



The National Grid Service Cloud Pilot

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Wallom

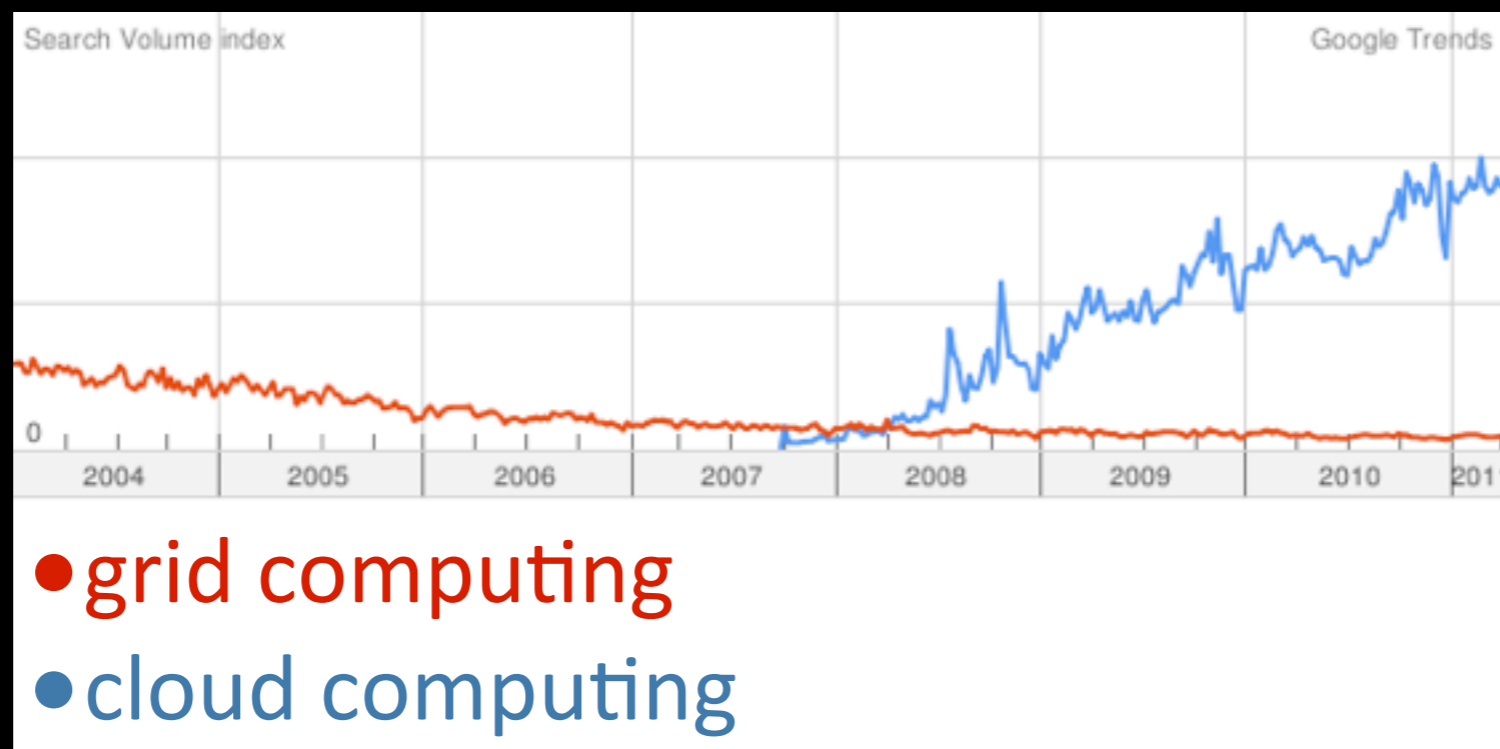


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Goal: “deliver production quality e-infrastructure to support academic research across all Higher Education



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- 2 years – just finished
- 1.25 FTE
- Universities of Edinburgh & Oxford

Are IaaS clouds useful in higher education?

(research, teaching, support services)



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3 Questions

- Is there sufficient interest?
- Are *IaaS* clouds suitable?
- Ease of use?



