

Google Apps @ Cambridge

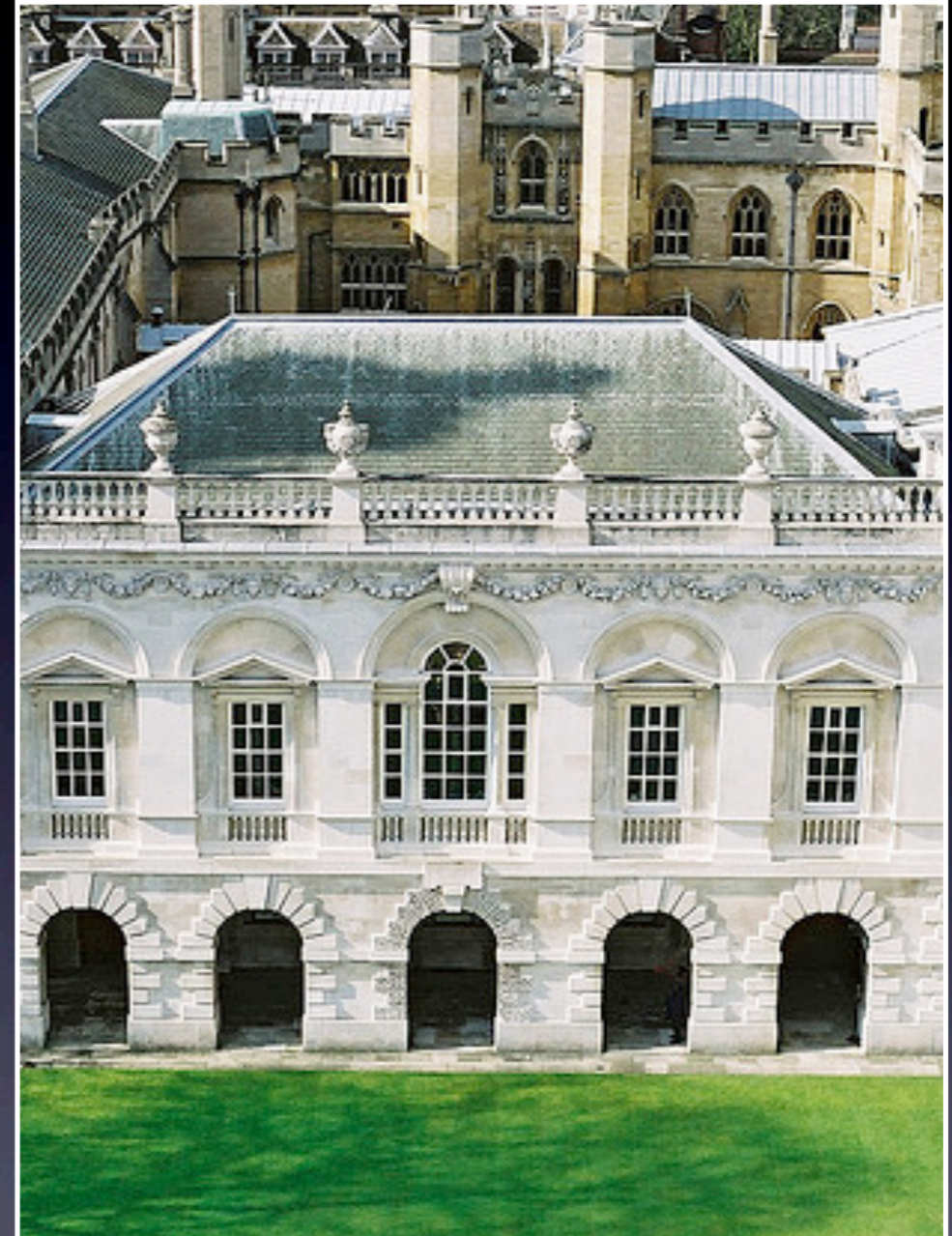
What we did

Jon Warbrick
University of Cambridge Computing Service
jw35@cam.ac.uk / @jw35

The University of Cambridge

100+ departments
32 colleges
40,000 users

“A loose affiliation
of warring fiefdoms”



Handy building blocks

- University Computing Service
 - *even if it doesn't set policy*
- User Administration Database
- Raven: Web Authentication system
 - *including a Shibboleth IdP*
- A 2008 UCS trial of Google Apps

What do we want?



A Calendar!

Perhaps other things, later..

To stay within the law



Data Protection Act 1998

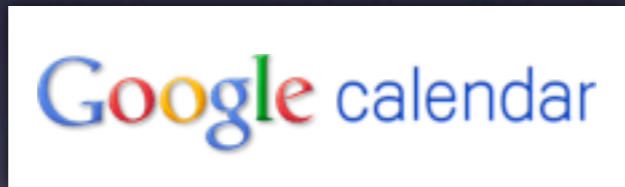


<http://www.cam.ac.uk/cs/googleapps/google-apps-cambridge-contract.pdf>

General Plan

- Google Apps for Education
 - *but just Calendar to start with*
- Use cam.ac.uk domain
- Web SSO using Raven
- Automatically available to everyone
- Minimum ongoing staff involvement
- Rollout September, for October, 2010

