Comparitive Performance Report for cbt-31stJul-16k-o01-6+2-ecopt2 vs cbt-26thAug-o01-16k-6+2-directreads-balanced-all vs cbt-25thAug-o01-32k-6+2-directreads-balanced-all2 vs cbt-21stAug-o01-3way-squid192 vs cbt-22ndAug-o01-3way-tentaclerc vs cbt-27thAug-o01-3way-tentacle-balanced

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Sequentia											
Read	cbt_31stJcdbt_1@GthcMal	gha6m@24_	clothp 285#128%	d <u>fræog</u> it	eadsk 12614412176	dirambit	ea ch tay22kmph26		<u>cBvtva927ttleAft</u>	nghkenn@de_	_3way
4.0K	165897@2 2849 43@1.3	72%	259704@1.5	57%	137725@0.7	-17%	139206@0.7	-16%	233243@1.6	41%	
8.0K	155175@22579982@1.4	80%	263572@1.5	70%	124810@1.0	-20%	126086@0.8	-19%	218186@1.8	41%	
16.0K	140148@2 22493 29@1.1	78%	249852@1.1	78%	111555@2.6	-20%	112627@2.6	-20%	198882@1.4	42%	
32.0K	$71375@0.9 \mathbf{m}3535@1.4$	87%	202500@0.9	184%	89107@2.2	25%	90377@2.1	27%	149566@1.3	110%	
64.0K	3172@5.3m $4651@3.6$	47%	7311@2.3	130%	4535@3.7	43%	4561@3.7	44%	7786@2.1	145%	
256.0K	5330@3.1m $309@2.0$	56%	8446@2.0	58%	7785@2.2	46%	7908@2.1	48%	11159@1.5	109%	
512.0K	$6067@2.8 ext{nh} ext{0}794@1.5$	78%	10860@1.5	79%	7950@2.1	31%	7991@2.1	32%	9144@1.8	51%	
	6186@3.4mh $2045@1.7$	95%	12176@1.7	97%	6753@3.1	9%	6651@3.1	8%	7178@2.9	16%	
1024.0K Sequentia											
Sequentia Write			ekity 28 + 12 / 1/2	d <u>ræ</u> og d	ea ds k 12 6kt27 0		ea 3ls tay22kapl 2 6		cBrtva 27ttle Afr	 	_3way
Sequentia Write	al		data 261 911@5.9		ea d9 k 1964/20 488188@3.1		e &ksi<u>a</u>y22kupl&d 500105@3.1				_3way
Sequentia Write 4.0K	al cbt_31stJell <u>t 1</u> 84tth	th. 660-1628_		4%		93%		98%	<u>cBwa</u> 2 7ttle A 6 510965@3.0 334276@4.6	102%	_3way
Sequentia Write 4.0K 8.0K	al cbt_31stJ ch<u>t 1</u>86th/Mi 252680@6 2556 38@6.0	t gh.60n@2 1%	261911@5.9	4% 3%	488188@3.1	93% 66%	500105@3.1	98% 69%	510965@3.0	102% 68%	_3way
Sequentia Write 4.0K 8.0K 16.0K	al cbt_31stJ cb<u>t</u> 126tth 252680@6 2556 38@6.0 198909@7 .7995 84@7.7	1% 0%	261911@5.9 204948@7.5	4% 3% 1%	488188@3.1 329799@4.6	93% 66% 50%	500105@3.1 336933@4.6	98% 69% 53%	510965@3.0 334276@4.6	102% 68% 52%	_3way
Sequentia Write 4.0K 8.0K 16.0K 32.0K	al cbt_31stJ cbt 1 26tth 3 252680@6255638@6.0 198909@7.7343584@7.7 121584@814241202@8.4	1% 0% -0%	261911@5.9 204948@7.5 122827@8.3	4% 3% 1%	488188@3.1 329799@4.6 182591@5.6	93% 66% 50%	500105@3.1 336933@4.6 185698@5.5	98% 69% 53%	510965@3.0 334276@4.6 184493@5.5	102% 68% 52%	_3way
Sequentia Write 4.0K 8.0K 16.0K 32.0K 64.0K	al cbt_31stJcht_184thcMi 252680@6255638@6.0 198909@7J794584@7.7 121584@8142h202@8.4 73998@10744550@10.3	1% 0% -0% 1%	261911@5.9 204948@7.5 122827@8.3 76903@10.0	4% 3% 1% 4%	488188@3.1 329799@4.6 182591@5.6 100309@7.6	93% 66% 50% 36%	500105@3.1 336933@4.6 185698@5.5 103300@7.4	98% 69% 53% 40%	510965@3.0 334276@4.6 184493@5.5 103026@7.4	102% 68% 52% 39%	_3way
	al cbt_31stJcllt_126tthcffff 252680@6255638@6.0 198909@7.799584@7.7 121584@814211802@8.4 73998@10.744550@10.3 2668@12.525371@13.0	1% 0% -0% 1% -4%	261911@5.9 204948@7.5 122827@8.3 76903@10.0 2797@12.0	4% 3% 1% 4% 5%	488188@3.1 329799@4.6 182591@5.6 100309@7.6 3079@5.4	93% 66% 50% 36% 15%	500105@3.1 336933@4.6 185698@5.5 103300@7.4 3436@9.7	98% 69% 53% 40% 29%	510965@3.0 334276@4.6 184493@5.5 103026@7.4 3534@9.5	102% 68% 52% 39% 32%	_3way

