Rapid design and effective operating of a general purpose Object Storage at RWTH Aachen University
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Resiliency

• Use multiple datacenters
  – Dark fiber/low latency is needed
• Use appropriate levels in your crush hierarchy
• Take failure domains into account
  – A single node failure should not impact more than 9% of your cluster
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Efficiency

- Use erasure coding
  - Erasure coding is not possible for some pools
- Bluestore is more IO efficient than Filestore
- What components of the nodes shall be redundant?
  - OS disk?
  - Network Links?
  - PSU?
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Compliance and workload reduction

- Use Ansible
- Automate update deployment
- Have a test environment
  - Keep it up to date
- Use a version control system for infrastructure code
- Do not fix installations, redeploy broken stuff
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Security

• Automated patching speeds up remediation
• Split gateway and public network
• Do security test
  – Mozilla observatory
  – Monitor TLS certificates
• Collect and combine logs
Why where fast?

• Ceph is ready for production
• Ceph is scalable
  – If you choose a “medium size”, you can scale
• Default configuration is great
Thanks for your attention

Got questions?
Meet me after this track or mail to jansen@itc.rwth-aachen.de