BIG UNIVERSITY 2019

big Business Information Group

PROTECTING YOUR WORKFORCE SESSIONS

WHAT IS MFA AND WHY YOU SHOULD BE USING IT

Introduction

- Director of Network Services
- Cisco Meraki Network Associate (CMNA)
- Barracuda Backup and Recovery Engineer
- CompTIA A+
- CompTIA Net +
- CompTIA Security +
- Barracuda SPAM Firewall Engineer
- Cisco Certified Network Associate(CCNA)-Security
- Cisco Certified Network Associate(CCNA)

Agenda

- What is Multi-Factor Authentication (MFA) or Two Factor Authentication (2FA)
- How are we using MFA today?
- Why is MFA more necessary today then it was just 2 years ago?
- Who and what attackers are targeting?
- Office 365 and MFA.
- What uses should MFA be implemented in a corporate environment?
- What does the future of MFA look like?

What is MFA?

- Multi-Factor Authentication (MFA) is a security system that verifies a user’s identity by requiring multiple credentials. Rather than just asking for a username and password, MFA requires other-additional- credentials, such as a code from the user’s smartphone, the answer to a security questions, a fingerprint, or facial recognition.

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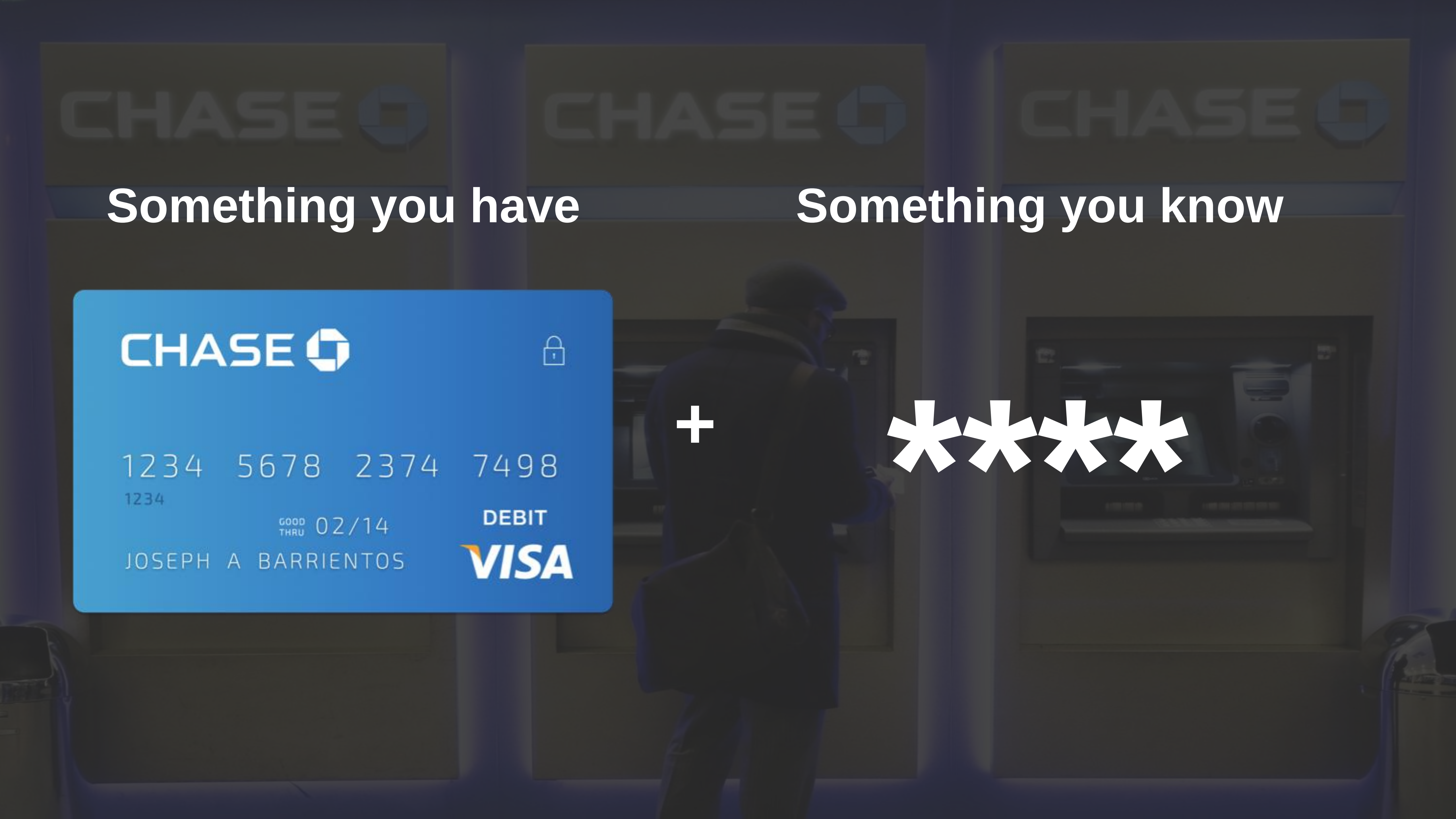
How are you using MFA today?