187305@4.1 78%

178532@4.3 80%

166006@3.5 83%

191467@4.0 82%

183567@4.2 85%

169312@3.5 87%

190064@4.0 81%

178473@4.3 80%

166788@3.5 84%

Random Read

104960@71396240@3.1 81%

99102@7.7\m\6827@4.3\78\%

90721@4.2\(\text{r66}120\)@2.3 83\%

4.0K

8.0K

16.0 K

216530@3.5106%

209775@3.7112%

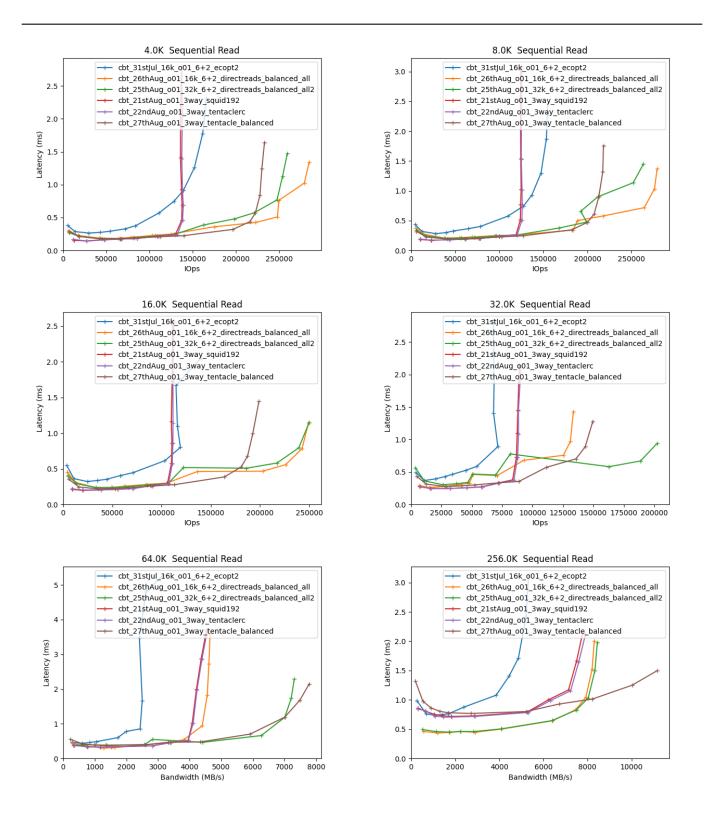
193403@3.0113%

 $Comparison summary for cbt-31stJul-16k-o01-6+2-ecopt2 \ vs \ cbt-26thAug-o01-16k-6+2-directreads-balanced-all \ vs \ cbt-25thAug-o01-32k-6+2-directreads-balanced-all2 \ vs \ cbt-21stAug-o01-3way-squid192 \ vs \ cbt-22ndAug-o01-3way-tentaclerc \ vs \ cbt-27thAug-o01-3way-tentacle-balanced$

