Comparitive Performance Report for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt-2ndApr-4k-main-o01-rbdsimple-isal vs cbt-7thApr-4k-ecopt2-o01-pdwauto-6+2 vs cbt-7thApr-16k-ecopt2-o01-pdwauto-6+2 vs cbt-7thApr-4k-ecopt2-o01-pdwoff-6+2

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Comparison summary for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt-2ndApr-4k-main-o01-rbdsimple-isal vs cbt-7thApr-4k-ecopt2-o01-pdwauto-6+2 vs cbt-7thApr-16k-ecopt2-o01-pdwauto-6+2 vs cbt-7thApr-4k-ecopt2-o01-pdwoff-6+2

Sequential Read	cbt_3rdApr_4k_squid192_6_2_o01_rbdsimple_isal	cbt_2ndApr_4k_main_o01_rbdsimple_isal	%diff	cbt_7thApr_4k_ecopt2_o01_pdwauto_6_2	%diff	cbt_7thApr_16k_ecopt2_o01_pdwauto_6_2	%diff	cbt_7thApr_4k_ecopt2_o01_pdwoff_6_2	%diff
4K	39660@4.5ms	106341@1.1	168%	108873@2.2	175%	103798@2.3	162%	109896@2.2	177%
8K	36440@4.9ms	65926@1.8	81%	66391@3.6	82%	97254@2.5	167%	67068@3.6	84%
16K	31632@5.7ms	37932@3.2	20%	38092@4.7	20%	92208@1.9	192%	38466@4.7	22%
32K	25426@4.7ms	25584@4.7	1%	26035@4.6	2%	45707@0.9	80%	26937@4.4	6%
64K	1508@6.9ms	1222@2.1	-19%	1482@5.3	-2%	2049@5.1	36%	1513@5.2	0%
256K	3131@3.3ms	3116@3.4	-0%	3312@3.2	6%	3547@2.9	13%	3429@3.0	10%
512K	3773@2.5ms	3743@2.5	-1%	3890@2.4	3%	4205@2.2	11%	3964@2.4	5%
1024K	4032@2.6ms	4006@2.6	-1%	4240@2.5	5%	4662@2.2	16%	4232@2.5	5%

Sequential Write	cbt_3rdApr_4k_squid192_6_2_o01_rbdsimple_isal	cbt_2ndApr_4k_main_o01_rbdsimple_isal	%diff	cbt_7thApr_4k_ecopt2_o01_pdwauto_6_2	%diff	cbt_7thApr_16k_ecopt2_o01_pdwauto_6_2	%diff	cbt_7thApr_4k_ecopt2_o01_pdwoff_6_2	%diff
4K	60783@10.5ms	60009@10.7	-1%	120742@5.3	99%	121188@5.3	99%	104791@4.6	72%
8K	73313@10.9ms	74238@10.8	1%	112090@7.1	53%	113139@7.1	54%	112929@7.1	54%
16K	31663@10.1ms	32299@9.9	2%	52930@6.0	67%	53185@6.0	68%	53357@6.0	69%
32K	30857@15.5ms	35487@13.5	15%	40842@11.7	32%	47224@10.1	53%	42507@11.3	38%
64K	1346@15.5ms	1320@15.9	-2%	1532@13.7	14%	1684@12.4	25%	1550@13.5	15%
256K	1830@22.8ms	1812@23.0	-1%	1999@20.9	9%	2117@19.7	16%	2020@20.6	10%
512K	1911@21.7ms	1838@22.6	-4%	2090@19.8	9%	2224@18.6	16%	2082@19.9	9%
1024K	2475@41.9ms	2289@45.3	-8%	2659@38.9	7%	2711@38.1	10%	2620@39.5	6%

Random Read	cbt_3rdApr_4k_squid192_6_2_o01_rbdsimple_isal	cbt_2ndApr_4k_main_o01_rbdsimple_isal	%diff	cbt_7thApr_4k_ecopt2_o01_pdwauto_6_2	%diff	cbt_7thApr_16k_ecopt2_o01_pdwauto_6_2	%diff	cbt_7thApr_4k_ecopt2_o01_pdwoff_6_2	%diff
4K	24443@15.1ms	74779@3.2	206%	76373@6.3	212%	73076@6.6	199%	72543@6.6	197%
8K	23197@15.9ms	48127@5.0	107%	47236@10.2	104%	65722@5.6	183%	47540@7.8	105%
16K	23161@16.0ms	31063@7.7	34%	29980@12.3	29%	63017@3.8	172%	29352@12.6	27%
32K	21703@7.4ms	22222@7.2	2%	21400@7.5	-1%	39875@4.0	84%	21263@7.5	-2%
64K	1337@7.8ms	1319@7.9	-1%	1277@8.2	-4%	1669@6.3	25%	1304@8.0	-2%
256K	2907@7.2ms	2864@7.3	-1%	3004@7.0	3%	3254@6.4	12%	3027@3.5	4%
512K	4167@3.5ms	4091@3.6	-2%	4137@3.5	-1%	4459@3.3	7%	4202@3.5	1%

Comparison summary for cbt-3rdApr-4k-squid192-6+2-o01-rbdsimple-isal vs cbt-2ndApr-4k-main-o01-rbdsimple-isal vs cbt-7thApr-4k-ecopt2-o01-pdwauto-6+2 vs cbt-7thApr-16k-ecopt2-o01-pdwauto-6+2 vs cbt-7thApr-4k-ecopt2-o01-pdwoff-6+2

