

# Using GCP and Docker for Schedule Based GO Scripts


Miriah Peterson

# Bio

- golang + rust streamer  
Twitch : [@soypete](https://www.twitch.tv/soypete)
- Organizer [GoWest Conference](https://www.gowestconference.com/)
- Proud Dog Mom
- [Twitter @captainnobody1](https://twitter.com/captainnobody1)
- [GitHub soypete](https://github.com/soypete)



# Set the Stage

**Forge Utah**

Members

3,166

Groups

7

Countries

1

Search Forge Utah

Q

Search for Places, Cities and Countries


SEARCH

Upcoming events

☒ In person events

☒ Online events

Online event





TUE, AUG 3, 6:30 PM MDT

TBA - looking for speaker

Utah Go User Group

3






TUE, AUG 3, 6:15 PM MDT


TBD - looking for speaker

Women Who Go Utah ( + Allies)

1




Who we are



Clint Berry

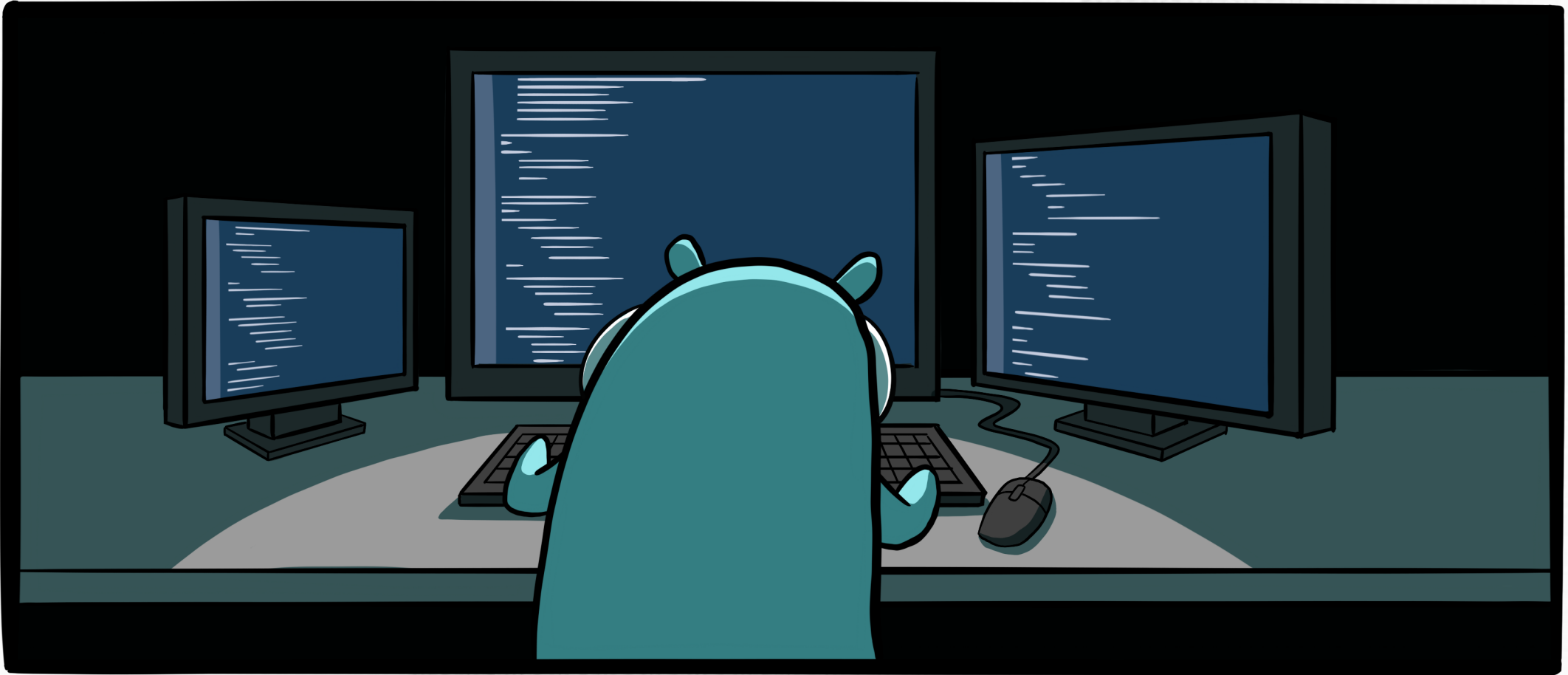
Forge Utah Administrator

Get in touch



[Twitter @captainnobody1](#)

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# Web Scrapper

- build using go!
    - [utah air quality example](#)
    - [dom parser](#)
- [crawler code](#)

# Web Scraper

- firestore for storage
  - [firestore](#)
  - [firestore go client](#)
  - [firestore go talk from utah go meetup](#)

[crawler code](#)---

# Web Scrapper

- want a weekly pull for historical meetup data
  - meetup name
  - talk title and description
  - *number of attendees* (to be implemented)

[crawler code](#)

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# Web Scrapper

```
{
  "@context": "http://schema.org",
  "@type": "Event"
}
```