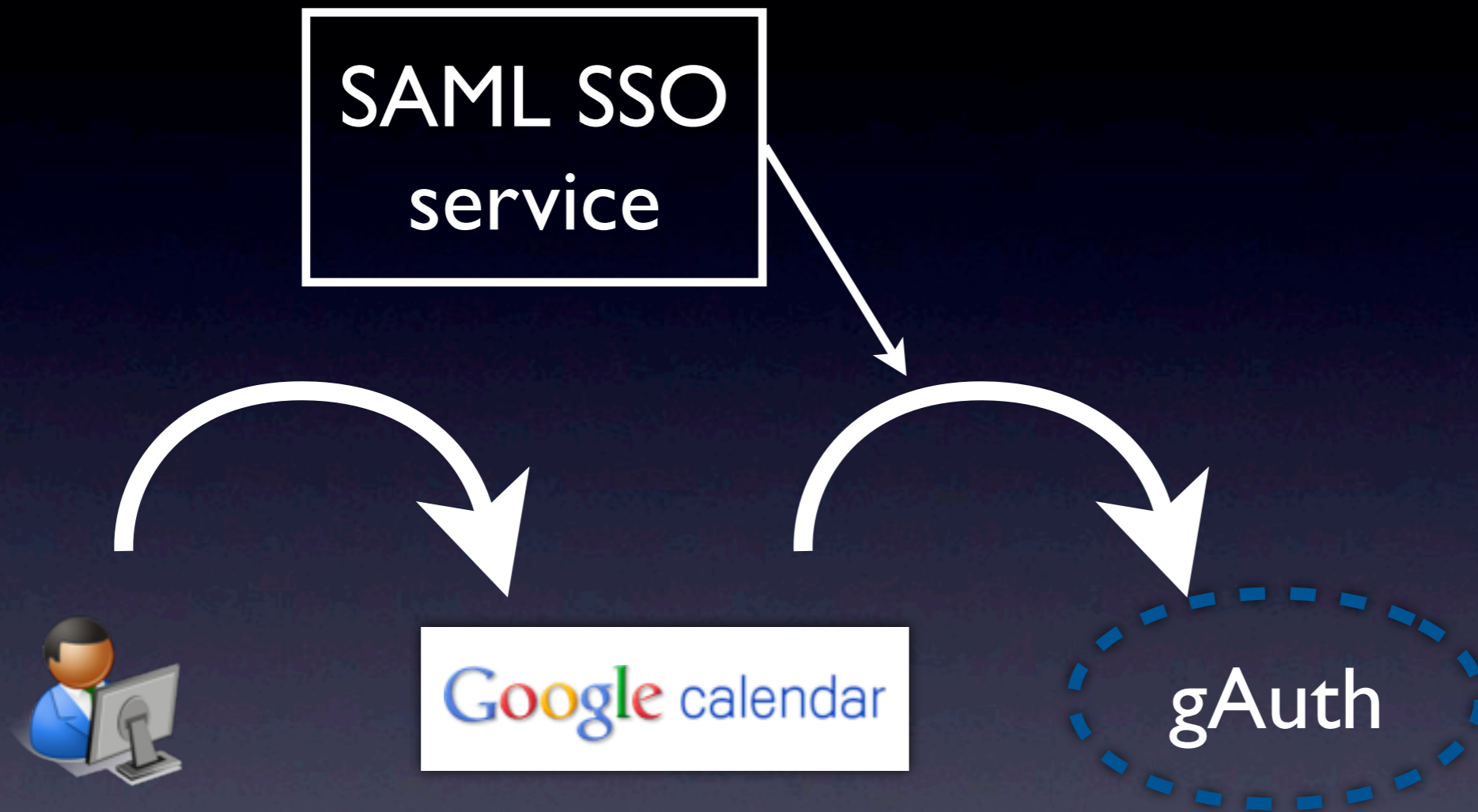
Web authentication



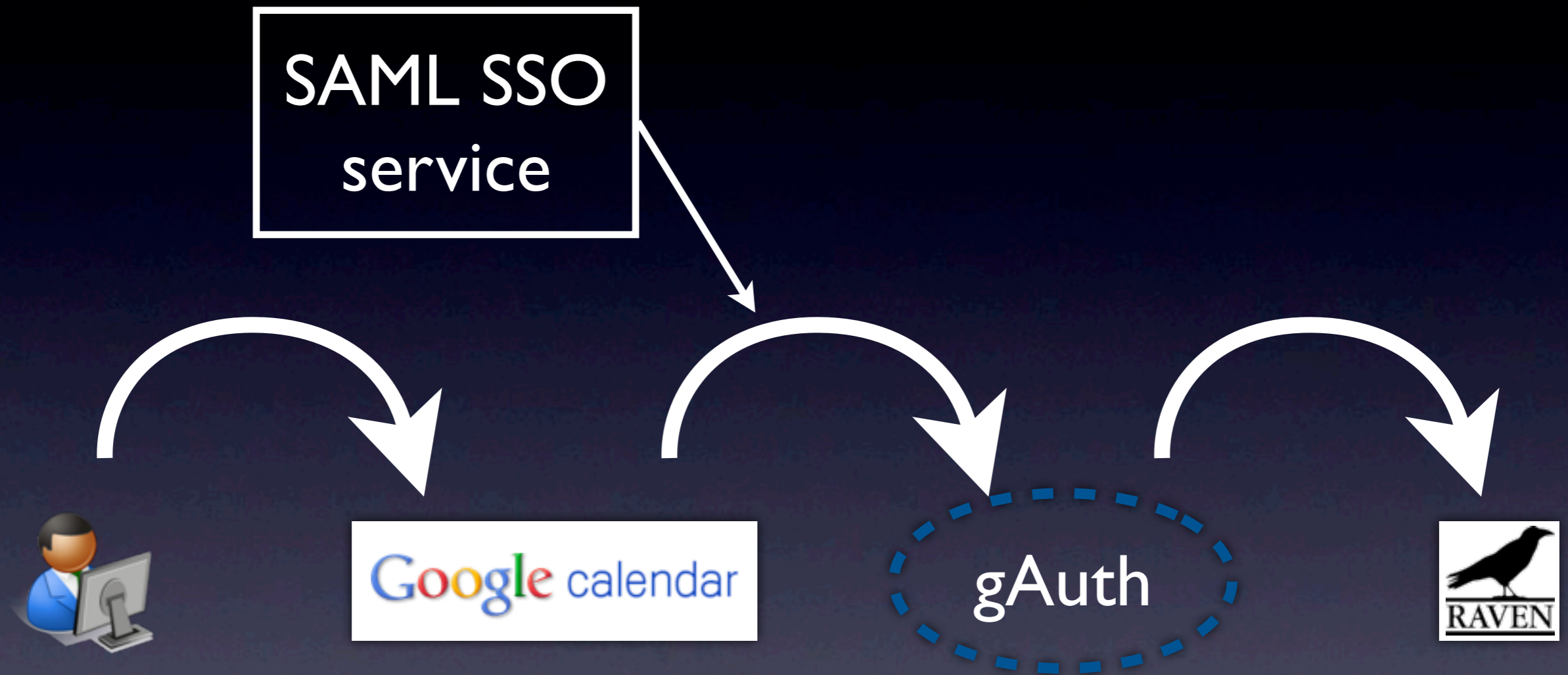
Web authentication



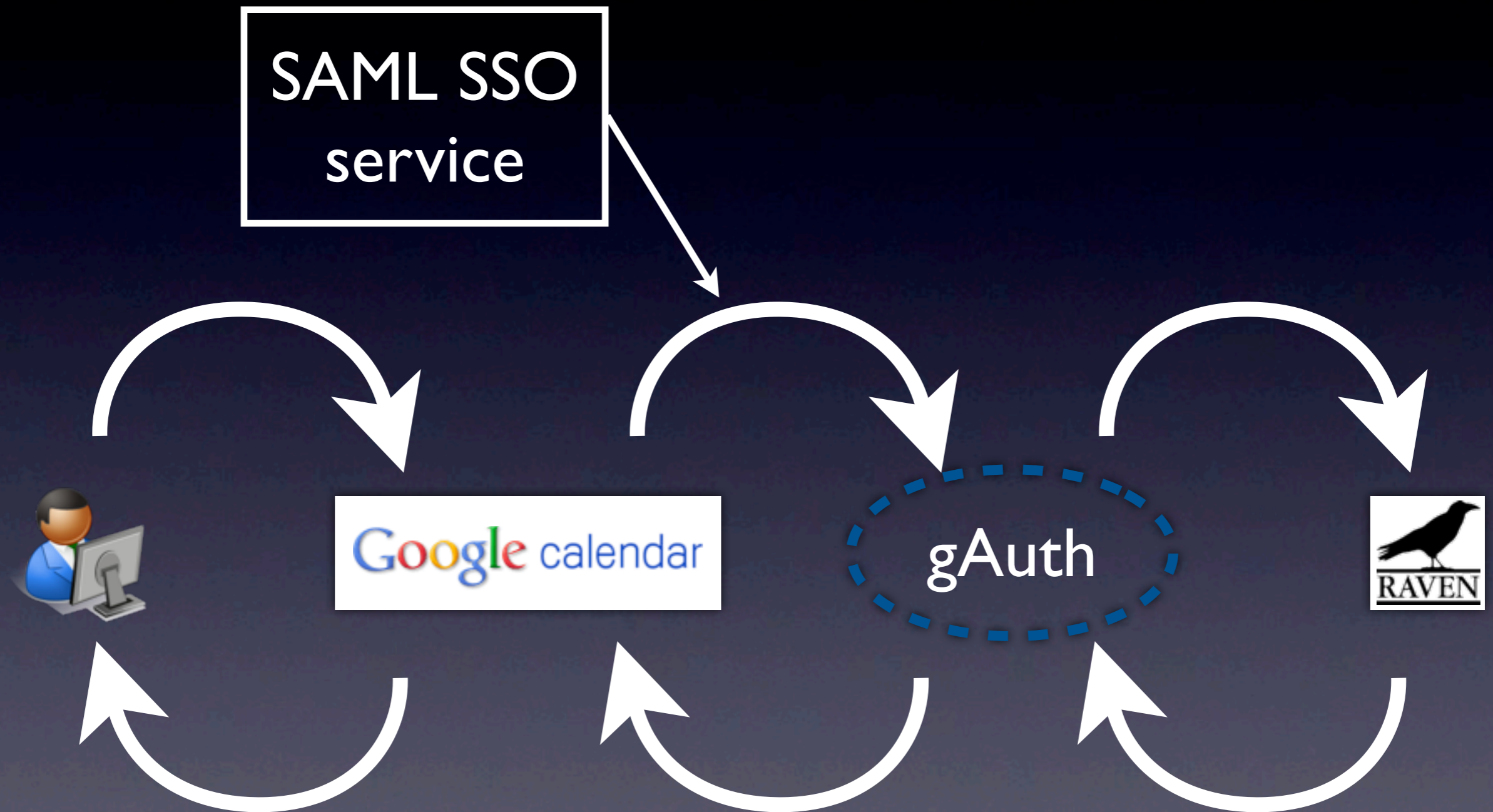
Web authentication



Web authentication



