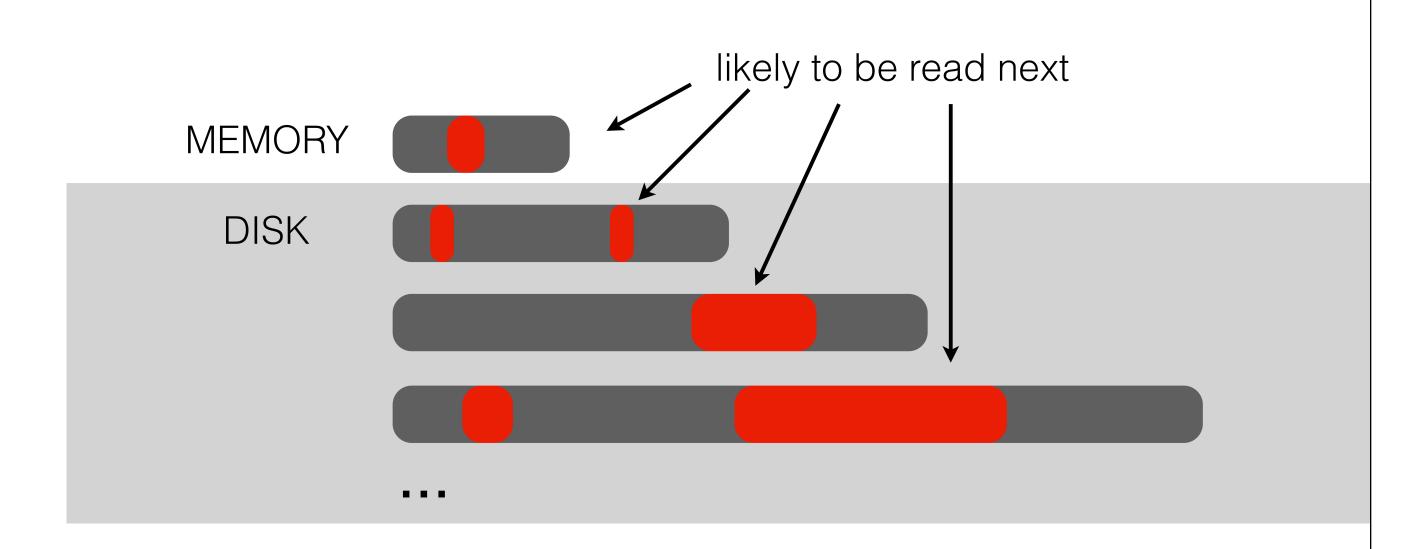
Splaying LSM-Trees

The Problem: LSM-Trees Have Suboptimal Read Performance

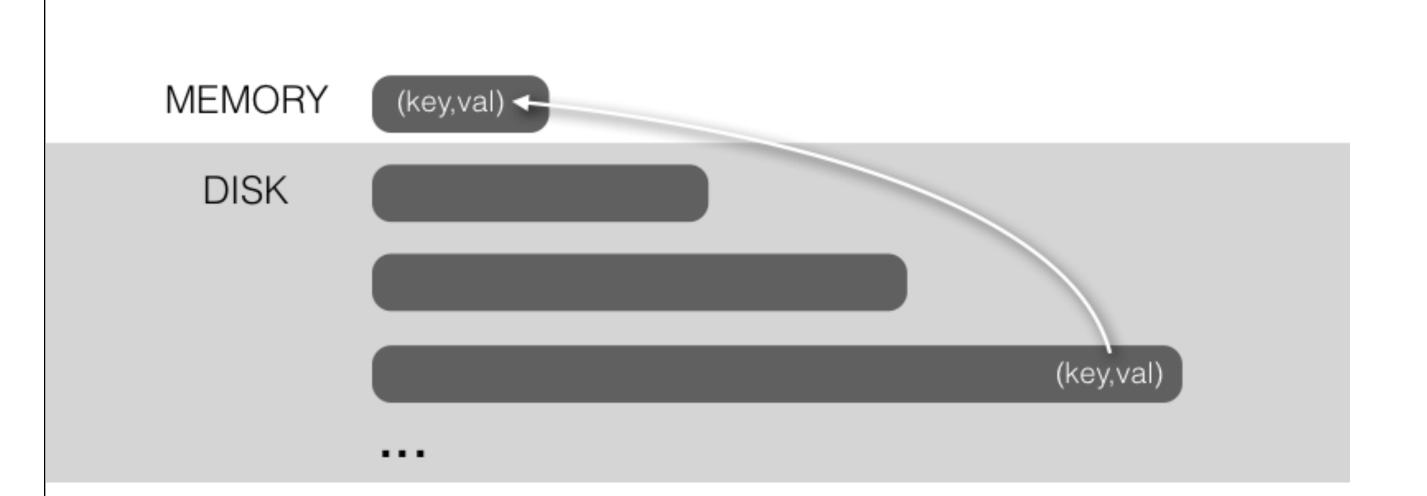