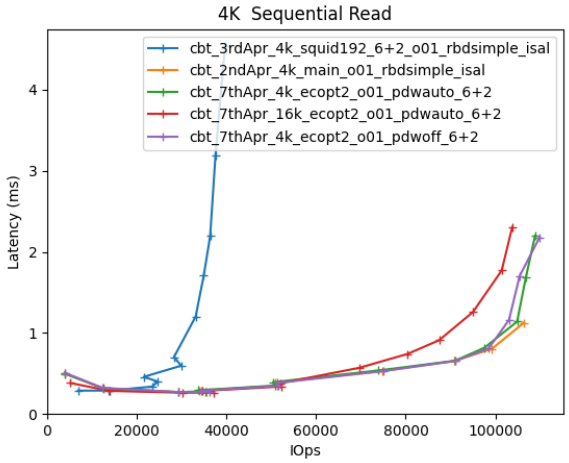
Random Read	cbt_3rdApr-4k_squid192-6+2-o01-rbdsimple-isal	cbt_2ndApr-4k_main-o01-rbdsimple-isal	%	cbt_7thApr-4k_ecopt2-o01-pdwauto-6+2	%	cbt_7thApr-16k_ecopt2-o01-pdwauto-6+2	%	cbt_7thApr-4k_ecopt2-o01-pdwoff-6+2	%
1024K	4377@4.8ms	4349@4.8	-1%	4537@4.1	4%	5051@3.7	15%	4625@4.5	6%

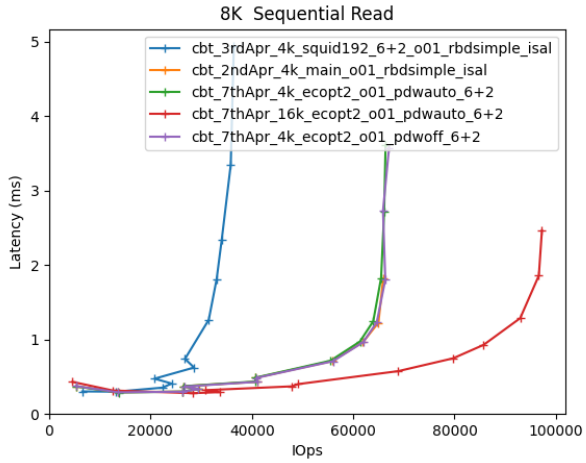
Random Write	cbt_3rdApr-4k_squid192-6+2-o01-rbdsimple-isal	cbt_2ndApr-4k_main-o01-rbdsimple-isal	%	cbt_7thApr-4k_ecopt2-o01-pdwauto-6+2	%	cbt_7thApr-16k_ecopt2-o01-pdwauto-6+2	%	cbt_7thApr-4k_ecopt2-o01-pdwoff-6+2	%
4K	8127@59.0ms	7292@65.8	-10%	15288@31.4	88%	14771@21.7	82%	14132@34.0	74%
8K	7923@60.6ms	7233@66.3	-9%	13160@36.5	66%	14129@34.0	78%	13040@24.5	65%
16K	7438@43.0ms	6864@46.6	-8%	10539@30.3	42%	12762@25.1	72%	10447@30.6	40%
32K	7212@44.3ms	6543@48.9	-9%	8324@38.4	15%	10989@29.1	52%	8181@39.1	13%
64K	431@36.4ms	392@40.1	-9%	510@30.8	18%	551@28.5	28%	500@31.4	16%
256K	1250@33.4ms	1108@37.7	-11%	1370@30.5	10%	1439@29.0	15%	1375@30.4	10%
512K	1730@5.3ms	1695@5.4	-2%	1887@4.8	9%	1905@10.7	10%	1864@4.9	8%
1024K	2404@7.4ms	2298@7.8	-4%	2697@6.6	12%	2760@6.4	15%	2698@6.6	12%

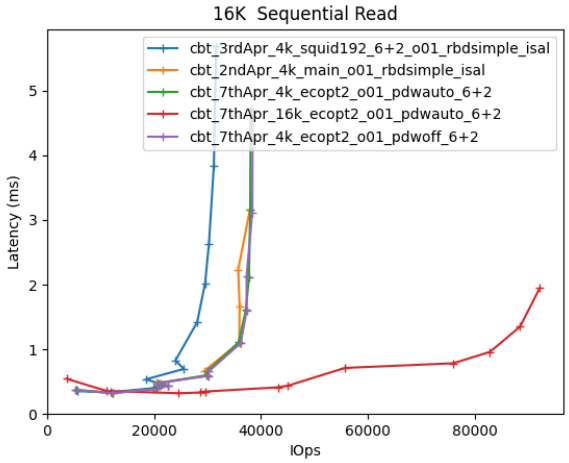
Random Read/Write	cbt_3rdApr-4k_squid192-6+2-o01-rbdsimple-isal	cbt_2ndApr-4k_main-o01-rbdsimple-isal	%	cbt_7thApr-4k_ecopt2-o01-pdwauto-6+2	%	cbt_7thApr-16k_ecopt2-o01-pdwauto-6+2	%	cbt_7thApr-4k_ecopt2-o01-pdwoff-6+2	%
4K_70/30	15414@15.6ms	17869@4.5	16%	32801@7.3	113%	30592@7.8	98%	30455@7.9	98%
16K_70/30	14187@11.3ms	15120@10.6	7%	19070@8.4	34%	25962@6.1	83%	19288@8.3	36%
64K_30/70	517@20.3ms	477@21.9	-8%	596@17.5	15%	652@16.1	26%	594@17.6	15%
64K_70/30	825@12.7ms	770@13.6	-7%	884@11.8	7%	962@10.9	17%	881@11.9	7%

