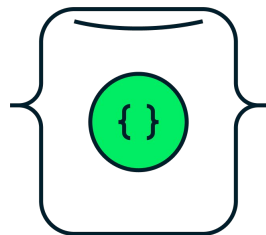


Data Model, Persistence & Real Time Sync

Bring VSS to life



Document Model or Object Oriented Database

- Flexible
- Scalable
- Always On
- Freedom to run anywhere
- ...



Documents Are Objects

Related data contained in a single, rich document

```
{
  "_id" : ObjectId("5ad88534e3632e1a35a58d00"),
  "name" : {
    "first" : "John",
    "last" : "Doe" },
  "address" : [
    { "location" : "work",
      "address" : {
        "street" : "16 Hatfields",
        "city" : "London",
        "postal_code" : "SE1 8DJ"},
        "geo" : { "type" : "Point", "coord" : [
          -0.109081, 51.5065752]}}],
    + {...}
  ],
  "dob" : ISODate("1977-04-01T05:00:00Z"),
  "retirement_fund" : NumberDecimal("1292815.75")
}
```



“Realm” - Embedded OSS Database

Offline first paradigm

- Usage: 100k+ developers; 65% of Fortune 1000; 2B+ app installs
- 47k+ Github stars
- Apache 2.0 license
- Active community involvement

Easy for developers

- Designed and built for resource constrained environments
- Just objects, with native code paradigms
- Live objects update automatically
- The class definitions *are* the database schema

2010

2016

>2019

>2022

Development started by two former Nokia engineers

Official announcement of Realm mobile platform

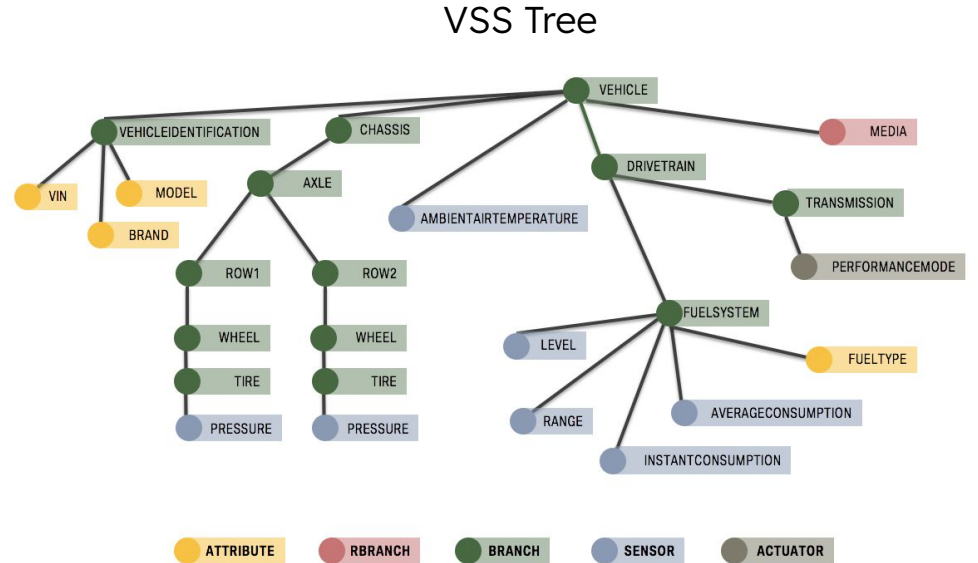
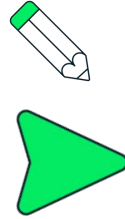
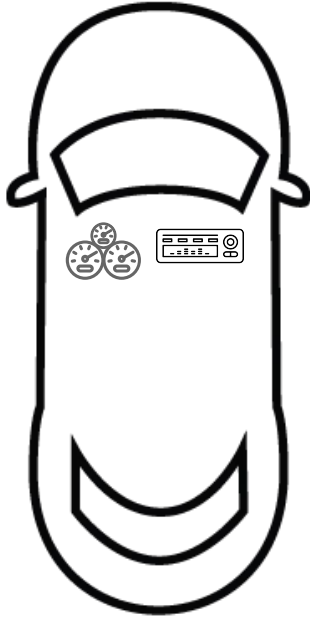
Acquisition by MongoDB

