

# Comparitive Performance Report for 24th-Sep-Jerasure-4+2 vs 30th-Sep-Clay-4+2+5 vs 9th-Oct-Jerasure-4+2-OSD-down vs 10th-Oct-Clay-4+2+5-OSD-down

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# Comparison summary for 24th-Sep-Jerasure-4+2 vs 30th-Sep-Clay-4+2+5 vs 9th-Oct-Jerasure-4+2-OSD-down vs 10th-Oct-Clay-4+2+5-OSD-down

Sequential							
Read	24th_Sep_Jerasure-4+2	30th-Sep-Clay-4+2+5	%change	9th_Oct_Jerasure-4+2-OSD-down	%change	10th-Oct-Clay-4+2+5-OSD-down	%change
4K	88535@4.3ms	220836@1.7	149%	86279@4.4	-3%	77823@4.9	-12%
8K	72622@5.3ms	210231@1.8	189%	71977@5.3	-1%	64407@6.0	-11%
16K	54724@5.3ms	191084@1.5	249%	54546@5.3	-0%	50059@5.7	-9%
32K	51917@3.7ms	147245@1.3	184%	49597@3.9	-4%	43847@4.4	-16%
64K	2759@1.5ms	7625@2.2	176%	2757@3.0	-0%	2198@3.8	-20%
256K	7038@19.1ms	11156@12.0	59%	6370@21.1	-9%	5293@25.4	-25%
512K	7896@17.0ms	11982@11.2	52%	7061@19.0	-11%	5971@22.5	-24%
1024K	8396@32.0ms	12551@5.3	49%	7528@35.7	-10%	6579@40.8	-22%

Sequential							
Write	24th_Sep_Jerasure-4+2	30th-Sep-Clay-4+2+5	%change	9th_Oct_Jerasure-4+2-OSD-down	%change	10th-Oct-Clay-4+2+5-OSD-down	%change
4K	152187@10.1ms	496157@3.1	226%	154904@9.9	2%	141456@10.9	-7%
8K	153668@10.0ms	328509@4.7	114%	159837@9.6	4%	135906@11.3	-12%
16K	130283@7.8ms	181537@5.6	39%	138893@7.4	7%	106849@9.6	-18%
32K	76706@10.0ms	99713@7.7	30%	81494@9.4	6%	62200@12.3	-19%
64K	2817@11.9ms	3422@9.8	21%	2818@8.9	0%	2265@14.8	-20%
256K	3582@18.6ms	3853@17.3	8%	3714@17.9	4%	2964@22.5	-17%
512K	3702@17.9ms	3982@8.2	8%	3805@17.4	3%	3131@21.2	-15%
1024K	4435@37.3ms	4071@32.4	-8%	4634@35.7	4%	4006@41.4	-10%

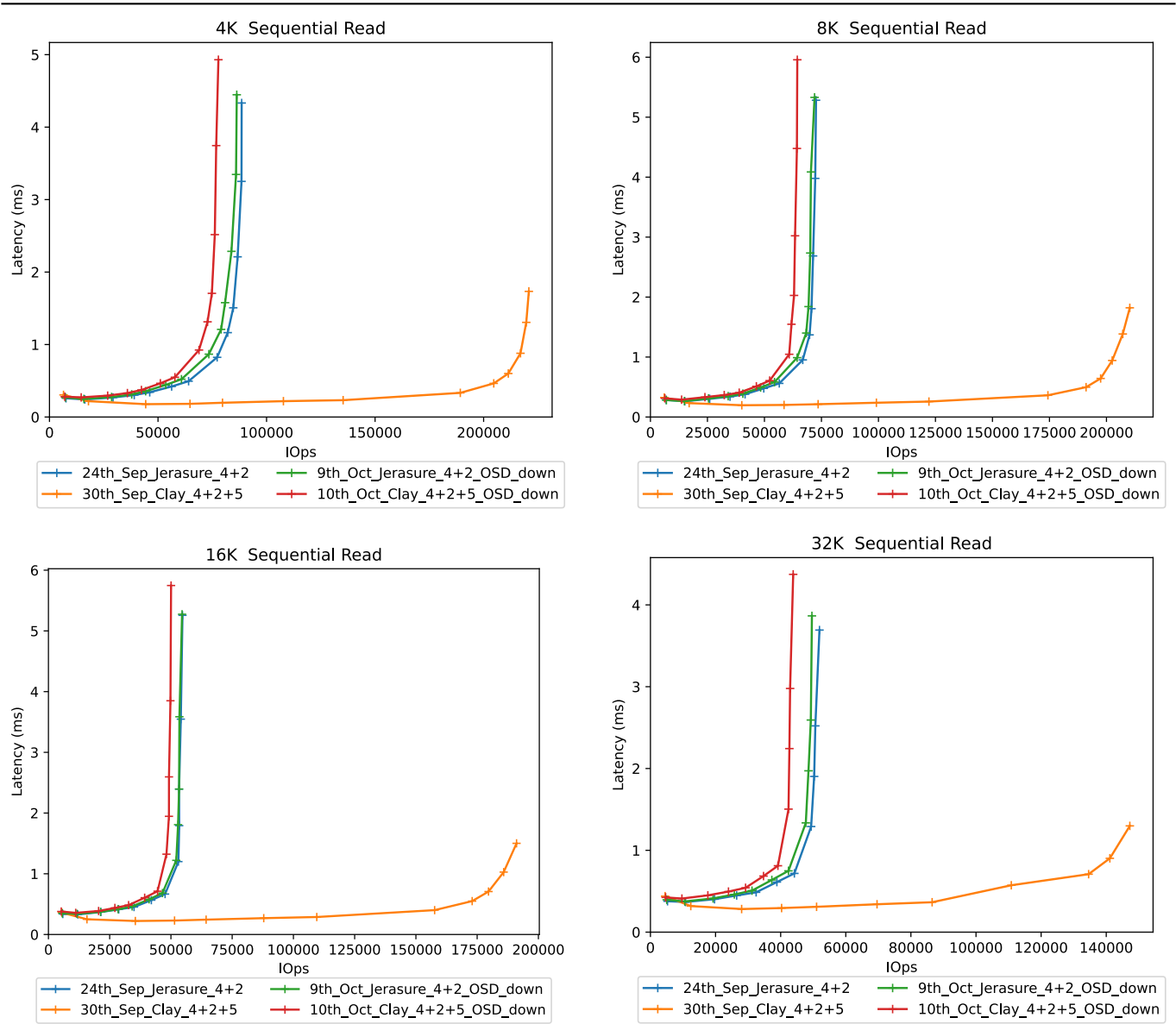
Random							
Read	24th_Sep_Jerasure-4+2	30th-Sep-Clay-4+2+5	%change	9th_Oct_Jerasure-4+2-OSD-down	%change	10th-Oct-Clay-4+2+5-OSD-down	%change
4K	56868@13.5ms	204999@3.7	260%	56798@13.5	-0%	52005@14.8	-9%
8K	57499@13.4ms	196145@3.9	241%	57036@13.5	-1%	54067@14.2	-6%
16K	56952@10.3ms	180473@3.3	217%	56520@10.4	-1%	53659@11.0	-6%
32K	52631@7.3ms	152053@3.4	189%	50856@7.5	-3%	47593@10.8	-10%
64K	3052@8.2ms	7786@3.2	155%	2909@8.6	-5%	2548@9.9	-17%
256K	6523@5.1ms	11532@2.9	77%	5741@5.8	-12%	5313@6.3	-19%
512K	8035@33.4ms	11996@2.8	49%	7162@37.5	-11%	6562@40.9	-18%
1024K	8358@32.1ms	12190@2.7	46%	7443@36.1	-11%	6848@39.2	-18%

