

CloudKit

Availability

- macOS
- iOS
- tvOS
- watchOS
- CloudKit JS
- Web Services

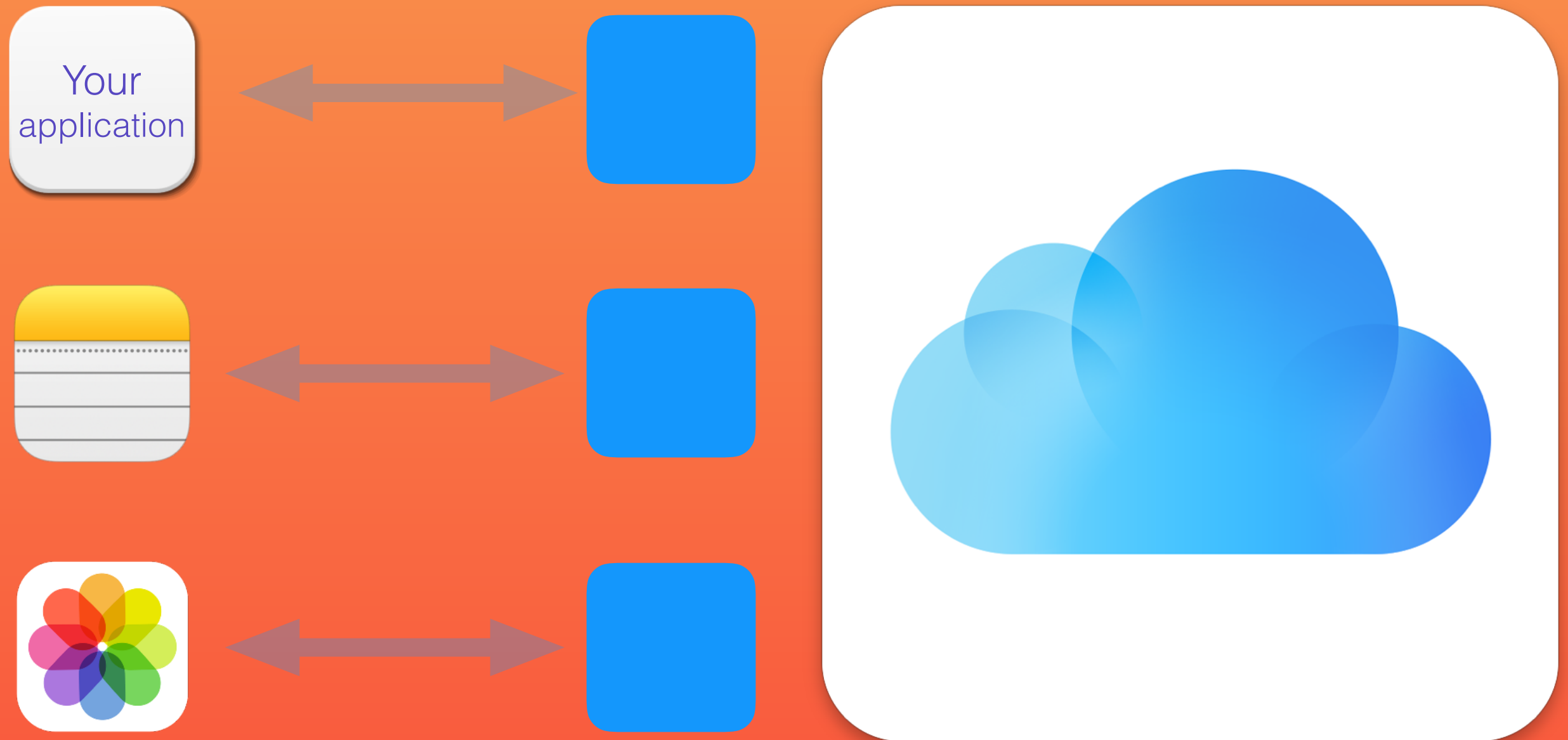


Advantage

- Focus on building the app - not on a backend support
- Automatic authentication with Apple ID
- Same data across all devices



