$\label{lem:comparitive Performance Report for cbt-19thAug-o01-squid192-2+2-4k vs cbt-18thAug-o01-2+2-16k-ecopt2 vs cbt-5thAug-4k-o01-4+2-squid vs cbt-4thAug-16k-o01-4+2-ecopt2 vs cbt-3rdAug-4k-o01-6+2-squid vs cbt-31stJul-16k-o01-6+2-ecopt2}$

Comparitive Performance Report for cbt-19thAug-001-squid192-2+2-4k vs cbt-18thAug-001-2+2-16k-ecopt2 vs cbt-5thAug-4k-001-4+2-squid vs cbt-4thAug-16k-001-4+2-ecopt2 vs cbt-3rdAug-4k-001-6+2-squid vs cbt-31stJul-16k-001-6+2-ecopt2

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- Response Curves
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Comparison summary for cbt-19thAug-001-squid192-2+2-4k vs cbt-18thAug-001-2+2-16k-ecopt2 vs cbt-5thAug-4k-o01-4+2-squid vs cbt-4thAug-16k-o01-4+2-ecopt2 vs cbt-3rdAug-4k-o01-6+2-ecopt2

Sequentia	al									
Read	cbt_19th Abg_b0th A	aghich1916	2 (22 4 2 25 (146) 4 (3	oechaphtga	eo 0c1bt 4_442h Asiqqq	<u>rh#6ke</u>	_adbit48#a2A%	Agricultati	o0d <u>bt6-342st</u> 376	jd <u>chd</u> h6ilş
4.0K	94850@1.0hh6011@1.7	22%	81908@4.7	-14%	143642@2.7	51%	58638@6.5	-38%	165897@2.3	3 75%
8.0K	69102@5.6hh2092@3.4	62%	67577@5.7	-2%	140289@2.71	103%	53638@5.4	-22%	155175@2.5	5125%
16.0K	65610@4.4h0\$755@2.7	61%	51153@5.6	-22%	126594@2.3	93%	46954@6.1	-28%	140148@2.0	0114%
32.0K	60081@3.260913@3.1	1%	48711@3.9	-19%	76709@2.5	28%	38463@5.0	-36%	71375@0.9	19%
64.0K	3326@5.0m $375@5.0$	1%	2675@6.3	-20%	2998@5.6	-10%	2255@7.4	-32%	3172@5.3	-5%
256.0K	6442@2.6r $6513@2.6$	1%	5814@2.9	-10%	5947@2.8	-8%	4536@3.7	-30%	5330@3.1	-17%
512.0K	$6621@2.5 \\ \textbf{m} \\ \textbf{6}826@2.5$	3%	6157@2.7	-7%	6420@2.6	-3%	5135@3.3	-22%	6067@2.8	-8%
$1024.0\mathrm{K}$	5820@3.6r 6 \$ $71@3.4$	6%	5832@3.6	0%	6346@3.3	9%	5217@4.0	-10%	6186@3.4	6%
Sequentia Write		andriadol (20)K) <i>3</i> 344-954 /63 (8	(accles Arbato D	anth 1.4th Awar	rhill 6ke	afbit R#cDA fi	Sorchustl Dre	nAht 6.2Det W	ido kalb fisik
Write	cbt_19thAbg_bOthA									
$\frac{\text{Write}}{4.0\text{K}}$	cbt_19th Abg_b8thA 199873@7 308\$ 08@5.0	54%	151417@10	.124%	280184@5.5	40%	136232@11	.332%	252680@6.	1 26%
Write 4.0K 8.0K	cbt_19th Ahg_b0thA 199873@7 3083 08@5.0 232463@6 2083 67@6.7) 54% ' -2%	151417@10 154665@9.9	.124%	280184@5.5 217309@7.1	40% -7%	136232@11 130892@11	.332% .744%	252680@6. 198909@7.	1 26% 7-14%