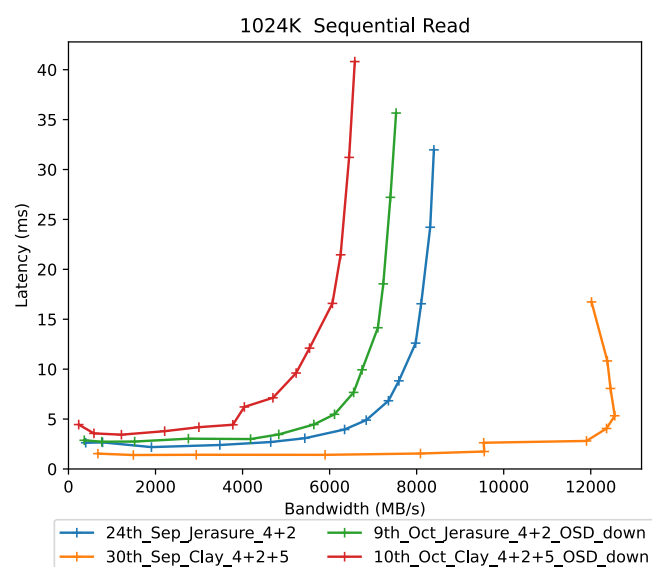
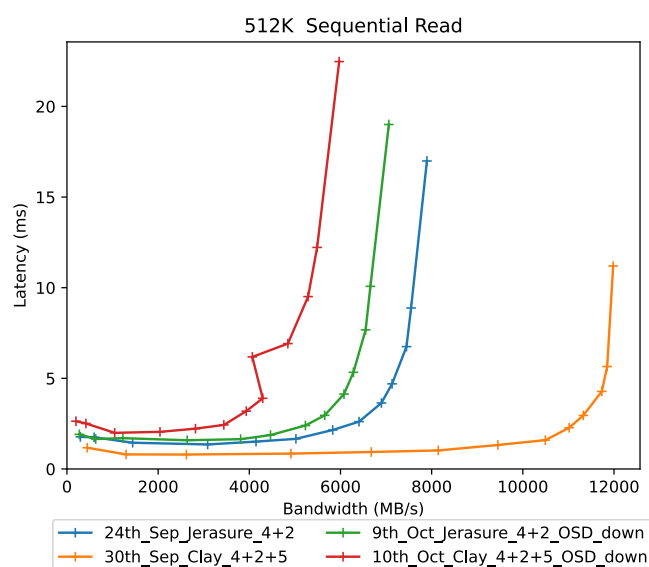
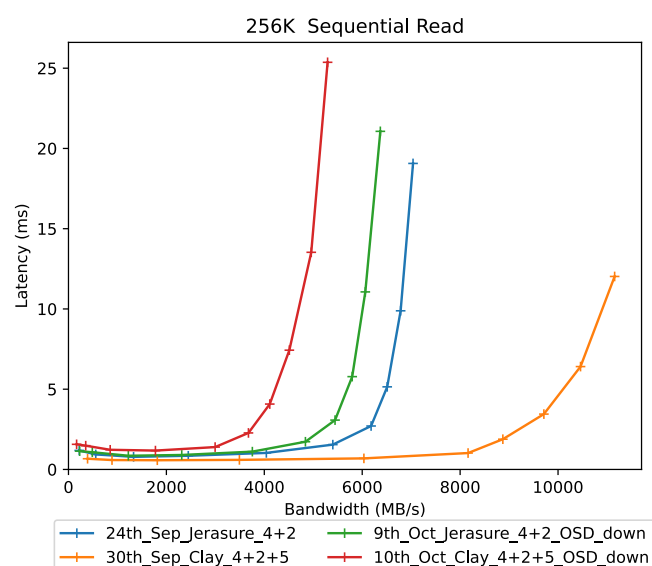
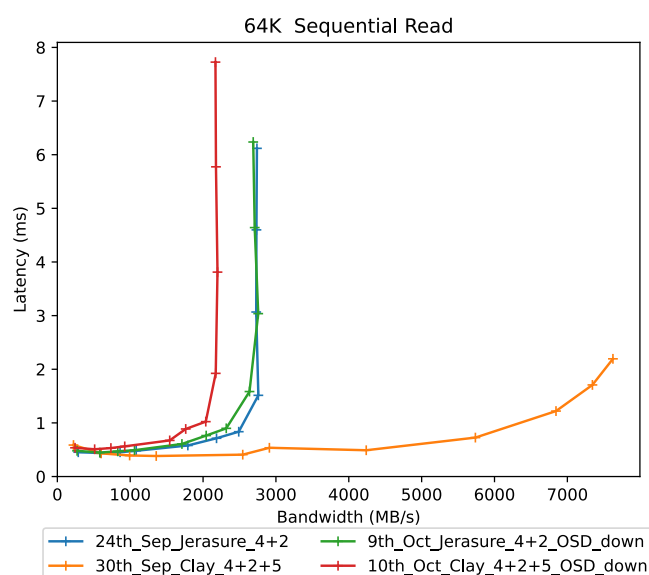
Random							
Write	24th_Sep_Jerasure-4+2	30th_Sep-Clay-4+2+5	%change	9th_Oct_Jerasure-4+2-OSD-down	%change	10th-Oct-Clay-4+2+5-OSD_down	%change
4K	14536@8.8ms	49410@5.2	240%	14933@17.1	3%	14501@8.8	-0%
8K	13394@19.1ms	46732@8.2	249%	14418@53.3	8%	13427@57.2	0%
16K	15582@24.6ms	44616@8.6	186%	17735@28.9	14%	17030@30.0	9%
32K	16810@22.8ms	41611@9.2	148%	17104@22.4	2%	16577@23.1	-1%
64K	1118@22.5ms	2242@11.2	101%	1115@15.0	-0%	1070@23.5	-4%
256K	3229@20.6ms	3910@6.3	21%	3188@20.9	-1%	2996@22.3	-7%
512K	3768@8.7ms	4384@7.4	16%	3788@8.6	1%	3433@9.5	-9%
1024K	4340@11.1ms	4123@7.7	-5%	4430@10.9	2%	3860@12.6	-11%