Web authentication



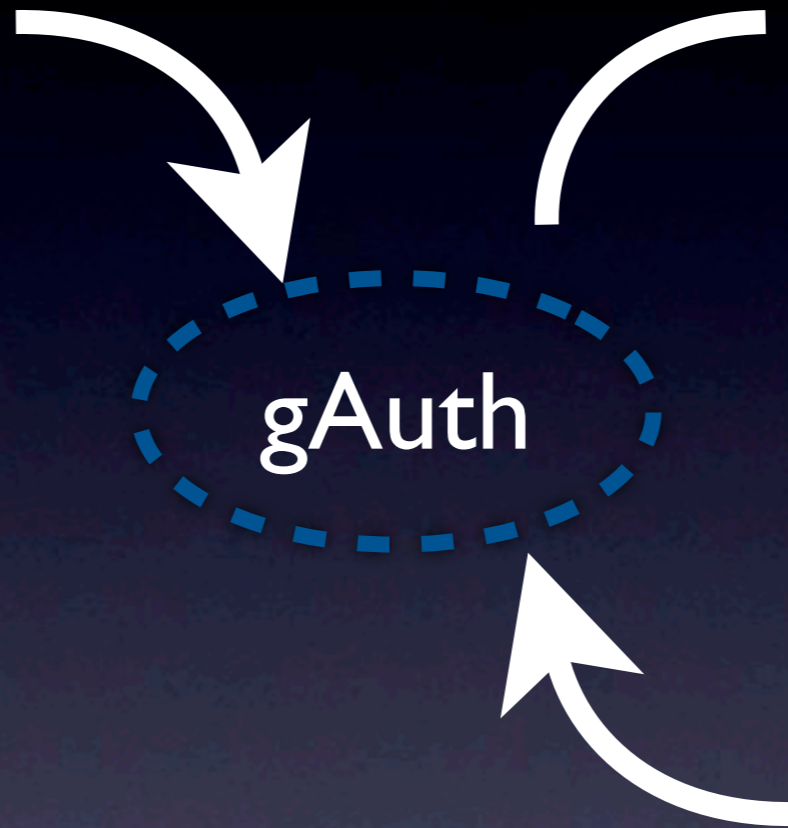


- Based on Google example Java SAML code
 - *SAML, but not Shibboleth*
- Java Webapp, runs in Tomcat
- And some other things ...

