Comparitive Performance Report for cbt-10thMar-4k-main-8vol-cacheon-rbdoff-isal vs cbt-7thMar-4k-ls26-8vol-cacheon-rbdoff-isal vs cbt-8thMar-16k-ls26-8vol-cacheon-rbdoff-isal vs cbt-9thMar-32k-ls26-8vol-cacheon-rbdoff-isal

Table of contents

- Comparison summary for cbt-10thMar-4k-main-8vol-cacheon-rbdoff-isal vs cbt-7thMar-4k-ls26-8vol-cacheon-rbdoff-isal vs cbt-8thMar-16k-ls26-8vol-cacheon-rbdoff-isal vs cbt-9thMar-32k-ls26-8vol-cacheon-rbdoff-isal
- Response Curves
  - Sequential Read
  - Sequential Write
  - Random Read
  - Random Write
  - Random Read/Write
- Configuration yaml files
  - results

Comparison summary for cbt-10thMar-4k-main-8vol-cacheon-rbdoff-isal vs cbt-7thMar-4k-ls26-8vol-cacheon-rbdoff-isal vs cbt-8thMar-16k-ls26-8vol-cacheon-rbdoff-isal vs cbt-9thMar-32k-ls26-8vol-cacheon-rbdoff-isal

Sequential Read	cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal	cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal	%Δ
4K	66785@2.9ms	64633@3.0	-3%	64527@3.0	-3%	64133@3.0	-4%
8K	39845@4.8ms	38374@5.0	-4%	57455@3.3	44%	55703@3.4	40%
16K	22239@8.6ms	21693@8.8	-2%	51076@3.8	130%	51108@3.7	130%
32K	18891@10.2ms	18819@10.2	-0%	29905@6.4	58%	42582@4.5	125%
64K	1158@14.5ms	1146@14.6	-1%	1170@14.3	1%	1543@10.9	33%
256K	1553@10.8ms	1554@10.8	0%	1570@10.7	1%	1613@10.4	4%
512K	1557@10.8ms	1559@10.8	0%	1574@10.7	1%	1608@10.4	3%
1024K	1564@13.4ms	1568@13.4	0%	1582@13.2	1%	1605@13.1	3%

Sequential Write	cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal	cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal	%Δ
4K	3433@149.7ms	7503@136.5	119%	10995@93.2	220%	9159@111.7	167%
8K	2008@512.0ms	5297@242.2	164%	8387@91.6	318%	7455@137.5	271%
16K	5099@100.3ms	5406@94.7	6%	5641@90.7	11%	5002@102.4	-2%
32K	9593@80.0ms	9773@78.5	2%	8046@95.4	-16%	5831@131.6	-39%
64K	215@156.5ms	233@144.3	8%	197@170.5	-8%	138@243.1	-36%
256K	400@62.8ms	456@73.5	14%	616@108.9	54%	546@122.9	36%
512K	292@229.8ms	305@220.4	4%	340@197.3	16%	350@191.6	20%
1024K	469@357.8ms	484@347.3	3%	601@222.9	28%	423@397.4	-10%

Random Read	cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal	cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal	%Δ
4K	69659@5.5ms	69552@5.5	-0%	70460@5.4	1%	69331@5.5	-0%
8K	47136@8.1ms	46343@8.3	-2%	65063@5.9	38%	64925@5.9	38%
16K	29788@12.9ms	29079@13.2	-2%	60243@6.4	102%	58739@6.5	97%
32K	26545@9.6ms	26213@9.8	-1%	38766@6.6	46%	50341@5.1	90%
64K	1502@11.2ms	1420@5.9	-5%	1481@11.3	-1%	1780@9.4	19%
256K	1708@19.6ms	1708@9.8	0%	1739@2.4	2%	1777@2.4	4%

Comparison summary for cbt-10thMar-4k-main-8vol-cacheon-rbdoff-isal vs cbt-7thMar-4k-ls26-8vol-cacheon-rbdoff-isal vs cbt-8thMar-16k-ls26-8vol-cacheon-rbdoff-isal vs cbt-9thMar-32k-ls26-8vol-cacheon-rbdoff-isal

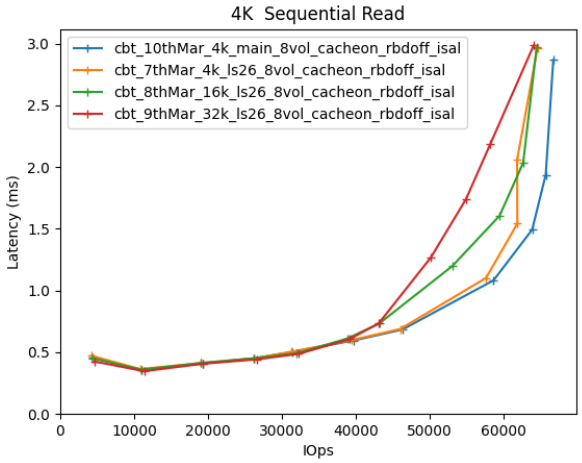
Random Read	cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal	cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_9thMar_32k_ls26_8vol_cacheon_	%Δ
512K	1775@14.2ms	1775@14.2	0%	1781@14.1	0%	1805@13.9	2%
1024K	1771@16.6ms	1772@16.6	0%	1779@16.5	0%	1792@16.4	1%