Random							
Read/Write	24th_Sep_Jerasure-4+2	30th_Sep-Clay-4+2+5	%change	9th_Oct_Jerasure-4+2-OSD-down	%change	10th-Oct-Clay-4+2+5-OSD_down	%change
4K_70/30	24534@10.4ms	90173@2.8	268%	25977@14.8	6%	24728@15.5	1%
16K_70/30	27036@9.5ms	85207@3.0	215%	28007@9.1	4%	26630@4.8	-2%
64K_30/70	1159@14.4ms	2745@6.1	137%	1291@13.0	11%	1161@14.4	0%
64K_70/30	1615@10.4ms	4204@4.0	160%	1688@5.0	5%	1538@4.1	-5%

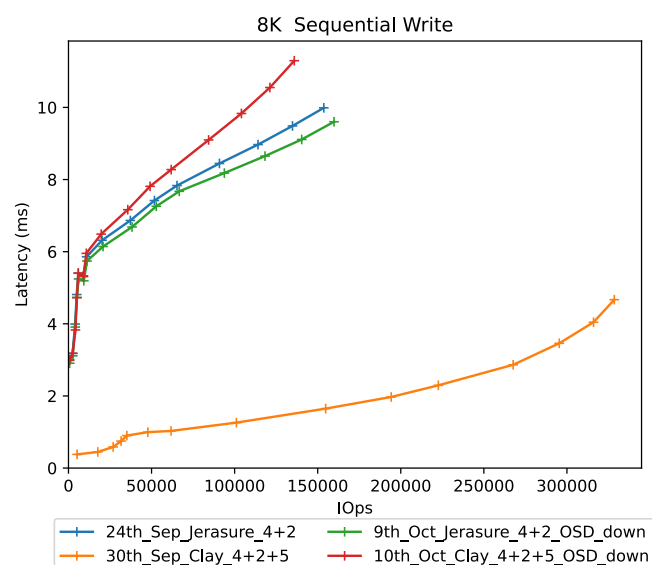
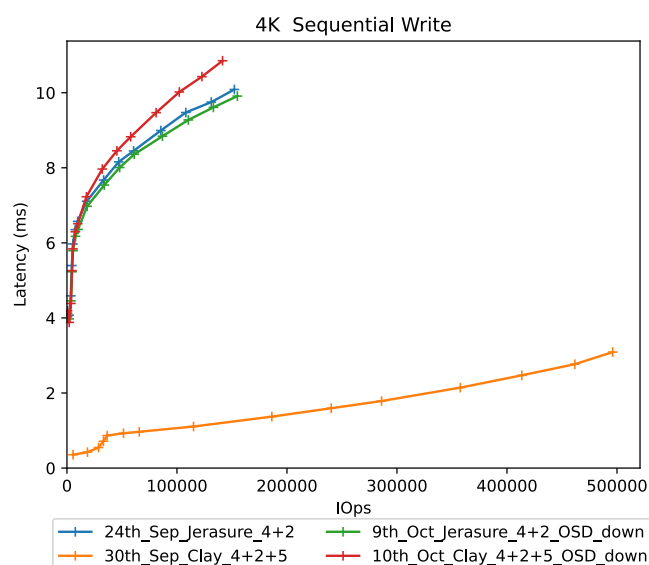
# Response Curves

