

LINUX CONTAINER WORKSHOP 2017

---

**RUNNING AUXILIARY DATACENTER SERVICES**



HPC DATACENTER

---

**COMMODITISATION  
OF SERVICE STACKS**

# WHAT TO CARE ABOUT?

- ▶ Workload scheduler and HPC systems are specific
- ▶ How about... M.E.L.I.T.A.?
  - ➔ **M**etrics
  - ➔ **E**vents
  - ➔ **L**ogs
  - ➔ **I**nventory
  - ➔ **T**racing
  - ➔ **A**lerting

# METRICS

- ▶ Backends
  - ➔ OpenTSDB (HBase, Hadoop)
  - ➔ KairoDB (Cassandra)
  - ➔ Graphite (POSIX files)
  - ➔ BTrDB (Ceph)
  - ➔ InfluxDB (Custom)

## METRICS

### ▶ Frontends

➔ Just use Grafana (v4)!



# EVENTS/LOGS

- ▶ Backend
  - ➔ Elasticsearch
- ▶ Aggregator
  - ➔ Logstash
  - ➔ Graylog2
  - ➔ rsyslog
  - ➔ beats, qframe

## EVENTS/LOGS

### ▶ Frontends

→ Kibana, Graylog2

### ▶ Alerts

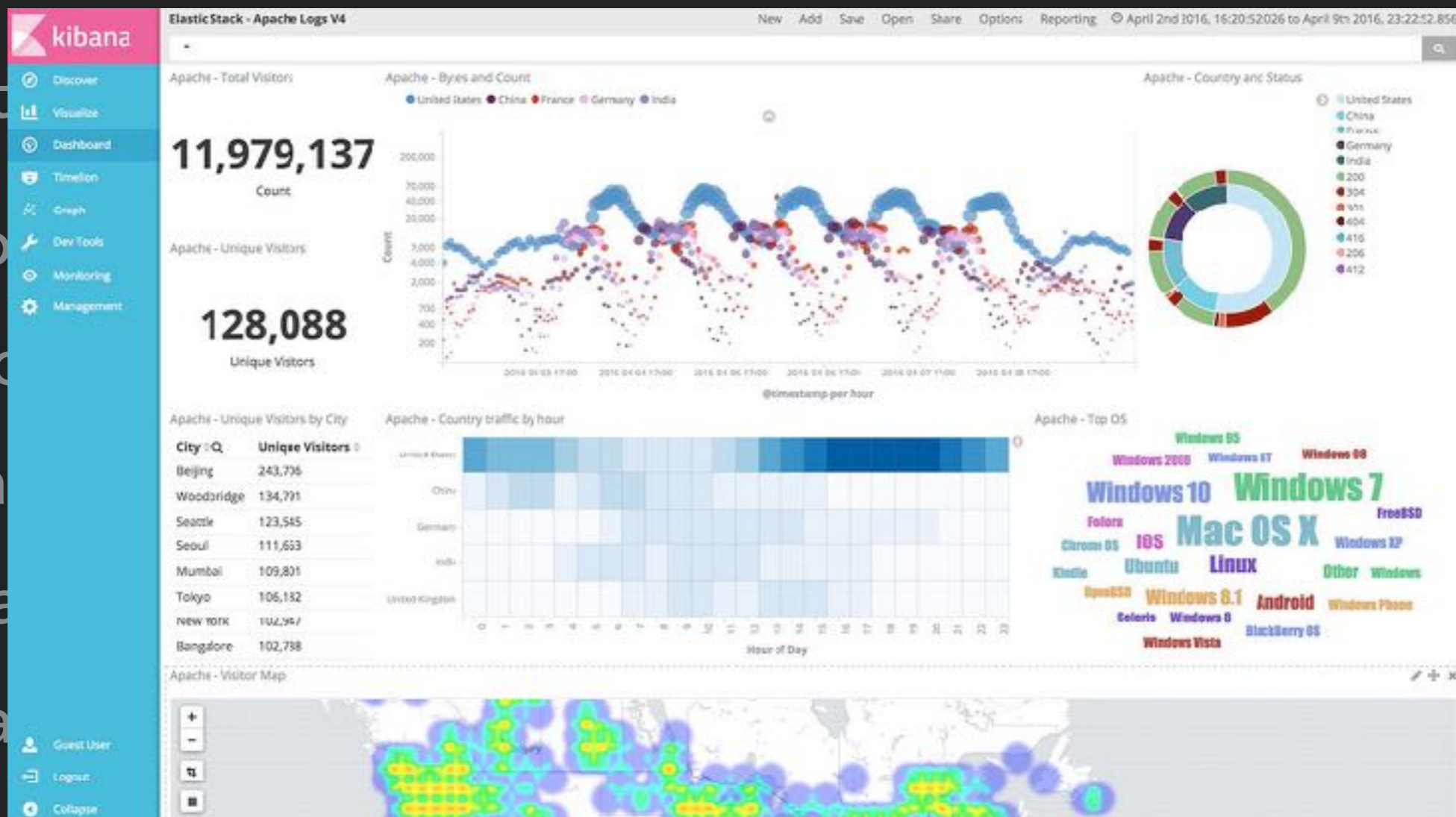
→ Bo

→ Pro

→ Ka

→ Ela

→ Ha



# INVENTORY

- ▶ Backend
  - ➔ Hawkular
  - ➔ GraphDB (Neo4j, ...)
- ▶ Frontend
  - ➔ Hawkular
  - ➔ Neo4j
  - ➔ JavaScript libraries





## ALERTING/ML

- ▶ Alerting/ML

- ➔ Bosun

- ➔ Prometheus

- ➔ Kapacitor

- ➔ ElastAlert

- ➔ Hawkular

**DEMO**



HPC DATACENTER

---

**OK, OK,  
WHAT IS YOUR POINT?**

### I RECKON...

- ▶ Stop reinventing the wheel
- ▶ Collaborate within OpenHPC, HPC Advisory Council, ... to
  - ▶ Provide container images
  - ▶ Example stacks on SWARM/Kubernetes/Mesos
  - ▶ Share Dashboards, alerting rules, collectors, experiences
  - ▶ Ingest what comes downstream from the 'Cloud'!

## TO STAY INFORMED

- ▶ Subscribe (check regularly) my blog: [qnib.org](http://qnib.org)
- ▶ Subscribe to this youtube channel (ChristianKniep)
- ▶ Check the github repositories:
  - ▶ [github.com/qnib/service-orchestration](https://github.com/qnib/service-orchestration)