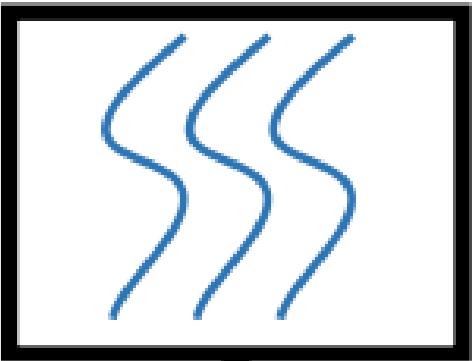


N Threads



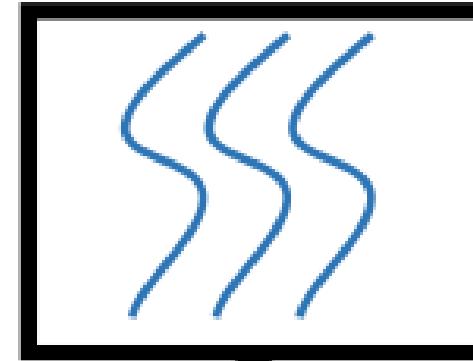
grouped
 $N \rightarrow 1$
N access



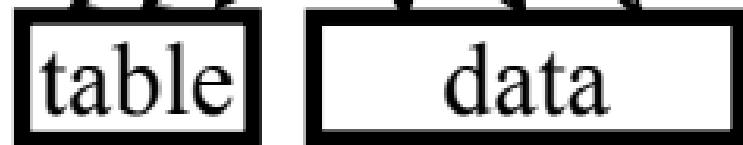
N+1 access

CuSan's metadata

N Threads



N query
N access



2N access

Shadow metadata