```
[iocost-tune result] 2022-04-08 07:35:19 - 07:35:19

System info: kernel="5.14.0-rc6+"
            nr_cpus=52 memory=15.6G swap=5.2G swappiness=60
            mem_profile=16 (avail=14.4G share=12.0G target=11.0G)

IO info: dev=nvme0n1(259:0) model="MTFDKBA512TFH" size=477G
         iosched=mq-deadline wbt=off iocost=on other=off
         iocost model: rbps=2167752017 rseqiops=243828 rrandiops=126744
                       wbps=2992472013 wseqiops=118080 wrandiops=80436
         iocost QoS: rpct=95.00 rlat=28901 wpct=95.00 wlat=51511 min=8.61 max=8.61

Solutions
=========

[naive] vrate=75-100, rpct=99, wpct=99
  info: scale=100.0% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.341 isol-01=94.15%
  rlat: 50-mean= 160u 50-99= 676u 50-100= 1.1m 99-mean= 6.4m 99-99=13.2m 100-100= 150m
  wlat: 50-mean= 4.1m 50-99= 8.2m 50-100= 9.4m 99-mean=11.6m 99-99=61.4m 100-100= 150m
  model: rbps=2167752017 rseqiops=243828 rrandiops=126744 wbps=2992472013 wseqiops=118080 wrandiops=80436
  qos: rpct=99.00 rlat=6439 wpct=99.00 wlat=11569 min=75.00 max=100.00

[bandwidth         ] aMOF=max-vrate
[isolated-bandwidth] (lat-imp=min).clamp(isolation, bandwidth)
  info: scale=100.0% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.341 isol-01=94.15%
  rlat: 50-mean= 160u 50-99= 676u 50-100= 1.1m 99-mean= 6.4m 99-99=13.2m 100-100= 150m
  wlat: 50-mean= 4.1m 50-99= 8.2m 50-100= 9.4m 99-mean=11.6m 99-99=61.4m 100-100= 150m
  model: rbps=2167752017 rseqiops=243828 rrandiops=126744 wbps=2992472013 wseqiops=118080 wrandiops=80436
  qos: rpct=0.00 rlat=6439 wpct=0.00 wlat=11569 min=100.00 max=100.00

[isolation] aMOF-delta=min
  info: scale=44.00% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.038 isol-01=94.15%
  rlat: 50-mean= 113u 50-99= 518u 50-100= 753u 99-mean= 989u 99-99= 3.6m 100-100=33.3m
  wlat: 50-mean= 235u 50-99= 230u 50-100= 451u 99-mean= 1.7m 99-99= 9.8m 100-100=27.4m
  model: rbps=953809826 rseqiops=107284 rrandiops=55767 wbps=1316686221 wseqiops=51955 wrandiops=35392
  qos: rpct=0.00 rlat=989 wpct=0.00 wlat=1703 min=100.00 max=100.00

[rlat-99-q1] rlat-99=0.75-1
  info: scale=100.0% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.341 isol-01=94.15%
  rlat: 50-mean= 160u 50-99= 676u 50-100= 1.1m 99-mean= 6.4m 99-99=13.2m 100-100= 150m
  wlat: 50-mean= 4.1m 50-99= 8.2m 50-100= 9.4m 99-mean=11.6m 99-99=61.4m 100-100= 150m
  model: rbps=2167752017 rseqiops=243828 rrandiops=126744 wbps=2992472013 wseqiops=118080 wrandiops=80436
  qos: rpct=99.00 rlat=6439 wpct=0.00 wlat=0 min=66.84 max=100.00

[rlat-99-q2] rlat-99=0.5-0.75
  info: scale=66.84% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.341 isol-01=94.15%
  rlat: 50-mean= 135u 50-99= 518u 50-100= 905u 99-mean= 5.1m 99-99=13.2m 100-100= 150m
  wlat: 50-mean= 2.2m 50-99= 6.0m 50-100= 9.4m 99-mean=11.6m 99-99=61.4m 100-100= 150m
  model: rbps=1448817061 rseqiops=162962 rrandiops=84709 wbps=2000018670 wseqiops=78919 wrandiops=53759
  qos: rpct=99.00 rlat=5076 wpct=0.00 wlat=0 min=95.10 max=100.00

[rlat-99-q3] rlat-99=0.25-0.5
  info: scale=63.56% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.341 isol-01=94.15%
  rlat: 50-mean= 131u 50-99= 518u 50-100= 883u 99-mean= 3.7m 99-99=13.2m 100-100= 150m
  wlat: 50-mean= 986u 50-99= 3.4m 50-100= 8.7m 99-mean=11.6m 99-99=61.4m 100-100= 150m
  model: rbps=1377823182 rseqiops=154977 rrandiops=80558 wbps=1902015211 wseqiops=75052 wrandiops=51125
  qos: rpct=99.00 rlat=3714 wpct=0.00 wlat=0 min=94.85 max=100.00

[rlat-99-q4] rlat-99=0-0.25
  info: scale=60.28% MOF=1.459@16 aMOF=1.251 aMOF-delta=0.335 isol-01=94.15%
  rlat: 50-mean= 128u 50-99= 518u 50-100= 861u 99-mean= 2.4m 99-99=11.1m 100-100= 138m
  wlat: 50-mean= 235u 50-99= 767u 50-100= 5.8m 99-mean=10.1m 99-99=60.2m 100-100= 150m
  model: rbps=1306829303 rseqiops=146992 rrandiops=76408 wbps=1804011753 wseqiops=71185 wrandiops=48491
  qos: rpct=99.00 rlat=2351 wpct=0.00 wlat=0 min=94.57 max=100.00

Remarks
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* bandwidth: Isolatable memory size is 23.38% < supportable, sizing may be difficult.
* isolated-bandwidth: Isolatable memory size is 23.38% < supportable, sizing may be difficult.
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vrate 8.6-123.6 (min=1.278 max=1.459 R-infl=25.9 err=0.016)

vrate 8.6-123.6 (min=60.543 max=94.147 L-infl=105.8 err=2.648)

vrate 8.6-108.0 (mean=1.251 err=0.035)

vrate 8.6-108.0 (min=0.038 max=0.341 L-infl=48.6 R-infl=60.5 err=0.018)

vrate 8.6-123.6 (min=2.968 max=77.174 L-infl=103.7 err=6.219)

vrate 8.6-123.6 (min=64.249 max=98.829 L-infl=63.5 R-infl=76.9 err=1.595)

vrate 8.6-123.6 (min=0.100 max=0.160 L-infl=30.5 R-infl=93.5 err=0.002)

vrate 8.6-123.6 (min=0.989 max=6.439 L-infl=57.0 R-infl=70.1 err=0.283)

vrate 8.6-123.6 (min=0.517 max=0.676 L-infl=74.6 R-infl=87.9 err=0.032)

vrate 8.6-123.6 (min=3.589 max=13.192 L-infl=52.5 R-infl=62.5 err=0.500)

vrate 8.6-123.6 (min=0.516 max=1.284 err=0.028)

vrate 8.6-123.6 (min=33.278 max=150.000 L-infl=51.3 R-infl=61.3 err=3.538)