

# RocksDB Festival

Supported by IITP, StarLab.

July 19, 2021  
강정현, 김산, 허진

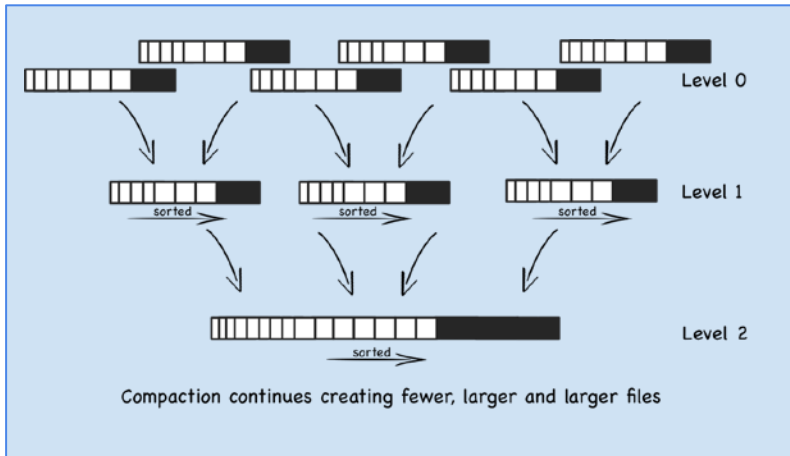
[rilac1@naver.com](mailto:rilac1@naver.com), [waterfog9580@gmail.com](mailto:waterfog9580@gmail.com), [jinh2352@gmail.com](mailto:jinh2352@gmail.com)

Team: JSJ

# RocksDB Festival

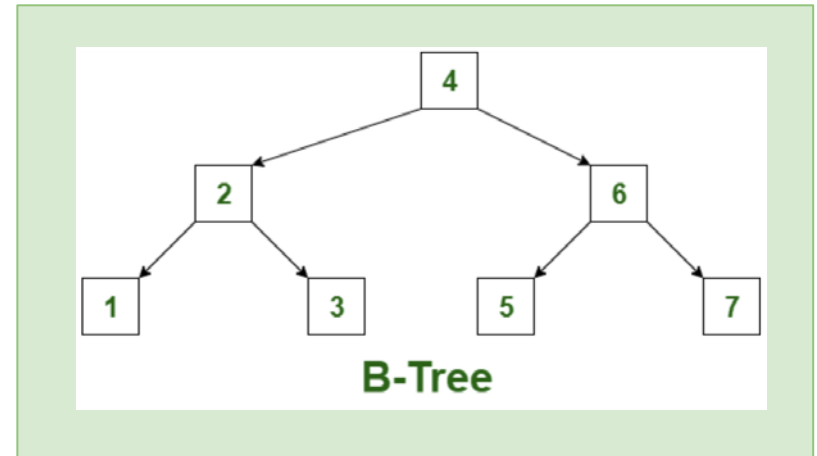
- RocksDB vs MongoDB
  - ✓ Data Structure

## Rocks DB



LSM-Tree  
(out-place update)  
-> Write Good!