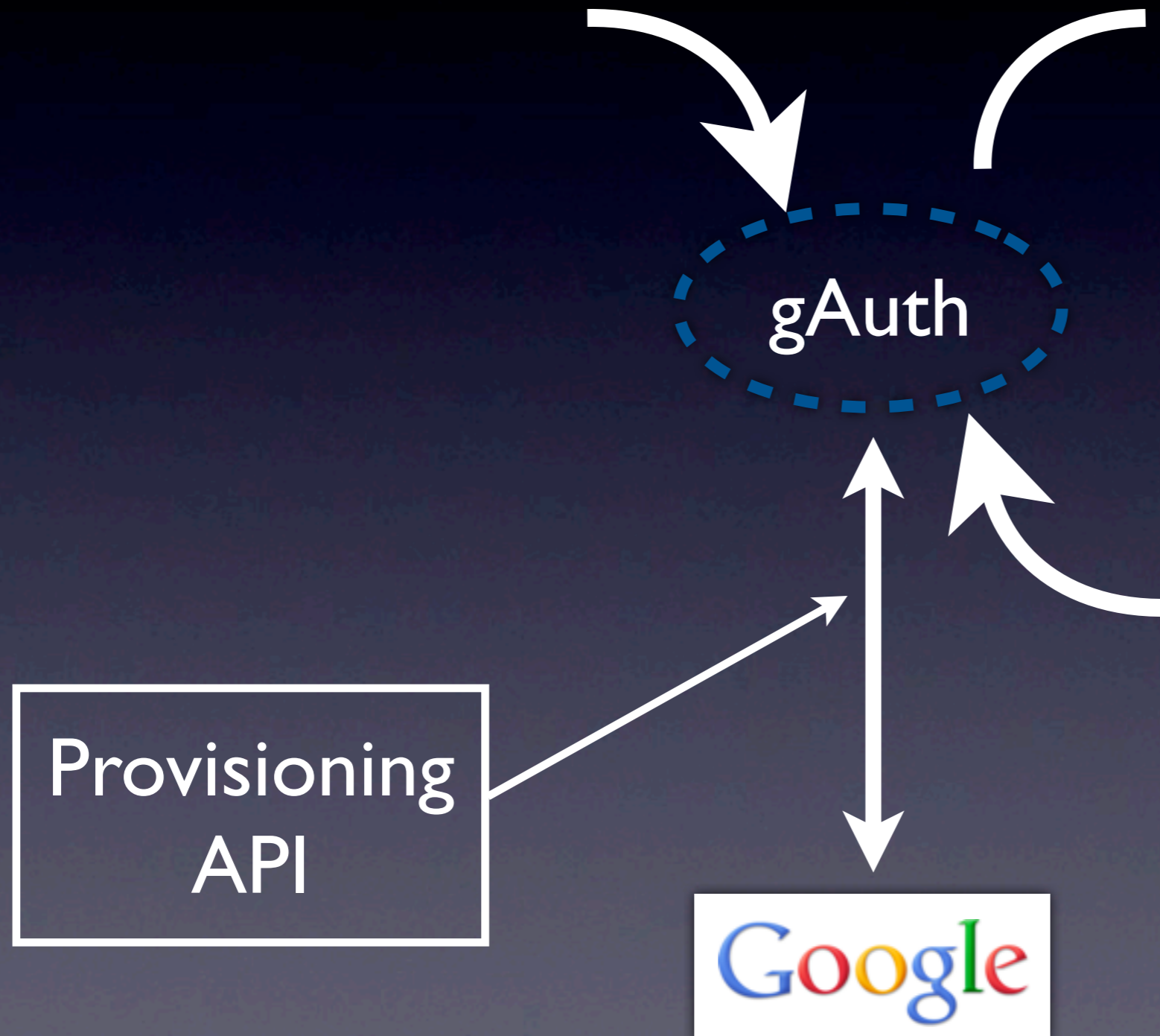
Account creation



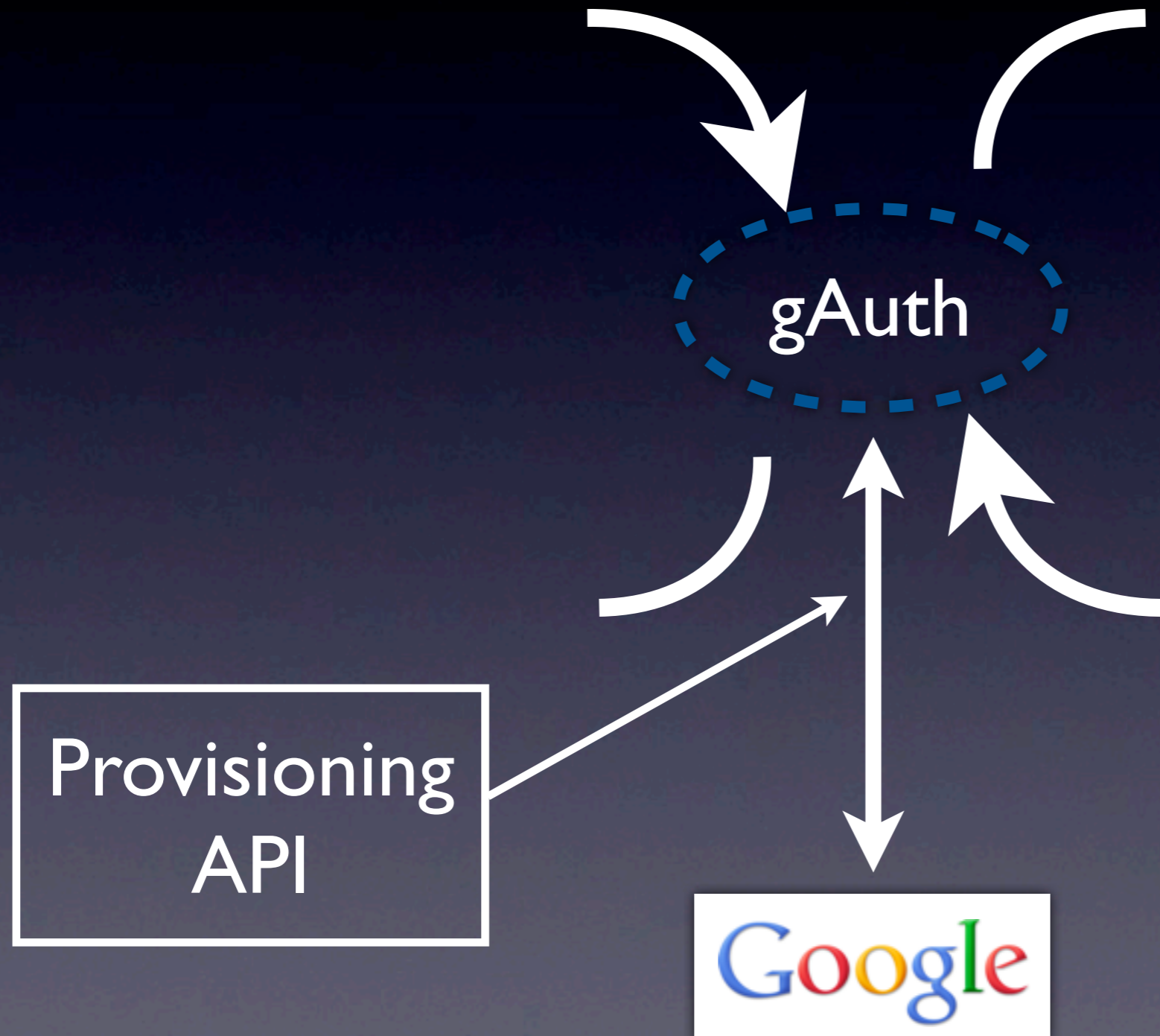
Account creation



Account creation



Account creation



Click-through T&C

Google Apps @ Cambridge

https://gauth-dev.csi.cam.ac.uk/process-response?SAMLRequest=fVLLTuswEN0j8Q%2BW93ESJHTBaoIKCFEJuBENL...

UNIVERSITY OF CAMBRIDGE UCS

Search [input] [magnifying glass]

Contact us | A-Z | Email & phone search

Computing Service

University of Cambridge > Computing Service > Google Apps @ Cambridge

Google Apps @ Cambridge

Terms and Conditions

You must agree to the following Google Apps @ Cambridge terms and conditions before you can use this service. A copy of these is available from the [Google Apps @ Cambridge documentation page](#).

Google Apps @ Cambridge is provided as a partnership between the University Computing Service (UCS) and Google. Google Apps @ Cambridge is the official name for a Google Apps Education Edition service provided under contract to the University of Cambridge.

The University's contract supersedes some of Google's standard terms and conditions. The University's agreement can be seen [here](#).

