

Command Examples: (**Bold** represents changed components for that experiment)

Data Access Size:

```
fio --name=ssd_test --filename=/mnt/d/testfile --size=1G --rw=randread --rwmixread=50
--bs=4k --direct=1 --iodepth=64 --numjobs=1 --ioengine=libaio --runtime=60 --time_based
```

Read/Write Intensity Ratios:

```
fio --name=ssd_test --filename=/mnt/d/testfile --size=1G --rw=randrw --rwmixread=50
--bs=32k --direct=1 --iodepth=64 --numjobs=1 --ioengine=libaio --runtime=60 --time_based
```

I/O Queue Depth:

```
fio --name=ssd_test --filename=/mnt/d/testfile --size=1G --rw=randread --rwmixread=50
--bs=32k --direct=1 --iodepth=1024 --numjobs=1 --ioengine=libaio --runtime=60 --time_based
```

```
zhur6@DESKTOP-J30F5P8:/mnt/d$ fio --name=ssd_test --filename=/mnt/d/testfile --size=1G --rw=randrw --rwmixread=50 --bs=4k --direct=1 --iodepth=32 --numjobs=1
--ioengine=libaio --runtime=60 --time_based
ssd_test: (g=0): rw=randrw, bs=(R) 4096B-4096B, (W) 4096B-4096B, (T) 4096B-4096B, ioengine=libaio, iodepth=32
fio-3.38-5-g86fc
Starting 1 process
Jobs: 1 (f=1): [m(1)][100.0%][r=20.9MiB/s,w=20.4MiB/s][r=5339,w=5232 IOPS][eta 00m:00s]
ssd_test: (groupid=0, jobs=1): err= 0: pid=29: Mon Oct 21 23:47:27 2024
  read: IOPS=5065, BW=19.8MiB/s (20.7MB/s)(1187MiB/60001msec)
    slat (usec): min=51, max=7384, avg=93.70, stdev=33.39
    clat (usec): min=2, max=30146, avg=3063.19, stdev=558.42
    lat (usec): min=97, max=30736, avg=3156.89, stdev=572.34
    clat percentiles (usec):
      | 1.00th=[ 2180],  5.00th=[ 2376], 10.00th=[ 2671], 20.00th=[ 2769],
      | 30.00th=[ 2835], 40.00th=[ 2900], 50.00th=[ 2999], 60.00th=[ 3064],
      | 70.00th=[ 3195], 80.00th=[ 3326], 90.00th=[ 3523], 95.00th=[ 3752],
      | 99.00th=[ 4621], 99.50th=[ 5538], 99.90th=[ 8455], 99.95th=[10552],
      | 99.99th=[17957]
  bw (  KiB/s): min=11624, max=26168, per=100.00%, avg=20260.93, stdev=1825.26, samples=120
  iops        : min= 2906, max= 6542, avg=5065.23, stdev=456.31, samples=120
write: IOPS=5062, BW=19.8MiB/s (20.7MB/s)(1187MiB/60001msec); 0 zone resets
  slat (usec): min=56, max=6135, avg=98.23, stdev=32.36
  clat (usec): min=357, max=30368, avg=3060.64, stdev=552.57
  lat (usec): min=468, max=30798, avg=3158.87, stdev=566.07
  clat percentiles (usec):
    | 1.00th=[ 2180],  5.00th=[ 2376], 10.00th=[ 2671], 20.00th=[ 2769],
    | 30.00th=[ 2835], 40.00th=[ 2900], 50.00th=[ 2999], 60.00th=[ 3064],
    | 70.00th=[ 3195], 80.00th=[ 3326], 90.00th=[ 3523], 95.00th=[ 3752],
    | 99.00th=[ 4555], 99.50th=[ 5473], 99.90th=[ 8455], 99.95th=[10552],
    | 99.99th=[17957]
  bw (  KiB/s): min=11304, max=26408, per=100.00%, avg=20250.27, stdev=1948.40, samples=120
  iops        : min= 2826, max= 6602, avg=5062.57, stdev=487.10, samples=120
  lat (usec)  : 4=0.01%, 100=0.01%, 500=0.01%, 750=0.01%, 1000=0.01%
  lat (msec)  : 2=0.02%, 4=97.46%, 10=2.45%, 20=0.06%, 50=0.01%
  cpu         : usr=9.58%, sys=12.05%, ctx=607796, majf=0, minf=10
  IO depths   : 1=0.1%, 2=0.1%, 4=0.1%, 8=0.1%, 16=0.1%, 32=100.0%, >=64=0.0%
                submit   : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.0%, 64=0.0%, >=64=0.0%
                complete  : 0=0.0%, 4=100.0%, 8=0.0%, 16=0.0%, 32=0.1%, 64=0.0%, >=64=0.0%
                issued rwts: total=303914,303754,0,0 short=0,0,0,0 dropped=0,0,0,0
                latency   : target=0, window=0, percentile=100.00%, depth=32

Run status group 0 (all jobs):
  READ: bw=19.8MiB/s (20.7MB/s), 19.8MiB/s-19.8MiB/s (20.7MB/s-20.7MB/s), io=1187MiB (1245MB), run=60001-60001msec
  WRITE: bw=19.8MiB/s (20.7MB/s), 19.8MiB/s-19.8MiB/s (20.7MB/s-20.7MB/s), io=1187MiB (1244MB), run=60001-60001msec
```

Example output result: