Team Compaction

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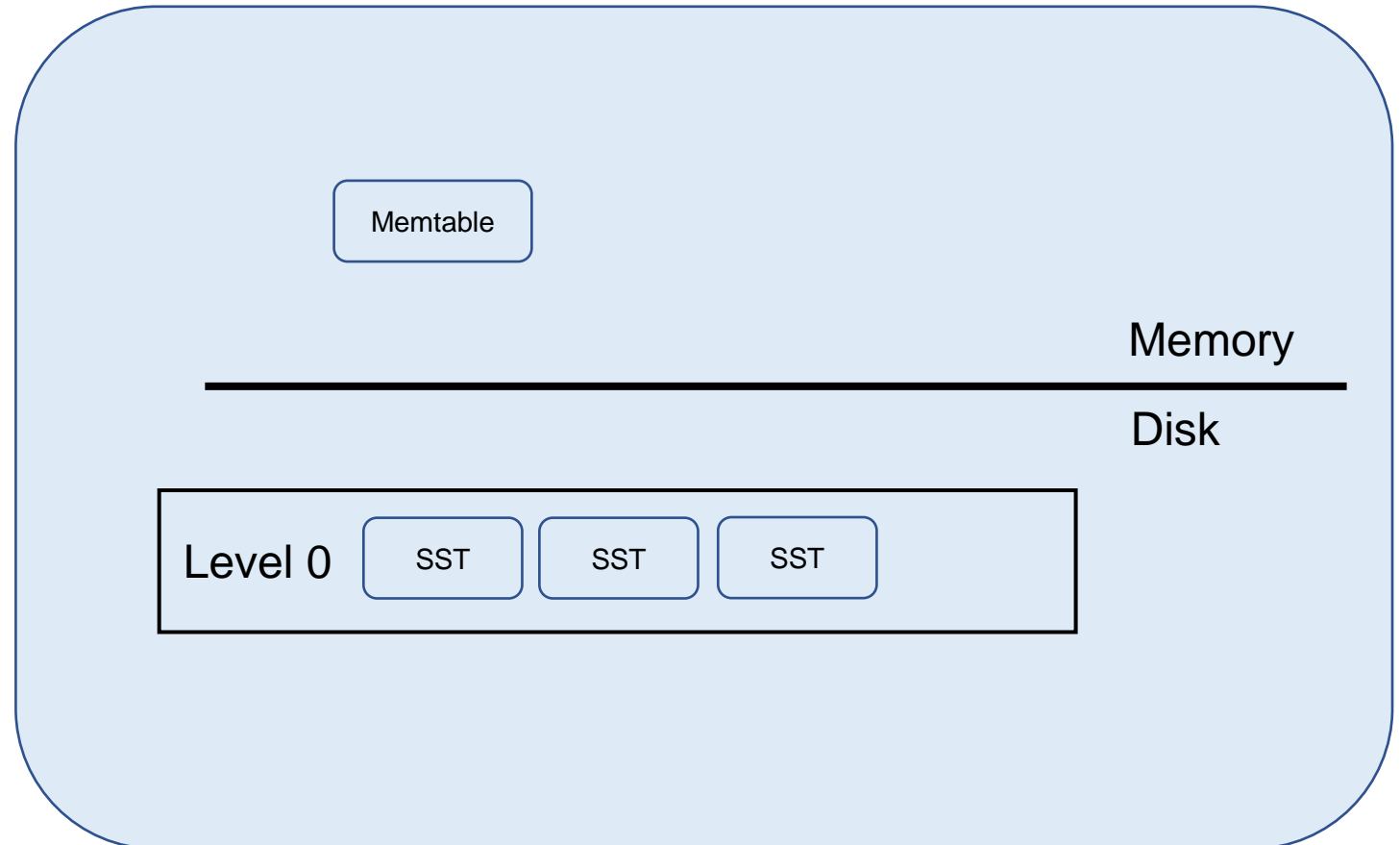# Introduction

