Multi-Factor Authentication

Deakin’s Journey to uplift authentication using Single Sign-On and Multi-Factor

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Deakin University CRICOS Provider Code: 00113B

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Content

- Single Sign-On Implementation
- Multi-Factor Authentication
- Demo

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Why Multi-Factor Authentication

284	5,044,555,541	70,358	77,127,825
pwned websites	pwned accounts	pastes	paste accounts

Largest breaches

711,477,622	Onliner Spambot accounts
593,427,119	Exploit.In accounts
457,962,538	Anti Public Combo List accounts
393,430,309	River City Media Spam List accounts
359,420,698	MySpace accounts
234,842,089	NetEase accounts
164,611,595	LinkedIn accounts
152,445,165	Adobe accounts
112,005,531	Badoo accounts
105,059,554	B2B USA Businesses accounts

Recently added breaches

777,649	ViewFines accounts
24,853,850	VNG accounts
7,485,802	17173 accounts
10,371,766	TGBUS accounts
188,847	ILikeCheats accounts
6,844,490	CashCrate accounts
27,971,100	Taringa accounts
386,489	Smogon accounts
13,873,674	HiAPK accounts
3,204	Bestialitysextaboo accounts

Source: haveibeenpwned.com

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Your digital identity is more than ‘Password123’

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Multi-Factor

- Something you **have**
- Something you **are**
- Something **you know**

Source: Splunk Inc.

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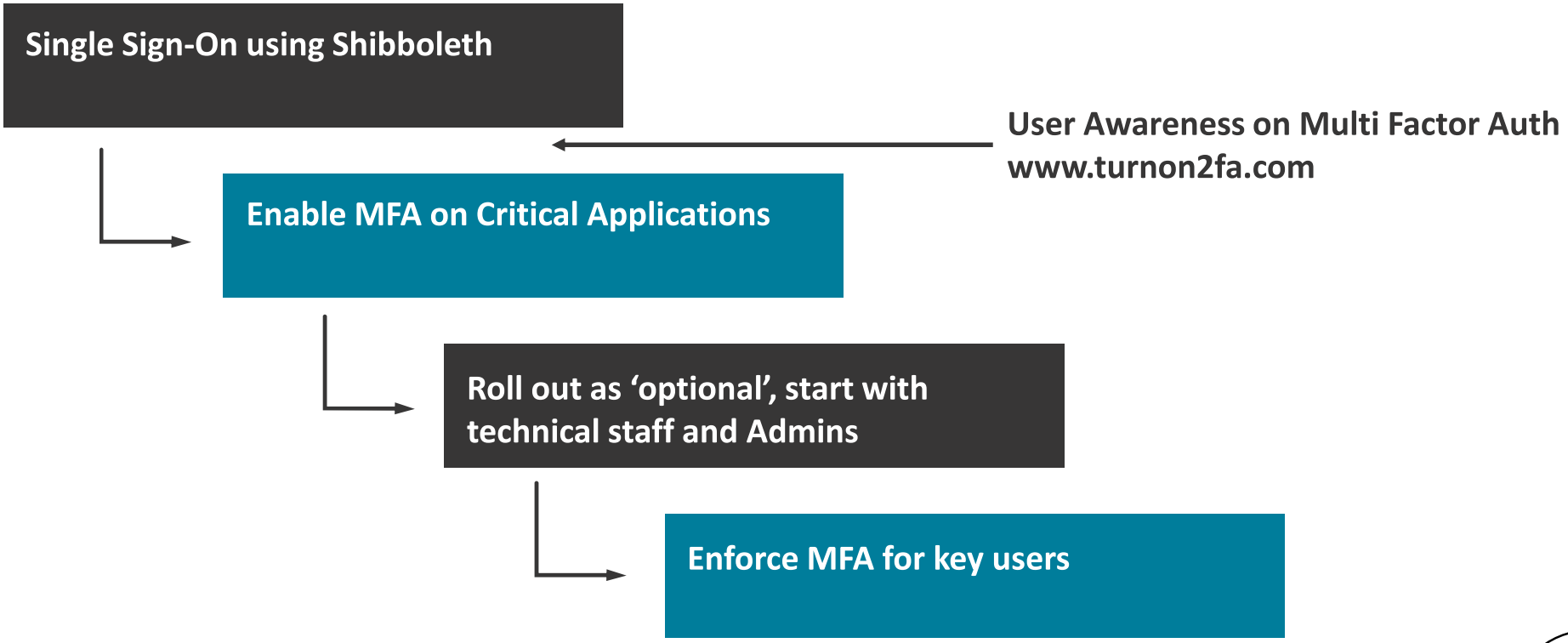
Our Journey


