

# Kubernetes Jobs and the Sidecar Problem

Lightning Talk

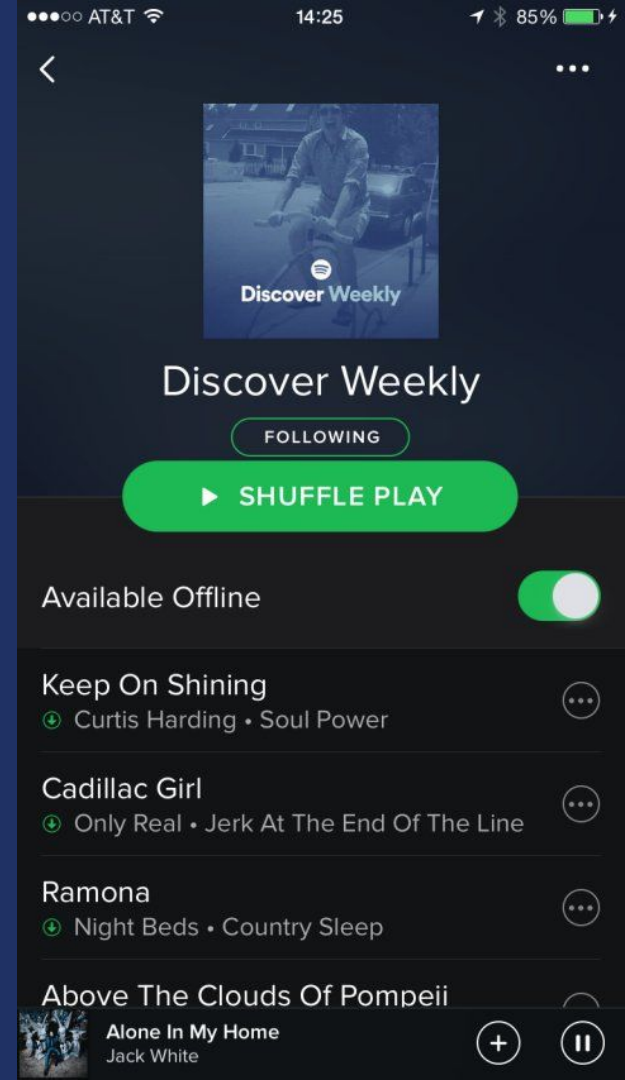
James Wen - [jameswen@spotify.com](mailto:jameswen@spotify.com)  
[@rochesterinnyc](#)

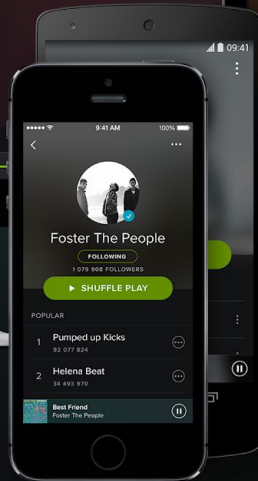
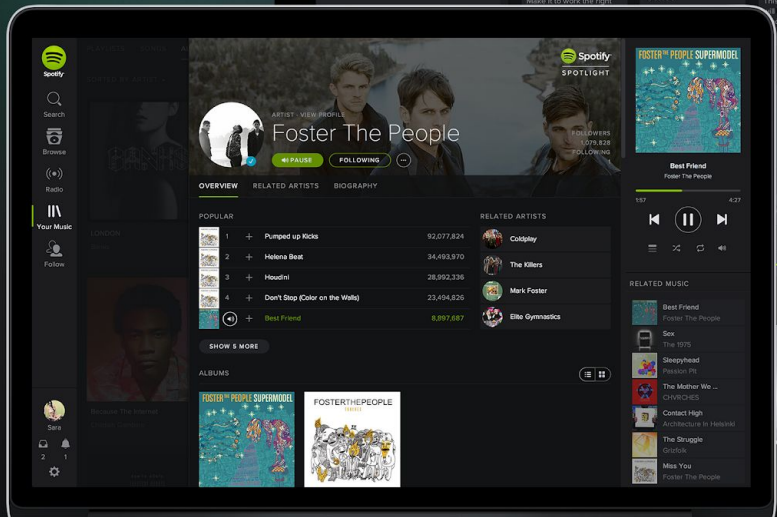
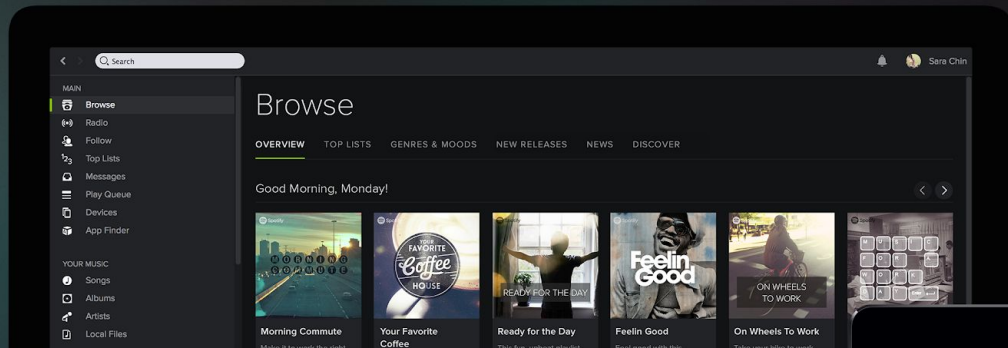
KubeCon + CloudNativeCon Europe 2019  
May 20th, 2019



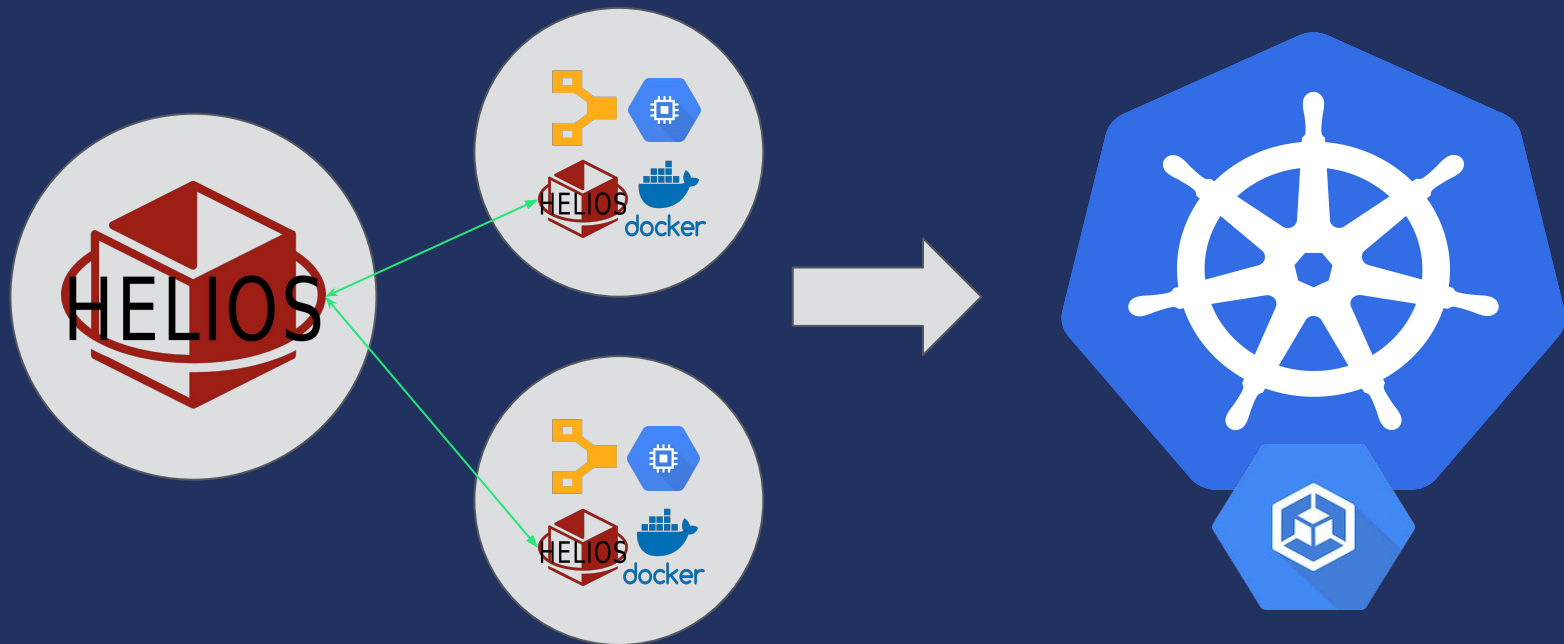
# About Me

- Senior Site Reliability Engineer
- Worked on Kubernetes Migration

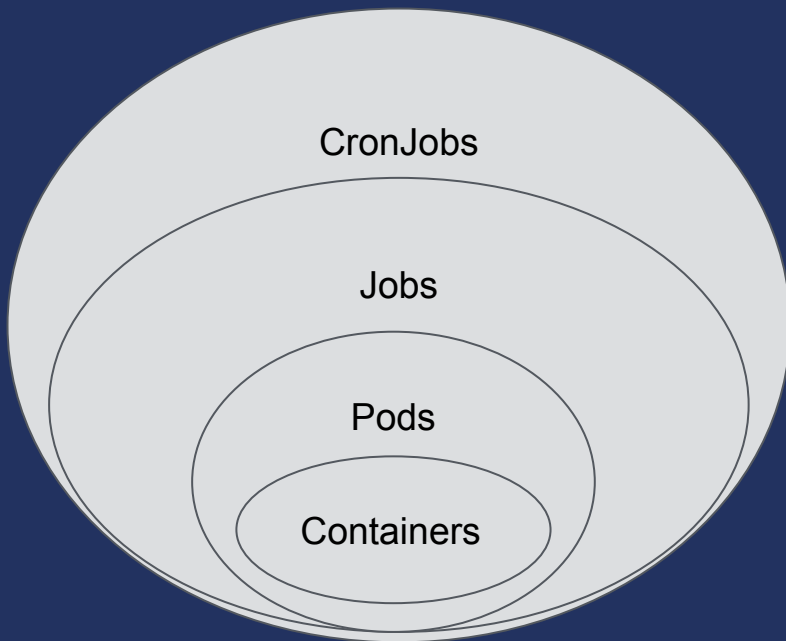




# Kubernetes at Spotify



# Jobs



```
apiVersion: batch/v1
kind: Job
metadata:
  name: cleanup-cluster
spec:
  template:
    spec:
      containers:
      - name: cleanup-cluster
        image: alpine
        restartPolicy: Never
      backoffLimit: 4
```

# History of Jobs in Kubernetes

- September 2015: Jobs go Beta in 1.1
- March 2016: Jobs go GA in 1.2
- May 2016: ScheduledJobs created in v1.3.0-alpha.4
- May 2016: Github Issue for "Better support for sidecar containers in batch jobs" created (<https://github.com/kubernetes/kubernetes/issues/25908>)

# Jobs + Sidecars

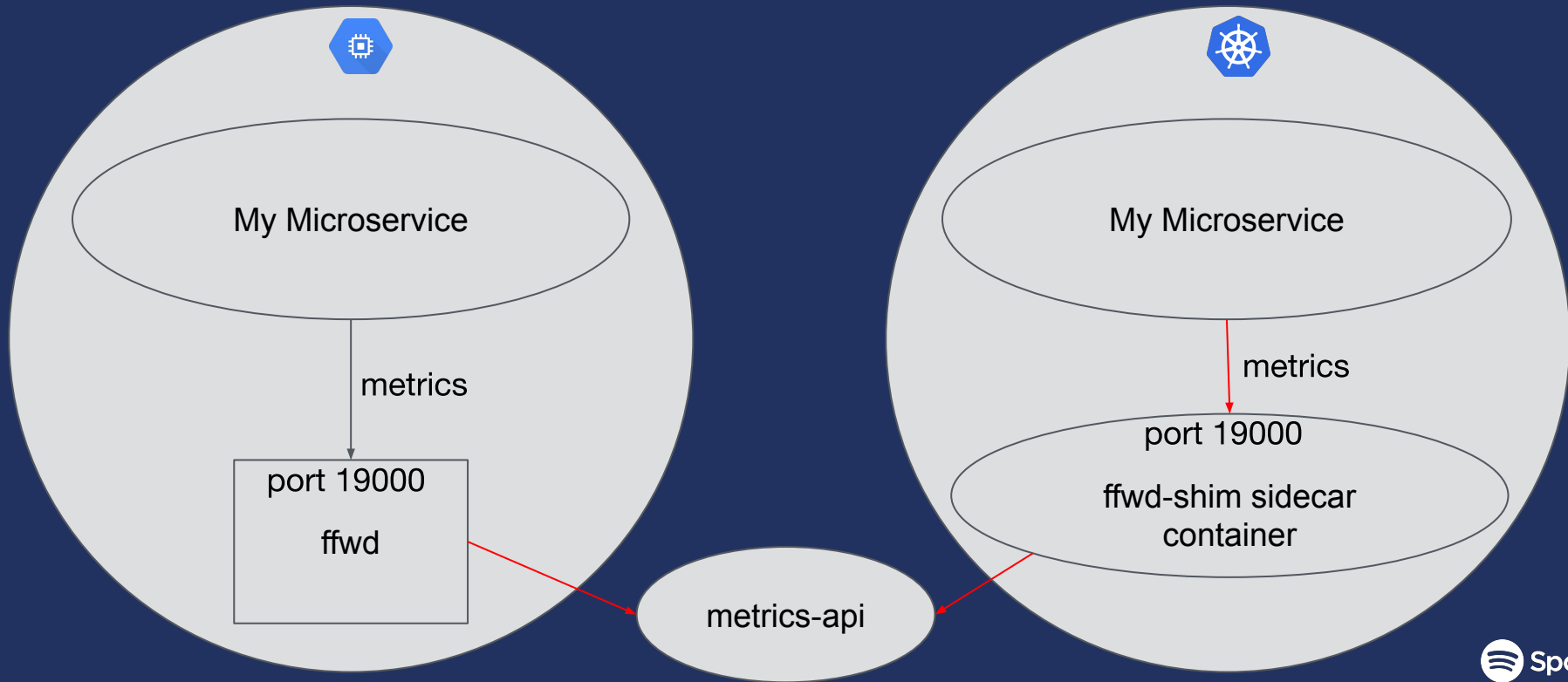


# Jobs + Sidecar Problem

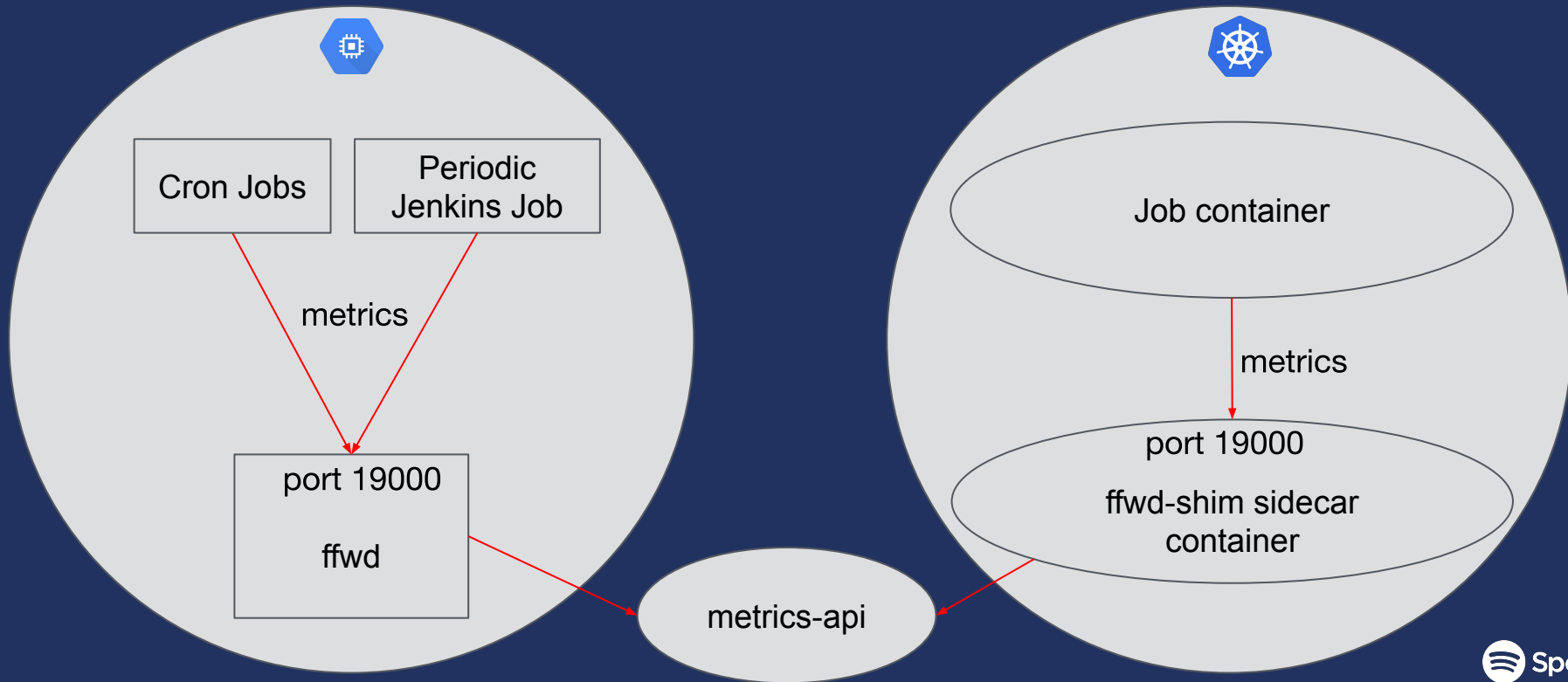




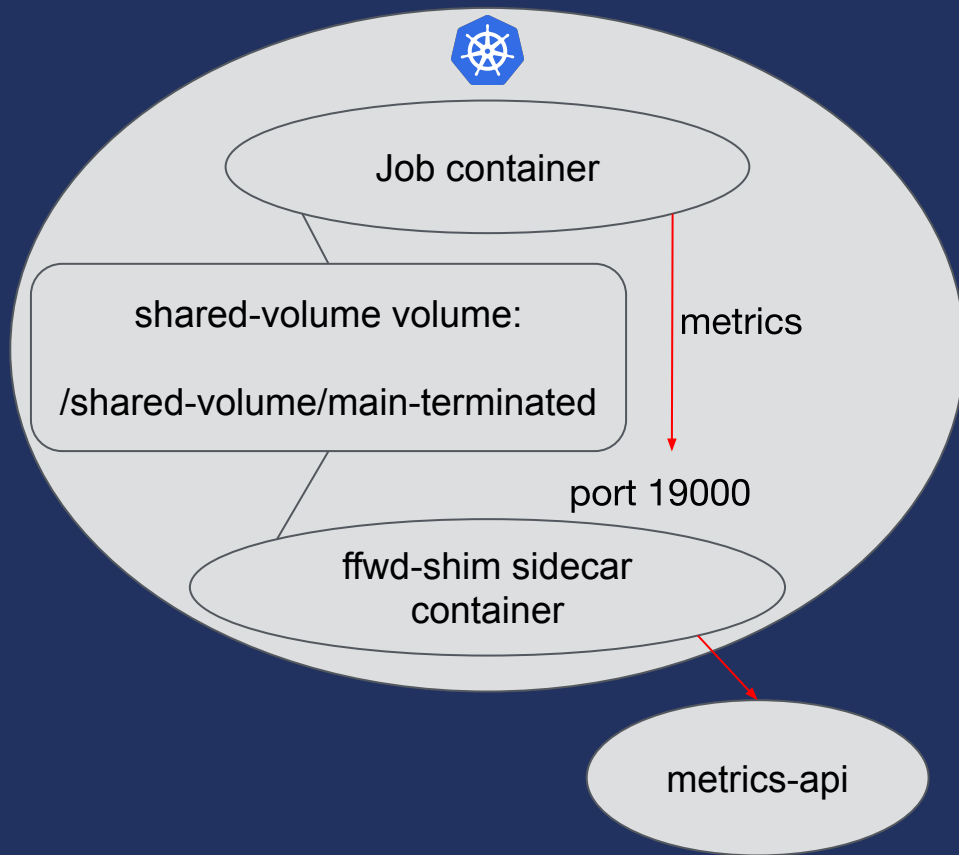
# Sidecars at Spotify



# Sidecar Problem at Spotify



# Workaround: Shared Volume Communication



```
volumes:
- name: shared-volume
  emptyDir: {}
containers:
- name: main-job-container
  image: gcr.io/my-project/my-job
  command: ["/bin/bash", "-c"]
  args:
  - |
    trap "sleep 5; touch /tmp/pod/main-terminated" EXIT
    /usr/src/app/run-job-script.sh
  volumeMounts:
  - name: shared-volume
    mountPath: /tmp/pod
- name: ffwd-java-shim
  image: ffwd-java-shim
  command: ["/bin/bash", "-c"]
  args:
  - |
    /run-ffwd-java-shim.sh &
    CHILD_PID=$!
    (while true; do if [[ -f "/tmp/pod/main-terminated" ]];\
      then kill $CHILD_PID; fi; sleep 1; done) &
    wait $CHILD_PID
    if [[ -f "/tmp/pod/main-terminated" ]]; then exit 0; fi
  volumeMounts:
  - name: shared-volume
    mountPath: /tmp/pod
    readOnly: true
```

# Call to Action

- Finally a KEP out: [Joseph Irving's Blog Post on the process](https://github.com/kubernetes/enhancements/blob/master/keps/sig-apps/sidecarcontainers.md)  
<https://github.com/kubernetes/enhancements/blob/master/keps/sig-apps/sidecarcontainers.md>
- Jobs have been out for ~4.5 years
- The issue for sidecar container support has been out for 3 years
- KEP out for ~1 year
- Let's get some more feedback and motion on the KEP!



Thanks for listening!

Join the Band!

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