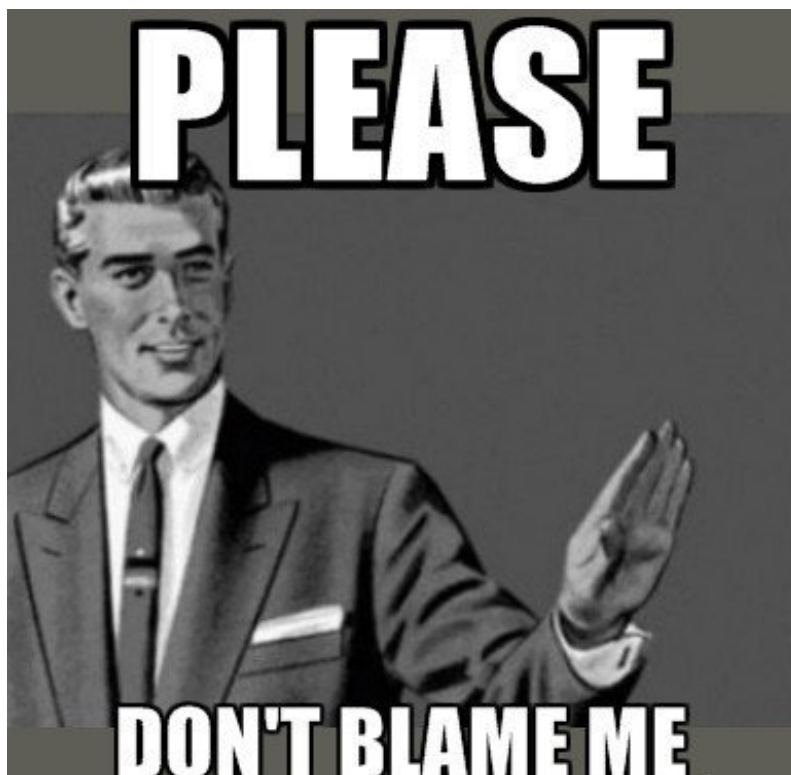# AGENDA

- Brigade
- Gateways
- Secrets
- Code - GitLab
- Storage
- Minio
- Links
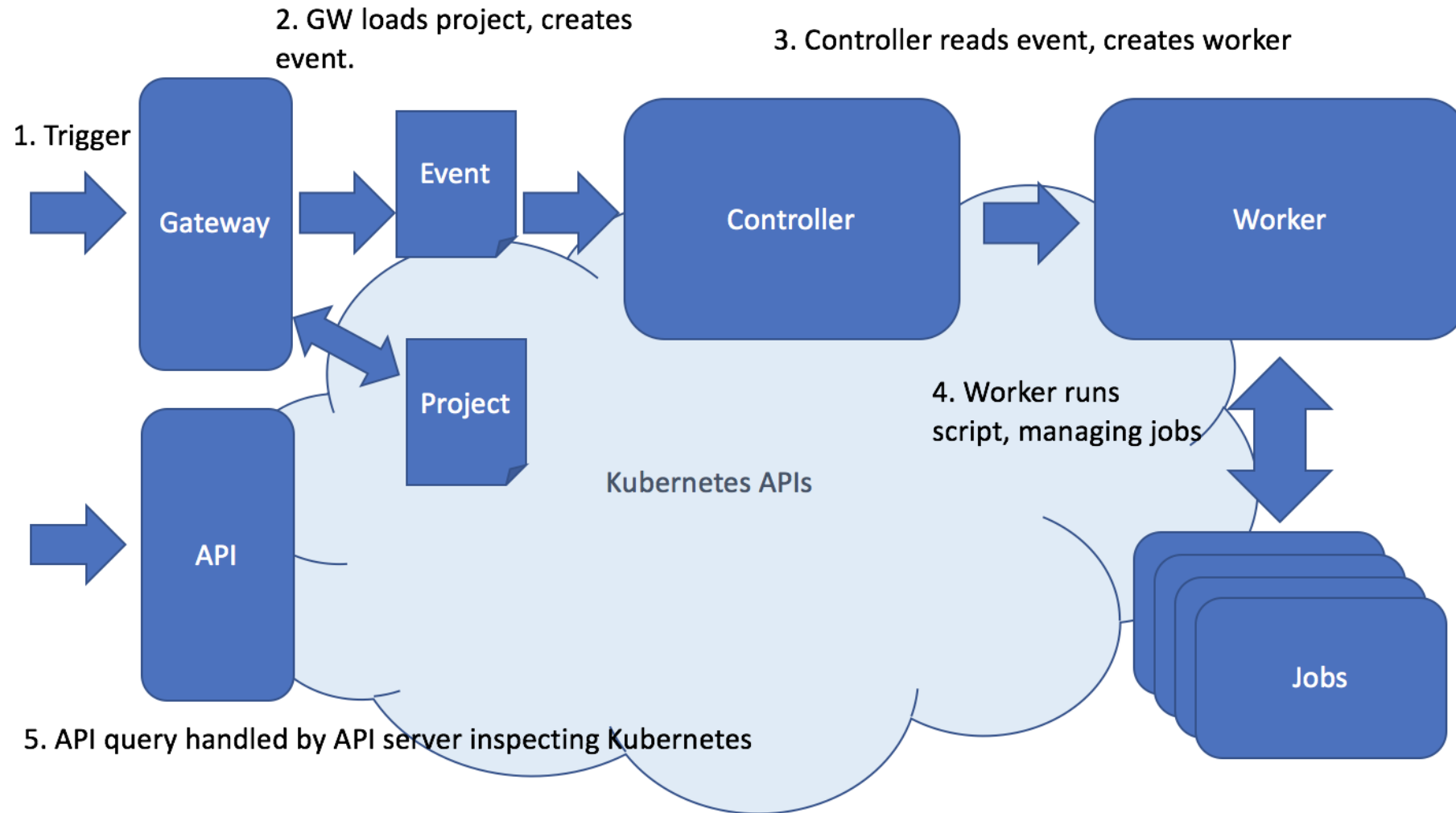
WHAT IS BRIGADE?