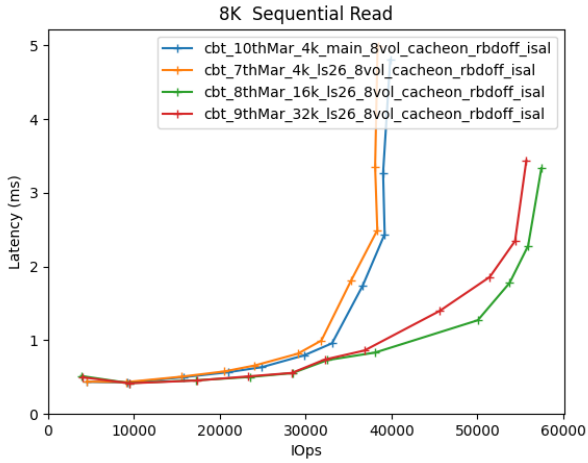
Random Write	cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal	cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_9thMar_32k_ls26_8vol_cacheon_	%Δ
4K	2053@373.6ms	4831@105.9	135%	5004@102.4	144%	5468@140.4	166%
8K	1948@394.6ms	4591@167.0	136%	3710@206.8	90%	4326@177.6	122%
16K	4539@112.7ms	4812@106.5	6%	2931@131.1	-35%	2766@185.1	-39%
32K	4105@124.6ms	4201@121.8	2%	2678@191.3	-35%	1693@226.9	-59%
64K	194@129.5ms	216@116.5	11%	169@148.9	-13%	121@209.0	-38%
256K	280@239.7ms	275@244.0	-2%	290@231.2	4%	295@227.7	5%
512K	262@127.8ms	252@99.4	-4%	293@114.2	12%	242@138.7	-8%
1024K	313@160.2ms	384@130.7	23%	368@136.3	18%	409@122.3	31%

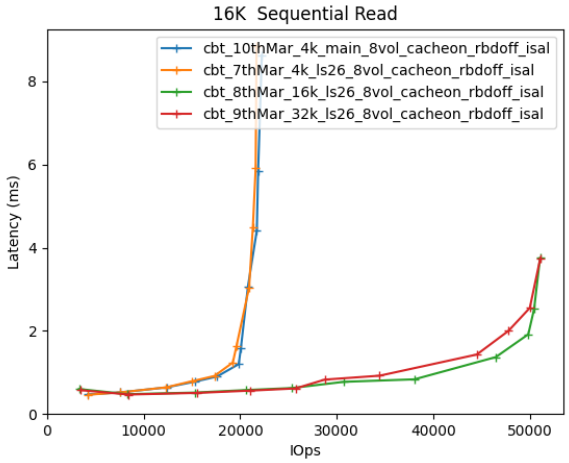
Random Read/Write	cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal	cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal	%Δ	cbt_9thMar_32k_ls26_8vol_cacheon_	%Δ
4K_70/30	5027@50.9ms	8450@30.3	68%	8228@31.1	64%	8953@28.6	78%
16K_70/30	4293@59.6ms	4747@53.9	11%	5610@45.6	31%	5440@47.0	27%
64K_70/30	202@83.1ms	215@39.0	6%	188@89.5	-7%	212@79.2	5%
64K_30/70	168@99.8ms	182@92.3	8%	158@106.0	-6%	133@126.0	-21%