Write 4.0K 8.0K 16.0K	cbt_19th Abg_b8thA 199873@7 3087 08 0 5.0 232463@6 2283 67@6.7 132920@7 .735 932@7.5) 54% 7 -2% 6 2%	151417@10 154665@9.9 131050@7.8	.124% 9-33% 8 -1%	280184@5.5 217309@7.1 131110@7.8	40% -7% -1%	136232@11 130892@11 86109@11.	.332% .744% 9-35%	252680@6. 198909@7. 121584@8.	1 26% 7-14% 4 -9%
Write 4.0K 8.0K 16.0K 32.0K	cbt_19th&bg_b60h_84 199873@7308\(\) 605.0 232463@62\(\) 8367@6.7 132920@71\(\) 605.7 74942@10\(\) 803\(\) 91.0 9.5) 54% 7 -2% 5 2% 7%	151417@10 154665@9.9 131050@7.8 78224@9.8	.124% 9-33% 8 -1% 4%	280184@5.5 217309@7.1 131110@7.8 79346@9.7	40% -7% -1% 6%	136232@11 130892@11 86109@11.5 50412@15.5	332% 744% 9-35% 2-33%	252680@6. 198909@7. 121584@8. 73998@10.	1 26% 7-14% 4 -9% 4 -1%
Write 4.0K 8.0K 16.0K 32.0K 64.0K	cbt_19th.Abg_b8th.A 199873@73708\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0 54% 7 -2% 5 2% 7% 12%	151417@10 154665@9.5 131050@7.8 78224@9.8 2783@12.0	.124% 9-33% 8 -1% 4% 8%	280184@5.5 217309@7.1 131110@7.8 79346@9.7 2908@11.5	40% -7% -1% 6% 13%	136232@11 130892@11 86109@11.: 50412@15.: 2095@16.0	.332% .744% 9-35% 2-33% -18%	252680@6. 198909@7.' 121584@8. 73998@10. 2668@12.5	1 26% 7-14% 4 -9% 4 -1% 4%
Write 4.0K 8.0K 16.0K 32.0K 64.0K 256.0K	cbt_19thAbg_b8thA 199873@7308\$08@5.0 232463@62288367@6.7 132920@71735932@7.5 74942@10826391@9.5 2565@13.128\$70@11.7 3179@21.08386@19.7	0 54% 7 -2% 6 2% 7% 12% 7%	151417@10 154665@9.9 131050@7.8 78224@9.8 2783@12.0 3506@19.0	.124% 9-33% 8 -1% 4% 8% 10%	280184@5.5 217309@7.1 131110@7.8 79346@9.7 2908@11.5 3621@18.4	40% -7% -1% 6% 13% 14%	136232@11 130892@11 86109@11.: 50412@15.: 2095@16.0 2797@23.9	.332% .744% 9-35% 2-33% -18% -12%	252680@6. 198909@7.' 121584@8. 73998@10. 2668@12.5 3346@19.9	1 26% 7-14% 4 -9% 4 -1% 4% 5%
Write 4.0K 8.0K 16.0K 32.0K 64.0K	cbt_19th.Abg_b8th.A 199873@73708\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0 54% 7 -2% 5 2% 7% 12%	151417@10 154665@9.5 131050@7.8 78224@9.8 2783@12.0	.124% 9-33% 8 -1% 4% 8%	280184@5.5 217309@7.1 131110@7.8 79346@9.7 2908@11.5	40% -7% -1% 6% 13%	136232@11 130892@11 86109@11.: 50412@15.: 2095@16.0	.332% .744% 9-35% 2-33% -18% -12% -16%	252680@6. 198909@7.' 121584@8. 73998@10. 2668@12.5	1 26% 7-14% 4 -9% 4 -1% 4%