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The approach

- real users
- real cloud
- case studies

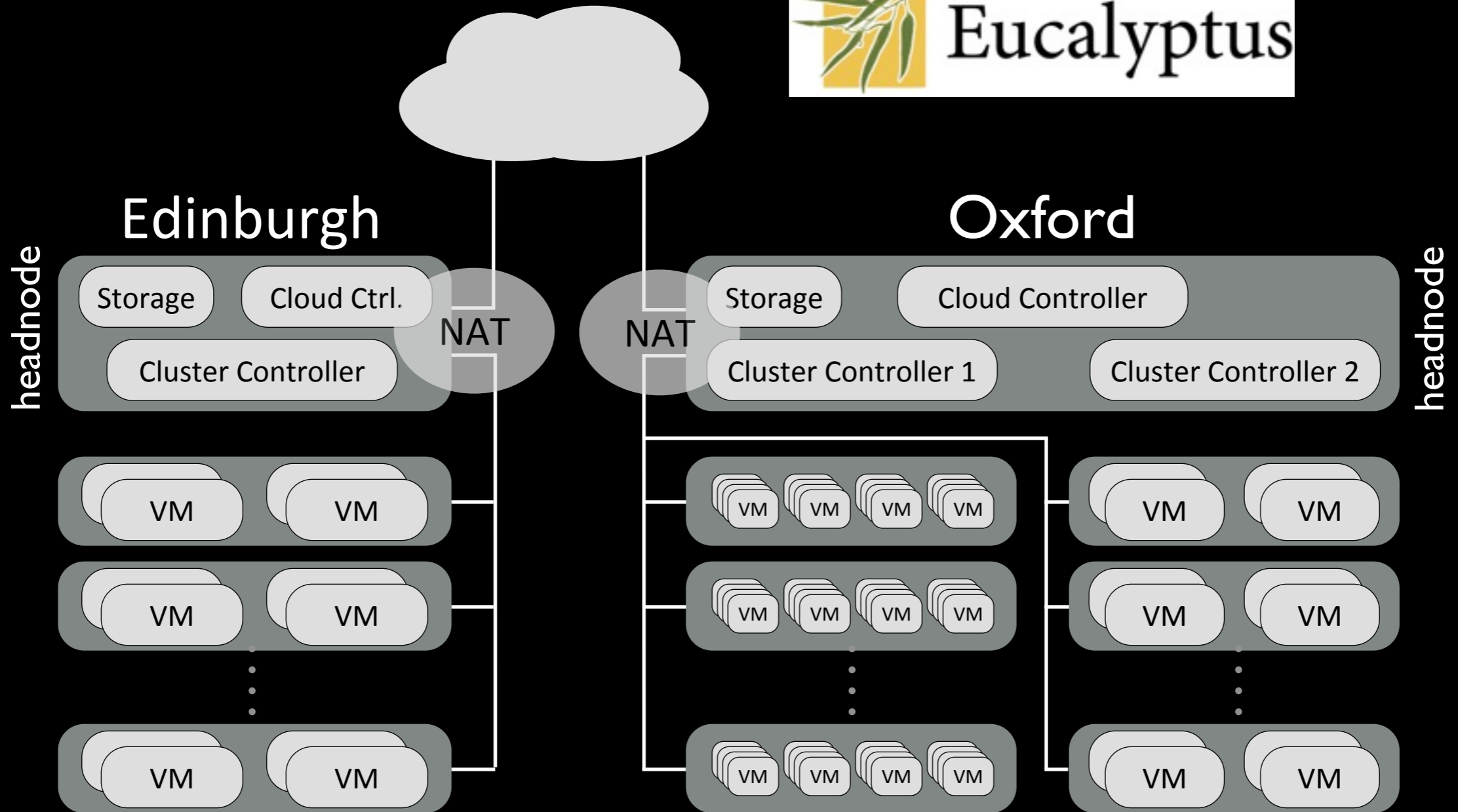


photo by [U.S. Army Environmental](#)



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Sufficient interest?



