codecentric

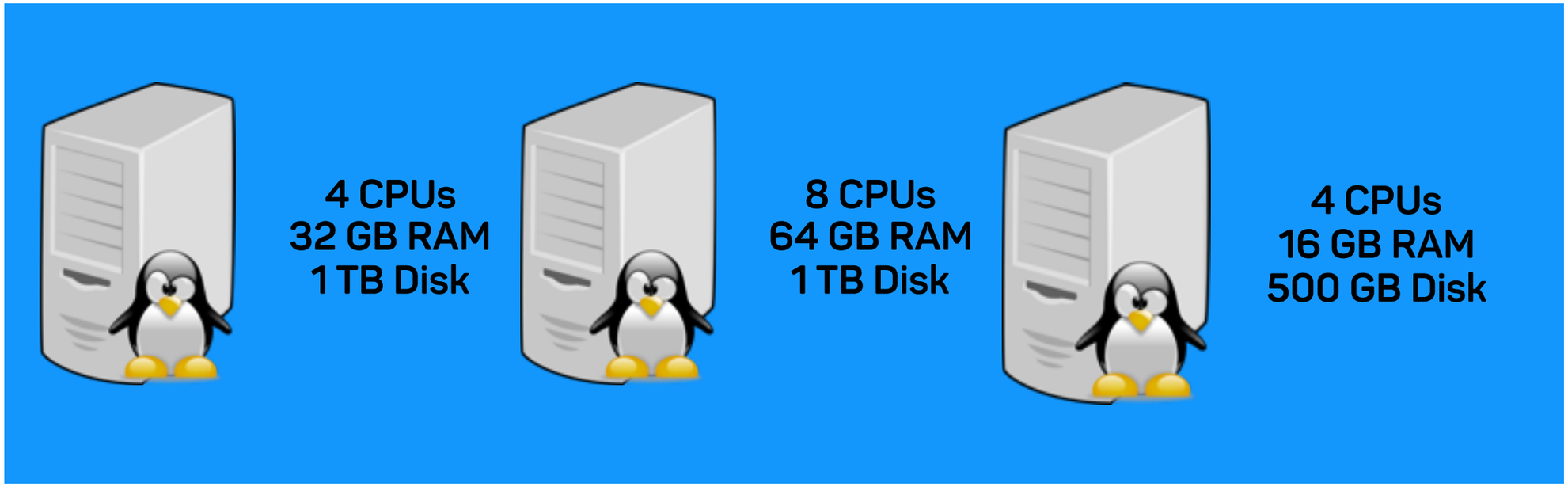
Mesos_

What is Mesos?

