





Cloud Experiences

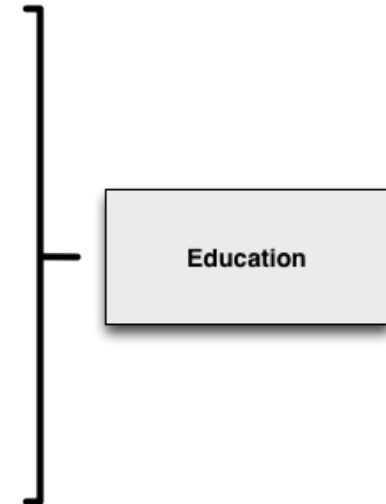
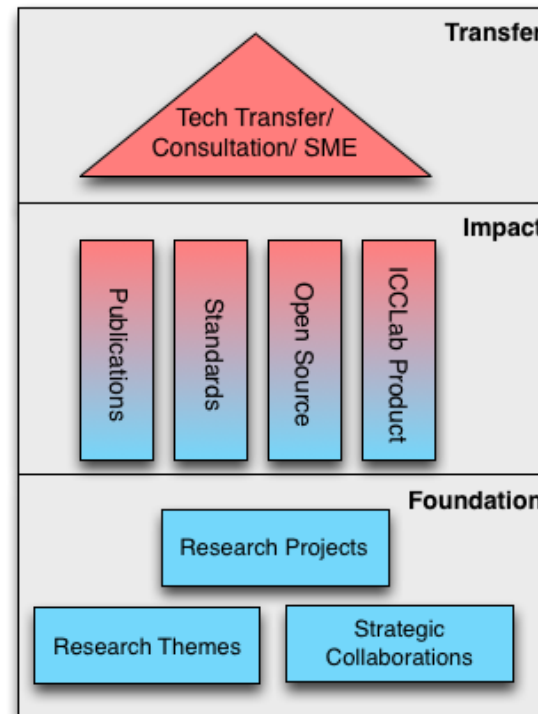
Andy Edmonds, Thomas Michael Bohnert,
Christof Marti
ZHAW

www.cloudcomp.ch

Hello!

ICCLab

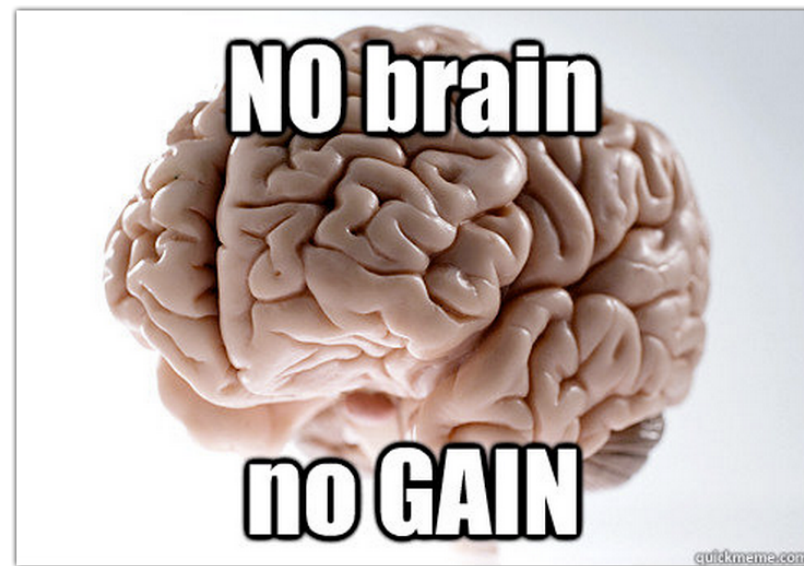
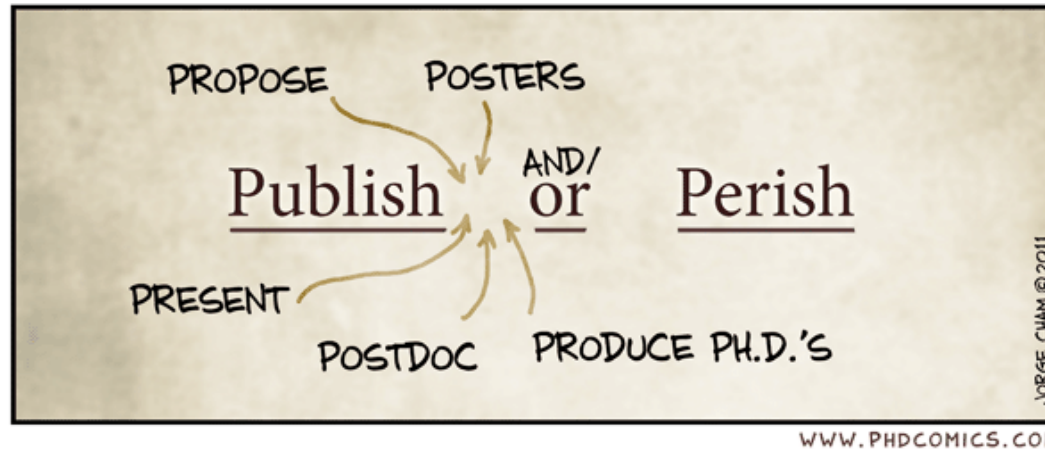
- Cloud Computing Research



