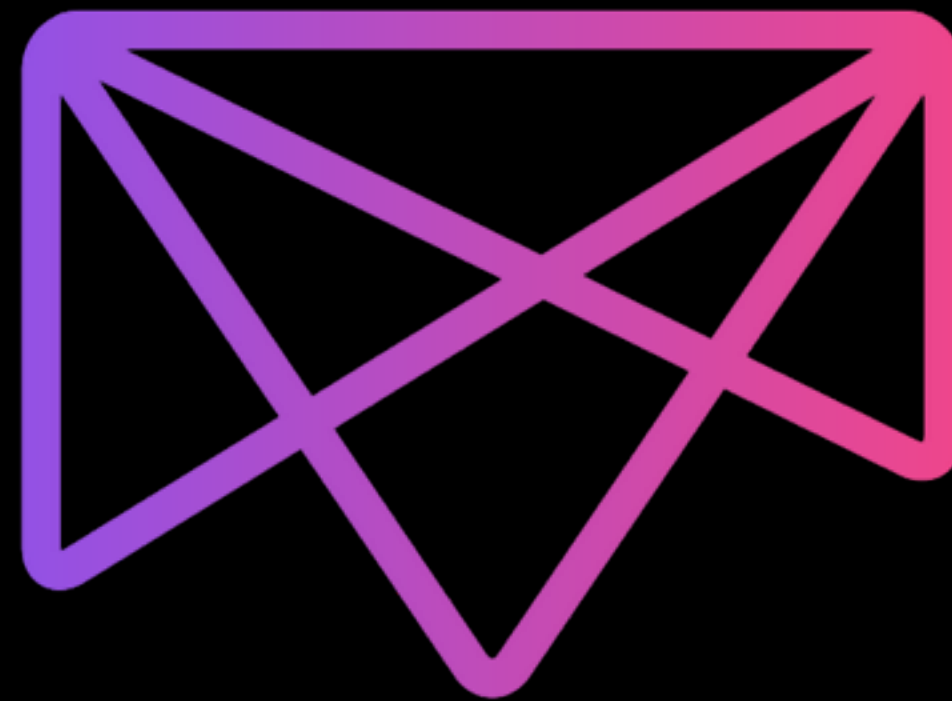


Automating Docker Deployments with Marathon

Michael Hausenblas, Datacenter