- O365
- Corporate domain environment
- Accessing banking websites
- Security Questions
  - Mothers Maiden name.
  - First street you lived on.
- 3 digit code on back of credit card
- Accessing ICLOUD
- Accessing retirement websites
- Numeric or pattern password on phones
- Tokens
- Codes sent to email address
- ATM Machines

CHASE
CHASE
CHASE



Something you have

Something you know

+

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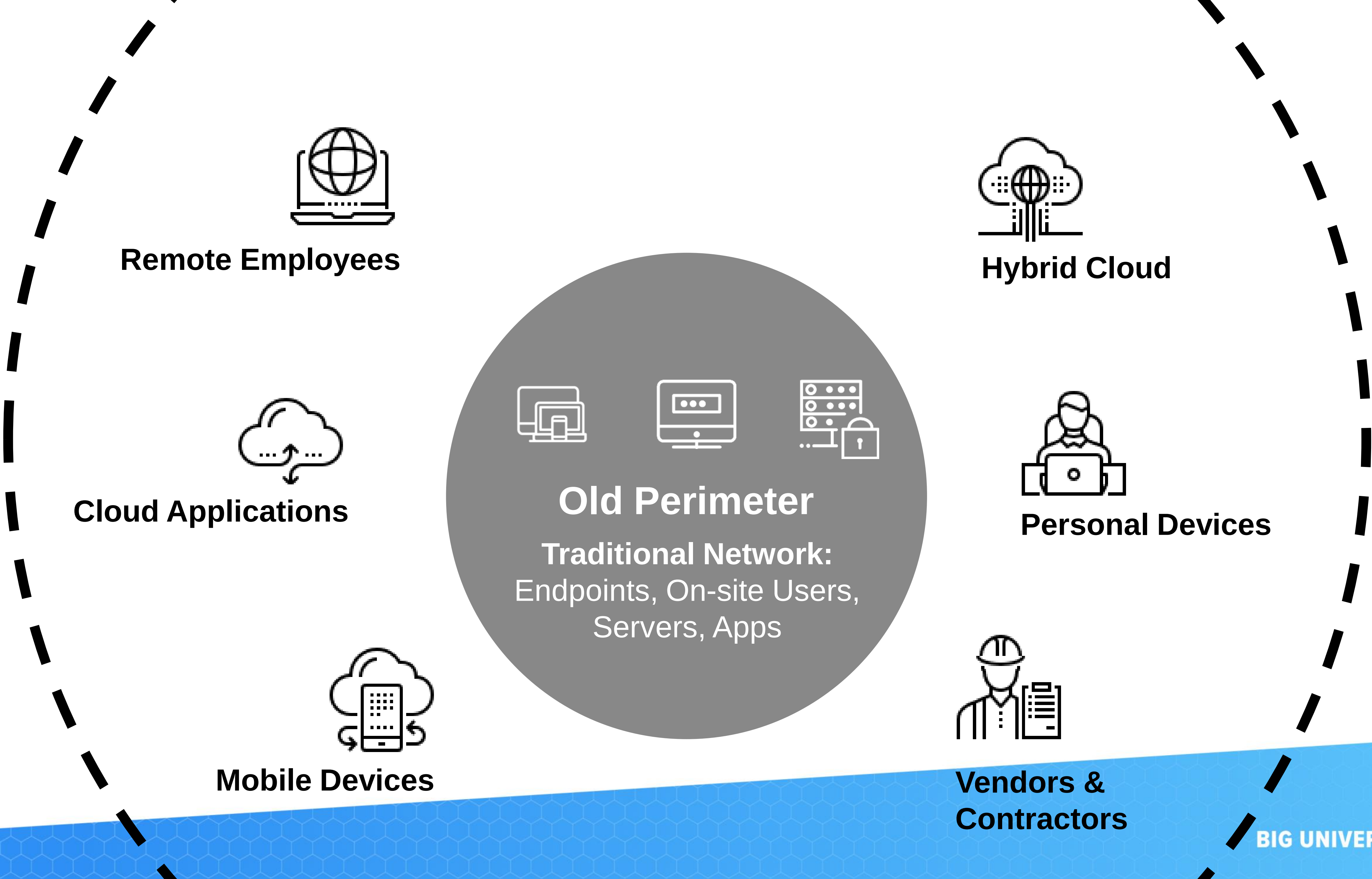


