Heroku 101

Kenneth Reitz

Hi.

@kennethreitz

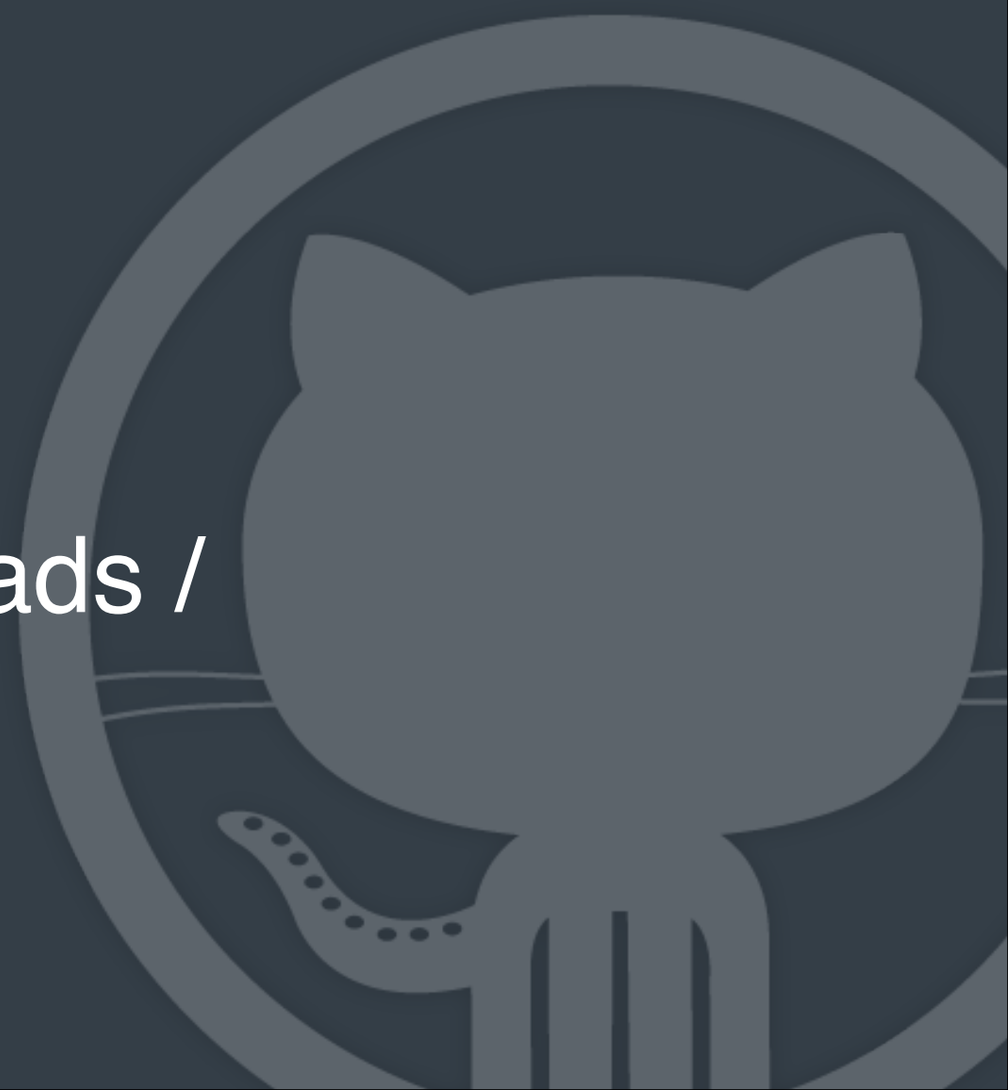
Requests

HTTP for Humans

```
>>> r = requests.get('https://api.github.com/user', auth=('user', 'pass'))
>>> r.status_code
200
>>> r.headers['content-type']
'application/json; charset=utf-8'
>>> r.encoding
'utf-8'
>>> r.text
u'{"type":"User"...'
>>> r.json
{u'private_gists': 419, u'total_private_repos': 77, ...}
```

github.com/kennethreitz

- ~20 serious projects.
- 100+ experiments.
- OSX-GCC-Installer: 56TB of downloads.
- Requests: 7+ million downloads / month.



salesforce heroku

Safe Harbor

Safe harbor statement under the Private Securities Litigation Reform Act of 1995.

