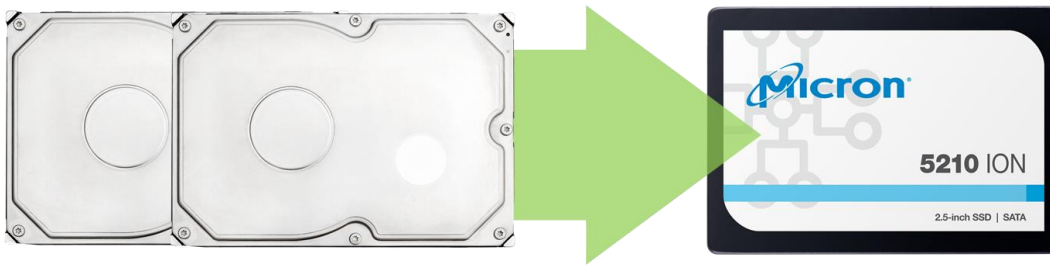




# Object Stores (Ceph)

To deliver a more cost-effective, consistent user experience, designers are moving tiered object stores from legacy HDDs to SATA QLC SSDs. The Micron® 5210 delivers.



## Micron 5210 QLC SSD vs. Legacy HDDs

Everyday Ceph Metric	HDD	5210	Improvement
Read performance	3 GB/s	23 GB/s	7X higher
Write performance	1.5 GB/s	9 GB/s	6X higher
Read latency	290 ms	56 ms	5X lower
Write latency	1,760 ms	185 ms	7X lower

*Four storage node cluster, 15TB data set size, 4MB objects, RADOS benchmark results (5210 x12 test details [here](#); 7200 RPM 3.5-inch HDD x60 data from [third party brief](#))*

**5210 Advantage** **5X** **Better Performance**

How much is your time worth?

## Typical Object Store Workload

Storage access pattern: random reads & writes

Storage IO size: ≥1 MB

Read/write ratio: 90% read / 10% write

How the workload works:

- Data accessed/saved as objects in large stores (PBs of objects)
- Frequently accessed objects stored in cache tier (most objects in slow tier)
- User experience depends heavily on fast object access
- HDDs are slow tier bottleneck & SATA QLC SSDs are affordable solution

Ready to learn more? [Read Micron's in-depth research on object stores](#)