- Compaction
  - Complication
  - Performance
  - Balance

- Compaction Type
  - Minor compaction
  - Major compaction
  - Tiered compaction
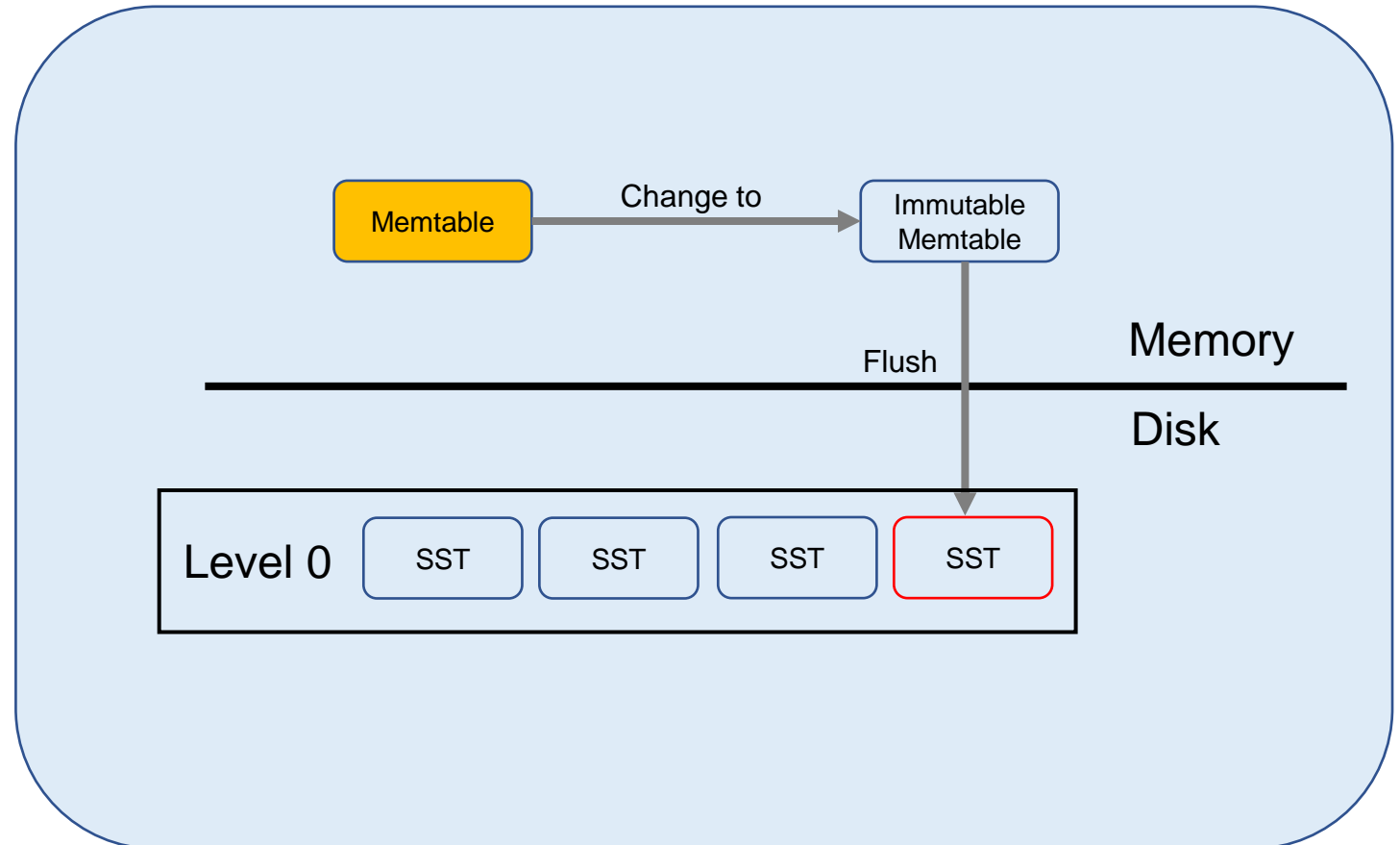   - Universal compaction etc..

Source: https://www.filecloud.com/blog/2014/08/leading-nosql-databases-to-consider/