A distributed System Kernel

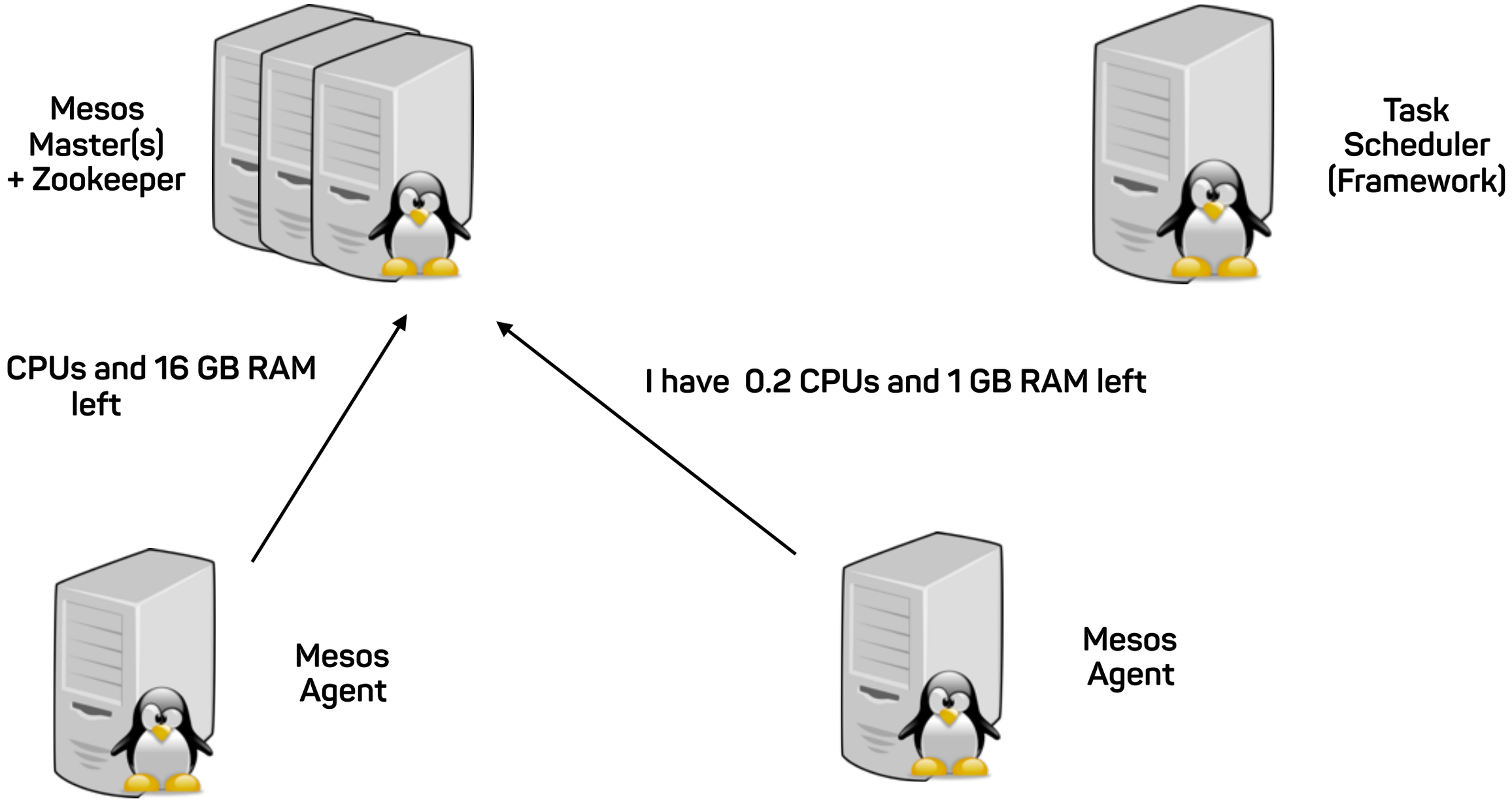
- Bundles the resources of n “physical” machines in a single logical machine
- Schedules applications to run on the logical machine
- First arrived in 2009
- Graduated from Apache Incubator in 2013
- Release 1.0.0 in July 2016

What is Mesos?_



16CPUs
112 GB RAM
2.5 TB Disk

What is Mesos?_



What is Mesos?_

Mesos
Master(s)
+ Zookeeper

If you want you can have
4 CPUs and 16 GB RAM or
0.2 CPUs and 1 GB RAM

Task
Scheduler
(Framework)

