

Comparitive Performance Report for
squid-ec-2+2-4k vs squid-ec-4+2-4k vs
squid-ec-6+2-4k vs
tentacle-fast-ec-2+2-16k vs
tentacle-fast-ec-4+2-16k vs
tentacle-fast-ec-6+2-16k vs
tentacle-3way-replica

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Comparison summary for squid-ec-2+2-4k vs squid-ec-4+2-4k vs squid-ec-6+2-4k vs tentacle-fast-ec-2+2-16k vs tentacle-fast-ec-4+2-16k vs tentacle-fast-ec-6+2-16k vs tentacle-3way-replica

Sequential Read	squid-ec-2+2-4k			squid-ec-4+2-4k			squid-ec-6+2-4k			tentacle-fast-ec-2+2-16k			tentacle-fast-ec-4+2-16k			tentacle-fast-ec-6+2-16k			tentacle-3way-replica		
	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change
4K	94850	@18.1998	@4.714%	58638	@6.538	%	116011	@1.72	%	143642	@2.51	%	165897	@2.35	%	139206	@0.47	%			
8K	69102	@5.6757	@5.7-2%	53638	@5.422	%	112092	@3.62	%	140289	@2.03	%	155175	@2.25	%	126086	@0.82	%			
16K	65610	@4.5115	@5.622%	46954	@6.428	%	105755	@2.61	%	126594	@2.93	%	140148	@2.10	%	112627	@2.62	%			
32K	60081	@3.4871	@3.919%	38463	@5.036	%	60913	@3.11	1%	76709	@2.528	%	71375	@0.919	%	90377	@2.150	%			
64K	3326	@5.0675	@6.3-20%	2255	@7.4-32	%	3375	@5.01	1%	2998	@5.6-10	%	3172	@5.3-5	%	4561	@3.737	%			
256K	6442	@2.6814	@2.9-10%	4536	@3.7-30	%	6513	@2.61	1%	5947	@2.8-8	%	5330	@3.1-17	%	7908	@2.123	%			
512K	6621	@2.6157	@2.7-7%	5135	@3.3-22	%	6826	@2.53	3%	6420	@2.6-3	%	6067	@2.8-8	%	7991	@2.121	%			
1024K	5820	@3.6882	@3.60%	5217	@4.0-10	%	6171	@3.46	6%	6346	@3.39	%	6186	@3.46	6%	6651	@3.114	%			

Sequential Write	squid-ec-2+2-4k			squid-ec-4+2-4k			squid-ec-6+2-4k			tentacle-fast-ec-2+2-16k			tentacle-fast-ec-4+2-16k			tentacle-fast-ec-6+2-16k			tentacle-3way-replica		
	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change	ops	latency	%change
4K	199873	@7.5141	@7.124%	136232	@1.83	%	308708	@5.54	%	280184	@5.40	%	252680	@6.26	%	500105	@3.50	%			
8K	232463	@6.5366	@5.933%	130892	@1.44	%	228367	@6.72	%	217309	@7.17	%	198909	@7.74	%	336933	@4.45	%			
16K	132920	@7.7105	@7.81%	86109	@11.35	%	135932	@7.52	%	131110	@7.81	%	121584	@8.49	%	185698	@5.40	%			
32K	74942	@10.8224	@9.84%	50412	@15.33	%	80391	@9.57	7%	79346	@9.76	6%	73998	@10.41	%	103300	@7.38	%			
64K	2565	@13.783	@12.08%	2095	@16.018	%	2870	@11.712	2%	2908	@11.513	3%	2668	@12.54	4%	3436	@9.734	%			
256K	3179	@21.3506	@19.010%	2797	@23.912	%	3386	@19.77	7%	3621	@18.414	4%	3346	@19.95	5%	3874	@17.222	2%			
512K	3420	@19.3563	@18.64%	2870	@23.216	%	3832	@8.512	12%	3809	@17.411	1%	3453	@19.21	1%	3896	@4.114	14%			
1024K	3793	@34.4908	@30.714%	3689	@45.0-3	%	4199	@31.411	1%	4645	@35.622	2%	4218	@39.211	1%	3674	@4.2-3	3%			

Comparison summary for squid-ec-2+2-4k vs squid-ec-4+2-4k vs squid-ec-6+2-4k vs tentacle-fast-ec-2+2-16k vs tentacle-fast-ec-4+2-16k vs tentacle-fast-ec-6+2-16k vs tentacle-3way-replica