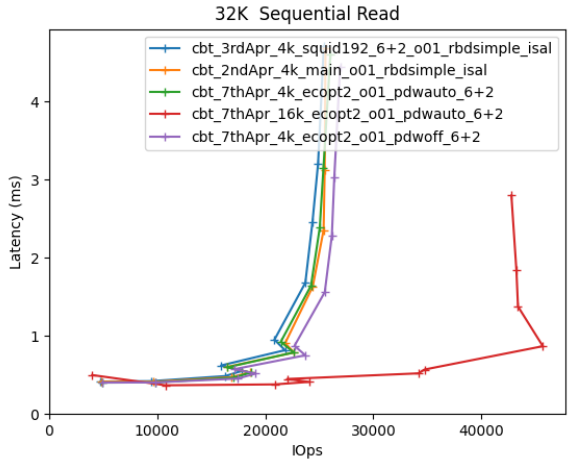
Response Curves

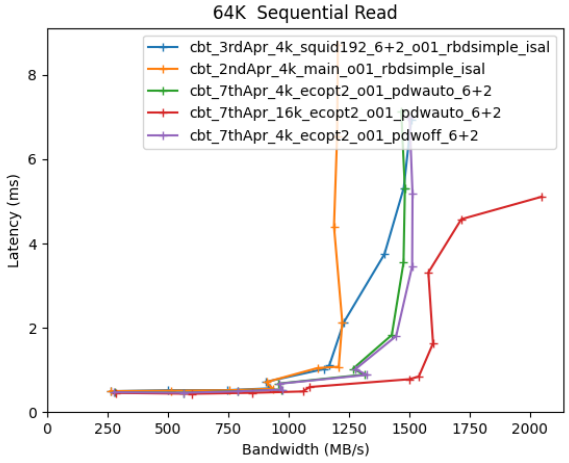
Sequential Read

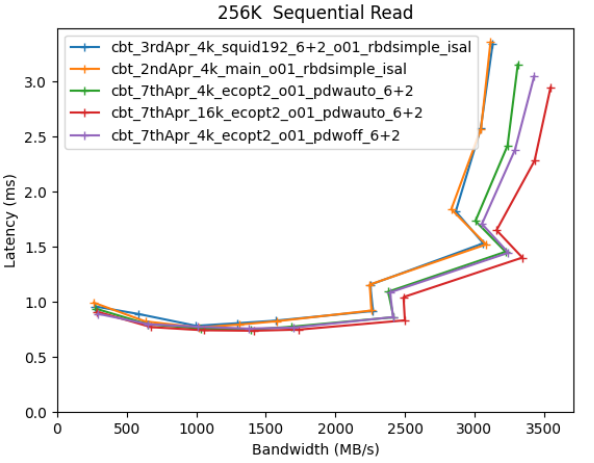


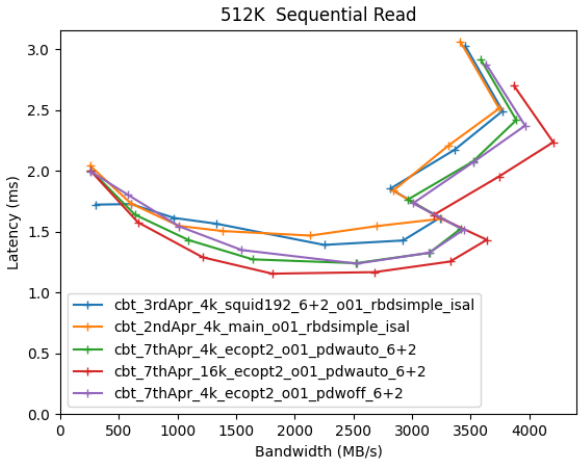


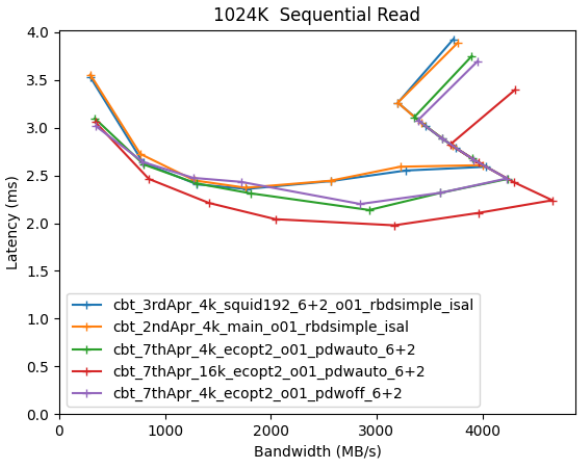




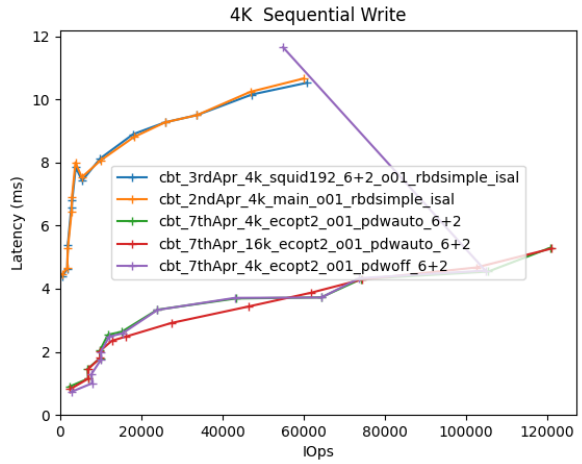


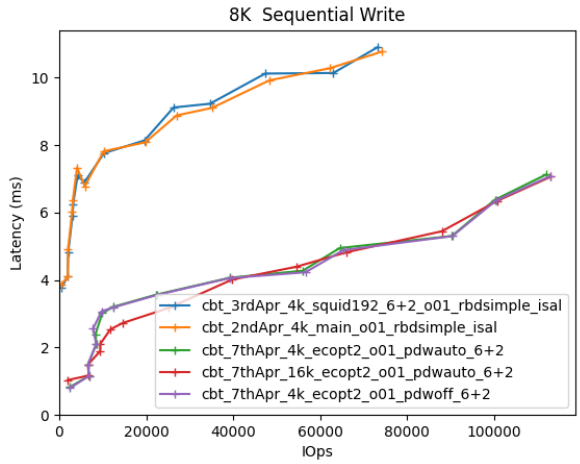


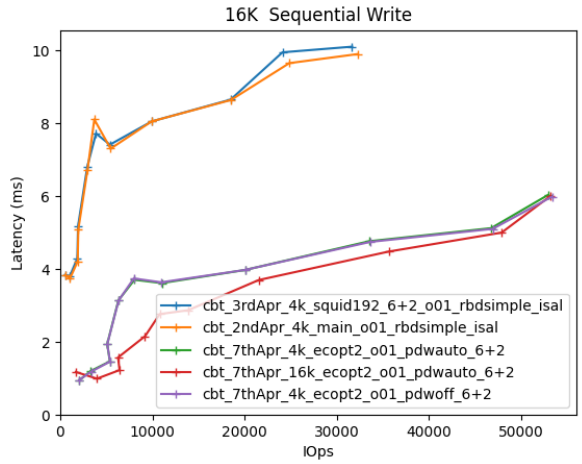


