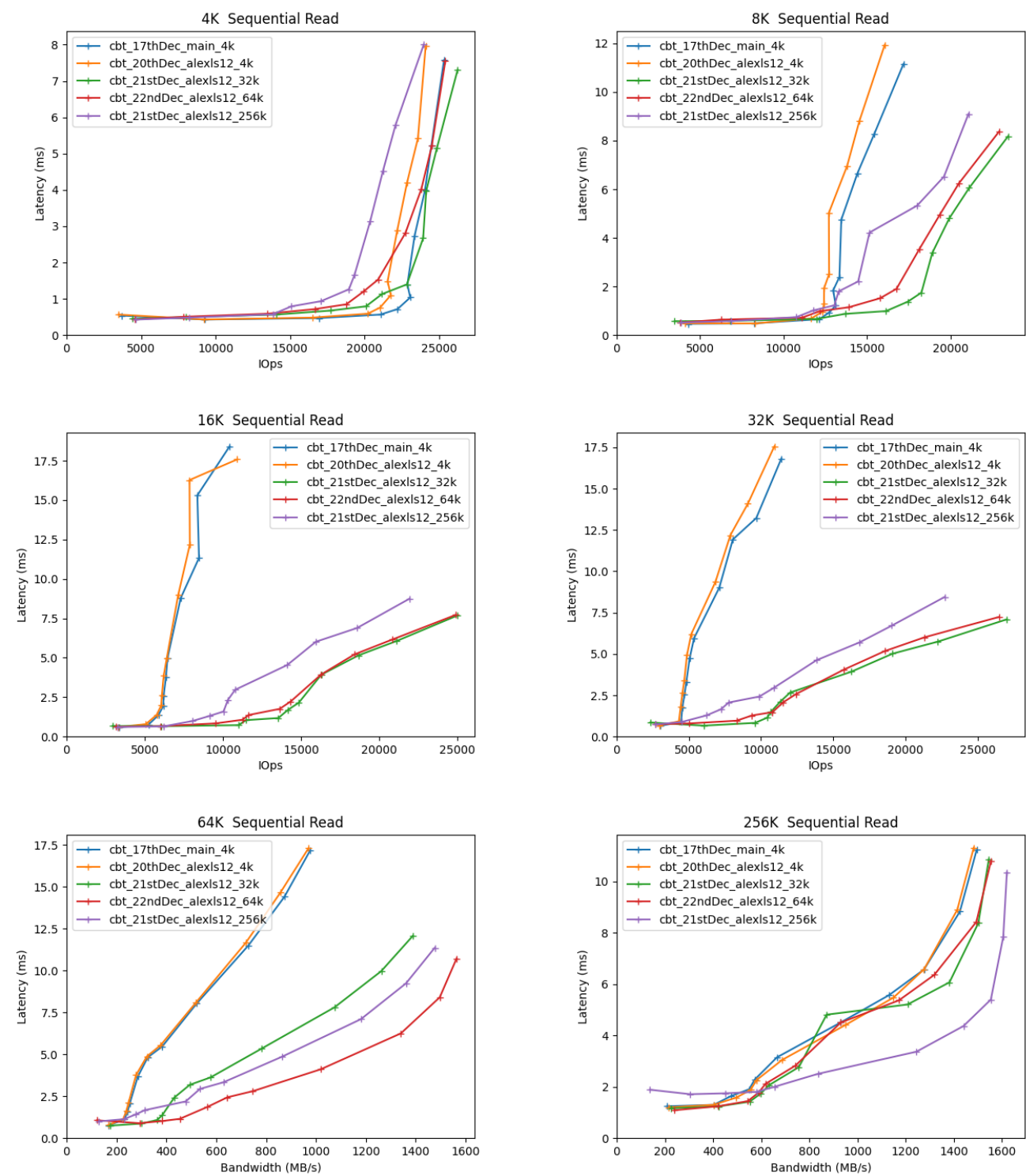
Random Read	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_21stDec_alexls12_32k	cbt_22ndDec_alexls12_64k	cbt_21stDec_alexls12_256k
4K	95501	94377	94215	96488	95030
	IOps@4.0ms	IOps@4.1ms	IOps@4.1ms	IOps@4.0ms	IOps@4.0ms
8K	60546	59367	88241	88567	88182
	IOps@6.3ms	IOps@6.5ms	IOps@4.3ms	IOps@4.3ms	IOps@4.4ms
16K	34618	33414	79992	81282	79547
	IOps@11.1ms	IOps@7.7ms	IOps@4.8ms	IOps@4.7ms	IOps@4.8ms
32K	31326	30473	53617	53553	53451
	IOps@4.1ms	IOps@4.2ms	IOps@4.8ms	IOps@4.8ms	IOps@4.8ms
64K	1642	1623	1784	1750	1833
	MB/s@10.2ms	MB/s@10.3ms	MB/s@4.7ms	MB/s@9.6ms	MB/s@4.6ms
256K	1680	1694	1769	1746	1768
	MB/s@20.0ms	MB/s@19.8ms	MB/s@19.0ms	MB/s@9.6ms	MB/s@19.0ms
512K	1698	1699	1782	1729	1748
	MB/s@19.8ms	MB/s@19.8ms	MB/s@18.8ms	MB/s@19.4ms	MB/s@19.2ms
1024K	1709	1707	1748	1725	1739
	MB/s@19.6ms	MB/s@19.7ms	MB/s@14.4ms	MB/s@19.5ms	MB/s@14.5ms