Eligibility

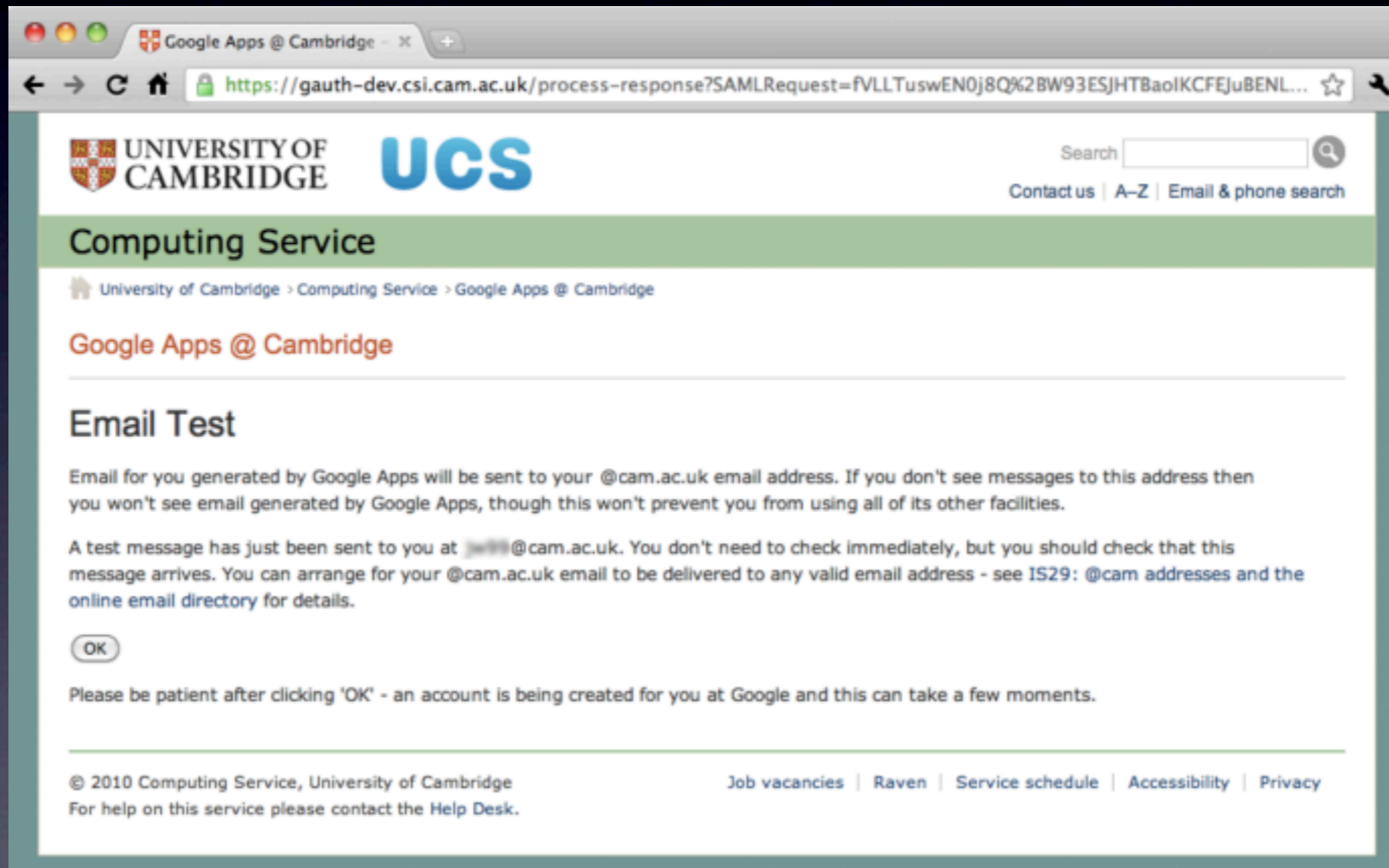
Google Apps @ Cambridge is available to current staff, students, accredited visitors to the University and staff of affiliated institutions. Access to this service is by Raven authentication for web based access or by dedicated token for non-web based access.

Provision of Service

The University Computing Service acts as the University's administrator for the Google Apps @ Cambridge service. The Google Apps @

By clicking the 'I accept' button below you accept that your use of Google Apps @ Cambridge will be subject to the terms and conditions set out here and that you want a Google Apps @ Cambridge account created for you. Otherwise please click 'Cancel'.

Mail confirmation



The screenshot shows a web browser window with the following content:

- Browser Tab:** Google Apps @ Cambridge
- Address Bar:** <https://gauth-dev.csi.cam.ac.uk/process-response?SAMLRequest=fVLLTuswEN0j8Q%2BW93ESJHTBaolKCFEJuBENL...>
- Page Header:** UNIVERSITY OF CAMBRIDGE UCS. Search bar with a magnifying glass icon. Links for Contact us, A-Z, and Email & phone search.
- Section Header:** Computing Service
- Breadcrumbs:** University of Cambridge > Computing Service > Google Apps @ Cambridge
- Section Header:** Google Apps @ Cambridge
- Section Header:** Email Test
- Text:** Email for you generated by Google Apps will be sent to your @cam.ac.uk email address. If you don't see messages to this address then you won't see email generated by Google Apps, though this won't prevent you from using all of its other facilities.
- Text:** A test message has just been sent to you at [redacted]@cam.ac.uk. You don't need to check immediately, but you should check that this message arrives. You can arrange for your @cam.ac.uk email to be delivered to any valid email address - see 1529: @cam addresses and the online email directory for details.
- Button:** OK
- Text:** Please be patient after clicking 'OK' - an account is being created for you at Google and this can take a few moments.
- Page Footer:** © 2010 Computing Service, University of Cambridge. For help on this service please contact the Help Desk. Links for Job vacancies, Raven, Service schedule, Accessibility, and Privacy.