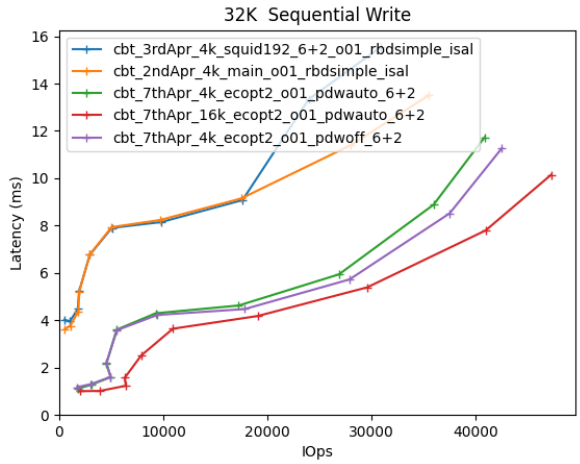


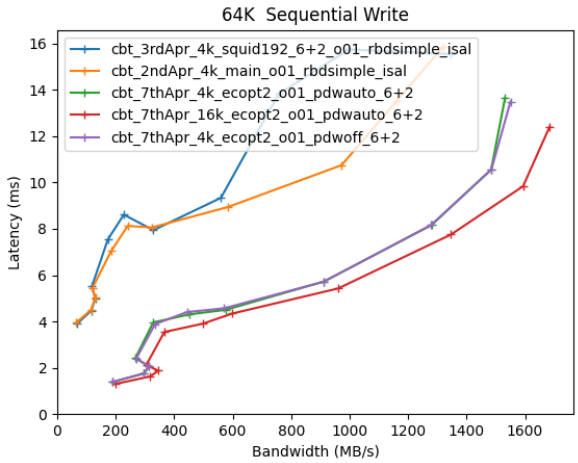
Sequential Write

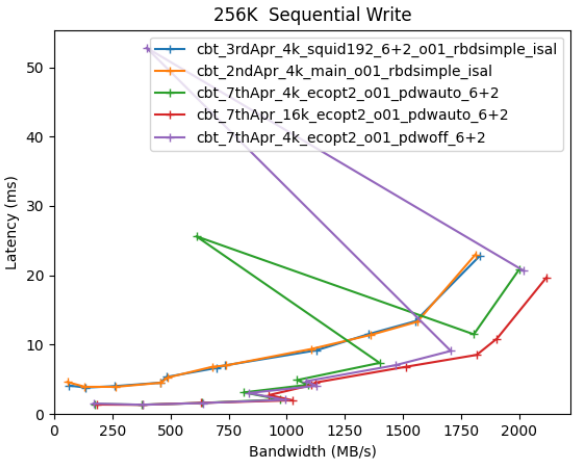


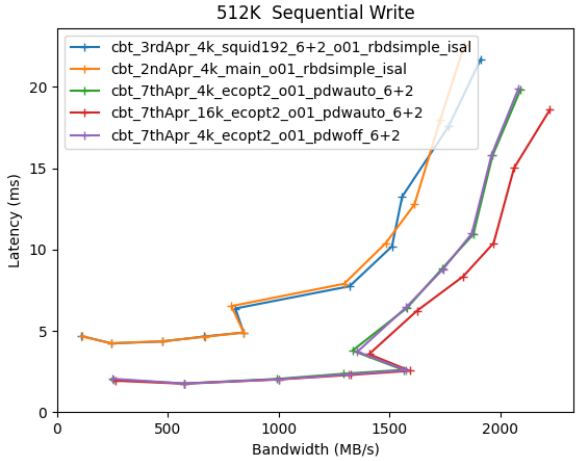


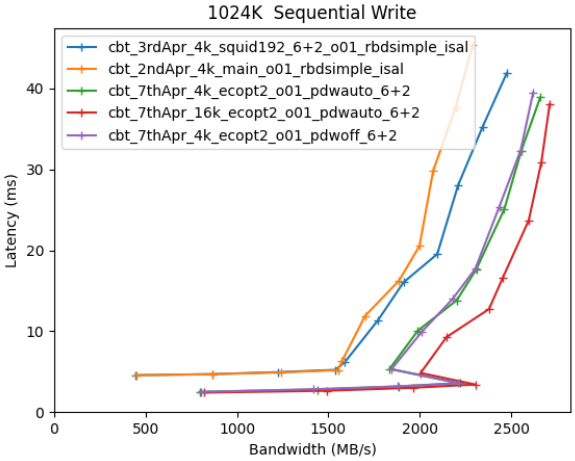




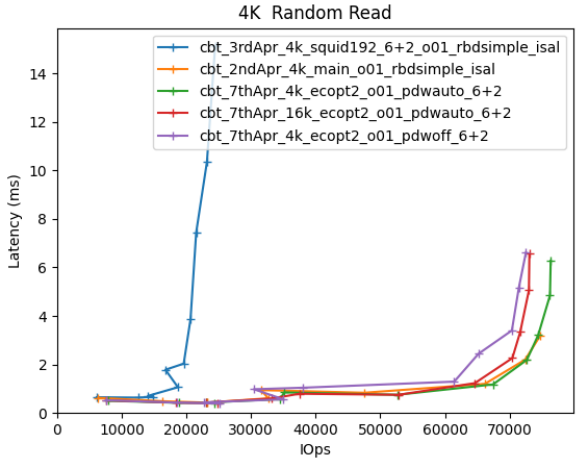

64K Sequential Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
Bandwidth (MB/s)