Single Sign-On using Shibboleth
User Awareness on Multi Factor Auth
www.turnon2fa.com
Enable MFA on Critical Applications
Roll out as 'optional', start with technical staff and Admins
Enforce MFA for key users

Technology Stack

Shibboleth

BIG-IP Access Policy Manager

Duo MFA

Source:
shibboleth.net
f5.com
duo.com

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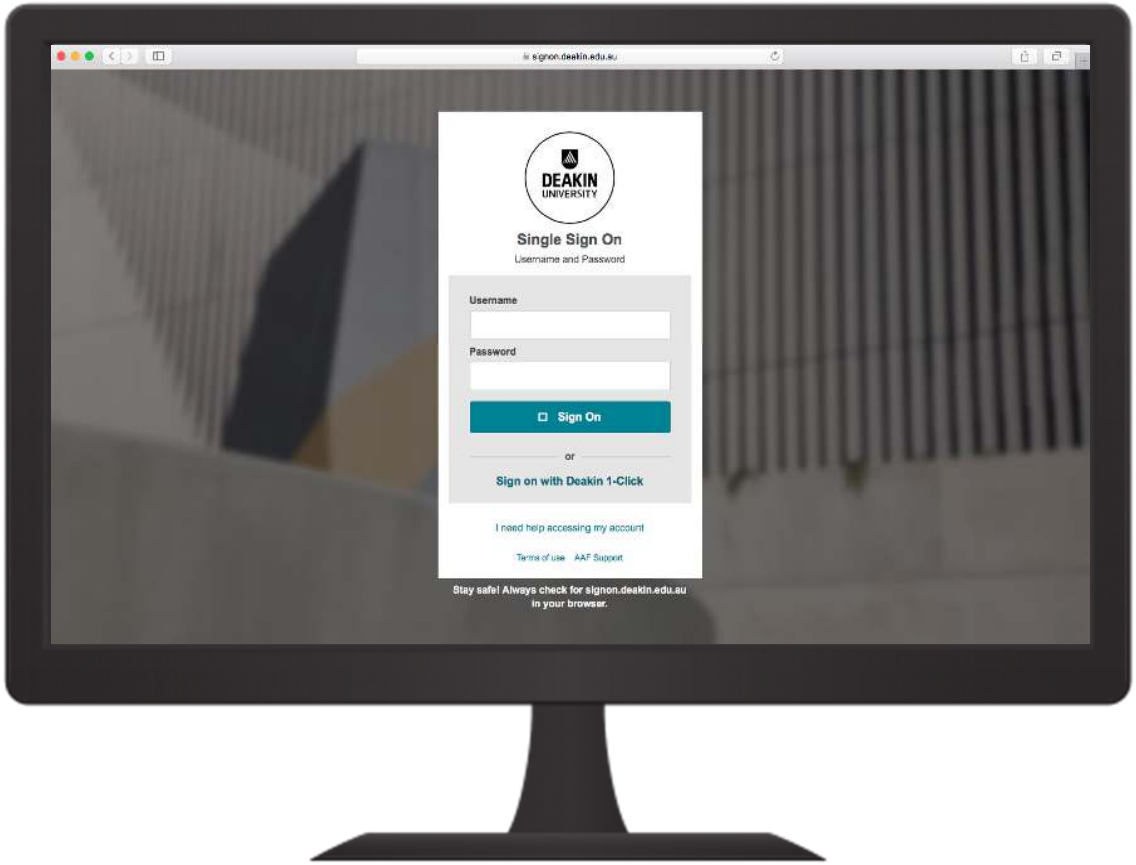
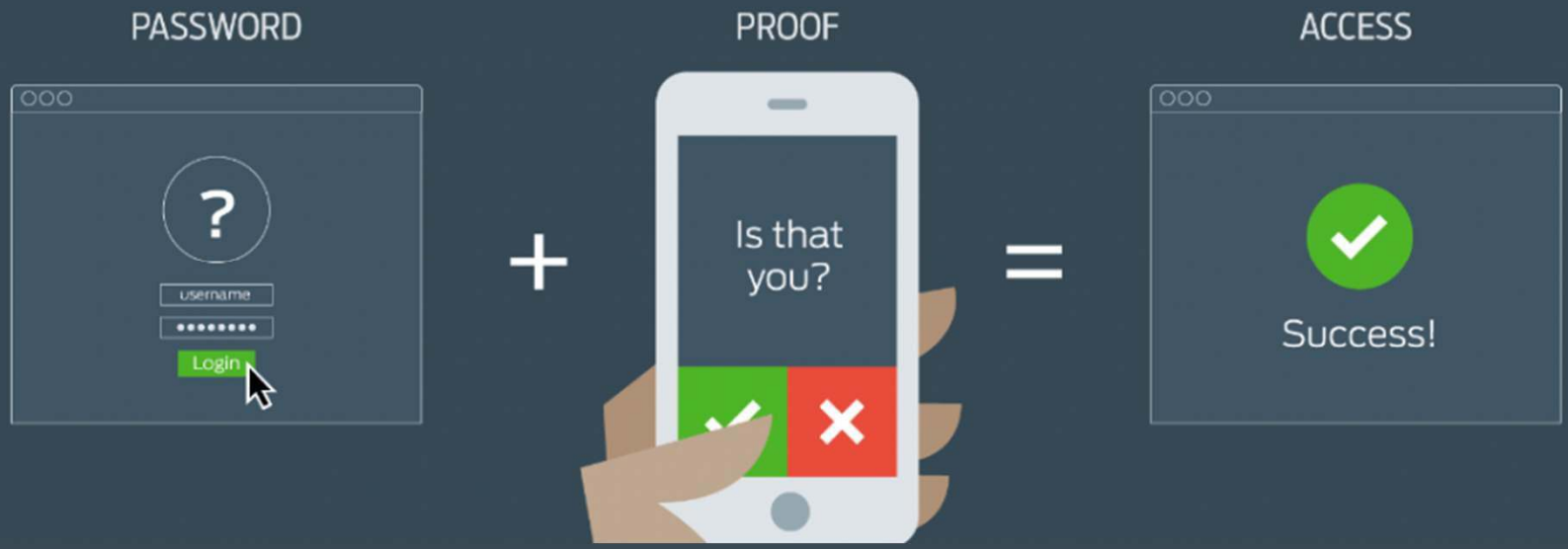
Balance between security and usability