Compaction Type

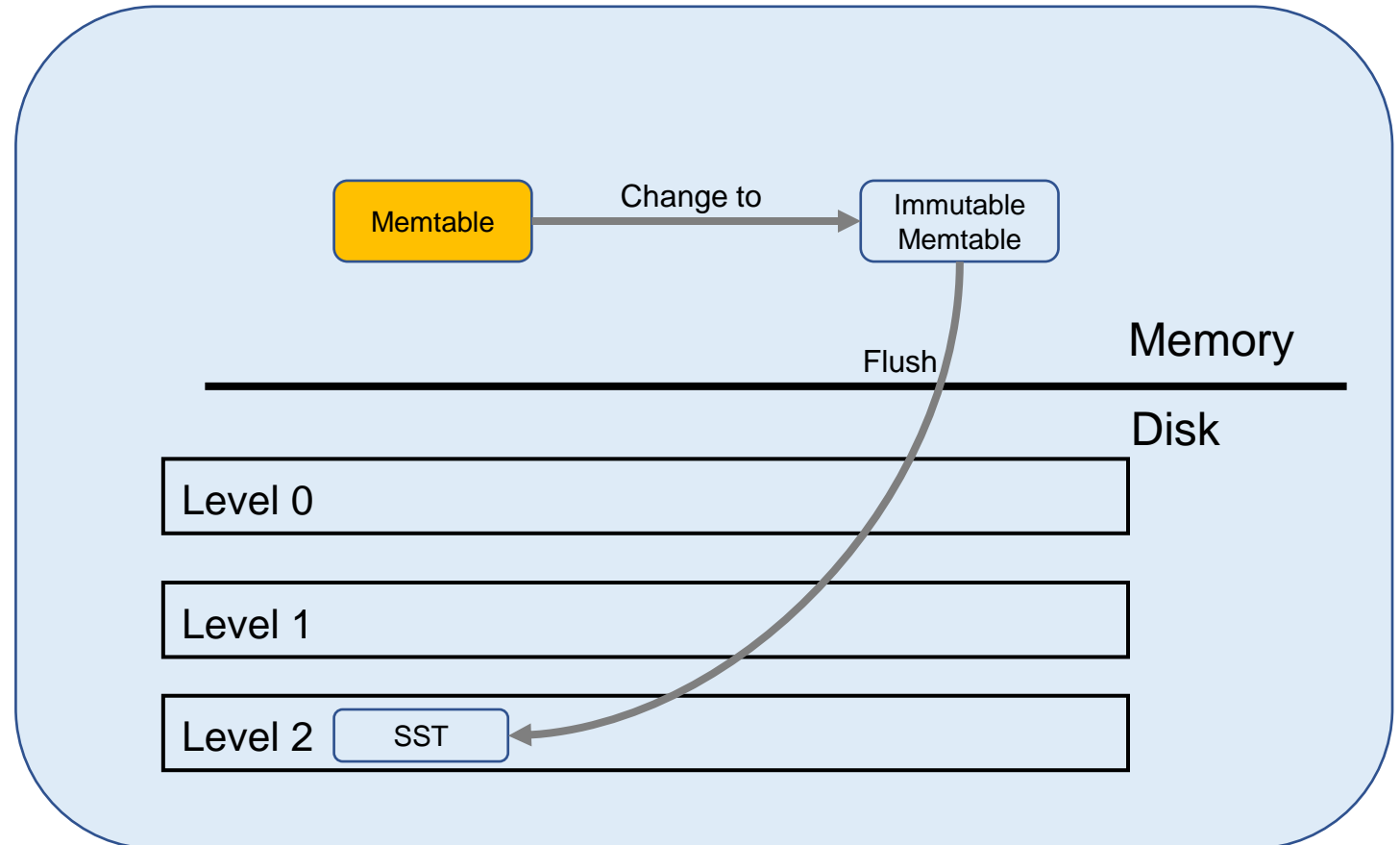- Minor compaction
  - In Level db call "Flush"

Compaction Type

- Minor compaction

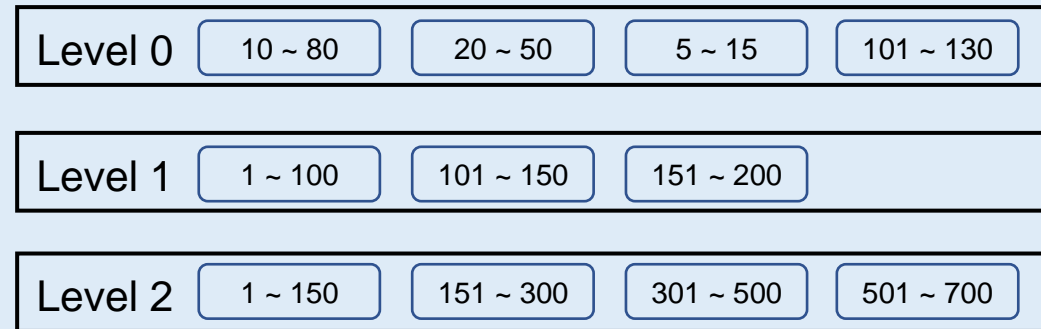 - In Level db call "Flush"