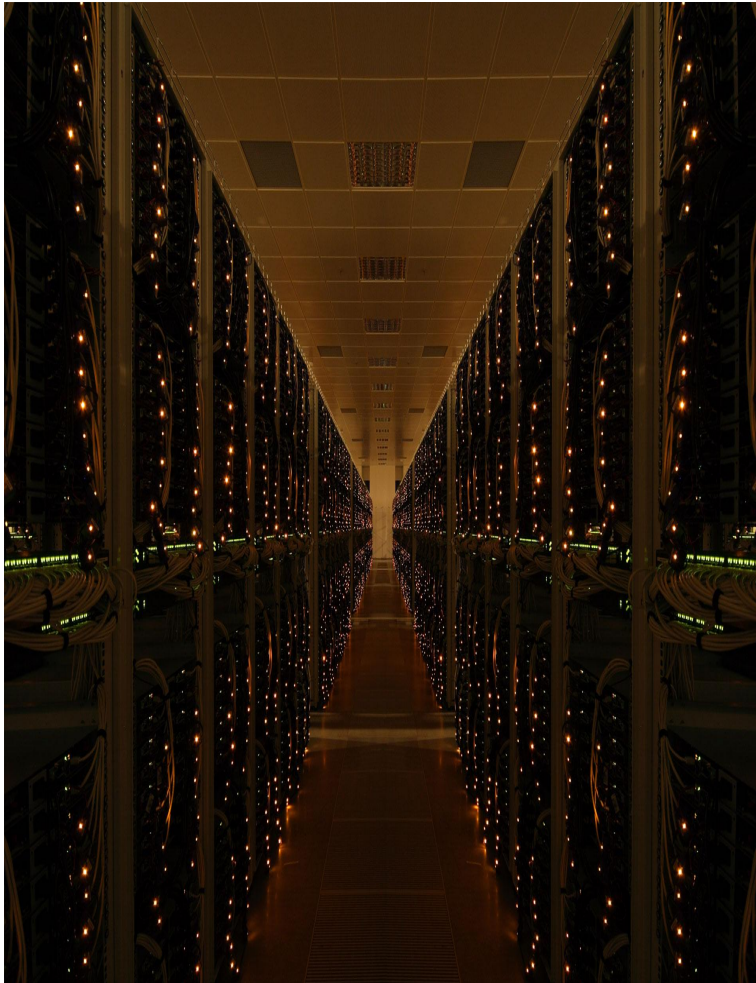
“From **Research Themes** to **Projects** creating **Impact** and **Transfer** for Educational Excellence”

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ICCLab Essence



Got Servers, want Cloud!



Why?

How?

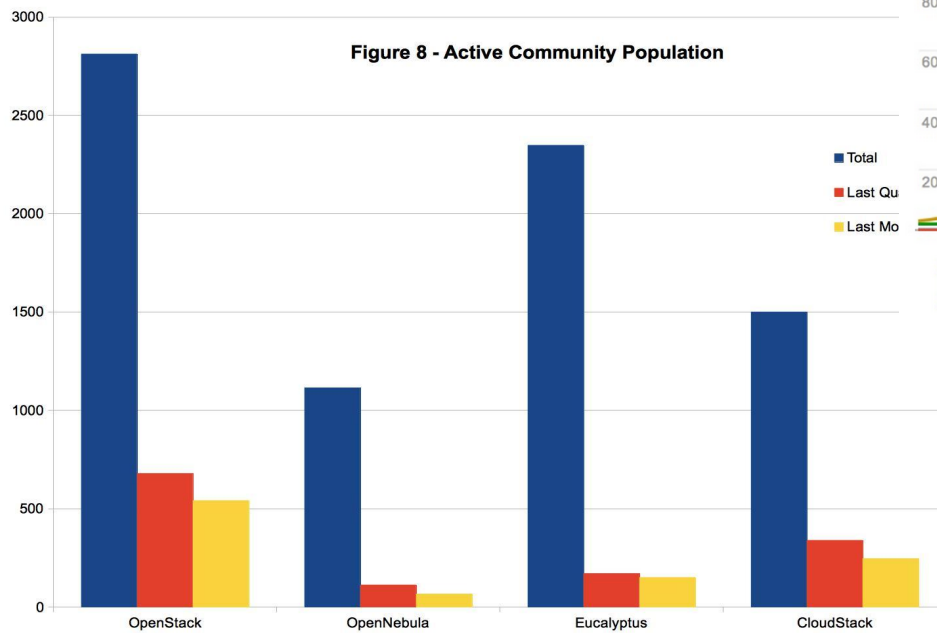


openstack™
CLOUD SOFTWARE

Why? Community



Figure 8 - Active Community Population



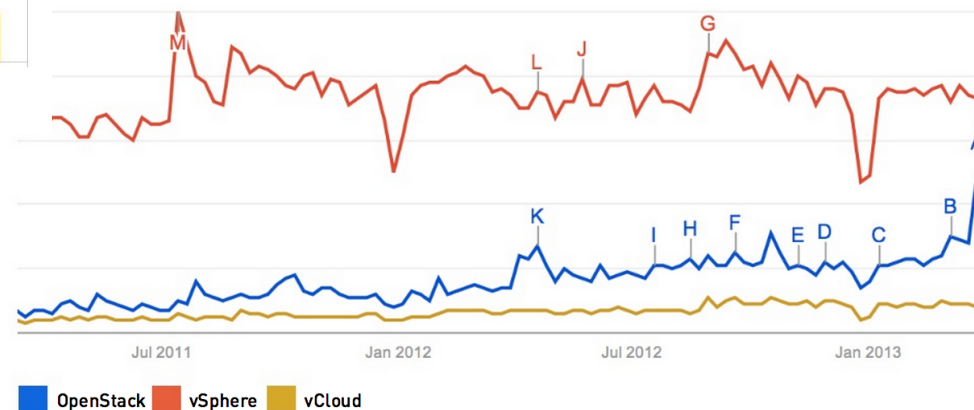
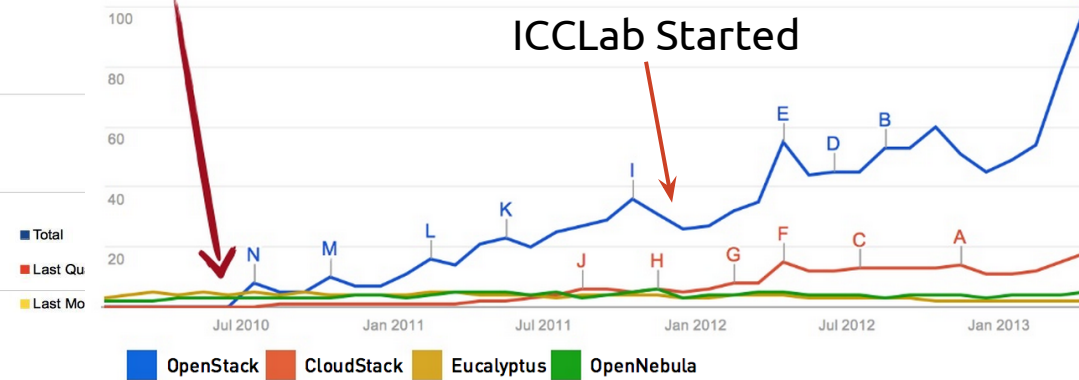
Sources:

