



Migration between Clouds

CloudDays 2011 – Hamburg

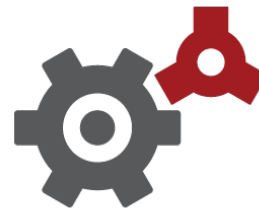
Thomas Metschke
@tmetschke

Consulting, development and workshops since 2005

NoSQL

Databases

Selection
Integration
Migration



Automation

Deployment
Workflows
Clusters



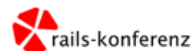
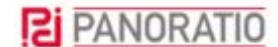
Ruby & RoR

Code Review
Security Review
Workshops
Development



Performance

Analysis
Optimization

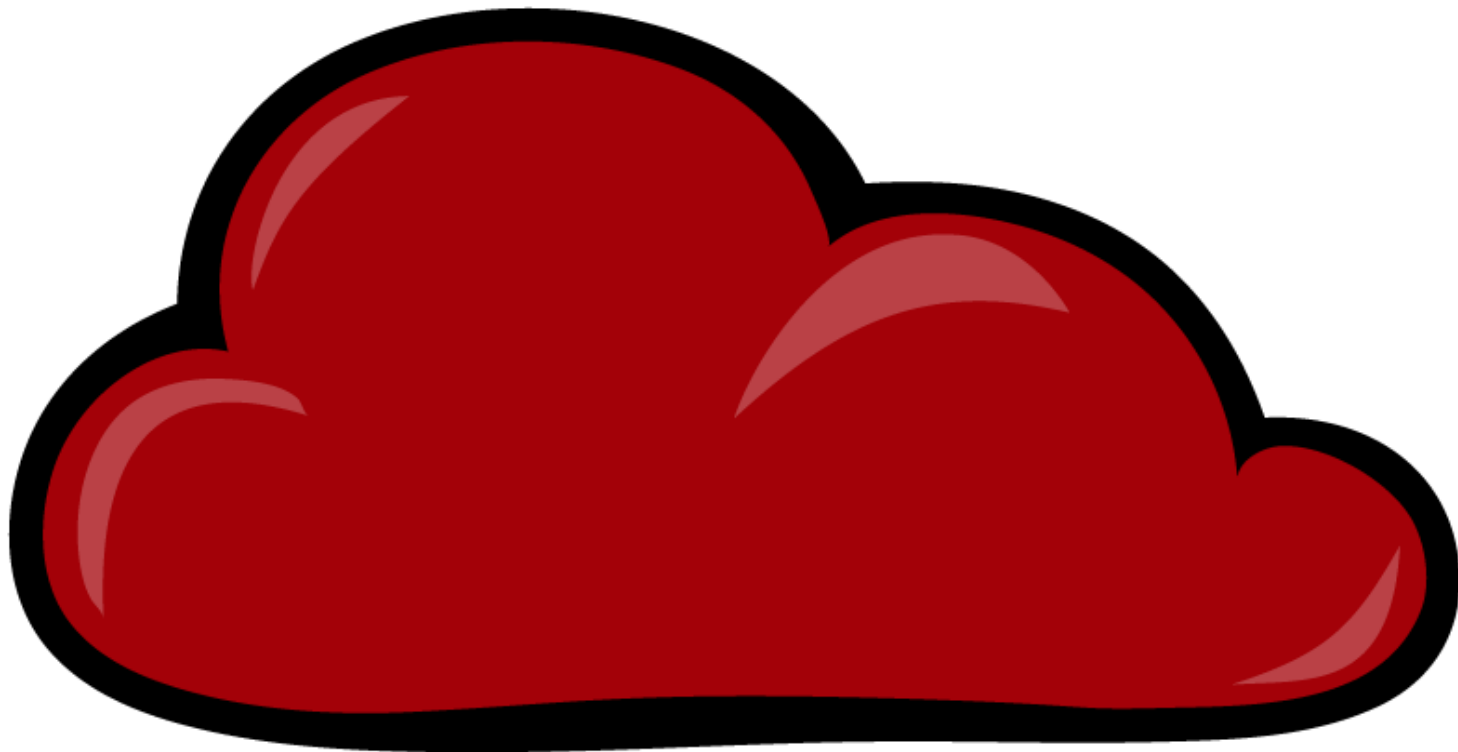


EC2 & Eucalyptus Cluster Management

- Automatic Configuration
- Self Healing Clusters
- Auto Scaling Clusters
- One Click Deployment
- One Click Cluster Cloning
- Monitoring & Alerting
- Logs & Accounting
- Firewalls & Backups
- Access & Rights Management



