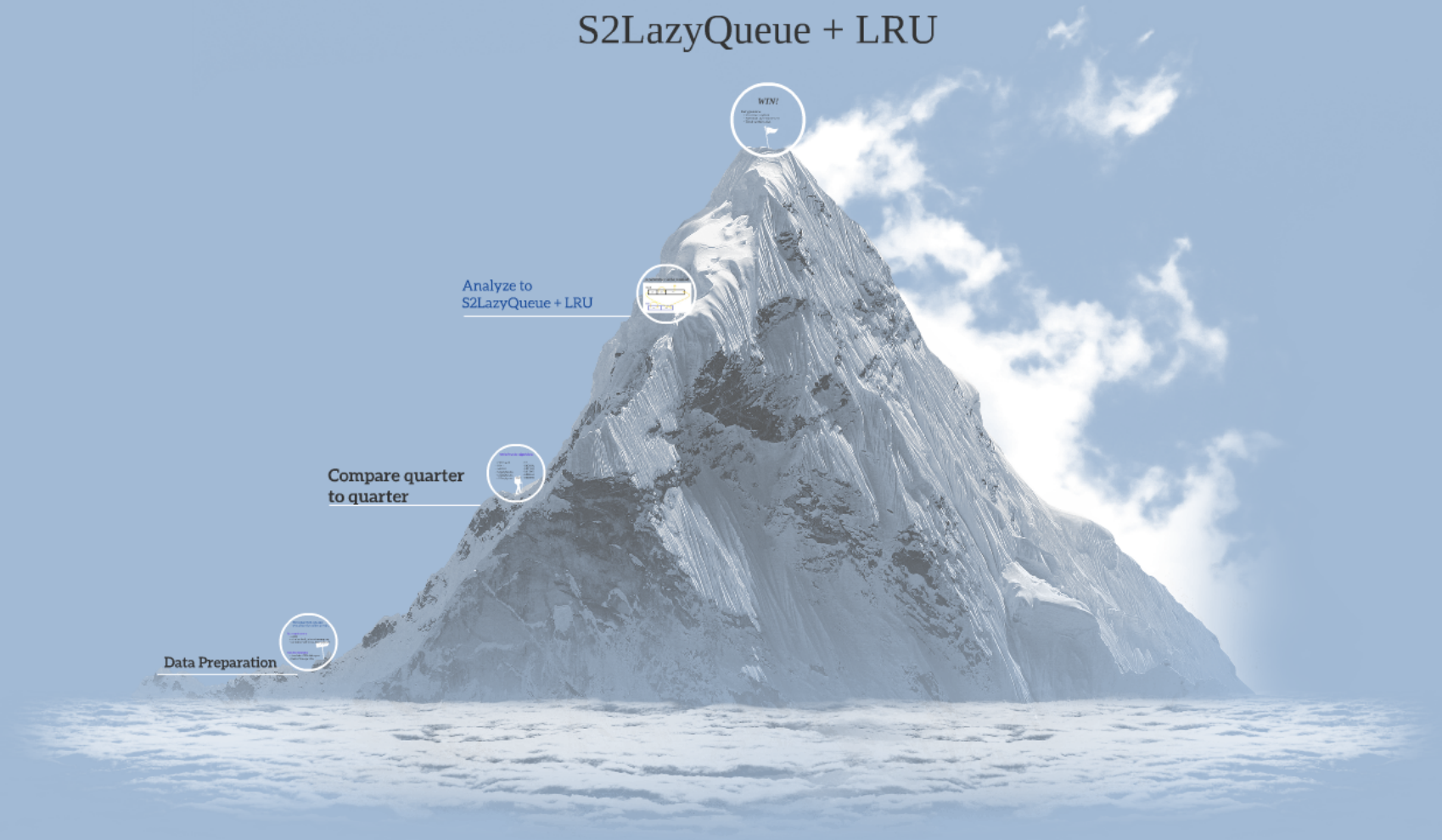
A suitable and outstanding Cache Algorithm

