New Trend of User Identity from Cloud Giants Today

Darren Lee, CEO of GoTrust
Users

- Facebook: 2.12B active users
- Google: 2B active users
- Apple iCloud: 782M users
- Microsoft Office 365: 120M business users
How to identify who is who ?
ID & Passwords
Problem of ID/Password
DON'T FALL INTO THIS TRAP
HIGHLY EFFECTIVE GMAIL PHISHING ATTACK!

90% Gmail attack is from phishing ID/Password*
*Google Enterprise Security Team
Data breach is worst than what we can imagine

2016 - 2017 > 4.2B
90% Data Breach is from ID/Password Phishing

* data source: Risk Base Security
What’s trend to protect User Identity in 2018?

No Password & 2nd Factor Authentication
Options of passwordless & 2-step login

- **Microsoft**
  - Windows: Hello login (No Password)
  - Azure: MFA (2\textsuperscript{nd} factor authentication)
- **Google**
  - OTP – SMS and Google Authenticator
  - FIDO U2F Key
  - Phone login
- **Facebook**
  - OTP – SMS, Facebook Authenticator, Google Authenticator, etc.
  - FIDO U2F Key
- **Apple**
  - MacOS: Apple watch or third party phone login (No Password)
  - SMS OTP
Popular 2-step login today

Apple: SMS OTP

FIDO U2F Key for Google, Facebook, Dropbox, etc.

Facebook: OTP

Google: OTP, phone login PC
Problem for SMS and one-time password 2-step login

- Back and forth to look at and input random code. Not user friendly for everyone.
- Third party APP is complicated to setup
- SMS may delay in many area and not guaranteed delivery
- SMS one-time password is compromised
  - NIST SP 800-63-3, “**OOB using SMS is deprecated**, and may no longer be allowed in future releases of this guidance.”
Bitcoin wallet hacked via SMS interception

https://www.youtube.com/watch?v=mLh1Nmqa6OM&feature=youtu.be
New Trend Today & Tomorrow

- Windows Hello Passwordless login
- FIDO Standard Passwordless login or 2\textsuperscript{nd} factor authentication
- FIDO-based hardware security key for 2\textsuperscript{nd} factor authentication
  - Windows – USB & NFC. BLE is vendor specific.
  - MacOS – USB & BLE
  - Android – BLE & NFC
  - iOS – BLE
- Google, Microsoft and Facebook are FIDO board members.
- Phone as Authentication Token.
  - NIST predicts 60\% out of band (OOB) authentication will use phone in 2019
  - No longer recommend (deprecated) SMS
Advantage to use FIDO-based product

- Google, Facebook, Microsoft, Samsung, Alibaba, Lenovo, Paypal, GoTrust, etc. All members
- over 260 members Worldwide
- Open standard
- Passwordless login and 2\textsuperscript{nd} factor authentication
- Interoperable ecosystem among Mobile, Biometrics and Hardware.
What is innovative user identity solution in market?