```
[iocost-tune result] 2022-05-06 03:22:02 - 03:22:02

System info: kernel="5.18.0-rc1-work+"
             nr_cpus=16 memory=32.0G swap=16.4G swappiness=60
             mem_profile=16 (avail=30.4G share=12.0G target=11.0G)

IO info: dev=nvme2n1(259:6) model="Samsung SSD 970 PRO 512GB" size=477G
         iosched=mq-deadline wbt=off iocost=on other=off
         iocost model: rbps=2700122479 rseqiops=349230 rrandiops=371271
                       wbps=2179712050 wseqiops=272764 wrandiops=268560
         iocost QoS: rpct=95.00 rlat=14254 wpct=95.00 wlat=12435 min=10.03 max=10.03

Solutions
=========

[naive] vrate=75-100, rpct=99, wpct=99
  info: scale=100.0% MOF=1.814@16 aMOF=1.165 aMOF-delta=0.653 isol-05=91.98%
  rlat: 50-mean= 153u 50-99= 850u 50-100= 1.9m 99-mean= 1.3m 99-99= 4.4m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 1.0m 99-99= 4.8m 100-100=71.1m
  model: rbps=2700122479 rseqiops=349230 rrandiops=371271 wbps=2179712050 wseqiops=272764 wrandiops=268560
  qos: rpct=99.00 rlat=1283 wpct=99.00 wlat=1019 min=75.00 max=100.00

[bandwidth] aMOF=max-vrate
  info: scale=100.0% MOF=1.814@16 aMOF=1.165 aMOF-delta=0.653 isol-05=91.98%
  rlat: 50-mean= 153u 50-99= 850u 50-100= 1.9m 99-mean= 1.3m 99-99= 4.4m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 1.0m 99-99= 4.8m 100-100=71.1m
  model: rbps=2700122479 rseqiops=349230 rrandiops=371271 wbps=2179712050 wseqiops=272764 wrandiops=268560
  qos: rpct=0.00 rlat=1283 wpct=0.00 wlat=1019 min=100.00 max=100.00

[isolated-bandwidth] (aMOF=right-max).clamp(isolation, bandwidth)
[isolation         ] aMOF-delta=min
  info: scale=56.51% MOF=1.814@16 aMOF=1.568 aMOF-delta=0.113 isol-05=91.98%
  rlat: 50-mean= 132u 50-99= 465u 50-100= 672u 99-mean= 1.1m 99-99= 3.1m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 659u 99-99= 4.8m 100-100=71.1m
  model: rbps=1525747575 rseqiops=197338 rrandiops=209793 wbps=1231681304 wseqiops=154130 wrandiops=151754
  qos: rpct=0.00 rlat=1130 wpct=0.00 wlat=659 min=100.00 max=100.00

[rlat-99-q1] rlat-99=0.75-1
  info: scale=100.0% MOF=1.814@16 aMOF=1.165 aMOF-delta=0.653 isol-05=91.98%
  rlat: 50-mean= 153u 50-99= 850u 50-100= 1.9m 99-mean= 1.3m 99-99= 4.4m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 1.0m 99-99= 4.8m 100-100=71.1m
  model: rbps=2700122479 rseqiops=349230 rrandiops=371271 wbps=2179712050 wseqiops=272764 wrandiops=268560
  qos: rpct=99.00 rlat=1283 wpct=0.00 wlat=0 min=56.28 max=100.00

[rlat-99-q2] rlat-99=0.5-0.75
  info: scale=56.28% MOF=1.814@16 aMOF=1.568 aMOF-delta=0.113 isol-05=91.98%
  rlat: 50-mean= 131u 50-99= 465u 50-100= 672u 99-mean= 1.1m 99-99= 3.1m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 657u 99-99= 4.8m 100-100=71.1m
  model: rbps=1519628931 rseqiops=196547 rrandiops=208951 wbps=1226741942 wseqiops=153512 wrandiops=151146
  qos: rpct=99.00 rlat=1125 wpct=0.00 wlat=0 min=88.89 max=100.00

[rlat-99-q3] rlat-99=0.25-0.5
  info: scale=50.03% MOF=1.793@16 aMOF=1.568 aMOF-delta=0.113 isol-05=91.98%
  rlat: 50-mean= 123u 50-99= 465u 50-100= 672u 99-mean= 967u 99-99= 2.7m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 605u 99-99= 4.8m 100-100=71.1m
  model: rbps=1350871276 rseqiops=174720 rrandiops=185747 wbps=1090509939 wseqiops=136464 wrandiops=134361
  qos: rpct=99.00 rlat=967 wpct=0.00 wlat=0 min=87.51 max=100.00

[rlat-99-q4] rlat-99=0-0.25
  info: scale=43.78% MOF=1.743@16 aMOF=1.568 aMOF-delta=0.113 isol-05=92.88%
  rlat: 50-mean= 114u 50-99= 465u 50-100= 672u 99-mean= 809u 99-99= 2.4m 100-100=71.8m
  wlat: 50-mean=47.1u 50-99= 159u 50-100= 325u 99-mean= 553u 99-99= 4.8m 100-100=71.1m
  model: rbps=1182113621 rseqiops=152893 rrandiops=162542 wbps=954277935 wseqiops=119416 wrandiops=117576
  qos: rpct=99.00 rlat=809 wpct=0.00 wlat=0 min=85.72 max=100.00

Remarks
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* bandwidth: Isolatable memory size is 36.01% < supportable, sizing may be difficult.
* isolated-bandwidth: Isolatable memory size is 6.21% < supportable, sizing may be difficult.
* isolation: Isolatable memory size is 6.21% < supportable, sizing may be difficult.
```

MOF@16 (Samsung SSD 970 PRO 512GB)

vrate 10.0-120.0 (min=1.473 max=1.814 infls=52.5 err=0.005)

isol-05 (Samsung SSD 970 PRO 512GB)

vrate 10.0-120.0 (min=91.983 max=97.967 infls=22.5,47.5 err=0.247)

aMOF@16 (Samsung SSD 970 PRO 512GB)

vrate 10.0-120.0 (min=1.165 max=1.568 infls=22.5,57.5,67.5 err=0.011)

aMOF-delta@16 (Samsung SSD 970 PRO 512GB)

vrate 10.0-120.0 (min=0.113 max=0.653 infls=57.5,67.5 err=0.015)

lat-imp (Samsung SSD 970 PRO 512GB)

vrate 10.0-120.0 (mean=1.078 err=0.228)

work-csv (Samsung SSD 970 PRO 512GB)

vrate 10.0-120.0 (min=38.503 max=74.406 infls=27.5 err=0.725)