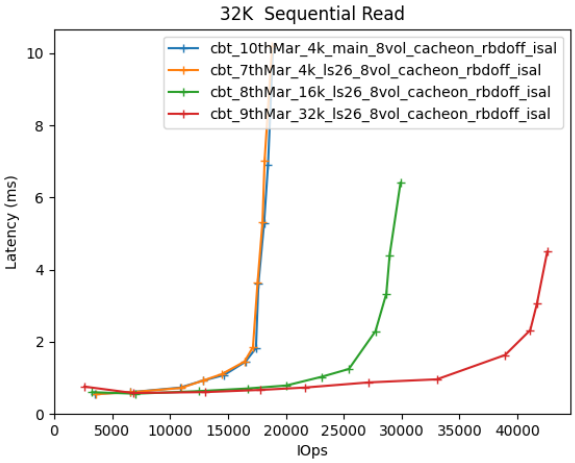
Response Curves

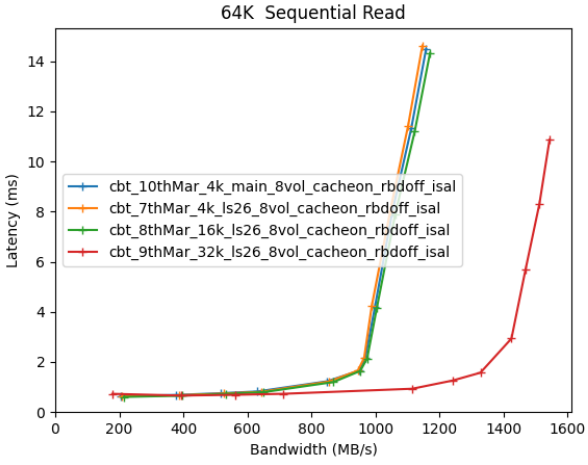
Sequential Read

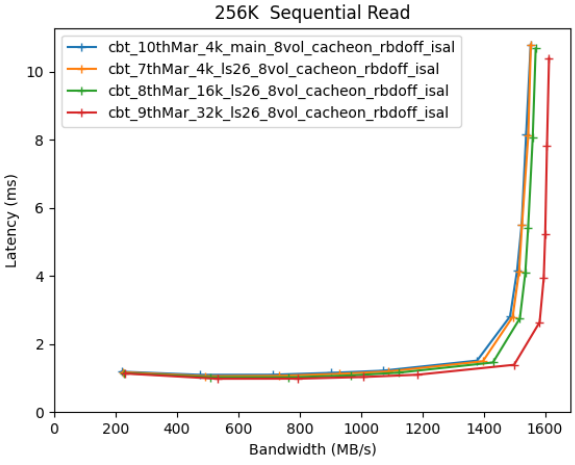


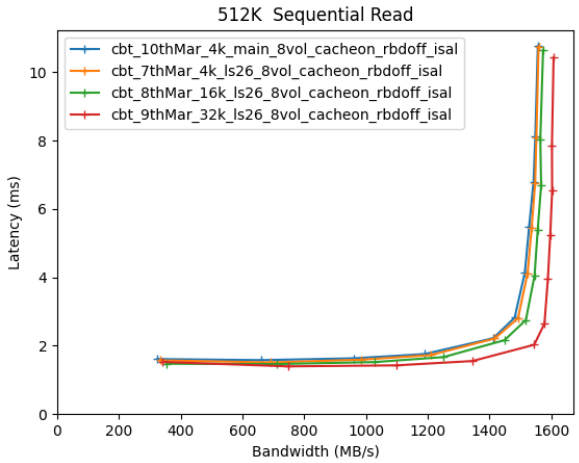


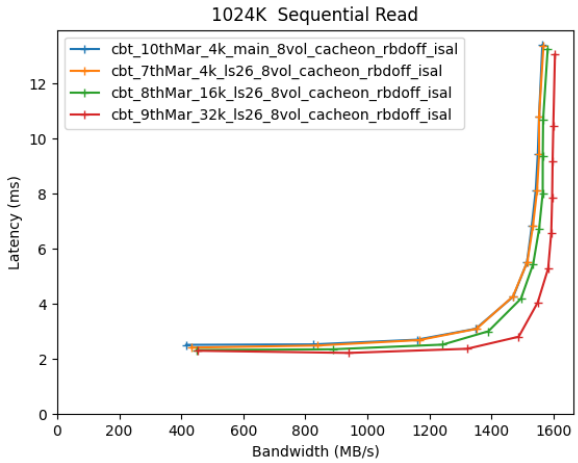




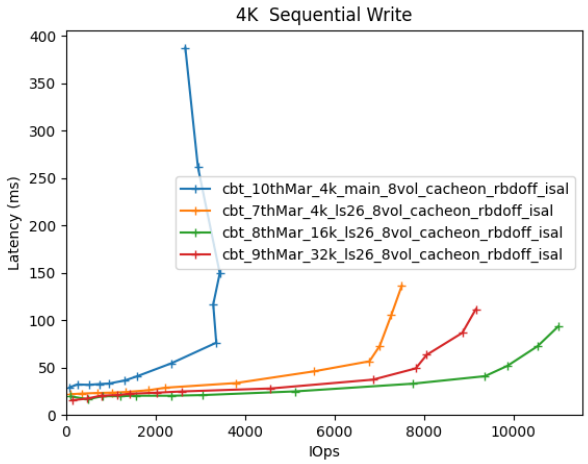


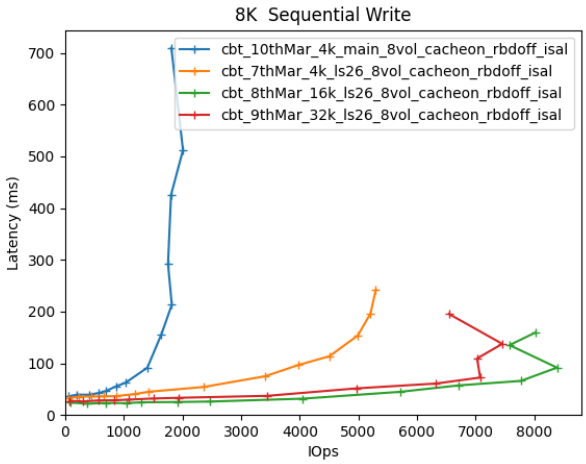


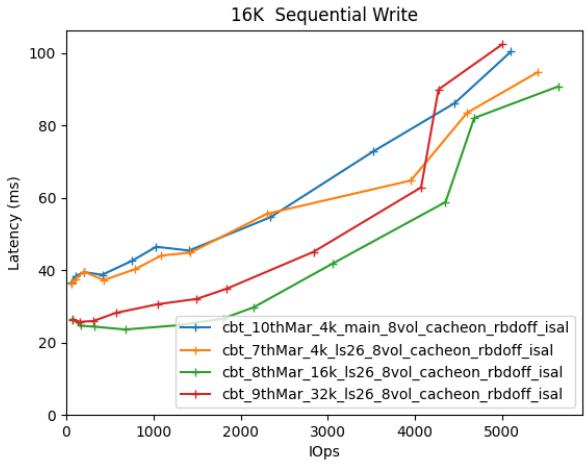


