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# Building an Openstack cluster without clustering

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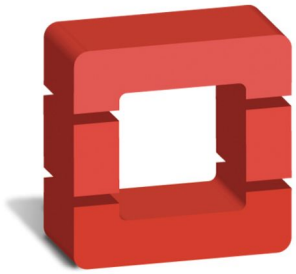
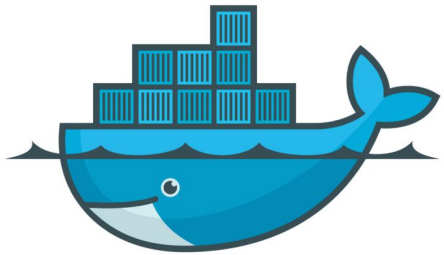


openstack
CLOUD SOFTWARE



docker

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# Requirements

- Integration in Federated Cloud
- Network modifiable (Opencontrail)
- Automated installation
- Easily upgradable
- Acess to hardware

# Setup (Containers)

- Dockers
  - No Clustering software
  - Emulating the openstack install guide
  - Dockerfile example
  - Images built using jenkins
  - Hosted on vmware Harbor registry

# Configuration management

- Ansible
  - Powerful
  - Shallow learning curve
  - imperative
  - Playbooks

# Setup

- Systemd unit files
  - Robust
  - Integrated logging
  - Unit file example

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# Some components

- openstack components (11)
- Mariadb Galera cluster
- Rabbitmq cluster

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# We don’t have

- Docker clustering
- Service discovery (consul)
- Overlay network

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# Existing solutions..

- We looked at existing solutions.
  - Not in docker (openstack ansible)
  - no opencontrail integration
  - ill supported
  - .. all this ~~might~~ will change

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# Future improvements

- Orchestration (zookeeper, consul etc)
- dynamic scheduling
- SDN
- Dynamic resource allocation (service)
- Kubernetes on top of openstack
- Or….?

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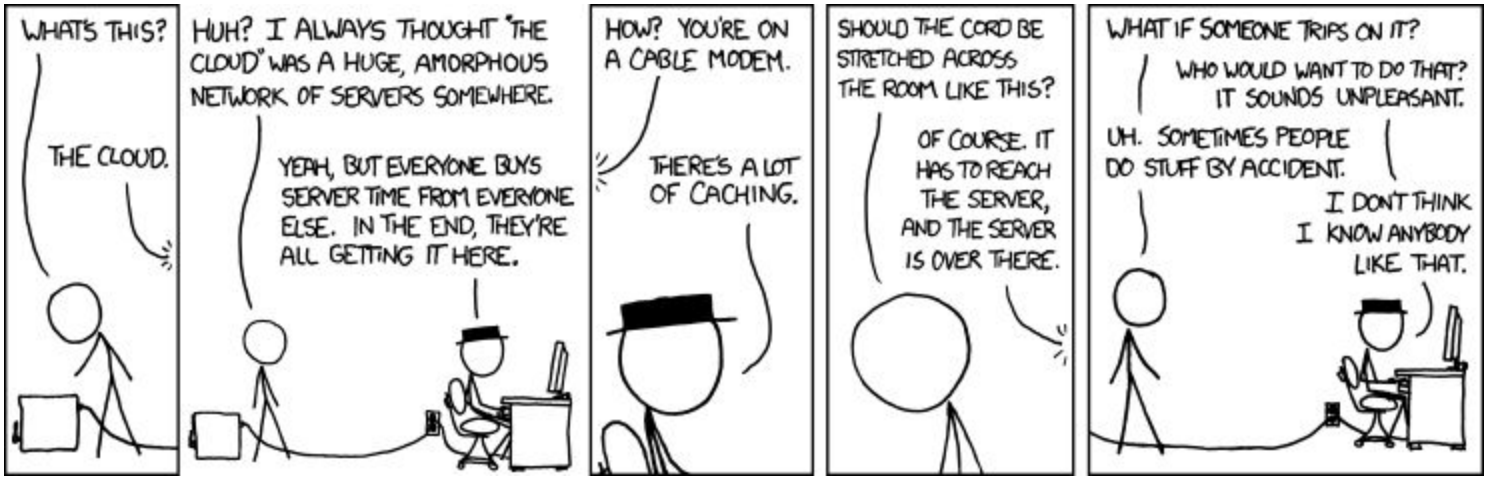
# Questions?