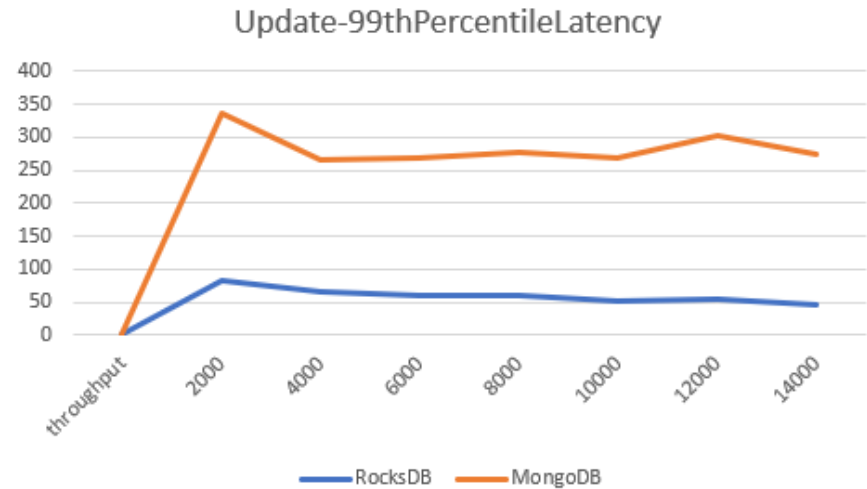
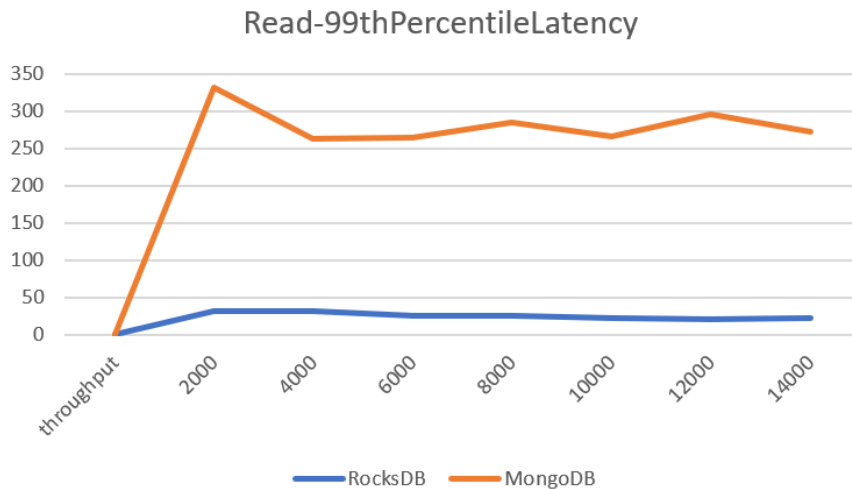
## Mongo DB



B-Tree  
(in-place update)  
-> Read Good!