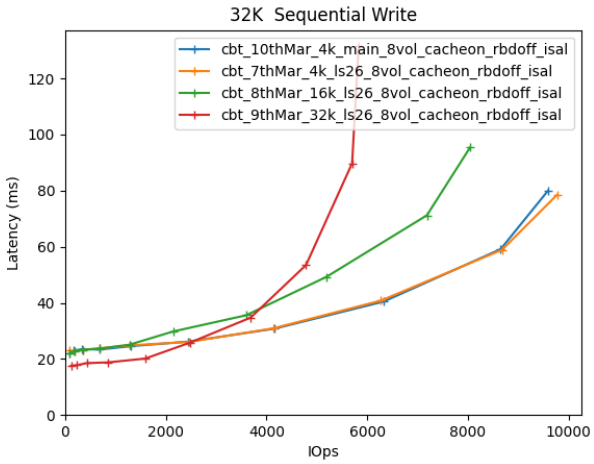


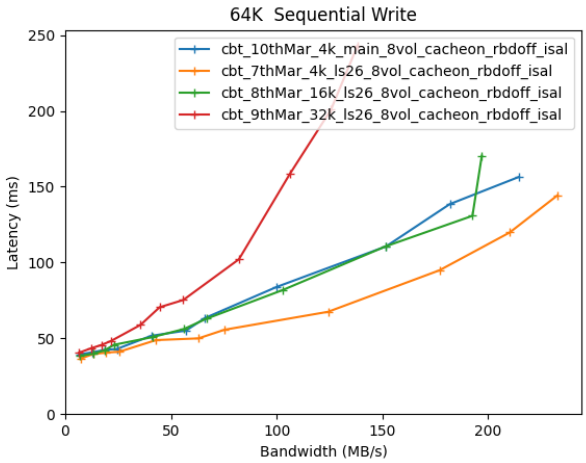
Sequential Write

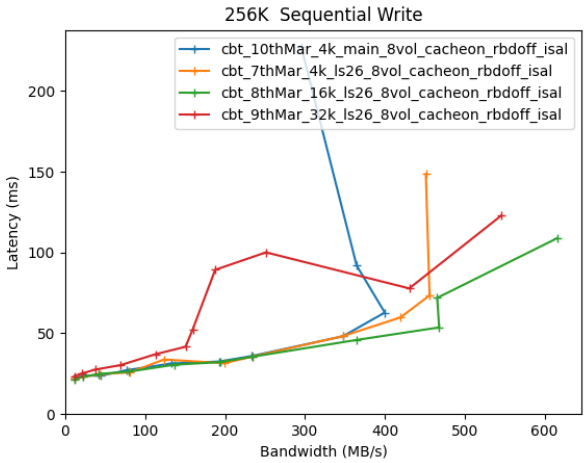


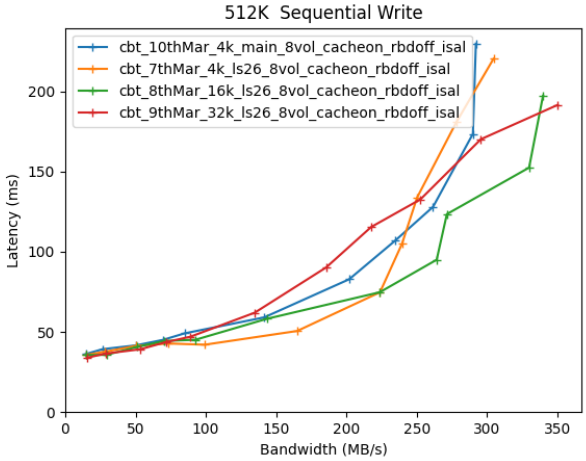







64K Sequential Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
Bandwidth (MB/s)


256K Sequential Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
Bandwidth (MB/s)