<http://www.slideshare.net/andybias/state-of-the-stack-april-2013>

<http://www.qyjohn.net/?m=201304>

OpenStack Launch

ICCLab Started



Why?

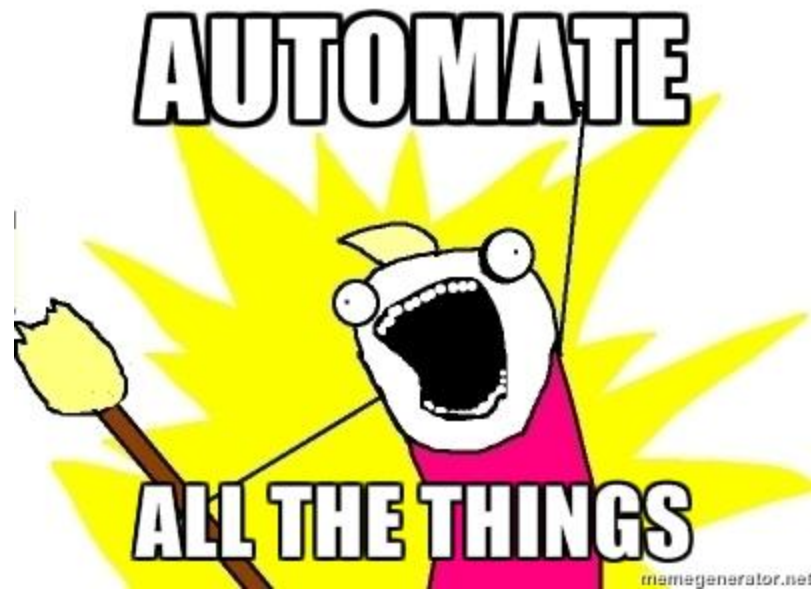
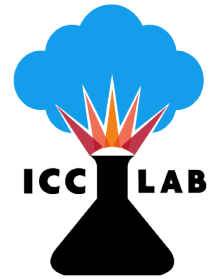
Top 3 Industry Support



Source:

<http://www.slideshare.net/randybias/state-of-the-stack-april-2013>

How?