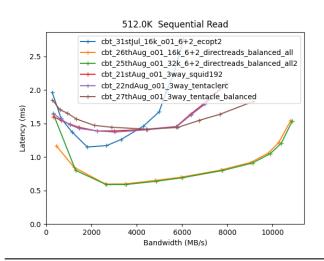
Random	<u> </u>										
Read	cbt_31stJ cb<u>t_1</u>26 t <u>th</u>	tgha6in@at	_dddp265#12 <u>%</u> v	dhængd	e ad9 k l 26k#12 6	<u>diradit</u>	<u>ea</u> 3hst <u>a</u> y22kaph#		$_c$ Brtva2 $\!7$ ttleA $\!7$	(neg<u>rhe</u>m@ &_	_3way_te
32.0K	61724@4.186252@4.4	40%	143697@3.61	133%	136151@3.8	5121%	138987@3.7	7125%	159835@3.2	${2159\%}$	
64.0K	$2610@6.4 {\rm r} 2971@5.6$	14%	4984@5.0	91%	6974@3.6	167%	6946@3.6	166%	8100@3.1	210%	
$256.0\mathrm{K}$	4839@6.9r $6331@5.3$	31%	6446@2.6	33%	12427@2.7	157%	12882@2.6	166%	13168@2.5	172%	
512.0K	$6387@5.2\mathbf{m}526@3.5$	49%	9849@3.4	54%	12483@2.7	95%	12426@2.7	95%	12732@2.6	99%	
$1024.0\mathrm{K}$	$7048@4.7 \mathrm{mh} \$826@2.5$	68%	11860@2.5	68%	10031@3.3	42%	10000@3.3	42%	10192@3.3	45%	
Random											
Write	cbt <u>31stJclbt 106tth</u>	tsha6n@24	dottp25 #12%/	<u>adhænga</u>	eadak 1261442127	<u>adiraaldi</u>	æa ðlu ta y 22koplú t	6dg 2dg2	_cBrtva27ttleA	hechkenge.	$_3$ way $_t\epsilon$
$\overline{4.0\mathrm{K}}$	23646@21 2363 9@21.6	0%	23925@21.4	1%	49015@5.2	107%	50963@7.5	116%	51182@5.0	116%	-
8.0K	22343@342226\$6@33.9		22481@34.2		50058@5.1		50946@5.0		48579@10.5		
16.0K	20872@2420764@24.6		20662@24.8		49288@10.4		48329@5.3		45875@11.1		
32.0 K	15269@16 .7528 0@25.1		18522@20.7		44622@8.6		44974@8.5		43891@8.7		
64.0K	827@30.4r843@29.8	2%	905@27.8	9%	2502@10.0		2467@10.2		2428@10.3		
256.0 K	2105@31.7 2 1160@30.9	3%	2121@31.5	1%	3830@8.6	82%	4315@15.4		4064@4.0	93%	
512.0K	2910@11. 3288 5@11.4	-1%	2861@11.5	-2%	4341@5.5	49%	3894@4.1	34%	4501@7.2	55%	
$1024.0\mathrm{K}$	3905@12.43854@8.3	-1%	3891@12.4	-0%	3740@8.5	-4%	4301@7.3	10%	4174@5.6	7%	
Random											
_ 001 00 0	vri ce t_31stJ ch<u>t 1</u>96tthoMi	tgh:a6m@24_	_clothp 235+124%	di <u>na</u> nga	eadak bakutak		<u>ea3lwtayl22kmpli@</u>		_cBtva27ttleA	hed <u>rhe</u> enge	_3way_te
4.0K_70	0/36650@8.257882@6.6	24%	57341@6.7	23%	101054@2.5	117%	100970@2.5	5116%	94949@4.0	104%	
	70 430 39@6. 2485 16@5.3	18%	48220@5.3	17%	91771@2.8	123%	92234@2.8	124%	87433@2.9	112%	
$64.0 K_{-7}$	70 /136 8@5.8mls50@10.8	8%	1988@8.4	38%	4208@2.0	193%	4293@3.9	199%	4287@3.9	198%	
$64.0\mathrm{K}_3$	30 980 @17.0ml\@19@16.4	4%	1156@14.5	18%	3022@5.5	208%	3016@5.5	207%	2901@5.7	195%	
				$\overline{}$		$\overline{}$					