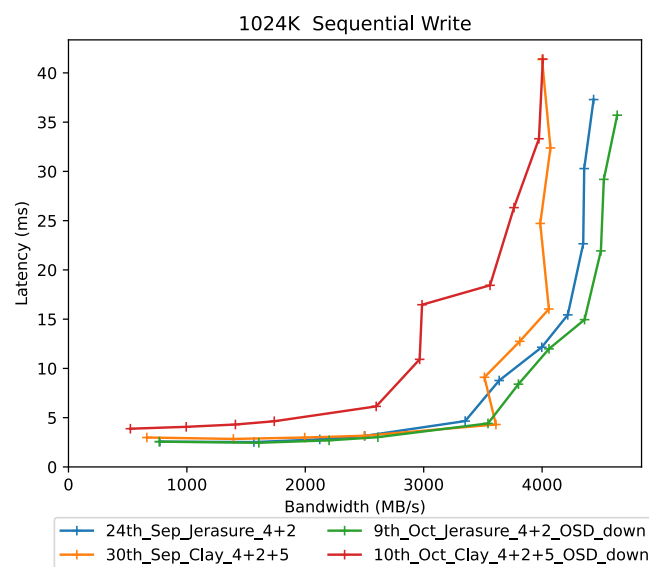
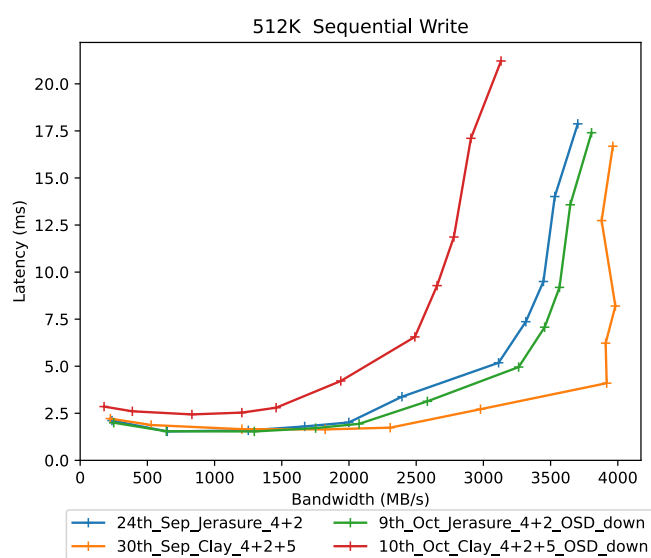
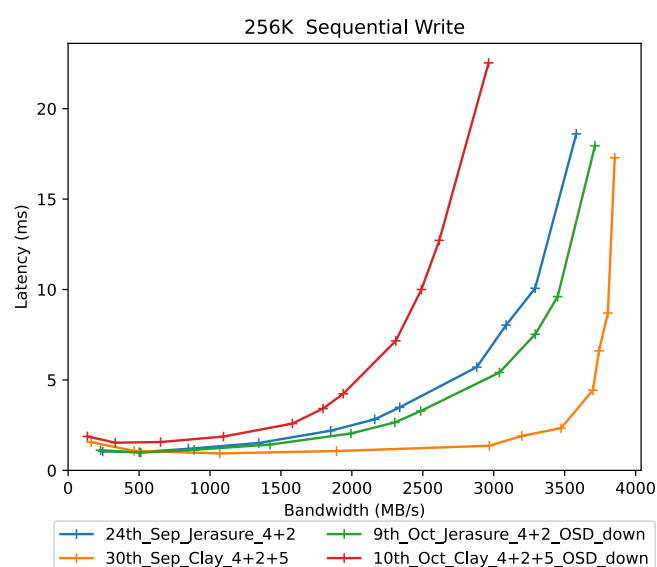
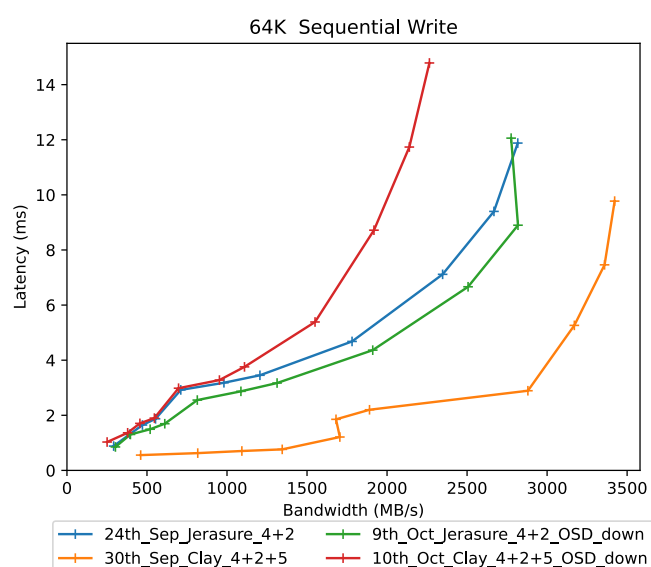
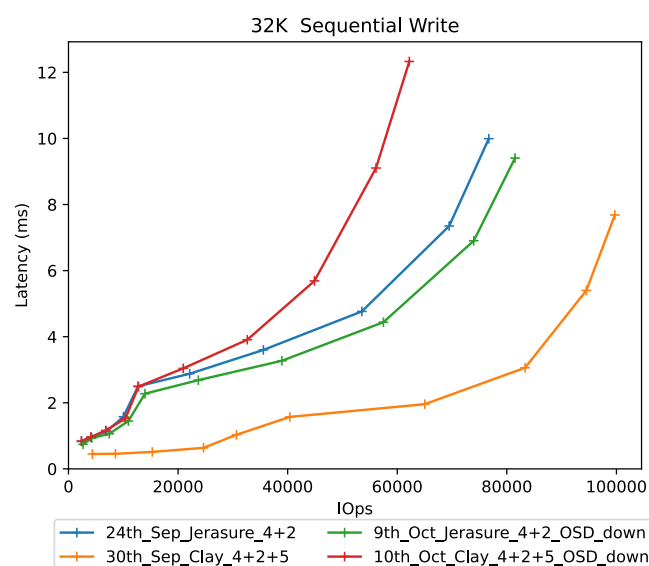
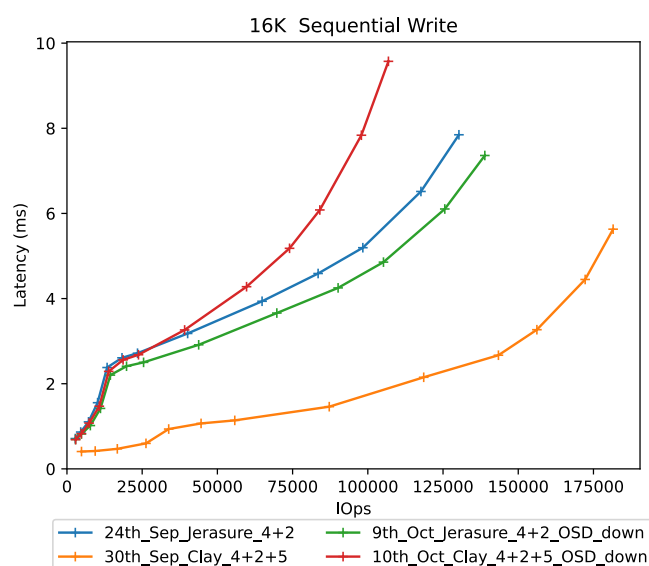
## Sequential Read