Application Architect
@mhausenblas

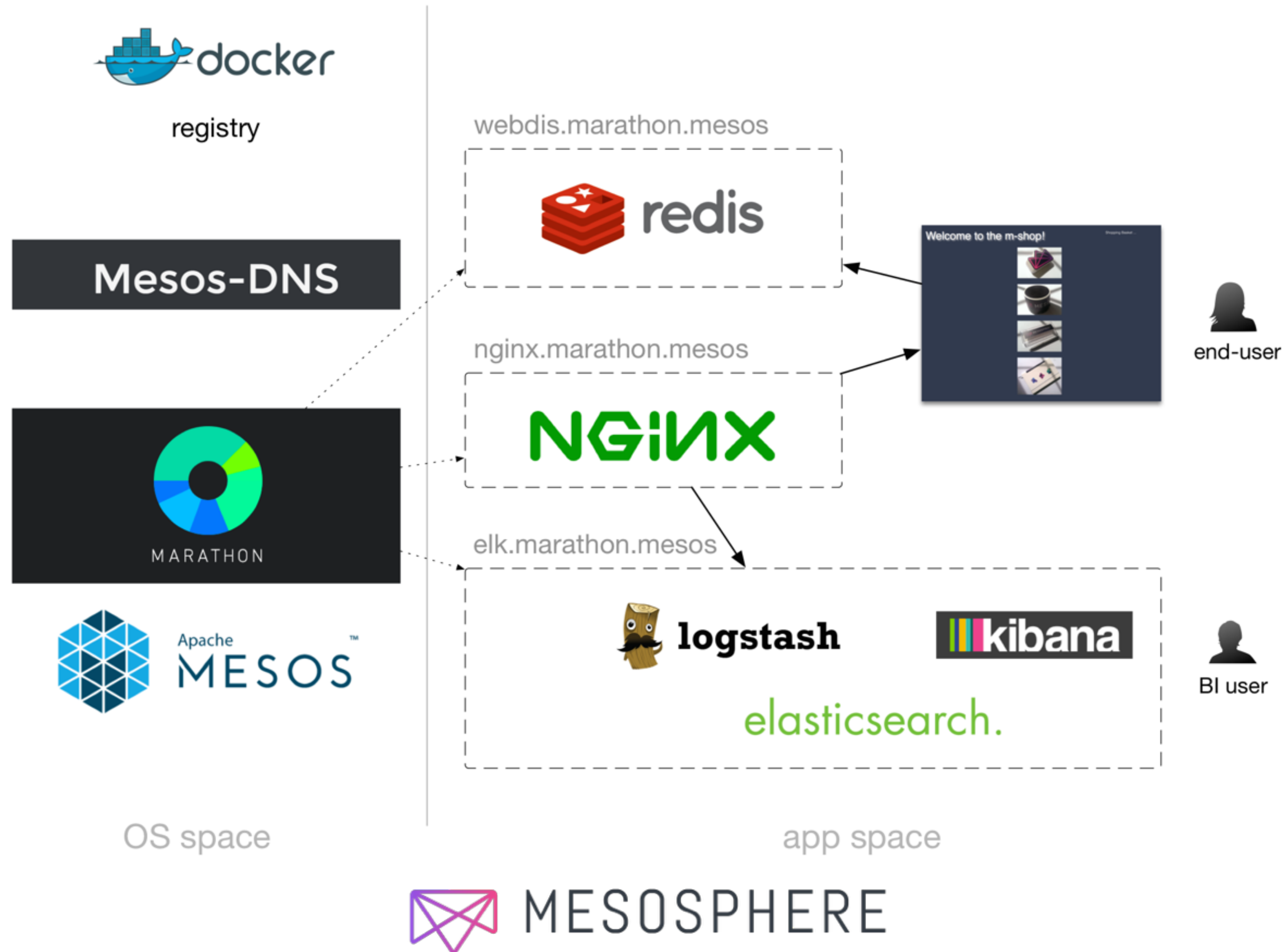


MESOSPHERE

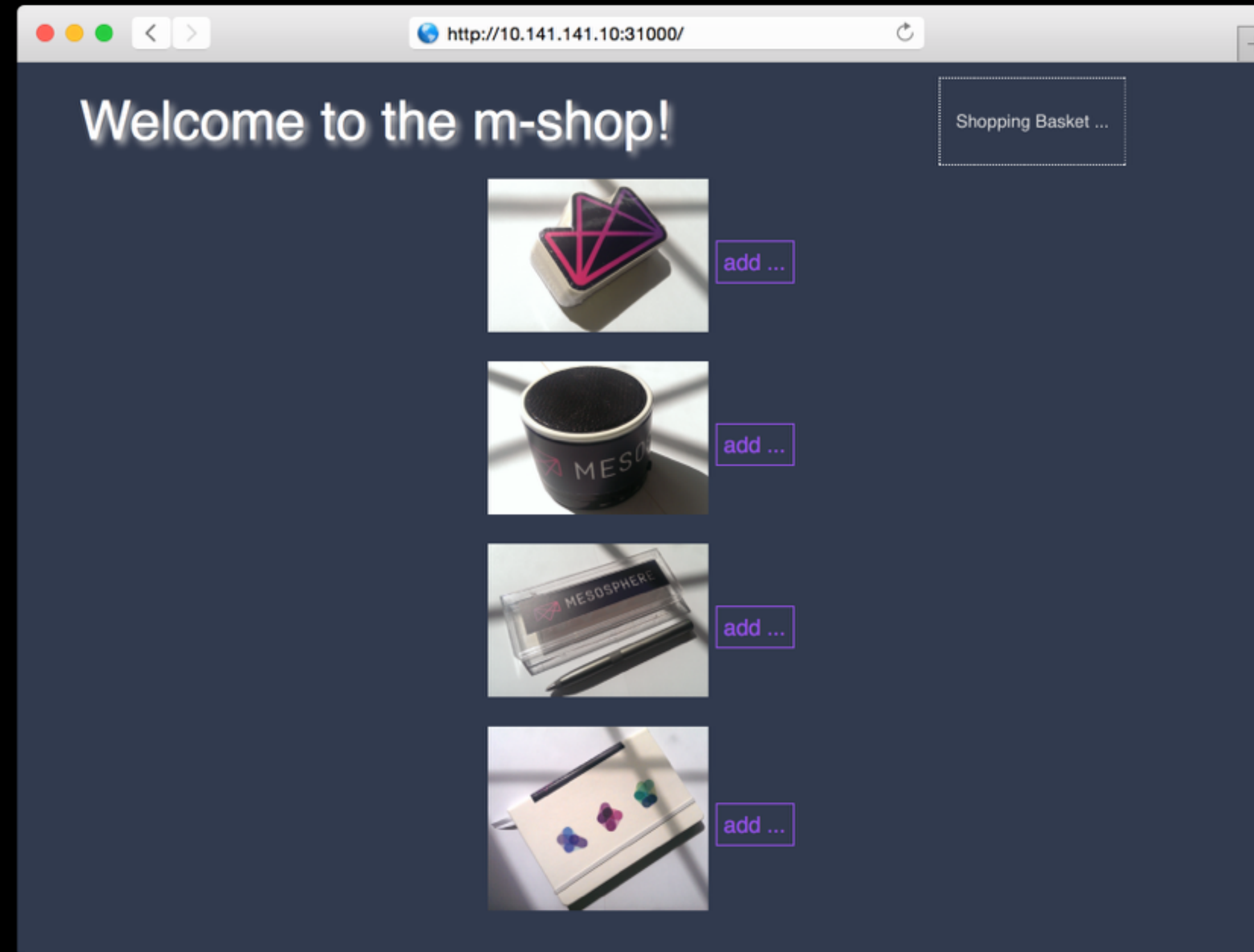
Motivation

- Build an e-Commerce shop incl. analytics
- Disclaimer: probably the world's worst merchandising shop

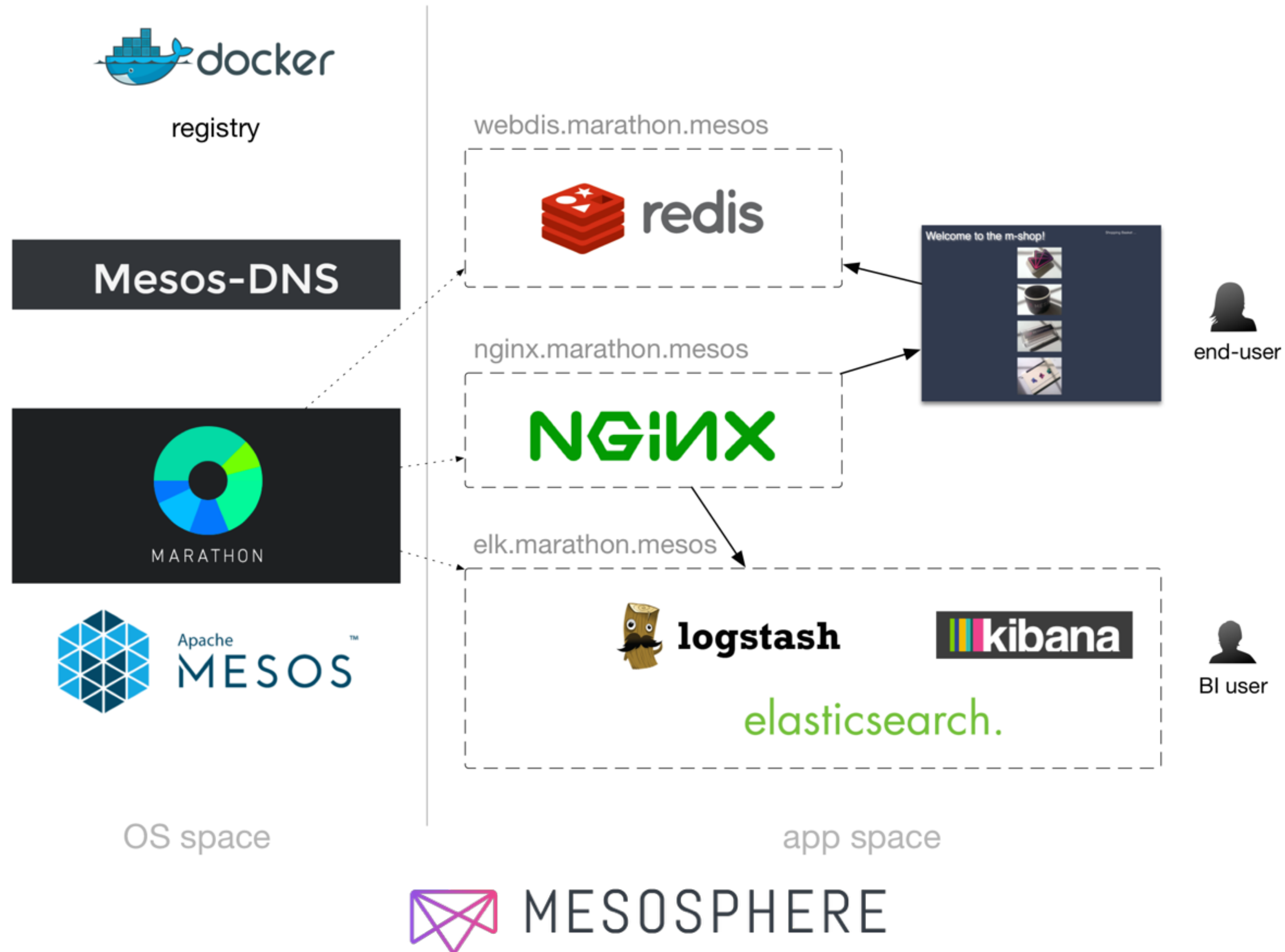
Architecture



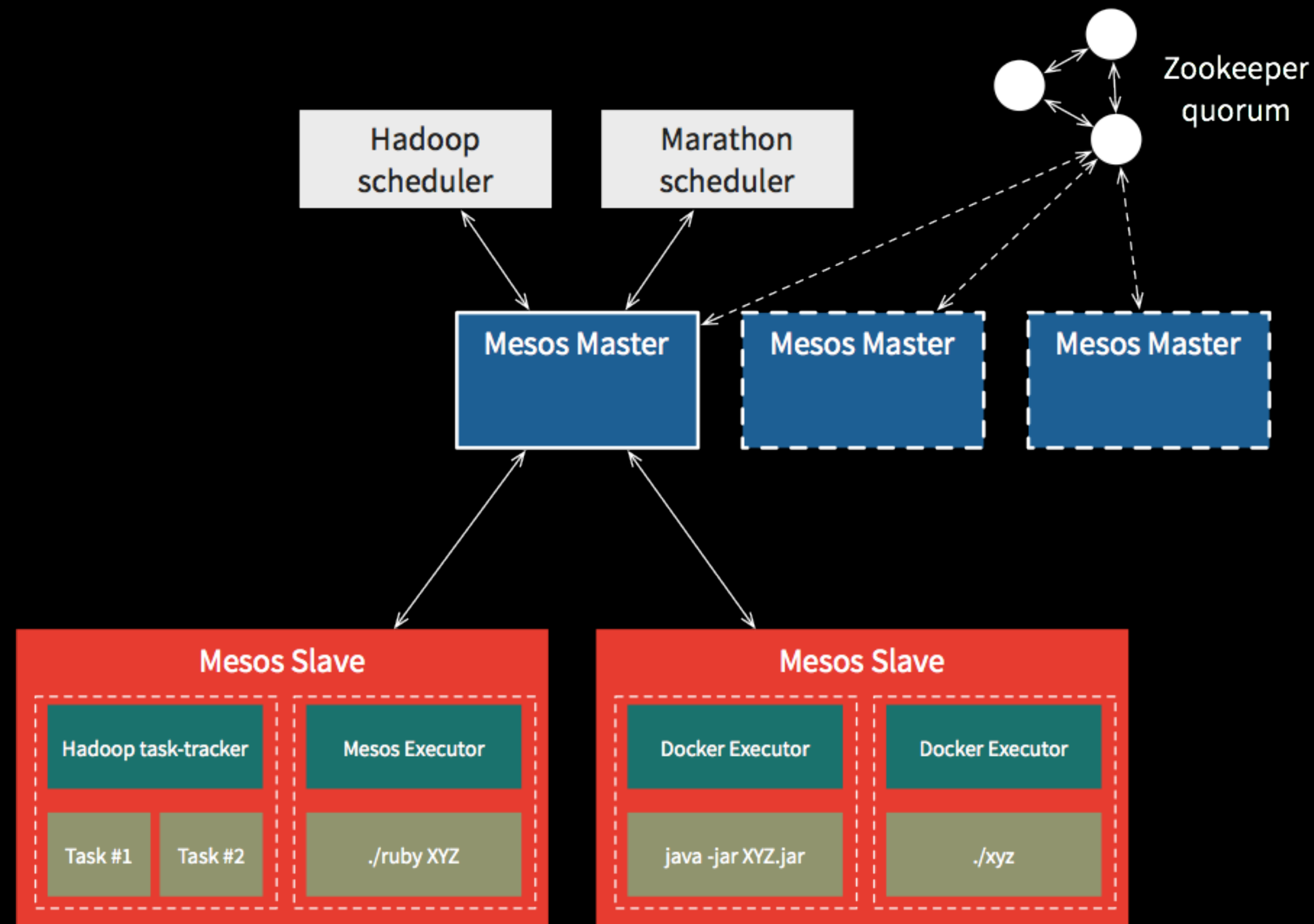
Demo time!



Architecture



Apache Mesos



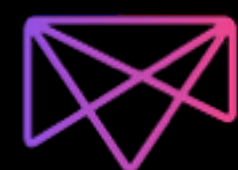
Marathon

- Long-running tasks
- Docker support
- HTTP API
- HA, health checks, groups, scaling

