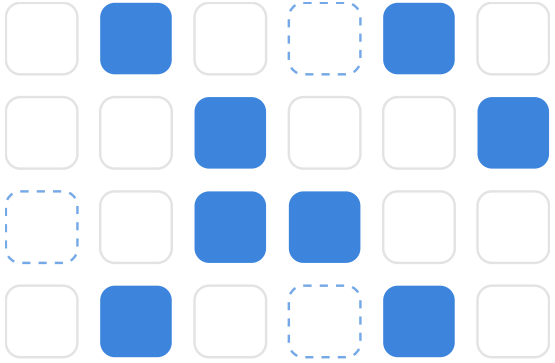
cecil.woebker

ARGOCON NA — 9 NOVEMBER 2026

The Full Stack Preview

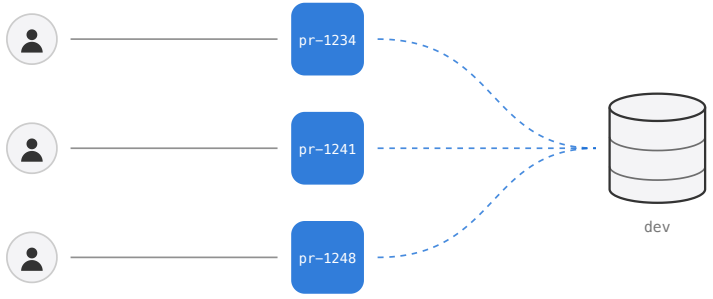
Kubernetes, Argo CD, and ephemeral databases



Cecil Woebker
Co-Founder & CTO, remberg
@cwoebker

Preview environments: v1

One Application per open PR from the pull request generator: api, web, workers, ingress. Click a link, see the branch. It works.




```
MONGO_URL: mongodb+srv://dev.a1b2c.mongodb.net
```

Deleting a file in a preview deletes it from dev.

— engineering velocity grows → side effects of shared state grow

State is not a database, it's a list

Six managed services that might need isolating, with three possible answers: **isolate**, **namespace**, or **share**.

MongoDB ?

whose data does a preview write?

Redis ?

whose cache does it flush?

RabbitMQ ?

who consumes what it publishes?

S3 ?

whose files does it delete?

Outbound email ?

who receives what it sends?

Auth (SSO) ?

who can log in?

One `mongod` per pull request

REJECTED

Managed cluster per preview
via a cloud operator, takes time to provision, & a SaaS dependency in the loop

Shared cluster, per-PR prefixes
application changes needed, prone to errors

BUILT

Single-member replica set

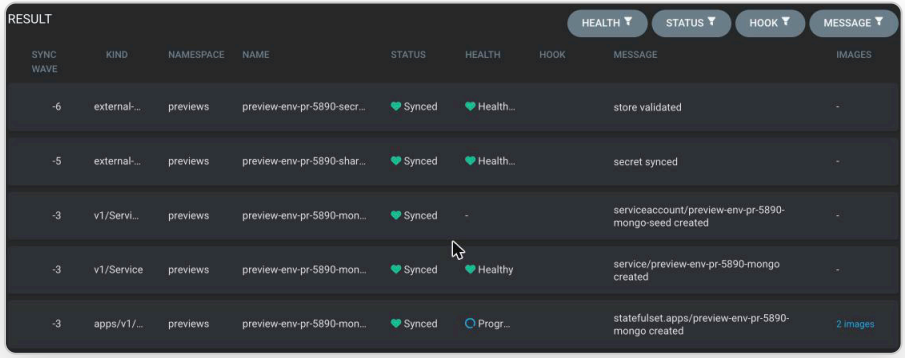
An Atlas-local image

Running data migrations

Search indexes shipped prebuilt

App unchanged: only `MONGO_URL` differs

The seed pipeline



Sync waves: secrets at –6 and –5, the database at –3. Nothing else starts until the StatefulSet is healthy, and healthy means seeded

Dump

nightly CronJob, dev → S3, three-day expiry

Golden

restored once a night, search indexes built, data dir packed

Unpack

per preview: fetch + untar, Ready in 86 s, no restore

Migrate

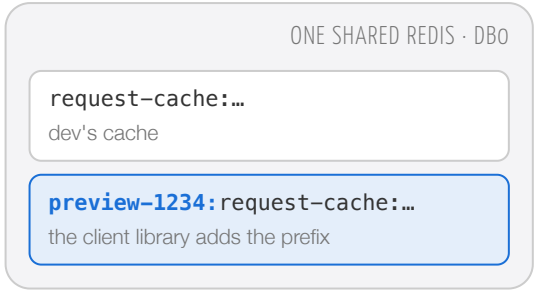
a PostSync job runs the PR's own migration image

Namespace, don't isolate

Redis

whose cache does it flush?

`dev` `pr-1234`

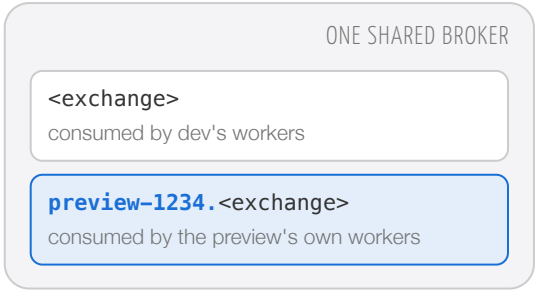


Flushing one key: **a 64 s SCAN**

RabbitMQ

who consumes what it publishes?

`dev` `pr-1234`

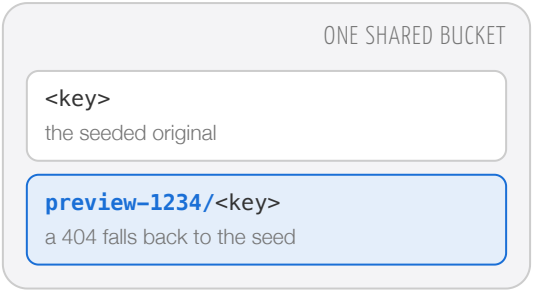


Before: dev's workers did the preview's jobs. **No errors.**

S3

whose files does it delete?

`dev` `pr-1234`



Before: a preview delete **removed dev's file**

MongoDB ISOLATE | Redis NAMESPACE | RabbitMQ NAMESPACE | S3 NAMESPACE | Outbound email ? | Auth (SSO) ?

The two shares we kept

SHARE



Real mail gets sent

SHARE



Logging in is enough for us

MongoDB ISOLATE | Redis NAMESPACE | RabbitMQ NAMESPACE | S3 NAMESPACE | Outbound email SHARE | Auth (SSO) SHARE

The scorecard

MongoDB	ISOLATE	own mongod & nightly seed
Redis	NAMESPACE	shared cluster & prefixed keys
RabbitMQ	NAMESPACE	per-preview exchanges, per-preview workers
S3	NAMESPACE	shared bucket, prefixed writes, reads fall-back
Outbound email	SHARE	dev's sender domain; previews can send real mail
Auth (SSO)	SHARE	mostly read-only; login is the test

2.40 € per pull request

a tenth of a shared database node | lives as long as the PR

thanks.

@cwoebker

cwoebker.com/talks/the-full-stack-preview-lightning