Mesos
Agent

Mesos
Agent

What is Mesos?_

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+ Zookeeper

Please launch this task that
needs 3 CPUs and 13 GB RAM

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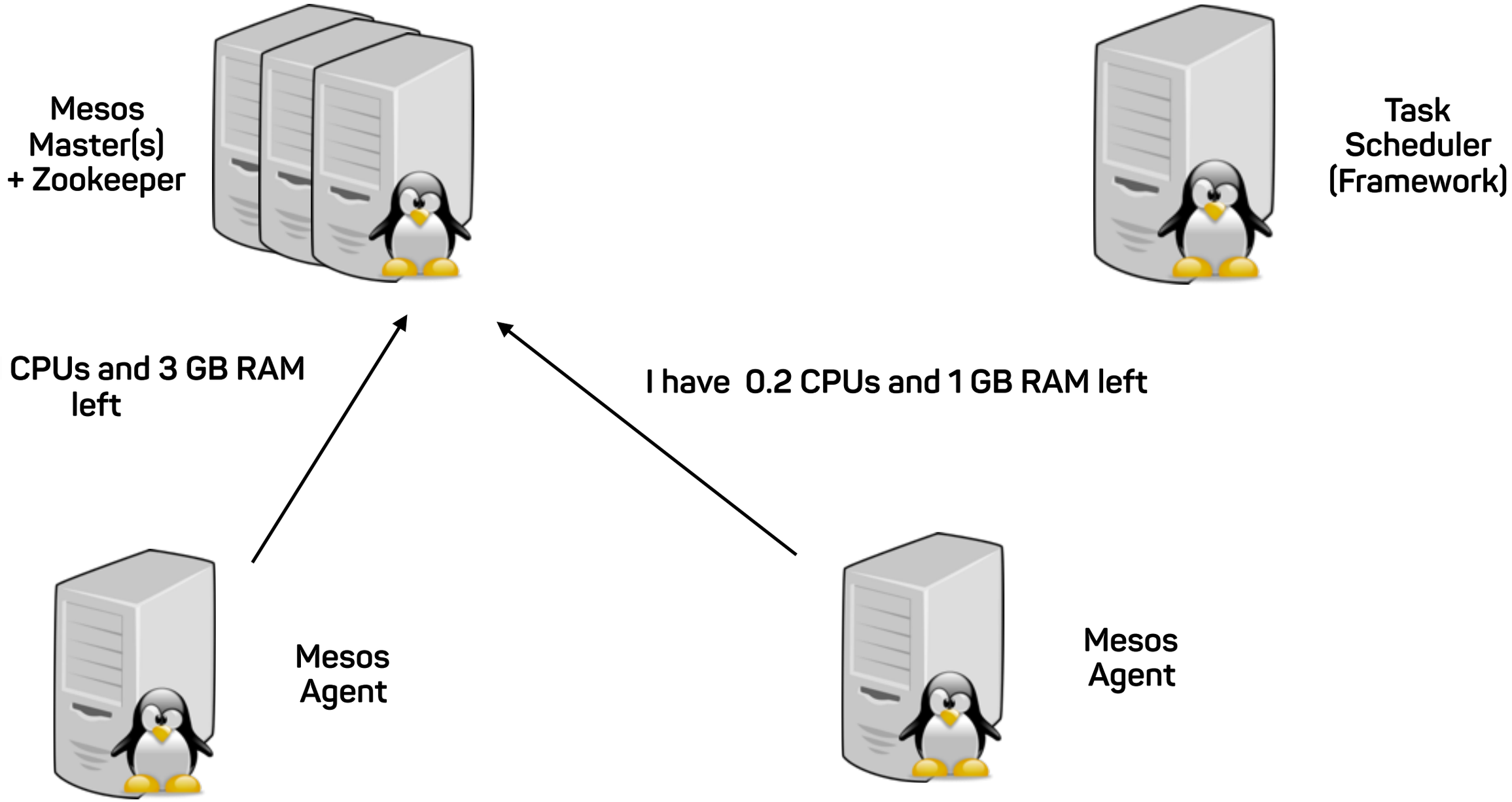


Mesos...