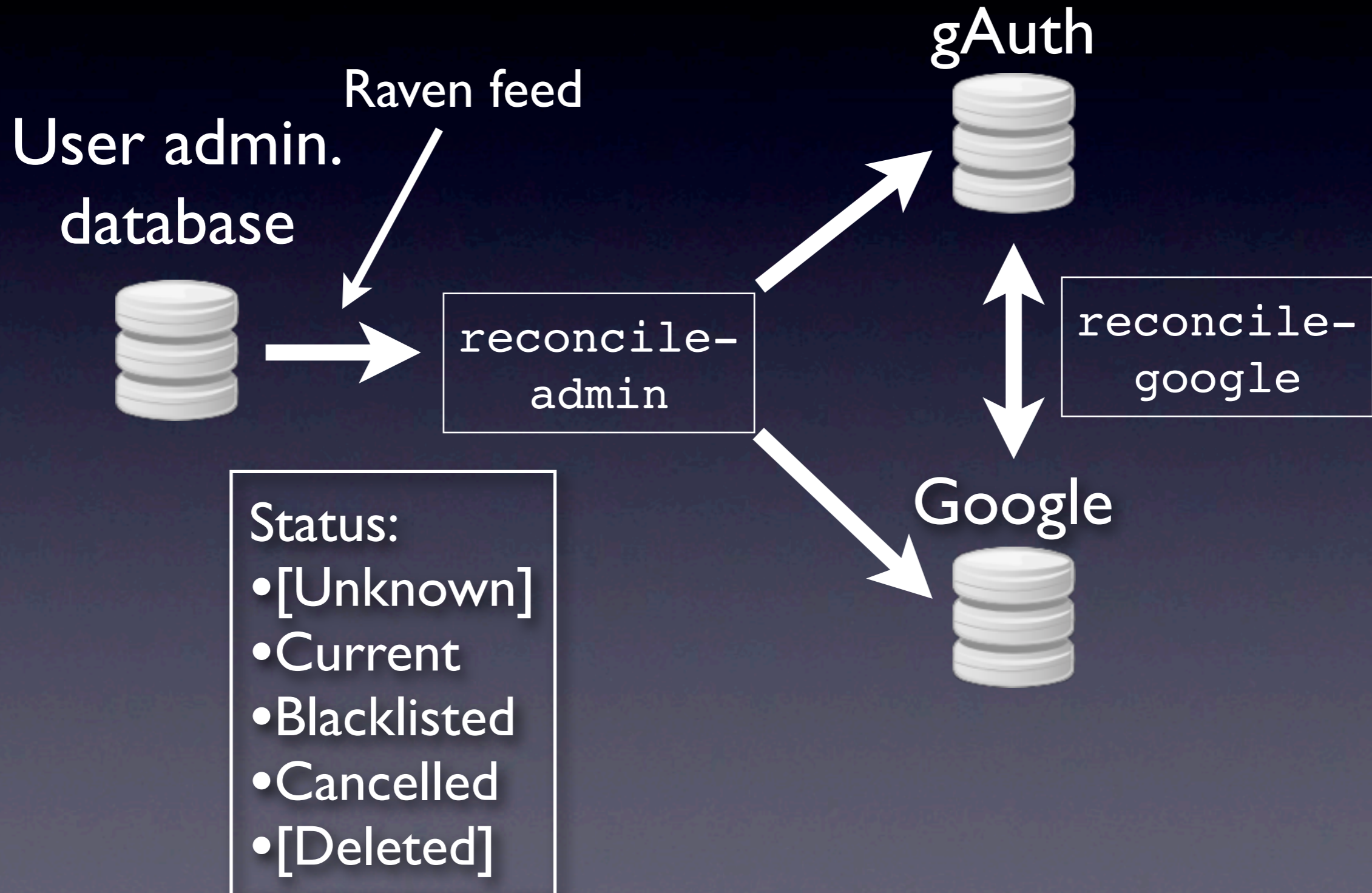
Non-web authentication

The screenshot shows a web browser window with the URL <https://gauth.csx.cam.ac.uk/token>. The page header includes the University of Cambridge logo and the UCS logo. A search bar and navigation links for 'Contact us', 'A-Z', and 'Email & phone search' are visible. The main content area is titled 'Computing Service' and 'Google Apps @ Cambridge'. The section 'Token Management' explains that web access uses Raven for authentication and that non-web access methods require a separate authentication token. It shows the user's username as 'joh@cam.ac.uk' and their token as 'rjho' followed by 15 obscured characters, with a note that the token is 16 lowercase alphabetic characters long. A 'Reset my token' button is located at the bottom of the main content area. The footer contains copyright information for 2010 and links to 'Raven', 'Service schedule', 'Accessibility', 'Privacy', and 'Job vacancies'.

Shush!

‘Token’ ==
‘Password’

Account management

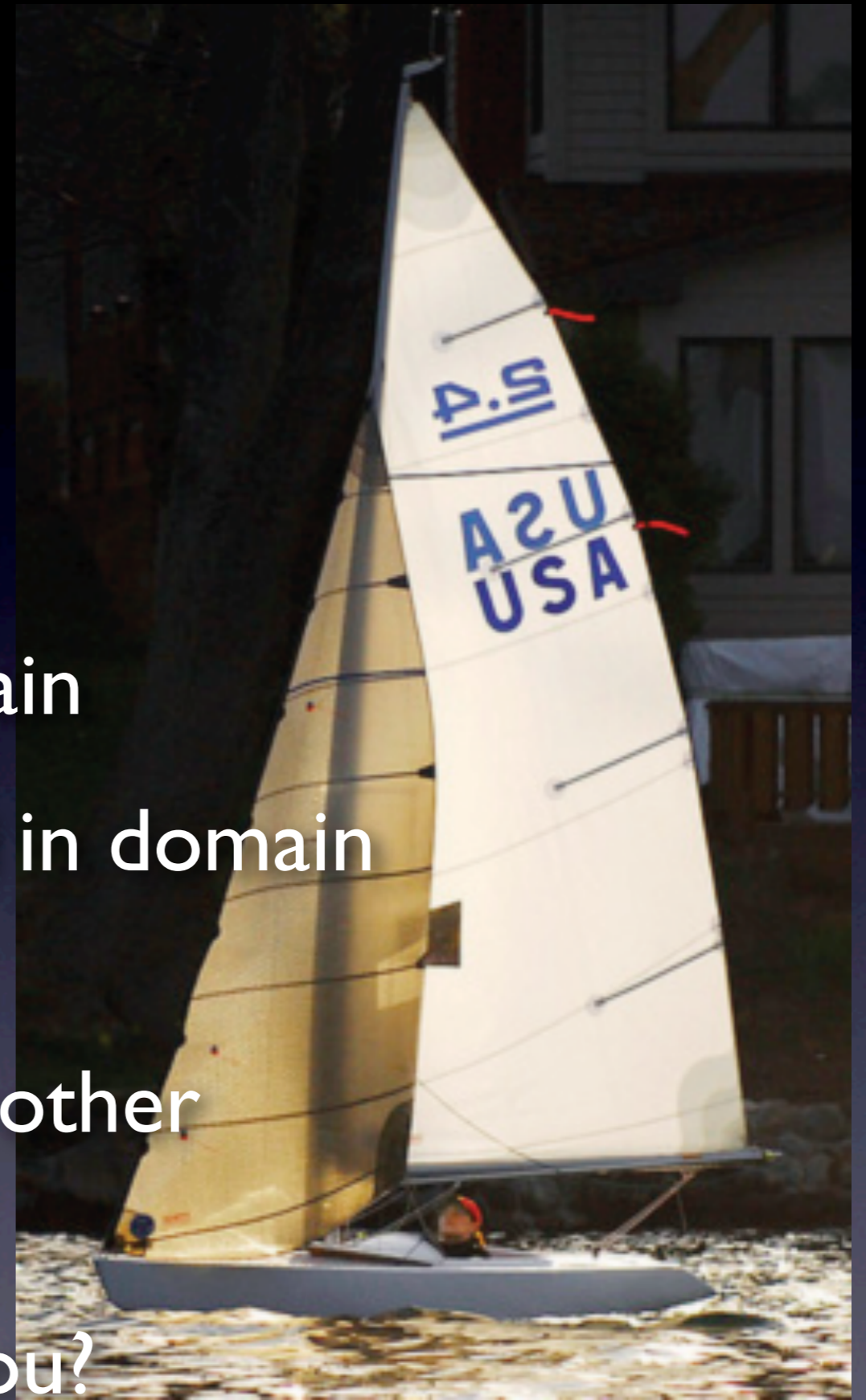


Implementation

- gAuth: Java webapp in Tomcat
- Batch processing: Java run by cron (!)
- (Live/standby) pair of VMs on Xen cluster
- Local Postgress database; SlonyI replication
- Manual service address transition

Plain sailing?

- Account issues
- Pre-existing cam.ac.uk domain
- ‘g’ ‘o’ ‘o’ ‘g’ ‘l’ ‘e’ not allowed in domain names
- Calendar sync, iPhones and other mobile devices
- Support. Do you or don't you?