This presentation may contain forward-looking statements that involve risks, uncertainties, and assumptions. If any such uncertainties materialize or if any of the assumptions proves incorrect, the results of salesforce.com, inc. could differ materially from the results expressed or implied by the forward looking-statements we make. All statements other than statements of historical fact could be deemed forward-looking, including any projections of product or service availability, subscriber growth, earnings, revenues, or other financial items and any statements regarding strategies or plans of management for future operations, statements of belief, any statements concerning new, planned, or upgraded services or technology developments and customer contracts or use of our services.

The risks and uncertainties referred to above include - but are not limited to - risks associated with developing and delivering new functionality for our service, new products and services, our new business model, our past operating losses, possible fluctuations in our operating results and rate of growth, interruptions or delays in our Web hosting, breach of our security measures, the outcome of intellectual property and other litigation, risks associated with possible mergers and acquisitions, the immature market in which we operate, our relatively limited operating history, our ability to expand, retain, and motivate our employees and manage our growth, new releases of our service and successful customer deployment, our limited history reselling non-salesforce.com products, and utilization and selling to larger enterprise customers. Further information on potential factors that could affect the financial results of salesforce.com, inc. is included in our annual report on Form 10-Q for the most recent fiscal quarter ended. This documents and others containing important disclosures are available on the SEC Filings section of the Investor Information section of our Web site.

Any unreleased services or features referenced in this or other presentations, press releases or public statements are not currently available and may not be delivered on time or at all. Customers who purchase our services should make the purchase decisions based upon features that are currently available. Salesforce.com, inc. assumes no obligation and does not intend to update these forward-looking statements.

Confusion as a Service

SaaS, IaaS, & PaaS.

SaaS (software) → For software users.
More features, transparent updates.
Facebook, Basecamp, Trello, etc.

IaaS (infrastructure) → For operations people.
On demand machine resources.
AWS, Digital Ocean, etc.

PaaS (platform) → For developers.
Transparent updates, no servers.
Heroku, App Engine, etc.

DEMO

Heroku:

Run exactly the processes you tell us to run.

Python, Locally.

pip & virtualenv

```
$ virtualenv venv
$ source bin/activate
$ pip install -r requirements.txt
```

Python, on Heroku.

pip & deployed

```
$ pip install -r requirements.txt
```

Python, Locally.

Running an example webserver.

```
$ python manage.py runserver 0.0.0.0:8000
```

Python, on Heroku.

Running an example webserver.

```
$ cat Procfile
web: python manage.py runserver 0.0.0.0:8000
```

What's a Dyno?

Not a Server

Not a VM

A Dyno is a Process,

Interacting with Dynos.

Scaling a multi-process web application.

```
$ cat Procfile
web: python manage.py runserver
worker: python manage.py celeryd -E -B

$ heroku scale web=2
$ heroku scale worker=3:standard-1x
```

Run Arbitrary Commands.

Managing a multi-process web application.

```
$ heroku run python manage.py migrate
  ...
$ heroku run python
  ...
$ heroku run bash
  ...
```

Addon Services

Managed and provisioned infrastructure resources.

Postgres
Redis
Kafka

Memcached
Mongo
Email
Metrics
Logging

Interacting with Addons.

Augmenting a multi-process web application.

```
$ heroku addons:create heroku-postgresql
$ heroku addons:create sentry
```

Interacting with Addons.

Augmenting a multi-process web application.

```
$ heroku config
=== pure-plateau-37918 Config Vars
DATABASE_URL: postgres://xxx:xxx@xxx.compute-1.amazonaws.com:5432/xxx
SENTRY_DSN:   https://xxx:xxx@app.getsentry.com/xxx
```

Application Configuration.

Configuring a multi-process web application.

```
$ heroku config:set hello=world
Setting hello and restarting ⬢ pure-plateau-37918... done, v5
hello: world


$ cat example.py
import os

who = os.environ.get('hello', 'you')
```

Tutorial Time!

hrku.co/pycon101