512K Sequential Write
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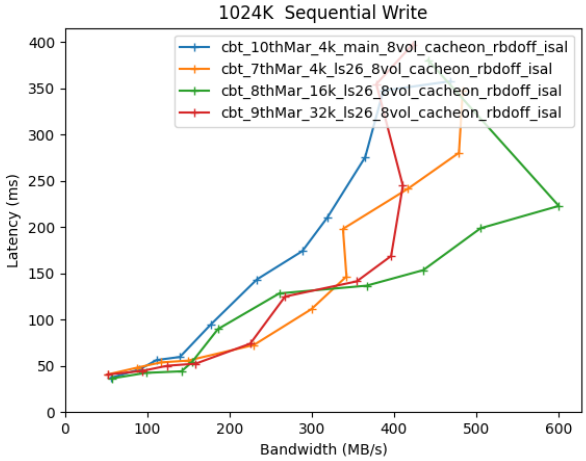
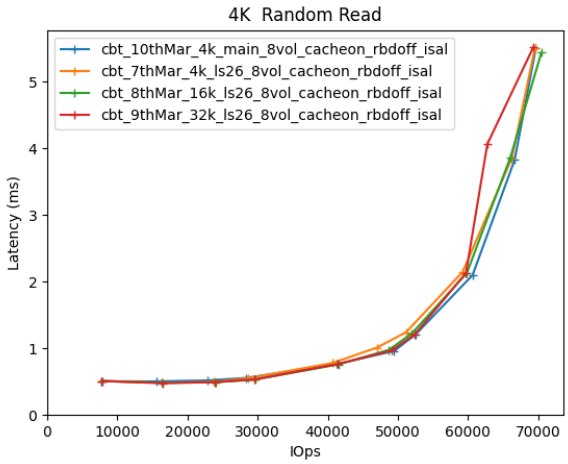
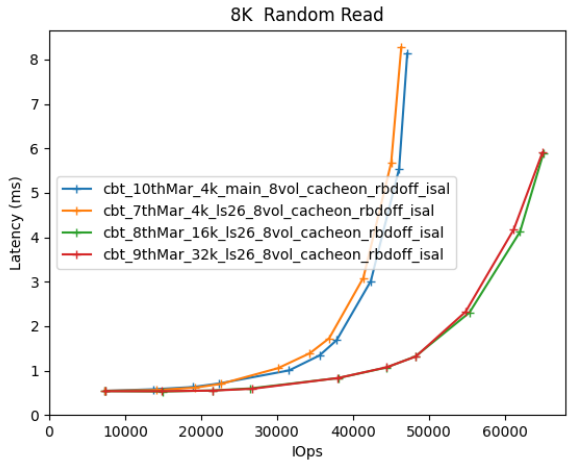
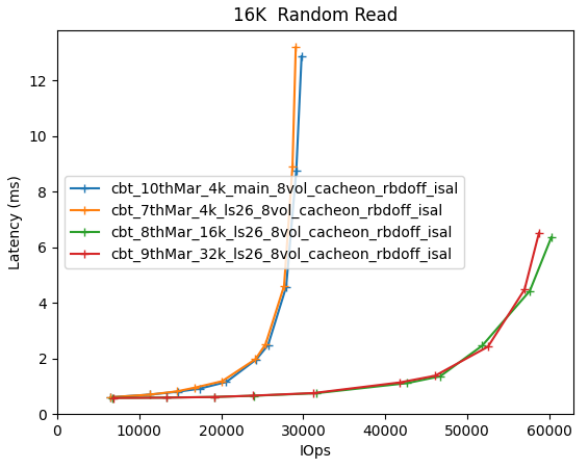
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
Bandwidth (MB/s)

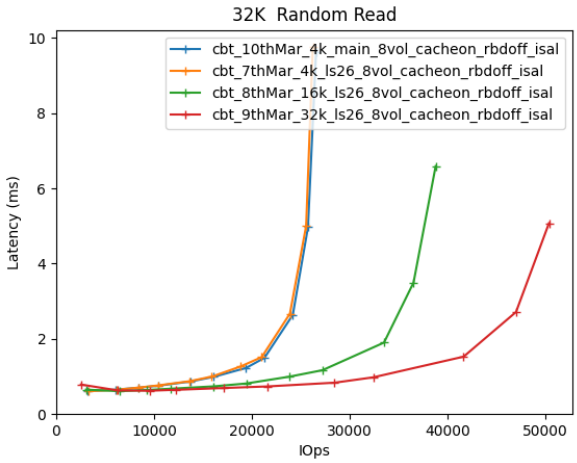

1024K Sequential Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
Bandwidth (MB/s)

