riak cs

riak

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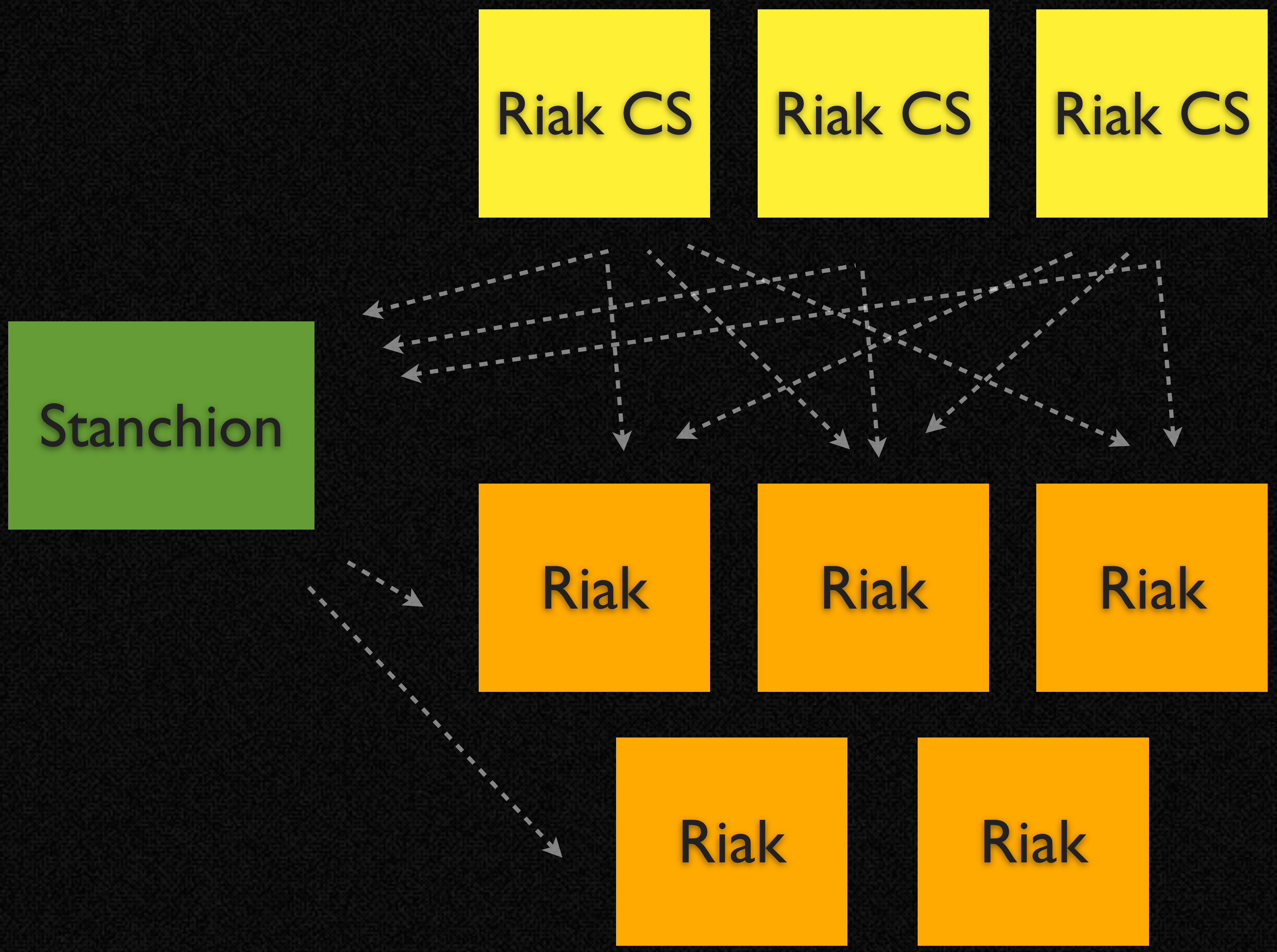
Riak CS is an Erlang
application
that exposes the S3 API on
top of Riak

# Apache 2 Licensed

(as of yesterday!)

webmachine lager riakc poolboy
druuid poolboy folsom sext eper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immutability
backpressure
webmachine
eqc
503
records

