

ALL DAY DEVOPS

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Jeff Knurek

Bring Back the Power
of the IDE





whoami

Jeff Knurek

Continuous Delivery Engineer
at travel audience

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Focus on Debugging

Day 1: Deploy

Day 2: Observability

Day 3: Developers

Day 1: Deploy

GitOps

Tools:

- Flux
 - <https://github.com/fluxcd/flux>
- Custom Operator
 - kcd: <https://github.com/nearmap/kcd>
 - DIY: <https://blog.codecentric.de/en/2019/06/kubernetes-operators-helm>
- Spinnaker/JenkinsX/so many more

Day 2: Observability

"SRE"

Tools:

- Monitoring
 - Prometheus: <https://prometheus.io>
 - Datadog: <https://www.datadoghq.com>
- OpenTelemetry
 - merge of *OpenTracing & OpenCensus*
 - Jaeger: <https://www.jaegertracing.io>
 - Zipkin: <https://zipkin.io>



Day 3: Developers

Non-production environment

Tools:

- Armador
- Garden.io
- Acyl
- Skaffold
- Okteto
- minikube
- kind
- docker desktop



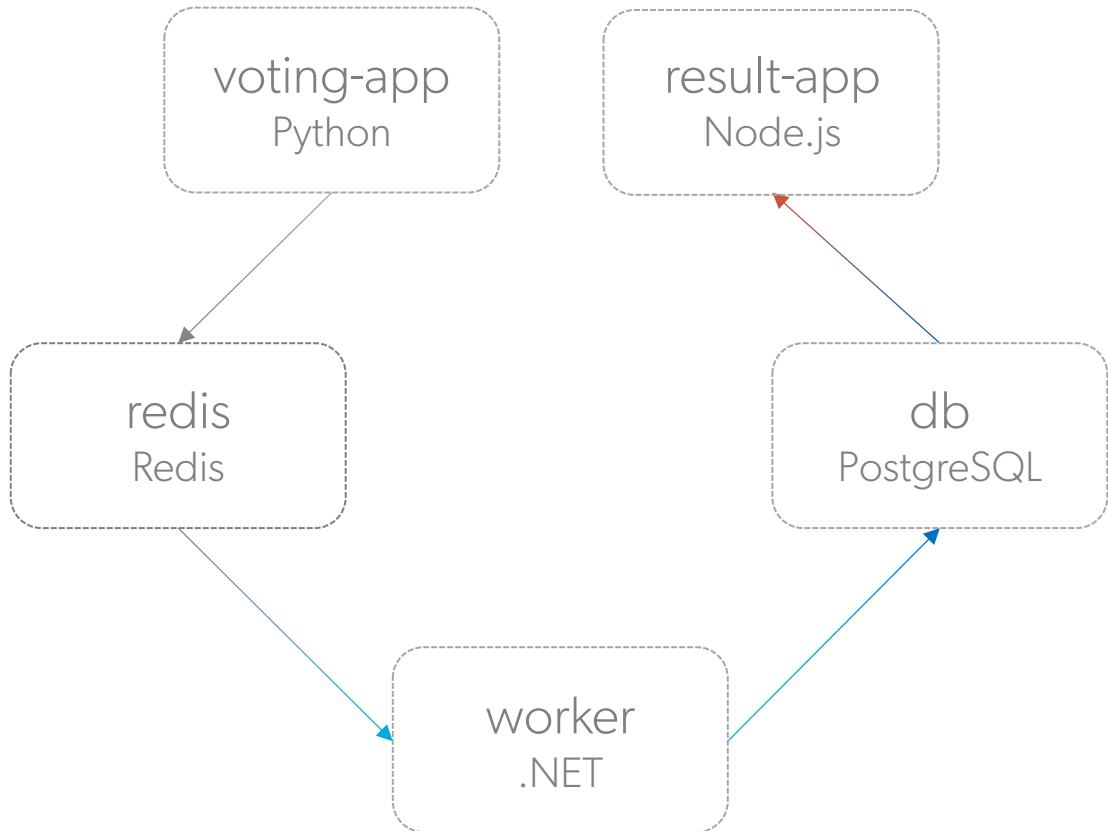
Source: <https://i2.wp.com/opensourceforu.com/wp-content/uploads/2018/03/Bug-with-magnifying-glass.jpg>