[Twitter @comtobody1](#)

# Web Scrapper

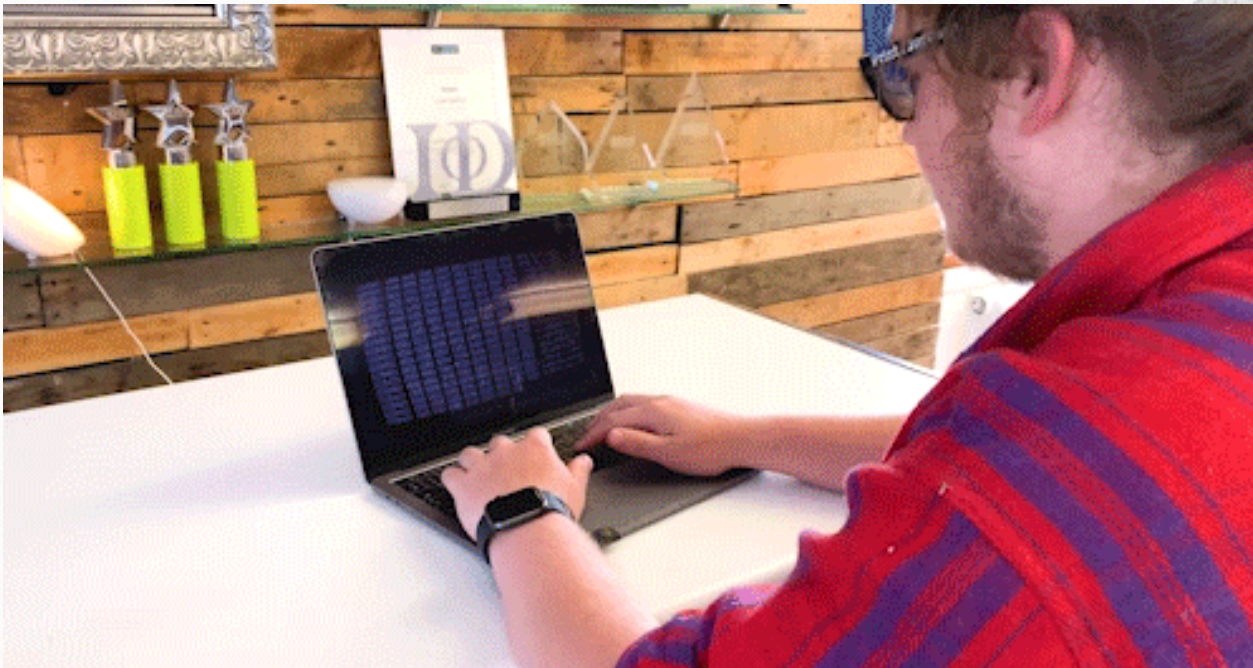
1. call web address to get the site file
2. parse the site file to get the event information
3. Take the json and Dump it to a cloud firestore

[crawler code](#)



# Web Scrapper

CODE TIME!



# Cron Job

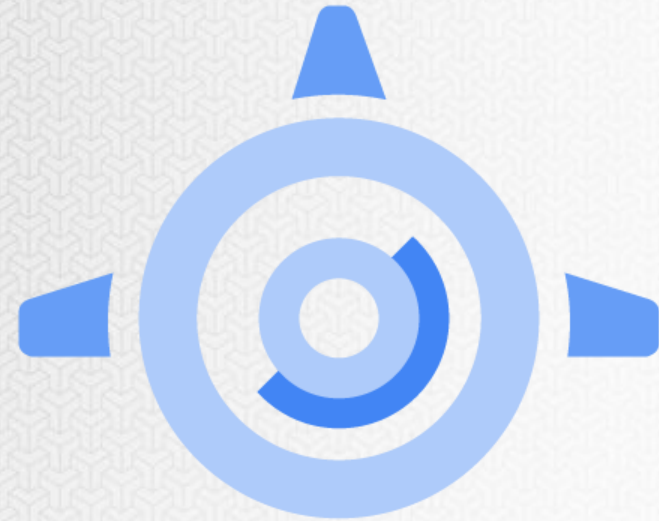
Running cron jobs on Google Cloud Platform.

# Cron Job

Running cron jobs on Google Cloud Platform.

Options:

- [App Engine Cron](#)