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Case study examples

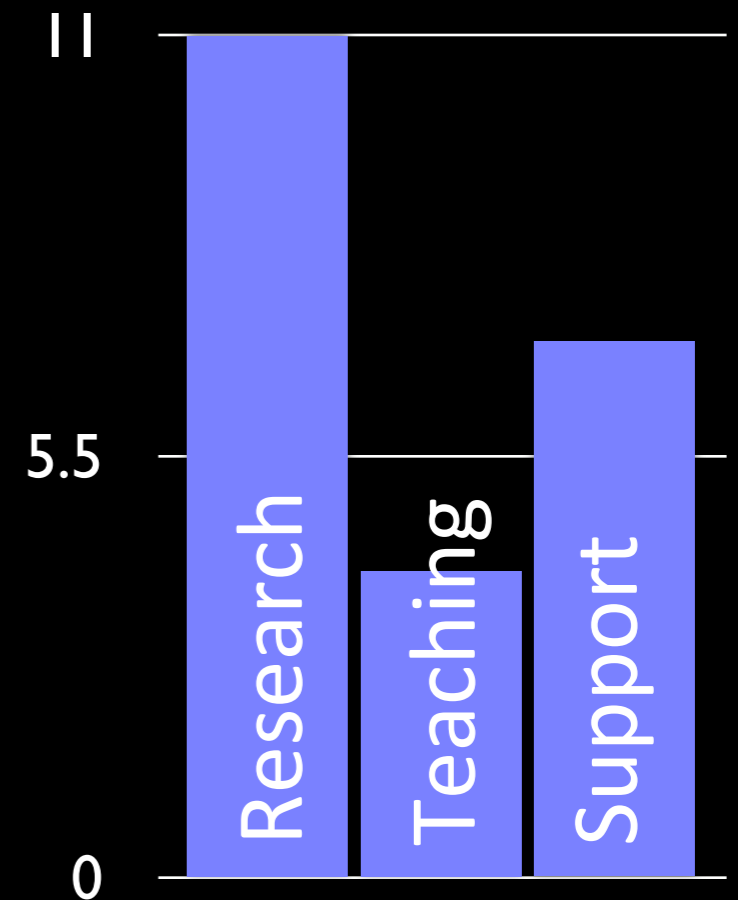
- ATLAS
- Distributed Scientific Computing MSc
- Geographic Data library



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User domains

- *Research*
 - cloud research, ecology, geography, informatics, life sciences, mathematics, medicine, physics, social science
- *Teaching*
 - computing, cloud computing
- *Support services*
 - data library, e-learning, portals, web conferencing, PC backup





Suitability of IaaS?



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Key IaaS features

- 'Unlimited' resource
- Scalability
 - 'cloudbursting'
- Agility
- Cost
- Control
- Reliability