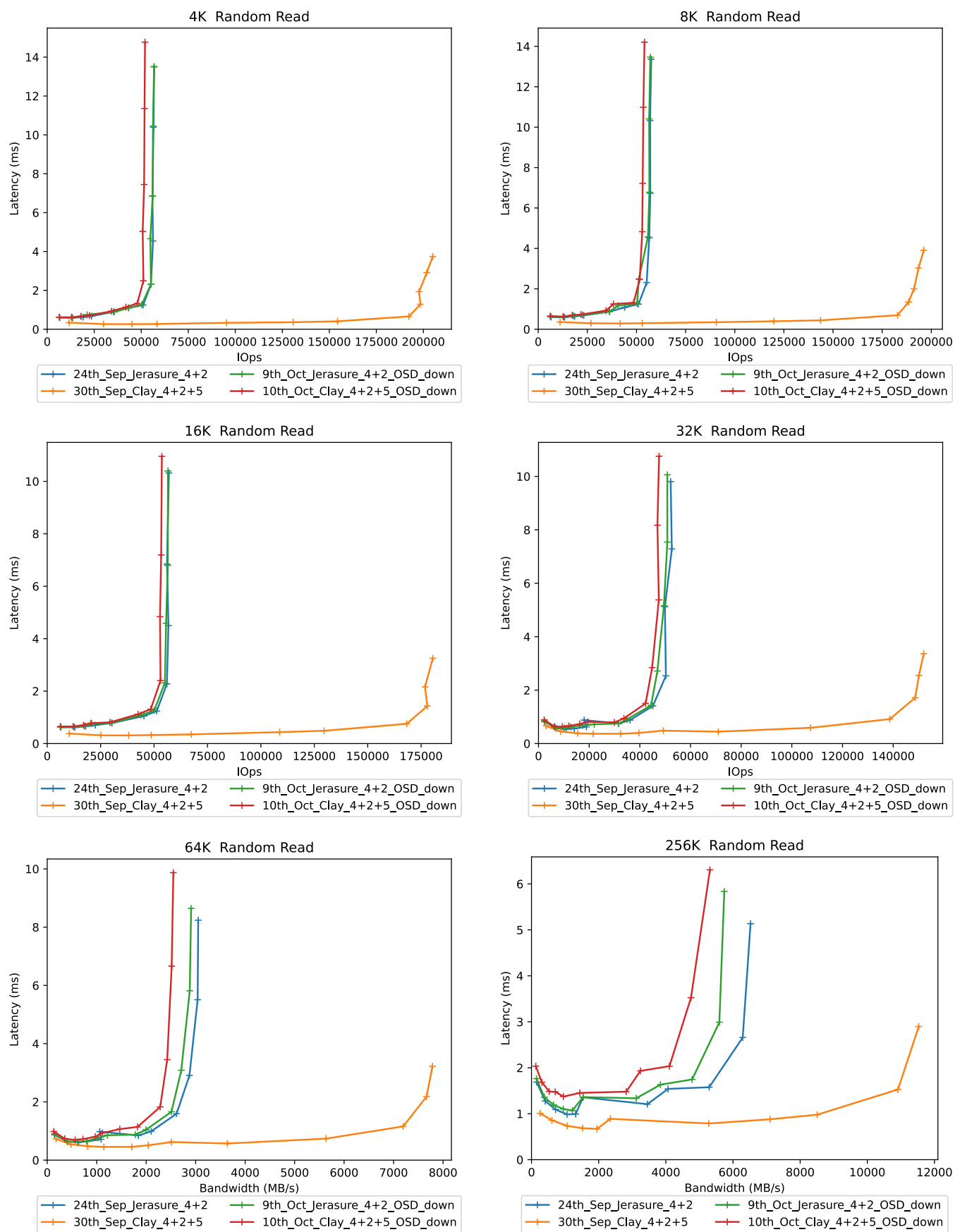


## Sequential Write

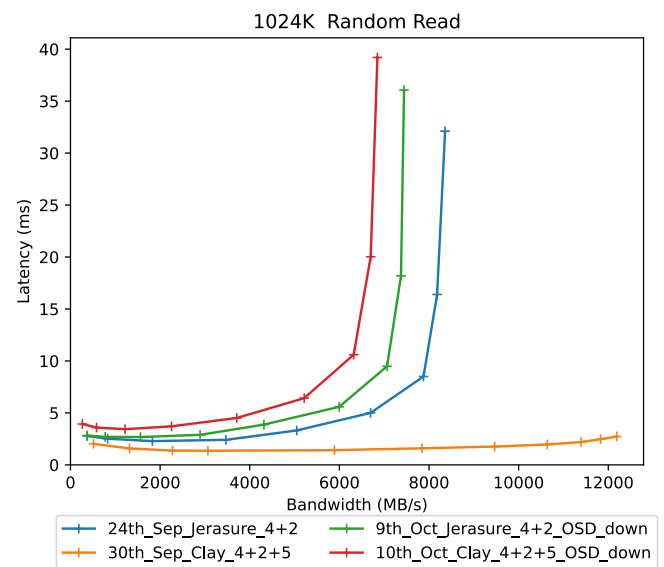
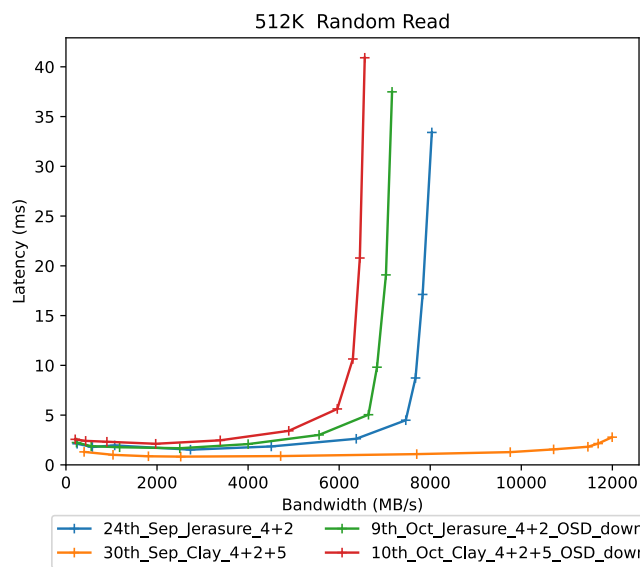