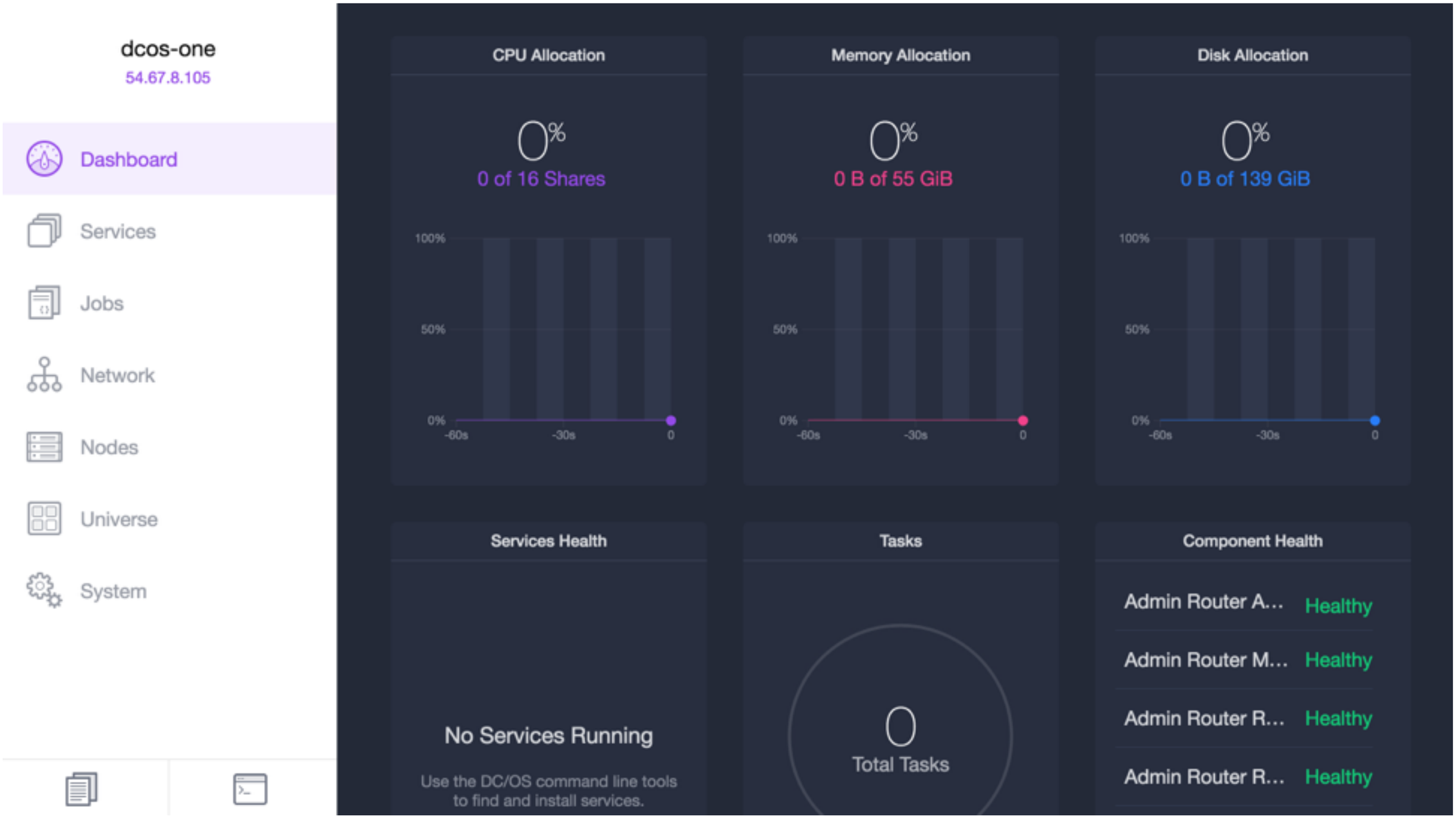
- ... Masters coordinate the cluster and offer resources to Frameworks
- ... Agents actually run Tasks
- ... Frameworks launch listen to resource offers and ask the Master to launch Tasks if required by their inner logic
  - They are not part of Mesos itself!
  - e.g. Frameworks for Cassandra, Kafka

What is DC/OS?