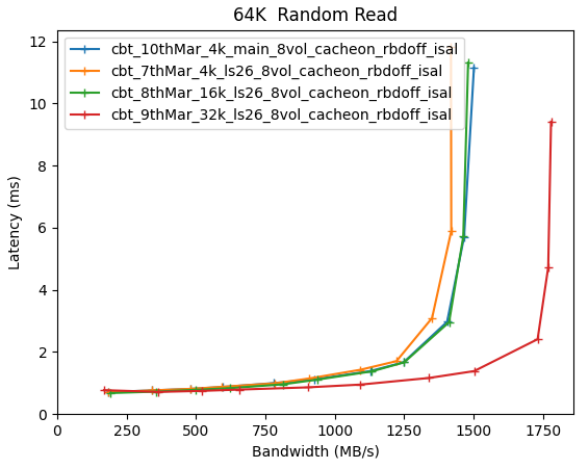
Random Read

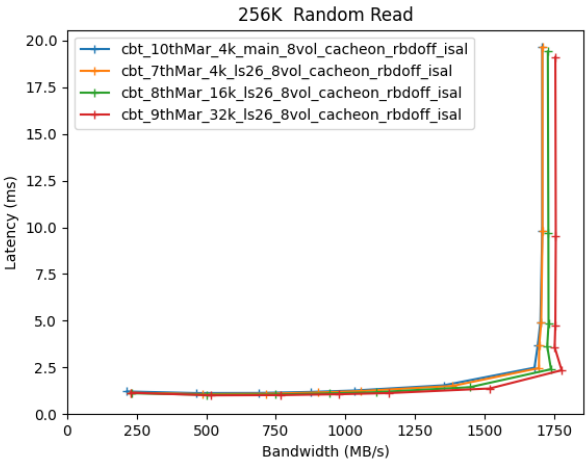

4K Random Read
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
IOps

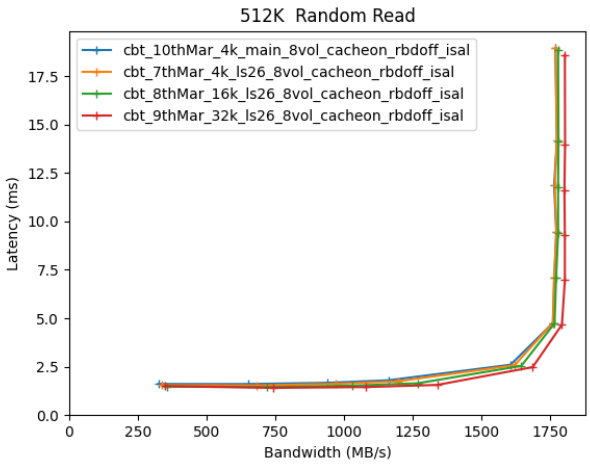

8K Random Read
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
IOps

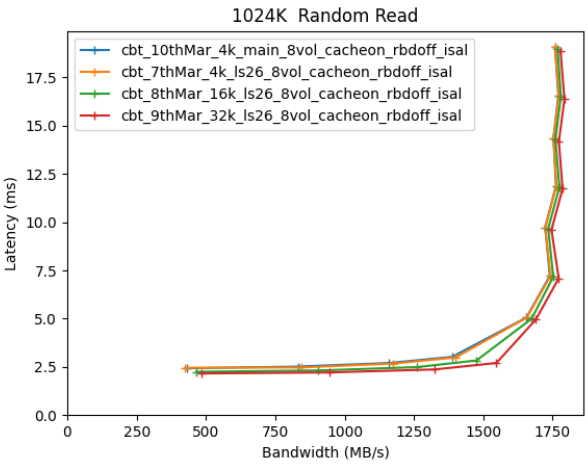




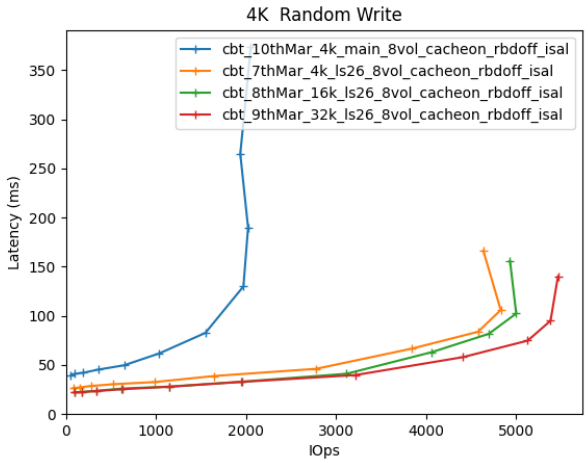


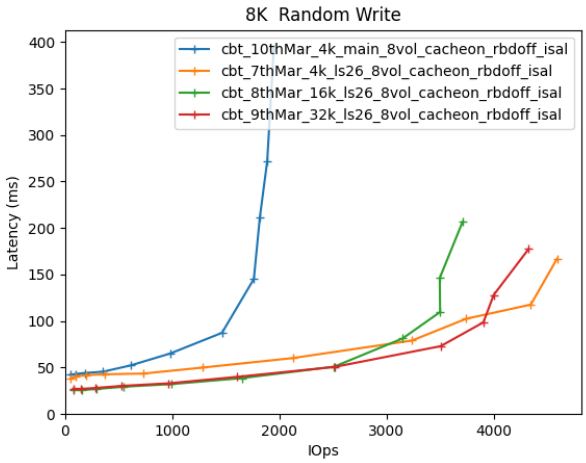


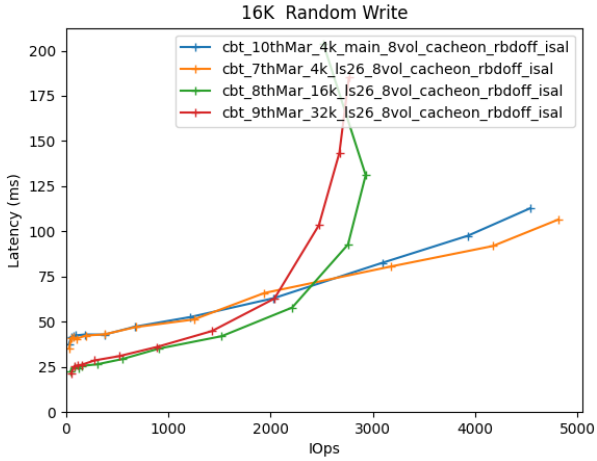




Random Write


4K Random Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