Marathon

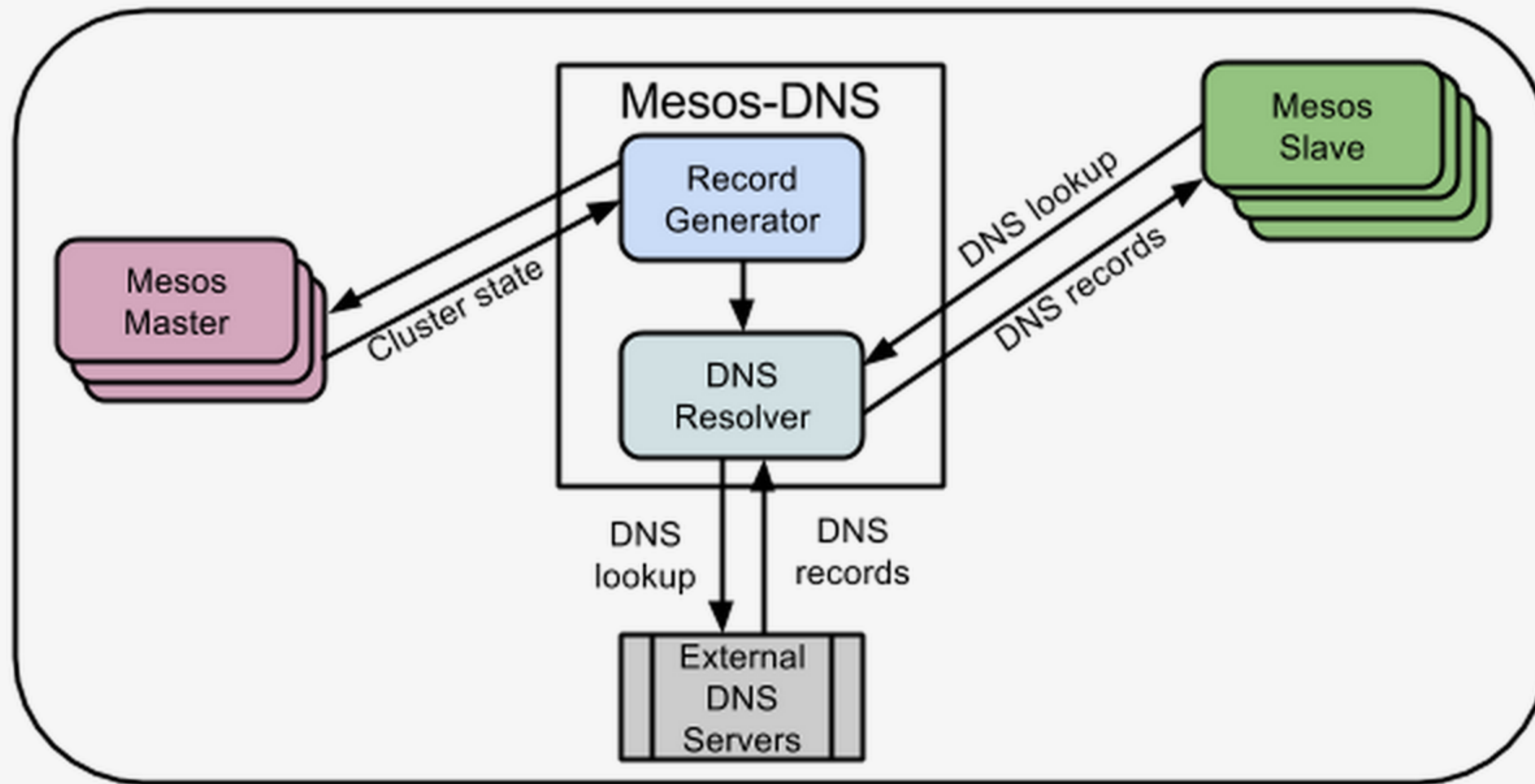
Example application specification:

```
{
  "id": "frontend-static",
  "instances": 1,
  "cpus": 0.2,
  "mem": 64,
  "container": {
    "type": "DOCKER",
    "docker": {
      "image": "mhausenblas/m-shop-frontend-static:latest",
      "network": "BRIDGE",
      "portMappings": [
        { "hostPort": 0, "containerPort": 80 }
      ]
    }
  },
  "volumes": [
    {
      "containerPath": "/var/log/nginx",
      "hostPath": "/tmp/m-shop/nginx",
      "mode": "RW"
    }
  ]
}
```



MESOSPHERE

Mesos-DNS



Mesos-DNS

webdis.marathon.mesos --> 10.141.141.10:31000

<https://github.com/mhausenblas/mc>



Docker images

- static website: mhausenblas/m-shop-frontend-static
- Redis: robtec/webdis
- ELK stack: raulcd/elk-docker