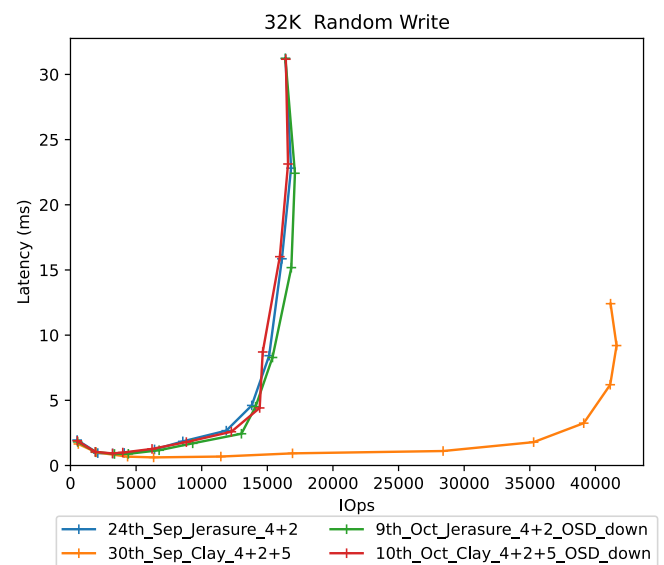
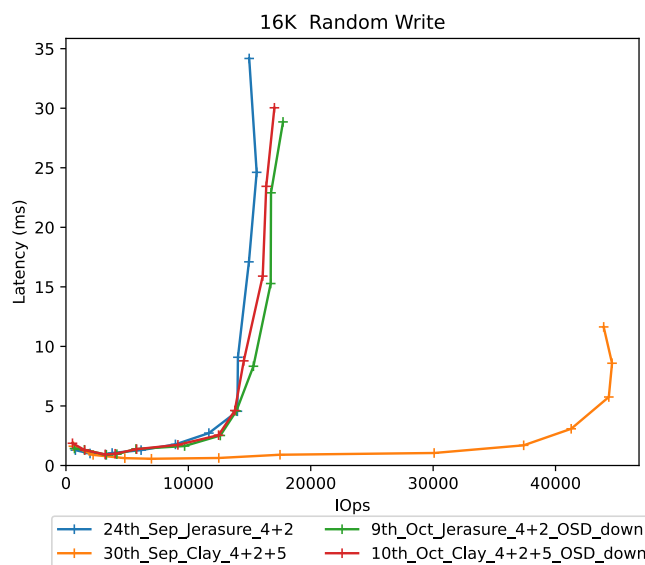
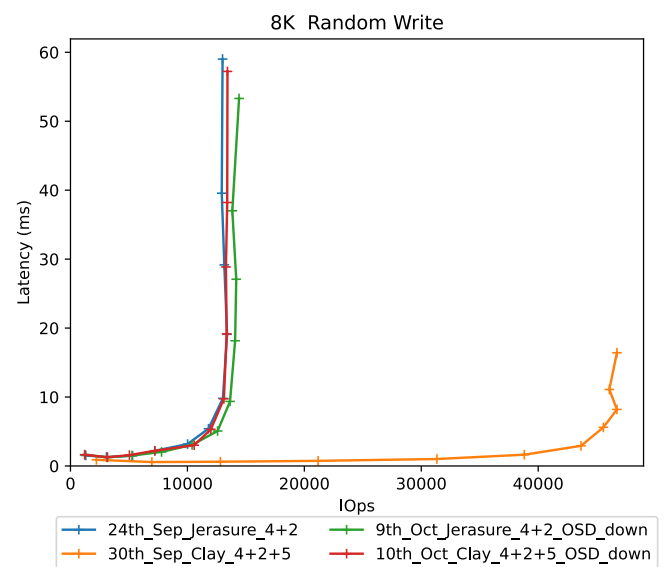
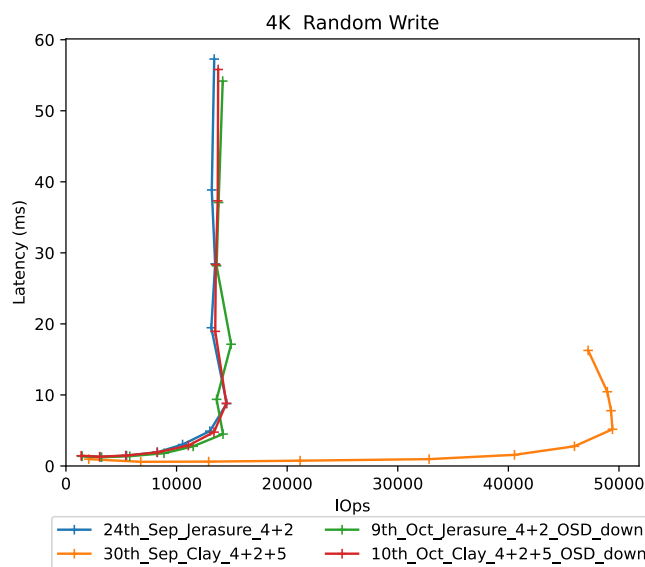
## Random Read