Cloud Computing



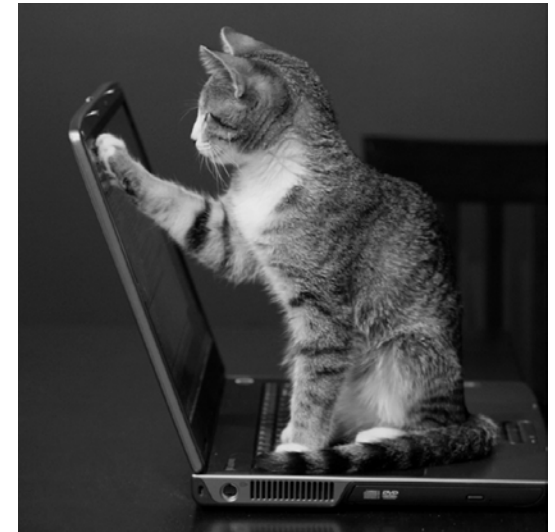
Cloud Computing



Infrastructure



Platform

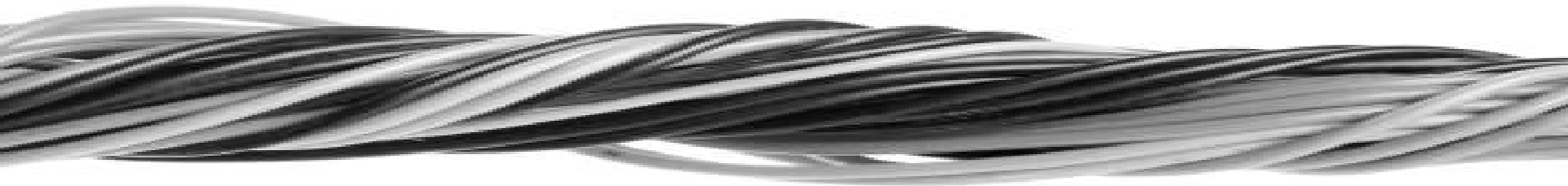
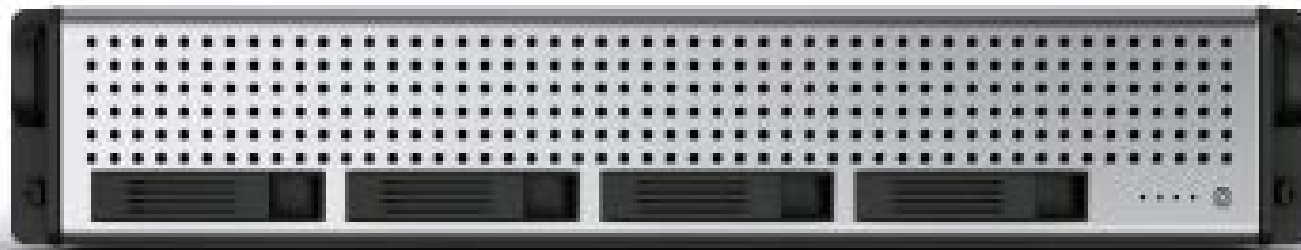


Software

Infrastructure as a Service



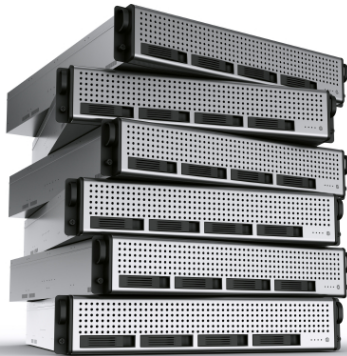
Compute, store, and transfer



Public cloud



Amazon Elastic Compute Cloud

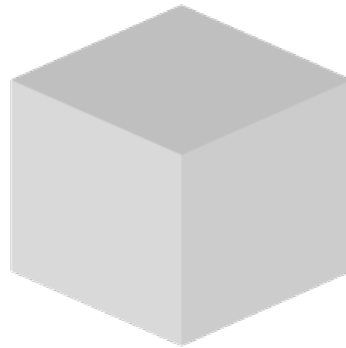


- Virtual servers via API call
- Pay per hour
- Different instance types in different regions

