



THE UNIVERSITY OF UTAH

Deploying Two-Factor Authentication to 45k Users

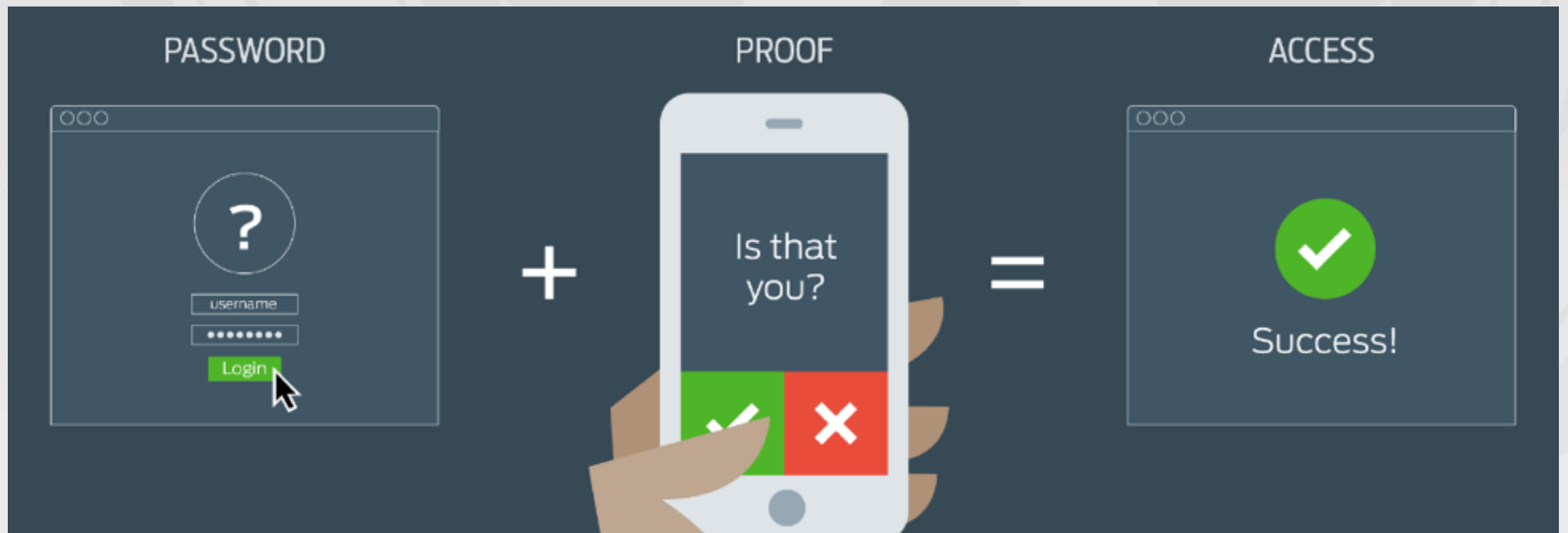
Bryan Wooten
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Brandon Gresham



THE UNIVERSITY OF UTAH
INFORMATION SECURITY OFFICE

Identity & Access Management

Two-Factor Authentication (2FA)



The Beginning

- NSTIC Grant
- https://spaces.internet2.edu/display/scale_priv/Scalable+Privacy
- Funds used to hire consultants to modify SSO
 - Central Authentication Service (CAS)
 - Apereo CAS
 - Under \$100k



The Environment



Microsoft
Active Directory



Pilot Rollout

- Staggered rollout to IT and HR employees
- Built Duo Self-Service App
 - Original source code from University of Chicago
 - Forks from University of Utah
 - Public: Helpdesk component (generate bypass-code)
 - Private: integrations, UI/UX, improved operational support, bug fixes & policy-enforcements, automations



Self-Service App



[Home](#)

Appli

Manage Your DUO Devices

Fullname: BRYAN WOOTEN

Your Registered Devices:

Phones

Number	Platform(OS)	Type	
+18014143593	Google Android	Mobile	REMOVE RE-ACTIVATE

Tokens

Serial Number	Type	
4142086	yk	REMOVE RESYNC

Serial Number	Type	
DSEC00053685	d1	REMOVE RESYNC

[REGISTER ANOTHER DEVICE](#)

Project Scope

- Applications
 - 150+ SAML (Shibboleth) / Cloud (Canvas)
 - 600+ Campus hosted Web apps (PeopleSoft / Homegrown/ JAVA / .NET / PHP / Ruby)
- All Current Employees
 - Includes student employees
- All users accessing VPN and clinical servers
- Offshore Vendors



Two 2FA Services



Offshore vendors for University
Medical Billing and Revenue Billing

Providers using e-Prescribe

Remote Access to Clinical Servers

Remote Access to Campus Servers

Remote Access via Citrix Access Gateway

Remote Access via Clinical and Non-Clinical VPN

All applications protected by CAS-WEB



Communications Plan

- Targeted emails
- Newsletter & website announcements
- Dedicated 2FA website
- Modal announcement on employee page
- Employee appreciation day booth
- Numerous meetings with governing and leadership groups
- And, a tagline...