Old Perimeter

Traditional Network:
Endpoints, On-site Users,
Servers, Apps

Remote Employees

Cloud Applications

Mobile Devices

Hybrid Cloud

Personal Devices

**Vendors &
Contractors**

Attackers are targeting Users and Devices

81%

Breaches involved compromised credentials

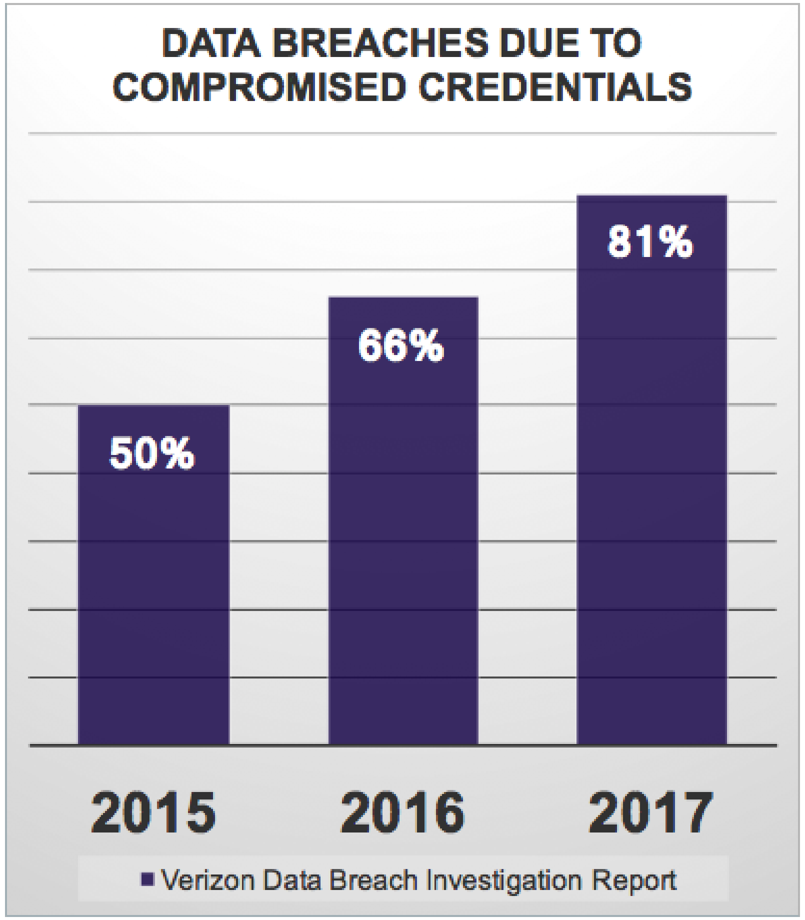
75%

Breaches involved compromised devices

Source: 2017 Verizon Data Breach Report

Office 365

- MFA is free with Office 365
- It does not require you to login two times for Outlook clients, just when accessing the web portal.
- Limit when users are required to use MFA by public IP-must have Azure P2 licensing

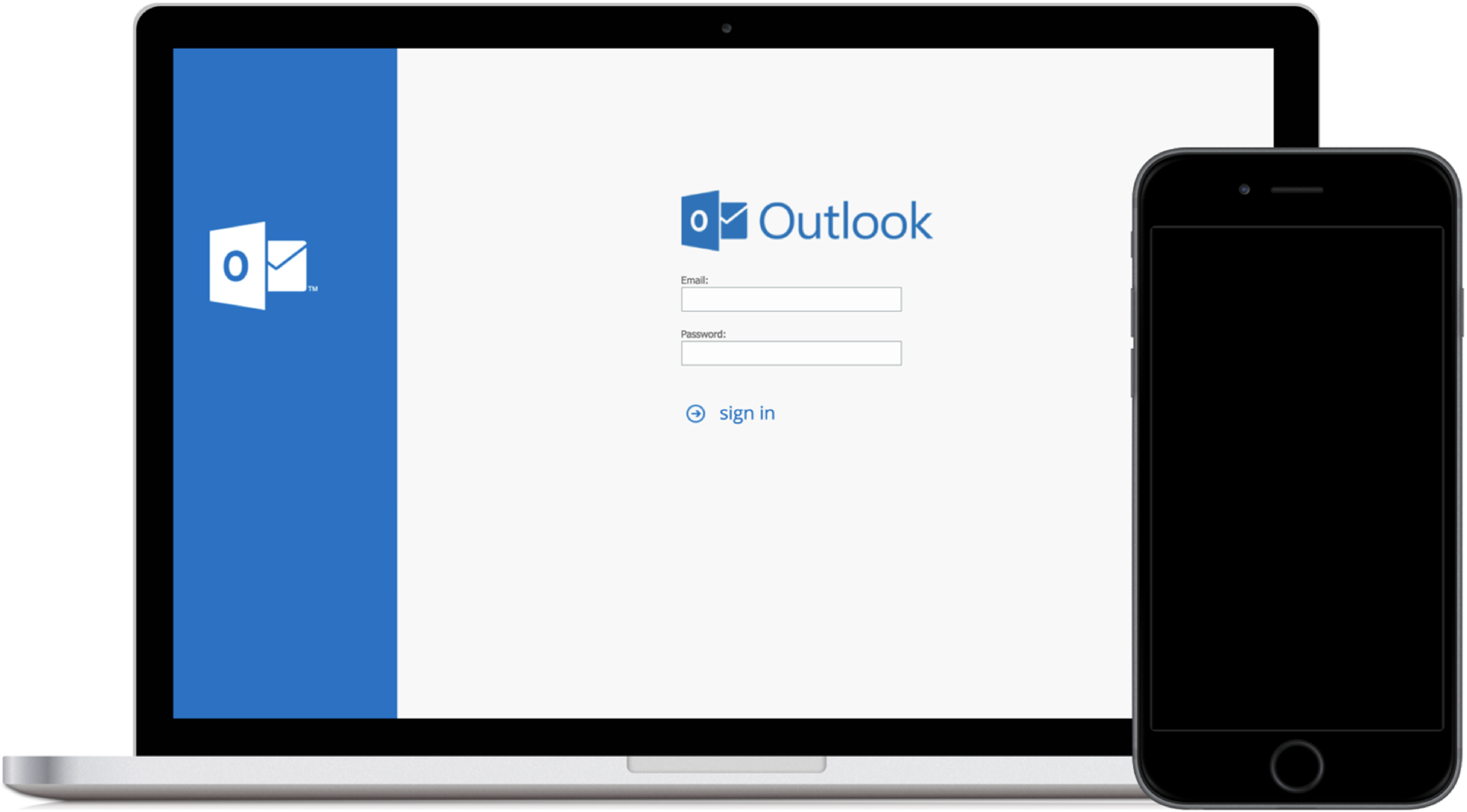

DATA BREACHES DUE TO COMPROMISED CREDENTIALS
50%
66%
81%
2015
2016
2017
■ Verizon Data Breach Investigation Report