Device Sync integration into Atlas



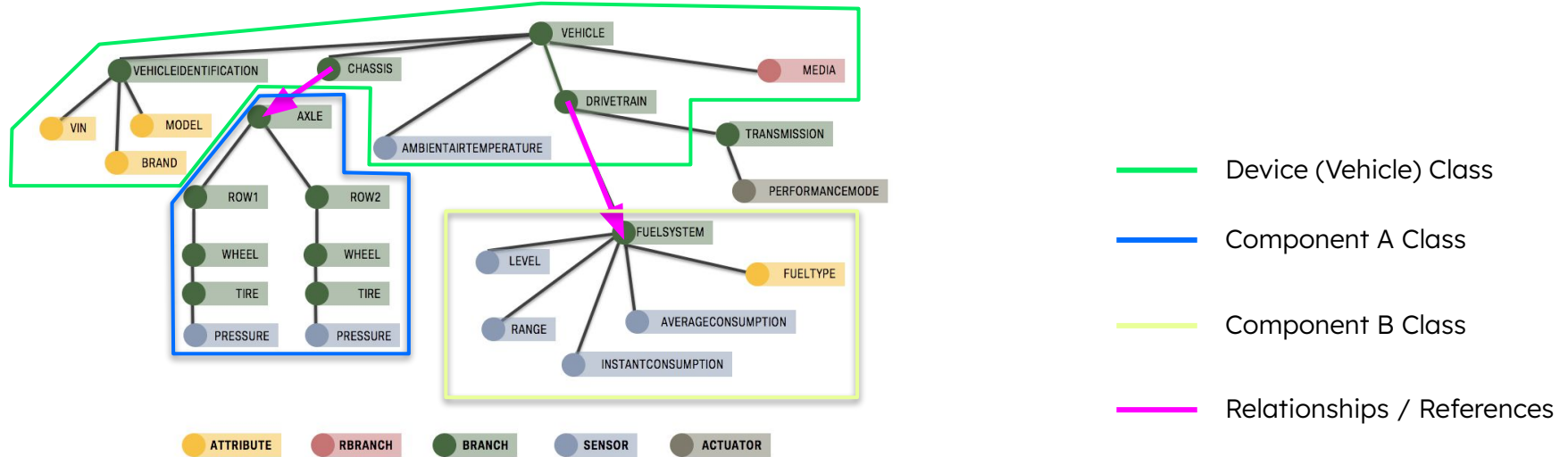


Vehicle Signal Specification





Is a Tree of Objects





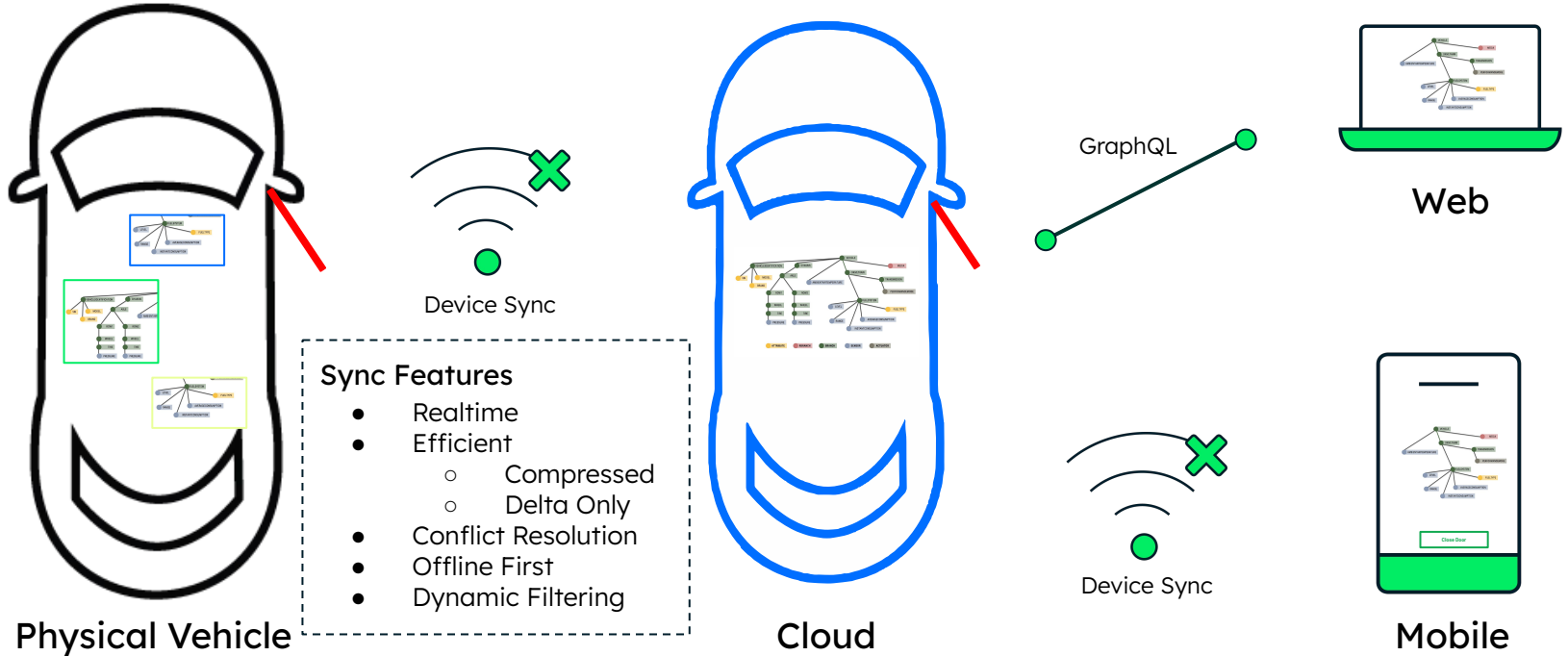
Objects are Instances of Classes

```
export class Device {  
  
    public _id = new ObjectId;  
    public name = "";  
    public owner_id = "";  
    public isOn = false;  
    public flexibleData?: Realm.Dictionary<string>;  
    public components: Array<Component> = [];  
  
    public static schema = {  
        name: 'Device',  
        primaryKey: '_id',  
        properties: {  
            _id: 'objectId',  
            name: 'string',  
            owner id: 'string',  
            isOn: 'bool',  
            components: 'Component[]',  
            flexibleData: 'string{}'  
        }  
    }  
}
```

```
export class Component {  
  
    public _id = new ObjectId;  
    public name = "";  
    public owner_id = "";  
  
    public static schema = {  
        name: 'Component',  
        primaryKey: '_id',  
        properties: {  
            _id: 'objectId',  
            name: 'string?',  
            owner_id: 'string'  
        }  
    }  
}
```