Automate All The Things



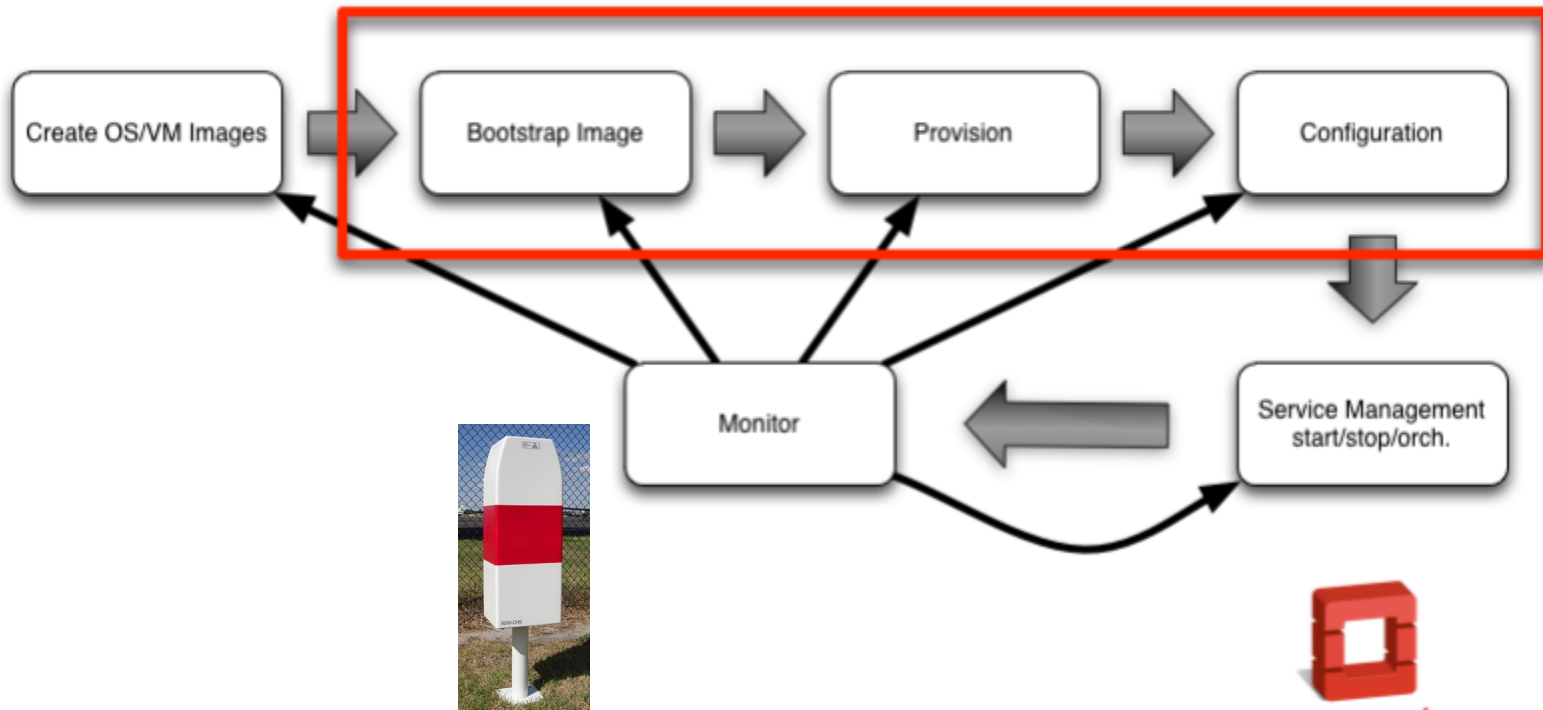
Ubuntu Netboot
apt-cache-ng



Foreman



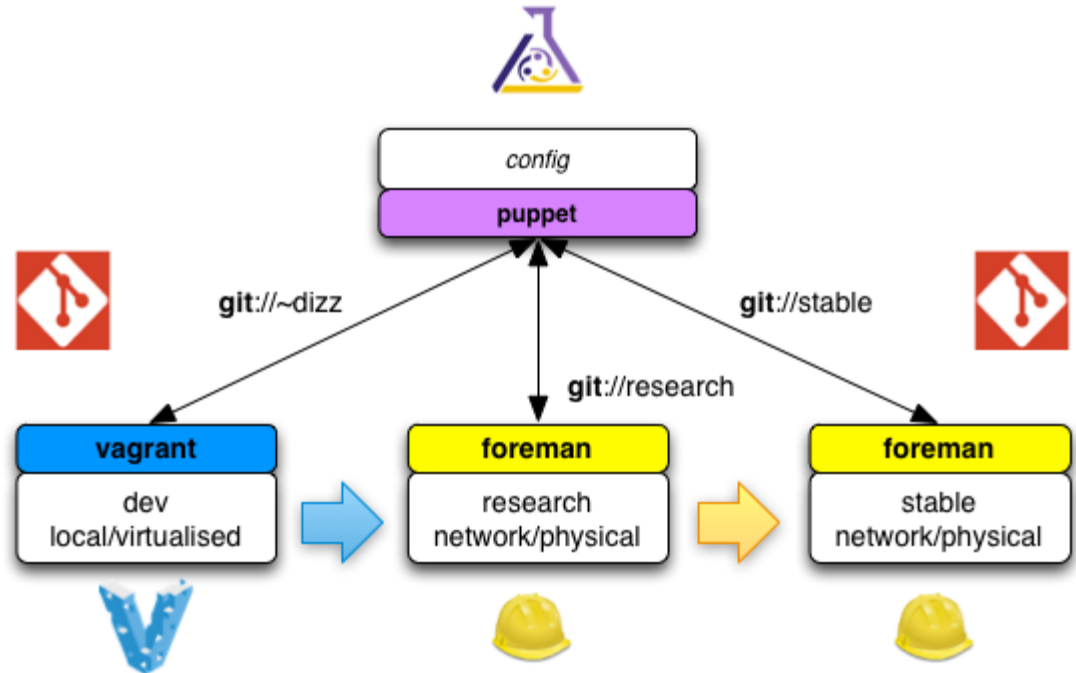
Puppet



Workflow

Automate

- Only operations?
- Research too!



Approach to deployment

- Local:, puppet, git & vagrant
- Research: all good use same puppet via git & foreman
- Stable: move if proven in research, repeat

Difference

- deployment tool: **vagrant** v.s. **foreman**

Result



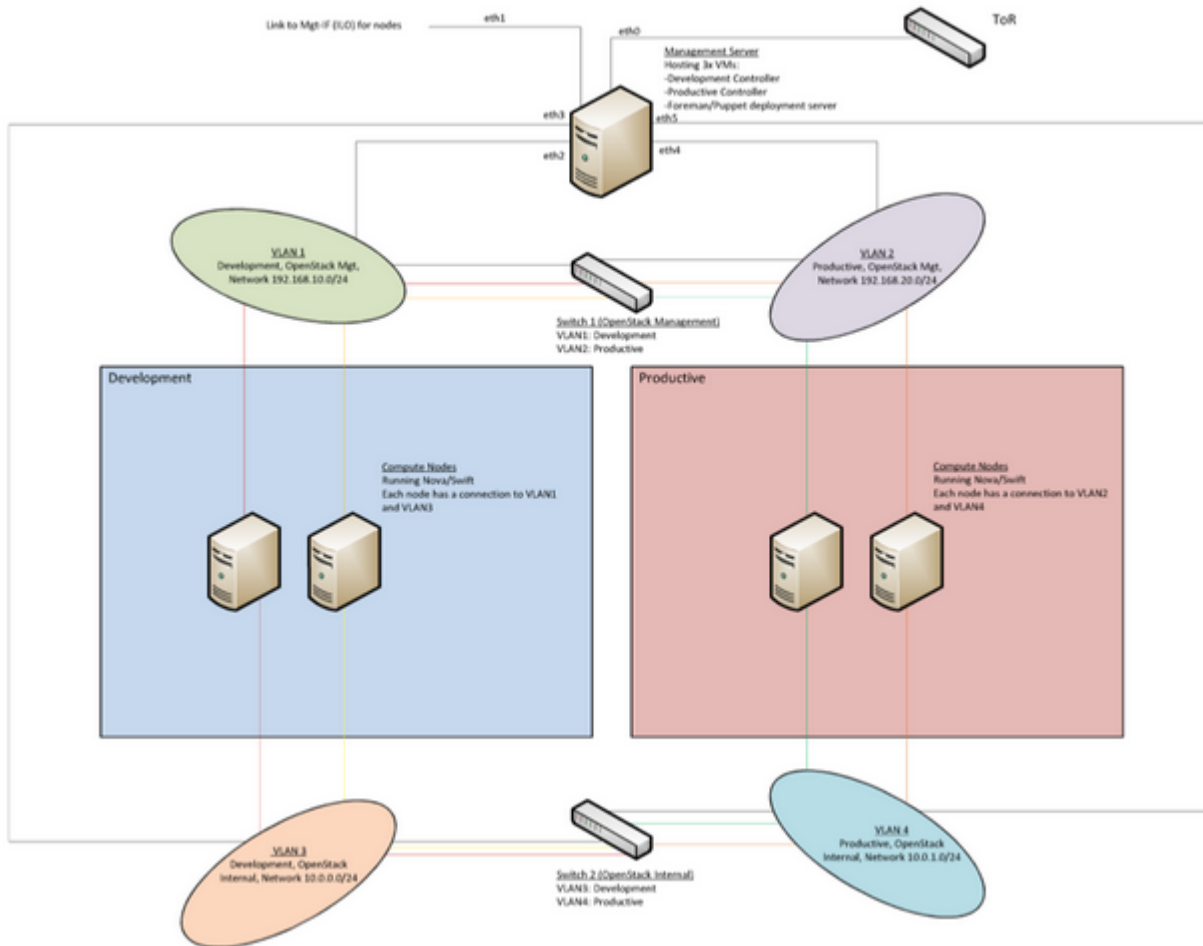
Second Swiss OS POC
Operational since May 2012