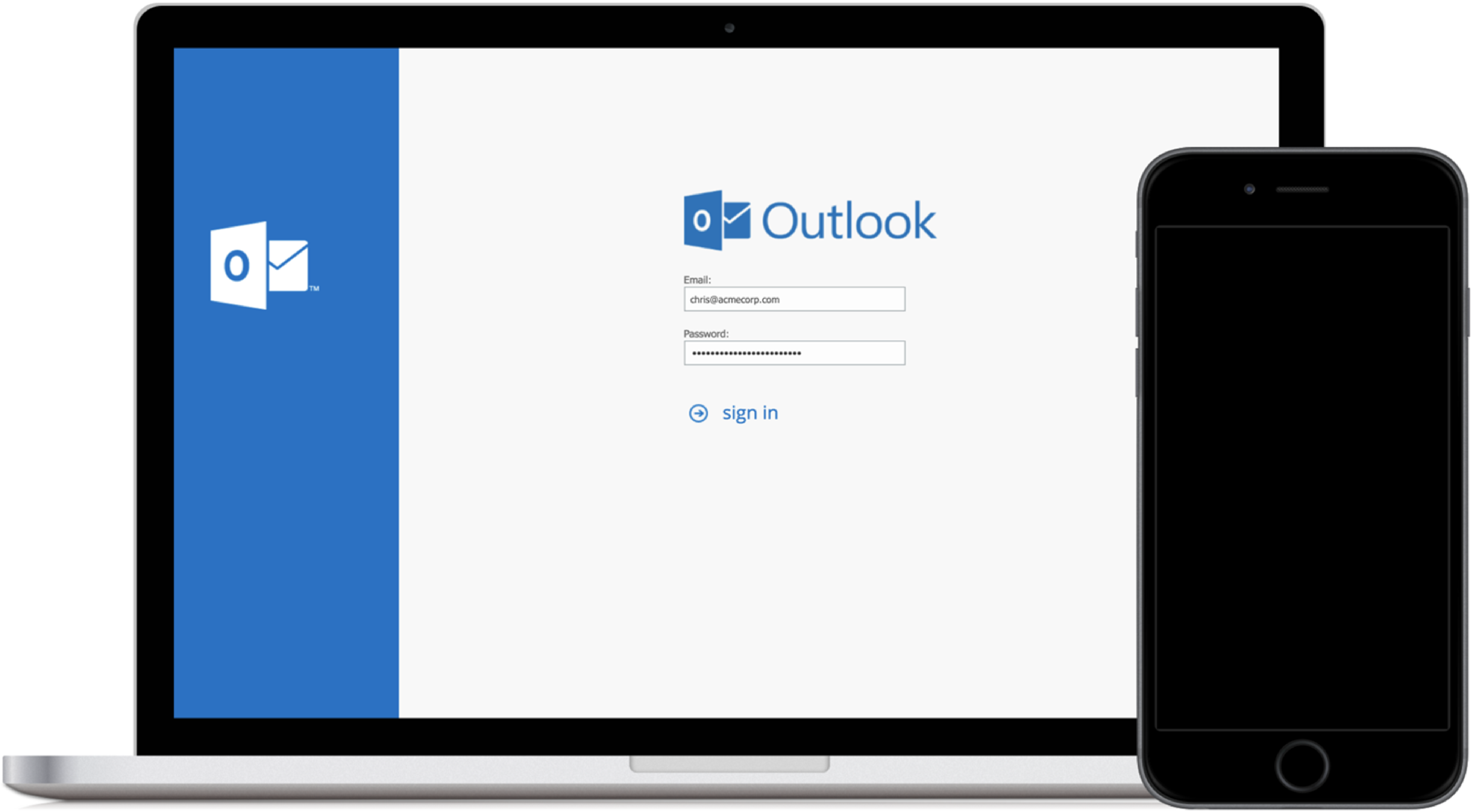
What should you be using MFA to access

- Logging into your computer both online and offline
- Logging into VPN to access your corporate network
- Logging into all servers
  - Servers on cloud
- Logging into corporate ERP’s
- Logging into any corporate applications

Start with the user:

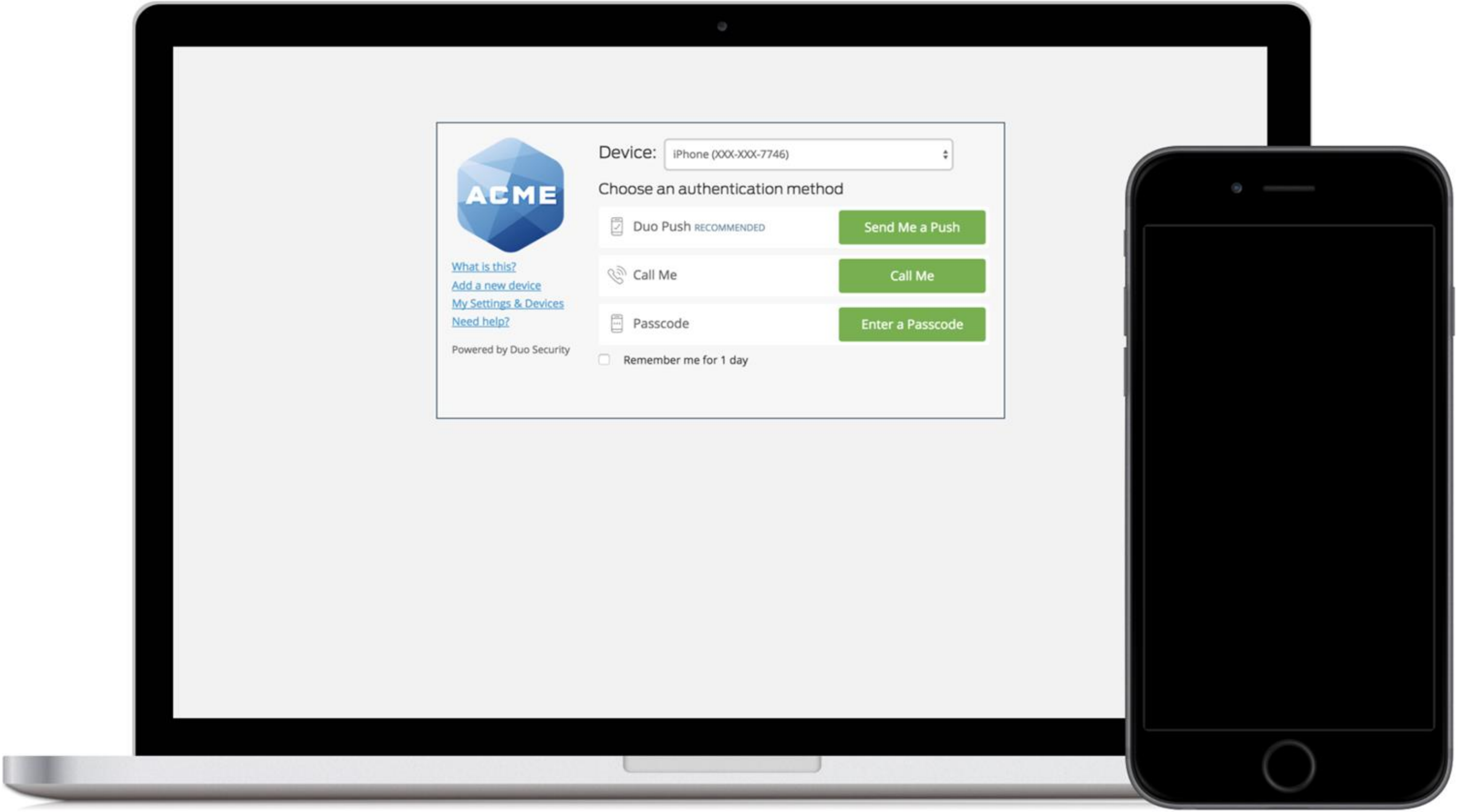
Two-factor authentication is an absolute necessity for application access