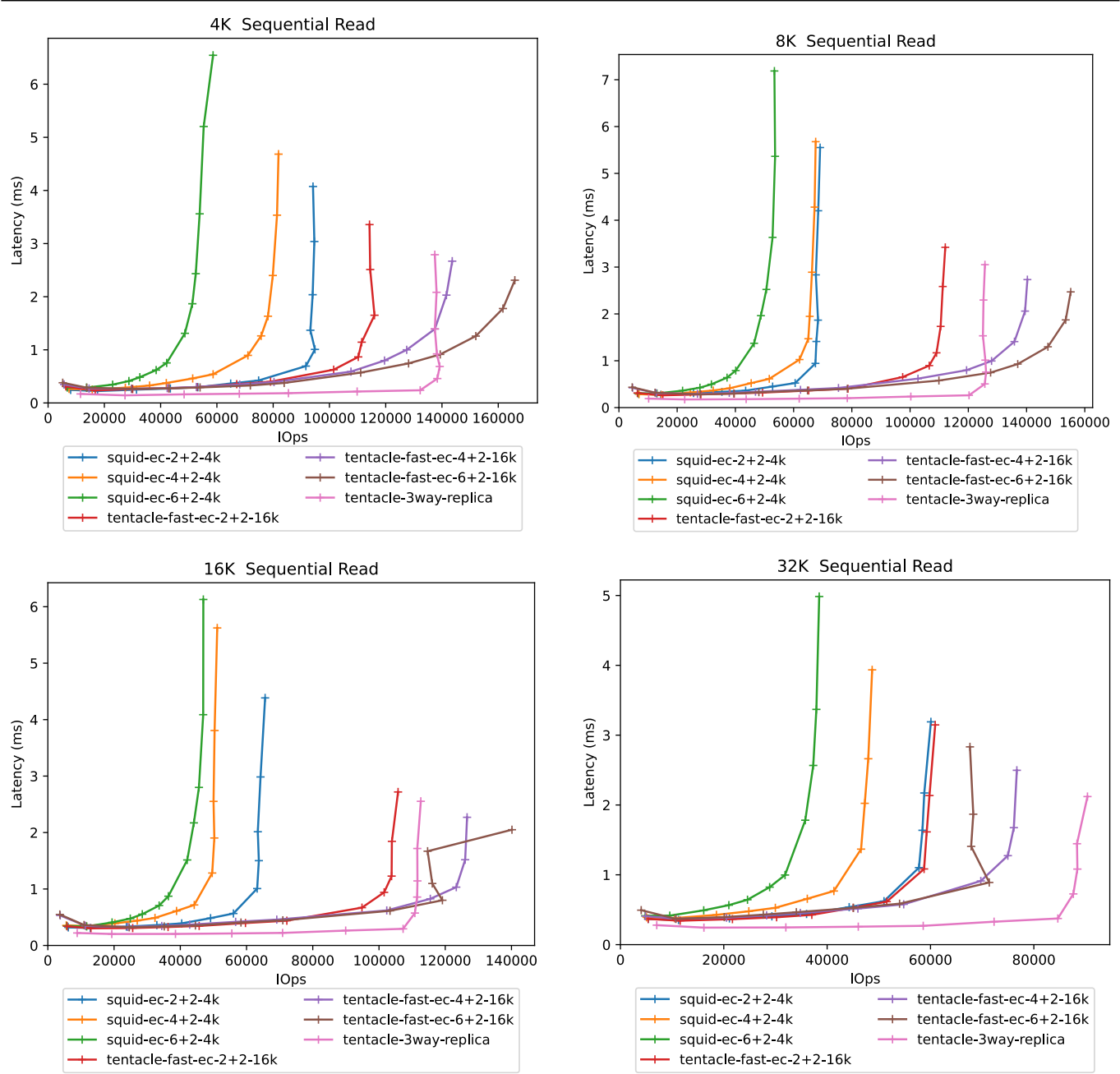
	squid- ec- 2+2- 4k	squid- ec- 4+2- 4k	%change	squid- ec- 6+2- 4k	%change	tentacle- fast- ec- 2+2- 16k	%change	tentacle- fast- ec- 4+2- 16k	%change	tentacle- fast- ec- 6+2- 16k	%change	tentacle- 3way- replica	%change
Random Read													
4K	82748@75.33%	75337@14.36%		36952@10.35%		128583@3.55%		125142@6.51%		104960@7.27%		191467@4.31%	
8K	81281@95.88%	82@14.34%		36424@21.55%		117727@5.45%		118048@6.45%		99102@7.72%		183567@4.26%	
16K	77611@75.32%	74@11.31%		35473@16.54%		112346@5.45%		110136@5.42%		90721@4.21%		169312@3.58%	
32K	70360@54.85%	83@2.63%		32165@7.95%		68917@5.6-2%		70582@3.6 0%		61724@4.41%		138987@3.98%	
64K	3807@4.49%	26@5.7-23%		1897@8.8-50%		3627@6.9 -5%		2749@6.1-28%		2610@6.4-31%		6946@3.6 82%	
256K	8382@4.62%	80@5.3-25%		4363@3.8-48%		7952@4.2 -5%		5778@5.8-31%		4839@6.9-42%		12882@2.65%	
512K	9275@3.63%	18@4.6-21%		5493@4.6-41%		8769@3.8 -5%		7132@4.7-23%		6387@5.2-31%		12426@2.73%	
1024K	7708@4.37%	28@4.8 -9%		5846@5.7-24%		7898@4.2 2%		7381@4.5 -4%		7048@4.7 -9%		10000@3.33%	