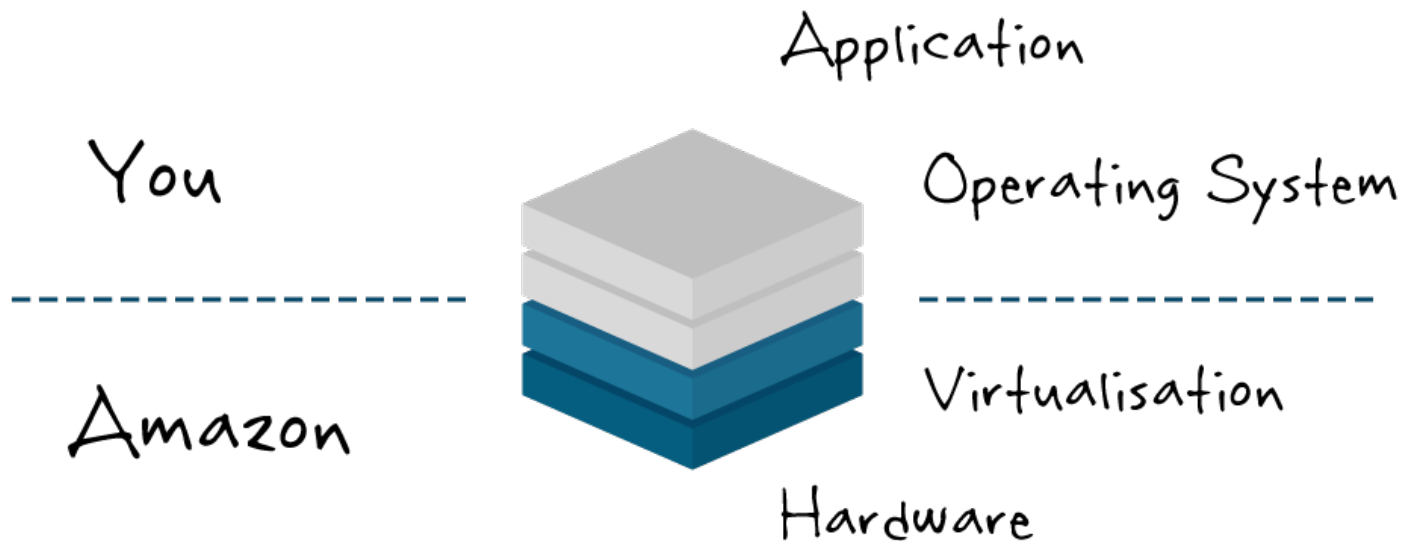
Amazon EC2 additional services



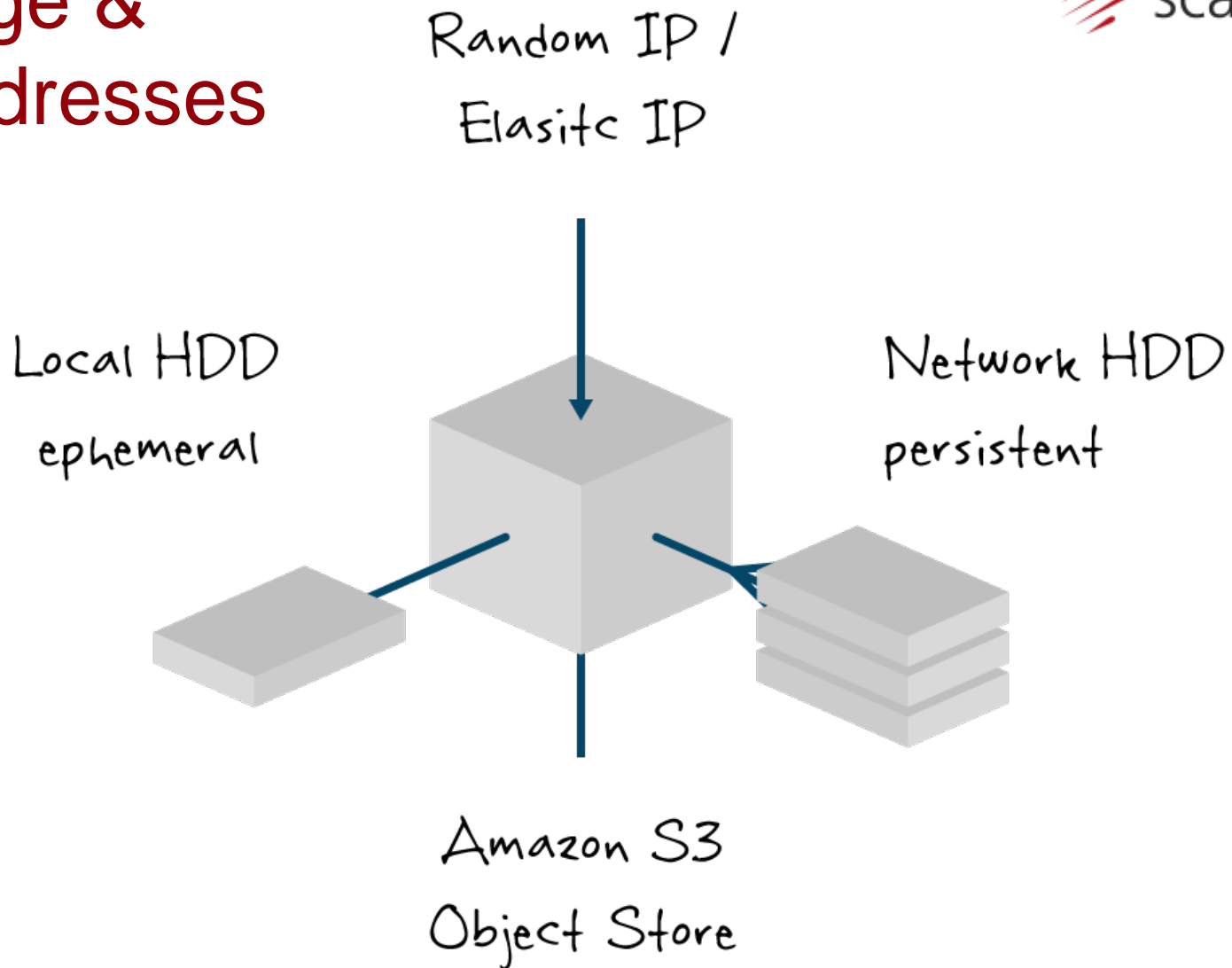
- Elastic Load Balancing
- Virtual Private Cloud
- Elastic IP
- CloudWatch
- Spot instances
- Elastic Block Storage
- And a lot more ...