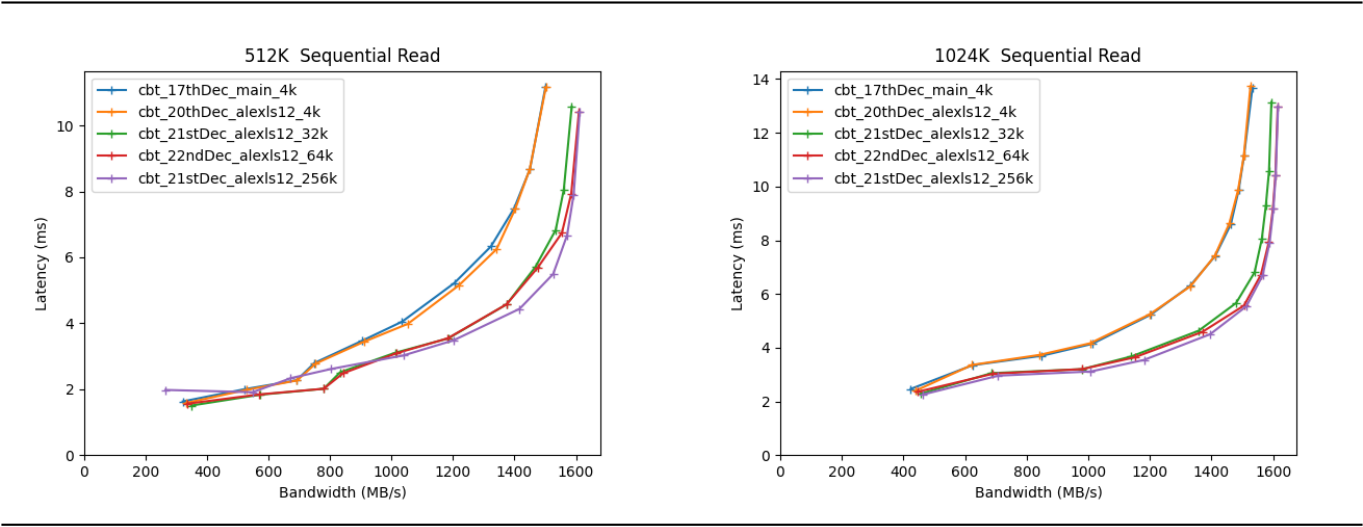
Random Write	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_21stDec_alexls12_32k	cbt_22ndDec_alexls12_64k	cbt_21stDec_alexls12_256k
4K	2897	5072	5855	5240	5550
	IOps@44.2ms	IOps@25.2ms	IOps@21.8ms	IOps@24.4ms	IOps@23.1ms
8K	2791	4734	4586	4256	4590
	IOps@45.9ms	IOps@27.0ms	IOps@27.9ms	IOps@30.1ms	IOps@27.9ms
16K	5726	4757	3146	3520	3226
	IOps@22.3ms	IOps@26.9ms	IOps@40.7ms	IOps@36.3ms	IOps@39.6ms
32K	3245	3674	2326	2113	2481
	IOps@39.4ms	IOps@34.8ms	IOps@55.0ms	IOps@60.5ms	IOps@51.6ms
64K	193	178	98 MB/s@85.7ms	128	101
	MB/s@21.7ms	MB/s@23.6ms		MB/s@65.6ms	MB/s@20.7ms
256K	335	387	134	393	444
	MB/s@100.2ms	MB/s@21.6ms	MB/s@251.1ms	MB/s@21.3ms	MB/s@75.5ms
512K	464	472	266	469	466
	MB/s@72.2ms	MB/s@70.9ms	MB/s@47.1ms	MB/s@71.3ms	MB/s@71.8ms
1024K	472	517	462	479	462
	MB/s@35.2ms	MB/s@32.1ms	MB/s@72.3ms	MB/s@69.8ms	MB/s@72.4ms

Random Read/Write	cbt_17thDec_main_4k	cbt_20thDec_alexls12_4k	cbt_21stDec_alexls12_32k	cbt_22ndDec_alexls12_64k	cbt_21stDec_alexls12_256k
16K_70/30	6191	6580 IOps@9.7ms	7468	7997	7936
	IOps@20.7ms		IOps@17.1ms	IOps@16.0ms	IOps@16.1ms
64K_70/30	288	275	262	263	276
	MB/s@29.2ms	MB/s@30.5ms	MB/s@16.0ms	MB/s@31.9ms	MB/s@30.3ms
64K_30/70	166	191	149	168	153
	MB/s@12.6ms	MB/s@43.8ms	MB/s@56.3ms	MB/s@50.0ms	MB/s@54.9ms