125142@6.1~51%

118048@6.5 45%

110136@5.3 42%

70582@3.6 0%

2749@6.1 -28%

5778@5.8

7132@4.7

-31%

-23%

36952@10.4-55%

36424@21.1-55%

35473@16.6 - 54%

32165@7.9 -54%

-50%

-48%

-41%

1897@8.8

4363@3.8

5493@4.6

104960@7.3 27%

61724@4.1 -12%

22%

17%

-31%

-42%

-31%

99102@7.7

90721@4.2

2610@6.4

4839@6.9

6387@5.2

53372@14.4 - 36%

53802@14.3-34%

53274@11.0-31%

48583@2.6 -31%

-23%

-25%

-21%

2926@5.7

6280@5.3

7318@4.6

4.0K

8.0K

16.0K

32.0 K

64.0K

256.0K

512.0K

82748@7.1128583@3.0 55%

81281@9.4hh\$727@5.0 45%

77611@7.6hh2346@5.245%

70360@5.4**689**17@5.6 -2%

-5%

-5%

-5%

3807@4.4m**36**27@6.9

8382@4.0m952@4.2

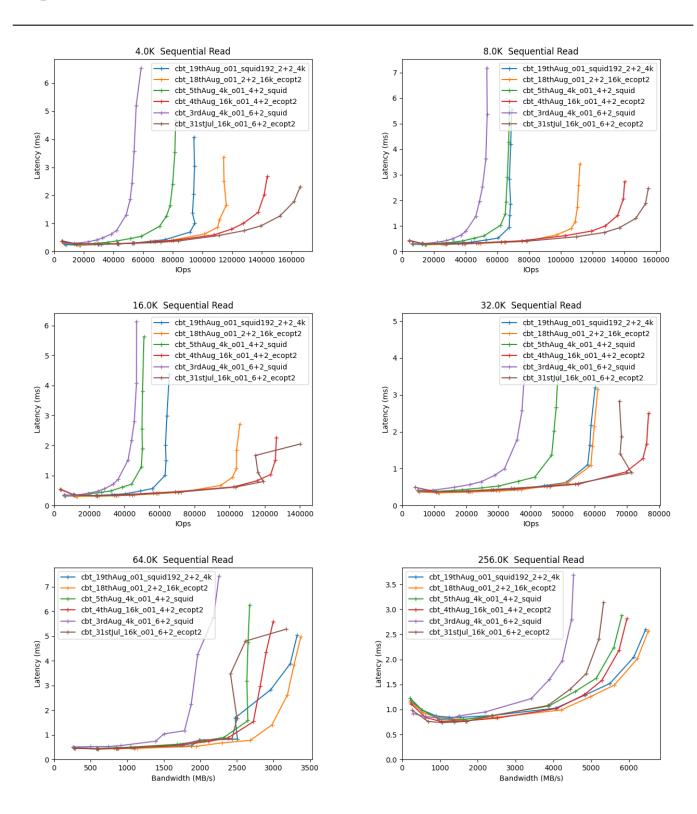
9275@3.6m\$69@3.8

 $\label{lem:comparison} Comparison summary for cbt-19thAug-o01-squid192-2+2-4k vs cbt-18thAug-o01-2+2-16k-ecopt2 vs cbt-5thAug-4k-o01-4+2-squid vs cbt-4thAug-16k-o01-4+2-ecopt2 vs cbt-3rdAug-4k-o01-6+2-squid vs cbt-31stJul-16k-o01-6+2-ecopt2$

Random										
Read	cbt_19th Adug_b0th_A	ghidhlet	2 (22 4 225 t 146) A (37	gechoalphatg?	o0:1 <u>bt44:12hA</u> sAg	gha6ke	_coObit48#c2A%	egopatty ge	o0d <u>bt6-32st</u> 3M	planda bilg
1024.0K	7708@4.3m898@4.2	2%	7028@4.8	-9%	7381@4.5	-4%	5846@5.7	-24%	7048@4.7	-9%
Random										
Write	cbt_19thAddg_bOthA	wah isabil@ili	2 (22#-22 5 f 146) A 97	sechoaldate2s	o 0 clot 4 4 t2h Asia	wha6ke	e or0bit 48±rd2A%	Exec domatika2ere	o0dot6-342st.5%	ídatahlók
4.0K	15611@8.2\8\\$57\@40.9		14381@8.9	-8%	18916@40.6		10725@71.		23646@21.0	
8.0K	18101@4258829@40.8		13490@28.4		17888@42.9	, ,	10726@71.	, -	22343@34.4	
16.0K	17949@21.47731@28.9		16340@31.3		17659@14.5		10123@50.		20872@24.	
32.0K	17281@22 .126:46 5@23.3		15972@32.0		15931@24.1		10117@50.		15269@16.	
64.0K	1116@22.5hd20@24.6	-9%	1108@22.7	-1%	890@9.4	-20%	596@42.2	-47%	827@30.4	-26%
256.0K	3097@21.52961@22.5	-4%	2853@23.4	-8%	2623@25.5	-15%	1785@37.5		2105@31.7	-32%
512.0K	3587@9.1m 6 87@8.8	3%	3623@9.0	1%	3507@9.3	-2%	2534@9.7	-29%	2910@11.3	
1024.0 K	3858@12.641124@11.7	7%	4264@11.3	11%	4309@11.2	12%	3217@15.2	-17%	3905@12.4	1%
Random										
Read/W	ri ce t_19th Adug_b®th_A%a	g <u>hia</u> bl@t	2 c 22 22 5 t 163A 77	gechalphtg2	o0d <u>bt44dhA</u> sag	<u>ghli6ke</u>	_odbit48#d2A&	égdijátk ége	o0:1 <u>bt 6-3 12st</u> 150	plandh folg
${4.0K}$ 70	/30145@11400925@6.2	23%	24698@15.5	5-25%	39936@6.4	20%	21146@18.	1-36%	46650@8.2	41%
	0 334 70@3. 8186 87@6.6	16%	25335@2.5		36732@7.0	10%	19770@12.		41239@6.2	
	0 280 6@4.1nh847@9.1	-9%	1621@5.2	-20%		-30%	1147@14.6		1438@5.8	-29%
	0 1/30 8@12.8 h 2 5 2@13.4	-4%	1215@6.9	-7%	968@6.5	-26%	739@22.7	-44%	982@17.0	-25%