Compute & Storage

- Automating is easy
- Scale should not hurt us



Result



Network

Not automated

We **need** tools to
do this

SDN is one way

Used?



Investigate Themes and Initiatives

- cloudcomp.ch/research

Research Projects

- Mobile Cloud Networking
 - E2E Cloud for Telco
- KIARA
 - SDN for Middleware
- GEYSER
 - Service Relocation for Green Savings
- cloudcomp.ch/research/projects



Present ICCLab Activities



OpenStack

- Grizzly
- SDN
- Ceilometer
- HA
- SmartOS



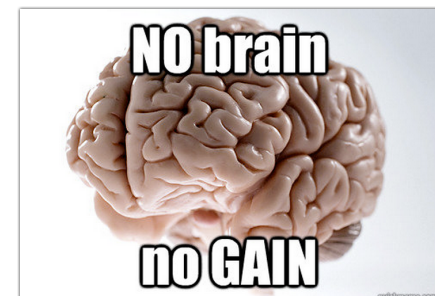
SmartOS



Education

- Summer school
- Bachelor course

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Present ICCLab Activity Q's



Service Relocation

- HOWTO move one service (can be composed or atomic) from one service provider to another?



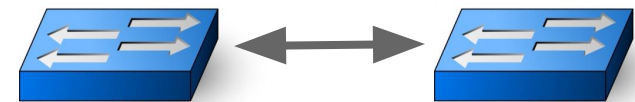
HaaS

- HOWTO provide on-demand customisable hadoop clusters using openstack?



SDN Interop

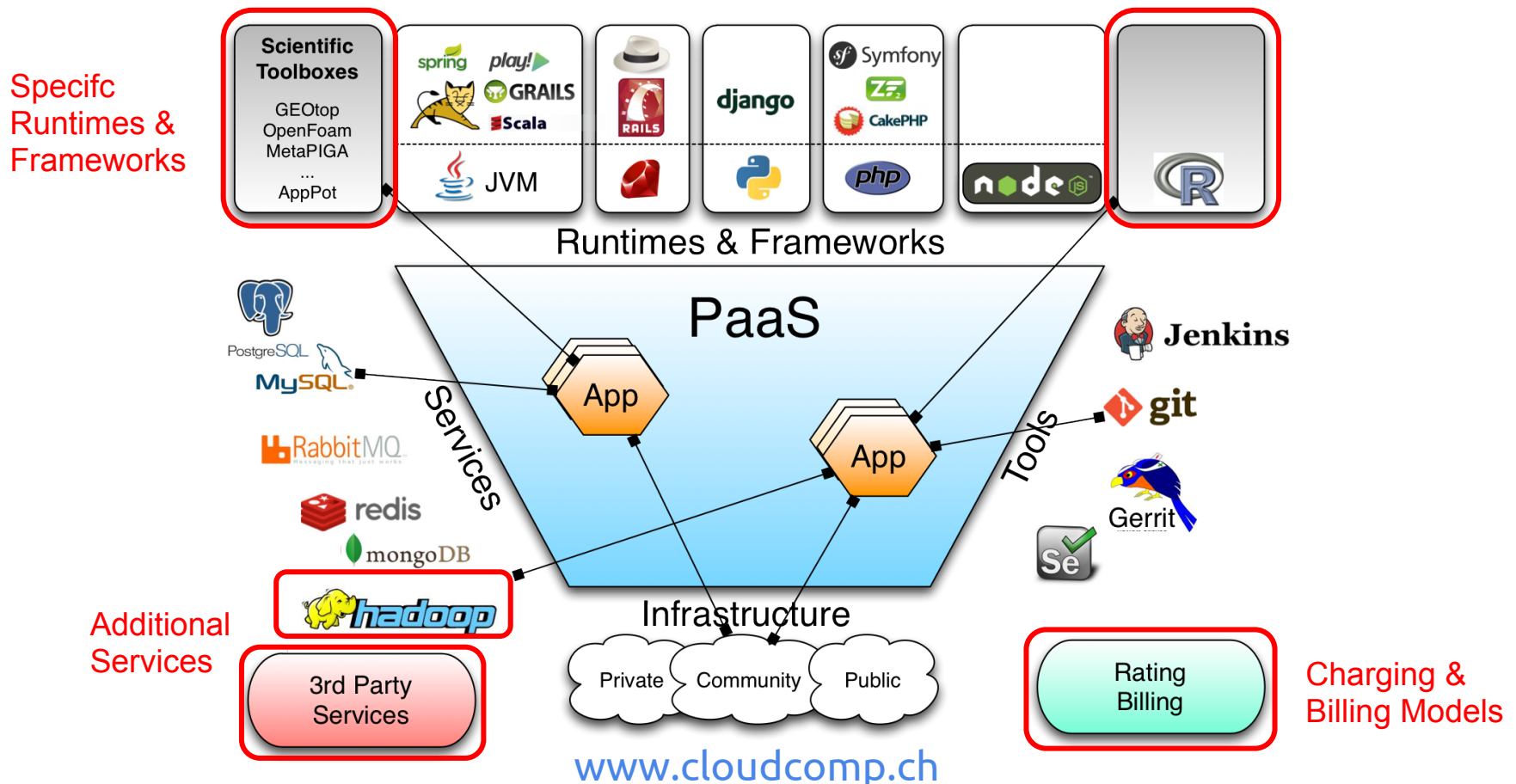
- HOWTO interconnect 2 networks hosted on different providers?