Recently updated keys are the cheapest to access

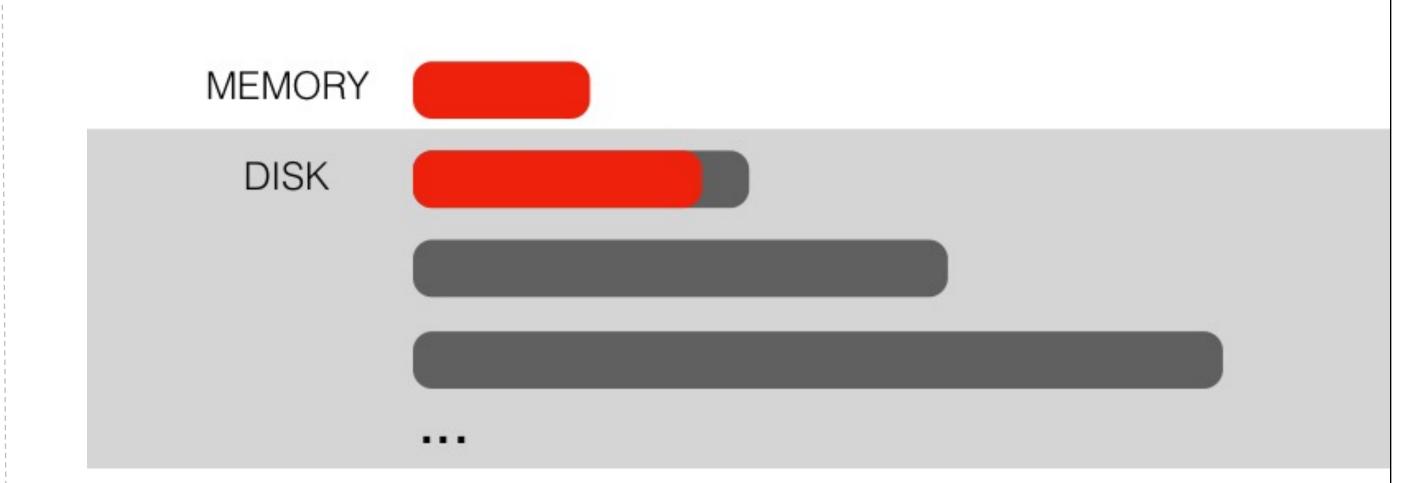


...but these keys are not necessarily most likely to be read next