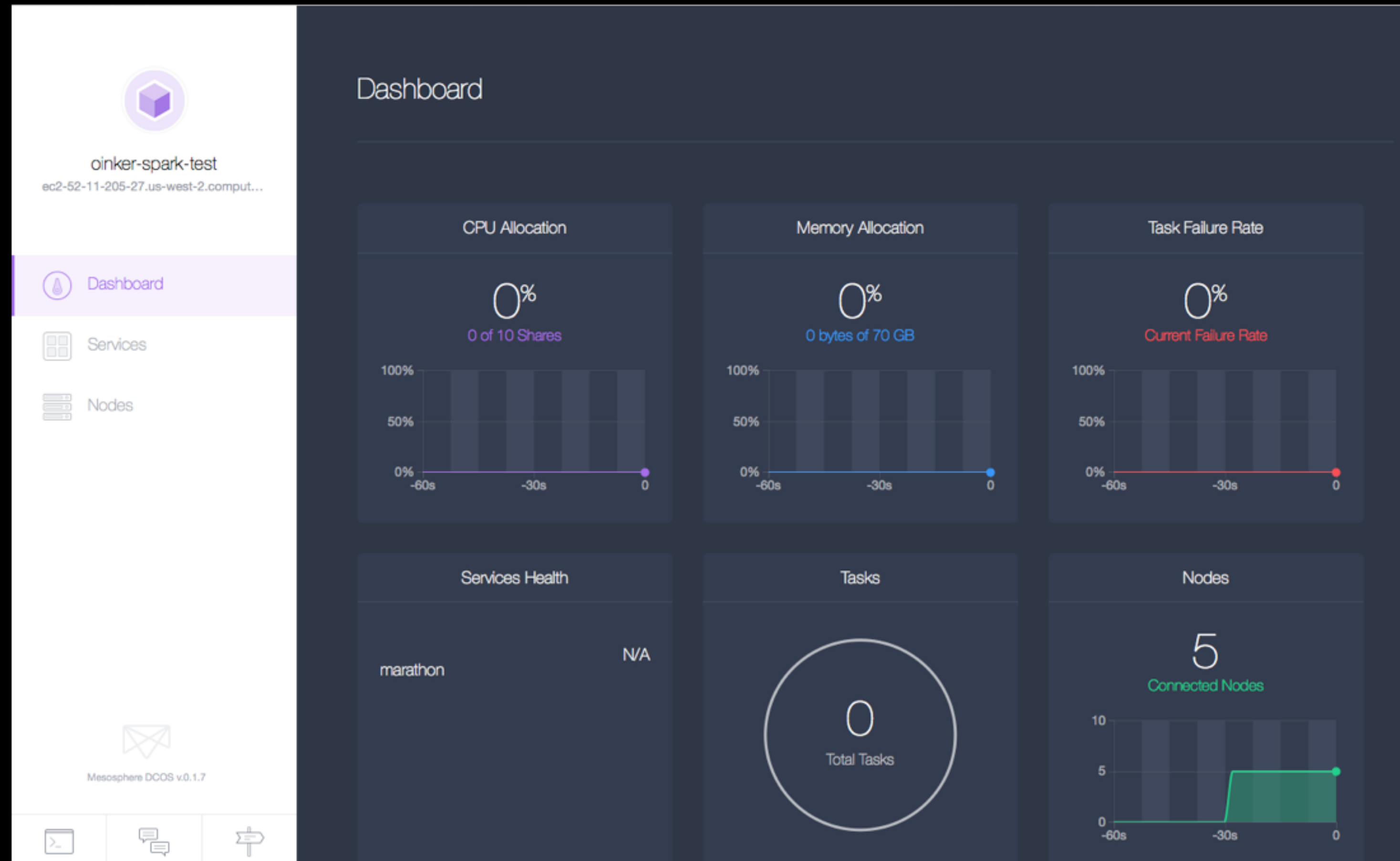
What is missing?