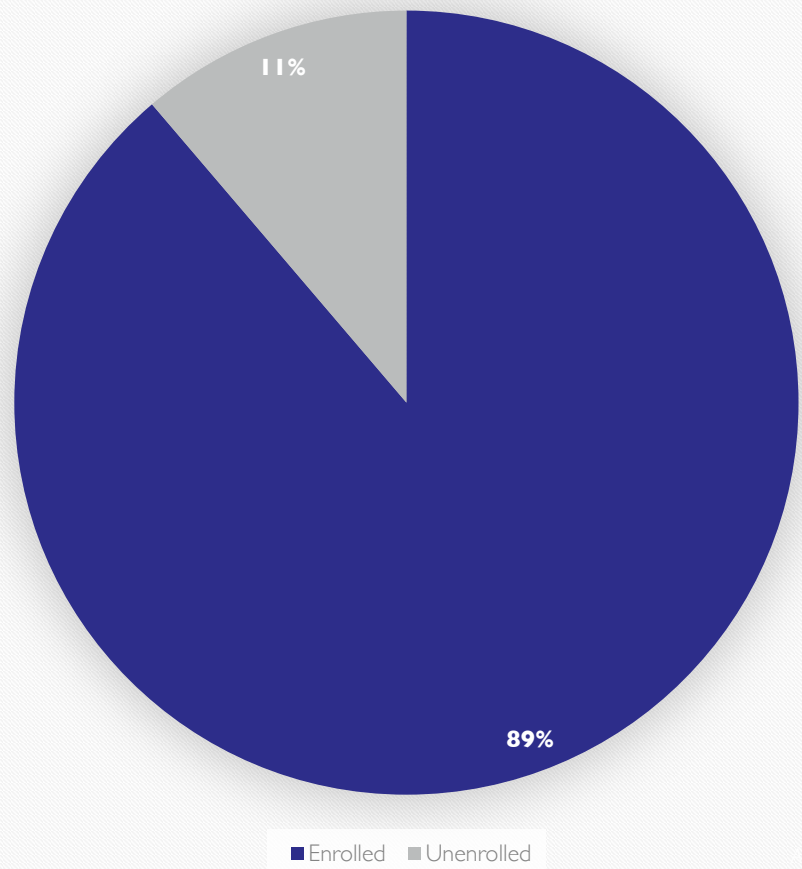




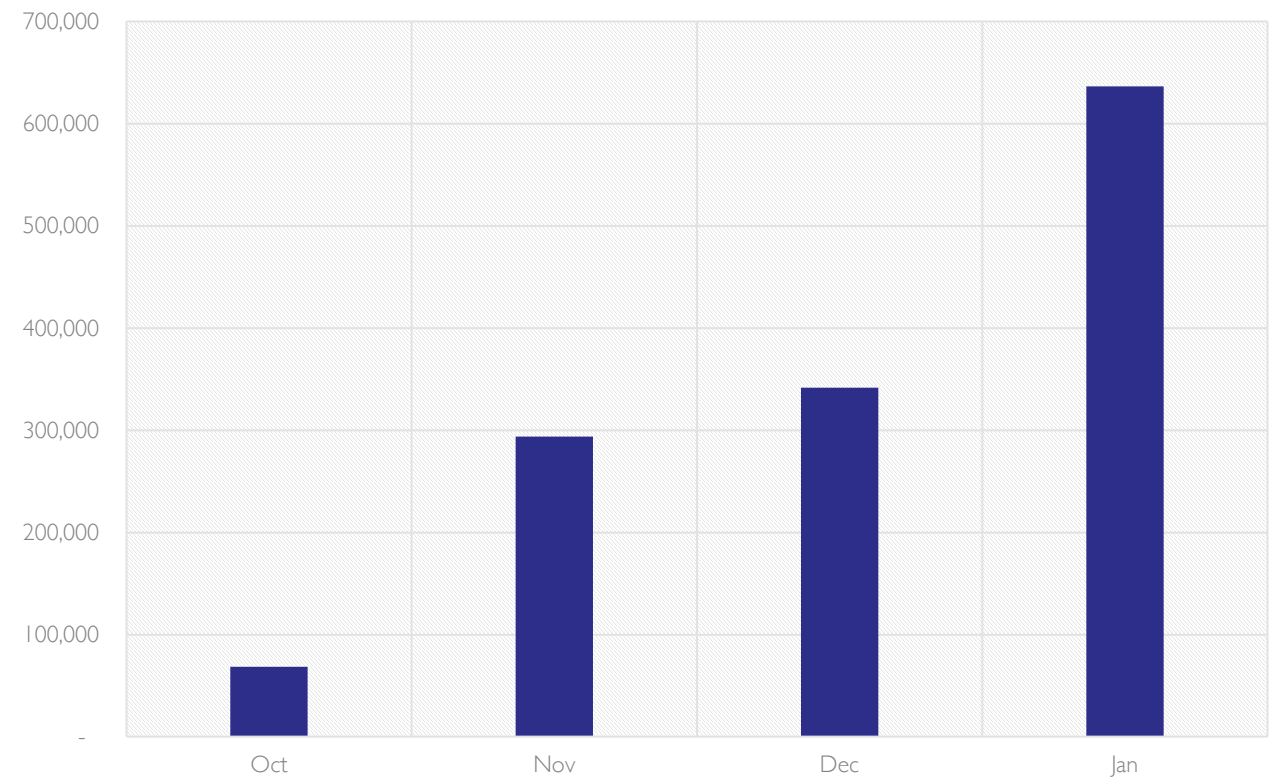
Your identity is worth an extra step.

The Aftermath...

Total employee 2FA enrollment



Monthly Duo 2FA Authentications



**As of Feb 2017*



...Continued...

- Top reasons for helpdesk calls:
 - Step-by-step support
 - Need bypass code
 - RSA or Duo?
- Significant increase in helpdesk call volume after implementation
 - Primary reason was procrastination



Lessons Learned

- Executive buy-in!!
 - Canvas pushback
- Engage dept IT leaders for support
- Start with a pilot rollout
- Testing center issues: Whitelist!
- Provide self-service



Live Demo



Thank You!

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Original source code from University of Chicago
<https://github.com/uchicago/duo-registration>

Fork from University of Utah
<https://github.com/bane73/duo-registration>



Appendix



Login

uNID: (e.g. u8675309)


[Forgot your uNID?](#)

Password:

[Forgot your password?](#)

Caution: Before entering your uNID or password, verify that the address in the URL bar of your browser is directing you to a University of Utah web site.

Important security information: This login uses cookies to provide access to the site you requested and to other protected University of Utah websites. For your security, log out of the services you are using and exit your browser when you have finished your session. Some browsers, including Google Chrome, retain cookie information by default even after you close your browser. Review your browser's support documentation to set your browser to clear cookies automatically upon exit. [Instructions for Google Chrome.](#)