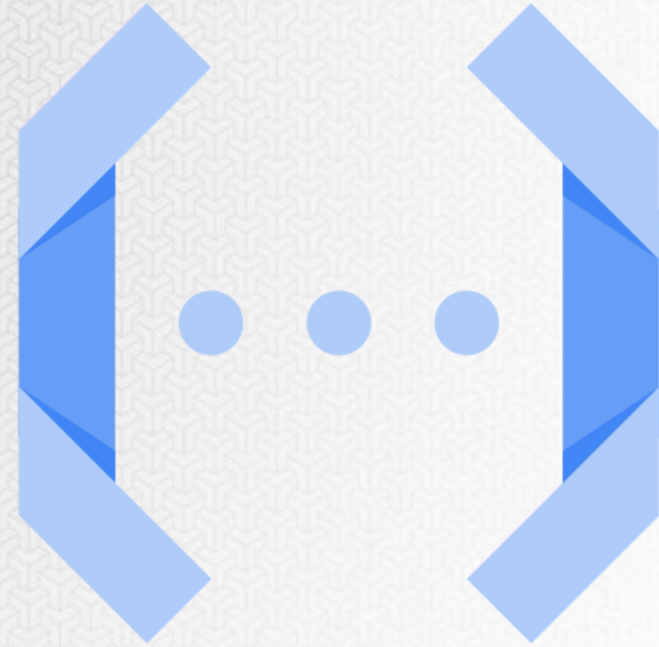


# Cron Job

Running cron jobs on Google Cloud Platform.

Options:

- [App Engine Cron](#)
- [Cloud Functions + Scheduler](#)



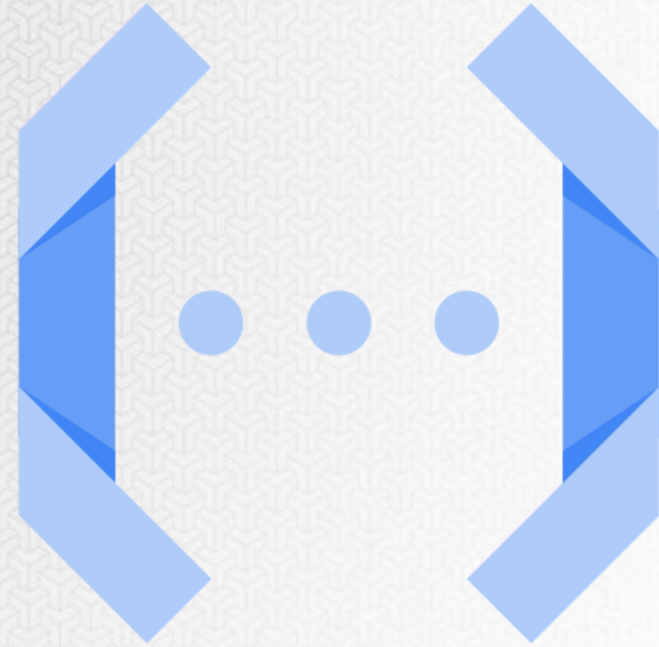


# Cron Job

Running cron jobs on Google Cloud Platform.

Options:

- [App Engine Cron](#)
- [Cloud Functions + Scheduler](#)
- [Cloud Run + Scheduler](#)



# Cron Job

Running cron jobs on Google Cloud Platform.

Options:

- [App Engine Cron](#)
- [Cloud Functions + Scheduler](#)
- [Cloud Run + Scheduler](#)
- [Kubernetes Cron on GKE](#)

# Cron Job

## Step 1: Create a docker image

```
FROM golang:alpine

WORKDIR /app
COPY go.* ./
RUN go mod download

COPY . ./
COPY --chown=root permissions/meetup-crawler-store-b25be2c787ec.json ./creds.json
RUN go build -v -o scraper

CMD ["/app/scraper"]
```

# Cron Job

## Step 2: Add the docker image to the Google Cloud Registry

```
bash
gcloud builds submit --tag gcr.io/meetup-crawler-store/web-crawler
```



# Cron Job

## Step 3: Add image to Cloud Run Instance

```
gcloud run deploy --image gcr.io/meetup-crawler-store/web-crawler --platform managed
```

# Cron Job

## Step 4: Create Endpoint for Calling Cloud Run

```
log.Print("starting server...")
http.HandleFunc("/crawl", runCrawler)
http.HandleFunc("/health", healthCheck)

// Determine port for HTTP service.
port := os.Getenv("PORT")
if port == "" {
    port = "8080"
    log.Printf("defaulting to port %s", port)
}
```

# Cron Job

## Step 5: Create schedule for calling the Cloud Run

```
gcloud scheduler jobs create http test-handler --schedule "5 * * * *"  
--http-method=Get  
--uri=https://{app_address}/crawl  
--oidc-service-account-email=web-crawler-scheduler@meetup-crawler-store.iam.gserviceaccount.com  
--oidc-token-audience=https://{app_address}/crawl
```

# Why not Cloud functions?

1. cloud functions support go
  2. cloud functions can run on a schedule
  3. cloud functions can be still connect to firestore
- [Cloud Functions](#)
  - [Cloud Functions + Scheduler](#)



# Why not Cloud functions?



# Hurdles

- Creating service accounts
- Adding the firebase permissions
- Accessing logs
- Exposing endpoints



# Summary

- Go is the best programming language!
- Docker support makes it really easy to create a containerized applications/scripts.



# Questions

Thanks you for coming out to this talk!

[twitch.tv/soypete01](https://twitch.tv/soypete01)

[twitter.com/captainnobody1](https://twitter.com/captainnobody1)

[youtube.com/captainnobody1](https://youtube.com/captainnobody1)



# Resources

- [Firestore video](#)
- [Crawler streams](#)
- [crawler code](#)