Present ICCLab Activity Q's



HOWTO extend PaaS → Domain Specific PaaS (Science)



Swiss-Focused Research Q's

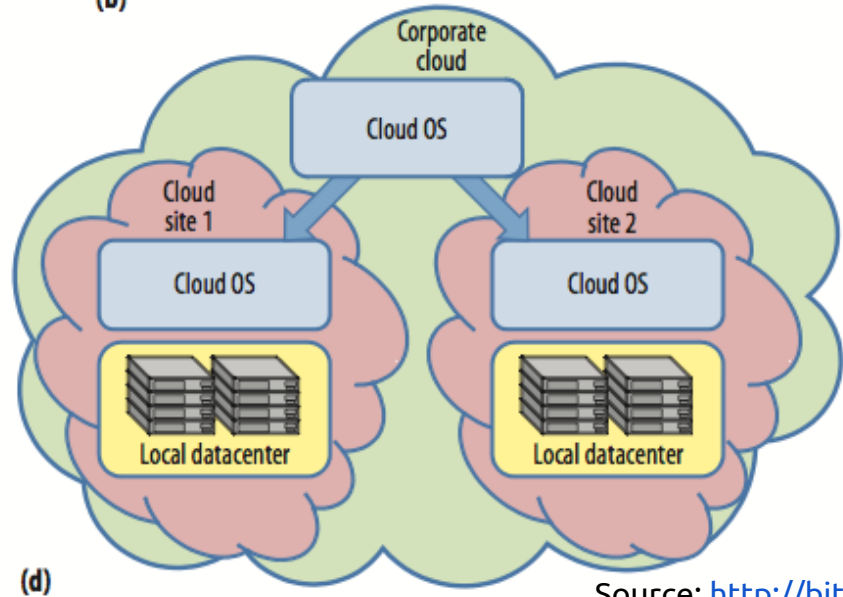
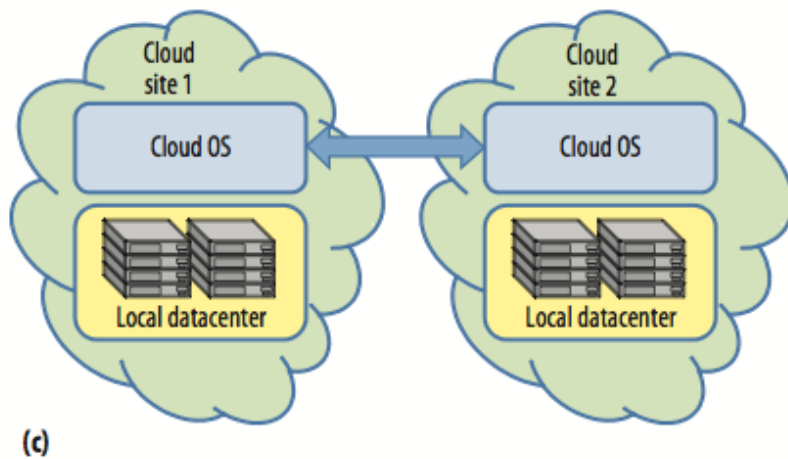
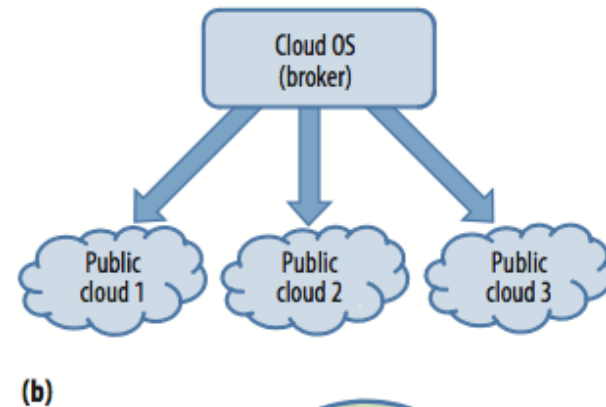
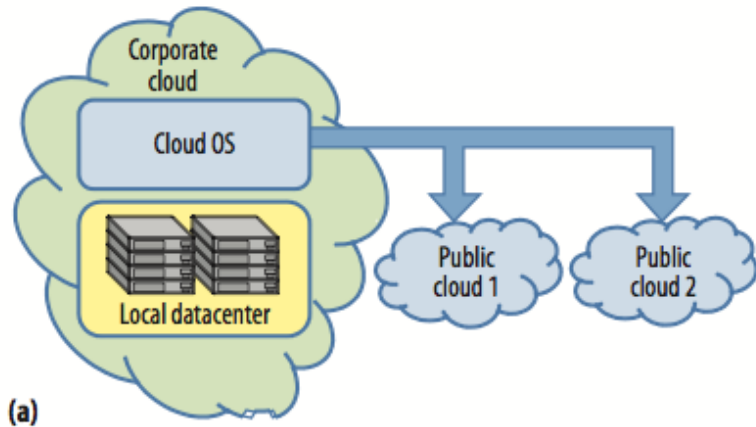
Bigger/Wider Question:

Continue ghettoisation of "clouds"?