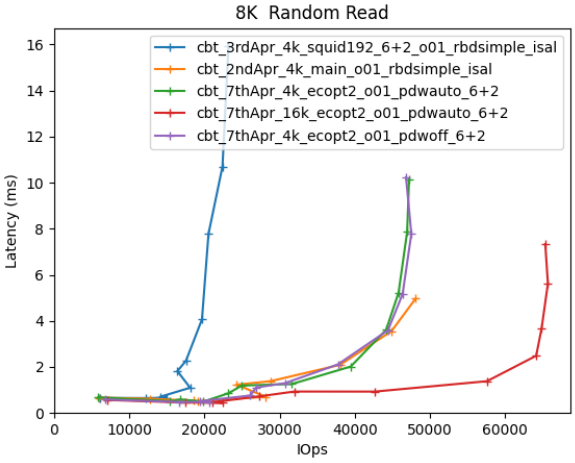

256K Sequential Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
Bandwidth (MB/s)

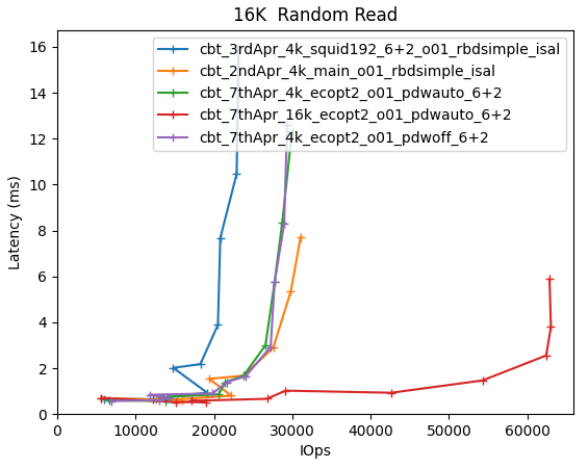

512K Sequential Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
Bandwidth (MB/s)

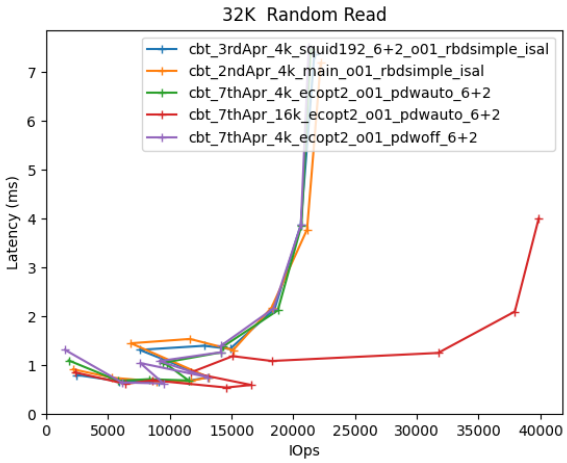

1024K Sequential Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
Bandwidth (MB/s)