CloudKit Container



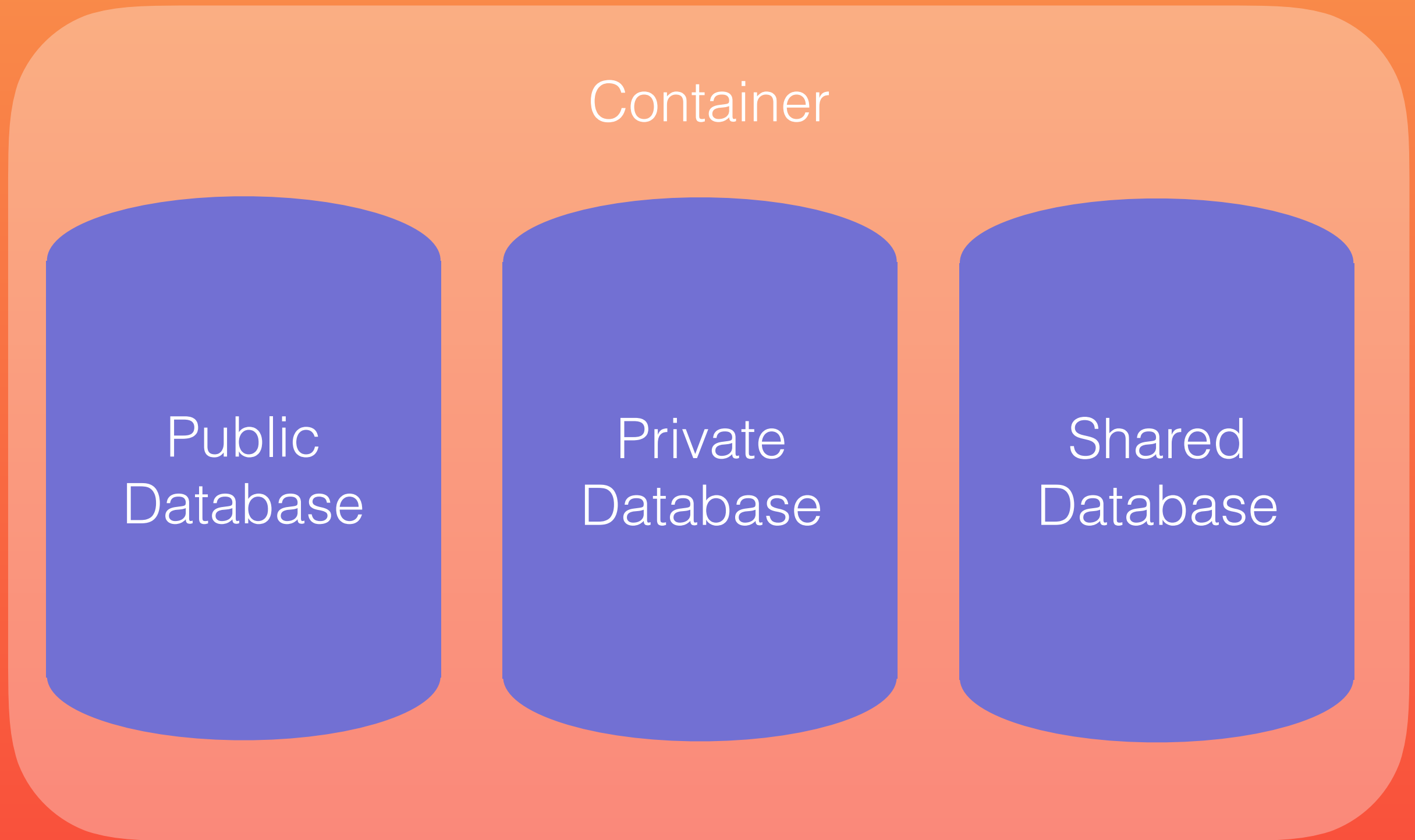
CloudKit Databases

Container

Public
Database

Private
Database

Shared
Database



Record

Note	
Title	String
Body	String
CreationData	Date
List	Reference

CKRecord

Structured data

Wraps key/value pairs

Record Values:

