NGS

National Grid Service

UK e-Science CA
- RA Auding

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Talk Outline

- UK e-Science CA
- Background
- Audit Format
- Advantages in Auditing
- Proposal

UK e-Science CA

- Operating since 2002
- Serves UK e-Science community
- Accredited to Classic AP
- ~8,500 total certs issued, ~3,300 live
- Large network of RAs

Current RAs

- Manage ~60 Registration Authorities (RAs) at ~45 institutions - a total of ~100 people

Aston University - Bath University - BBSRC - Birmingham University - Bristol University - Brunel University - Cambridge University - Cardiff University - Cranfield University - Culham Science Centre - Daresbury Laboratory - Diamond Light Source Ltd. - Durham University - NeSC, Edinburgh - Glasgow University - Imperial College, London - Lancaster University - Leeds University - Leicester University - Liverpool University - Manchester University - NERC - Newcastle University - Nottingham University - Oxford University - Plymouth Marine Laboratory - Portsmouth University - Queens University, Belfast - Queen Mary University of London - Reading University - Royal Holloway University of London - Rutherford Appleton Laboratory - Sheffield University - Southampton University - Stirling University - Swansea University - Surrey University - University College London - University of East Anglia - University of Wales, Aberystwyth - University of Wales, Bangor - Warwick University - Westminster University - York University

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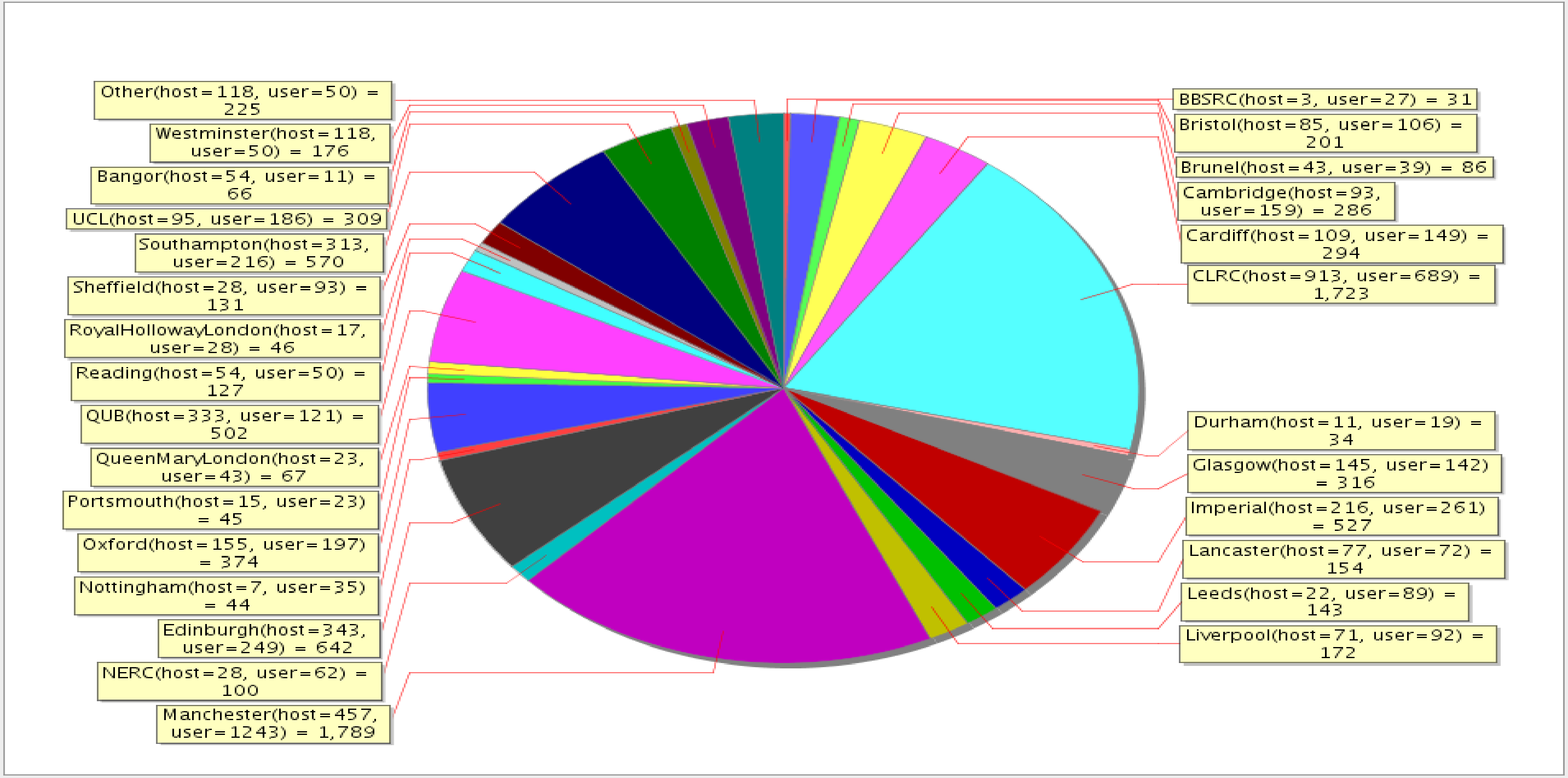
Total Issued Certificates by RA



RA Auditing Background

- Major upgrade in May 2005
- Issue of obtaining user feedback.
- Data Protection Law (DPA) in UK a problem
- Get feedback through RAs? -> Audit them.
- Additional benefits of auditing

Auditing History

- Audits so far:
  - July 2005 (5 RAs)
  - Nov 2005 (8 RAs)
  - July 2006 (6 RAs)
- Remit to continue biyearly
- Target big RAs first

Audit Format

- Face to face visit with RA
- Discuss procedure (user cert entitlement)
- Physical location of paperwork (DPA)
- Physical check of paperwork/logs, using pre-selected list of certs
- Discussion of problems, changes to CA, Q/A

After audit

- Formal report for audited RA & NGS management. Recommendations/requirements
- Yearly executive report for NGS management (high-level result of audits plus sample RA audit report)

http://www.grid-support.ac.uk/goscboard/NGS800/raaudits_report.pdf

Benefits: Maintaining the Trust

Why should I trust a CA?

- IGTF accreditation - Vetting of CP/CPS
- CA Auditing?
- ID verification still delegated to RAs
- RA Auditing necessary

Advantages

- Proactive verifying quality of certificates
- Retain trust in PKI
- RAs less likely to cut corners
- Opens channels of communication for RAs
- Easier to arrange than CA auditing

Proposal

- Make RA Auditing mandatory? – maybe include it in Classic AP?
- check paperwork of *x*% of issued certs over *y* years?
- RA audits carried out by CA staff
- CA audits should verify RA audit results

Conclusion

- Classic AP CAs = high level of human interaction -> scope for shortcuts
- CA operations need to be monitored
- Travel costs outweighed by benefits
- Maintain the trust - RA auditing is highly beneficial for Grid CAs

Thank you!

Questions?

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