IOps


8K Random Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
IOps


16K Random Write
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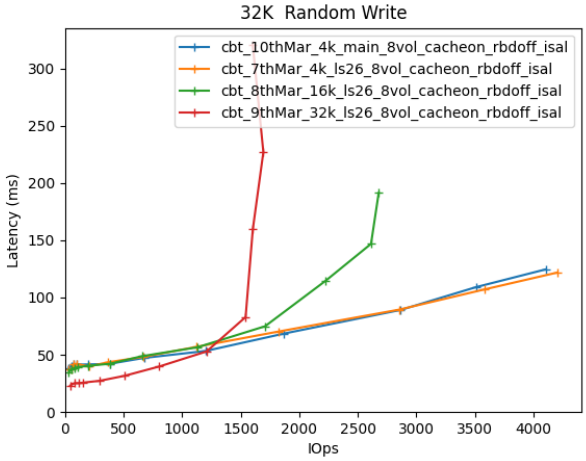
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
IOps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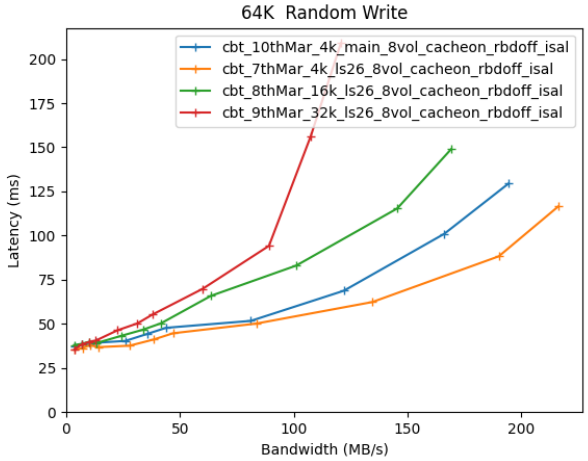
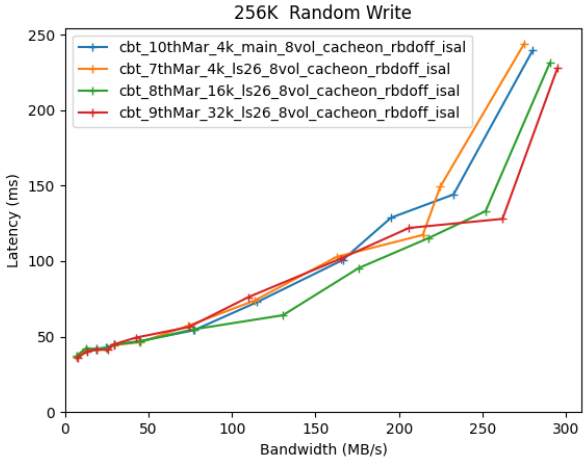
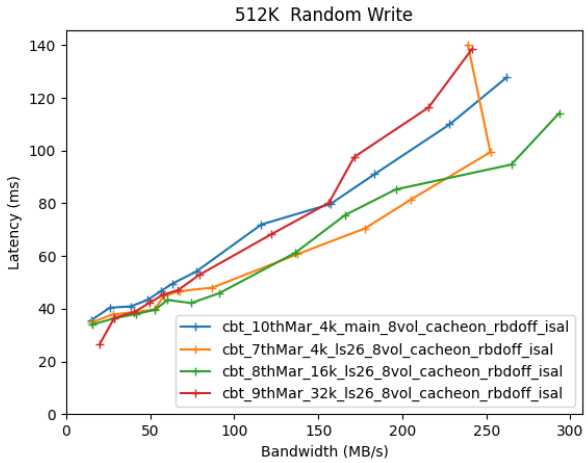
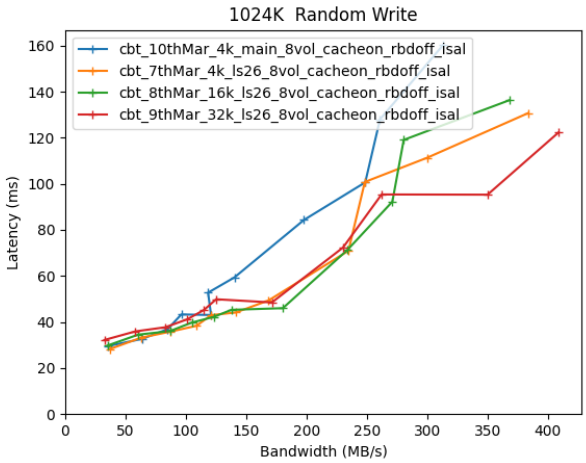
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
IOps