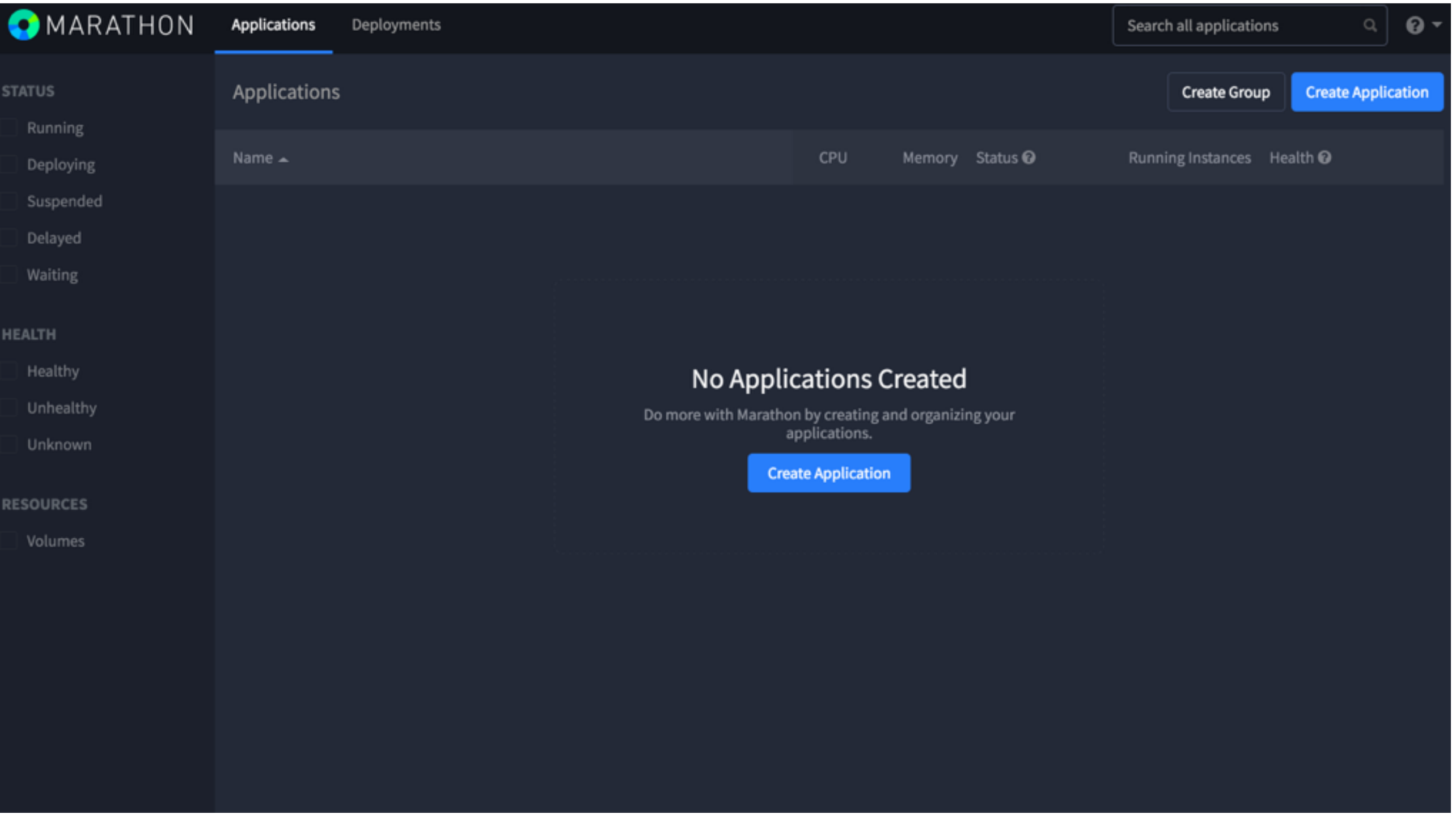
Someone wants to make money with Mesos!

- Mesosphere founded in 2013
- Data Center Operating System
  - A scheduler (Marathon)
  - A packaging system (Cosmos)
  - Service Discovery (Mesos DNS)
  - Load Balancing
  - ...
- Cooperations with Confluent (Kafka), DataStax (Cassandra), Lightbend (Akka, Spark) and others

DC/OS Dashboard_



Marathon


MARATHON
Applications
Deployments
Search all applications
STATUS
Running
Deploying
Suspended
Delayed
Waiting
HEALTH
Healthy
Unhealthy
Unknown
RESOURCES
Volumes
Applications
Create Group
Create Application
Name
CPU
Memory
Status
Running Instances
Health
No Applications Created
Do more with Marathon by creating and organizing your applications.
Create Application

Marathon

```
{
    "id": “my-deployment-spec“,
    "cmd": "app/cool-script.sh",
    "cpus": 0.1,
    "mem": 10.0,
    "instances": 1,
    "uris": [
        "https://example.com/app.zip"
    ]
}
```

Plain Mesos_

Mesos Frameworks Agents Offers dcos-one

Master 9345dc7a-9722-4a77-9aba-8da20ad91c17

Cluster: dcos-one
Server: 10.0.5.65:5050
Version: 1.0.1
Built: 3 weeks ago by
Started: 6 minutes ago
Elected: 6 minutes ago

LOG

Agents

Activated	4
Deactivated	0

Tasks

Staging	0
Starting	0
Running	0
Killing	0
Finished	0
Killed	0
Failed	0
Lost	0
Orphan	0

Active Tasks

ID	Name	State	Started ▼	Host	
No active tasks.					

Completed Tasks

ID	Name	State	Started ▼	Stopped	Host	
No completed tasks.						

Orphan Tasks

ID	Name	State	Started ▼	Stopped	Host	
No orphan tasks.						