Outlook
Email:
Password:
sign in



Email: chris@acmecorp.com

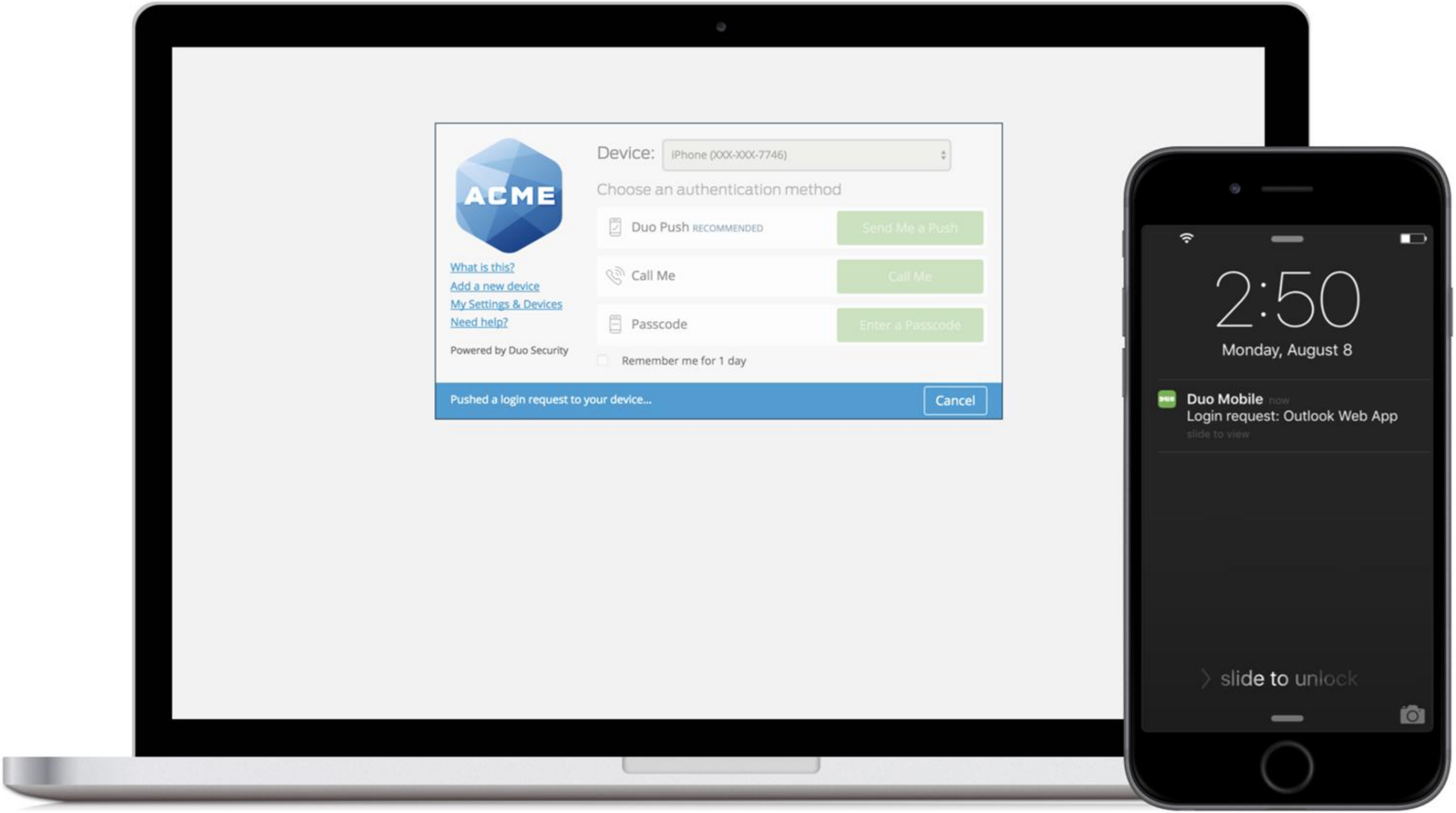
Password: ••••••••••••••••••••••••



Device: iPhone (XXX-XXX-7746)

Choose an authentication method

☐ Remember me for 1 day



Device: iPhone (XXX-XXX-7746)

Choose an authentication method

Duo Push RECOMMENDED

Call Me

Passcode

□ Remember me for 1 day

Pushed a login request to your device...

