

Knobs, buttons & switches



Operating your application at scale



Got Options?

Application Resilience





HEROKU

gettyimages[®]

1. Maintenance Mode
2. Read-Only Mode
3. Feature Flags
4. Rate Limits
5. Non-critical work
6. New code paths
7. Circuit Breakers



1

**Maintenance
Mode**

Environment Variable

MAINTENANCE_MODE=ON



2

**Read-only
Mode**

Environment Variable

READONLY_MODE=ON



3

Feature Flags

Feature Flags Granularity

- User
- Global
- Group

Datastore

```
ApplicationSetting.get('billing-enabled')
```

Datastore

```
ApplicationSetting.get('billing-enabled-eu')
```



4

Rate Limits



**Rate
Limits**

**Surge
pricing**


9.9x
THE NORMAL FARE



A Venn diagram consisting of two overlapping circles. The left circle is solid black and contains the text 'Rate Limits' in white. The right circle is yellow with a black outline and contains the text 'Preferred traffic' in black. The intersection of the two circles is also yellow.

**Rate
Limits**

**Preferred
traffic**

Datastore

```
ApplicationSetting.set('default-rate') =  
    100
```

Datastore

```
> customer.rate_limit  
=> 100
```

Datastore

```
> customer.rate_limit_modifier = 2.0
```

Datastore

```
> customer.rate_limit  
=> 200
```

Datastore

```
ApplicationSetting.set('default-rate') = 50
```

Datastore

```
> customer.rate_limit  
=> 100
```



5

**Stop
non-critical
work**

Datastore

```
> ReportSetting.get("monthly_user_report")  
=> false
```



6

**Known
Unknowns**

Datastore

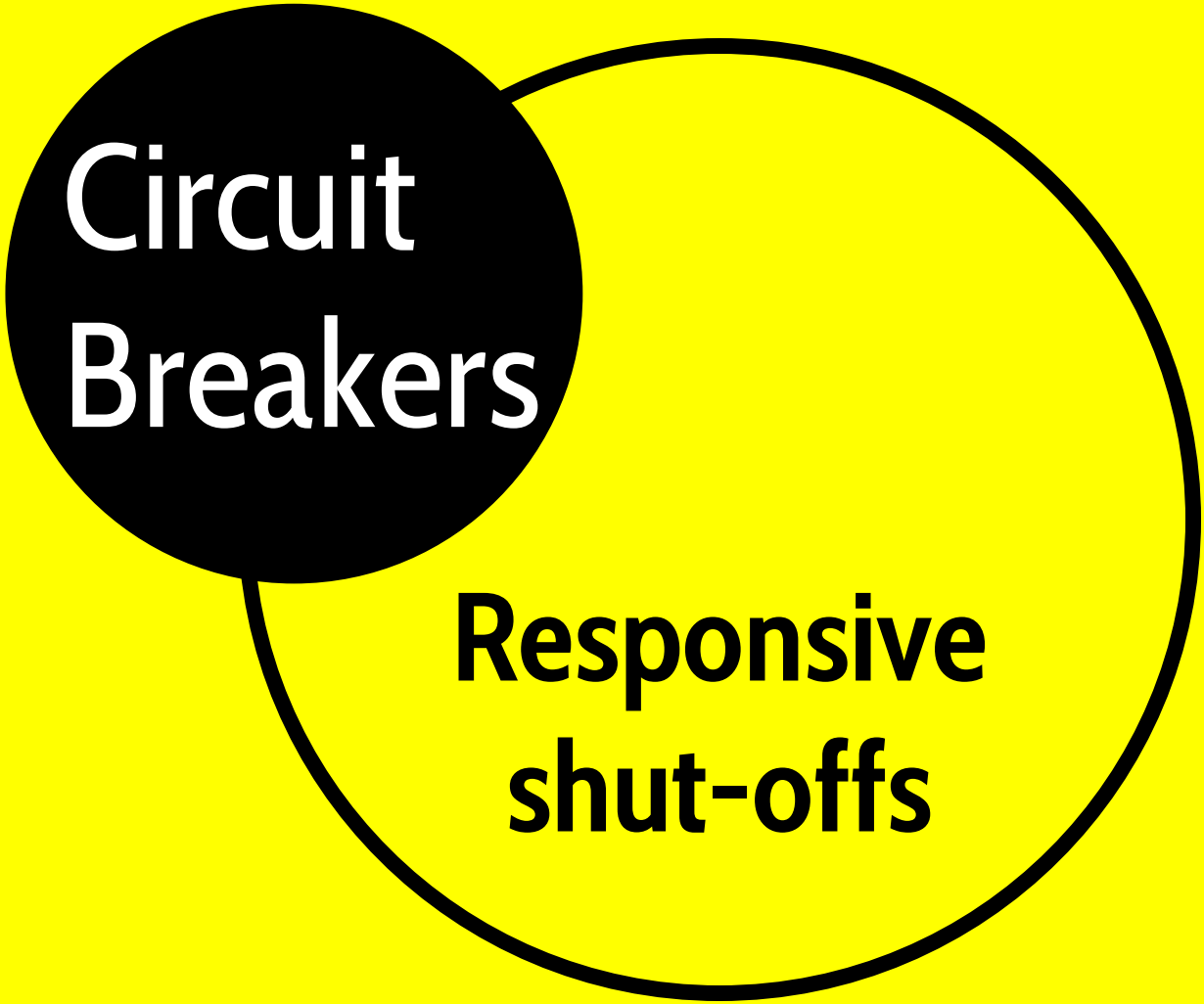
Scientist!