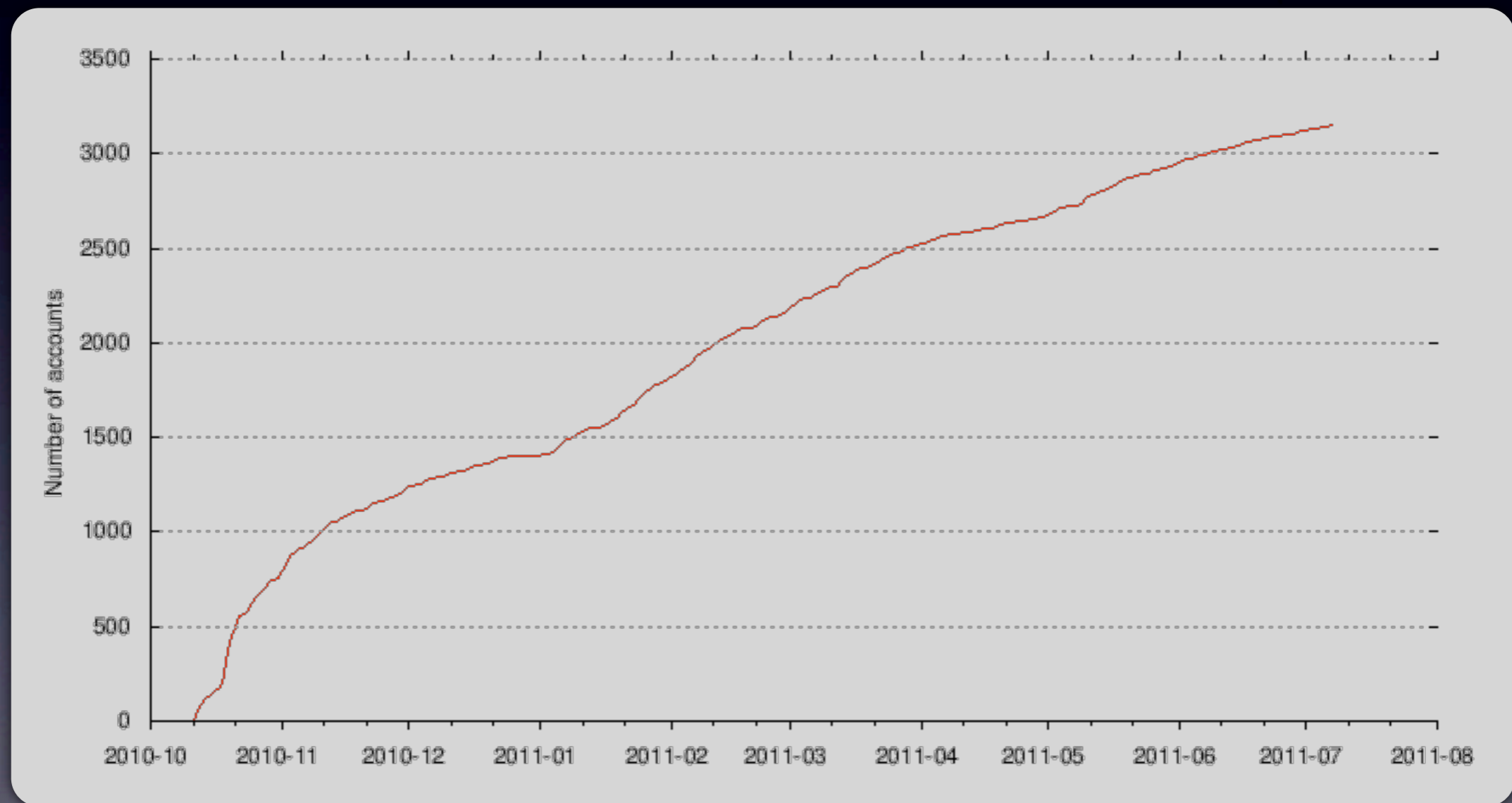


Account Issues

- **Conflicting accounts**
 - *Google apps vs. Google consumer*
 - *foo@cam.ac.uk != foo@cam.ac.uk*
- **The 'New Authentication Architecture' transition**
 - *Conflicting accounts renamed*
 - *Loss of multiple login*
 - *The 62 'other' Google services*