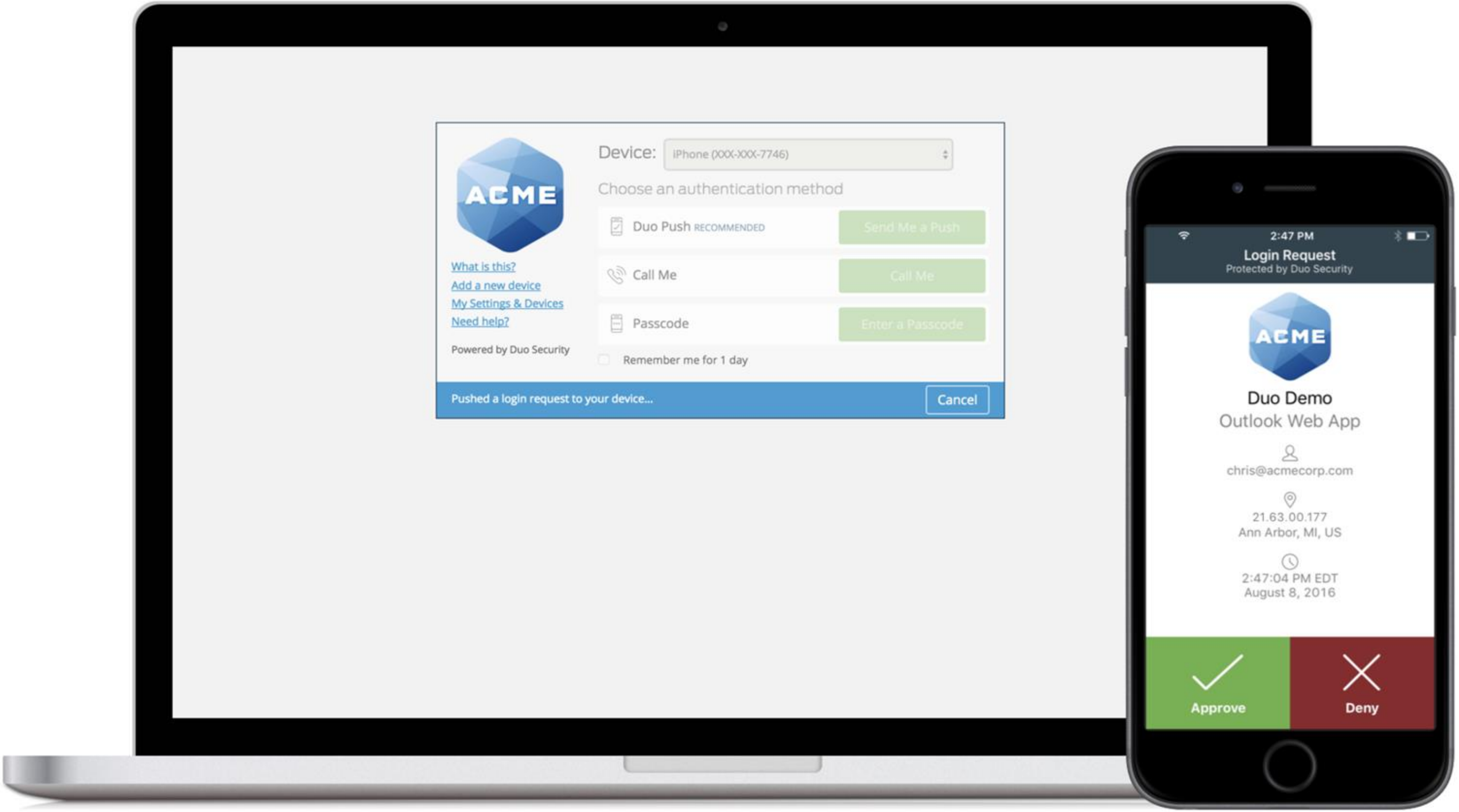
2:50

Monday, August 8

Duo Mobile now

Login request: Outlook Web App

slide to view



Device: iPhone (XXX-XXX-7746)

Choose an authentication method

Duo Push RECOMMENDED

Call Me

Passcode

☐ Remember me for 1 day

Pushed a login request to your device...

