github.com/maximilien/knfun

Knative / micro-services / functions demo

demo goals

- **micro-services**
  - creating micro-services that you can test locally
  - creating docker images of your micro services
  - running your micro-service as a function

- **serverless**
  - using `kn` to create, delete, and update services or functions
  - using `kn` to connect functions
  - using `kn` to debug functions

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demo design sketch

- **TwitterFn search function**
    in: hashtags or string
    out: image URLs from recent tweets

- **WatsonFn image analysis function (via Watson APIs)**
    in: image URLs
    out: image features with probability
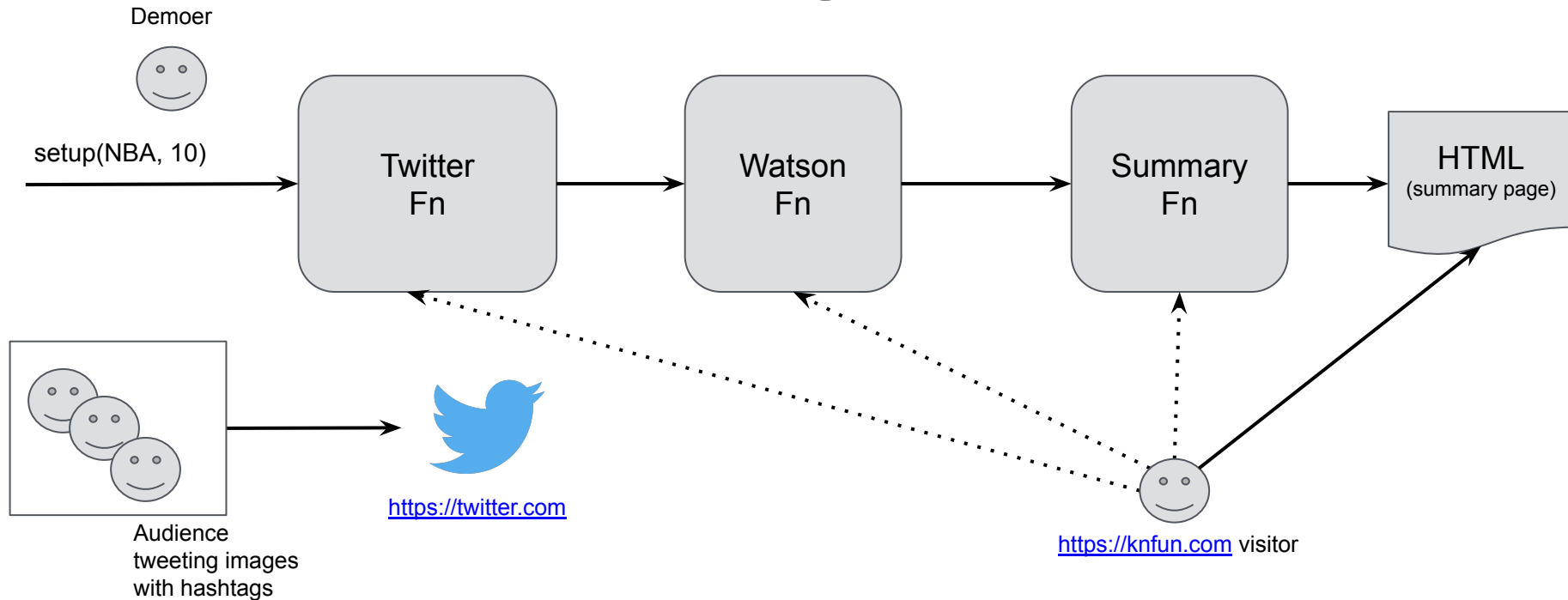
- **SummaryFn function**
    - *in:* search string and twitterFn and WatsonFn
    - *out*: HTML page displaying summary

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demo design sketch

Demoer

setup(NBA, 10) →

Twitter Fn

Watson Fn

Summary Fn

HTML (summary page)

Audience tweeting images with hashtags

https://twitter.com

https://knfun.com visitor

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demo steps

- **build**
  ```
  $ git clone git:github.com/maximilien/knfun.git
  $ cd knfun
  $ ./hack/build.sh
  ```
- **test**
  ```
  $ ./twitter-fn search NBA -c 10 -o json -S -p 8080 --twitter-api-key ...
  $ ./watson-fn vr classify http://<image>.jpg -o json -S -p 8081 --watson-api-key
  $ ./summary-fn NBA -c 10 -S -p 8082 --twitter-fn-url … --watson-fn-url ...
  ```
- **image**
  ```
  $ docker build -v -f ./funcs/twitter/Dockerfile -u drmax/twitter-fn
  $ docker push drmax/twitter-fn

      …
  ```
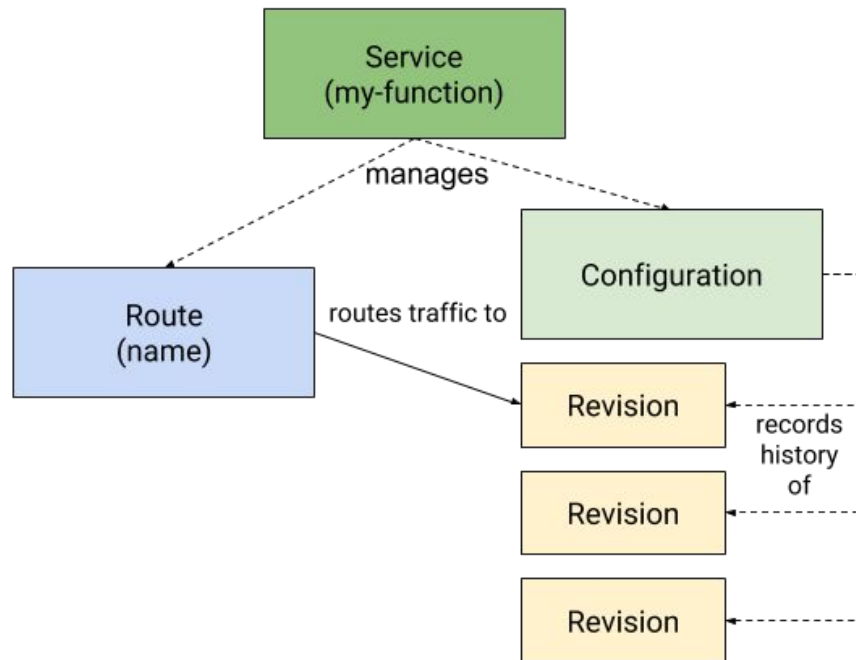- **functions**
  ```
  $ ./kn service create twitter-fn --image docker.io/drmax/twitter-fn --env
  twitter-api-key ...
  ...
  ```

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demo

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knative overview

knative overview (*cont.*)