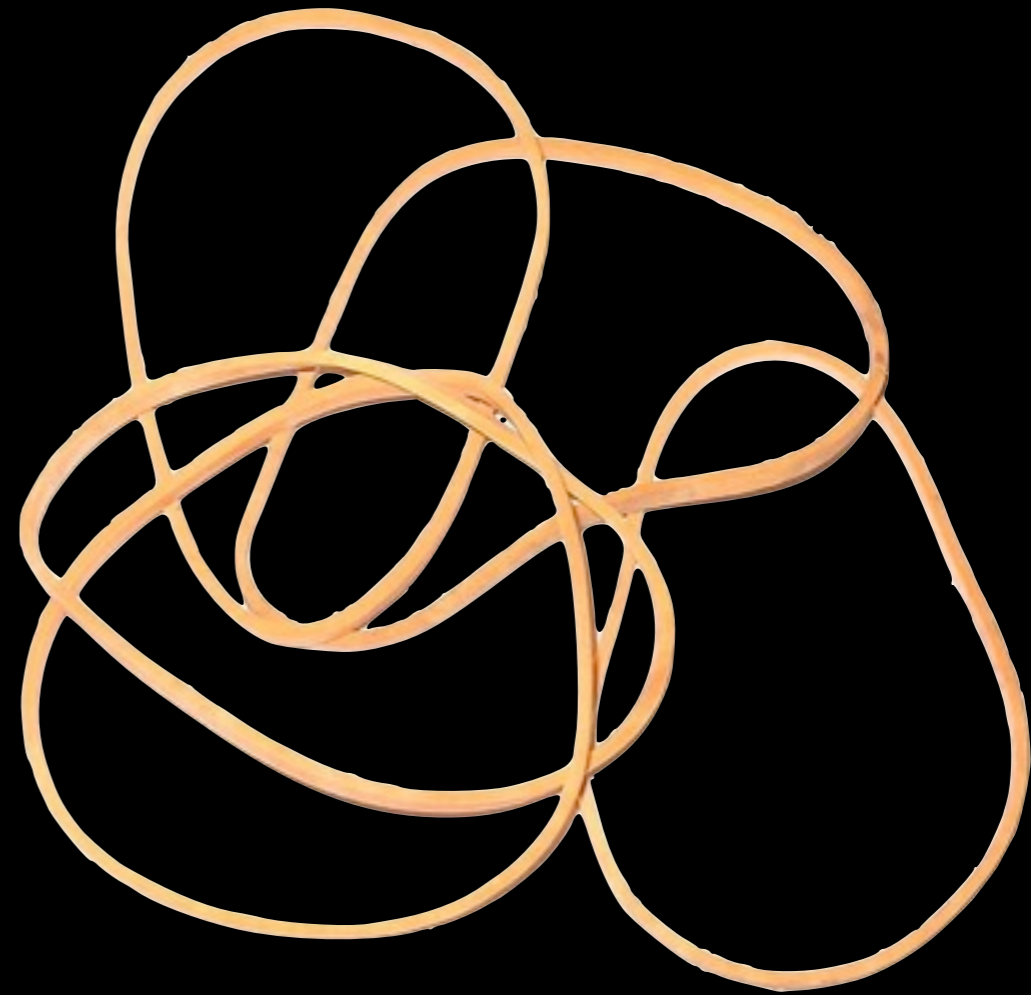
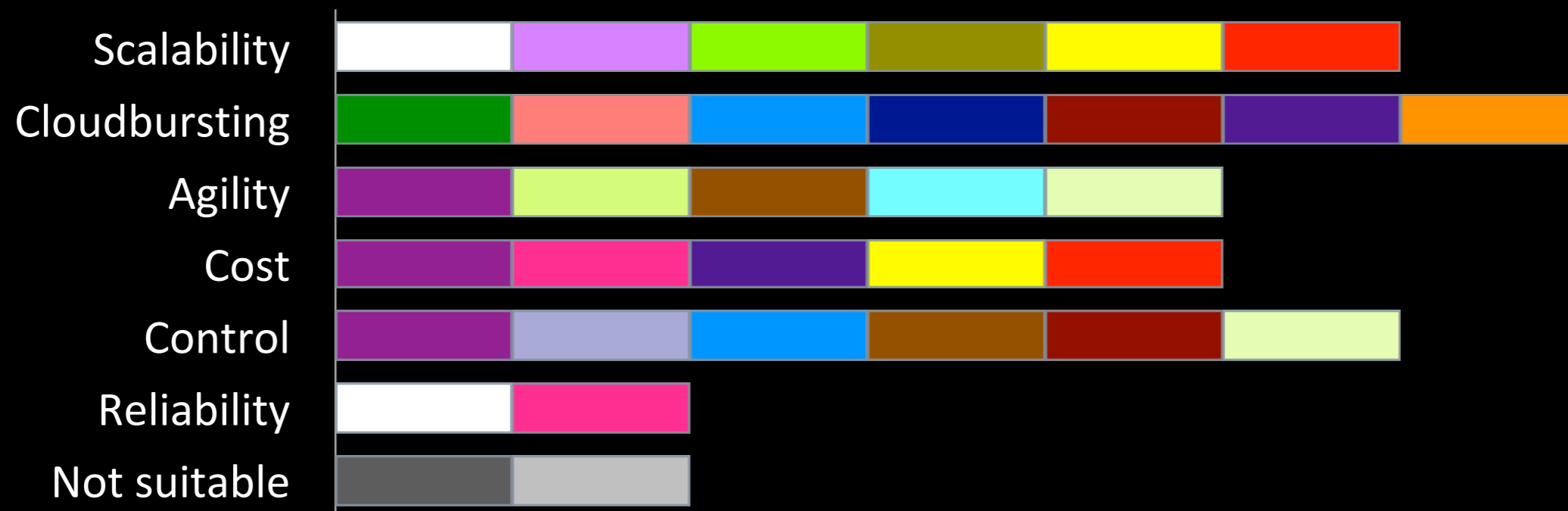


image by [Felipe Micaroni Lalli](#)



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Case studies



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Ease of use?



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It's hard...



- physical assembly
- housing:
 - power; cooling;
 - physical sec.; fire
- hardware failure

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Nothing new

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- Images are key
- Training
- Support



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Technical issues

- Bottlenecks: public traffic routing; data
- Eucalyptus stability
- Accounting & quotas
- 'Bad' nodes



Summary

- Sufficient interest: yes
- Suitability of IaaS: yes
- Ease of use: no



The Future

- Maintain current infrastructure
- Federated cloud - more institutes; production quality



Thank you

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