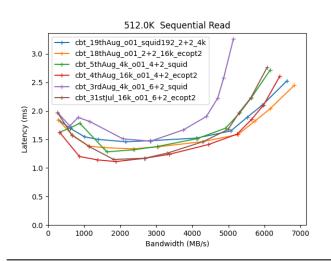
Response Curves

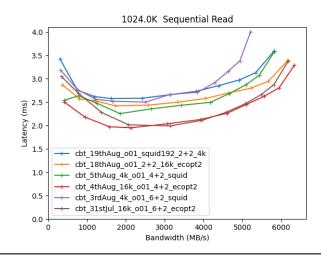
Sequential Read



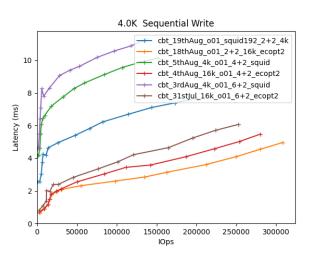
 $cbt-19th Aug-o01-squid 192-2+2-4k \ vs \ cbt-18th Aug-o01-2+\\ \textbf{3}-16k-ecopt 2 \ vs \ cbt-5th Aug-4k-o01-4+2-squ\\ \textbf{4}degust \ 20, \ 2025 \ cbt-4th Aug-16k-o01-4+2-ecopt 2 \ vs \ cbt-3rd Aug-4k-o01-6+2-squid \ vs \ cbt-31st Jul-16k-o01-6+2-ecopt 2$