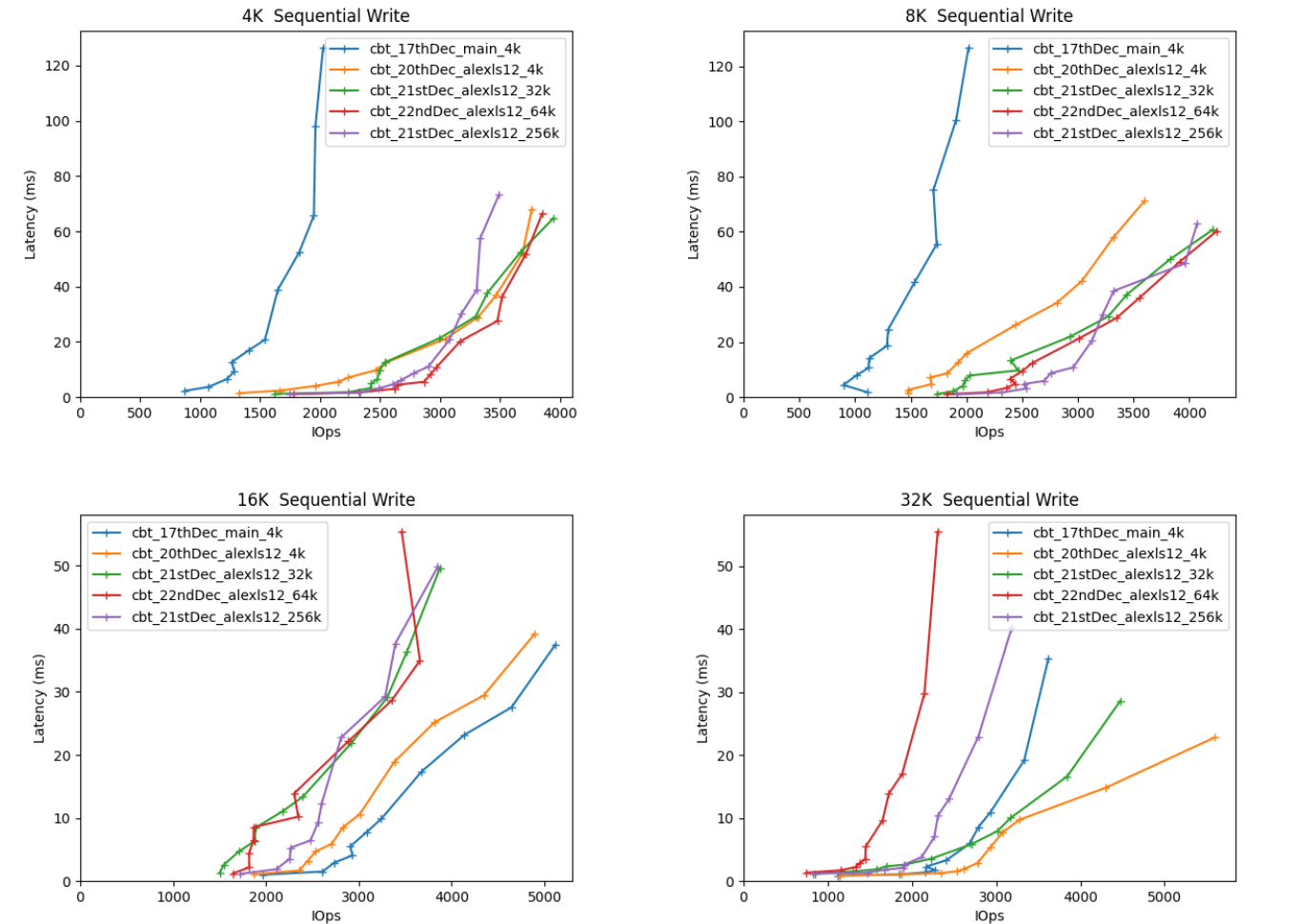
Response Curves

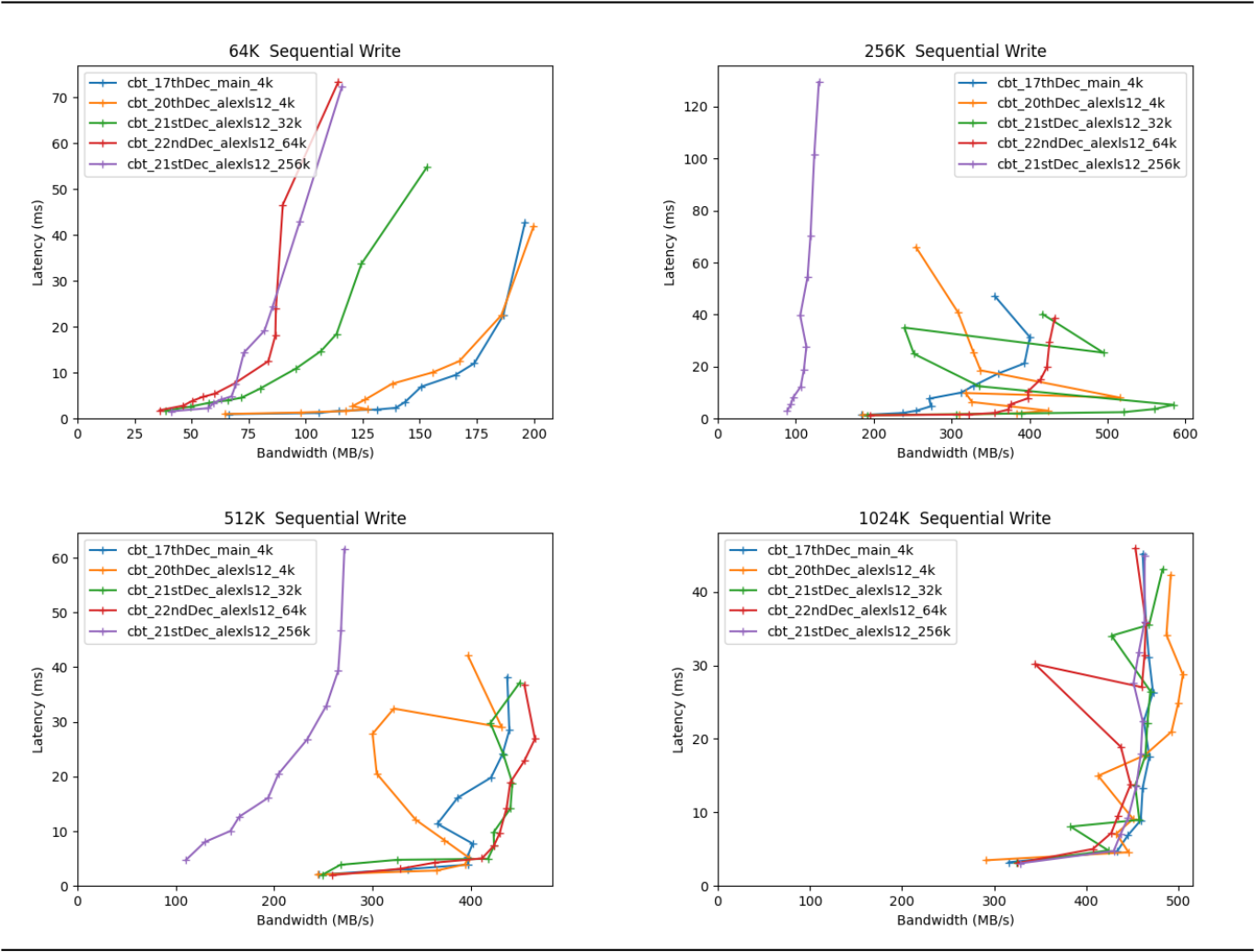
Sequential Read



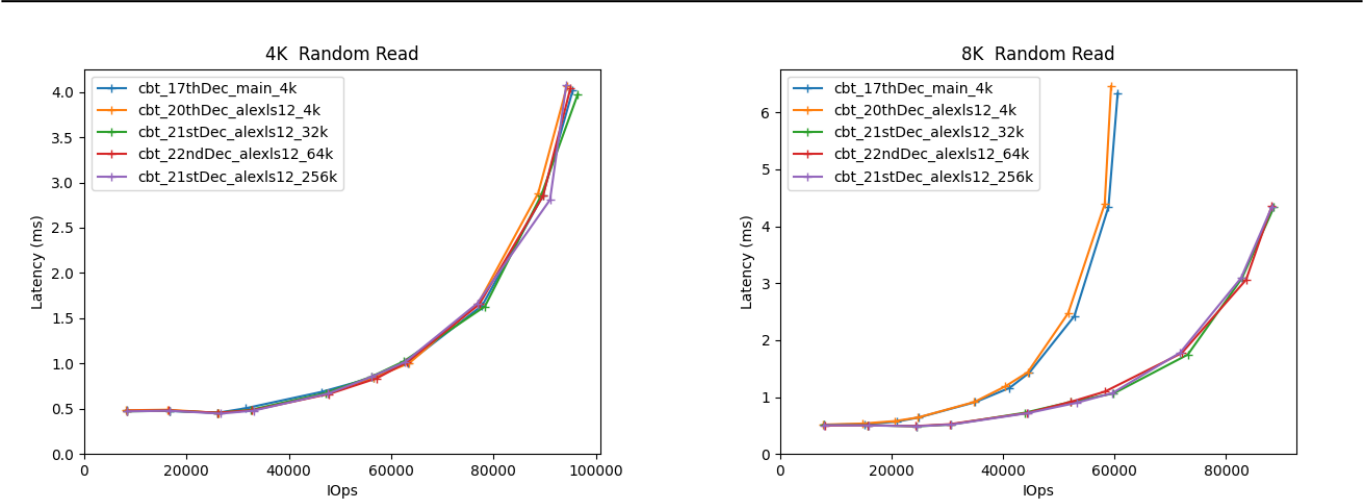


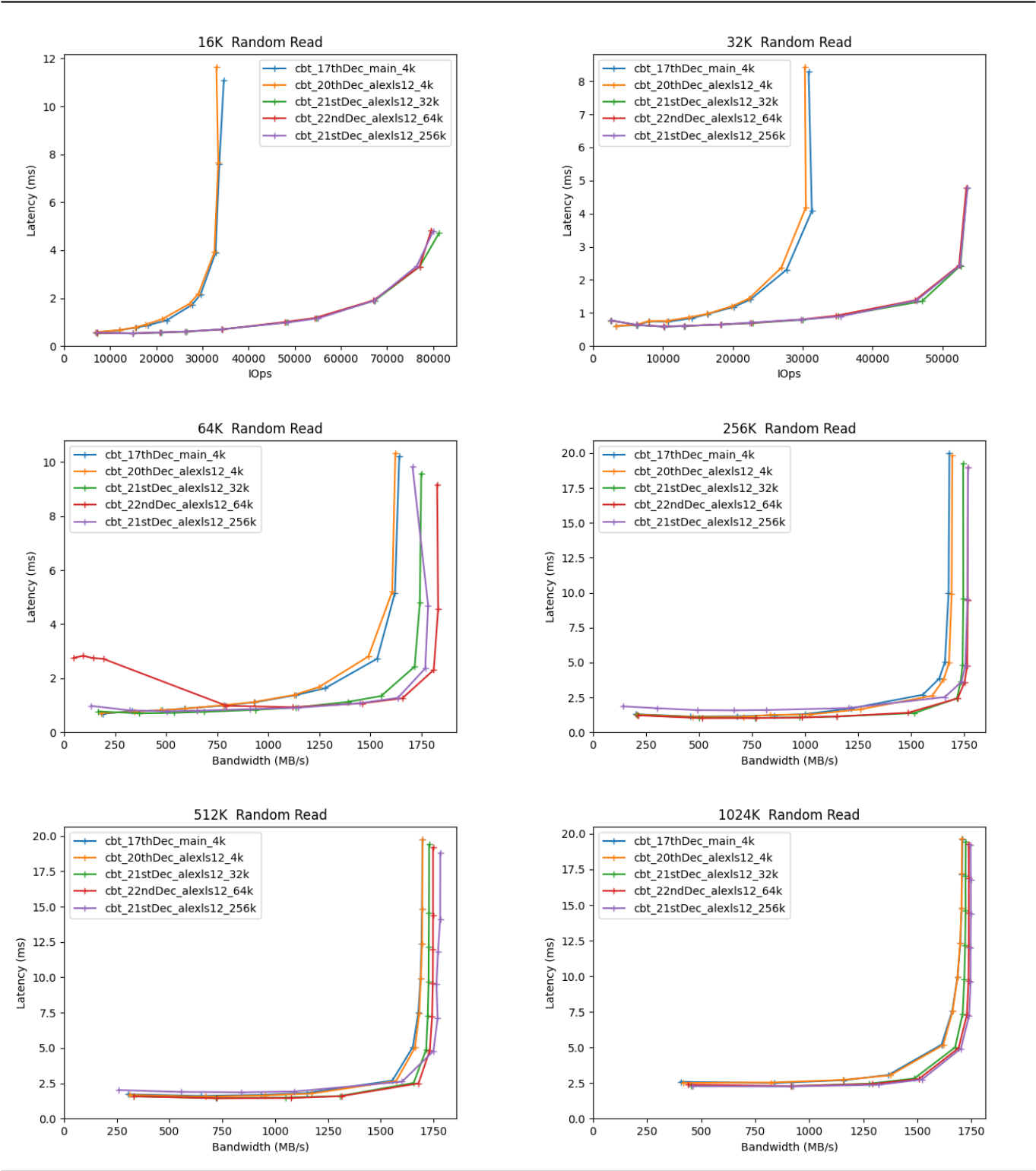
Sequential Write



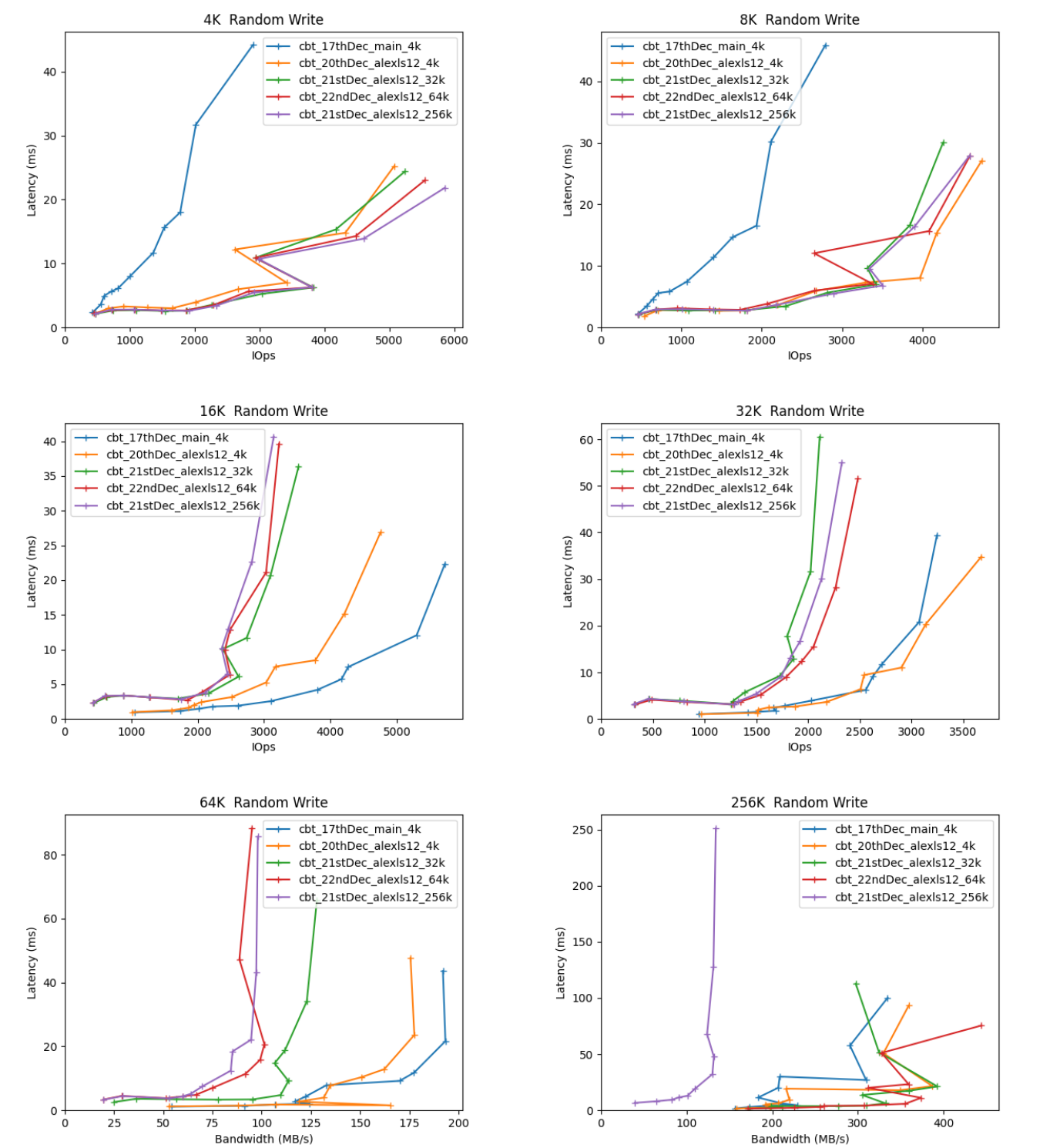


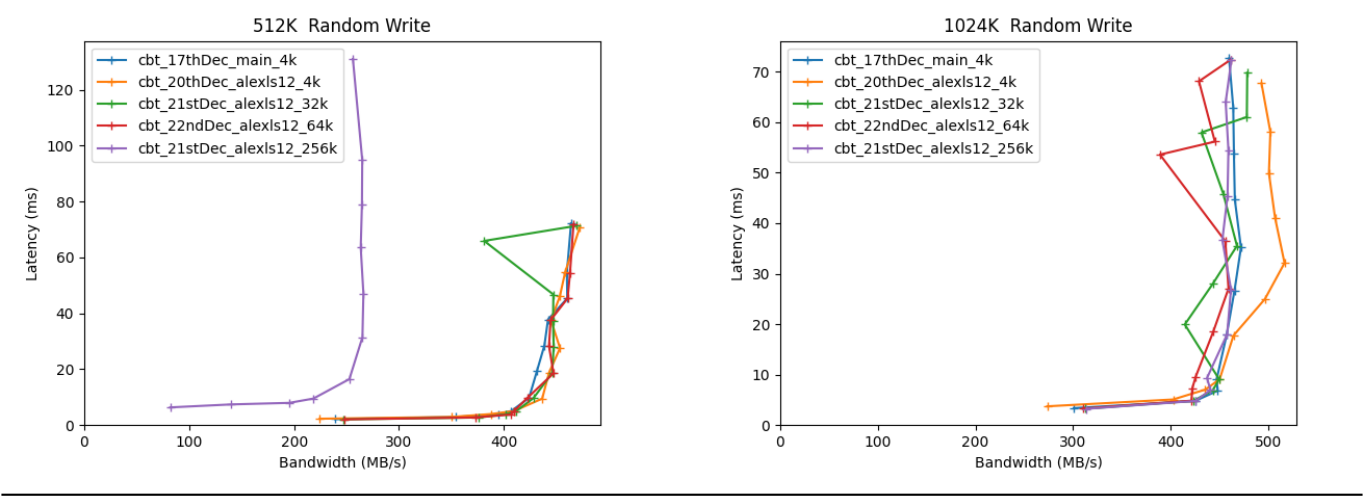
Random Read



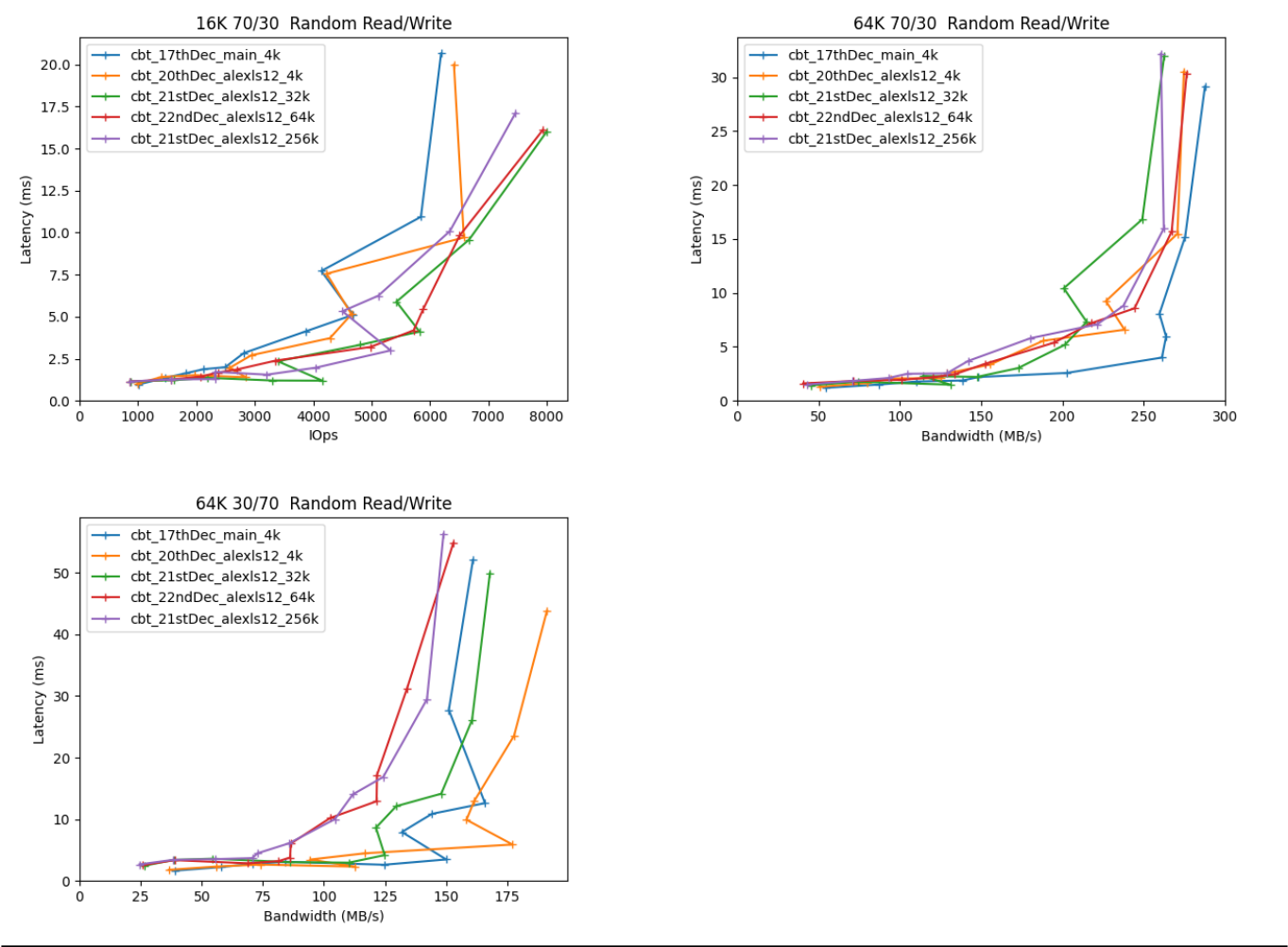


Random Write





Random Read/Write



Configuration yaml files

results

```

librbd fio:
  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
  precondition_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
    - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
    - 1
  workloads:
    16k7030:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      jobname: randmix
      mode: randrw
      numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1

```



```

- 2
- 3
- 4
- 8
- 12
- 16
- 20
- 24
- 28
- 32
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 1048576
1Mrandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
  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
  - 6
  - 8
  - 10
  - 12

```

```

- 14
- 16
- 20
  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
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 1048576
256krandomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randread
  mode: randread
  numjobs:
    - 1

```

```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 262144
256krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 262144
32krandomread:
  iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
  op_size: 32768
32krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
4krandomread:
  iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 4096
4krandomwrite:
  iodepth:
    - 1
    - 2

```



```

- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
- 8
- 16
- 24
- 32
- 40
- 48
- 64
  jobname: randread
  mode: randread
  numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 524288
512krandomwrite:
  iodepth:
- 1
- 2
- 3
- 4
- 8
- 16
- 24
- 32
- 40

```

```

- 48
- 64
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
- 6
- 8
- 12
- 16
- 20
- 24
- 32
jobname: seqread
mode: read
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 524288
512kseqwrite:
iodepth:
- 1
- 2
- 3
- 4
- 6
- 8
- 12
- 16
- 20
- 24
- 32
jobname: seqwrite
mode: write
numjobs:
- 1
- 1