Compaction Type

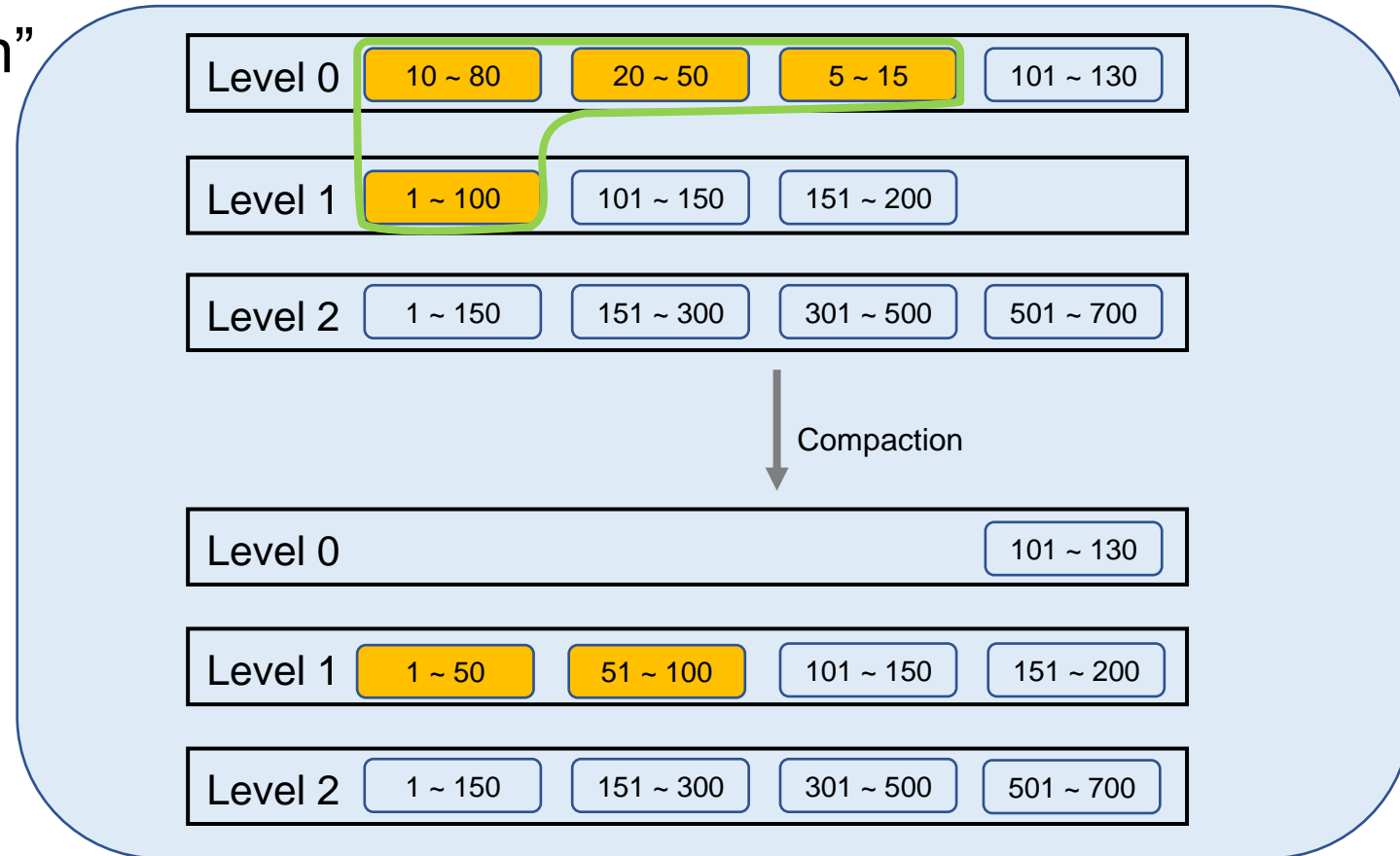- Minor compaction
  - In Level db call "Flush"
  - Trivial move