Single Sign-On

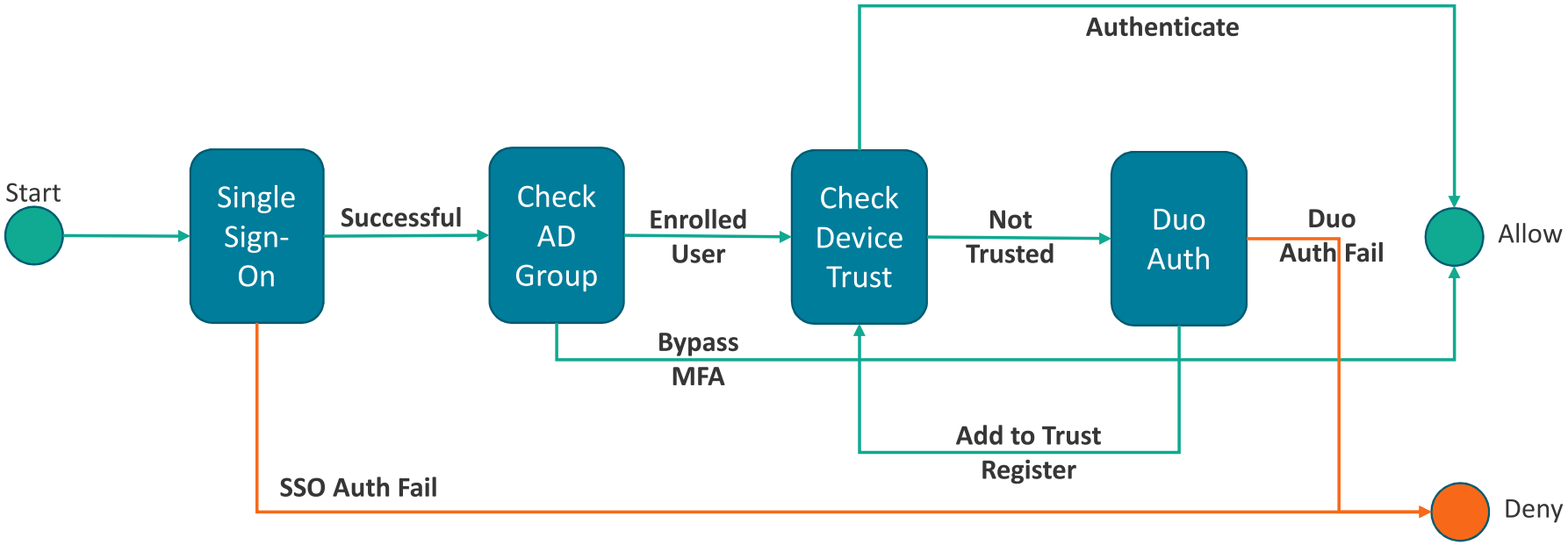


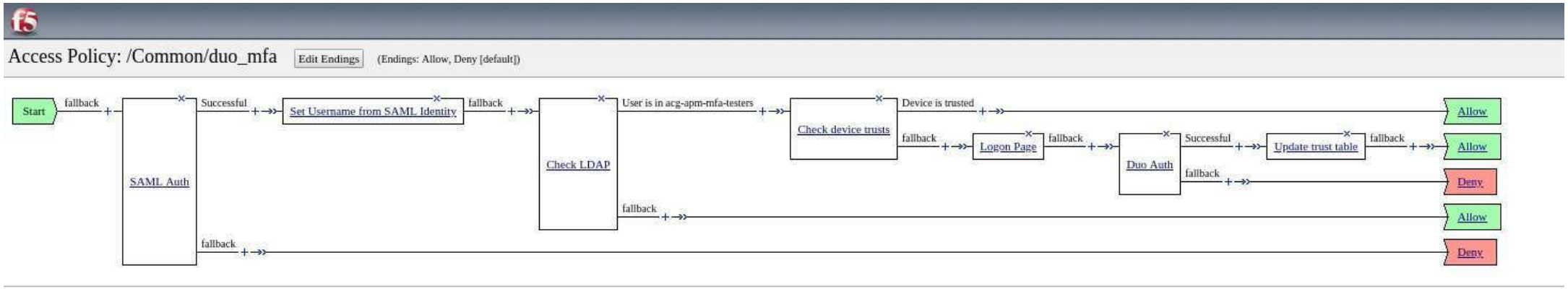
MFA using Duo



Source: Duo Security

MFA Logic Flow




Access Policy: /Common/duo_mfa
Edit Endings
(Endings: Allow, Deny [default])
Start
fallback
SAML Auth
Successful
Set Username from SAML Identity
fallback
Check LDAP
User is in acg-apm-mfa-testers
Check device trusts
Device is trusted
Allow
fallback
Logon Page
fallback
Duo Auth
Successful
Update trust table
fallback
Allow
fallback
Deny
fallback
Allow
fallback
Deny