# RocksDB Festival

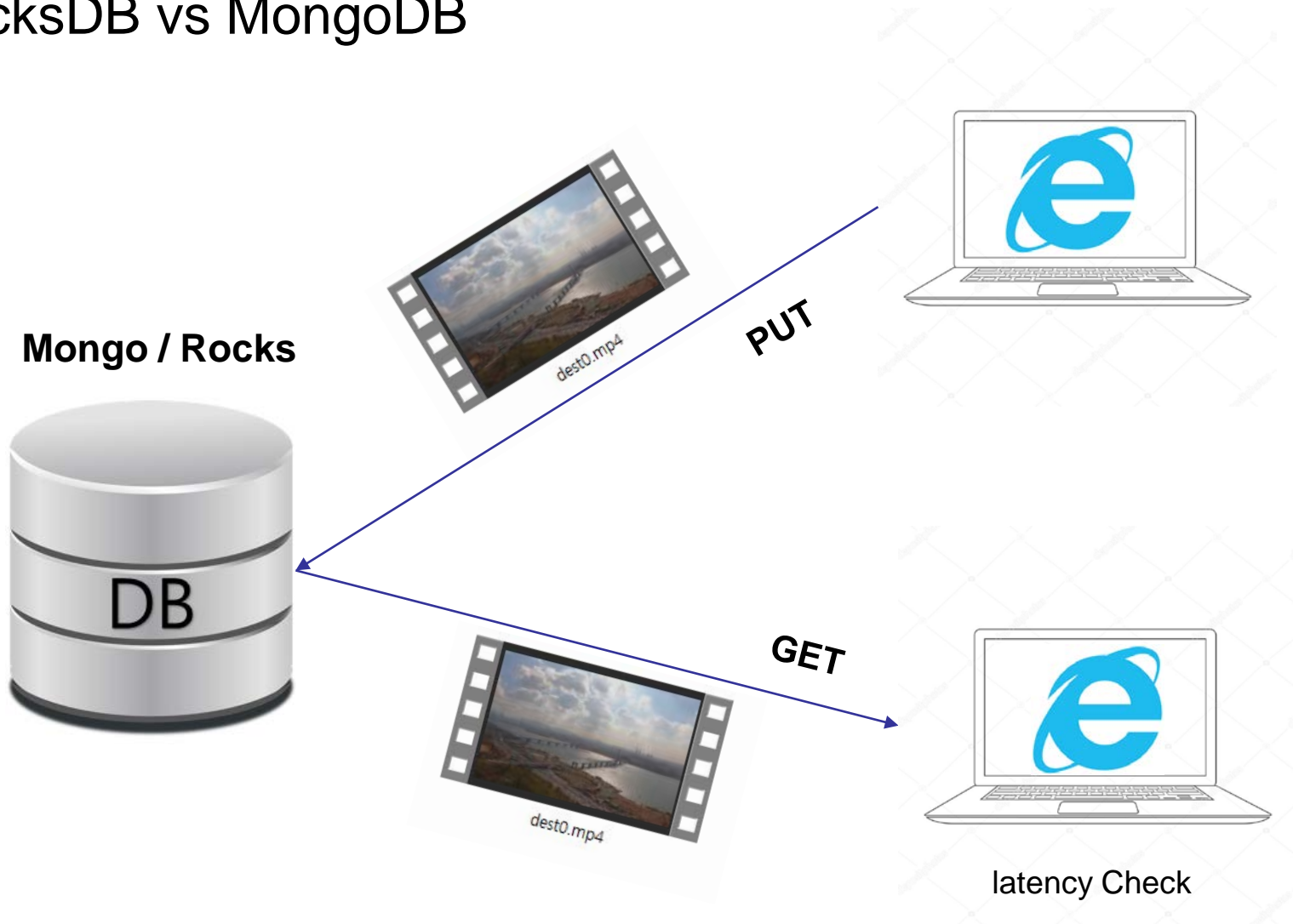
- RocksDB vs MongoDB
  - ✓ YCSB Bench



Through put: latency / operations

# RocksDB Festival

- RocksDB vs MongoDB



# RocksDB Festival

- RocksDB PUT & GET API

RocksDB API only supports std::string types.

```
template<typename T, typename... Args>
unique_ptr<T> make_unique(Args&&... args) {
    return unique_ptr<T>(new T(forward<Args>(args)...));
}

template <typename T>
string Pack(const T* data, int _size)
{
    string d(_size, L'\0');
    memcpy(&d[0], data, d.size());
    return d;
}

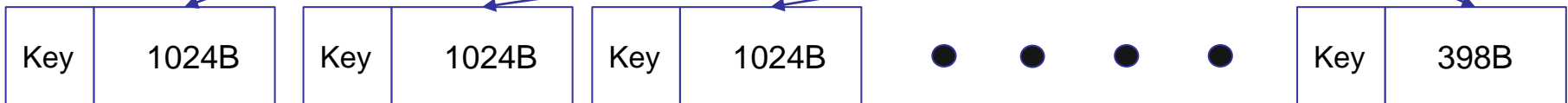
template <typename T>
unique_ptr<T> Unpack(const string& data)
{
    if (data.size() != sizeof(T))
        return nullptr;

    auto d = make_unique<T>();
    memcpy(d.get(), data.data(), data.size());
    return d;
}
```

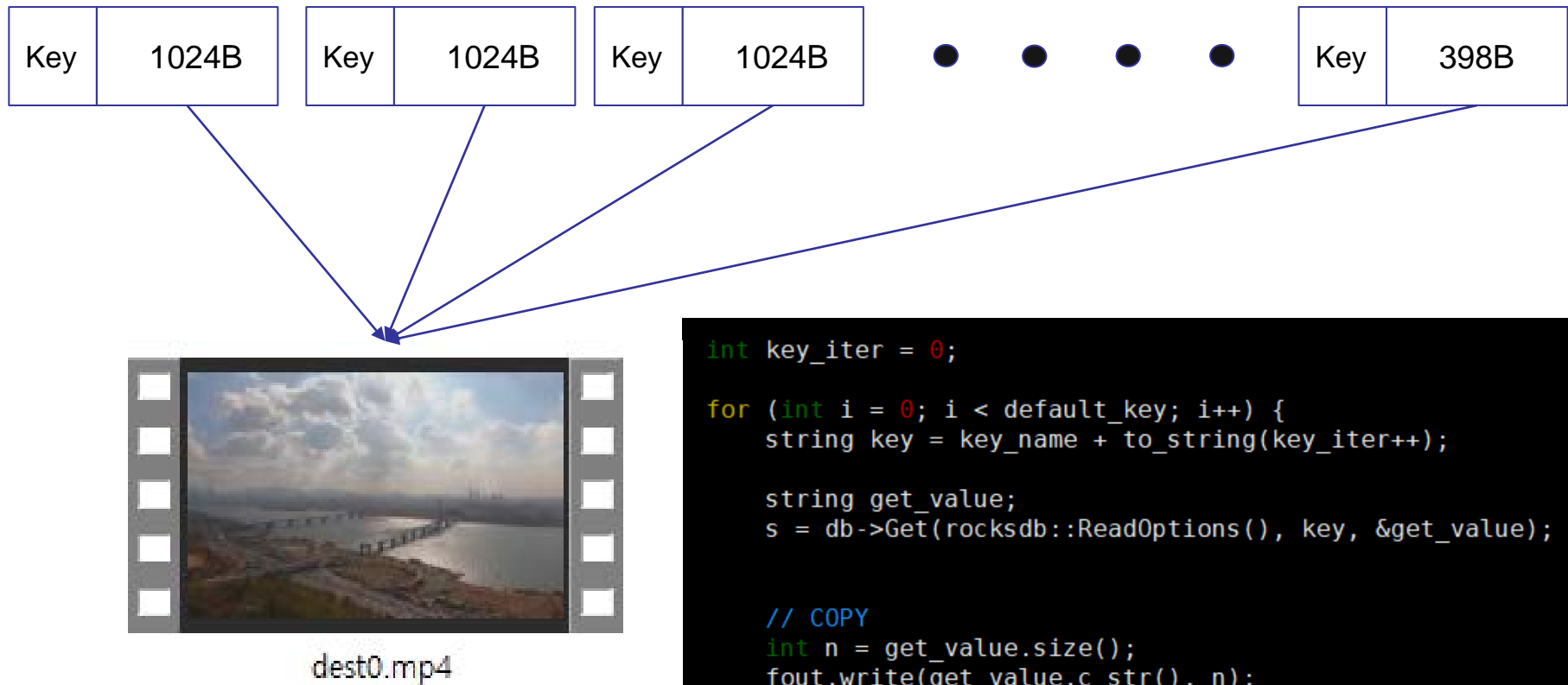
Need to pack  
input string(binary)