Compaction Type

- Major compaction
  - In Level db call "Compaction"
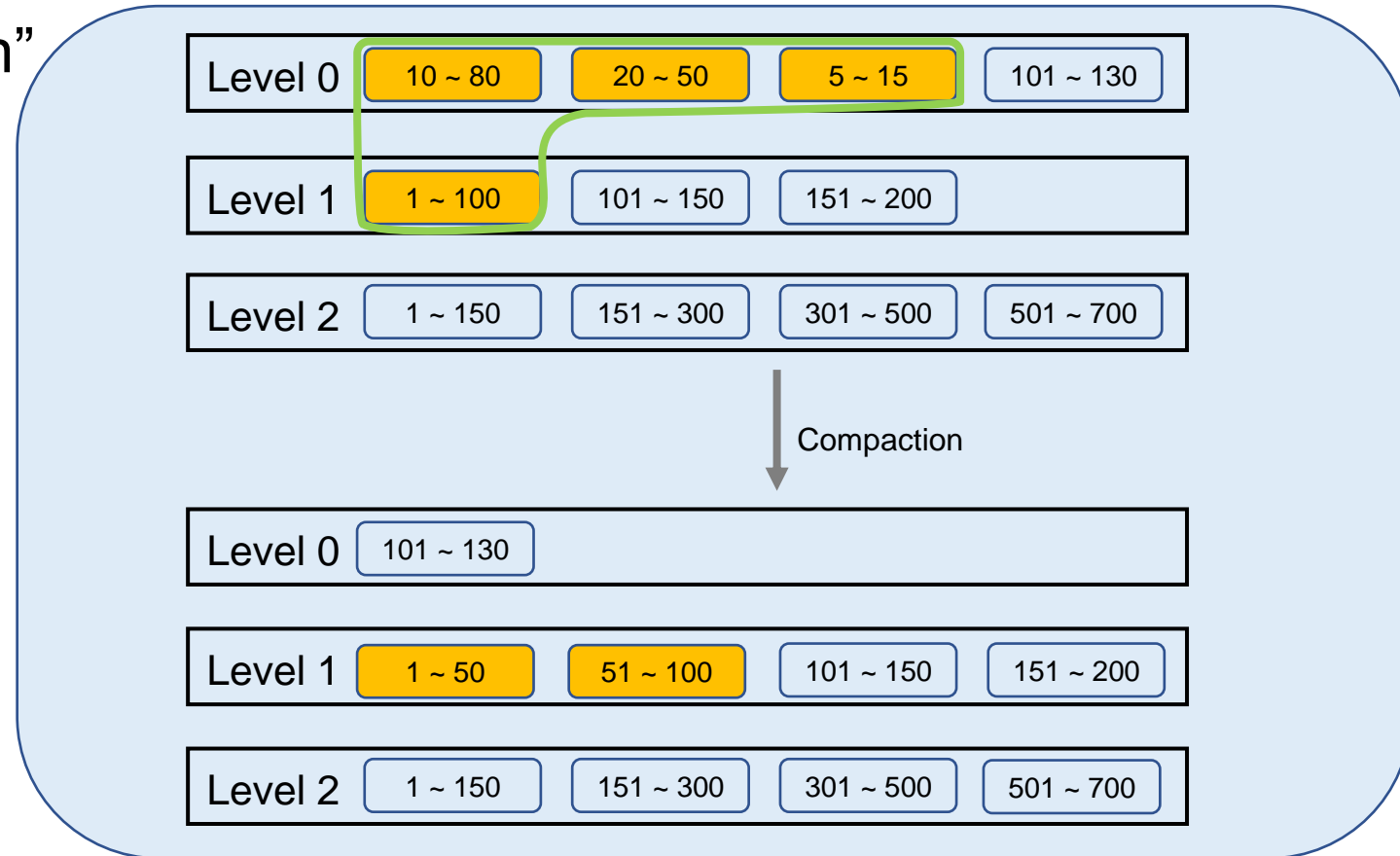 - Leveled Compaction

Level 0	10 ~ 80	20 ~ 50	5 ~ 15	101 ~ 130

Level 1	1 ~ 100	101 ~ 150	151 ~ 200

Level 2	1 ~ 150	151 ~ 300	301 ~ 500	501 ~ 700

Compaction Type

- Major compaction
  - In Level db call "Compaction"
  - Leveled Compaction

Compaction Type

- ▪ Major compaction

  - In Level db call "Compaction"