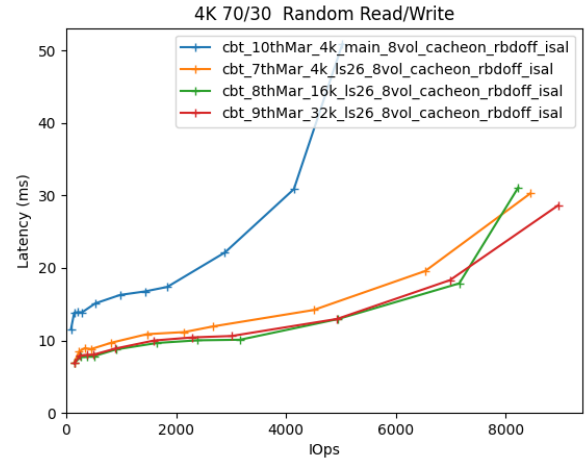

64K Random Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
Bandwidth (MB/s)

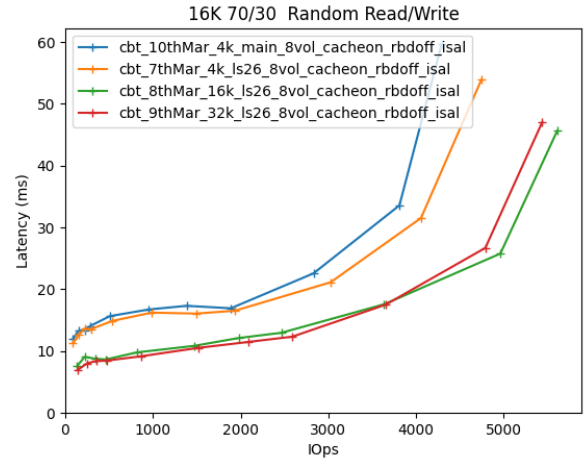

256K Random Write
cbt_10thMar_4k_main_8vol_cacheon_rbdoff_isal
cbt_7thMar_4k_ls26_8vol_cacheon_rbdoff_isal
cbt_8thMar_16k_ls26_8vol_cacheon_rbdoff_isal
cbt_9thMar_32k_ls26_8vol_cacheon_rbdoff_isal
Latency (ms)
Bandwidth (MB/s)

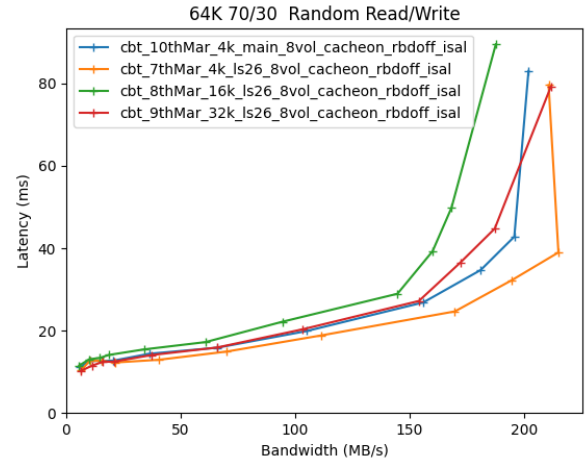


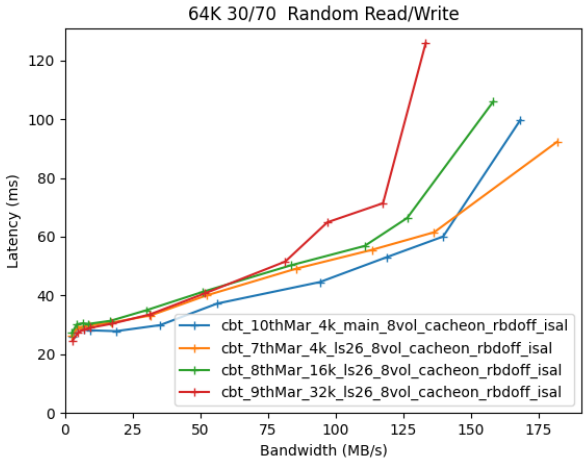


Random Read/Write









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: 52500
  volumes_per_client:
  - 8
  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
    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
4krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 4096
```

```
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
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
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
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
  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
  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: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
  librbdfio:
    cmd_path: /usr/local/bin/fio
    fio_out_format: json
    log_avg_msec: 100
    log_bw: true
    log_iops: true
    log_lat: true
    norandommap: true
    osd_ra:
    - 4096
    poolname: rbd_replicated
    prefill:
      blocksize: 64k
      numjobs: 1
    procs_per_volume:
    - 1
    ramp: 30
    time: 90
    time_based: true
    use_existing_volumes: true
    vol_size: 52500
    volumes_per_client:
    - 8
    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
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
4krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
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
  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
  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
  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
      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: root
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
```