S2LazyQueue + LRU



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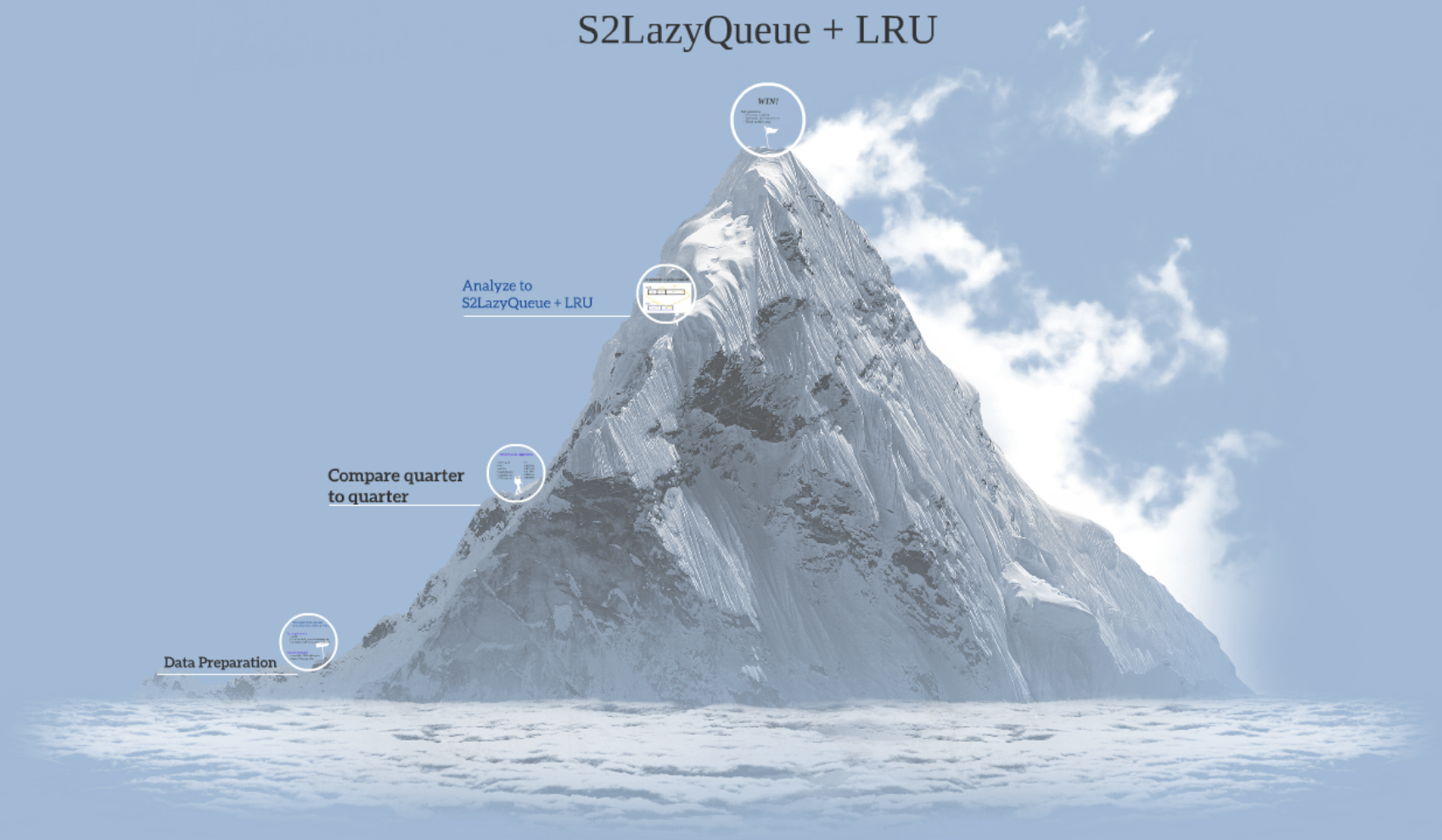
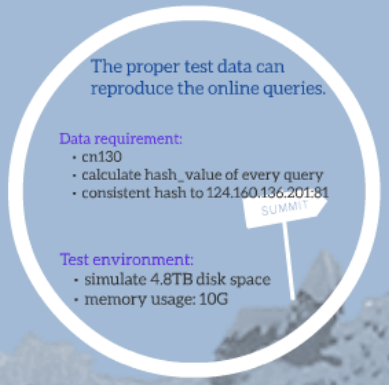


to quarter

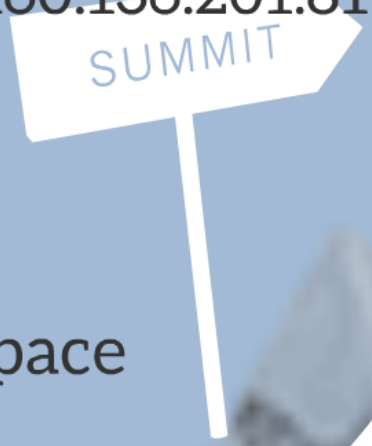
Data Preparation



The proper test data can reproduce the online queries.