String, Number, Data, Date

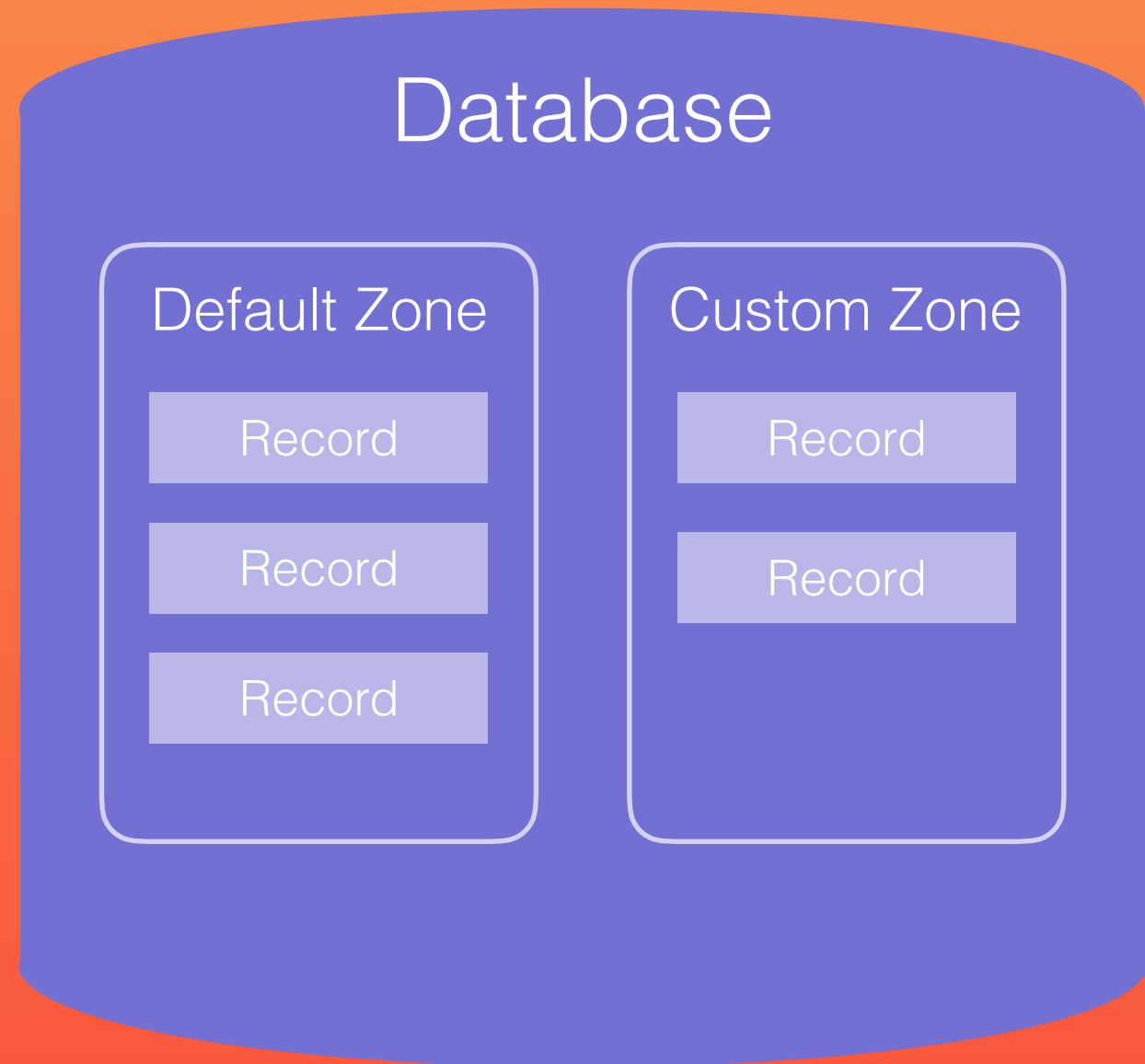
CLLocation

CKReference

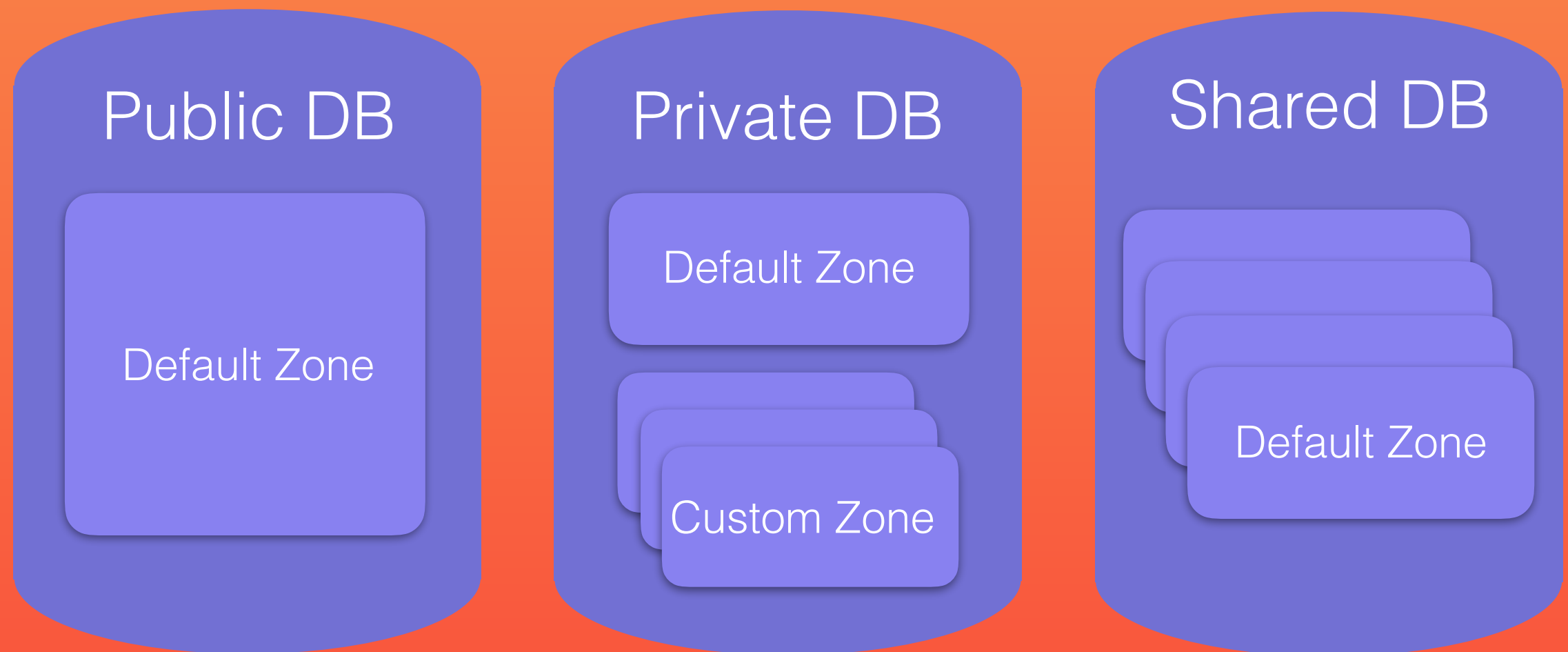
CKAsset

Record Zone

CKRecordZone



Record Zone



Custom Zone

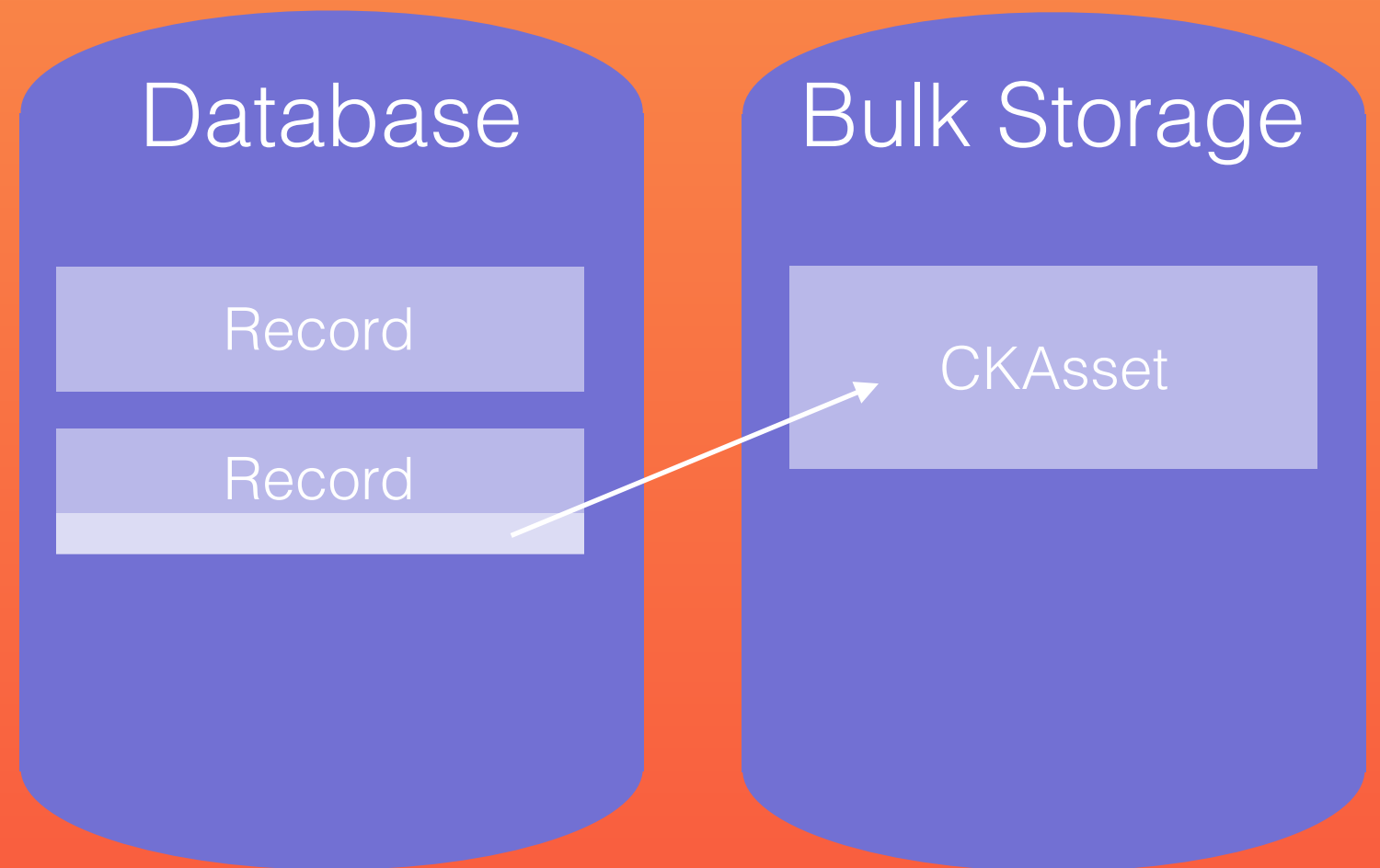
- Atomic commits
 - provides data consistency
 - batch operation succeeds or fails as a whole
 - on failure - CKErrorPartialFailure with all individual errors (real or CKErrorBatchRequestFailed)
- Delta downloads
- Zone subscription

Asset

Large, unstructured data

Fetching asset

- `var fileURL: URL`
- doesn't keep a data locally



Convenience API vs CKOperation

Convenience API

```
open func fetch(withRecordID recordID: CKRecordID, completionHandler: @escaping  
(CKRecord?, Error?) -> ())  
  
open func save(_ record: CKRecord, completionHandler: @escaping (CKRecord?, Error?)  
-> ())  
  
open func delete(withRecordID recordID: CKRecordID, completionHandler: @escaping  
(CKRecordID?, Error?) -> ())
```

CKOperation benefits from Operation API

- dependency
- cancellation
- quality of service
- queue priority