[What is this?](#) [Need help?](#)

Powered by Duo Security

Device:

Choose an authentication method

Remember me for 12 hours



U CAMPUS INFORMATION SERVICES

Employee

Message Center

- Planned Maintenance Downtime**
Production PeopleSoft Financials and associated web applications. Saturd 5/19/2018 from 4:00 a.m. to 2:00 p.m.
- Setting Your Default Homepage**
CIS been updated so that Employees can set their own default homepage. The default homepage loads first when you log in to the system. It is also quickly accessible by clicking the Home icon in the system header. To take advantage of this feature, do the following:
1. Click the Person icon in the system header and select Personalize

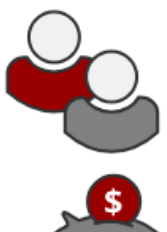
Employee Resources



University Careers



Campus Directory



Human Resources

Update Profile



RACHAEL SHEEDY
06001660
Change Bio/Demo Info.

UBox



Umail



UMail
UMail Settings

Payroll, Taxes & Salary



Kronos Time & Attendance



Benefits Information



Hospital Applicant Tracking



Learning Management System



Employee Tax Forms



Electronic W-2

Forms

1095-C

Annual Compensation Statement



Password & Security Info



Change Your

Password

Campus Alert



Enrolled in the text alert system
Campus Alert
Campus Alert Settings

DUO 2FA Management



Workorder Status



Workorder Status
Workorder Status Tutorial

Facilities Customer Request



Cell Phone Reimbursement



Performance Management



Training Summary