  - Leveled Compaction

- ▪ Tiered compaction

  - Universal compaction

Level 0 | 10 ~ 80 | 20 ~ 50 | 5 ~ 15 | 101 ~ 130

Level 1 | 1 ~ 100 | 101 ~ 150 | 151 ~ 200

Level 2 | 1 ~ 150 | 151 ~ 300 | 301 ~ 500 | 501 ~ 700

Compaction

Level 0 | 101 ~ 130

Level 1 | 1 ~ 50 | 51 ~ 100 | 101 ~ 150 | 151 ~ 200

Level 2 | 1 ~ 150 | 151 ~ 300 | 301 ~ 500 | 501 ~ 700

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db_bench

Various Key Size

16 Byte
32 Byte
64 Byte
128 Byte

Various Value Size

256 Byte
1 KB
4 KB
16 KB

Experiment Setup

Putty → 서버

Benchmarks

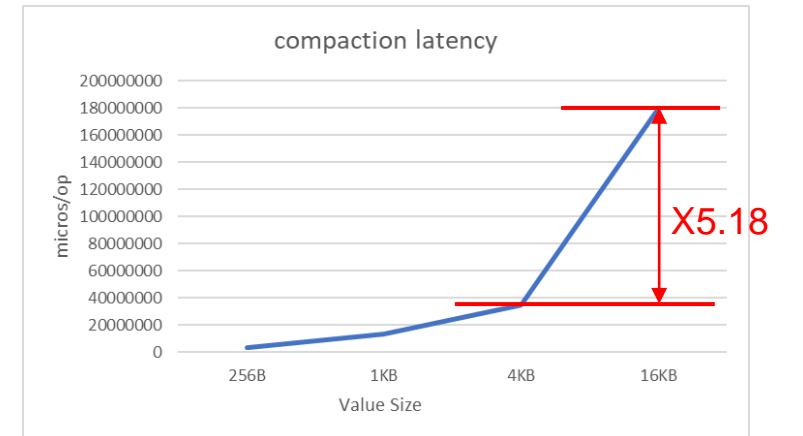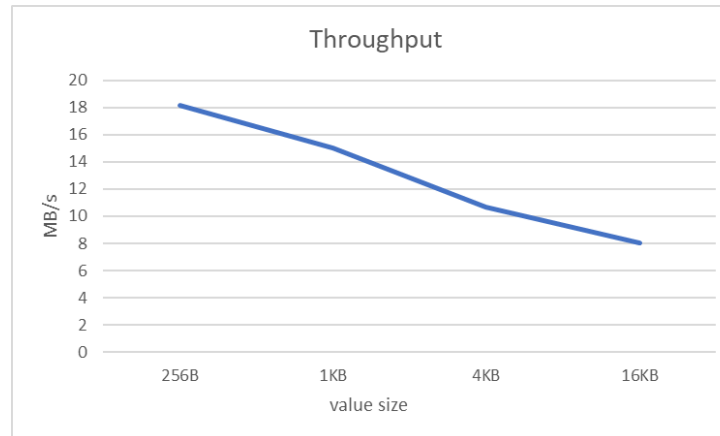| Fillrandom |
|------------|
| ~~Fillseq~~ |
| ~~Readseq~~ |
| Readrandom |