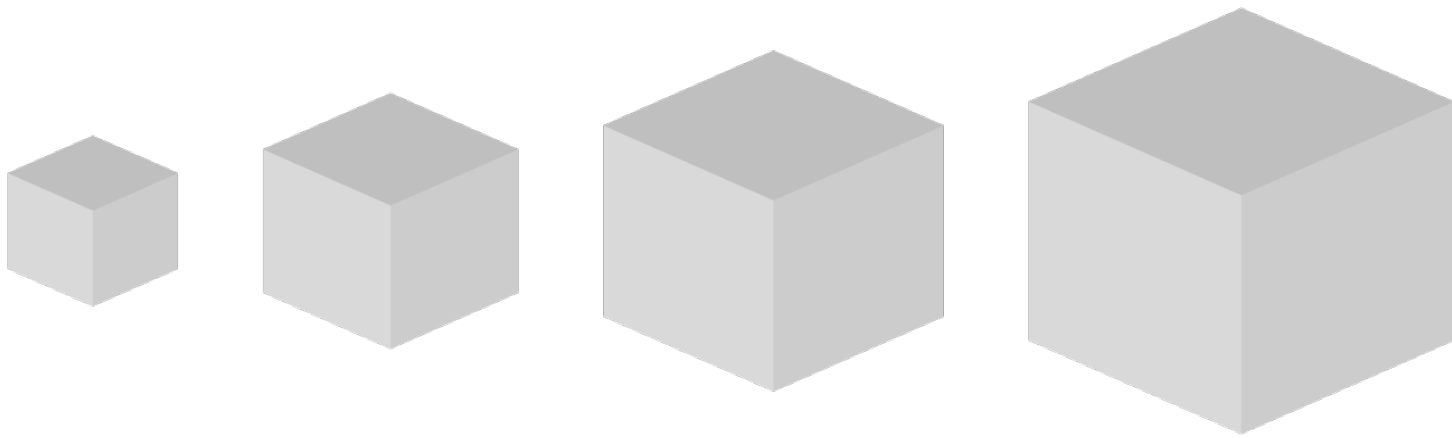
Amazon EC2



Storage & IP Addresses



Amazon EC2 is



Infrastructure as a Service

Let's talk about cute little Monsters  scalarium



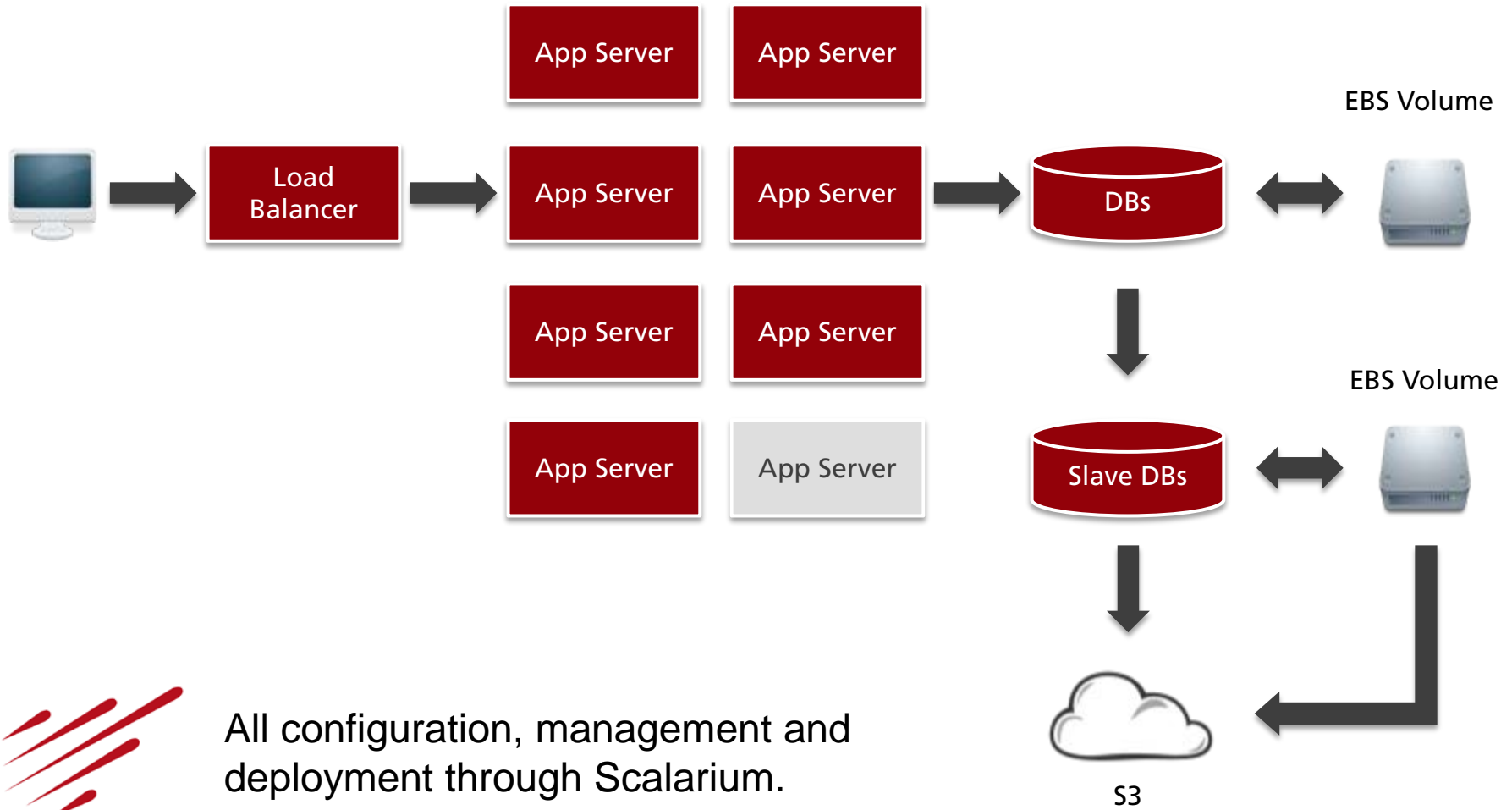