# immutability

manifest

content-type

content-length

md5

blocks-written

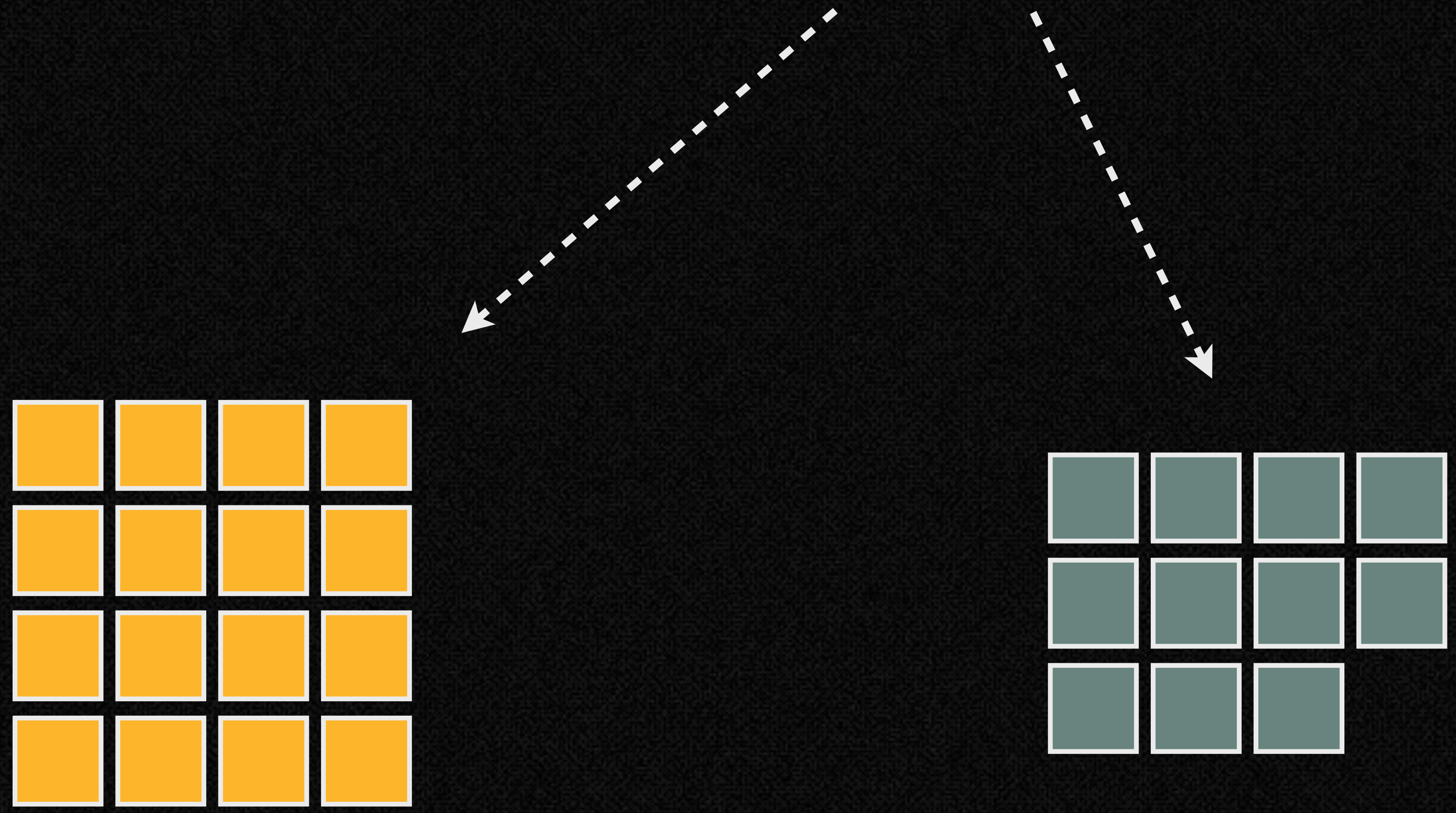
block-size

manifest version

acl

cluster-id

[2fb5bb24, 3e908b88]

