

Configuration Management: Stability in Your Pipeline

sascha bates





sascha bates

blog.brattyredhead.com

Twin Cities Infracoders Meetup

@sascha_d

The Ship Show Podcast



OPSCODETM
CODE CAN

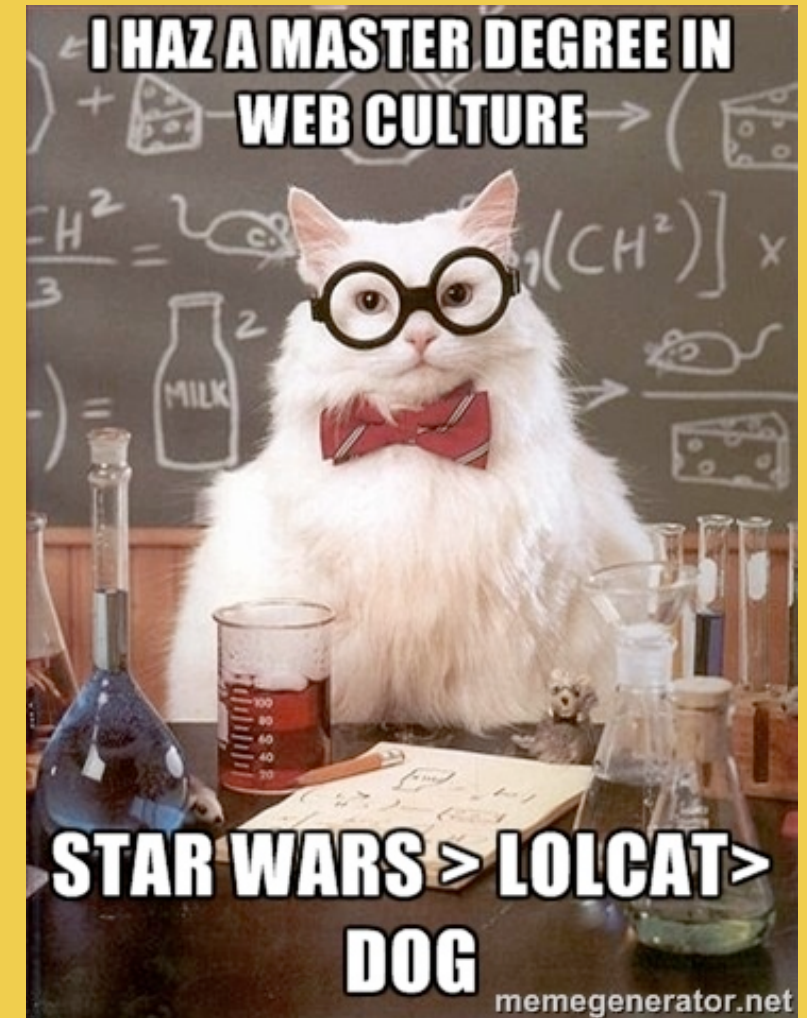
Automation Consultant

sascha@opscode.com

credentials?

In love with CM since 2010

victim and perpetrator of inconsistency
over the years



The Problem



Environments Run Amok

Environments Run Amok

configuration management

homogenous environments

consistent process



A tool is just
a tool

it's what
you do
with it that
matters



Environments...

who cares?



**This Never
Happens**



**incorrect/incomplete
deployment instructions**

**This Never
Happens**



**wrong database connection
string deployed to Production**

This Never Happens



smtp server fixed by hand
then forgotten

This Never Happens



test apache server with special configs

**This Never
Happens**



ssh keys pushed by hand

What Happened?