- Leverage lots of resources collectively?
- **A Commons?**
 - How to avoid "tragedy of the commons"?
- How best to **federate**?
- How to **interoperate**?



Q: Federate?



Source: <http://bit.ly/c-fed>

Q: Interoperable, Really?!!



OpenStack?

Amazon EC2?

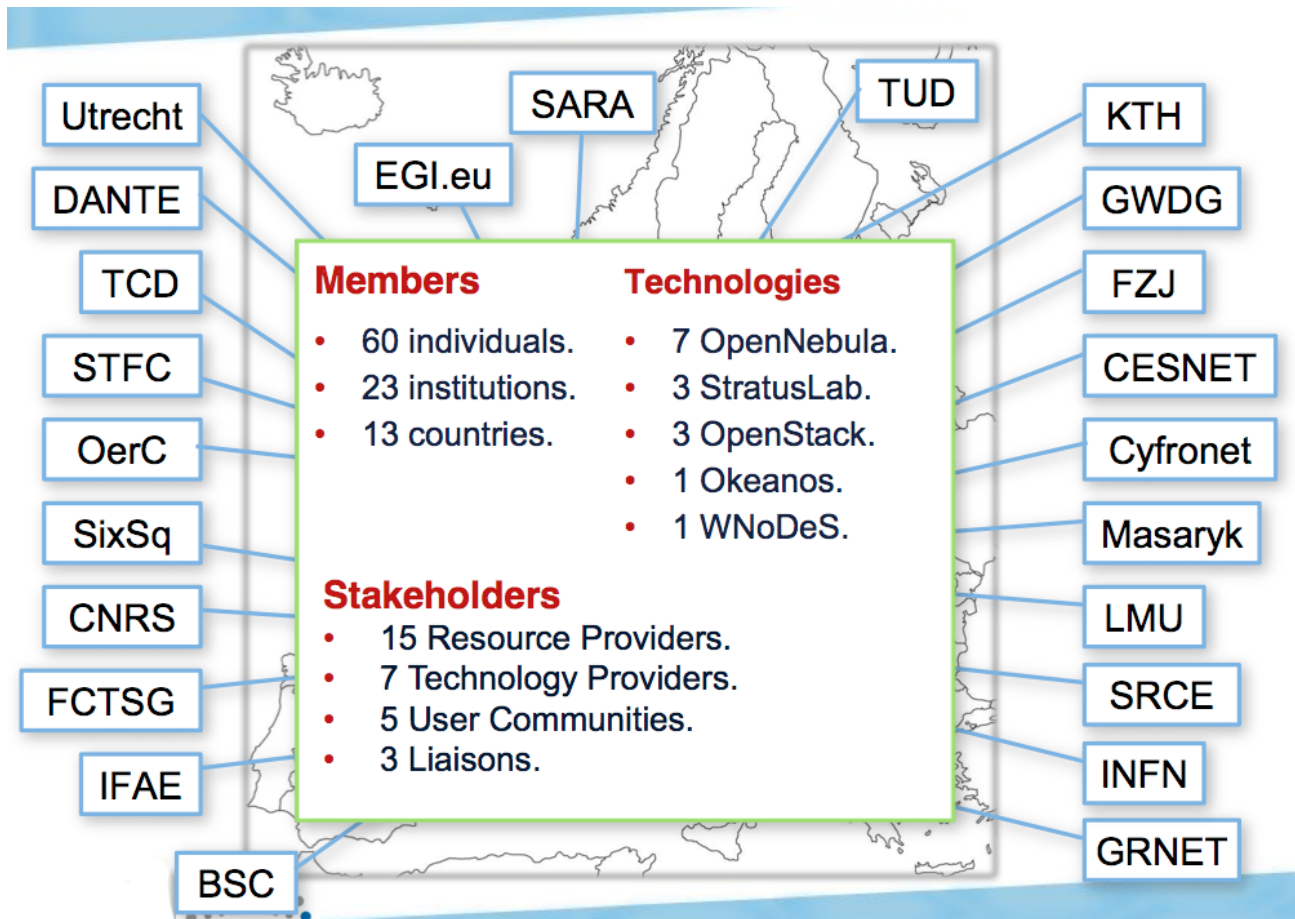
OpenNebula? etc....

