JEFF KRAMER (HP HELION)

SCALING HADOOP IN & OUT OF THE PRIVATE CLOUD
PRIVATE CLOUDS ARE LIKE…

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RATHER...
OPENSTACK PRIVATE CLOUD OFFERINGS

- HP
- IBM
- Canonical
- Red Hat
- Blue Box
- EMC
- Cisco
- or Roll Your Own!
YOUR PRIVATE CLOUD

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WELCOME TO THE SAVANNA SAHARA

...OR NOT?

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BRING YOUR DATA

...OR NOT!
IT’S ALL ABOUT PLACEMENT
HARD AND SQUISHY BITS...
HADOOP AS A SQUISHY WORKLOAD
CHOCOLATE MARSHMALLOWS!

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Overview

Limit Summary

- Instances: Used 12 of 50
- VCPUs: Used 24 of 50
- RAM: Used 48GB of 50GB
- Floating IPs: Allocated 5 of 10
- Security Groups: Used 3 of 10

Usage Summary

Select a period of time to query its usage:

From: 2015-04-01  To: 2015-04-01  Submit

Active Instances: 12  Active RAM: 48GB  This Period's VCPU-Hours: 422.56  This Period's GB-Hours: 8451.11  This Period's RAM-Hours: 865393.42
MAKING CHOCOLATE MARSHMALLOWS

1. Place Scale-Up Order
2. Order Set to Pending
3. Plugin Notes Pending Order
4. Plugin Creates Scale-Down Order
5. Sahara Views Order & Scales Down 1 Instance
6. CF Cluster Views
   Now-Open Scale-Up Order
7. Creates New VMs
8. Acknowledges Order
THE NO-QUOTA, PRIORITY BALANCED, UTOPIAN PRIVATE CLOUD FUTURE

- Quotas are a Pain
- Workloads are Opaque
- Workloads are Spiky
- Workloads Know Themselves
- Cloud Managers Need More Knobs
- Bindings Need to be Loose

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OTHER STUFF

• Whither Mesos?
• CloudBreak
• DockerDockerDocker
github.com/HPCloud/os-workloads

@jeffk