<https://github.com/travelaudience/armador>

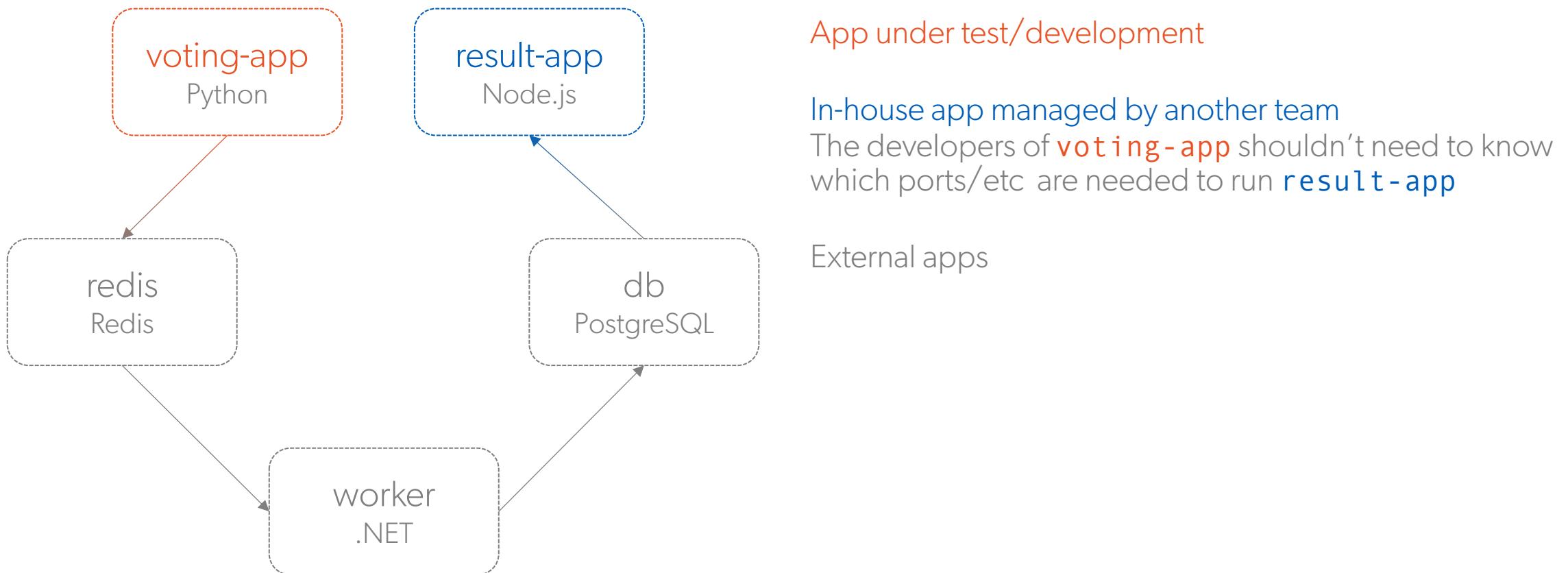
- Like Docker Compose, but for Kubernetes
- Wrapper around Helm