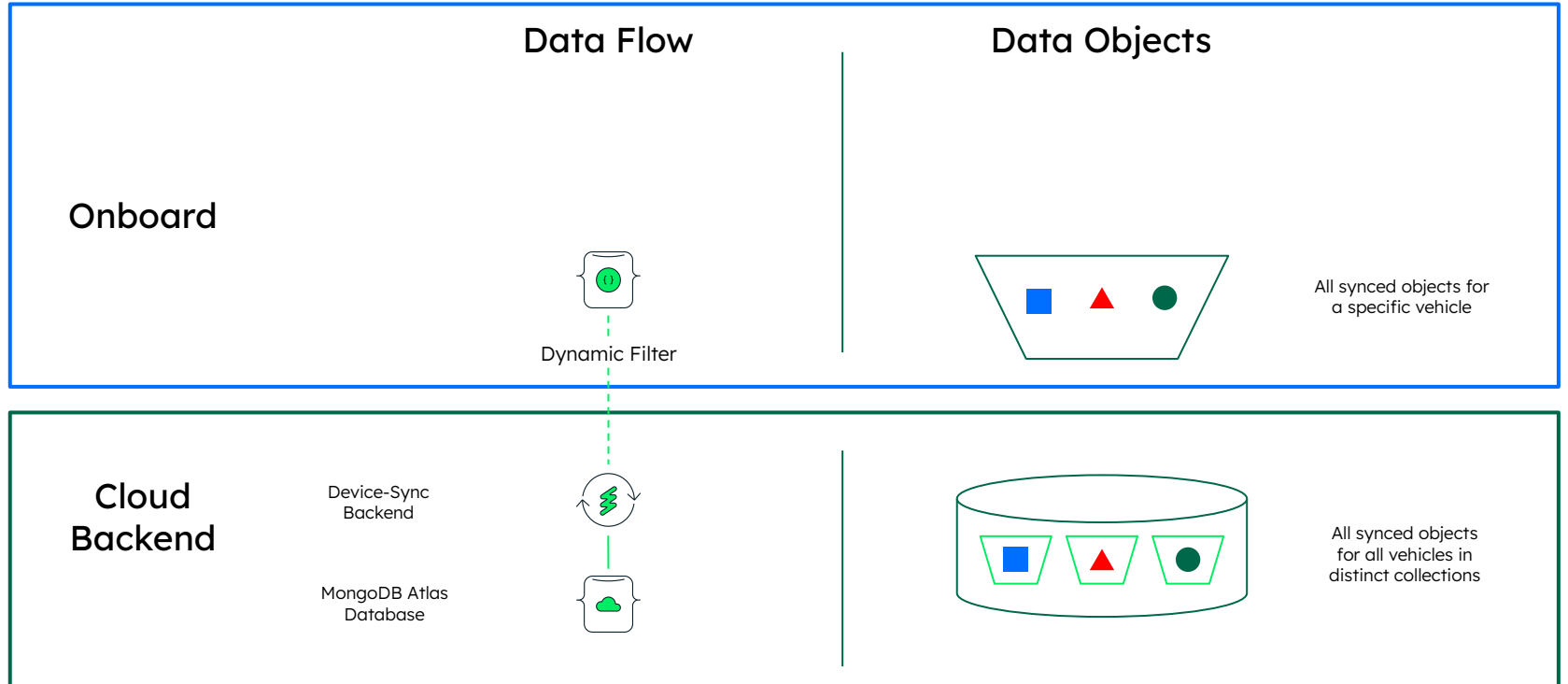


Keep the Object Tree in Sync



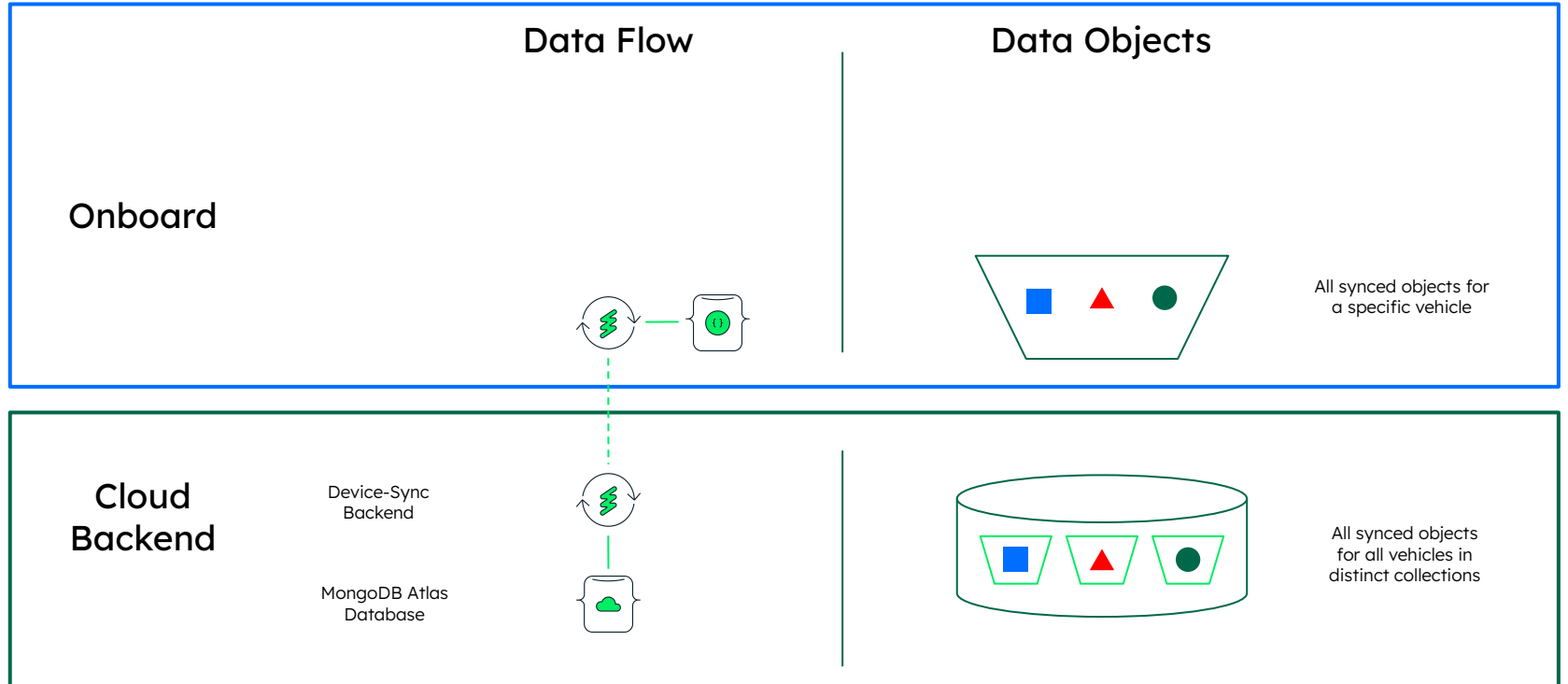


