

Heroku 101



Kenneth Reitz

The background features several stylized, swirling cloud shapes in a light blue-grey color. These clouds are scattered across the upper half of the image, with some appearing as simple outlines and others having more complex, spiral-like internal patterns. The overall aesthetic is clean and modern.

Hi.

@kennethreitz



Requests

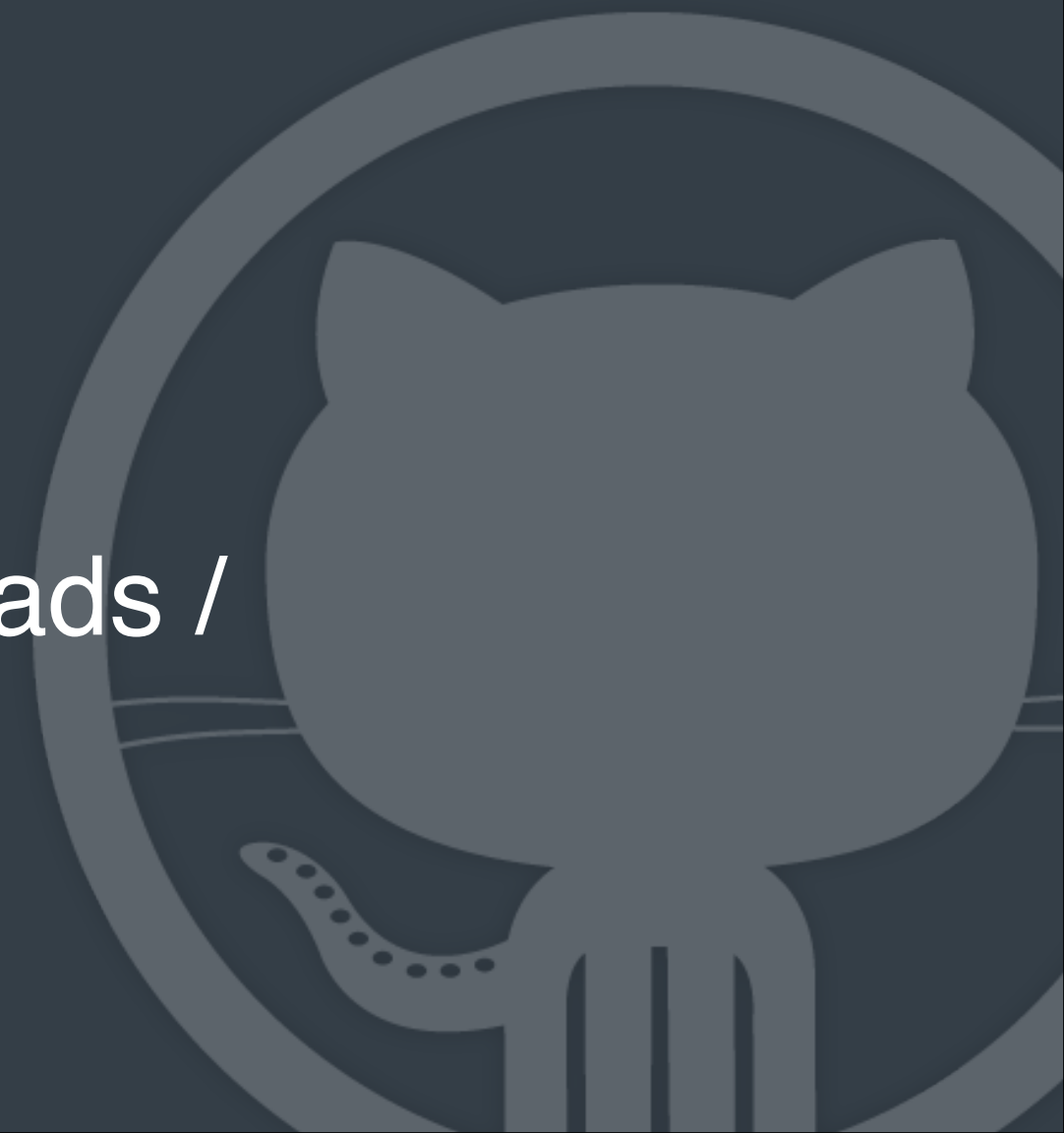
HTTP for Humans

```
>>> 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.







The image features a dark blue background with stylized cloud patterns. A bright blue cloud shape on the left contains the word "salesforce" in white, lowercase, italicized font. To its right, the word "heroku" is written in a white, lowercase, sans-serif font. The background is decorated with several cloud outlines: a large, faint, dark blue cloud at the bottom right, and several smaller, lighter blue cloud outlines in the upper left and upper right areas.

salesforce heroku

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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) →

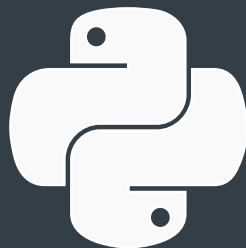
For developers.

Transparent updates, no servers.

Heroku, App Engine, etc.



php





php





DEMO

The image features a dark blue background with faint, stylized cloud patterns. A prominent, ornate, light gray decorative frame surrounds the central text. The frame consists of symmetrical, flowing lines with small circular accents at the ends of the scrolls. The word "DEMO" is centered within this frame in a bold, white, sans-serif font.

The background features several stylized, swirling cloud shapes in a light blue-grey color, set against a dark grey-blue gradient background. The clouds are positioned in the upper half of the frame, with some appearing as simple outlines and others having more defined, rounded shapes.

Heroku:

Run exactly the processes you tell us to run.

Python, Locally.

pip & virtualenv

```
$ virtualenv venv
```

```
$ source bin/activate
```

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

The background features several stylized, light blue cloud outlines of varying sizes and shapes, scattered across a dark blue-grey gradient background.

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

The background is a dark blue-grey color. It features several stylized, light blue-grey cloud shapes with spiral patterns. There are also horizontal, wavy lines in the same color, some of which are positioned above and below the clouds.

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')
```

The background features several stylized, swirling cloud shapes in a light blue-grey color against a dark grey-blue background. The clouds are of varying sizes and are positioned around the central text.

Tutorial Time!

hrku.co/pycon101