- CORS-enabled
- log shipping: NFS mount or fluentd
- load balancer (HAproxy)

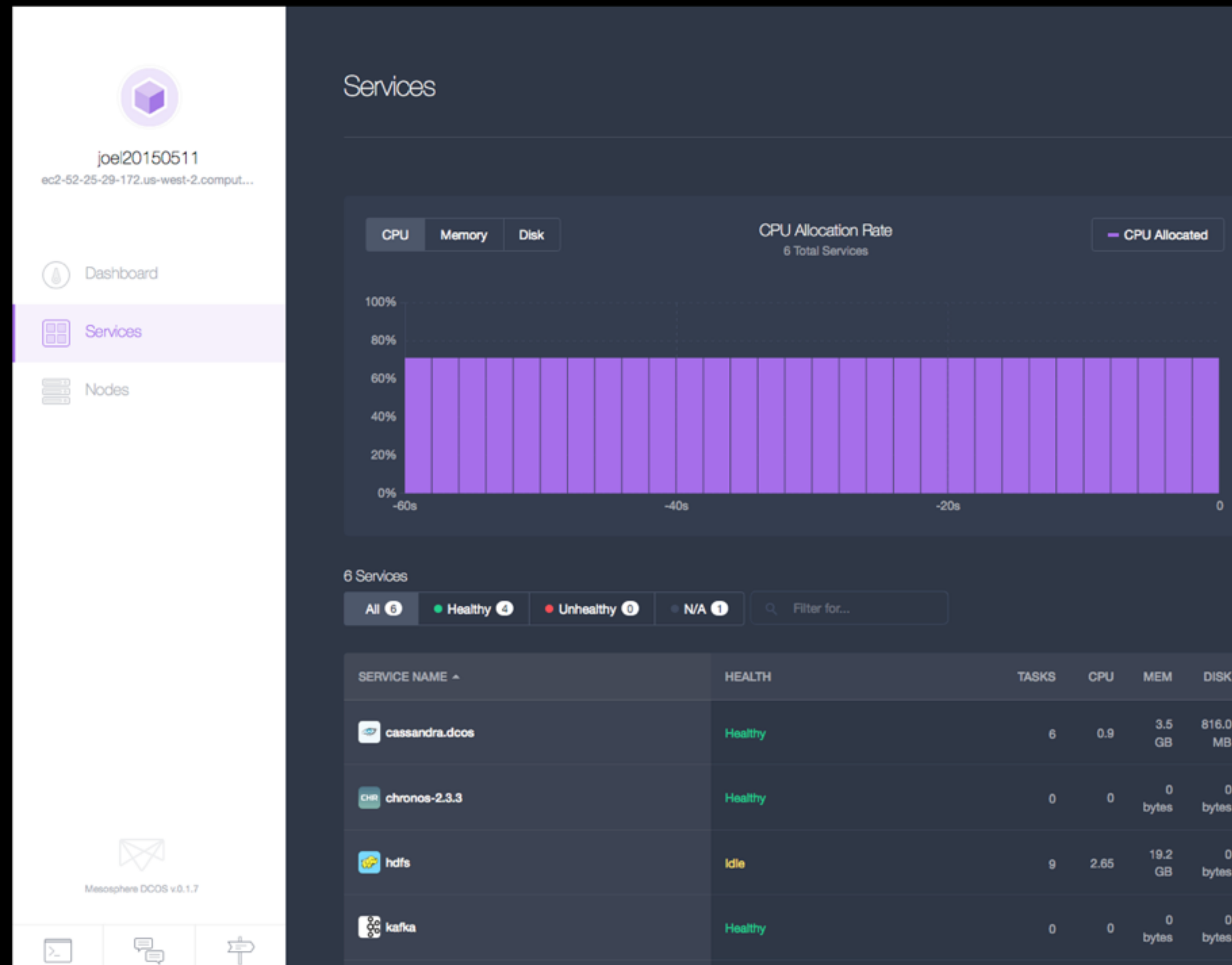
Best practices

- make no assumptions, because everything that can fail, will fail
- pets vs. cattle
<http://blog.factual.com/docker-mesos-marathon-and-the-end-of-pets>
- service discovery (Mesos-DNS + JS)
- private Docker repo

DCOS



DCOS



Wrapping up ...

- Use Marathon for Docker container orchestration
- Remember: cattle herding!
- Try out the DCOS: <https://mesosphere.com/product/>
- We're hiring: <https://mesosphere.com/careers/>