Who's interoperable? **No one is!**

*Even **OpenStack's** are not*...*

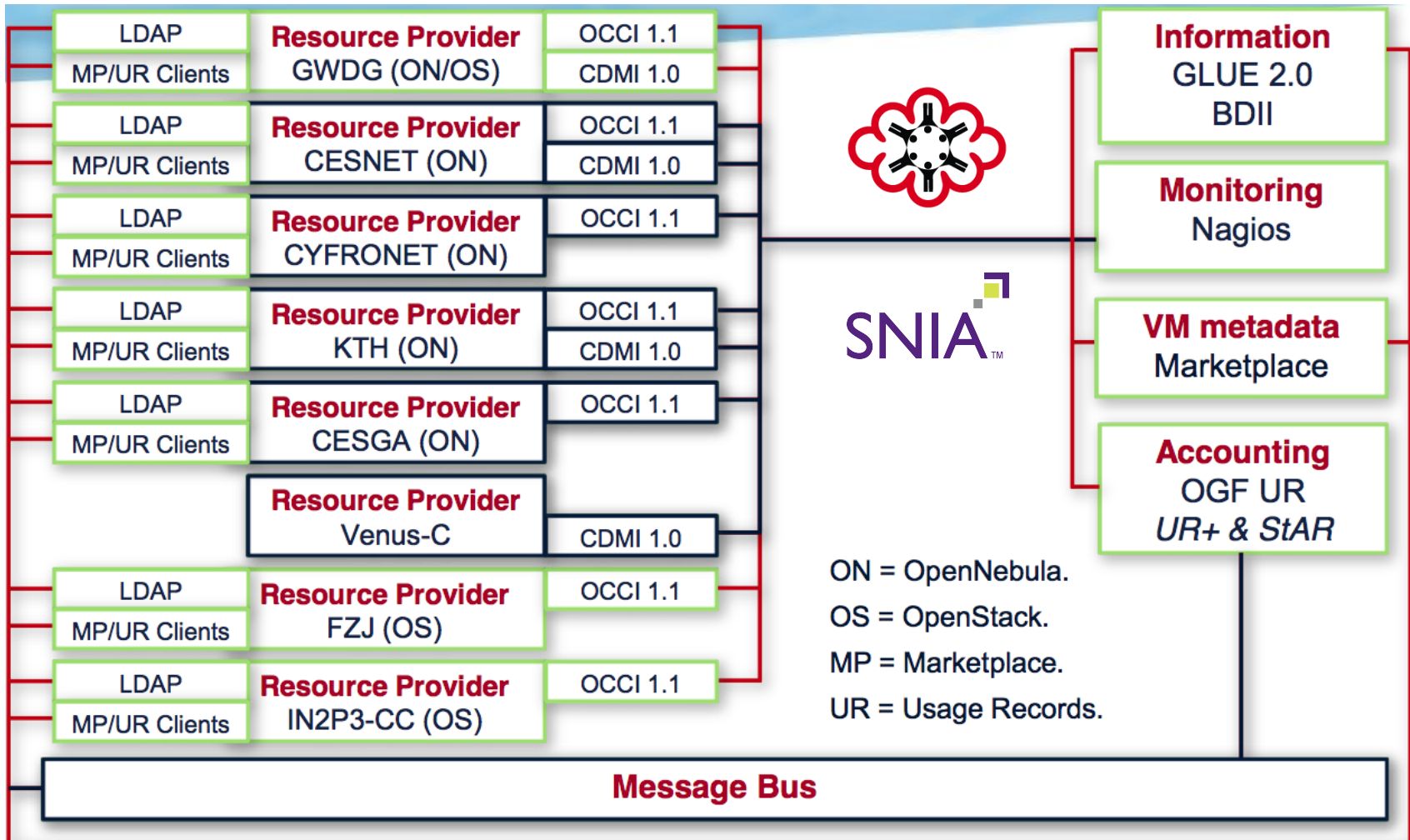


EGI FedCloud



Fed & Interop Challenge!

A Solution? EGI FedCloud



Fed & Interop Implemented!



But...

Let's be wary of past mistakes

Use what works

How federated do you want to be?

Asks the question of permissions (AAA)...

Upcoming Cloud



schweizer informatik gesellschaft
société suisse d'informatique
società svizzera per l'informatica
swiss informatics society



SI Cloud Computing: bit.ly/si-cc-sig



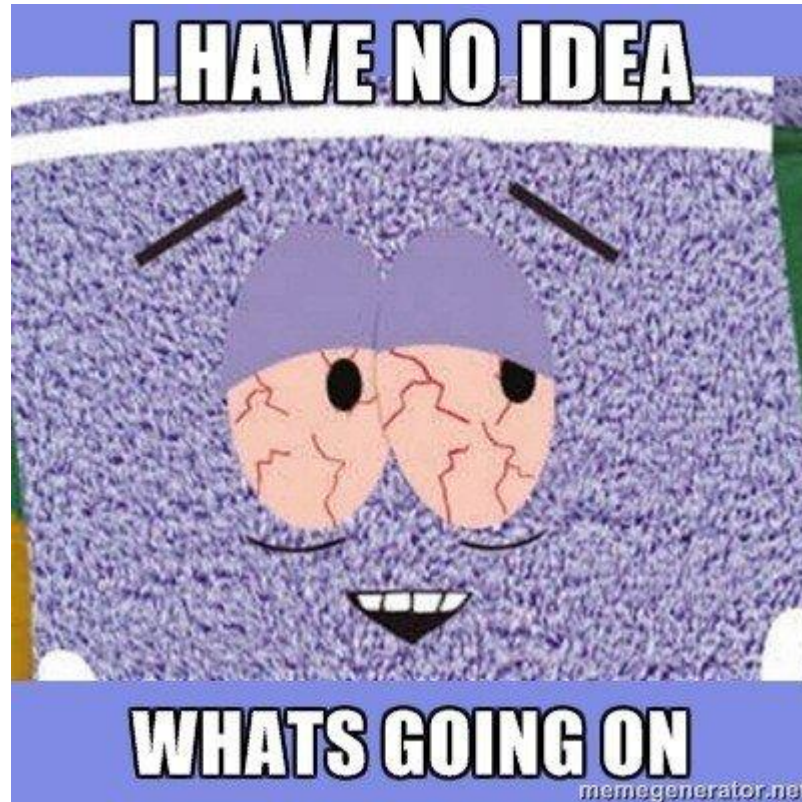
Open Cloud Day: ch-open.ch



Interop in Madrid: bit.ly/mad-interop



Next CHOSUG: openstack.ch



Questions?

@dizz

Thanks! :-)

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