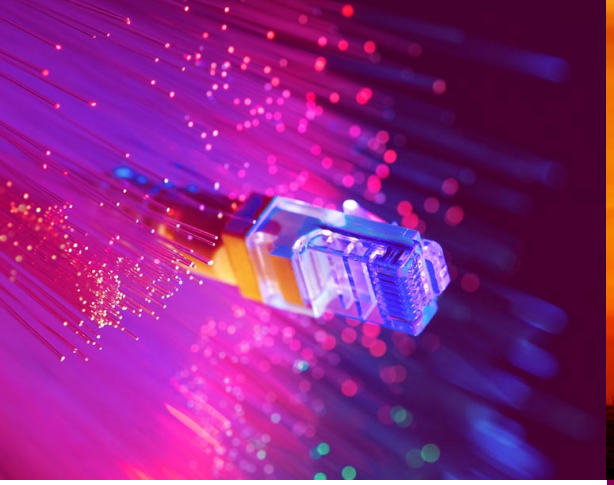

CSC OpenStack, clouds and other stuff Kalle considers importantish

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CSC – Finnish research, education, culture and public administration ICT knowledge center

What do we do and for whom?

- We (CSC) provide IT services for Research, Education and other stuff (internal production, customer production…)
- We have OpenStack since 2012
- Two services targeted at different usecases
  - Community cloud
  - Virtual private cloud (a lot of bioinformatics go here)
- OpenStack is critical for us, but if we only focus on on it, we miss the larger picture

The OpenStack stuff

- 1. How do you deploy OpenStack – tell it to the rest of the community and get to know how others deploy
  - Puppet, Ansible, but we're behind
  - Probably go to containers + podman in the future
  - Everything in code
- 2. How do upgrade it to the next version
  - By reading the release notes, many times, then testing many times
- 3. What do you use to monitor your OpenStack-based Cloud infrastructure ?
  - Nagios clone (opsview), collectd, grafana, redfish, tempest/rally

- 4. What kind of accounting system do you use – if you implement accounting ?
  - Accounting is usually very organization specific. We have our homegrown accounting. We read usage through the APIs
- 5. How do you register and authenticate users to the cloud ?
  - MyCSC demo
- 6. How do you perform authorization , based on which parameters/attributes ?
  - MyCSC demo

- 7. How do you keep you OpenStack infrastructure secure ?
  - Follow and analyze CVEs that affect us
  - ISO 27k1 certified processes
  - Risk analysis
  - Planning as a team
  - Reviewing everything that goes to production

- 8. How do you debug OpenStack, and its specific components like NEUTRON and KEYSTONE, for instance ?
  - Put everything via test and development, where we test it with Tempest/Rally
  - Extensive monitoring
  - Scaling problems harder to find and debug, knowing and understanding the platform helps

Looking at the wider picture

- OpenStack is a great abstraction layer for infrastructure… but
- ..It's not enough

- A recent use case asked for
  - OpenStack
  - Object storage
  - Kubernetes
  - Database as a service
  - Logging service
- We need to understand how to build coherent long-lived ecosystems
  - How we run the teams that produce services
  - Costs, long term strategy
  - Usability
  - Scaling (operations, cost)
  - Documentation
  - Etc.. This is probably a 2 hour presentation and discussion to just get started

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