The Solution: Splaying

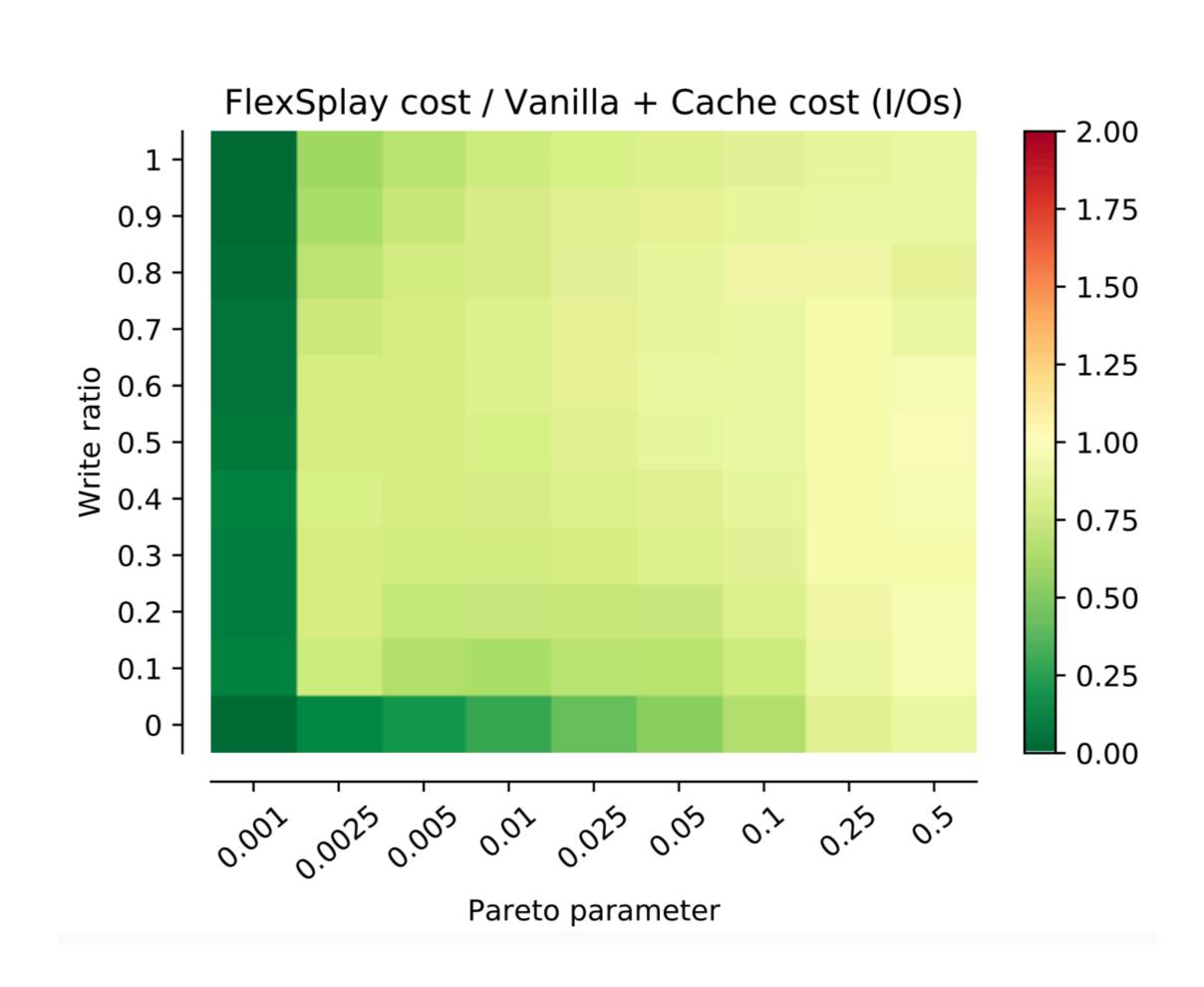


Copy frequently accessed keys to top Use 'get' as a trigger for possible 'put'