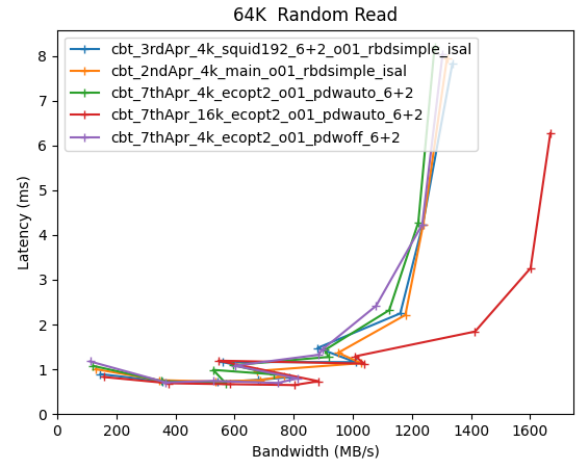
Random Read

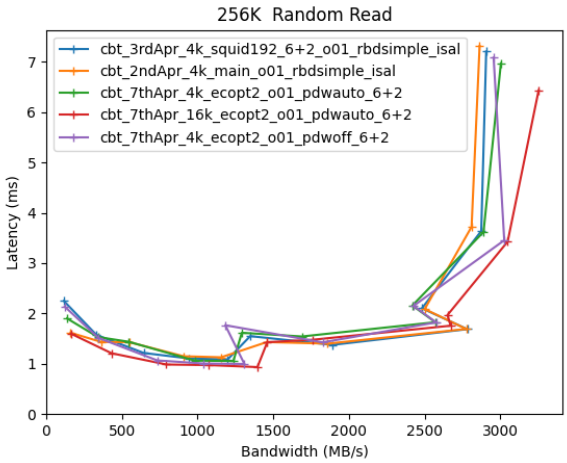

4K Random Read
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
IOps

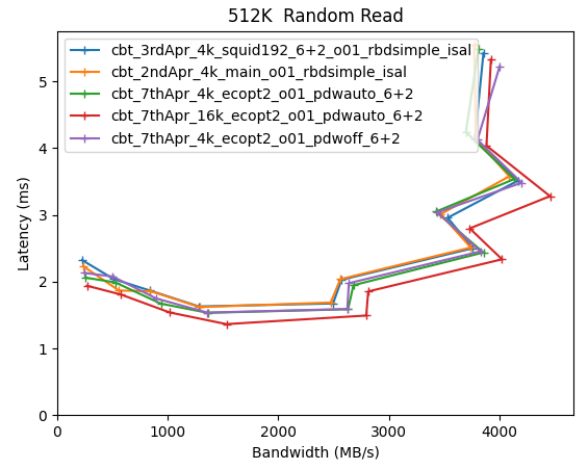

8K Random Read
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
IOps

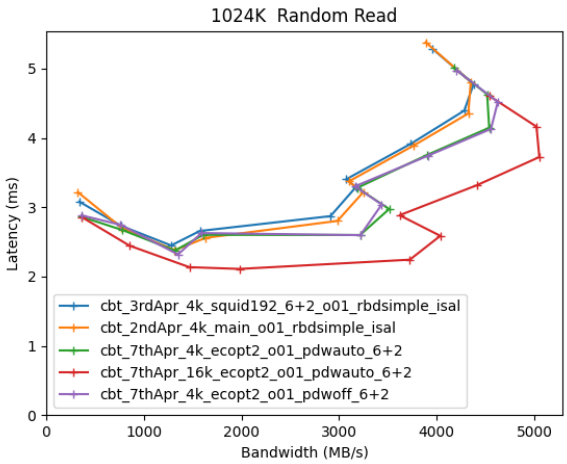




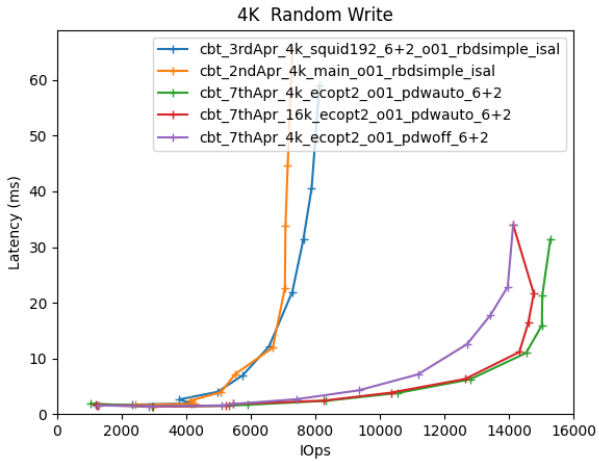


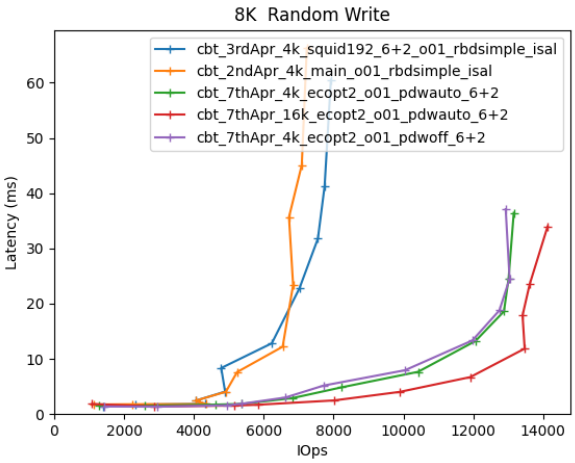


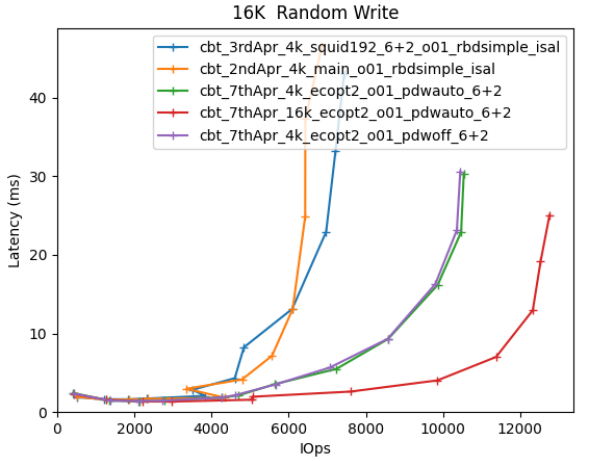


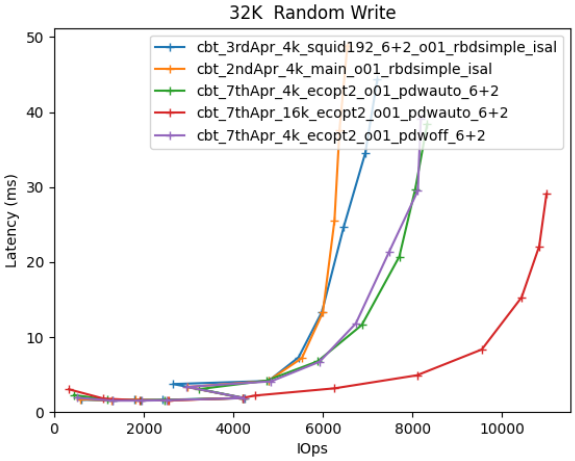


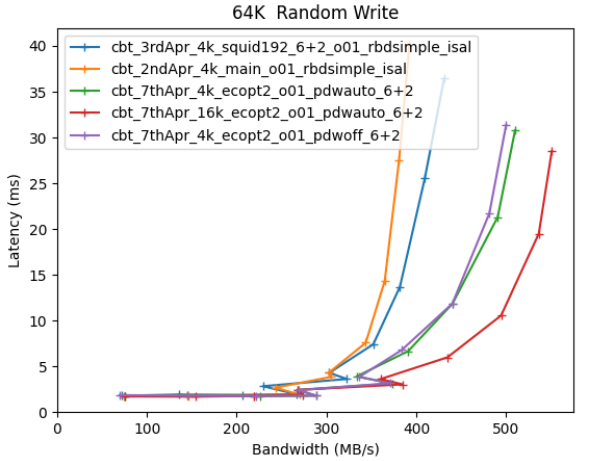
Random Write

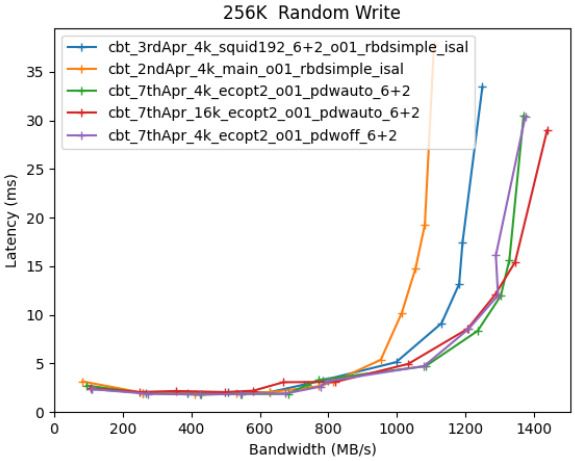

4K Random Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
IOps

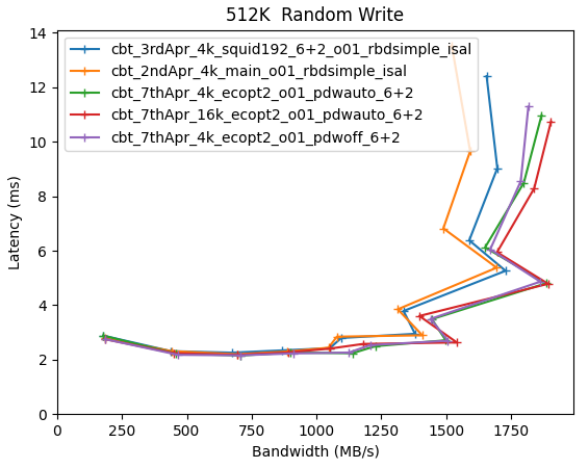