Plug n' Play Sync



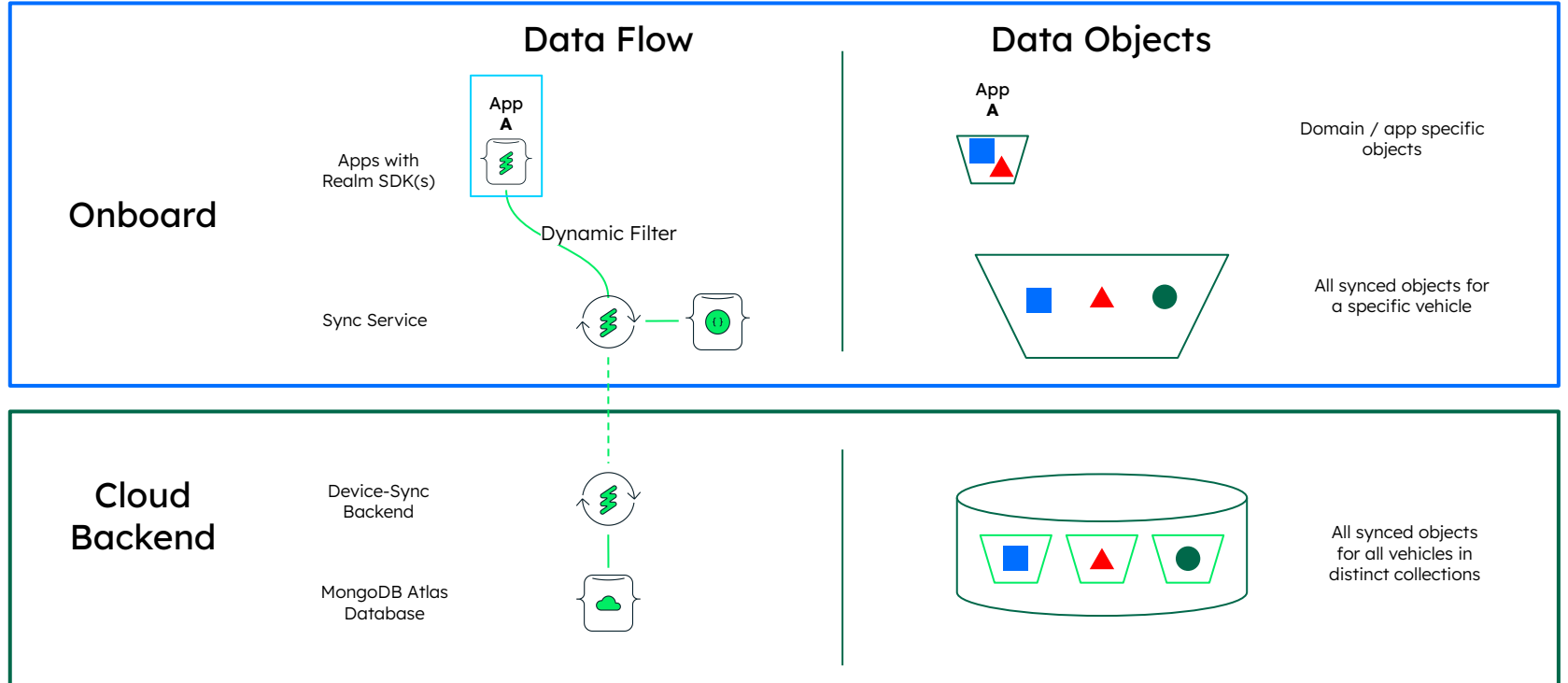


Plug n' Play Sync



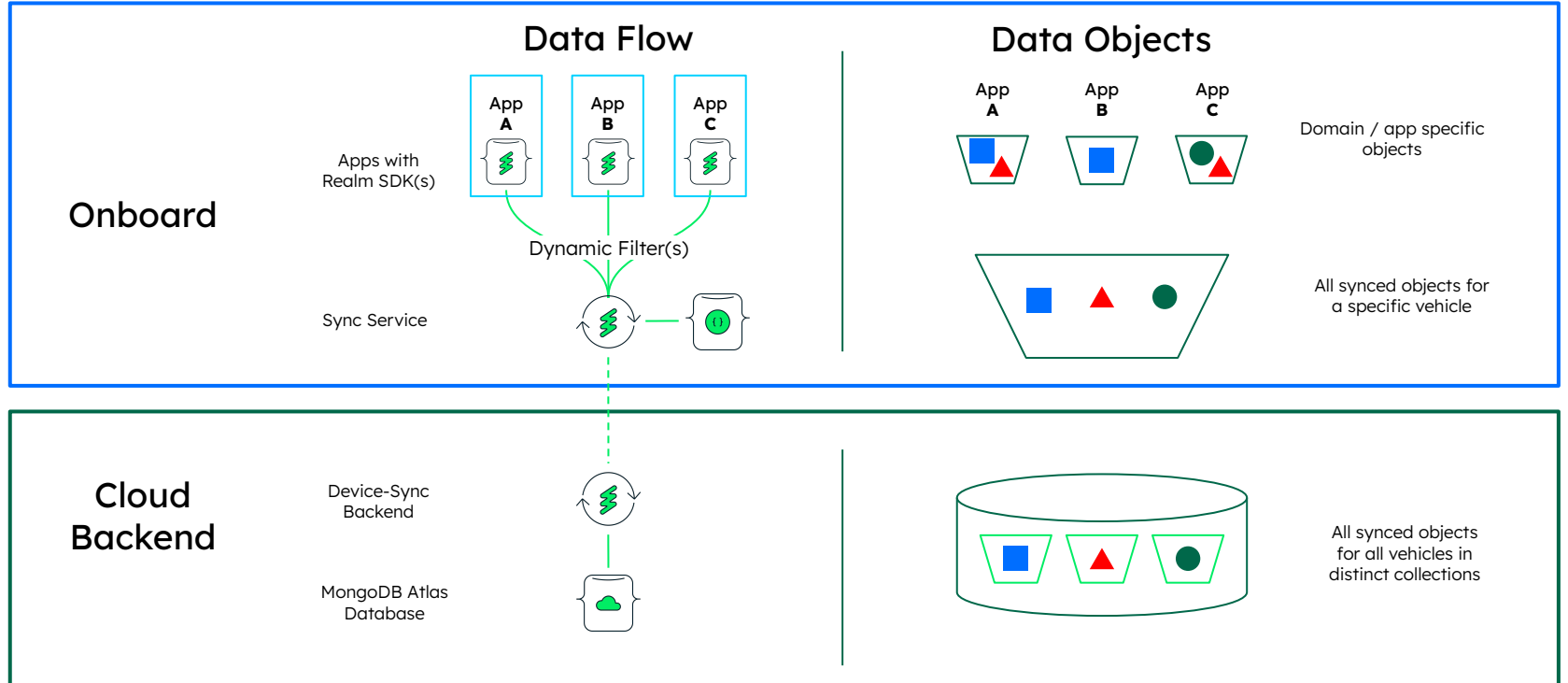


Plug n' Play Sync





Plug n' Play Sync





That was just a glimpse

Curious? -> Reach out

felix@mongodb.com