```

```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 524288
64k3070:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randmix
  mode: randrw
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 65536
  rwmixread: 30
64k7030:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randmix
  mode: randrw
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
  op_size: 65536
  rwmixread: 70
64krandomread:
  iodepth:
- 2
- 4
- 6
- 8
- 12
- 16
- 24
- 32
- 64
- 128
- 256
  jobname: randread
  mode: randread
  numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 65536
64krandomwrite:
  iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: randwrite
  mode: randwrite
  numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 65536
64kseqread:
  iodepth:

```

thDec-main-4k vs cbt-20thDec-alex1s12-4k vs cbt-21stDec-alex1s12-32k vs cbt-22ndDec-alex1s12-64k vs cbt-23rdDec-alex1s12-128k vs cbt-24thDec-alex1s12-256k

```

- 128
- 256
- 384
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 8192
8krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 8192
precondition:
  iodepth:
    - 4
  jobname: precond1rw
  mode: randwrite
  monitor: false
  numjobs:
    - 1
  op_size: 65536
  precondition: true
seq16kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16

```

```
- 24
- 32
- 64
- 96
- 128
- 192
jobname: seqread
mode: read
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 16384
seq16kwrite:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
jobname: seqwrite
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 16384
seq256kread:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 48
- 64
jobname: seqread
```



```

- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 32768
seq32kwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
seq4kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 4096

```

thDec-main-4k vs cbt-20thDec-alex12-4k vs cbt-20thDec-alex12-32k vs cbt-22ndDec-alex12-364k vs 7, 2025
stDec-alex12-256k

```

- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
- 256
  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 -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: root
monitoring_profiles:
  collect1:
    args: -c 18 -sCD -i 10 -P -oz -FO --rawtoo --sep "," -f {collect1_dir}

```

results

```

librbd fio:
  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
  precondition_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
  - 1
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24

```

```

- 48
- 64
- 128
- 256
- 384
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
16krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
1Mrandomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  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
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 1048576
1Mseqread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  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
- 6
- 8
- 10
- 12
- 14
- 16
- 20
jobname: seqwrite
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 1048576
256krandomread:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 262144
256krandomwrite:
```

```
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
  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
    - 8
```



```

- 16
- 24
- 32
- 64
- 128
jobname: randwrite
mode: randwrite
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 32768
4krandomread:
iodepth:
- 4
- 8
- 12
- 16
- 32
- 48
- 64
- 128
- 256
- 384
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 4096
4krandomwrite:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
jobname: randwrite
mode: randwrite
numjobs:

```

$$\begin{array}{r} -1 \\ -1 \\ -1 \\ -1 \\ -1 \\ -1 \\ -1 \end{array}$$

```
64k3070:
    iodepth:
```

```

- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
  rwmixread: 70
64krandomread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 12

```

```

- 16
- 24
- 32
- 64
- 128
- 256
  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
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 65536
64kseqread:
  iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
  jobname: read

```

```

    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 65536
  64kseqwrite:
    iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    jobname: write
    mode: write
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 65536
  8krandomread:
    iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
    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
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 8192
precondition:
  iodepth:
    - 4
  jobname: precond1rw
  mode: randwrite
  monitor: false
  numjobs:
    - 1
  op_size: 65536
  precondition: true
seq16kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 16384
seq16kwrite:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
seq256kread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```



```

- 1
  op_size: 262144
seq256kwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 5
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 262144
seq32kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
seq32kwrite:
  iodepth:
    - 1
    - 2
    - 3

```

```

- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
  seq4kread:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    jobname: seqread
    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 4096
  seq4kwrite:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128

```

```

- 192
- 256
jobname: seqwrite
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 4096
seq8kread:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
jobname: seqread
mode: read
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 8192
seq8kwrite:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
- 256
jobname: seqwrite
mode: write
numjobs:

```

```

- 1
- 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 -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

```

librbd fio:
  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
  precondition_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
    - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
    - 1
  workloads:
    16k7030:
      iodepth:
        - 1
        - 2
        - 3
        - 4
        - 5
        - 8
        - 16
        - 24
        - 32
        - 64
        - 128
      jobname: randmix
      mode: randrw
      numjobs:
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
        - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
        - 4
        - 8
        - 12
        - 16
        - 24

```

```

- 48
- 64
- 128
- 256
- 384
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
16k randomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
1M randomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  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
  - 8
  - 12
  - 16
  - 20
  - 24
  - 28
  - 32
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 1048576
1Mseqread:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 6
  - 8
  - 10
  - 12
  - 14
  - 16
  - 20
  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
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 1048576
256krandomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 262144
256krandomwrite:

```



```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 4096
512krandomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
512krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
- 1
  op_size: 524288
512kseqread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
512kseqwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
64k3070:
  iodepth:

```

```

- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randmix
  mode: randrw
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 65536
  rwmixread: 70
64krandomread:
  iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12

```



```

    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 65536
  64kseqwrite:
    iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    jobname: write
    mode: write
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 65536
  8krandomread:
    iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
    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
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 8192
precondition:
  iodepth:
    - 4
  jobname: precond1rw
  mode: randwrite
  monitor: false
  numjobs:
    - 1
  op_size: 65536
  precondition: true
seq16kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1

```



```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 16384
seq16kwrite:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
seq256kread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

```

- 1
  op_size: 262144
seq256kwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 5
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 262144
seq32kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
seq32kwrite:
  iodepth:
    - 1
    - 2
    - 3

```

```

- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
  seq4kread:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    jobname: seqread
    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 4096
  seq4kwrite:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128

```

```

- 192
- 256
jobname: seqwrite
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 4096
seq8kread:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
jobname: seqread
mode: read
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 8192
seq8kwrite:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
- 256
jobname: seqwrite
mode: write
numjobs:

```

```

- 1
- 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 -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: root
monitoring_profiles:
  collect1:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collect1_dir}

```

results