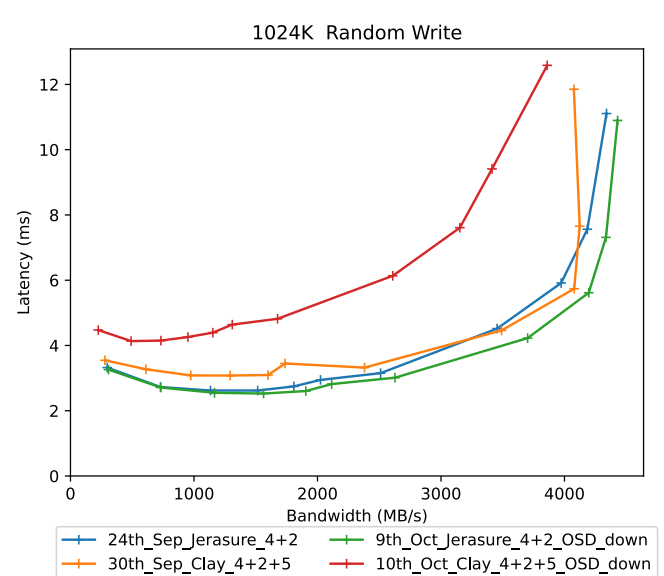
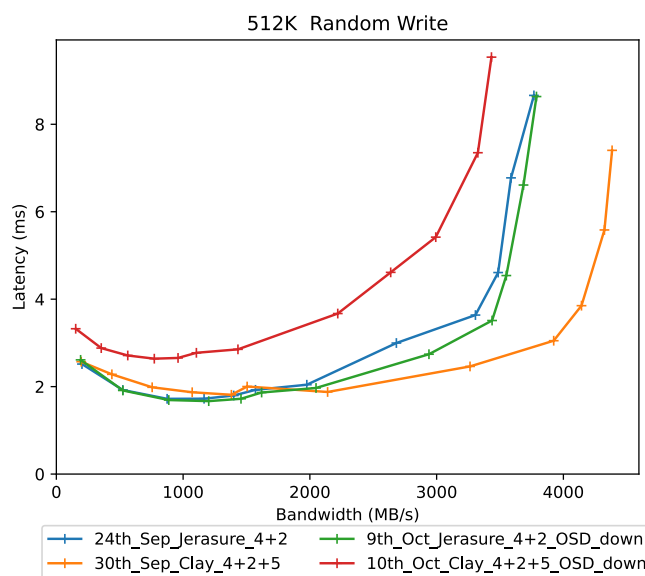
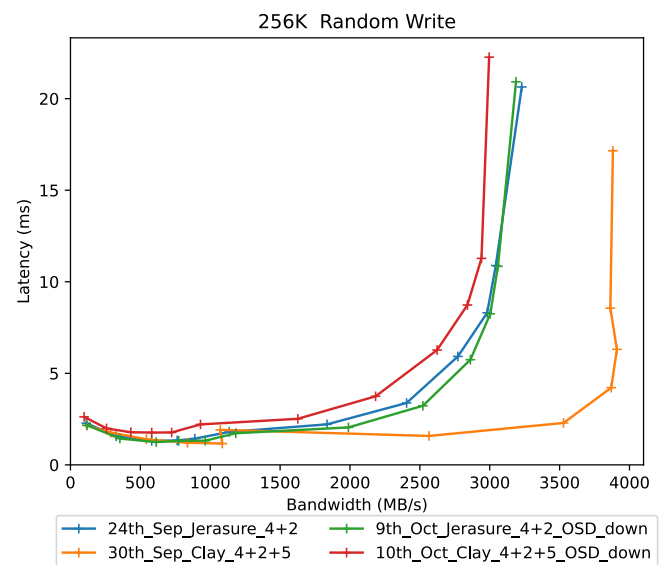
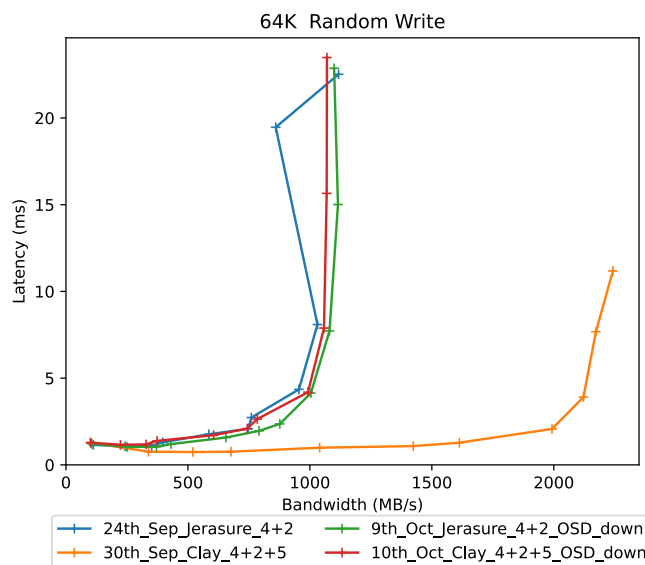