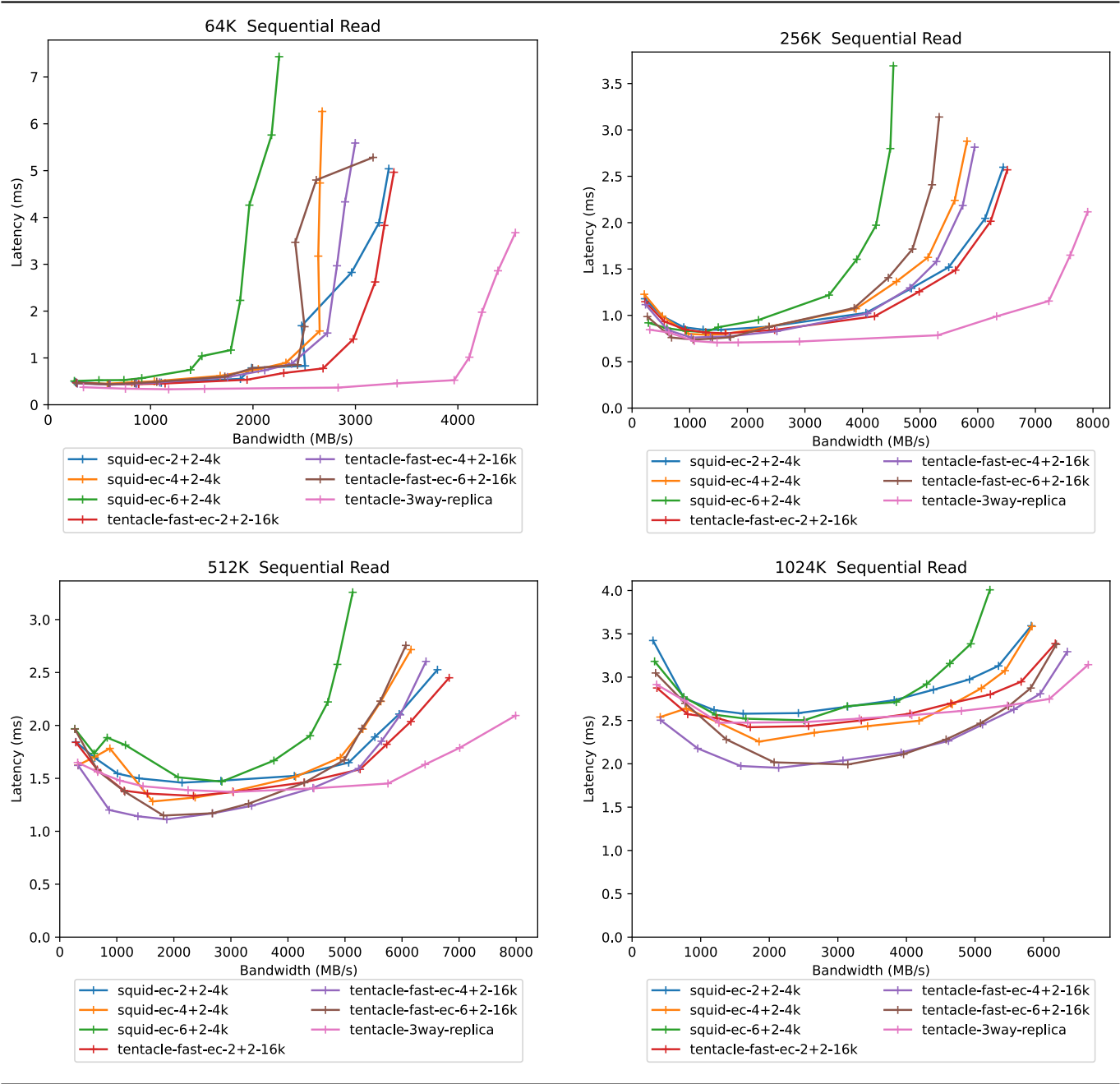
	squid- ec- 2+2- 4k	squid- ec- 4+2- 4k	%change	squid- ec- 6+2- 4k	%change	tentacle- fast- ec- 2+2- 16k	%change	tentacle- fast- ec- 4+2- 16k	%change	tentacle- fast- ec- 6+2- 16k	%change	tentacle- 3way- replica	%change
Random Write													
4K	15611@81.23%	81@8.9-8%		10725@71.31%		18757@40.20%		18916@40.21%		23646@21.51%		50963@7.22%	
8K	18101@42.34%	90@28.25%		10706@71.71%		18829@40.84%		17888@42.91%		22343@34.23%		50946@5.08%	
16K	17949@21.68%	40@31.39%		10123@50.54%		17731@28.91%		17659@14.52%		20872@24.56%		48329@5.36%	
32K	17281@22.37%	72@32.08%		10117@50.41%		16465@23.35%		15931@24.18%		15269@16.72%		44974@8.56%	
64K	1116@22.15%	8@22.7-1%		596@42.2-47%		1020@24.6-9%		890@9.4 -20%		827@30.4-26%		2467@10.22%	
256K	3097@21.28%	3@23.4-8%		1785@37.54%		2961@22.5-4%		2623@25.51%		2105@31.73%		4315@15.43%	
512K	3587@9.36%	3@9.0 1%		2534@9.7-29%		3687@8.8 3%		3507@9.3 -2%		2910@11.31%		3894@4.1 9%	
1024K	3858@12.42%	4@11.31%		3217@15.21%		4124@11.7 7%		4309@11.21%		3905@12.4 1%		4301@7.3 11%	