<https://github.com/github/scientist>



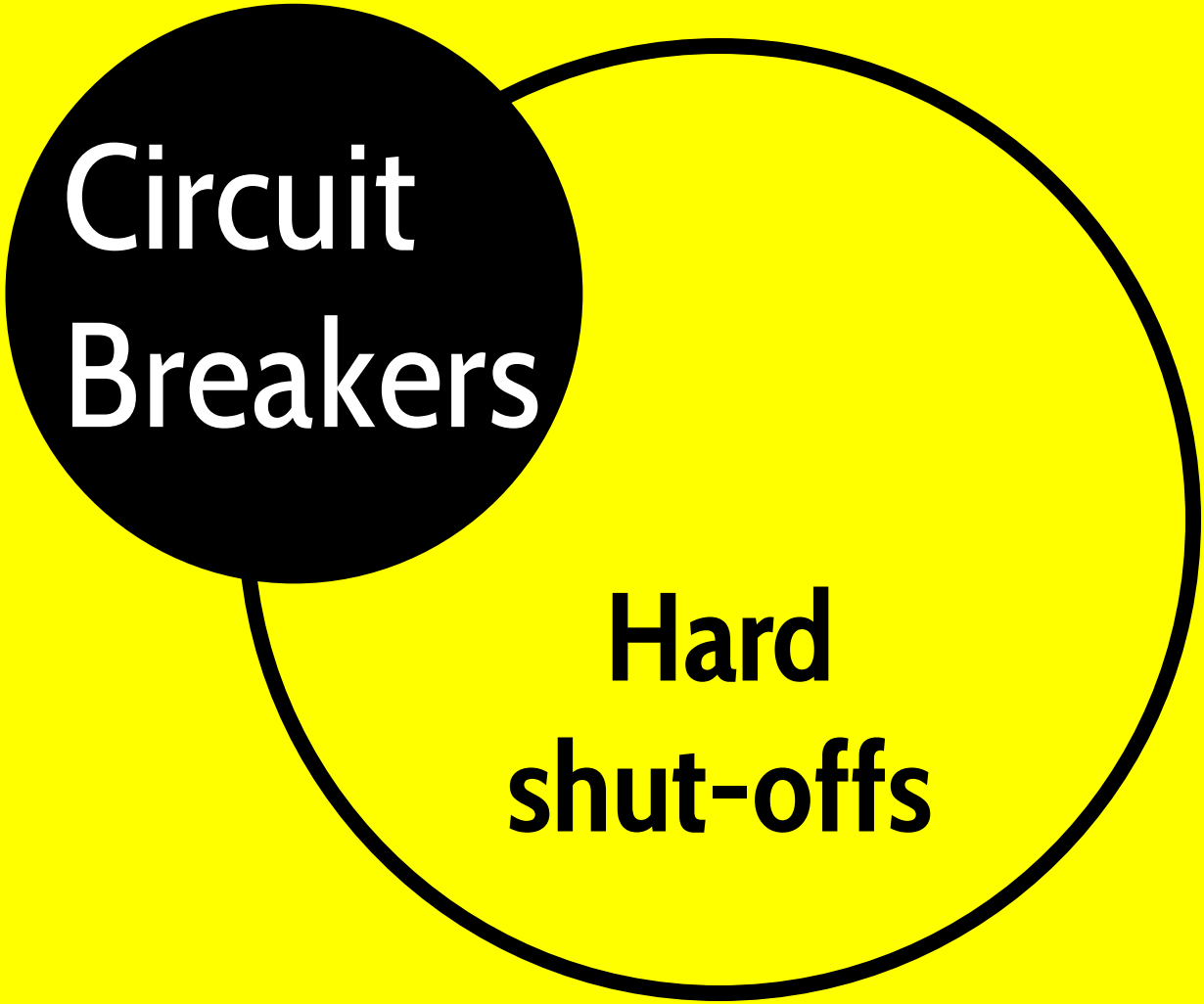
7

**Circuit
Breakers**



**Circuit
Breakers**

**Responsive
shut-offs**



A Venn diagram on a yellow background. It consists of two circles. The left circle is solid black and contains the text "Circuit Breakers" in white. The right circle is outlined in black and contains the text "Hard shut-offs" in black. The two circles overlap, with the intersection area being yellow.