db_bench

- ## Various Key Size
  - 'fillrandom'
  - Num=1000000
  - Value=100 byte

WAF

latency

throughput
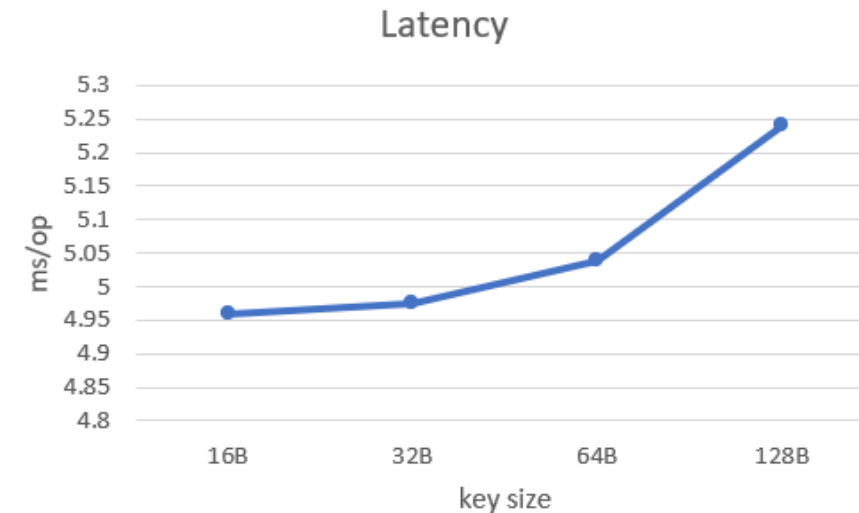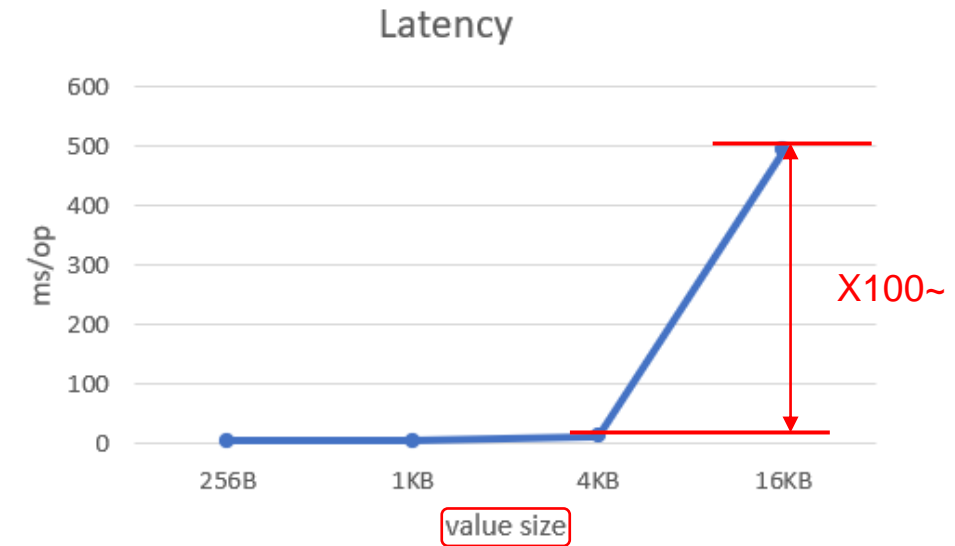

Compaction Latency
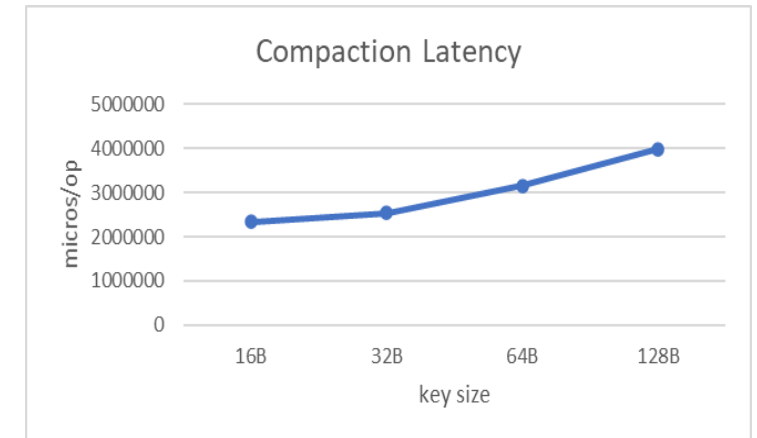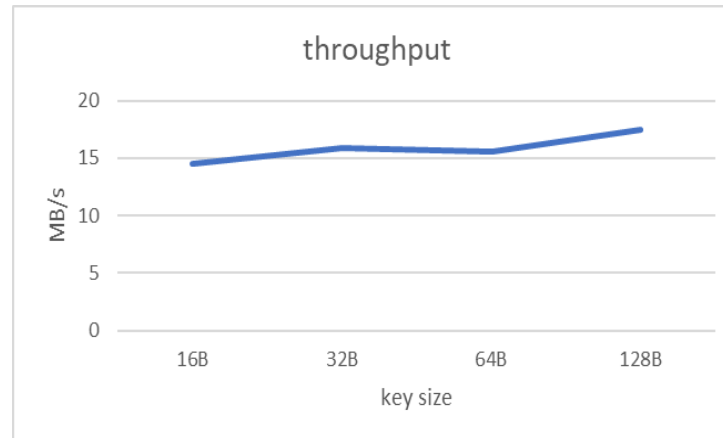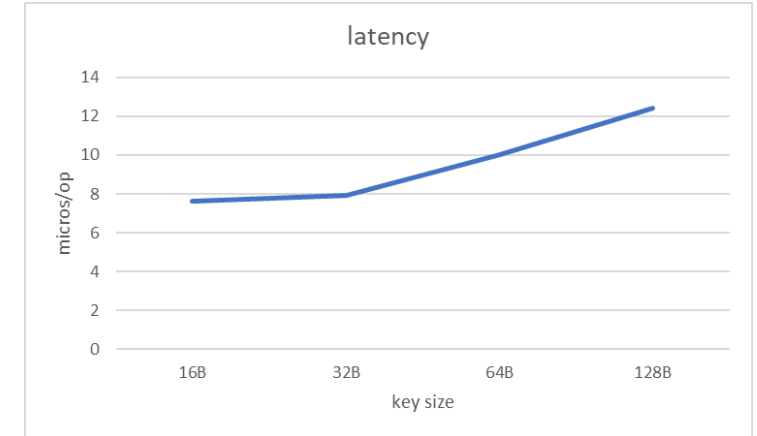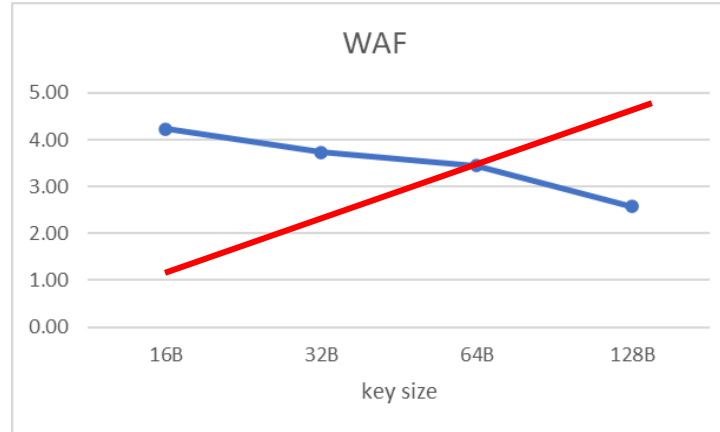
db_bench