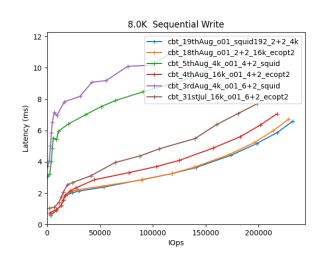
Response Curves Sequential Write

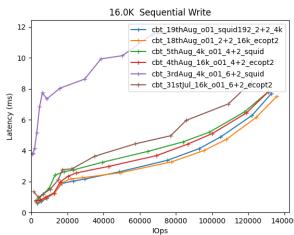


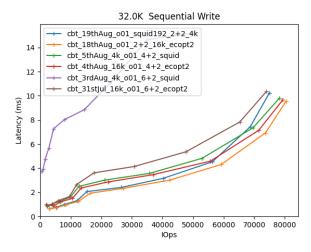


Sequential Write

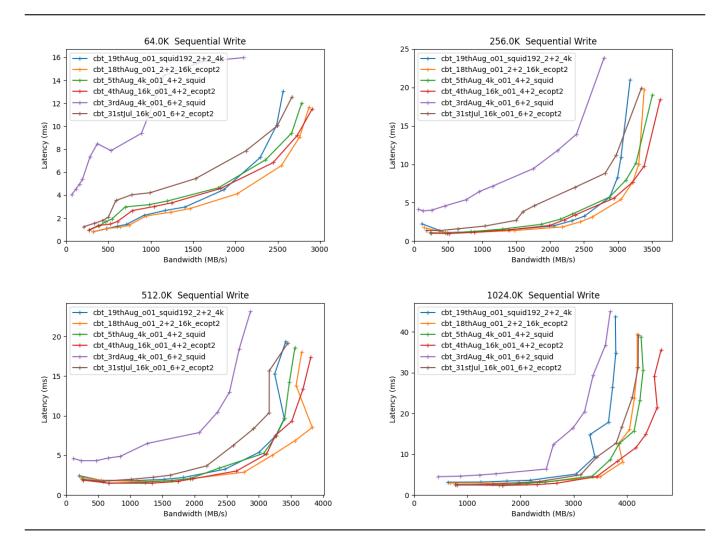




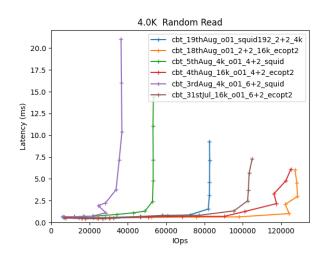


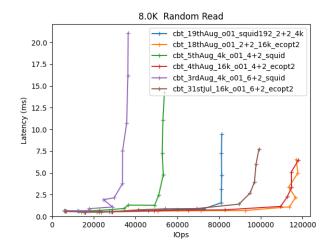


Response Curves Random Read

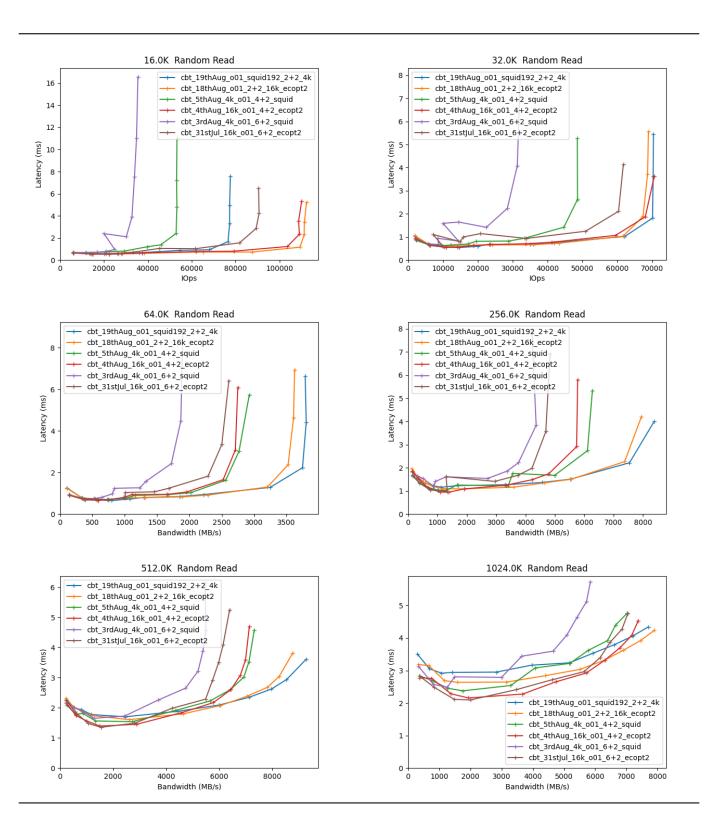


Random Read



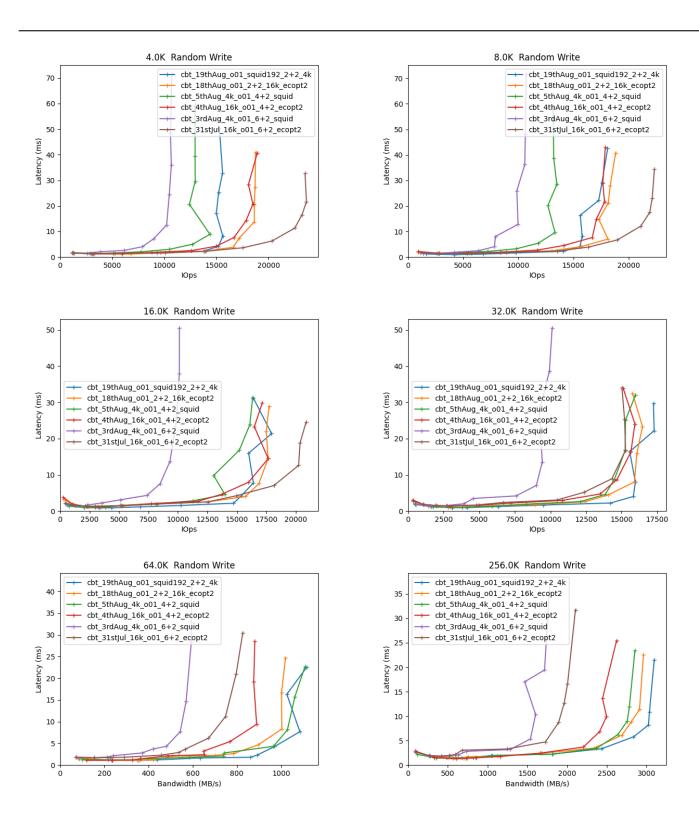


Response Curves Random Write

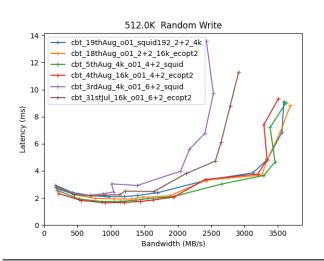


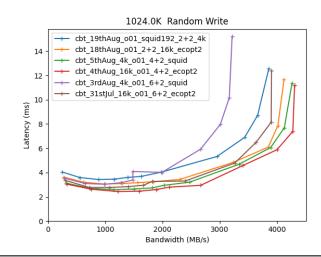
Random Write

Response Curves Random Write

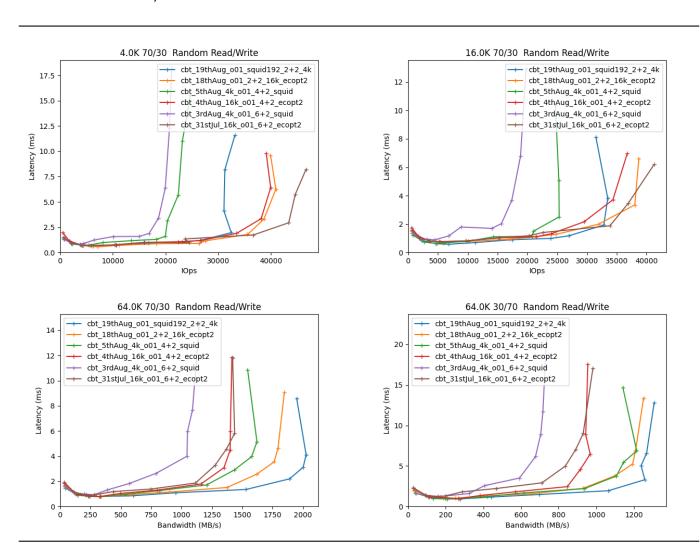


Response Curves Random Read/Write





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: 912500
  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
  - 5
  - 6
  - 8
  - 16
  - 24
  - 32
  - 48
1Mseqread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 1048576
  total_iodepth:
```