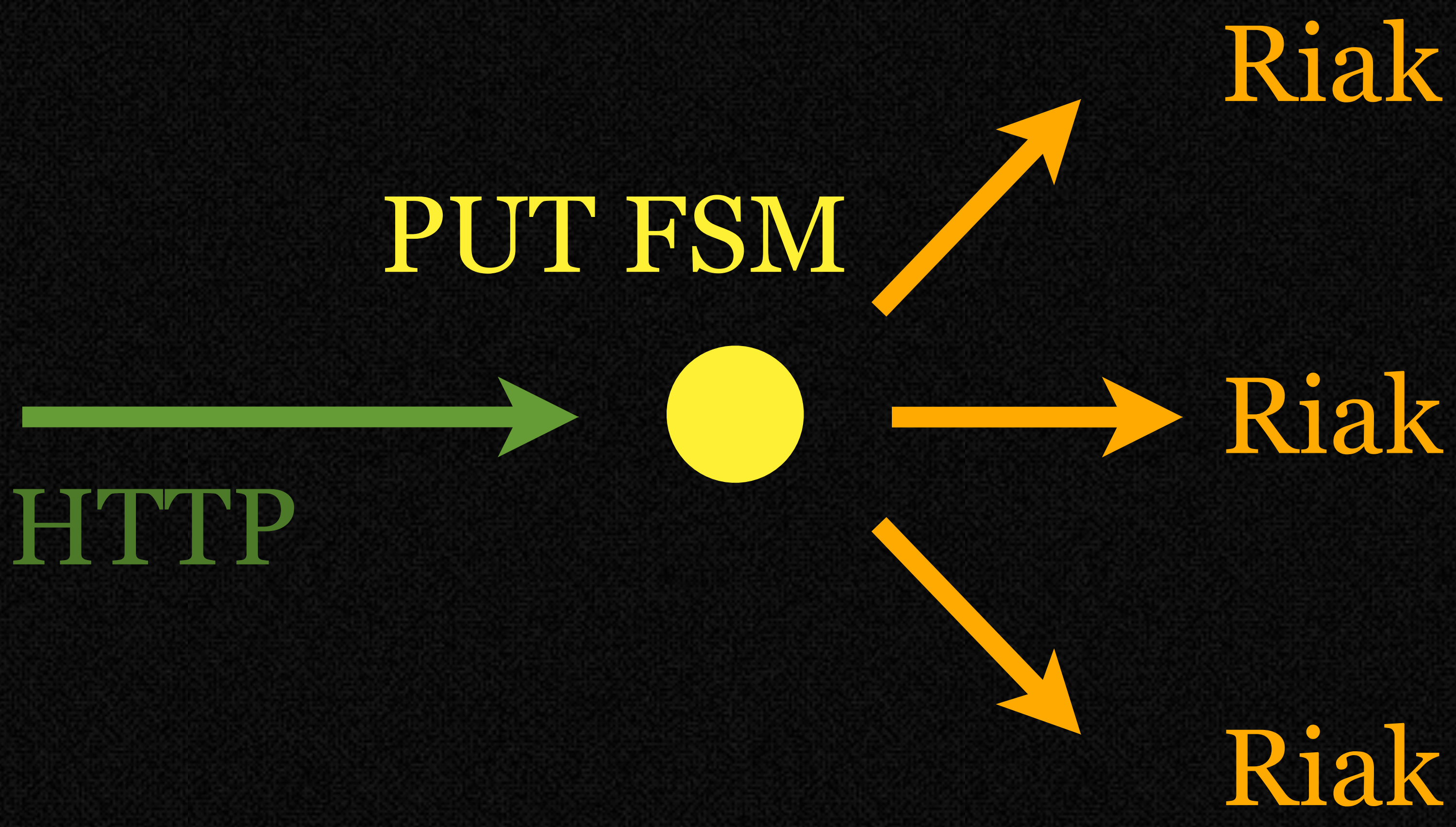


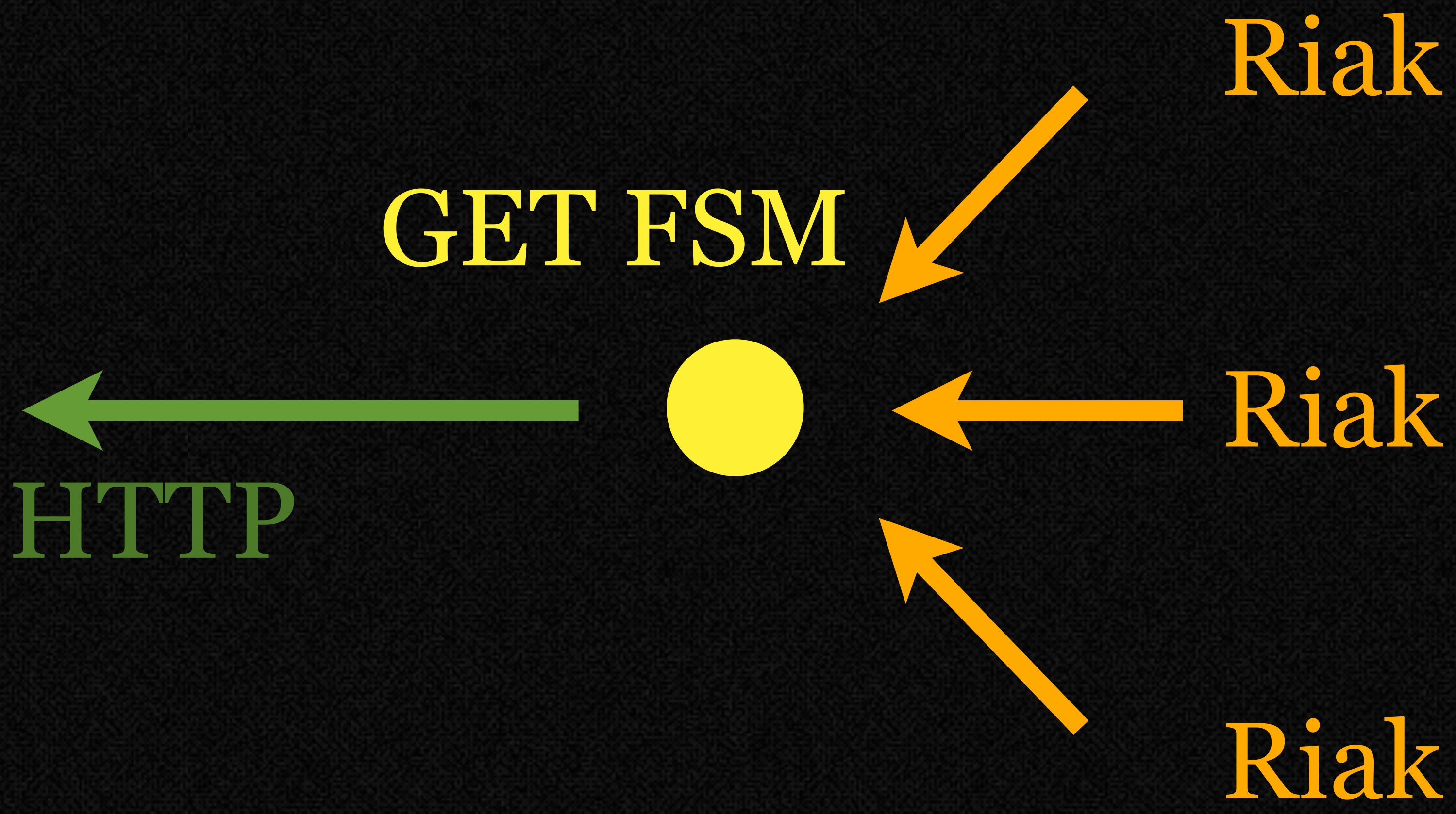
correct or not found

# cache forever

99% of data is immutable

# backpressure


Riak
PUT FSM
Riak
HTTP
Riak


Riak
GET FSM
Riak
HTTP
Riak

# webmachine

webmachine is great if you have a RESTful API s3 is not

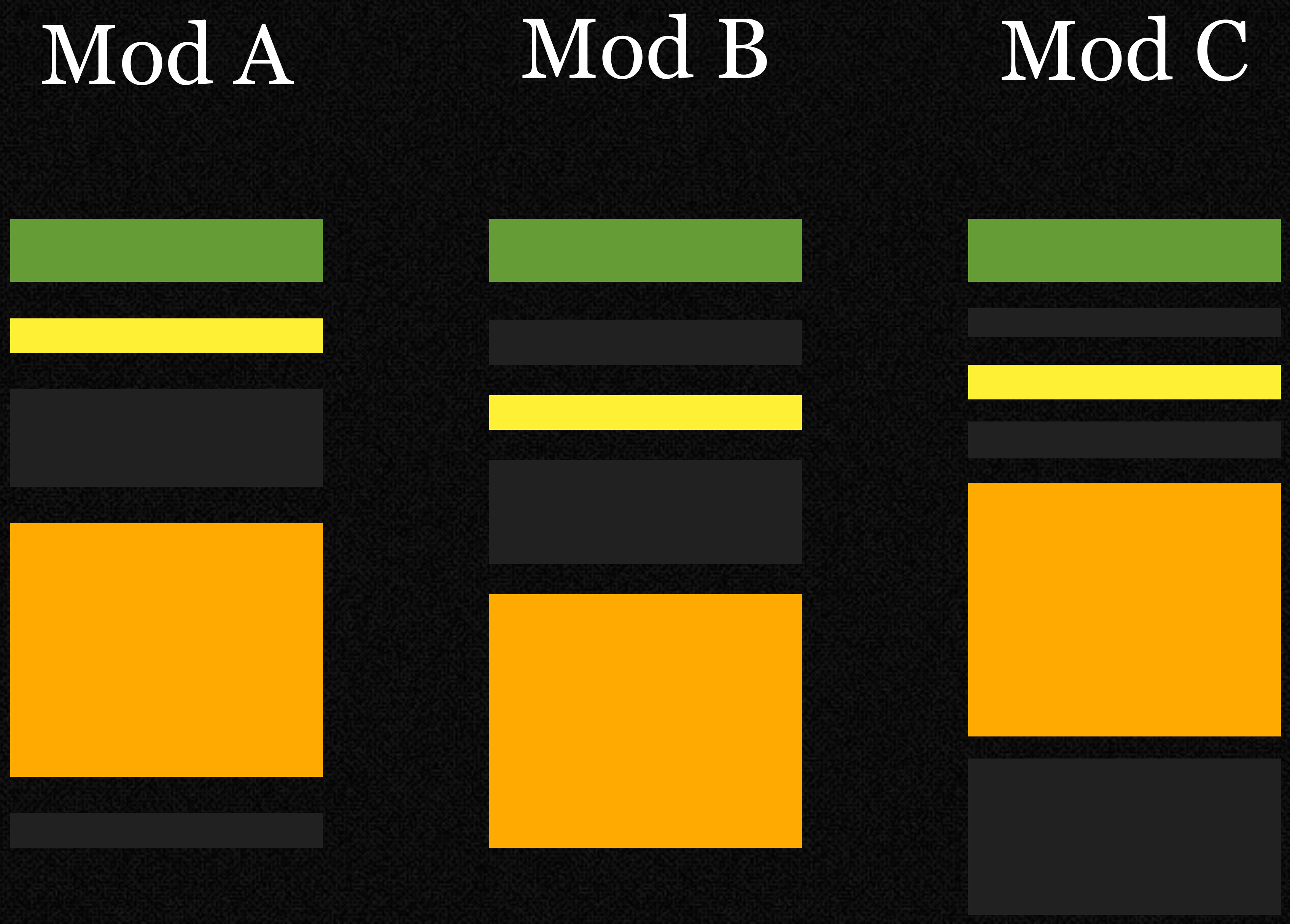
originally this was painful, now we rewrite requests

```
/foo
/buckets/foo
```

```
/foo?policy
/buckets/foo/policy
```

```
/foo/bar
/buckets/foo/objects/bar
```

```
/foo/bar?acl
/buckets/foo/objects/bar/acl
```



Mod A

Mod B

Mod C

# custom default resource funs

```
dict:merge(F, Resource,
        Defaults).
```

# module_info/1

# testing conflict resolution

(with EQC)

# binary `resolve` function

# associative and commutative

```
1 + (2 + (3 + (4 + (5 + 6))))
              ==
6 + (5 + (4 + (3 + (2 + 1))))
```

```
lists:foldl(Fun, L) ==
lists:foldr(Fun, L).
```

# HTTP 503

(or how I learned to stop worrying and say ‘no’)

# poolboy pools Riak connections

503 if you can’t check out a connection during `service_available`

separate pools for resources with different ‘costs’

# record versioning

upgrade/1

```
upgrade(A=#v1{}) ->
  upgrade(upgrade_v1(A);
upgrade(A=#v2{}) ->
  upgrade(upgrade_v2(A);
upgrade(A=#v3{}) ->
  A.
```

# read path:

upgrade

resolve

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Jordan West

Questions?