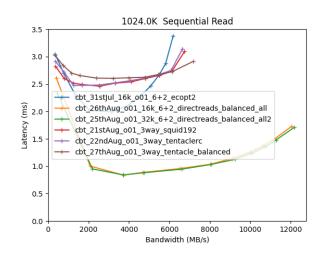
Response Curves

Sequential Read

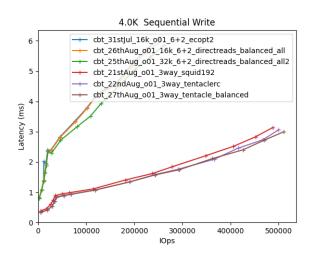


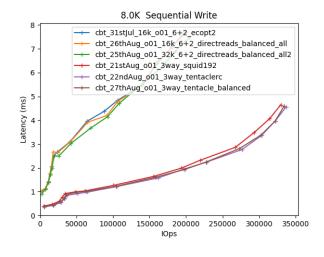
Response Curves Sequential Write

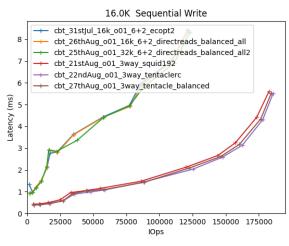


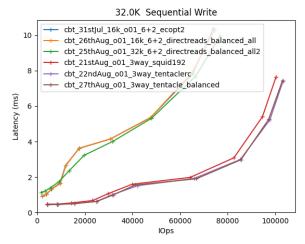


Sequential Write

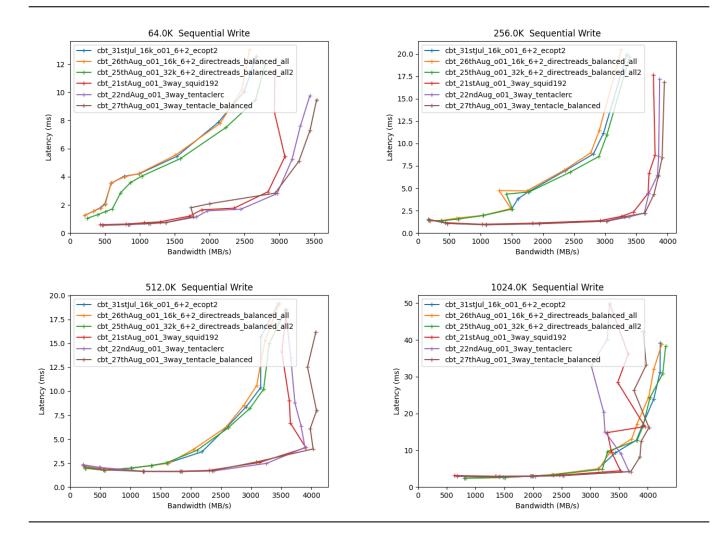




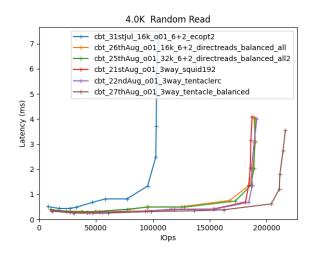


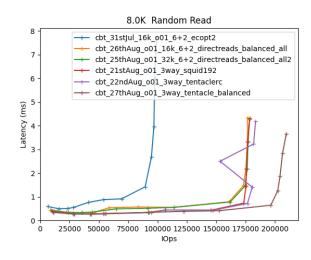


Response Curves Random Read

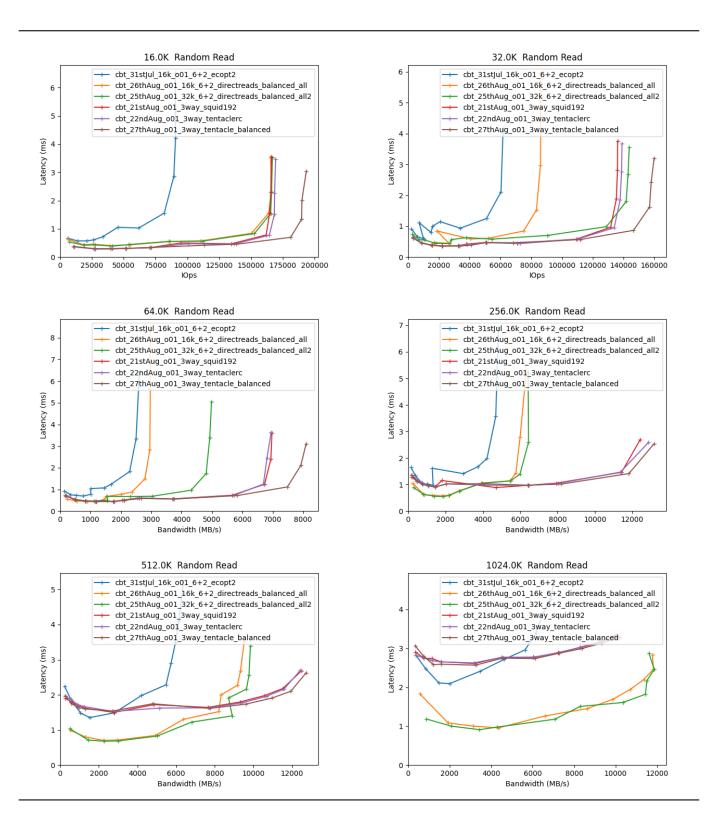


Random Read



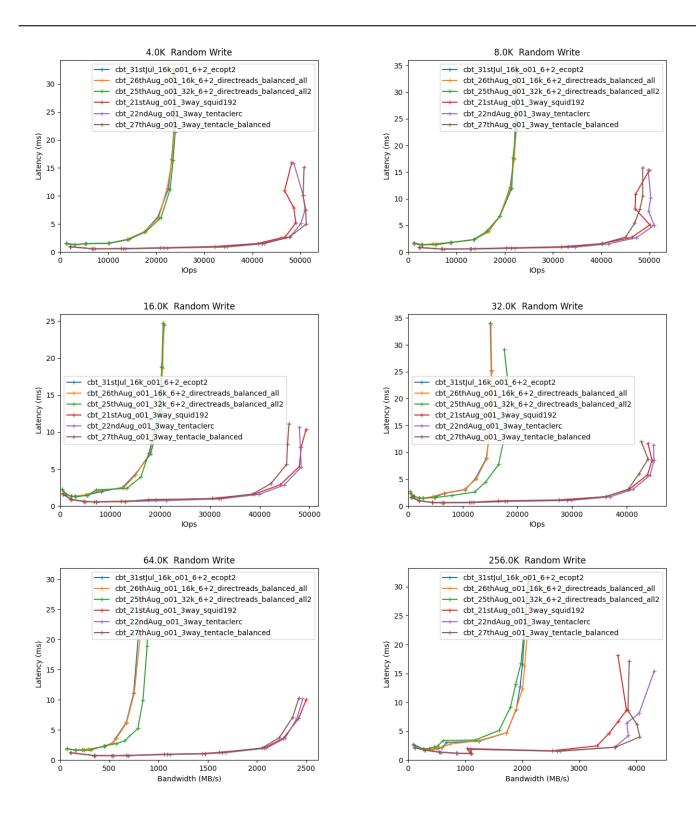


Response Curves Random Write

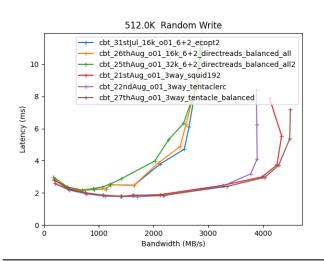


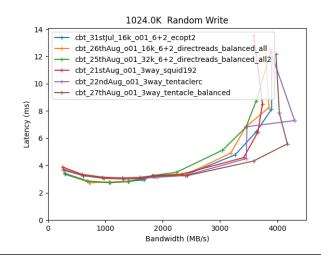
Random Write

Response Curves Random Write

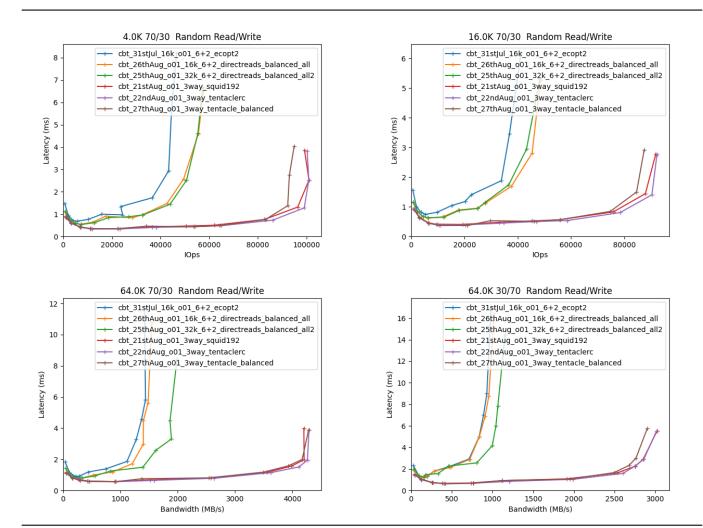


Response Curves Random Read/Write





Random Read/Write



Configuration yaml files

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

results

```
librbdfio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
  osd_ra:
  - 4096
 poolname: rbd_replicated
 prefill:
    blocksize: 64k
    numjobs: 1
 procs_per_volume:
  - 1
  ramp: 30
  rbdname: cbt-librbdfio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 1368750
  volumes_per_client:
  - 16
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      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:
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384
```

```
- 588
16krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 16384