Powered by Duo Security

Login Request

Protected by Duo Security

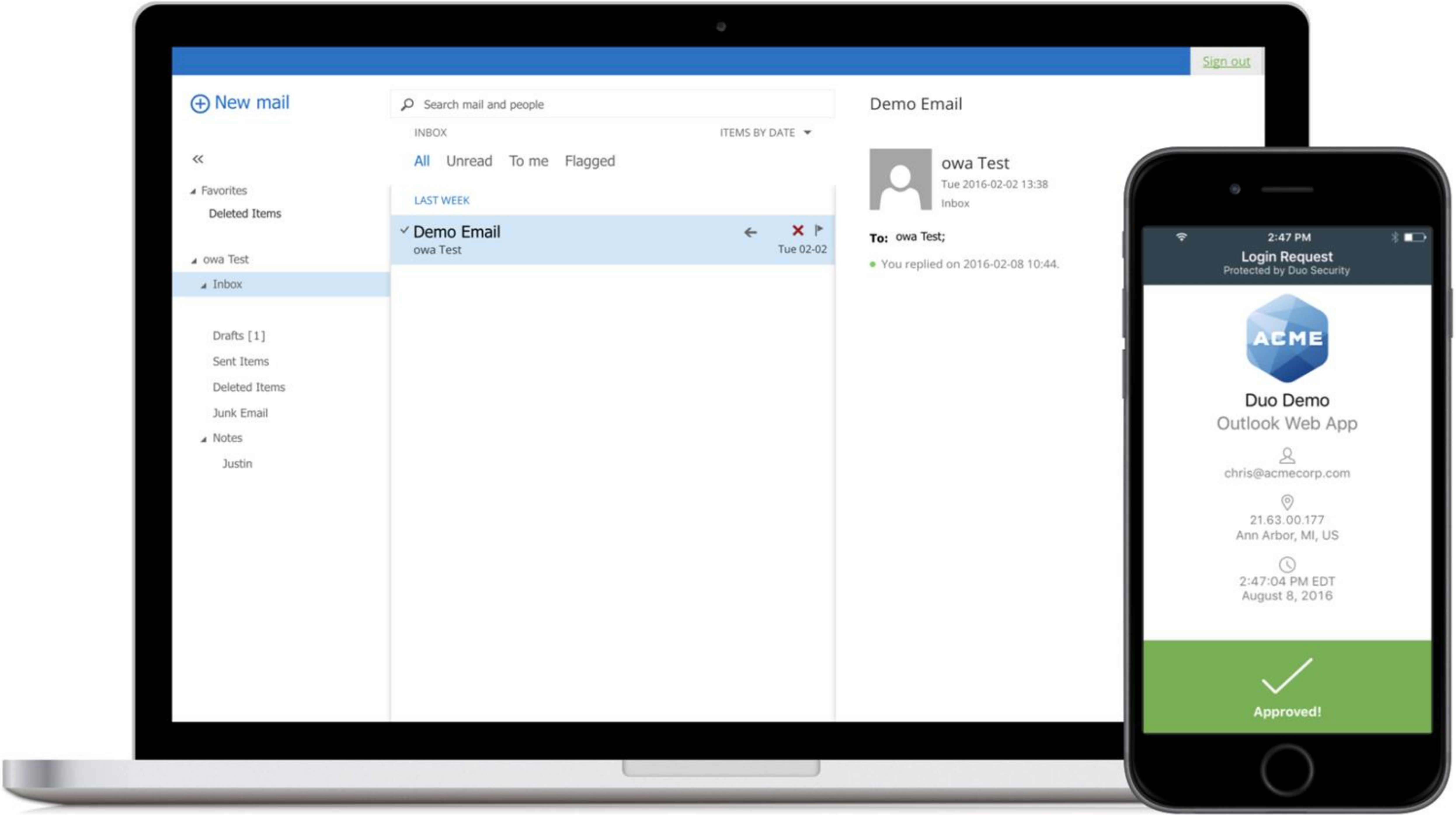
Duo Demo

Outlook Web App

chris@acmecorp.com

21.63.00.177
Ann Arbor, MI, US

2:47:04 PM EDT
August 8, 2016



Demo Email
owa Test
Tue 02-02

Demo Email

owa Test
Tue 2016-02-02 13:38
Inbox

To: owa Test;

You replied on 2016-02-08 10:44.

Login Request
Protected by Duo Security

Duo Demo
Outlook Web App

chris@acmecorp.com

21.63.00.177
Ann Arbor, MI, US

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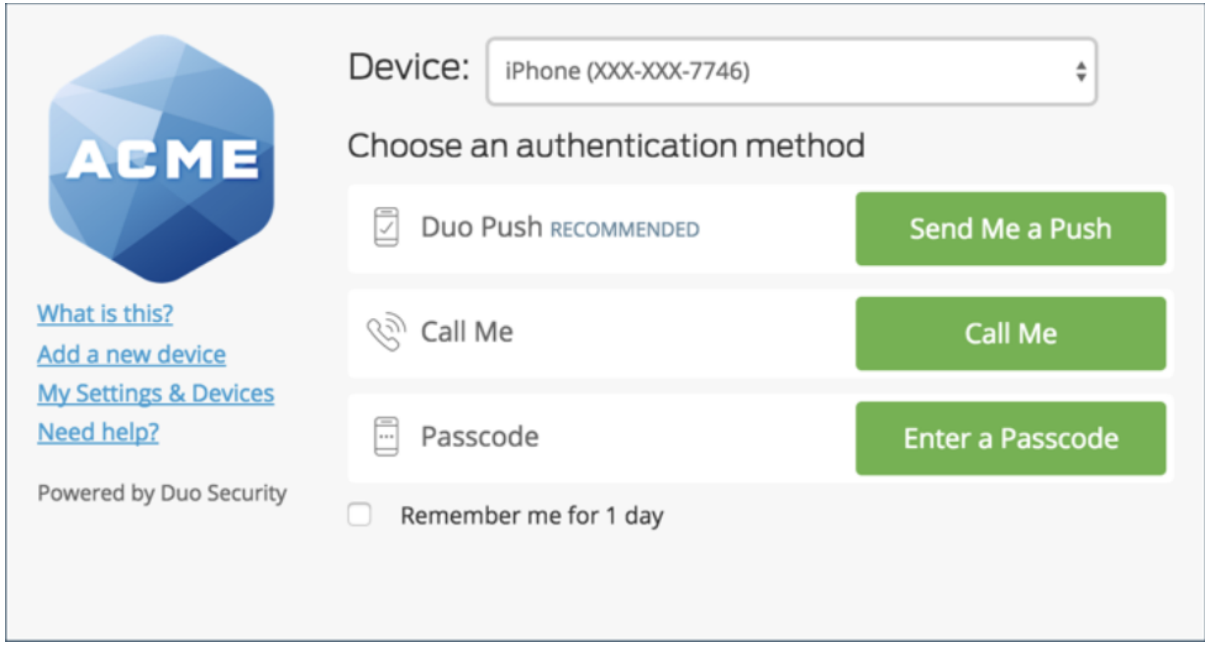
August 8, 2016

Approved!

