Docker@OVH with Mesos/Marathon

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The Docker ecosystem

- **Docker Engine**: run containerized processes (aka: containers)
- **Docker Compose**: run multi-container applications on a single host
- **Docker Machine**: provision and manage multiple remote Docker hosts
- **Docker Swarm**: orchestrate multi-containers app on multi hosts, manage networks, health-checks, etc
Docker orchestrators

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Orchestrator: lets you automate the creation, monitoring, and deployment of resources in your environment.

- **Docker Swarm** (Docker Inc.)
- **Mesos/Marathon** (Mesosphere)
- **Kubernetes** (Google)

Multiple orchestrators: all of each are now **standards**!
DockerAAS @ OVH

- You build your image, we run your containers
- Based on Mesos/Marathon
- Will support all orchestrators in the future
- Stateless/stateful containers
- Run on any OVH infrastructure (cloud, dedicated, etc)
- runabove.com/docker-with-mesos-marathon
Mesos/Marathon
Marathon API

- Start/pause/stop/redeploy applications
- Used from our CI environment (Bamboo/CDS) to create or update application after a CI build
- Monitor app health status
- Fetch marathon event stream
- etc
Mesos/Marathon @ OVH

Managed stack

Customer stack

Ovh Environment

PaaS Timeseries

PaaS Logs

Managed stack

Customer stack

Ovh Environment

PaaS Timeseries

PaaS Logs

Controlled stack
(Big) Data

- Docker 1.11.1
- 3000 containers (stateful/stateless) running at all times
- 2000 (v)CPUs
- 9TB RAM
- 6 clusters (4 prod, 2 beta)
- 500 hosts (VMs/dedicated)
- 5 people
Docker in stormy weather: storage drivers

- Devicemapper (default) only suitable for development
- OverlayFS: way faster but lots of inode consumed
- ZFS: to be tested, not easily available on Linux
- Messy documentation
- Some (dated) benchmarks
Docker in stormy weather: docker under load

- Some deadlocks: docker ps/info/run stuck
- Goroutine leaks: kernel ran out of threads
Thanks!
Questions?