Data requirement:

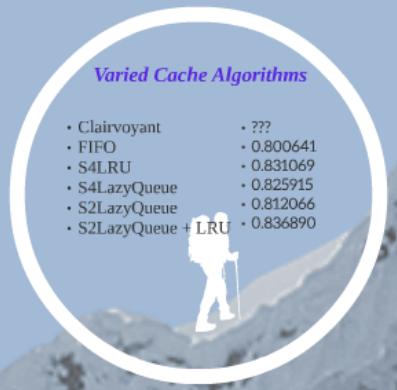
- cn130
- calculate hash_value of every query
- consistent hash to 124.160.136.201:81



Test environment:

- simulate 4.8TB disk space
- memory usage: 10G

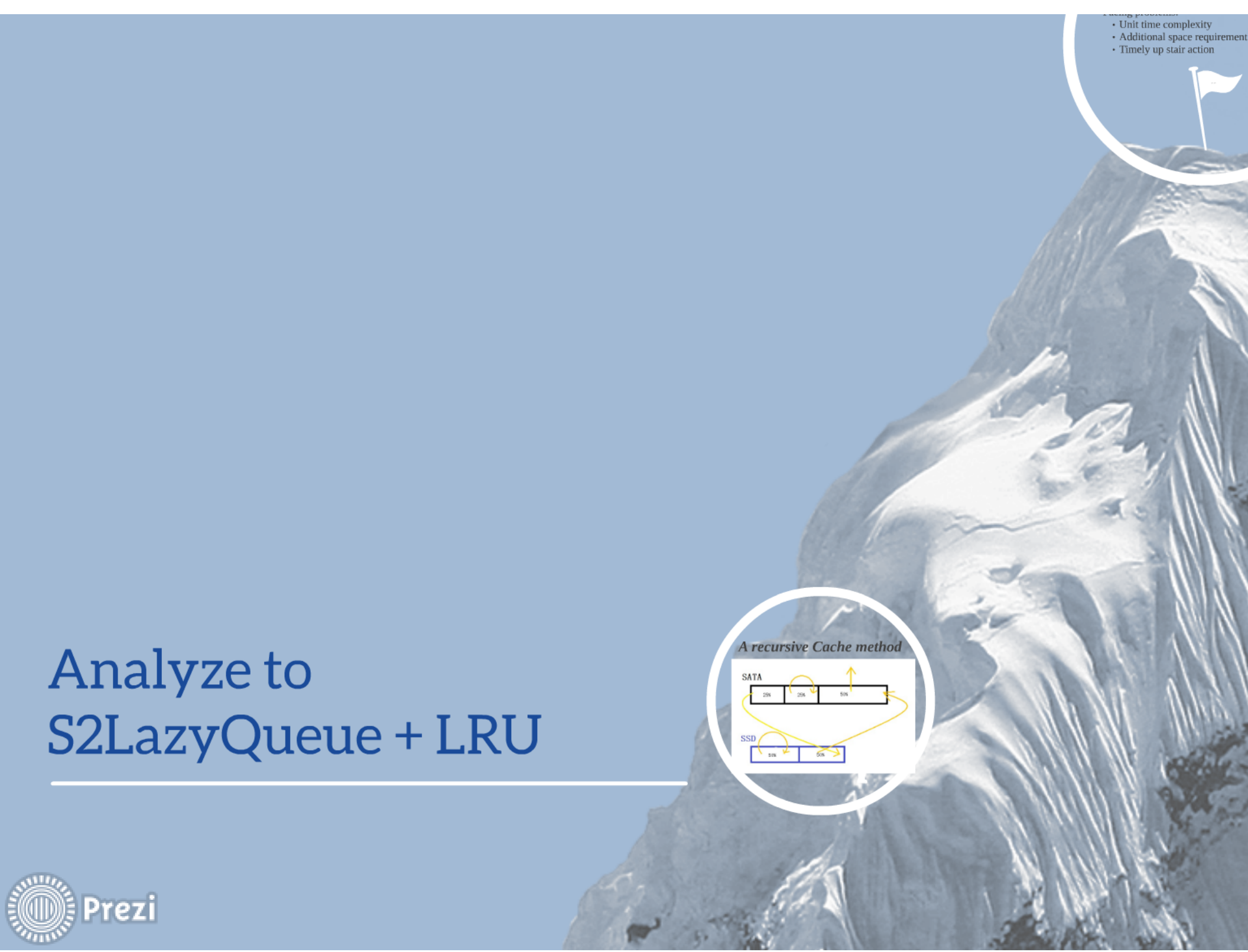
S2LazyQueue + LRU



Compare quarter to quarter

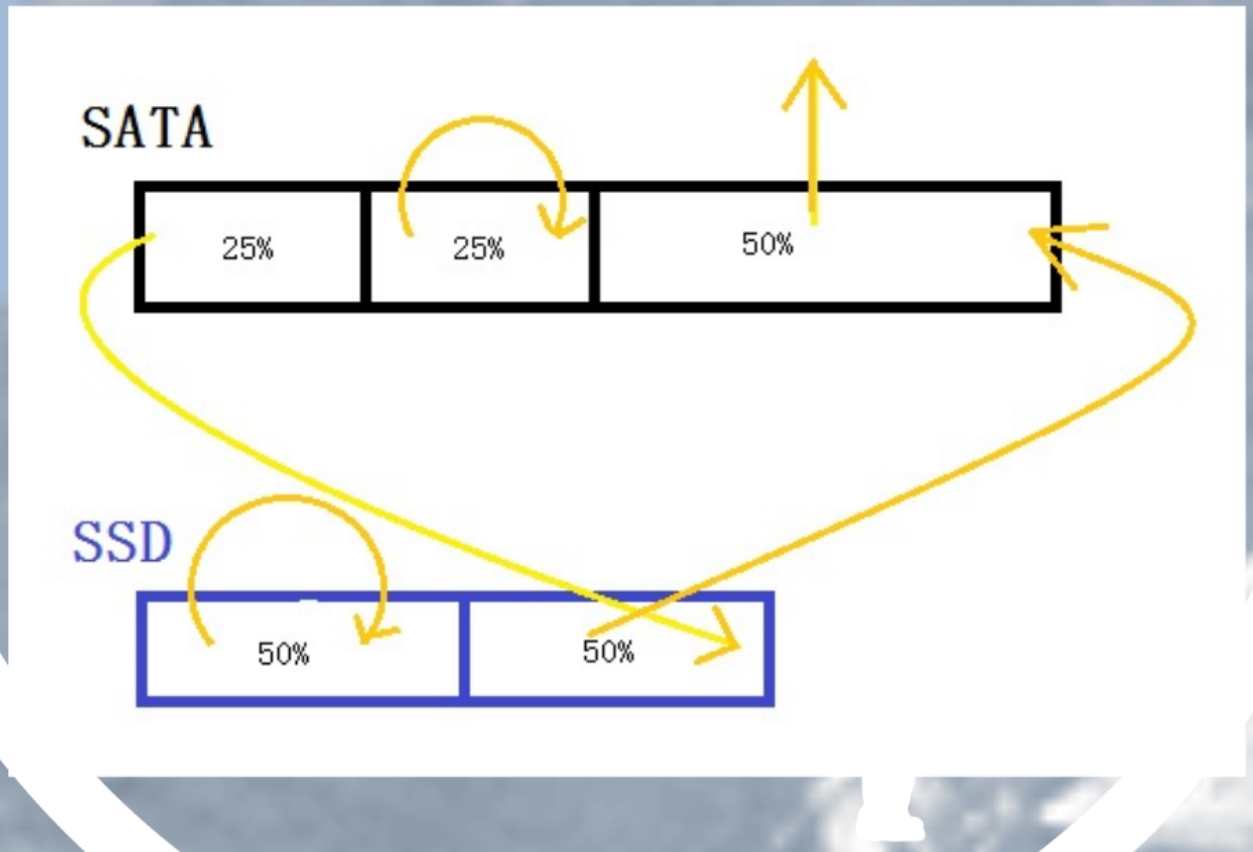
Varied Cache Algorithms

• Clairvoyant	• ???
• FIFO	• 0.800641
• S4LRU	• 0.831069
• S4LazyQueue	• 0.825915
• S2LazyQueue	• 0.812066
• S2LazyQueue + LRU	• 0.836890



Analyze to S2LazyQueue + LRU

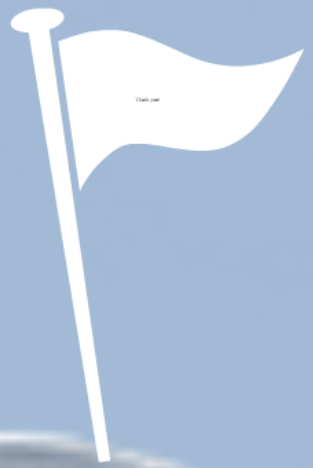
A recursive Cache method



WIN!

Facing problems:

- Unit time complexity
- Additional space requirement
- Timely up stair action



Thank you!

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