	squid- ec- 2+2- 4k	squid- ec- 4+2- 4k	%change	squid- ec- 6+2- 4k	%change	tentacle- fast- ec- 2+2- 16k	%change	tentacle- fast- ec- 4+2- 16k	%change	tentacle- fast- ec- 6+2- 16k	%change	tentacle- 3way- replica	%change
Random Read/Write													
4K_70/30	31145@12.46%	98@15.25%		21146@18.36%		40925@6.22%		39936@6.42%		46650@8.24%		100970@2.65%	
16K_70/30	3170@32.53%	35@2.52%		19770@12.41%		38687@6.61%		36732@7.01%		41239@6.22%		92234@2.87%	
64K_30/70	1308@12.11%	15@6.9 -7%		739@22.7-44%		1252@13.4-4%		968@6.5 -26%		982@17.0-25%		3016@5.51%	
64K_70/30	2026@4.16%	21@5.2-20%		1147@14.64%		1847@9.1 -9%		1415@11.83%		1438@5.8-29%		4293@3.91%	

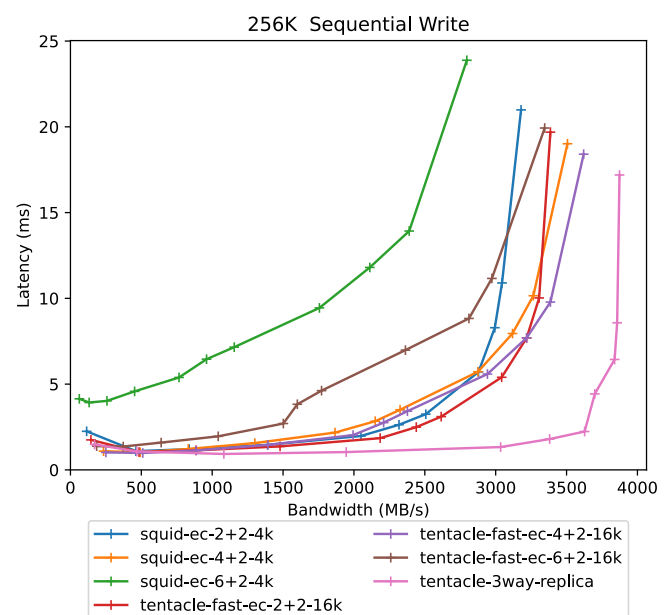
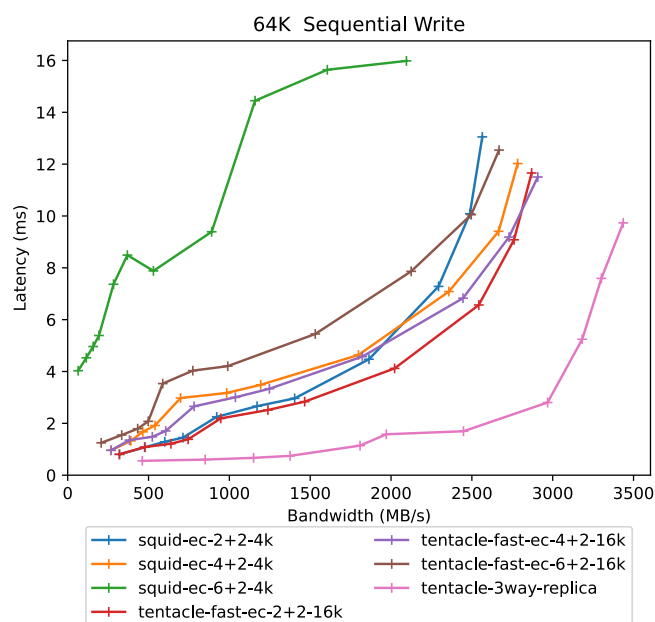
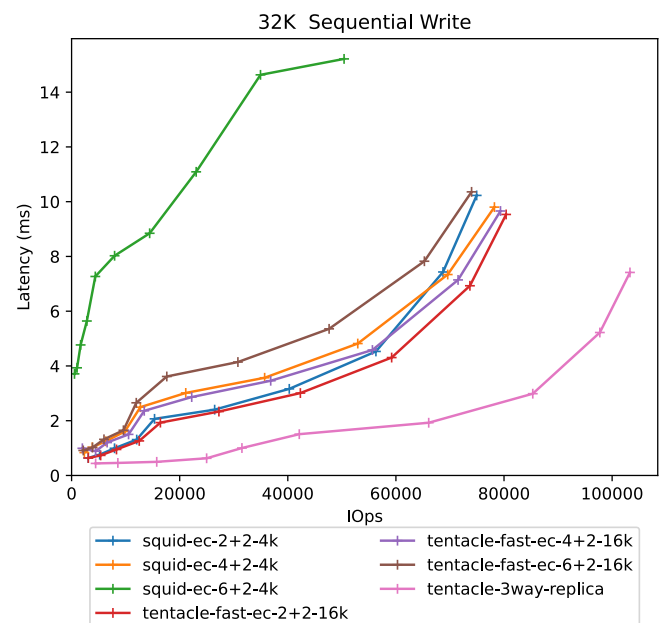
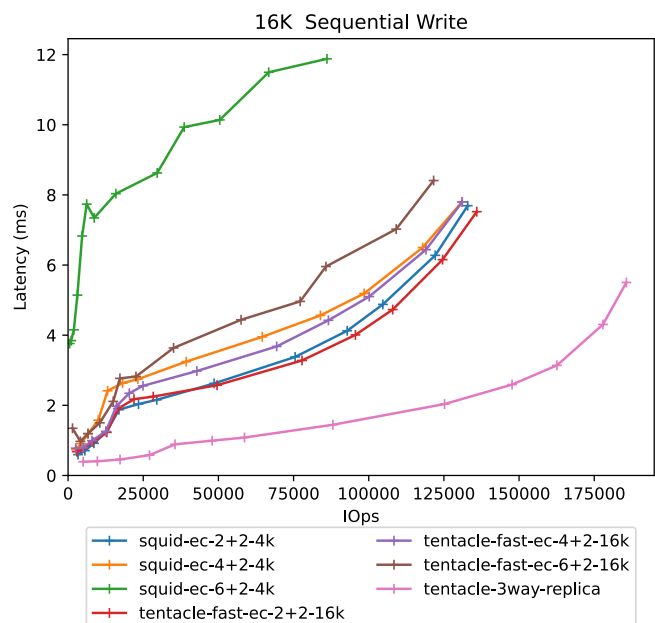
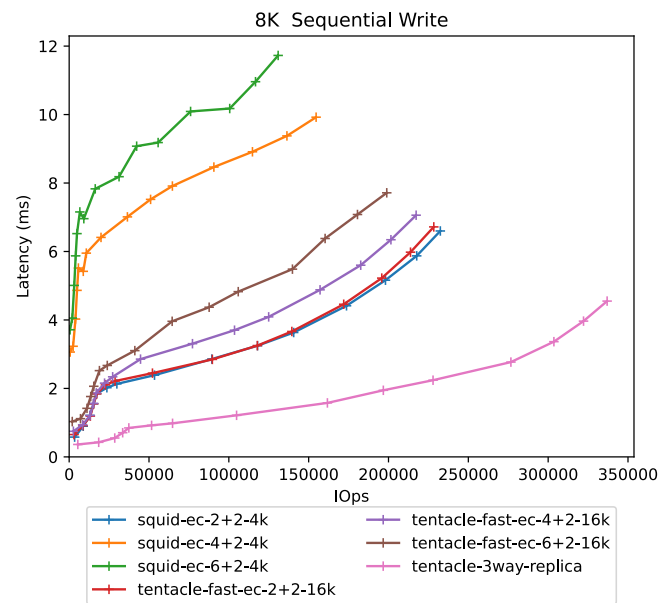
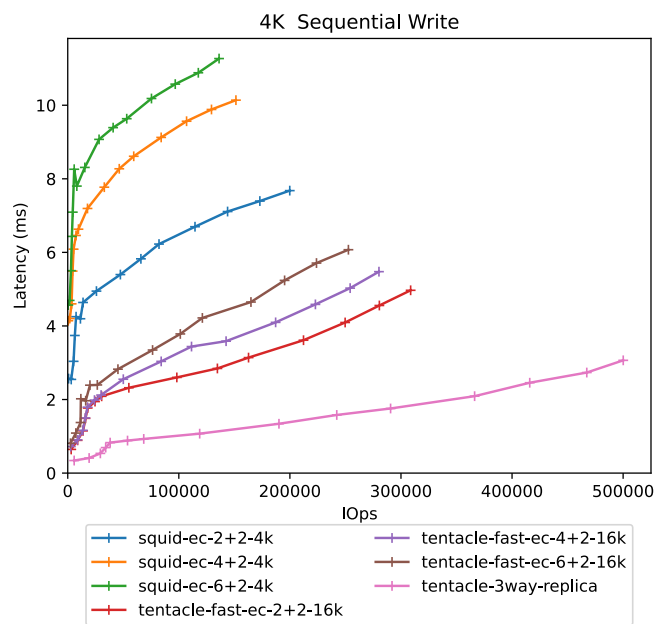
Response Curves