**Monster
World**

Monster World



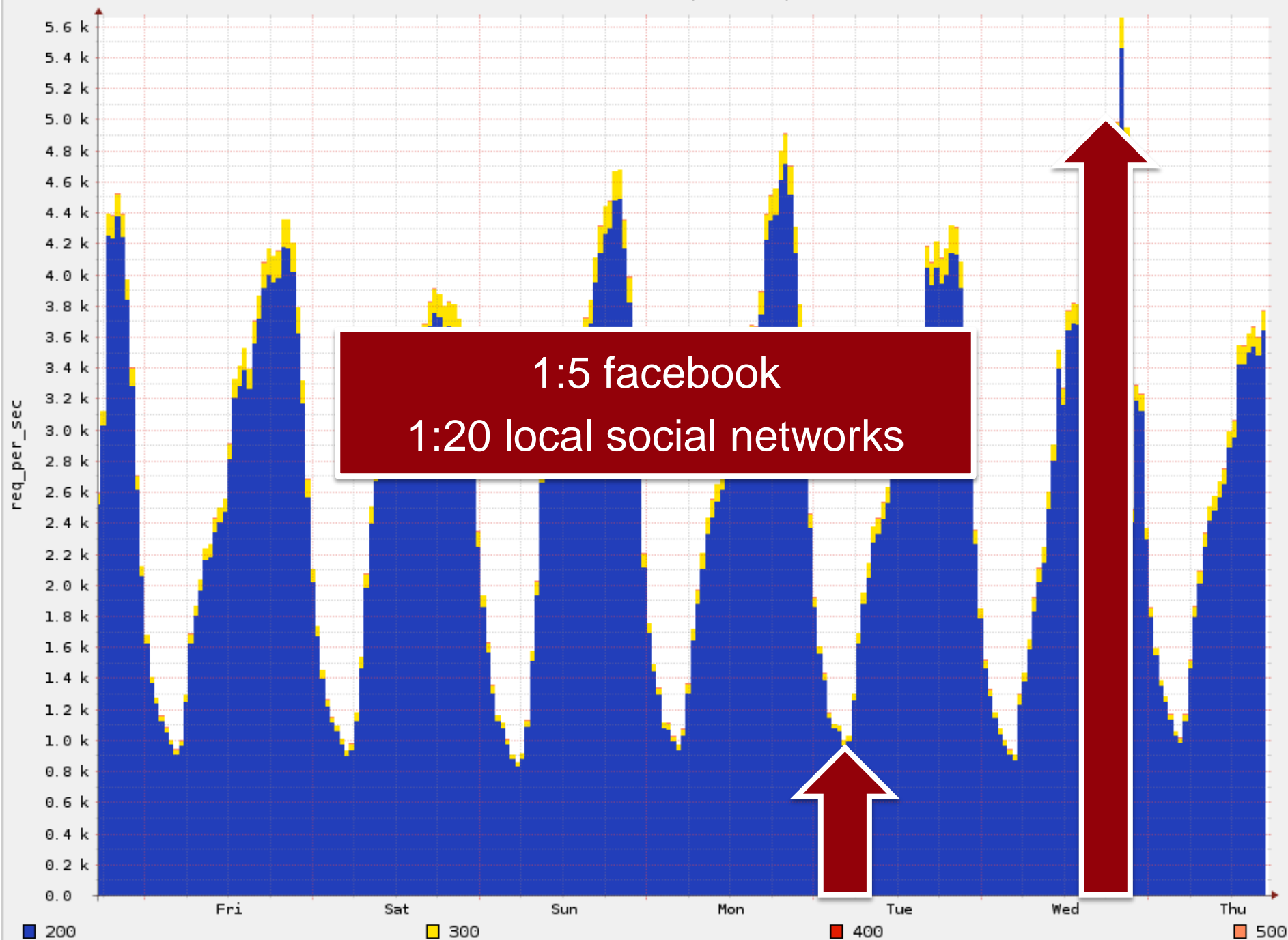
- 1.6 million DAU
(daily active users)
- 8.2 million MAU
(monthly active users)
- Peak 130 servers
- ~ 250.000 requests
per minute on
average