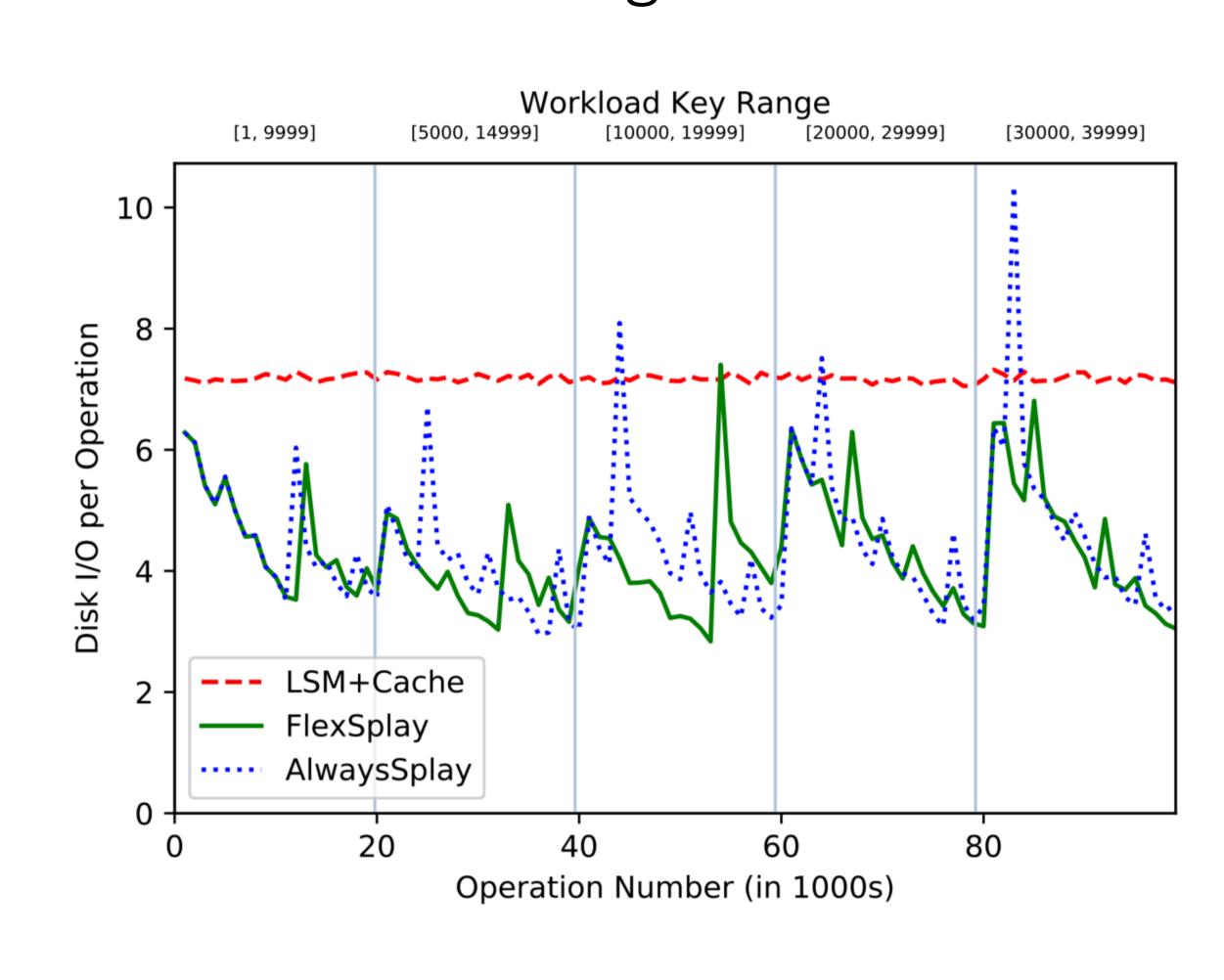


...and over time the tree is reorganized for better read performance

Compared with the state-of-the-art solution of adding a cache:



Splaying dominates cache in the absence of Bloom Filters



...and can offer adaptivity and better performance across workloads