8K Random Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
IOps

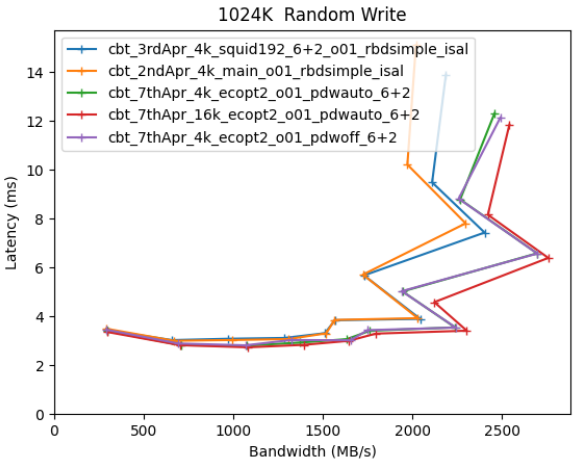

16K Random Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
IOps


32K Random Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
IOps

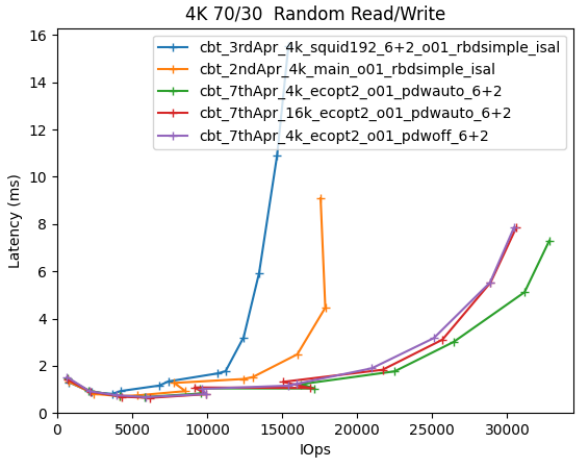

64K Random Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
Bandwidth (MB/s)

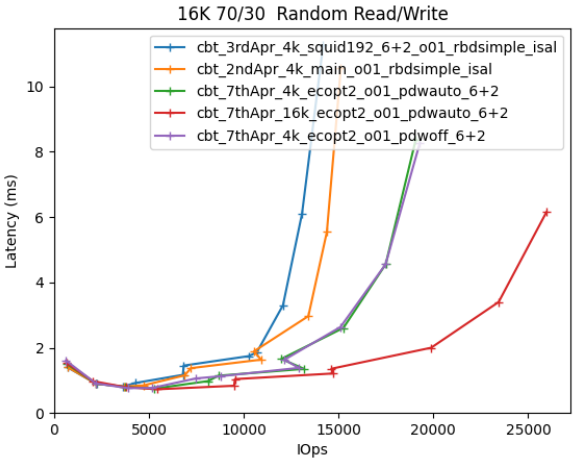

256K Random Write
cbt_3rdApr_4k_squid192_6+2_o01_rbdsimple_isal
cbt_2ndApr_4k_main_o01_rbdsimple_isal
cbt_7thApr_4k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_16k_ecopt2_o01_pdwauto_6+2
cbt_7thApr_4k_ecopt2_o01_pdwoff_6+2
Latency (ms)
Bandwidth (MB/s)