Basic architecture

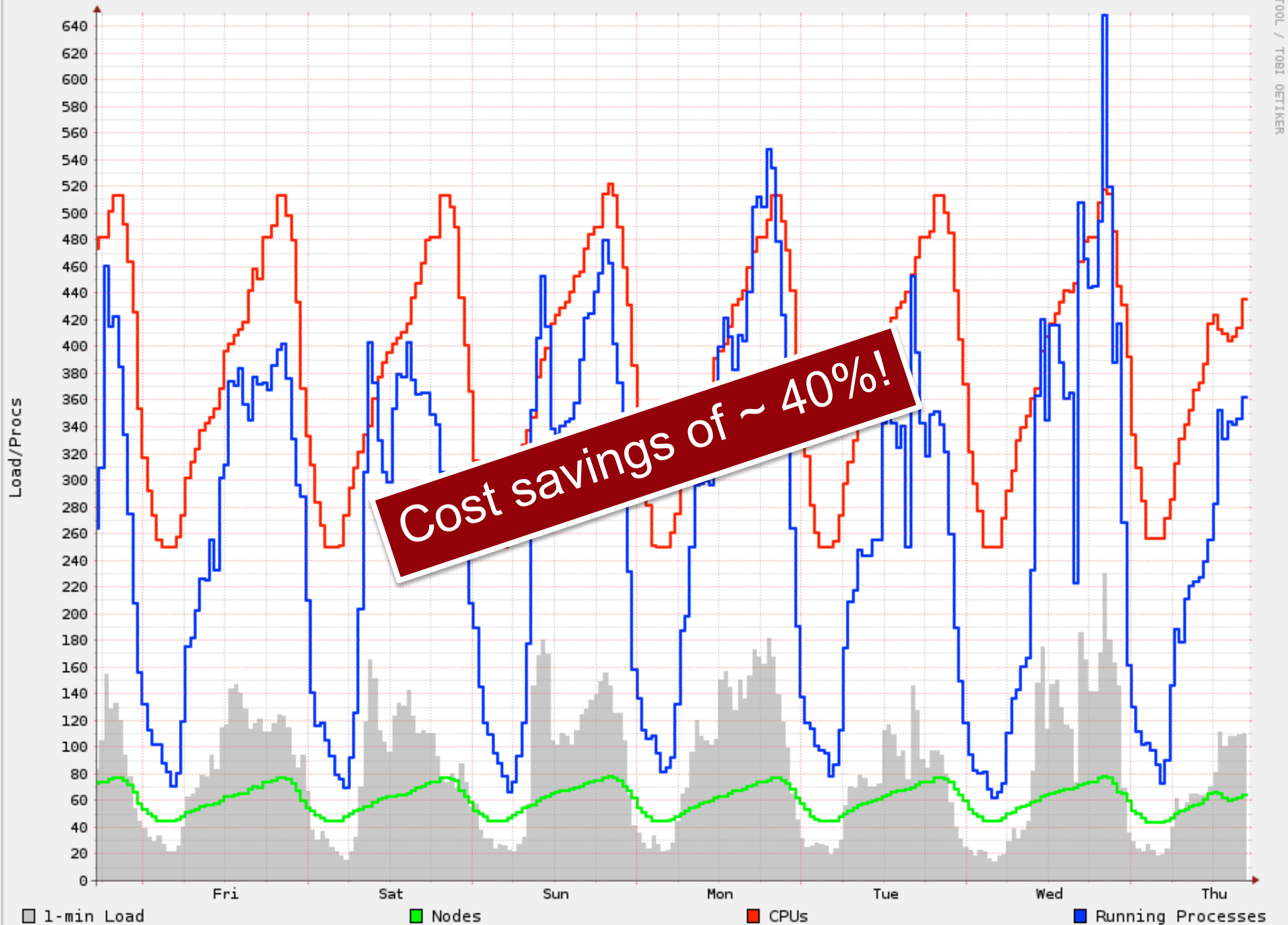


All configuration, management and deployment through Scalarmium.
No other tools needed.

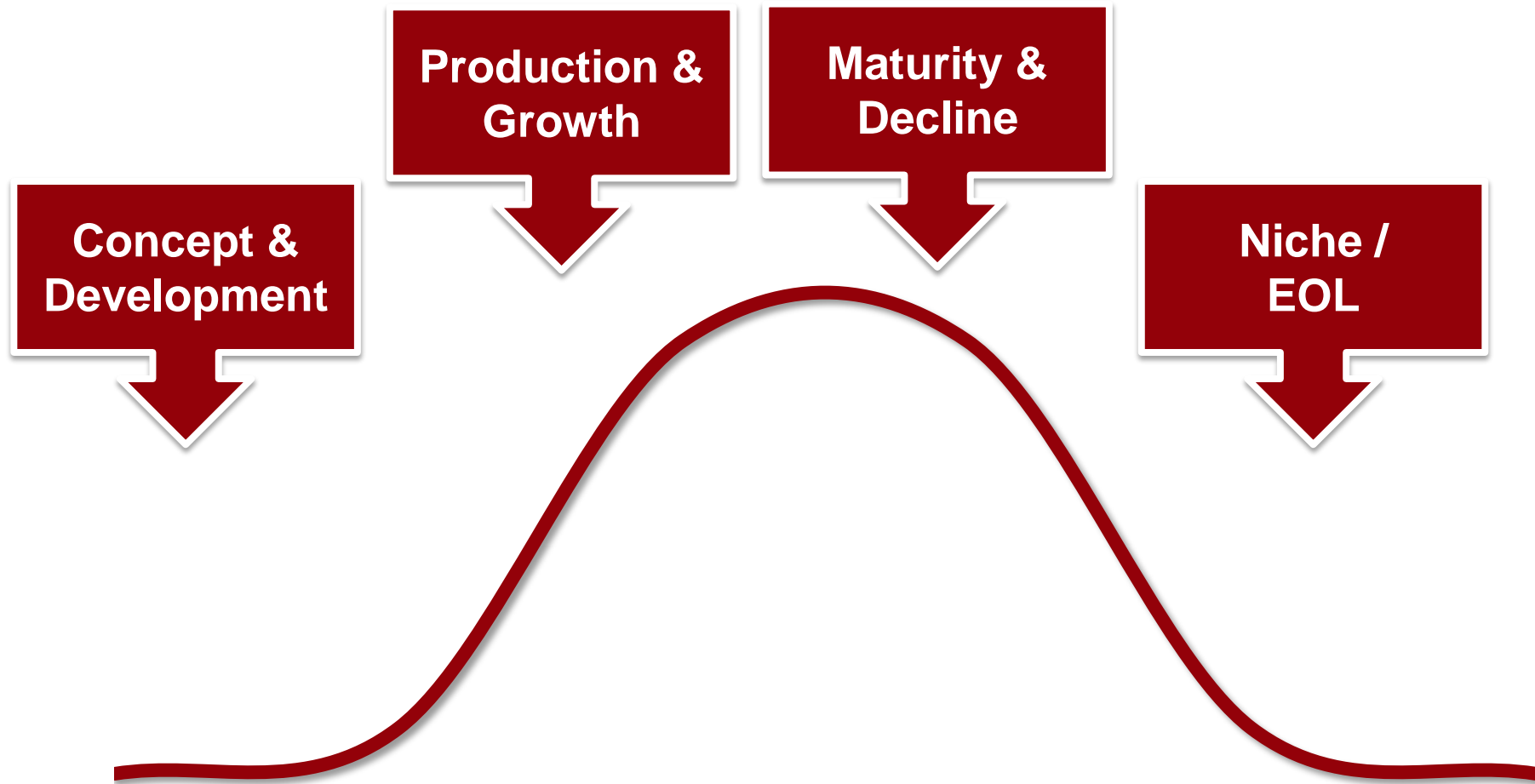
Cluster Apache Report last week



Cluster Load last week



Project life cycle





Cloud needs automation

- Configuration
- Healing
- Scaling
- Deployment



Stop server hugging!