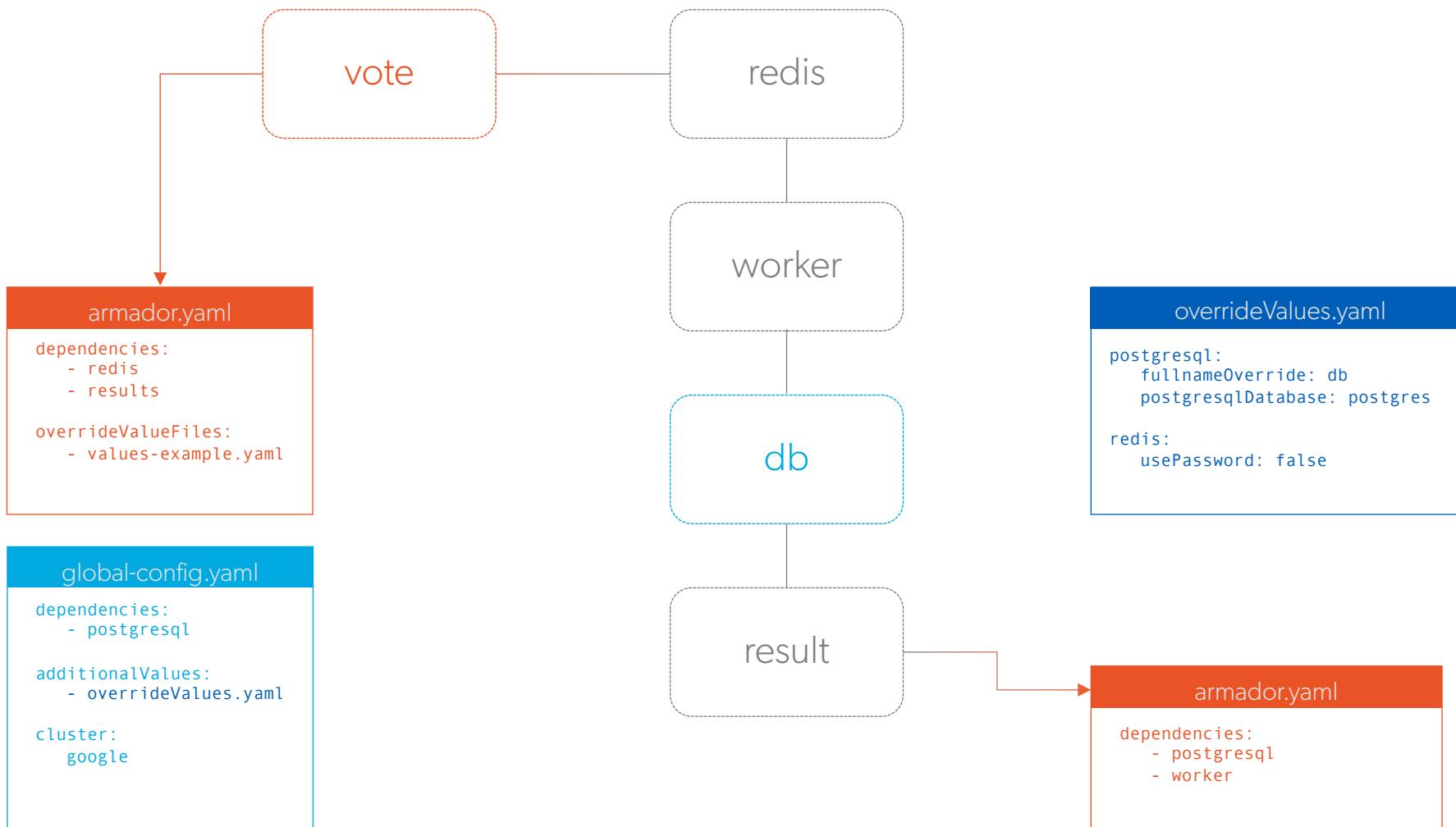
github.com/dockersamples/example-voting-app



```
services:  
  vote:  
    build: ./vote  
    command: python app.py  
    volumes:  
      - ./vote:/app  
    ports:  
      - "5000:80"  
    networks:  
      - front-tier  
      - back-tier  
  
  result:  
    build: ./result  
    command: nodemon server.js  
    volumes:  
      - ./result:/app  
    ports:  
      - "5001:80"  
      - "5858:5858"  
  
  worker:  
    build:  
      context: ./worker  
    depends_on:  
      - "redis"  
      - "db"  
  
  redis:  
    image: redis:alpine  
    container_name: redis  
    ports: ["6379"]  
    networks:  
      - back-tier  
  
  db:  
    image: postgres:9.4  
    container_name: db  
    volumes:  
      - "db-data:/var/lib/postgresql/data"
```

github.com/dockersamples/example-voting-app





Day 3: Developers

Non-production environment

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Bring Back the Power of the IDE

Working with Dev Env

– Telepresence

<https://github.com/telepresenceio/telepresence>

– Ksync

<https://github.com/vapor-ware/ksync>

– Squash

<https://github.com/solo-io/squash>

– Skaffold

<https://github.com/GoogleContainerTools/skaffold>

– Cloud Code

<https://cloud.google.com/code>

Demo



References

- Armador blog post:
<https://tech.travelaudience.com/armador-5fab64496e2a>
- Skaffold & Cloud Code video
<https://www.youtube.com/watch?v=Z2fyc3AbfKE>
- K8s blog post about tools:
<https://kubernetes.io/blog/2018/05/01/developing-on-kubernetes>
- Jib, for Java images:
<https://github.com/GoogleContainerTools/jib>
- Acyl:
<https://engineering.dollarshaveclub.com/qa-environments-on-demand-with-kubernetes-5a571b4e273c>

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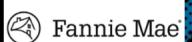
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