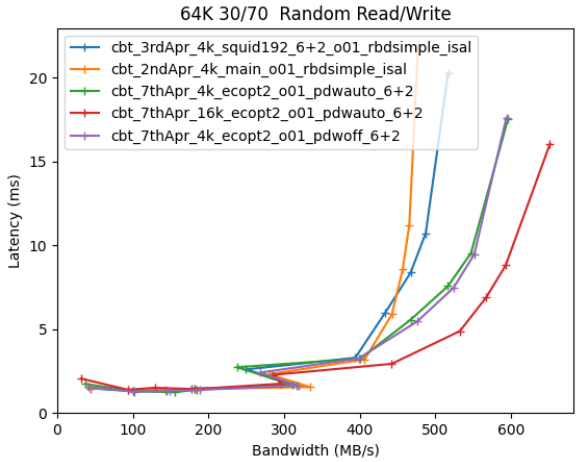


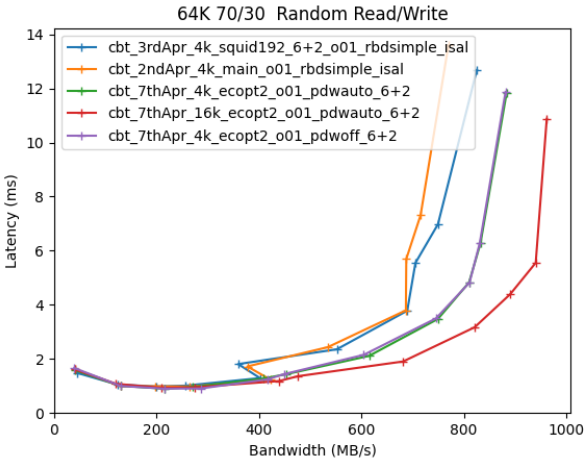


Random Read/Write









Configuration yaml files

Only yaml files that differ by more than 20 lines from the yaml file for the baseline directory will be added here in addition to the baseline yaml

results

```
librbdfio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
  osd_ra:
  - 4096
  poolname: rbd_replicated
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 1368750
  volumes_per_client:
  - 16
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
    16krandomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
      - 588
```

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

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

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

```
  - 1
  op_size: 4096
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 588
4krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 2
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
  - 384
  - 512
  - 768
512krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 524288
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 24
  - 32
  - 40
  - 48
  - 64
512krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 524288
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 6
```

```
  - 8
  - 16
  - 24
  - 32
  - 48
  - 64
512kseqread:
  jobname: seqread
  mode: read
  numjobs:
  - 1
  op_size: 524288
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 6
  - 8
  - 12
  - 16
  - 20
  - 24
  - 32
512kseqwrite:
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  op_size: 524288
  total_iodepth:
  - 1
  - 2
  - 4
  - 6
  - 8
  - 16
  - 32
  - 48
  - 64
  - 96
  - 128
64k3070:
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  op_size: 65536
  rwmixread: 30
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
64k7030:
  jobname: randmix
```

```
  mode: randrw
  numjobs:
  - 1
  op_size: 65536
  rwmixread: 70
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
64krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
64krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
  - 384
64kseqread:
  jobname: read
  mode: read
  numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
```

```
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
  64kseqwrite:
    jobname: write
    mode: write
    numjobs:
    - 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
  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
  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
  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
  seq8kread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 8192
    total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    - 288
  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
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: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
  librbdfio:
    cmd_path: /usr/local/bin/fio
    fio_out_format: json
    log_avg_msec: 100
    log_bw: true
    log_iops: true
    log_lat: true
    norandommap: true
    osd_ra:
    - 4096
    poolname: rbd_replicated
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 90
    time_based: true
    use_existing_volumes: true
    vol_size: 1368750
```

```
volumes_per_client:
- 16
workloads:
  16k7030:
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 16384
    rwmixread: 70
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
  16krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 16384
    total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 24
    - 48
    - 64
    - 128
    - 256
    - 384
    - 588
  16krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 16384
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
  1Mrandomread:
    jobname: randread
    mode: randread
    numjobs:
```

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

```
  - 48
  - 64
  - 96
  - 128
  - 160
256krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 262144
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
256krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 262144
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
32krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 32768
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
32krandomwrite:
  jobname: randwrite
  mode: randwrite
```

```
  numjobs:
  - 1
  op_size: 32768
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
  - 384
  - 512
4k7030:
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  op_size: 4096
  rwmixread: 70
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
  - 384
4krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 588
4krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 2
  - 4
```

```
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
  512krandomread:
    jobname: randread
    mode: randread
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 40
    - 48
    - 64
  512krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 8
    - 16
    - 24
    - 32
    - 48
    - 64
  512kseqread:
    jobname: seqread
    mode: read
    numjobs:
    - 1
    op_size: 524288
    total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 12
    - 16
    - 20
    - 24
```

```
  - 32
512kseqwrite:
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  op_size: 524288
  total_iodepth:
  - 1
  - 2
  - 4
  - 6
  - 8
  - 16
  - 32
  - 48
  - 64
  - 96
  - 128
64k3070:
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  op_size: 65536
  rwmixread: 30
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
64k7030:
  jobname: randmix
  mode: randrw
  numjobs:
  - 1
  op_size: 65536
  rwmixread: 70
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
64krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 65536
```

```
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
  64krandomwrite:
    jobname: randwrite
    mode: randwrite
    numjobs:
    - 1
    op_size: 65536
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    - 384
  64kseqread:
    jobname: read
    mode: read
    numjobs:
    - 1
    op_size: 65536
    total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 192
    - 256
  64kseqwrite:
    jobname: write
    mode: write
    numjobs:
    - 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
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
  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
  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
      seq8kread:
        jobname: seqread
        mode: read
        numjobs:
        - 1
        op_size: 8192
        total_iodepth:
        - 2
        - 4
        - 8
        - 12
        - 16
        - 24
        - 32
        - 64
        - 96
        - 128
        - 192
        - 288
      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
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: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```