- 1 - 2 - 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 - 64

- 96 - 128 - 256 32krandomread: jobname: randread mode: randread numjobs: - 1 op_size: 32768 total_iodepth: - 4 - 6 - 8 - 12 - 16 - 24 - 32 - 64 - 128 - 256 - 384 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
- cbt-19thAug-001-squid192-2+2-4k vs cbt-18thAug-001-2+2516k-ecopt2 vs cbt-5thAug-4k-001-4+2-squagust 20, 2025 cbt-4thAug-16k-001-4+2-ecopt2 vs cbt-3rdAug-4k-001-6+2-squid vs cbt-31stJul-16k-001-6+2-ecopt2

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

- 4 - 5 - 8 - 16 - 24 - 32 - 48 - 64 512kseqread: jobname: seqread mode: read numjobs: - 1 op_size: 524288 total_iodepth: - 1 - 2 - 3 - 4 - 6 - 8 - 12 - 16 - 20 - 24 - 32 512kseqwrite: jobname: seqwrite mode: write numjobs: - 1 op_size: 524288 total_iodepth: - 1 - 2 - 4 - 6 - 8 - 16 - 32 - 48 - 64 - 96 - 128 64k3070: jobname: randmix mode: randrw numjobs: - 1 op_size: 65536 rwmixread: 30 total_iodepth: - 1 - 2 - 3 - 4 - 8 - 16 - 32 - 64 - 96

- 128