You have to
constantly create
and destroy servers

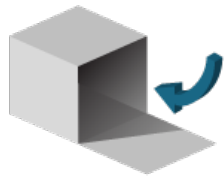


Life cycle events

setup



configure



deploy



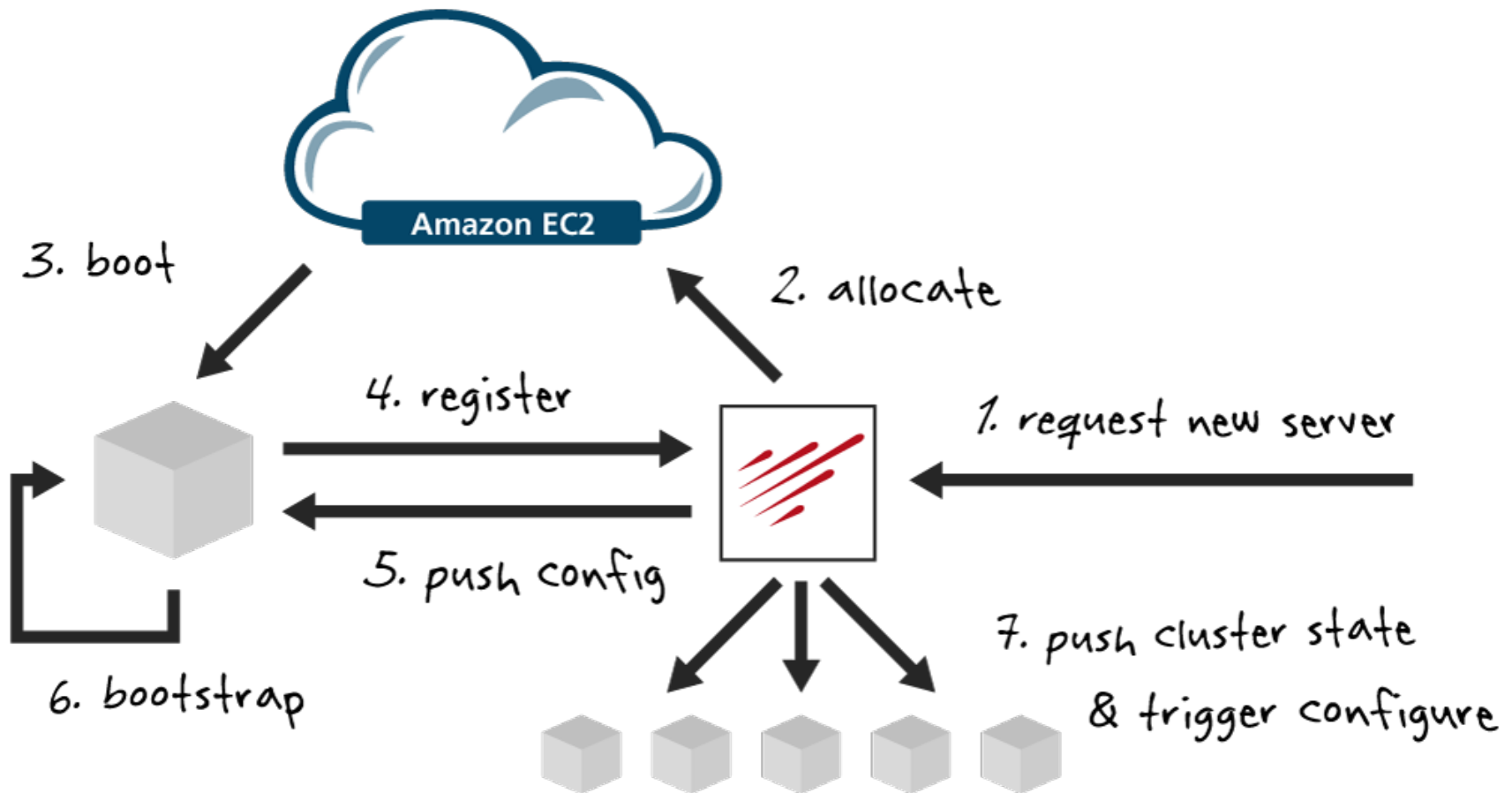
undeploy



shutdown



Continuous configuration



Deployments to the cloud



Application



Cluster

Handle deployments of applications out of source control systems or via http downloads. Allow update code on running servers. User management and GUI.