## SW스타랩

 Dankook University  
Embedded System



# RocksDB Festival



```
int key_iter = 0;

for (int i = 0; i < default_key; i++) {
    string key = key_name + to_string(key_iter++);

    string get_value;
    s = db->Get(rocksdb::ReadOptions(), key, &get_value);

    // COPY
    int n = get_value.size();
    fout.write(get_value.c_str(), n);
}
```

## SW스타랩

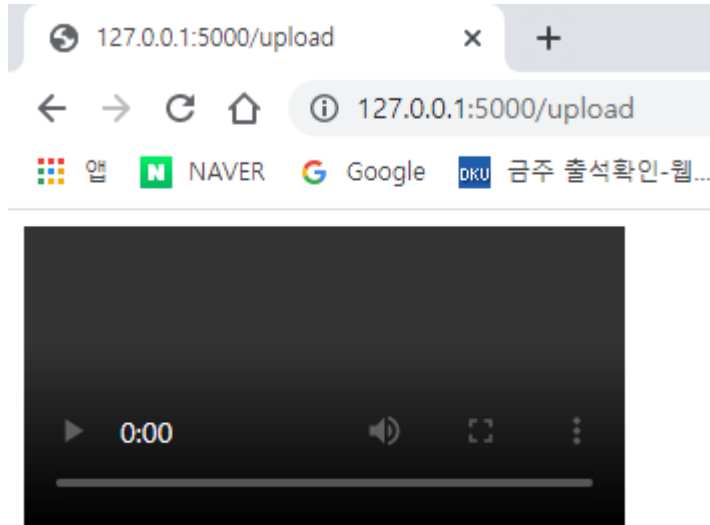
- 
- 127.0.0.1:5000
- ← → ↻ 🏠 ⓘ 127.0.0.1:5000
- 앱 NAVER Google dkU 금주 출석확인-웹... YouTube
- 파일 선택 Temp.mp4 제출

```
{
  "_id": {
    "$oid": "60f3fb9ab4bc98a6b8b00a"
  },
  "files_id": {
    "$oid": "60f3fb9ab4bc98a6b8b009"
  },
  "n": 0,
  "data": {
    "$binary": {
      "base64": "AAAAIGZ0eXBpc29tAAACAGlzb21pc28yYXZjMWlwAAAAD6AAA7pwAAQAAQAIAAAAAAAAAAAAAAAAAEAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwAA  
BAAAAAAAA7pwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
```



# RocksDB Festival

- MongoDB
  - ✓ Video Upload



```
<html>  
  <body>  
    <video src="" controls></video>  
  </body>  
</html>
```

???

# Discussion

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