- ## Various Value Size
  - 'fillrandom'
  - Num=1000000
  - key=16 byte
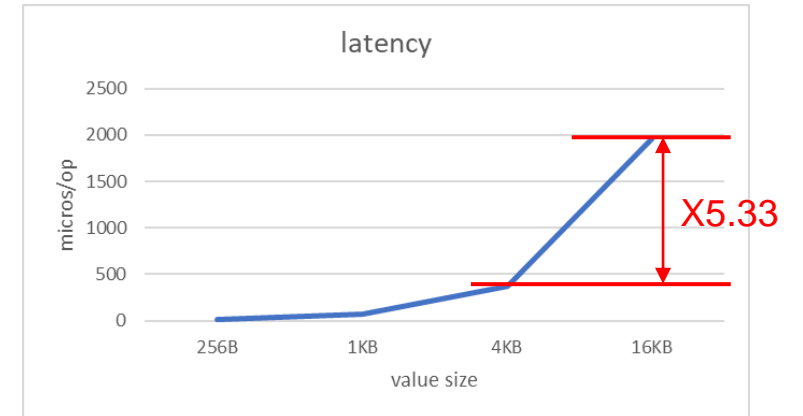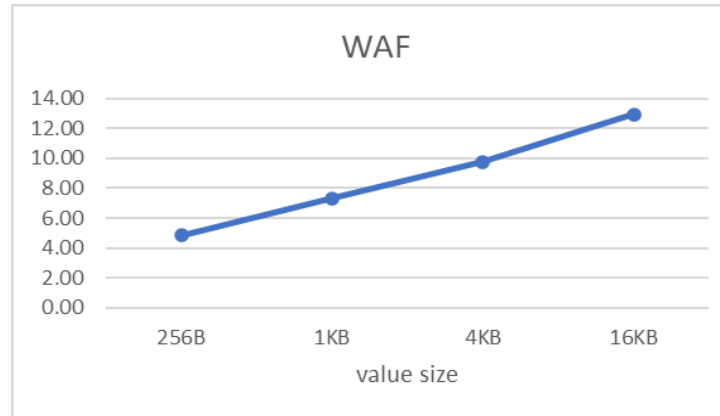
db_bench

- Readrandom
  - Various Key Size
  - Various Value Size

db_bench

- **Readrandom**
  - Various Key Size
  - Various Value Size

Q&A

감사합니다

꾸벅

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