  total_iodepth:
  - 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 - 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: - 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

- 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:
  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:
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
  - 384
  - 512
  - 768
512krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 524288
  {\tt total\_iodepth:}
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 24
  - 32
  - 40
  - 48
  - 64
{\tt 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

```
64k7030:
  jobname: randmix
 mode: randrw
 numjobs:
  - 1
  op_size: 65536
 rwmixread: 70
  total_iodepth:
  - 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
64 krandom write:\\
  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:
  op_size: 65536
  total_iodepth:
```

- 4 - 6 - 8 - 16 - 24 - 32 - 64 - 128 - 192 - 256 64kseqwrite: jobname: write mode: write numjobs: - 1 op_size: 65536 total_iodepth: - 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
  {\tt 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:
  - 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:
  - 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 -1%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
rbdname: cbt-librbdfio
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:
    - 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 ${\tt 1Mrandomread:}$ 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:
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
256krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 262144
  {\tt total\_iodepth:}
  - 1
  - 2
  - 3
  - 5
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
32 krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 32768
  {\tt 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: - 8 - 12 - 16 - 32 - 48 - 64 - 128

- 384 - 588 - 768 4krandomwrite: jobname: randwrite mode: randwrite numjobs: - 1 op_size: 4096 total_iodepth: - 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:
  - 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:
  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
  {\tt 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:
  - 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
  - 8
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 256
seq32kread:
  jobname: seqread
  mode: read
  numjobs:
  - 1
  op_size: 32768
  {\tt 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
```

- 192 - 288 - 384 seq4kwrite: jobname: seqwrite mode: write numjobs: - 1 op_size: 4096 total_iodepth: - 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

Configuration yaml files results

```
- 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 -1%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}
```