The only reasonable thing about this slide is the word "Magic"
JUJU LITERALLY MEANS 
magic or supernatural powers!
NO REALLY

Juju is a cloud automation tool from Canonical
Juju allows you to configure, manage, and scale services in a cloud environment
DEPLOY TO DIFFERENT CLOUD ENVIRONMENTS

- Amazon Web Services
- HP Public Cloud
- OpenStack Clouds
- Linux Containers
- Windows Azure!

Using Ubuntu MAAS you can even orchestrate bare metal!
BUT X DID THIS FOR ME
WE EMPLOY THESE TOOLS TOO!

"Bring your experience with you"

more on this in a minute...
CONFIGURATION MANAGEMENT IS ONLY THE FIRST STEP

"Nobody is playing Nginx, or MySQL. They are playing League of Legends (tm)"

Jamie Windsor, Riot Games 2013
WHAT ARE YOU TRYING TO SOLVE?

... Let's talk about Hadoop.
A COMPLEX TOOL, WITH A COMPLEX DEPLOYMENT STRATEGY

Like it or not, big data is here
You can spend days or a small fortune getting a complex hadoop cluster deployed.
Wouldn't you rather spend that time/$ with your family?
Prepare for an extreme case example...
LIFE AFTER THE HADOOP SLIDE

That was a lot to ingest
Now it's time to talk about Service Orchestration
SERVICE ORCHESTRATION

THE ABILITY TO:

- Deploy services or workloads
- Configure the software on a service
- Manage service lifecycles
- Create relationships between services
- Handle increased/decreased workloads transparently

*Relationships between the services is the key.*
HOW ABOUT THIS INSTEAD?

**DEPLOY HADOOP**

```
juju deploy hadoop hadoop-master
juju deploy hadoop hadoop-slavecluster
juju add-unit -n 2 hadoop-slavecluster
```

**AND CONNECT THEM TOGETHER**

```
juju add-relation hadoop-master:namenode hadoop-slavecluster:datanode
juju add-relation hadoop-master:jobtracker hadoop-slavecluster:tasktracker
```

**AND SCALE THE WORKERS**

```
juju add-unit hadoop-slavecluster
```
APT-GET FOR THE CLOUD

Yeah, its kinda like apt-get for the cloud.

JUJU IS NOT JUST DEPLOYMENT

Manage at the service level, not the machine level
CHARMS
THE NAME FOR JUJU DEPLOY UNITS.

They are packages of code that handle deployment, configuring, and relating different services.
TECHNOLOGIES

BUT THATS NOT ALL!

Bash, Perl, PHP, Python, Ruby

The author's choice!
BUILD WITH OUR CHARMS

Hundreds of charms have already been written for open source applications like MySQL, Hadoop, or MongoDB. They are free to use and scale with your application.

Go to jujucharms.com to see the list
WRITE YOUR OWN CHARM

Don't see what you need?

- Charms are designed to be easy to author and you can use any language
- If you want people to deploy your application, share it with the juju world!
- There are tools to get you started

[link] juju.ubuntu.com/resources
HOW IT WORKS

• Charms & hooks + something to call them
• Juju server stores environment state -- agents on the machines get messages
• Hooks do whatever needs to be done at this time
A COMMUNITY OF EXPERTISE

The power of Juju really lies in the community, not the packages

- As little or as much as you want.
- ... In whatever language you want
- Easy to share and hack on
- Lightweight contribution process
- You're probably 90% there!
DOES YOUR PROJECT RUN ON THE CLOUD? WE SHOULD TALK…

THANK YOU FOR YOUR TIME!

- juju.ubuntu.com
- github.com/charms
- #Juju on Freenode

To reach me directly - @lazypower on twitter
LIVE DEMO

Let's see how awesome this really is up close and personal

Get started with a basic hadoop bundle