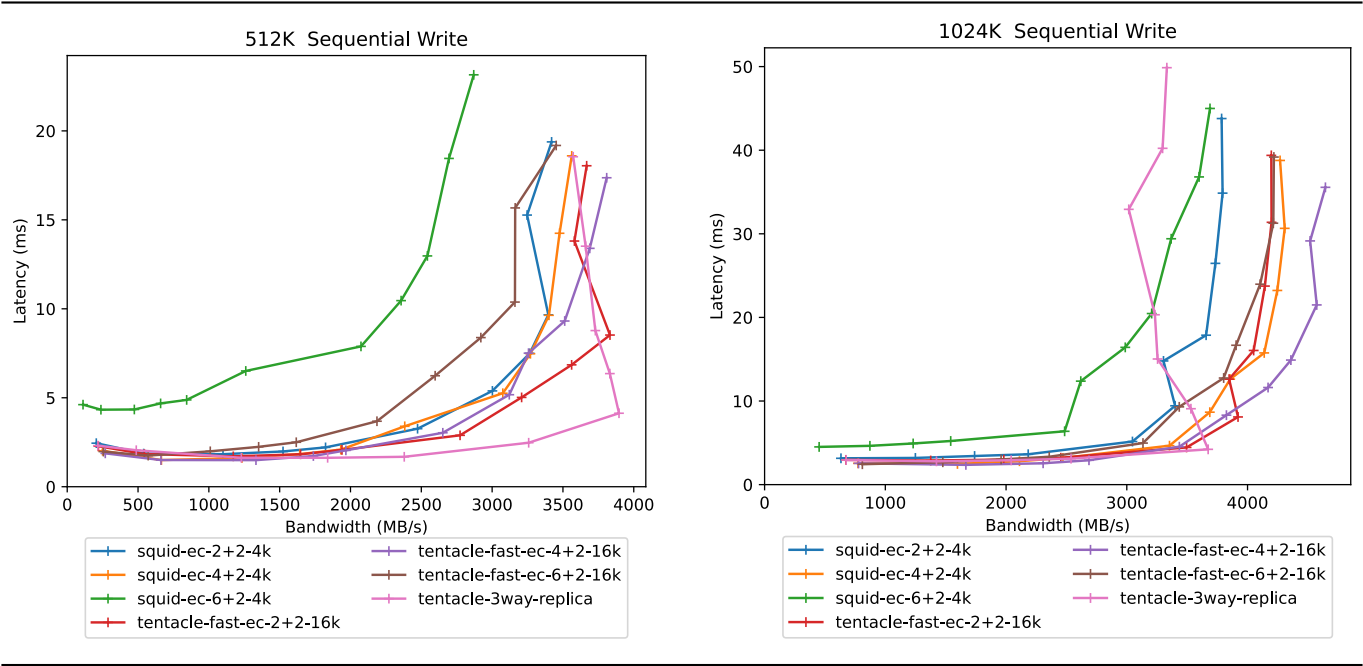
Sequential Read



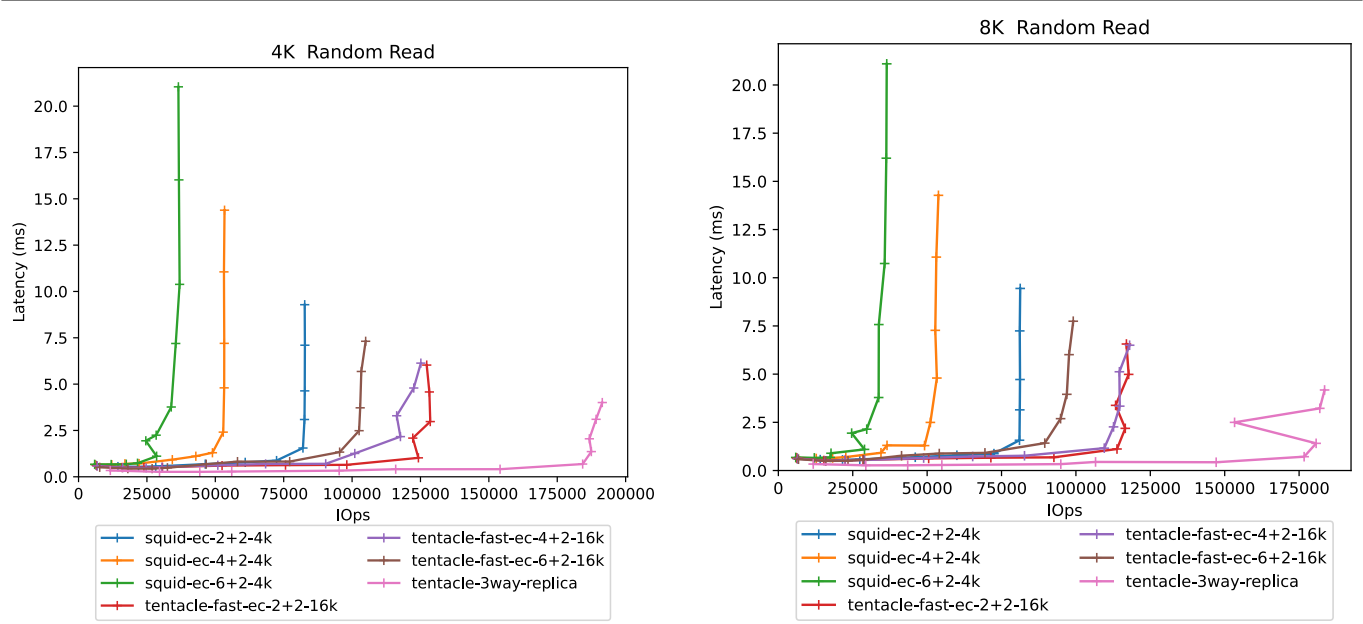


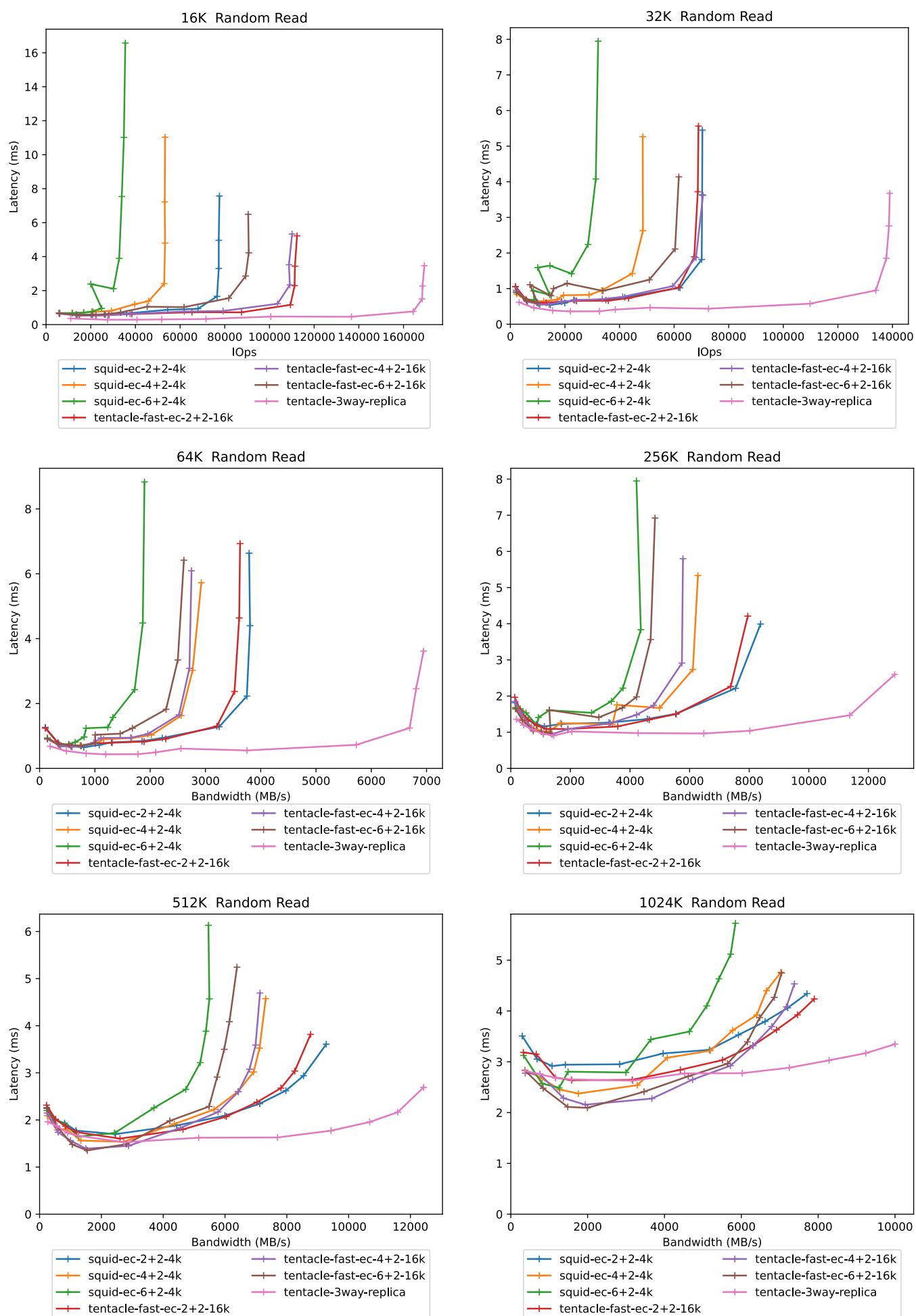
Sequential Write



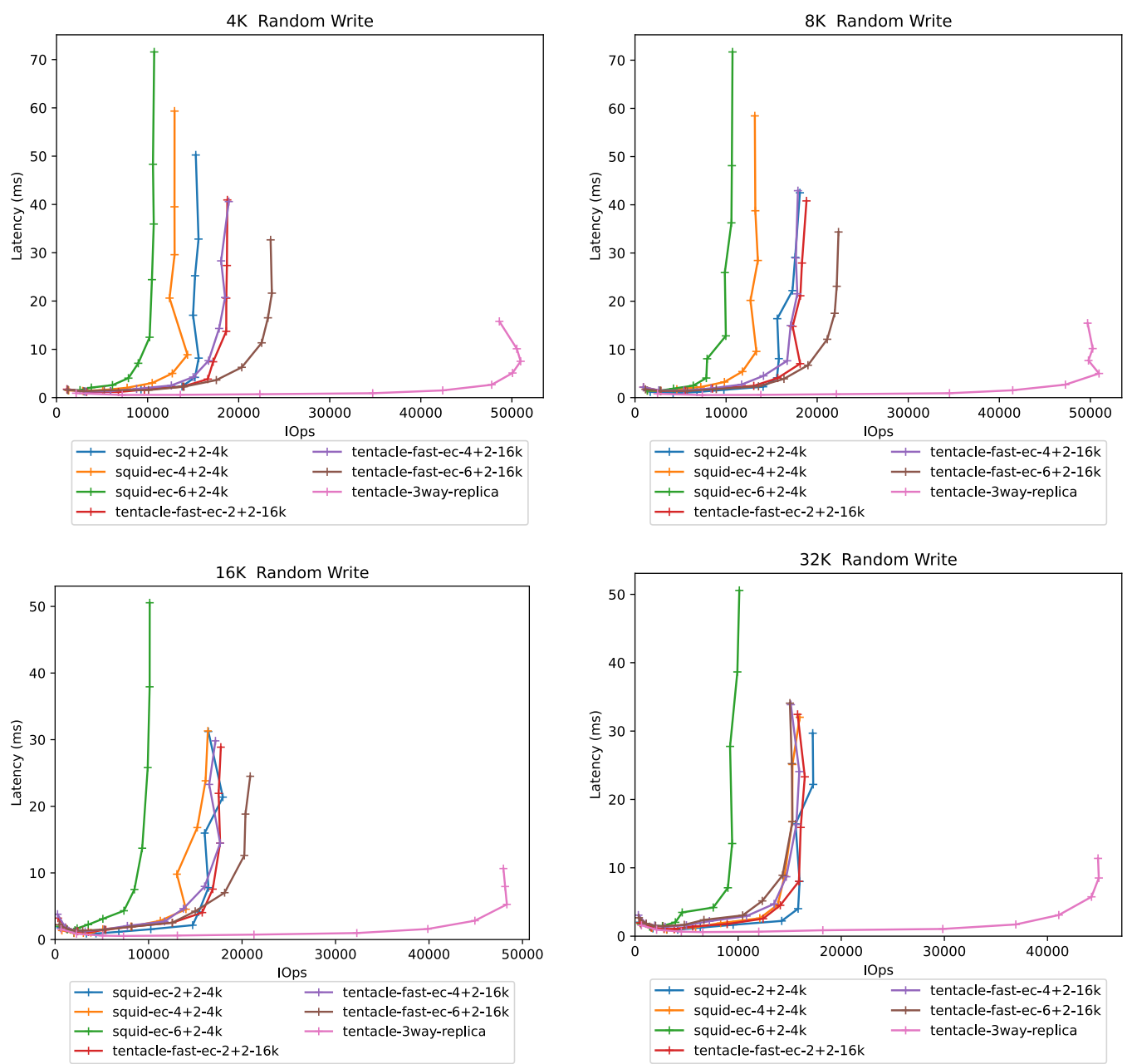


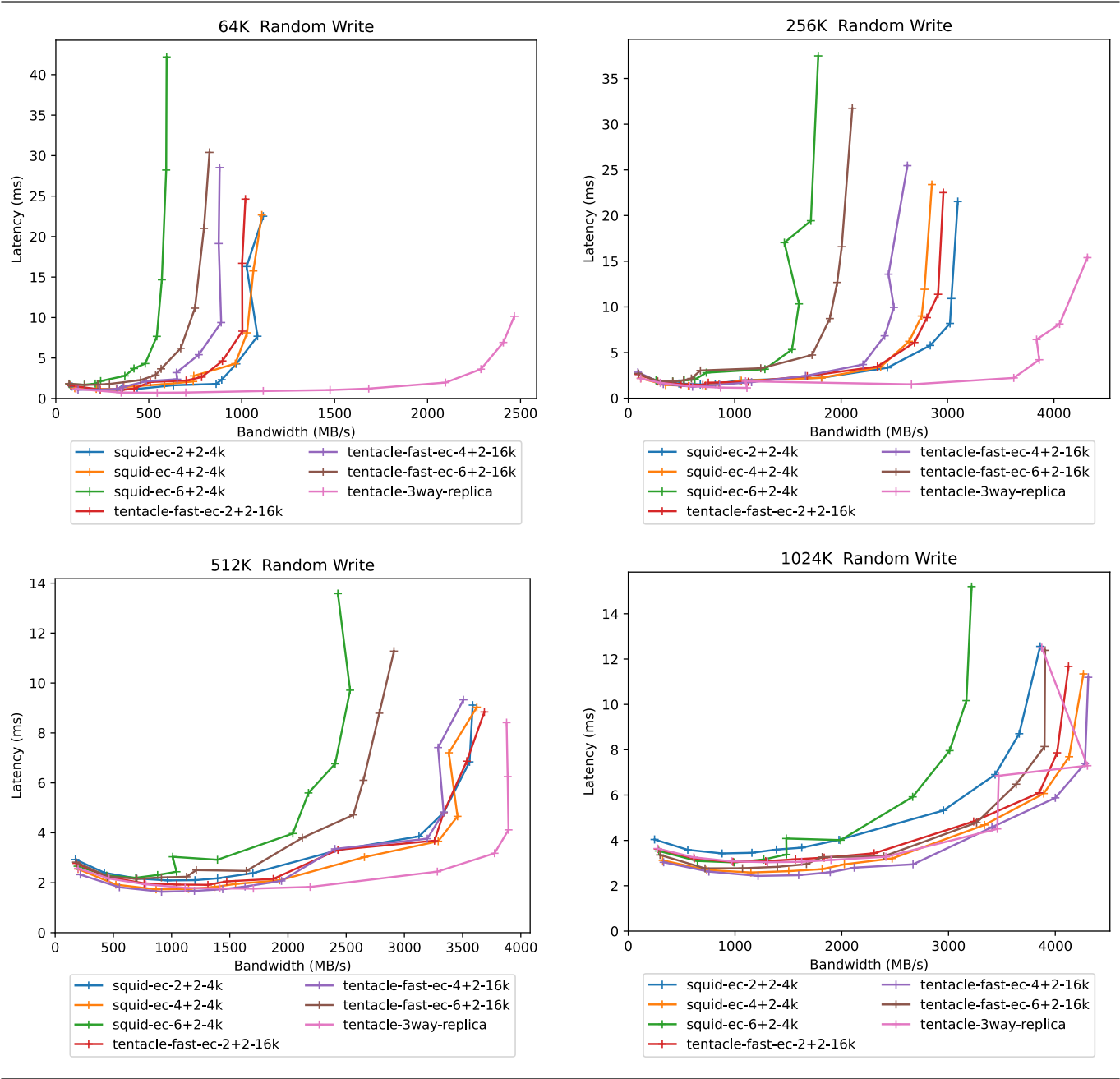
Random Read



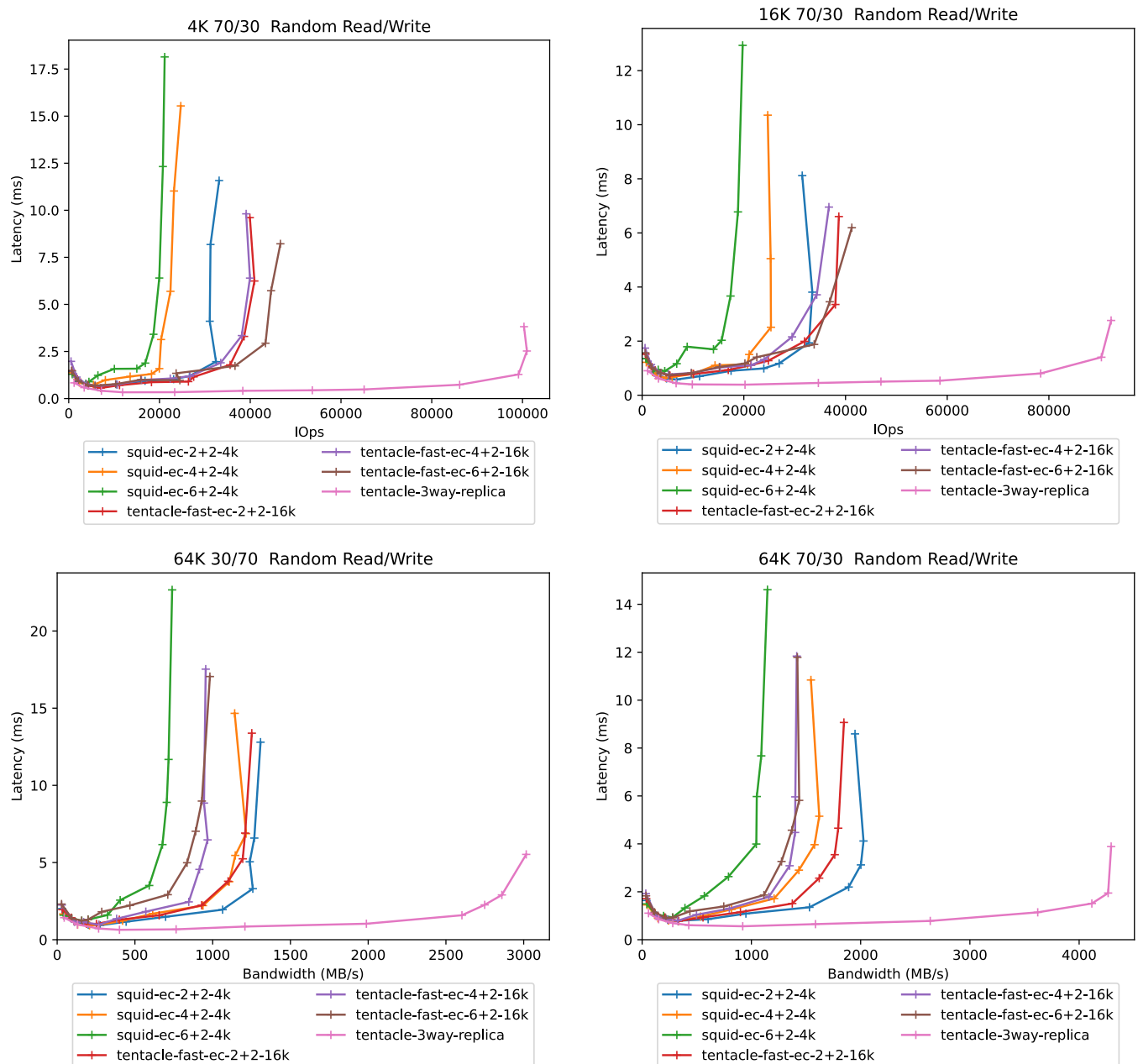


Random Write





Random Read/Write



results

```

librbd fio:
  cmd_path: /usr/local/bin/fio
  fio_out_format: json
  log_avg_msec: 100
  log_bw: true
  log_iops: true
  log_lat: true
  norandommap: true
  osd_ra:
  - 4096
  poolname: rbd_replicated
  prefill:
    blocksize: 64k
    numjobs: 1
  procs_per_volume:
  - 1
  ramp: 30
  rbdname: cbt-librbd fio
  time: 90
  time_based: true
  use_existing_volumes: true
  vol_size: 912500
  volumes_per_client:
  - 16
  workloads:
    16k7030:
      jobname: randmix
      mode: randrw
      numjobs:
      - 1
      op_size: 16384
      rwmixread: 70
      total_iodepth:
      - 1
      - 2
      - 3
      - 4
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      - 256
    16k randomread:
      jobname: randread
      mode: randread
      numjobs:
      - 1
      op_size: 16384
      total_iodepth:
      - 4
      - 8
      - 12
      - 16
      - 24
      - 48
      - 64
      - 128
      - 256
      - 384

```



```

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

```



```

- 96
- 128
- 256
32krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    - 384
32krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 384
    - 512
4k7030:
  jobname: randmix
  mode: randrw
  numjobs:
    - 1