```
- 256
64k7030:
  jobname: randmix
 mode: randrw
 numjobs:
  - 1
  op_size: 65536
  rwmixread: 70
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
64krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
  - 384
64krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 2
  - 4
  - 6
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  - 256
  - 384
64kseqread:
  jobname: read
 mode: read
 numjobs:
  - 1
  op_size: 65536
```

```
total_iodepth:
  - 6
  - 8
  - 16
  - 24
  - 32
  - 64
  - 128
  - 192
  - 256
64kseqwrite:
  jobname: write
  mode: write
  numjobs:
  - 1
  op_size: 65536
  {\tt total\_iodepth:}
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 512
8krandomread:
  jobname: randread
  mode: randread
  numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 588
  - 768
8krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
```

- 256 - 384 - 512 - 768 precondition: jobname: precond1rw mode: randwrite monitor: false numjobs: 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
- cbt-19thAug-001-squid192-2+2-4k vs cbt-18thAug-001-2+2016k-ecopt2 vs cbt-5thAug-4k-001-4+2-squAdgust 20, 2025 cbt-4thAug-16k-001-4+2-ecopt2 vs cbt-3rdAug-4k-001-6+2-squid vs cbt-31stJul-16k-001-6+2-ecopt2

```
- 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
{\tt 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:
  op_size: 8192
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 192
  - 288
  - 384
seq8kwrite:
  jobname: seqwrite
  mode: write
```

```
numjobs:
        op_size: 8192
        total_iodepth:
        - 2
        - 8
        - 16
        - 24
        - 32
        - 48
        - 64
        - 128
        - 256
        - 384
        - 512
        - 768
        - 1024
        - 1280
        - 1536
cluster:
  archive_dir: /tmp/cbt
  ceph-mgr_cmd: /usr/bin/ceph-mgr
  ceph-mon_cmd: /usr/bin/ceph-mon
  ceph-osd_cmd: /usr/bin/ceph-osd
  ceph-run_cmd: /usr/bin/ceph-run
  ceph_cmd: /usr/bin/ceph
  clients:
  - --- server1 ---
  clusterid: ceph
  conf_file: /cbt/ceph.conf.4x1x1.fs
  fs: xfs
  head: --- server1 ---
  iterations: 1
  mgrs:
    --- server1 ---:
     a: null
  mkfs opts: -f -i size=2048
  mons:
    --- server1 ---:
     a: --- IP Address --:6789
  mount_opts: -o inode64, noatime, logbsize=256k
  osds:
  - --- server1 ---
  osds_per_node: 8
  pdsh_ssh_args: -a -x -l%u %h
  rados_cmd: /usr/bin/rados
  rbd_cmd: /usr/bin/rbd
  tmp_dir: /tmp/cbt
  use_existing: true
  user: ljsanders
monitoring_profiles:
  collectl:
    args: -c 18 -sCD -i 10 -P -oz -F0 --rawtoo --sep ";" -f {collectl_dir}
  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: 912500
volumes_per_client:
- 16
workloads:
  16k7030:
    jobname: randmix
    mode: randrw
    numjobs:
    - 1
    op_size: 16384
    rwmixread: 70
    total_iodepth:
    - 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: 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
256 krandomread:
  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:
  op_size: 262144
  total_iodepth:
  - 1
  - 3
  - 4
  - 5
  - 8
  - 16
  - 32
  - 64
  - 96
  - 128
  - 256
32krandomread:
  jobname: randread
 mode: randread
 numjobs:
  op_size: 32768
  total_iodepth:
```

- 4 - 6 - 8 - 12 - 16 - 24 - 32 - 64 - 128 - 256 - 384 32 krandom write:jobname: randwrite mode: randwrite numjobs: - 1 op_size: 32768 total_iodepth: - 1 - 2 - 3 - 8 - 16 - 32 - 64 - 128 - 256 - 384 - 512 4k7030: jobname: randmix mode: randrw numjobs: - 1 op_size: 4096 rwmixread: 70 total_iodepth: - 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
- cbt-19thAug-001-squid192-2+2-4k vs cbt-18thAug-001-2+2716k-ecopt2 vs cbt-5thAug-4k-001-4+2-squAdgust 20, 2025 cbt-4thAug-16k-001-4+2-ecopt2 vs cbt-3rdAug-4k-001-6+2-squid vs cbt-31stJul-16k-001-6+2-ecopt2

- 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 total_iodepth: - 1 - 2 - 3 - 8 - 16 - 24 - 32 - 40 - 48 - 64 512 krandom write:jobname: randwrite mode: randwrite numjobs: - 1 op_size: 524288 total_iodepth: - 1 - 2 - 3 - 5 - 6 - 8 - 16 - 24 - 32 - 48 - 64 512kseqread: jobname: seqread