**Circuit
Breakers**

**Hard
shut-offs**

Caching layer or Datastore

```
> BillingServiceClient.circuit.close
```

```
=>
```

```
> BillingServiceClient.circuit.open
```

```
=>
```

**Consider
implementation**



Consider Implementation

- Database
- Data caching layer
- Environment variables
- Code

A large black circle is centered on a bright yellow background. The word "Caveats" is written in white, bold, sans-serif font inside the black circle.

Caveats



Caveats

Visibility



Got Options?



Caveats

Visibility



Caveats

**Does it
actually work?**



Caveats

**Knowledge vs.
Control**



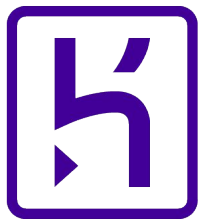
I'd still take this
deal any day

Thank you!

Amy Unger

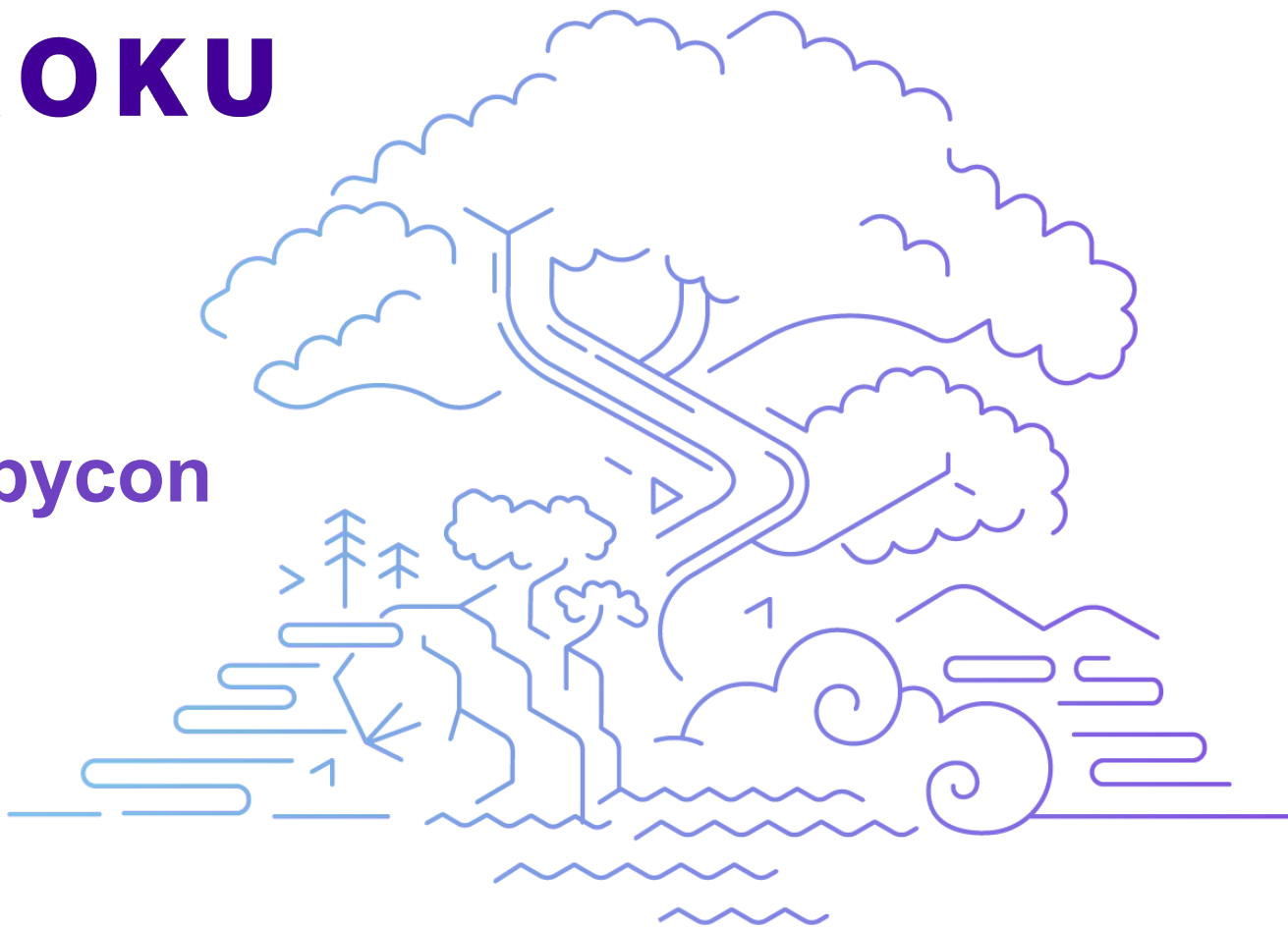
@cdwort





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www.bit.ly/rubycon



Thank you!

Amy Unger

@cdwort