  op_size: 4096
  rwmixread: 70
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
    - 256
    - 384
4krandomread:
  jobname: randread

```

```

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

```

```

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

```

```

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

```

```

    total_iodepth:
      - 2
      - 4
      - 6
      - 8
      - 16
      - 24
      - 32
      - 64
      - 128
      - 192
      - 256
64kseqwrite:
  jobname: write
  mode: write
  numjobs:
    - 1
  op_size: 65536
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
8krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 8192
  total_iodepth:
    - 4
    - 8
    - 12
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 588
    - 768
8krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
  op_size: 8192
  total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128

```

```

- 256
- 384
- 512
- 768
precondition:
  jobname: preconditionrw
  mode: randwrite
  monitor: false
  numjobs:
    - 1
  op_size: 65536
  time: 600
  total_iodepth:
    - 16
seq16kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 16384
  total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
    - 288
seq16kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 16384
  total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 48
    - 64
    - 128
    - 256
    - 384
    - 512
    - 768
    - 1024
seq256kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 262144
  total_iodepth:
    - 1
    - 2
    - 3

```

```

- 4
- 5
- 8
- 16
- 24
- 32
- 48
- 64
seq256kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 262144
  total_iodepth:
    - 1
    - 2
    - 4
    - 8
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 256
seq32kread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 2
    - 4
    - 8
    - 12
    - 16
    - 24
    - 32
    - 64
    - 96
    - 128
    - 192
seq32kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 2
    - 4
    - 8
    - 16
    - 32
    - 64
    - 128
    - 256
    - 512
    - 768
seq4kread:
  jobname: seqread

```

```

mode: read
numjobs:
- 1
op_size: 4096
total_iodepth:
- 2
- 4
- 8
- 12
- 16
- 24
- 32
- 64
- 96
- 128
- 192
- 288
- 384
seq4kwrite:
  jobname: seqwrite
  mode: write
  numjobs:
  - 1
  op_size: 4096
  total_iodepth:
  - 2
  - 8
  - 16
  - 24
  - 32
  - 48
  - 64
  - 128
  - 256
  - 384
  - 512
  - 768
  - 1024
  - 1280
  - 1536
seq8kread:
  jobname: seqread
  mode: read
  numjobs:
  - 1
  op_size: 8192
  total_iodepth:
  - 2
  - 4
  - 8
  - 12
  - 16
  - 24
  - 32
  - 64
  - 96
  - 128
  - 192
  - 288
  - 384
seq8kwrite:
  jobname: seqwrite
  mode: write

```


ec-2+2-4k vs squid-ec-4+2-4k vs squid-ec-6+2-4k vs 26-tentacle-fast-ec-2+2-16k vs 26-tentacle-fast-ec-4+2-16k vs 26-tentacle-fast-ec-6+2-16k vs 26-tentacle-3way-replica

```

- 4
- 8
- 16
- 32
- 64
- 128
- 256
- 384
- 512
1Mrandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 1048576
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 8
    - 12
    - 16
    - 20
    - 24
    - 28
    - 32
1Mrandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