LiveSlides web content

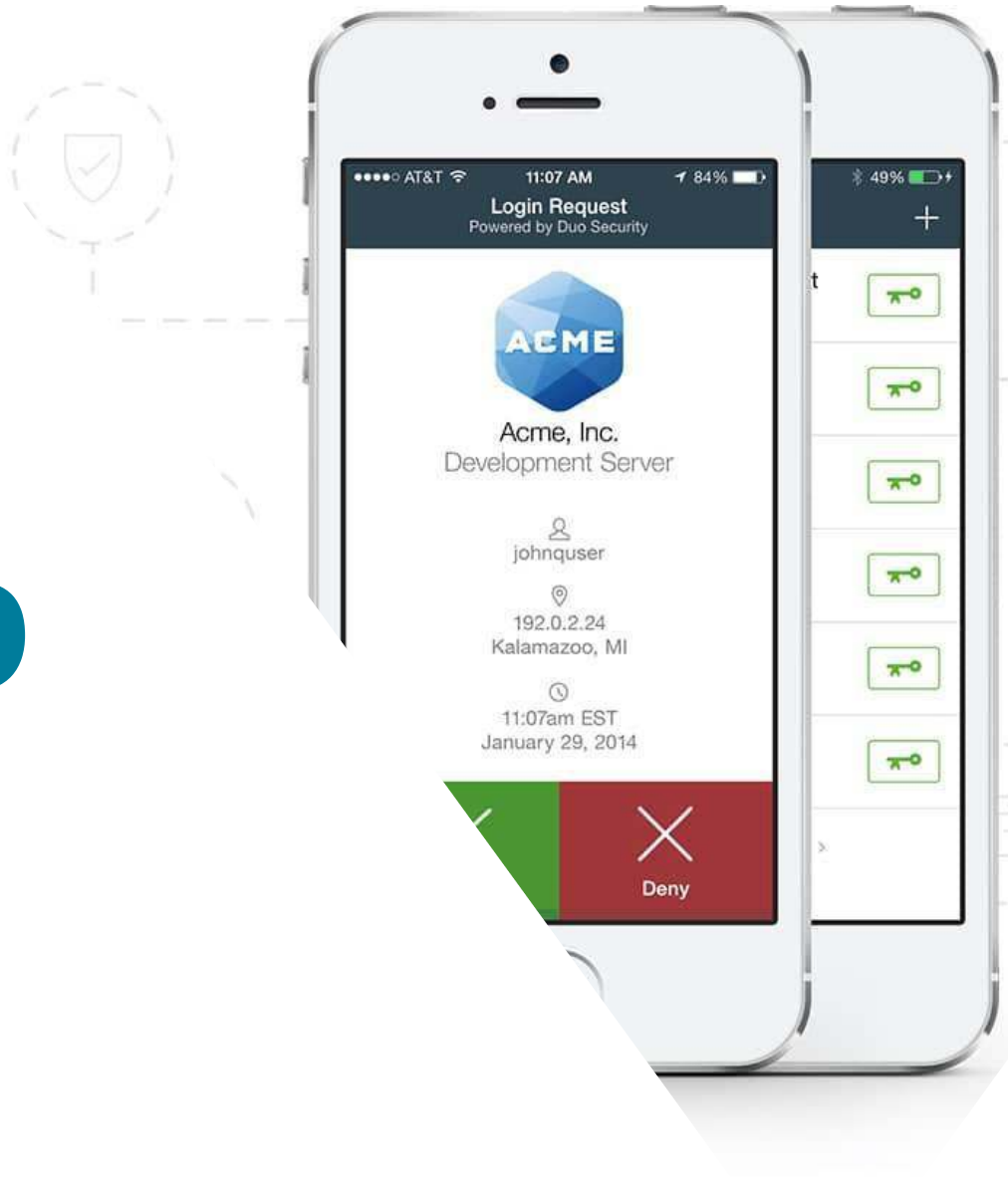
To view

Download the add-in.

liveslides.com/download

Start the presentation.

Demo


AT&T
11:07 AM
84%
Login Request
Powered by Duo Security
ACME
Acme, Inc.
Development Server
johnquser
192.0.2.24
Kalamazoo, MI
11:07am EST
January 29, 2014
Deny
49%

Demos have failed before...

Source: mirror.co.uk

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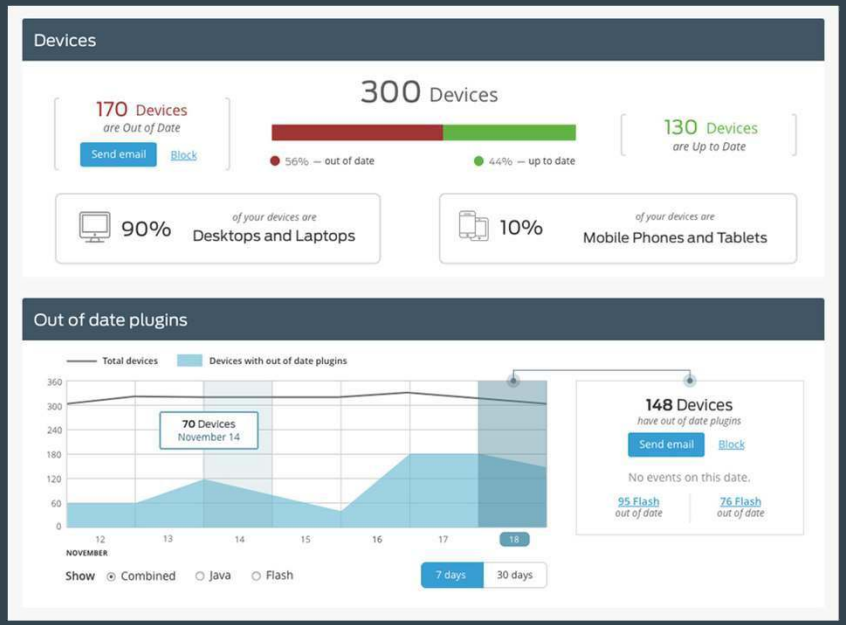
Advantages



Device Health

Different options

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Issues and challenges

- User Awareness
- Reluctance to use personal device
- Session limit for f5 APM
- Duo Look and Feel is not customizable – at this stage

Ben Savage
Ryan Parker-Hill

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