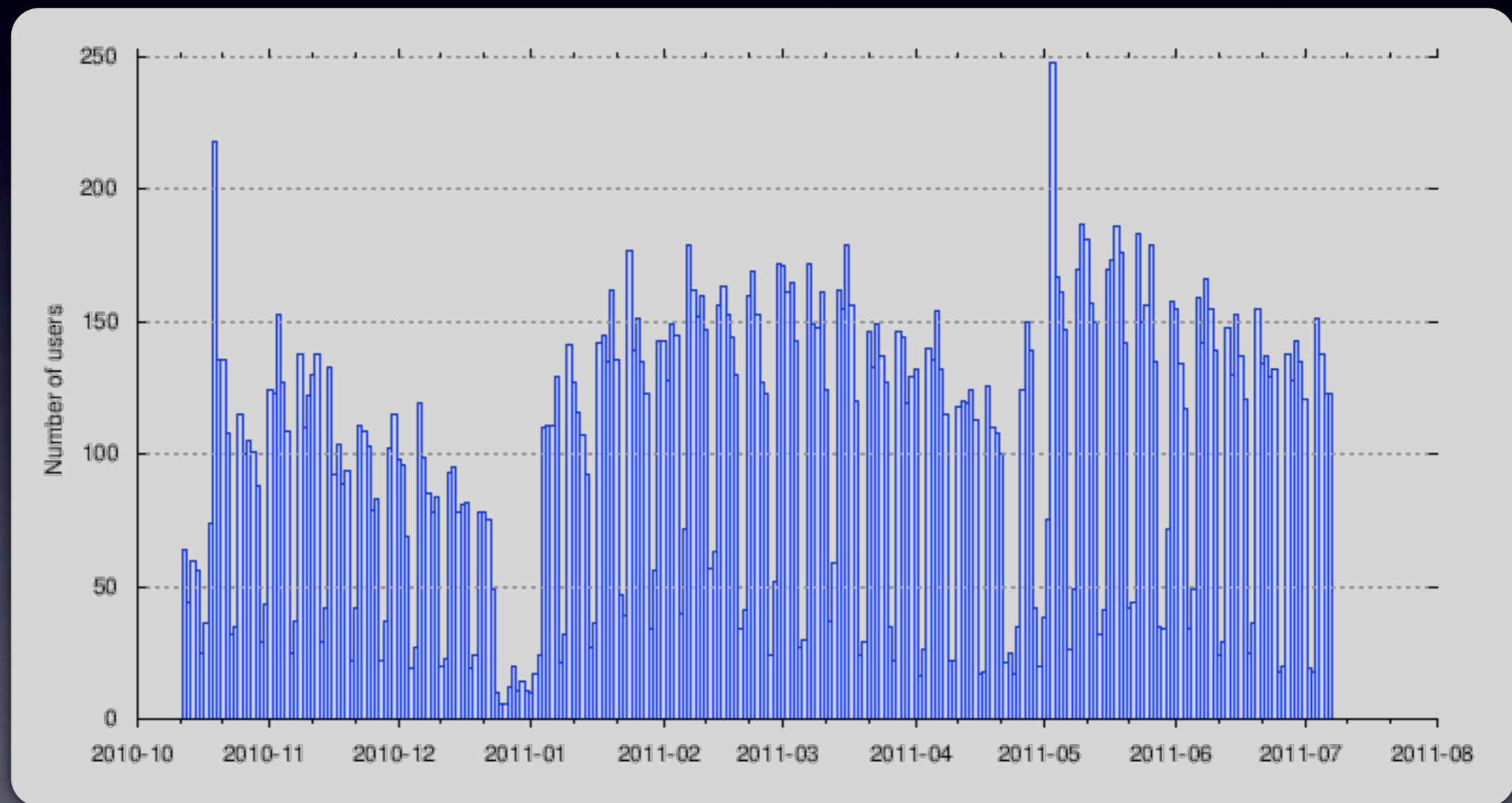
Deployed October 2010

Number of Accounts



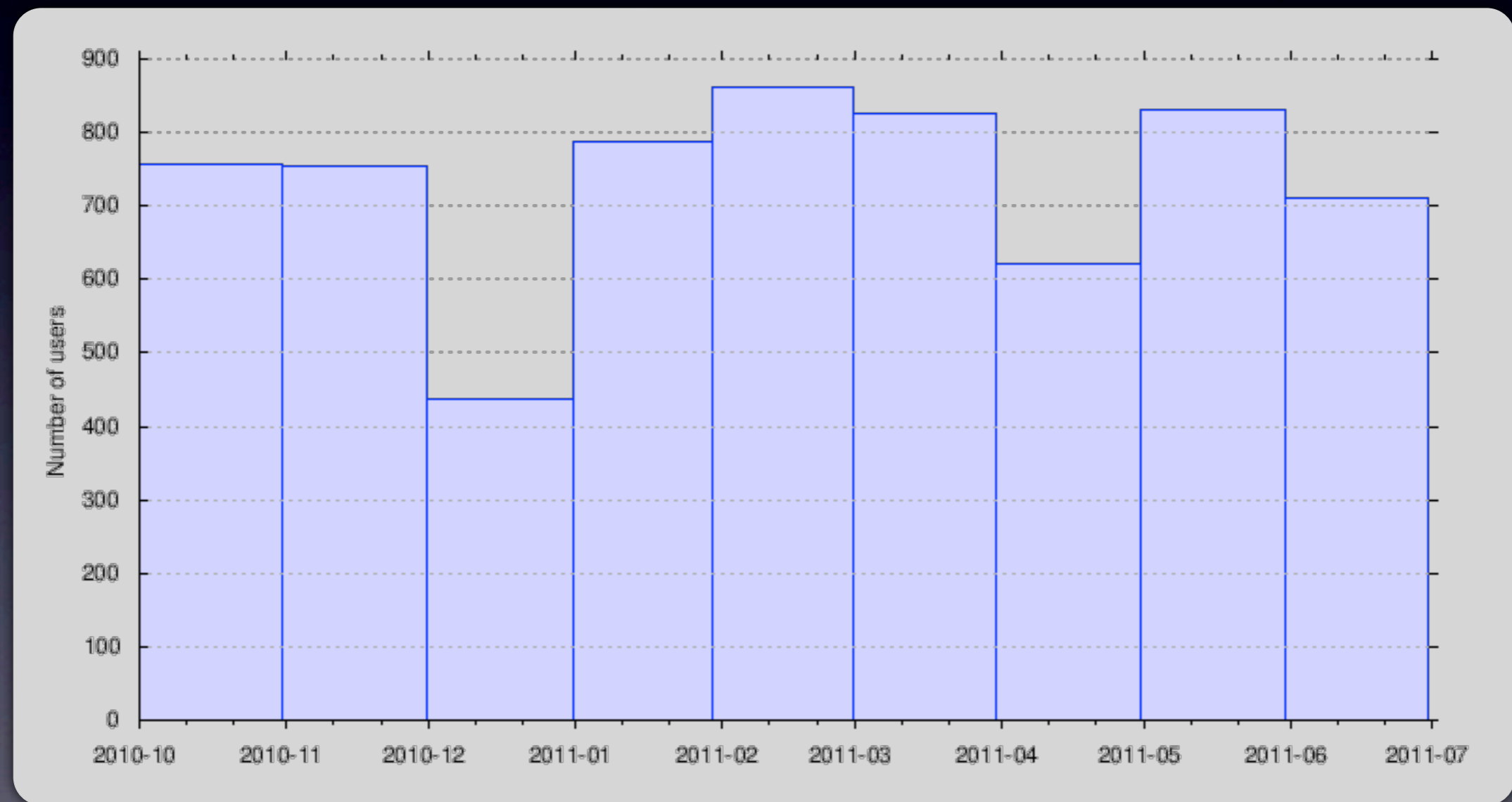
Deployed October 2010

Unique users per day



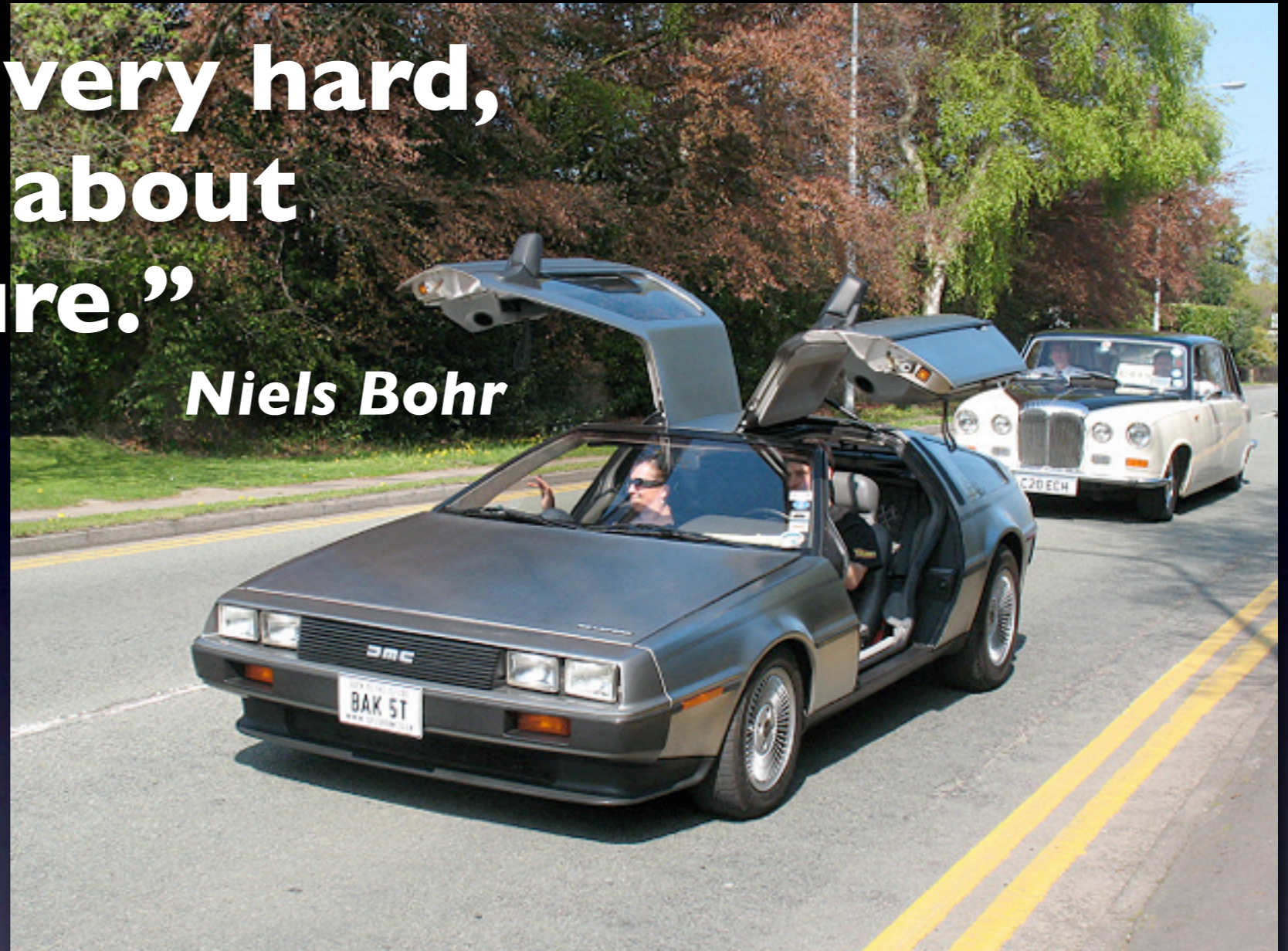
Deployed October 2010

Unique users per month



**“Prediction is very hard,
especially about
the future.”**

Niels Bohr



- Groups?
- Google Docs?
- The 62 ‘Other Google Services’?

Any questions?

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Jon Warbrick

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jw35@cam.ac.uk / [@jw35](https://twitter.com/jw35)