  op_size: 1048576
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
    - 8
    - 16
    - 24
    - 32
    - 48
1Mseqread:
  jobname: seqread
  mode: read
  numjobs:
    - 1
  op_size: 1048576
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 6
    - 8
    - 10
    - 12
    - 14
    - 16
    - 20

```

```

1Mseqwrite:
  jobname: seqwrite
  mode: write
  numjobs:
    - 1
  op_size: 1048576
  total_iodepth:
    - 2
    - 4
    - 6
    - 8
    - 16
    - 32
    - 48
    - 64
    - 96
    - 128
    - 160
256krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 262144
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 24
    - 32
    - 64
    - 128
256krandomwrite:
  jobname: randwrite
  mode: randwrite
  numjobs:
    - 1
  op_size: 262144
  total_iodepth:
    - 1
    - 2
    - 3
    - 4
    - 5
    - 8
    - 16
    - 32
    - 64
    - 96
    - 128
    - 256
32krandomread:
  jobname: randread
  mode: randread
  numjobs:
    - 1
  op_size: 32768
  total_iodepth:
    - 2

```

```

- 4
- 6
- 8
- 12
- 16
- 24
- 32
- 64
- 128
- 256
- 384
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

```


ec-2+2-4k vs squid-ec-4+2-4k vs squid-ec-6+2-4k vs tentacle-fast-ec-2+2-16k vs tentacle-fast-ec-4+2-16k vs tentacle-fast-ec-6+2-16k vs tentacle-3way-replica

squid-ec-2+2-4k vs squid-ec-4+2-4k vs squid-ec-6+2-4k vs tentacle-fast-ec-2+2-16k vs tentacle-fast-ec-4+2-16k vs
tentacle-fast-ec-6+2-16k vs tentacle-3way-replica


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

```
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

```