Easy 2FA is flexible



ACME

What is this?

Add a new device

My Settings & Devices

Need help?

Powered by Duo Security

Device: iPhone (XXX-XXX-7746)

Choose an authentication method

Duo Push RECOMMENDED — Send Me a Push

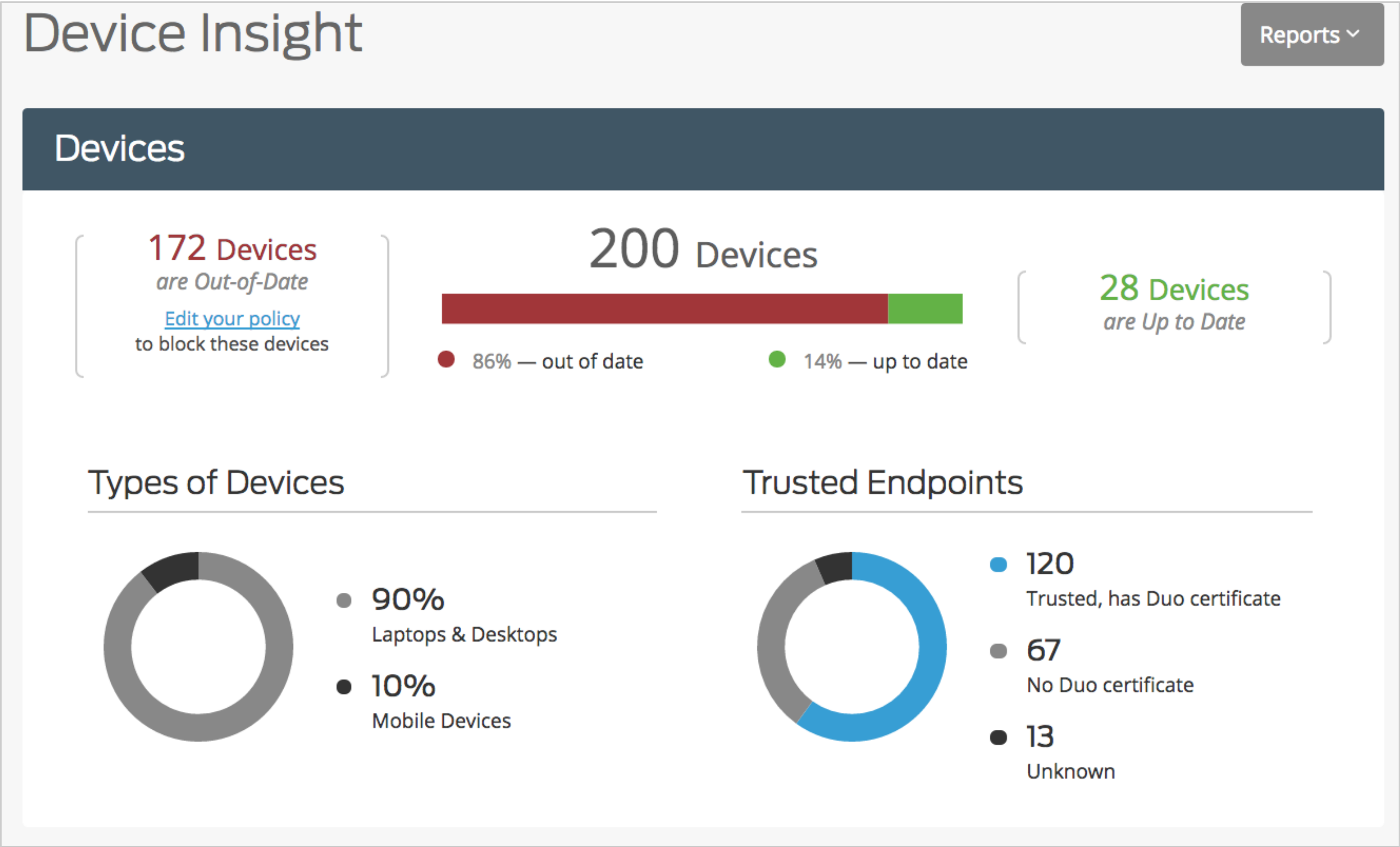
Call Me — Call Me

Passcode — Enter a Passcode

□ Remember me for 1 day

Authentication methods for your end-users

Push · Soft Token · SMS · Phone Call · U2F · Wearables · Biometrics · HW Tokens



Device Insight

Reports ⌄

Devices

172 Devices
are Out-of-Date
Edit your policy
to block these devices

200 Devices

● 86% — out of date ● 14% — up to date

28 Devices
are Up to Date

Types of Devices

● 90%
Laptops & Desktops

● 10%
Mobile Devices

Trusted Endpoints

● 120
Trusted, has Duo certificate

● 67
No Duo certificate

● 13
Unknown

Future of MFA

- Biometrics
  - Retina scanner
  - Face scanners
  - Palm scanner
- Adaptive Authentication
  - Online banking from somewhere you’ve never accessed it from before.
- Windows Hello
  - Fingerprint
  - Face scanning
- Amazon is testing behavioral characteristics
  - Pressure applied when user taps phone
  - Typing speed on phone