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# OBLIGATORY BUZZWORD SLIDE

- SCALE!
- DEVOPS!
- MAGIC!

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.





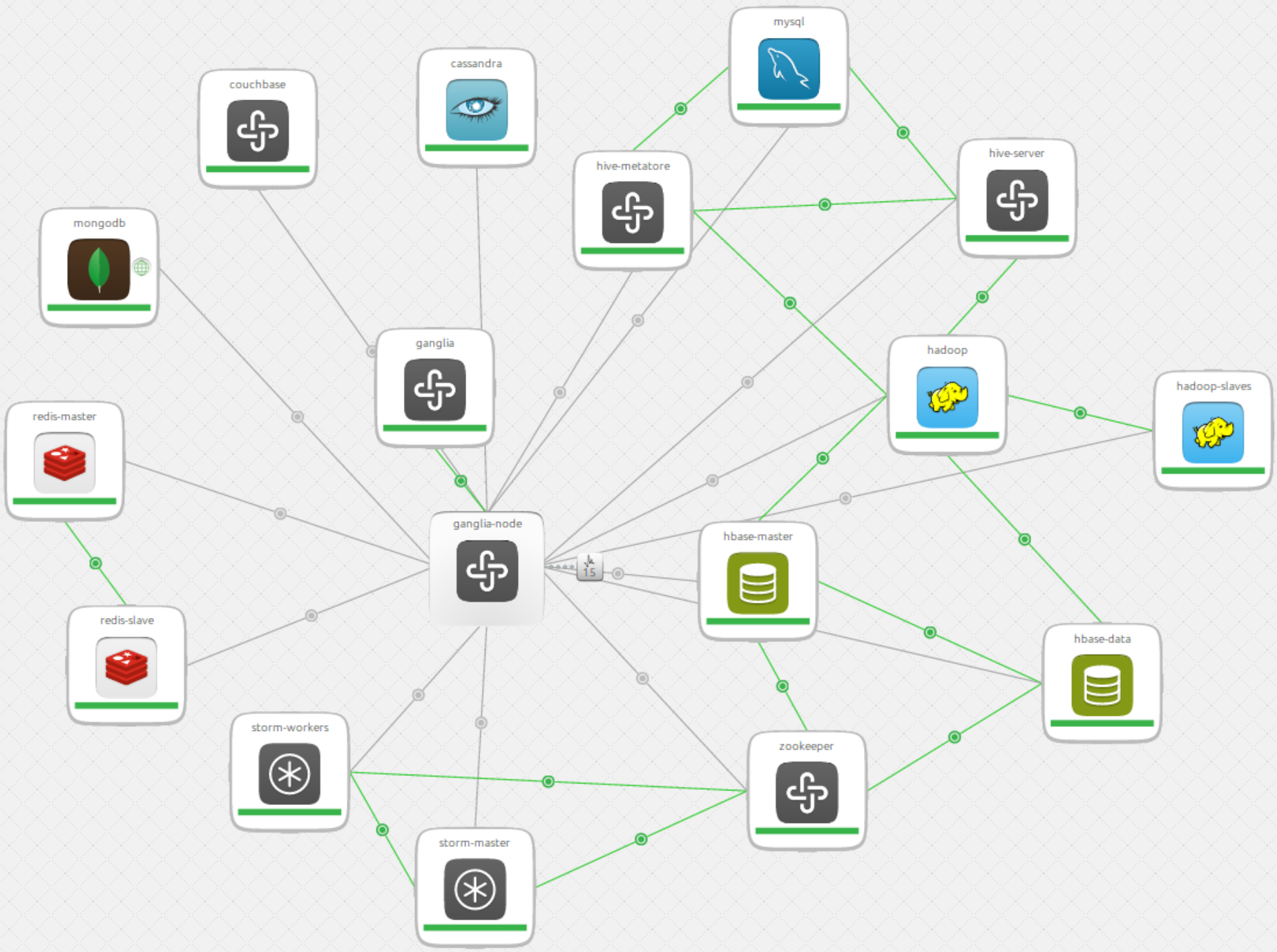
A COMPLEX TOOL, WITH A COMPLEX DEPLOYMENT STRATEGY

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

# DevOpsolution



Bare  
Metal



Virtualization



Cloud  
Computing



Configuration  
Management



Service  
Orchestration



Skynet

[juju.ubuntu.com](http://juju.ubuntu.com)  
DevOps Distilled™

# 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](http://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

[juju.ubuntu.com/resources](http://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](http://juju.ubuntu.com)
- [github.com/charms](https://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