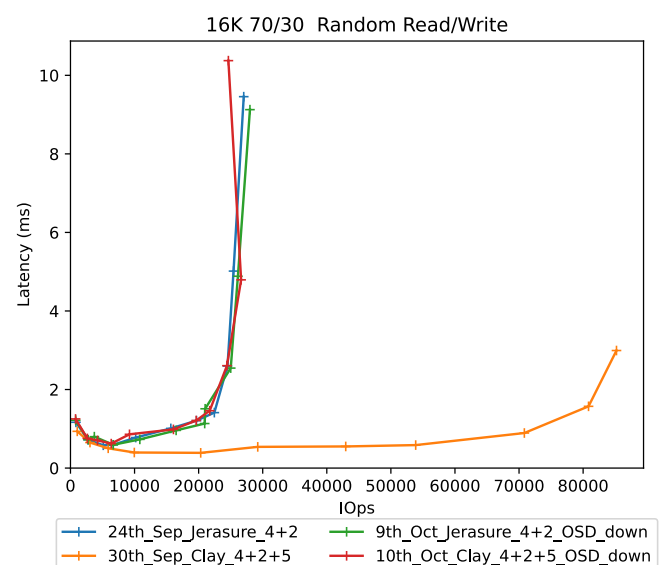
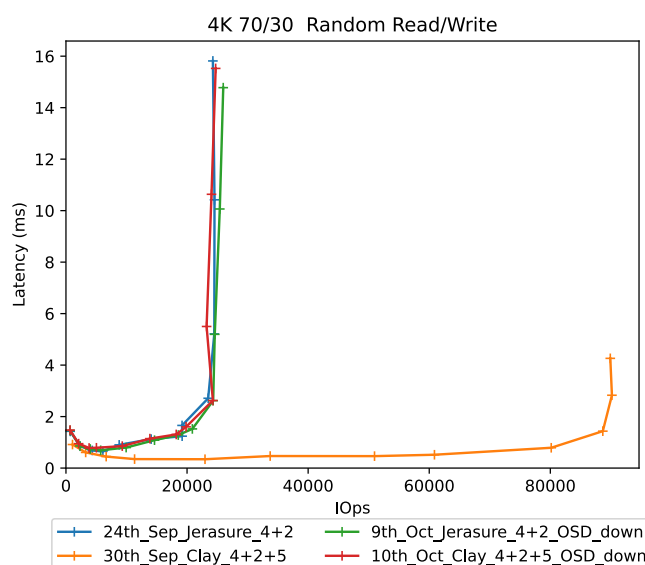


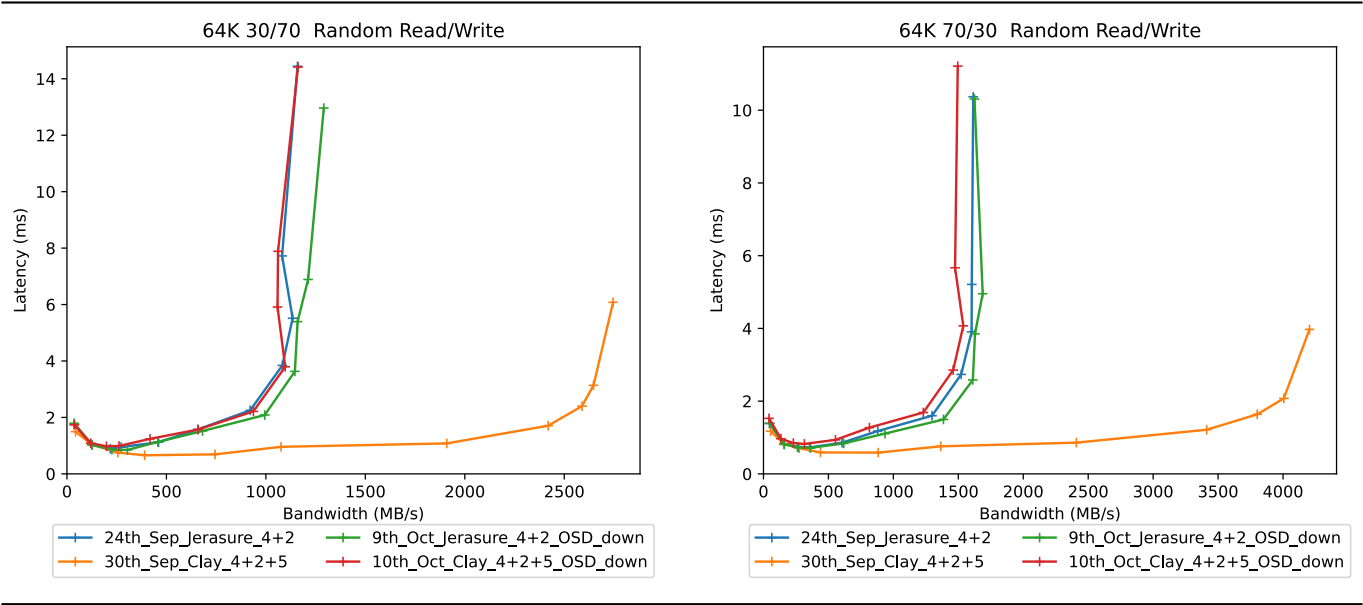
## Random Write





## 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

```

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
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
    - 1
  ramp: 30
  rbdname: cbt-librbd fio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 1204500
  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
    16k randomread:
      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
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
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

```

```

- 4
- 8
- 12
- 16
- 24
- 32
- 48
- 64
- 96
- 128
- 192
- 256
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
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
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
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
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
    - 96
    - 128
    - 256
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: preconditionrw
  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
- 4
- 8
- 16
- 32
- 64
- 128
- 256
- 512
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}
  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
prefill:
  blocksize: 64k
  numjobs: 1
procs_per_volume:
- 1
ramp: 30
rbdname: cbt-librbd fio
time: 90
time_based: true
use_existing_volumes: true
vol_size: 1204500
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
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
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
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
    - 96
```

```

- 128
- 192
- 256
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
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
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
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
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 48
    - 64
    - 96
    - 128
    - 256
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
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256

```

```

- 512
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}

```

## 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
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
    - 1
  ramp: 30
  rbdname: cbt-librbd fio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 1204500
  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
    16k randomread:
      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
  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
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
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: preconditionrw
  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 -FO --rawtoo --sep "," -f {collectl_dir}
  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
prefill:
  blocksize: 64k
  numjobs: 1
procs_per_volume:
- 1
ramp: 30
rbdname: cbt-librbd fio
time: 90
time_based: true
use_existing_volumes: true
vol_size: 1204500
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
  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
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
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
  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}

```