↓

BRIGADE ARCHITECTURE

2. GW loads project, creates event.

3. Controller reads event, creates worker

1. Trigger

Gateway

Event

Controller

Worker

Project

4. Worker runs script, managing jobs

Kubernetes APIs

API

Jobs

5. API query handled by API server inspecting Kubernetes

GATEWAY

- a gateway is an entity that generates events
- out of the box Brigade ships with GitHub and DockerHub gateways
- other examples, **brig** CLI tool behaves as a gateway with a `brig run`
- Anything could be a source of events, we want you to contribute

KUBERNETES SECRETS

- Secrets are namespaced objects; exist in the context of a namespace
- You can access them via a volume or an environment variable from a container running in a pod
- The secret data on nodes is stored in tmpfs volumes
⬇

- A per-secret size limit of 1MB exists
- The API server stores secrets as plaintext in etcd
- All **data** fields must be base64 encoded

↓

```yaml
apiVersion: v1
kind: Secret
metadata:
  name: mysecret
  labels:
    app: myapp
type: Opaque
data:
  username: YWRtaW4=
  password: Qm91bGRlcgo=
```

```
$ kubectl create -f ./secret.yaml
secret "mysecret" created
```

Decode

```
$ echo "Qm91bGRlcgo=" | base64 -D
Boulder
```

BRIGADE SECRETS

- **Events** are **Secrets**
- Using the Kubernetes Secret API, Brigade events are specially labeled Secrets

↓

SAMPLE BRIGADE SECRET

```yaml
apiVersion: v1
kind: Secret
metadata:
  name: example
  labels:
    heritage: brigade
    project: brigade-1234567890
    build: 01C1R2SYTYAR2WQ2DKNTW8SH08
    component: build
type: brigade.sh/build
```

```yaml
data:
  event_provider: github
  event_type: push
  revision:
    commit: 6913b2703df943fed7a135b671f3efdafd92dbf3
    ref: master
  build_name: example
  project_id: brigade-1234567890
  build_id: 01C1R2SYTYAR2WQ2DKNTW8SH08
  payload: "{ 'foo': 'bar' }"
  script: "console.log('hello');"
```

GITLAB GATEWAY

github.com/lukepatrick/brigade-gitlab-gateway

Gateway Executable

```go
package main

import (
    "flag"
    "fmt"
    "log"
    "os"
    "strings"

    "github.com/Azure/brigade/pkg/brigade"
```

Gateway Secret writer

```go
package webhook

import (
    "log"

    "github.com/Azure/brigade/pkg/brigade"
    "github.com/Azure/brigade/pkg/storage"
)

const (
    brigadeJSFile      = "brigade.js"
```

DEMO

REFERENCES

- kubernetes.io/docs/concepts/configuration/secret
- github.com/lukepatrick/brigade-gitlab-gateway
- github.com/lukepatrick/brigade-bitbucket-gateway
- github.com/lukepatrick/minio-brigade
- github.com/Azure/brigade

QUESTIONS?

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⌗ lukepatrick

THANK YOU!