```

librbd fio:
  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
  precondition_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
  - 1
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24

```

```

- 48
- 64
- 128
- 256
- 384
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 16384
16krandomwrite:
  iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: randwrite
  mode: randwrite
  numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 16384
1Mrandomread:
  iodepth:
- 1
- 2
- 3
- 4
- 8
- 12
- 16
- 20
- 24
- 28
- 32
  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
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 1048576
1Mseqread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  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
- 6
- 8
- 10
- 12
- 14
- 16
- 20
jobname: seqwrite
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 1048576
256krandomread:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 262144
256krandomwrite:
```

```

iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
  - 12
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
  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
  - 8

```

```

- 16
- 24
- 32
- 64
- 128
jobname: randwrite
mode: randwrite
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 32768
4krandomread:
iodepth:
- 4
- 8
- 12
- 16
- 32
- 48
- 64
- 128
- 256
- 384
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 4096
4krandomwrite:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
512krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-60thDec-alexls12-32k vs cbt-22ndDec-alexls12-64k vs cbt-11thDec-alexls12-256k

```

- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 65536
  rwmixread: 70
64krandomread:
  iodepth:
  - 2
  - 4
  - 6
  - 8
  - 12

```

```

- 16
- 24
- 32
- 64
- 128
- 256
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
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: randwrite
  mode: randwrite
  numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 65536
64kseqread:
  iodepth:
- 2
- 4
- 6
- 8
- 16
- 24
- 32
- 64
- 128
- 192
- 256
  jobname: read

```

```

    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 65536
  64kseqwrite:
    iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
    jobname: write
    mode: write
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 65536
  8krandomread:
    iodepth:
      - 4
      - 8
      - 12
      - 16
      - 32
      - 48
      - 64
      - 128
      - 256
      - 384
    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
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 8192
precondition:
  iodepth:
    - 4
  jobname: precond1rw
  mode: randwrite
  monitor: false
  numjobs:
    - 1
  op_size: 65536
  precondition: true
seq16kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 16384
seq16kwrite:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
seq256kread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

thDec-main-4k vs cbt-20thDec-alex12-4k vs cbt-175thDec-alex12-32k vs cbt-22ndDec-alex12-256k vs cbt-1stDec-alex12-256k

```

- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
  seq4kread:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    jobname: seqread
    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 4096
  seq4kwrite:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128

```

thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-17thDec-alexls12-32k vs cbt-22ndDec-alexls12-64k
stDec-alexls12-256k

cbt-17thDec-main-4k vs cbt-20thDec-alexls12-4k vs cbt-27thDec-alexls12-32k vs cbt-22ndDec-alexls12-64k
cbt-21stDec-alexls12-256k

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
  precondition_time: 600
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 60
  time_based: true
  use_existing_volumes: true
  vol_size: 420000
  volumes_per_client:
  - 1
  workloads:
    16k7030:
      iodepth:
      - 1
      - 2
      - 3
      - 4
      - 5
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      op_size: 16384
      rwmixread: 70
    16krandomread:
      iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24

```

```

- 48
- 64
- 128
- 256
- 384
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
16krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
1Mrandomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  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
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 1048576
1Mseqread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  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
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 1048576
256krandomread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 262144
256krandomwrite:

```

```

iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
  - 12
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
  jobname: randread
  mode: randread
  numjobs:
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  - 1
  op_size: 32768
32krandomwrite:
  iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8

```

```

- 16
- 24
- 32
- 64
- 128
jobname: randwrite
mode: randwrite
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 32768
4krandomread:
iodepth:
- 4
- 8
- 12
- 16
- 32
- 48
- 64
- 128
- 256
- 384
jobname: randread
mode: randread
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 4096
4krandomwrite:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
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
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  jobname: randread
  mode: randread
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
512krandomwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
- 1
  op_size: 524288
512kseqread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
512kseqwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
    - 32
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 524288
64k3070:
  iodepth:

```



```

- 16
- 24
- 32
- 64
- 128
- 256
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
- 8
- 16
- 24
- 32
- 64
- 128
jobname: randwrite
mode: randwrite
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 65536
64kseqread:
iodepth:
- 2
- 4
- 6
- 8
- 16
- 24
- 32
- 64
- 128
- 192
- 256
jobname: read

```



```

mode: read
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 65536
64kseqwrite:
iodepth:
- 1
- 2
- 3
- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
jobname: write
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 65536
8krandomread:
iodepth:
- 4
- 8
- 12
- 16
- 32
- 48
- 64
- 128
- 256
- 384
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
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 8192
precondition:
  iodepth:
    - 4
  jobname: precond1rw
  mode: randwrite
  monitor: false
  numjobs:
    - 1
  op_size: 65536
  precondition: true
seq16kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1

```

```

- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
  op_size: 16384
seq16kwrite:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 16384
seq256kread:
  iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1

```

```

- 1
  op_size: 262144
seq256kwrite:
  iodepth:
    - 1
    - 2
    - 3
    - 5
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 262144
seq32kread:
  iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
  jobname: seqread
  mode: read
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
seq32kwrite:
  iodepth:
    - 1
    - 2
    - 3

```

```

- 4
- 5
- 8
- 16
- 24
- 32
- 64
- 128
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
    - 1
  op_size: 32768
  seq4kread:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128
      - 192
    jobname: seqread
    mode: read
    numjobs:
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
      - 1
    op_size: 4096
  seq4kwrite:
    iodepth:
      - 2
      - 4
      - 8
      - 12
      - 16
      - 24
      - 32
      - 64
      - 96
      - 128

```

```
- 192
- 256
jobname: seqwrite
mode: write
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 4096
seq8kread:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
jobname: seqread
mode: read
numjobs:
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1
op_size: 8192
seq8kwrite:
iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
- 256
jobname: seqwrite
mode: write
numjobs:
```

```

- 1
- 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 -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}

```