```
mode: read
  numjobs:
  - 1
 op_size: 524288
  total_iodepth:
  - 2
  - 3
  - 4
  - 6
  - 8
  - 12
  - 16
  - 20
  - 24
  - 32
512kseqwrite:
  jobname: seqwrite
 mode: write
 numjobs:
  - 1
 op_size: 524288
 total_iodepth:
  - 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
  - 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: - 4 6 - 8 - 12 - 16 - 24 - 32 - 64 - 128 - 256 - 384 64krandomwrite: jobname: randwrite mode: randwrite numjobs: - 1 op_size: 65536 total_iodepth: - 2 - 4 - 6 - 8 - 16 - 24 - 32 - 64 - 128 - 256 - 384 64kseqread: jobname: read mode: read numjobs: - 1 op_size: 65536 total_iodepth: - 2 - 4 - 6 - 8 - 16 - 24 - 32 - 64 - 128 - 192

```
- 256
64kseqwrite:
  jobname: write
 mode: write
 numjobs:
  - 1
  op_size: 65536
  total_iodepth:
  - 8
  - 12
  - 16
  - 32
  - 48
 - 64
  - 128
  - 256
  - 384
  - 512
8krandomread:
  jobname: randread
 mode: randread
 numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 588
  - 768
8krandomwrite:
  jobname: randwrite
 mode: randwrite
 numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 2
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
 - 384
  - 512
  - 768
precondition:
  jobname: precond1rw
 mode: randwrite
 monitor: false
 numjobs:
  - 1
  op_size: 65536
```

time: 600

```
total_iodepth:
  - 16
seq16kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 16384
  total_iodepth:
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 192
  - 288
seq16kwrite:
  jobname: seqwrite
  mode: write
 numjobs:
  - 1
  op_size: 16384
  total_iodepth:
  - 2
  - 4
  - 8
  - 16
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 512
  - 768
  - 1024
seq256kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 262144
  total_iodepth:
  - 1
  - 2
  - 3
  - 4
  - 5
  - 8
  - 16
  - 24
  - 32
  - 48
  - 64
seq256kwrite:
  jobname: seqwrite
  mode: write
```

```
numjobs:
  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:
  - 4
  - 8
  - 16
  - 32
  - 64
  - 128
  - 256
  - 512
  - 768
seq4kread:
  jobname: seqread
 mode: read
 numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
```

- 32 - 64 - 96 - 128 - 192 - 288 - 384 seq4kwrite: jobname: seqwrite mode: write numjobs: - 1 op_size: 4096 total_iodepth: - 2 - 8 - 16 - 24 - 32 - 48 - 64 - 128 - 256 - 384 - 512 - 768 - 1024 - 1280 - 1536 seq8kread: jobname: seqread mode: read numjobs: - 1 op_size: 8192 total_iodepth: - 4 - 8 - 12 - 16 - 24 - 32 - 64 - 96 - 128 - 192 - 288 - 384 seq8kwrite: jobname: seqwrite mode: write numjobs: - 1 op_size: 8192 total_iodepth: - 8 - 16 - 24 - 32 - 48 - 64
- $cbt-19th Aug-o01-squid 192-2+2-4k \ vs \ cbt-18th Aug-o01-2+2416k-ecopt 2 \ vs \ cbt-5th Aug-4k-o01-4+2-squid us t \ 20, \ 2025 \ cbt-4th Aug-16k-o01-4+2-ecopt 2 \ vs \ cbt-3rd Aug-4k-o01-6+2-squid vs \ cbt-31st Jul-16k-o01-6+2-ecopt 2$

```
- 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}
```