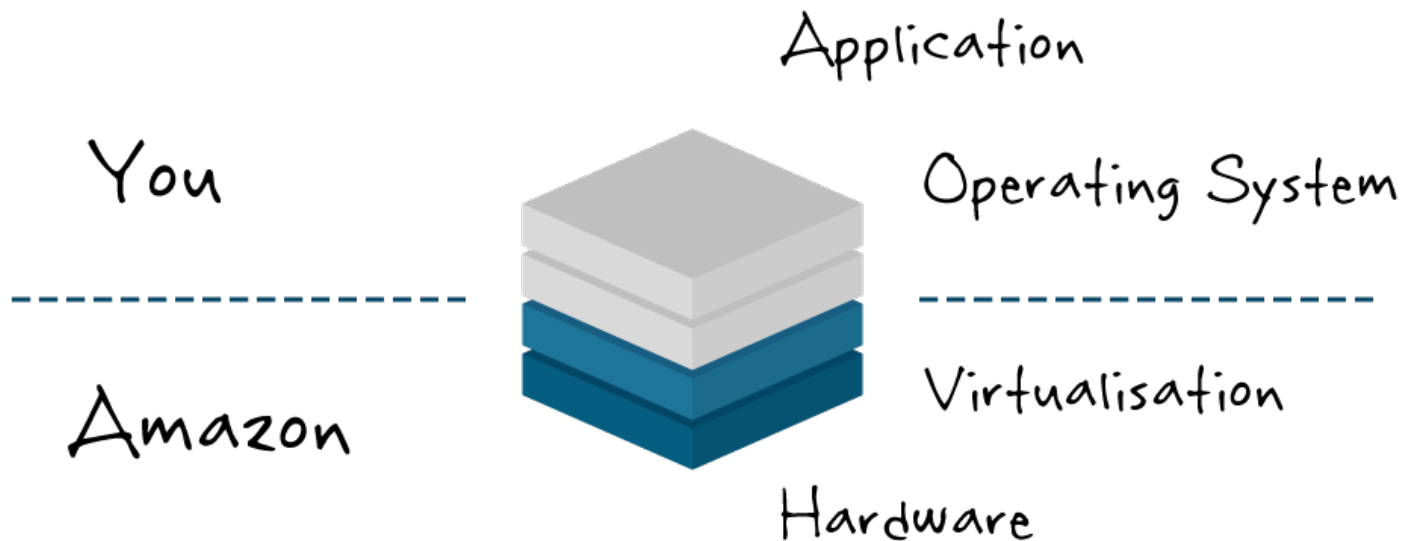
Why switch to a private cloud



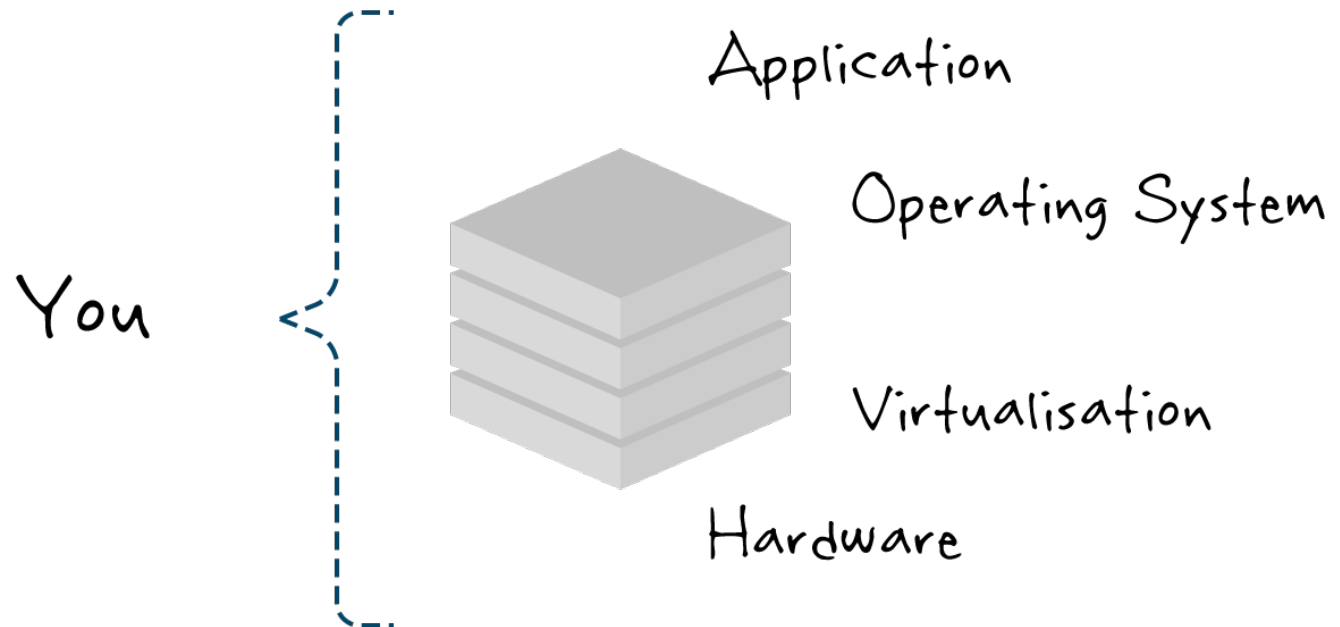
Because

- You can do it cheaper
- You have to be compliant to German data privacy and protection laws
- You need custom hardware
- You just want to do it
- In very rare cases
- You are with Safe Harbor Agreement
- Really?
- That's at least honest

What does change



It is all your responsibility



Private cloud



EUCALYPTUS

OpenNebula

nimbula

Private cloud

- All tools try to be Amazon API compliant
 - Amazon API is de facto standard
 - Discussion whether or how to create a standard is useless
- Most offer additional APIs
 - Most of them are quite bad
- Try to recreate Amazon functionality, focus on EC2, S3 and EBS

Dirty details



~~Back~~ to the future

 scalarium



Q & A

Thomas Metschke
@tmetschke

Peritor GmbH
Blücherstr. 22, Hof III Ausgang 6
10961 Berlin

Tel.: +49 (0)30 69 20 09 84 0
Internet: www.peritor.com
E-Mail: info@peritor.com