Two Failures

Two Failures

Communication

Two Failures

Communication

Ownership

Communication



people gotta talk

Communication



DEVOPS

people gotta talk

Communication

BASIC

HUMANITY

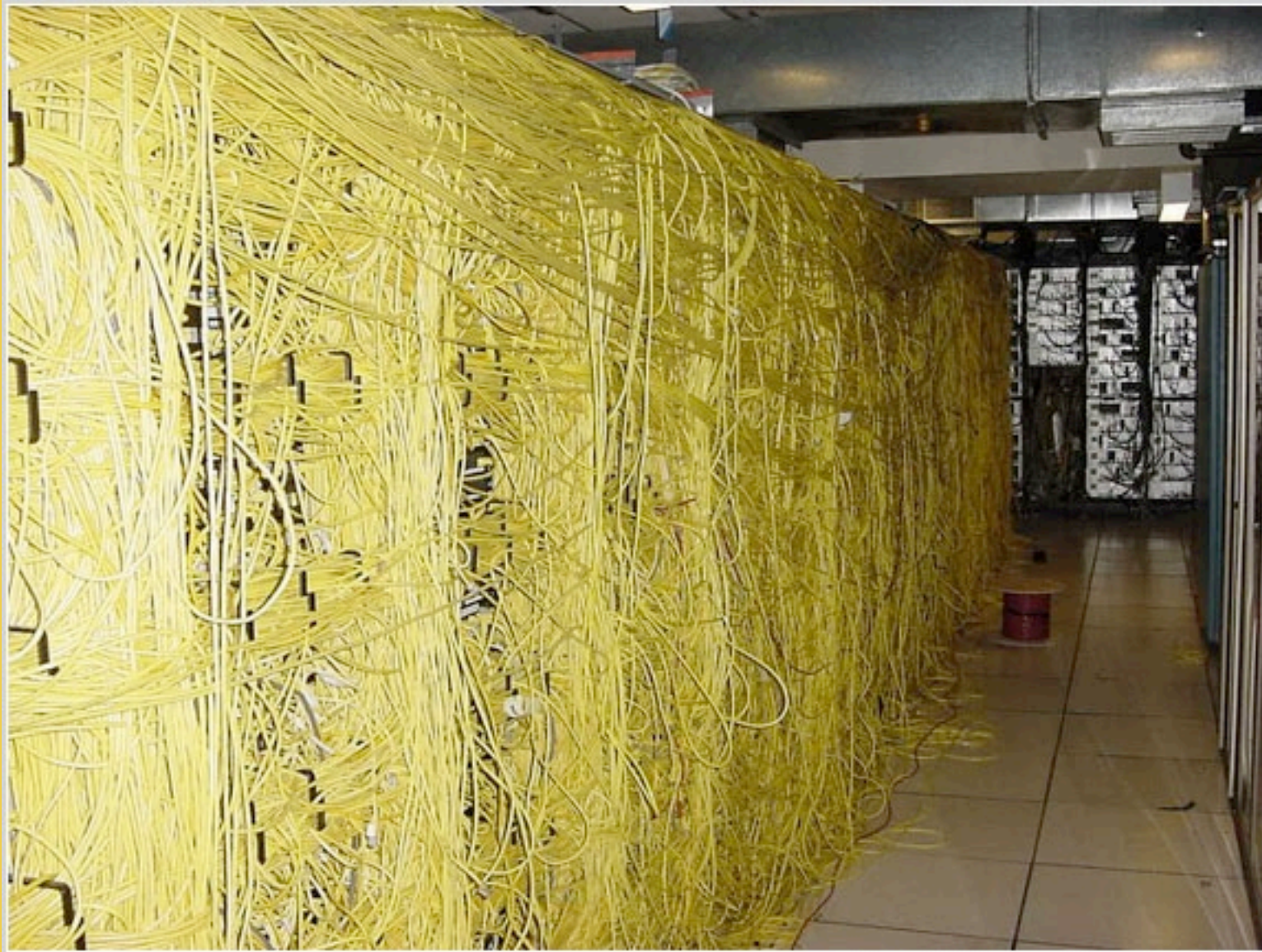
people gotta talk

Technical Ownership



Dev and Test are the Cinderellas of Environments

Environments



are complex

Environments



are unloved

Environments



become unloveable

Environments



are necessary

So Many Things...

and none of them belong in your code build

So Many Things...

packages and versions

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

multiple data centers

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

multiple data centers

database users and passwords

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

multiple data centers

database users and passwords

connection strings

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

multiple data centers

database users and passwords

connection strings

integration URLs

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

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database users and passwords

connection strings

integration URLs

deployments

and none of them belong in your code build

So Many Things...

packages and versions

mail servers

multiple data centers

database users and passwords

connection strings

integration URLs

deployments

batch jobs

and none of them belong in your code build



Configuration Management



to the rescue

Eliminate Mistakes

Ensure Consistency

Automate Complexity

Separation of Duties

Eliminate Mistakes



people out of the pipeline

Eliminate Mistakes



people out of the pipeline

Ensure Consistency

one OS build to rule them all

Ensure Consistency

easy

one OS build to rule them all

Ensure Consistency

easy
fast

one OS build to rule them all

Ensure Consistency

easy

fast

reliable

one OS build to rule them all

Ensure Consistency

easy

fast

reliable

server builds

one OS build to rule them all

Ensure Consistency

```
yum install tomcat
```

or

```
download random tomcat; install
```

Packages

Ensure Consistency

```
yum install tomcat
```

or

```
download random tomcat; install
```

Packages

Ensure Consistency

`yum install tomcat`

`download random tomcat, install`

Packages

Ensure Consistency

```
package 'apache' do  
  version '2.2.9'  
  action :install  
end
```

Packages

Ensure Consistency

```
package 'apache' do  
  version node['apache']['version']  
  action :install  
end
```

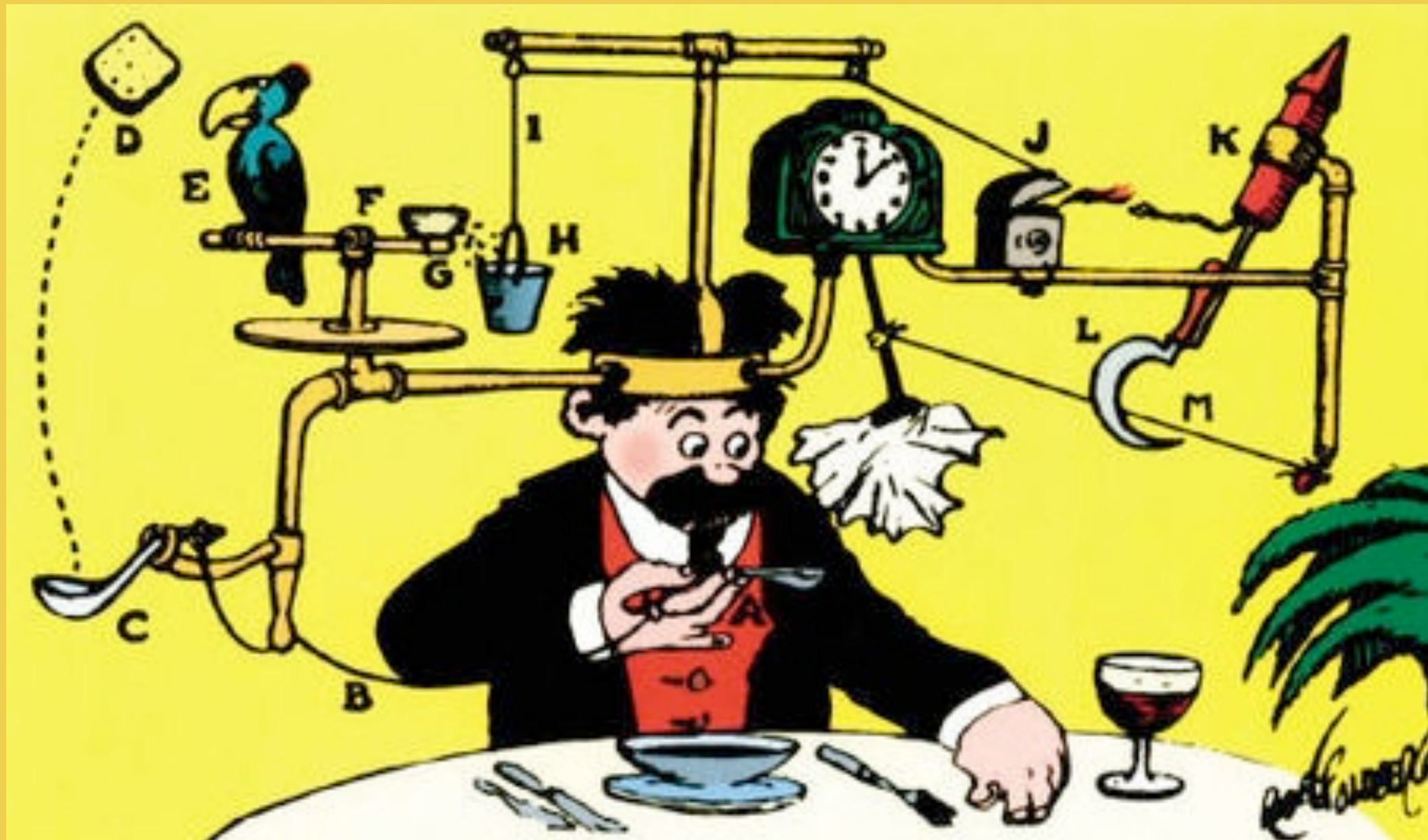
Packages

Ensure Consistency

locate environment-
specific configurations
outside the codebase

Central Configurations

Automate Complexity



your 5 year old bash scripts not cutting it

Automate Complexity



stop running around to multiple servers

Automate Complexity

app version 1.2.2

bump 1.3.0

trigger deployment actions across multiple tiers

stop running around to multiple servers

Separation of Duties



confidence

