(IN)SECURITY IS EATING THE WORLD

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@_MWC

A lot has changed in the past 15 years

Security assumes many different forms depending on your vantage point

INTEGRATION

Life is Technology, Technology is Life

What sank the Thresher

All 129 men died aboard the submarine 50 years ago

By Bruce Rule and Norman Polmar

Beginning with the pioneer nuclear-propelled submarine Nautilus, which went to sea in January 1955, the Navy has built 200 nuclear submarines of all types. These undersea craft have been manned by several hundred thousand sailors and have traveled more than a hundred million miles.

They have demonstrated that nuclear propulsion is safe, efficient and of tremendous value for

ABOUT THE WRITERS

■ Bruce Rule in April 1963 was the analysis officer at the Navy's seafloor sound surveillance system evaluation center in the Atlantic Fleet compound in Norfolk, Va., where he analyzed the acoustic events related to the loss of the Thresher. He subsequently testified before the Thresher court of inquiry. Rule then served as the lead acoustic analyst in the Office of Naval Intelligence for 42 years, retiring in 1992, and was a scientific and technical consultant to ONI from 1996 to 2007.

■ Norman Polmar, a columnist for Naval History and Proceedings magazines, has written several books related to submarines and has directed or participated in submarine-related studies for various U.S. government agencies and foreign firms and governments, as well as for senior members of Congress. He was a member of the Navy secretary's Research Advisory Committee for almost 11

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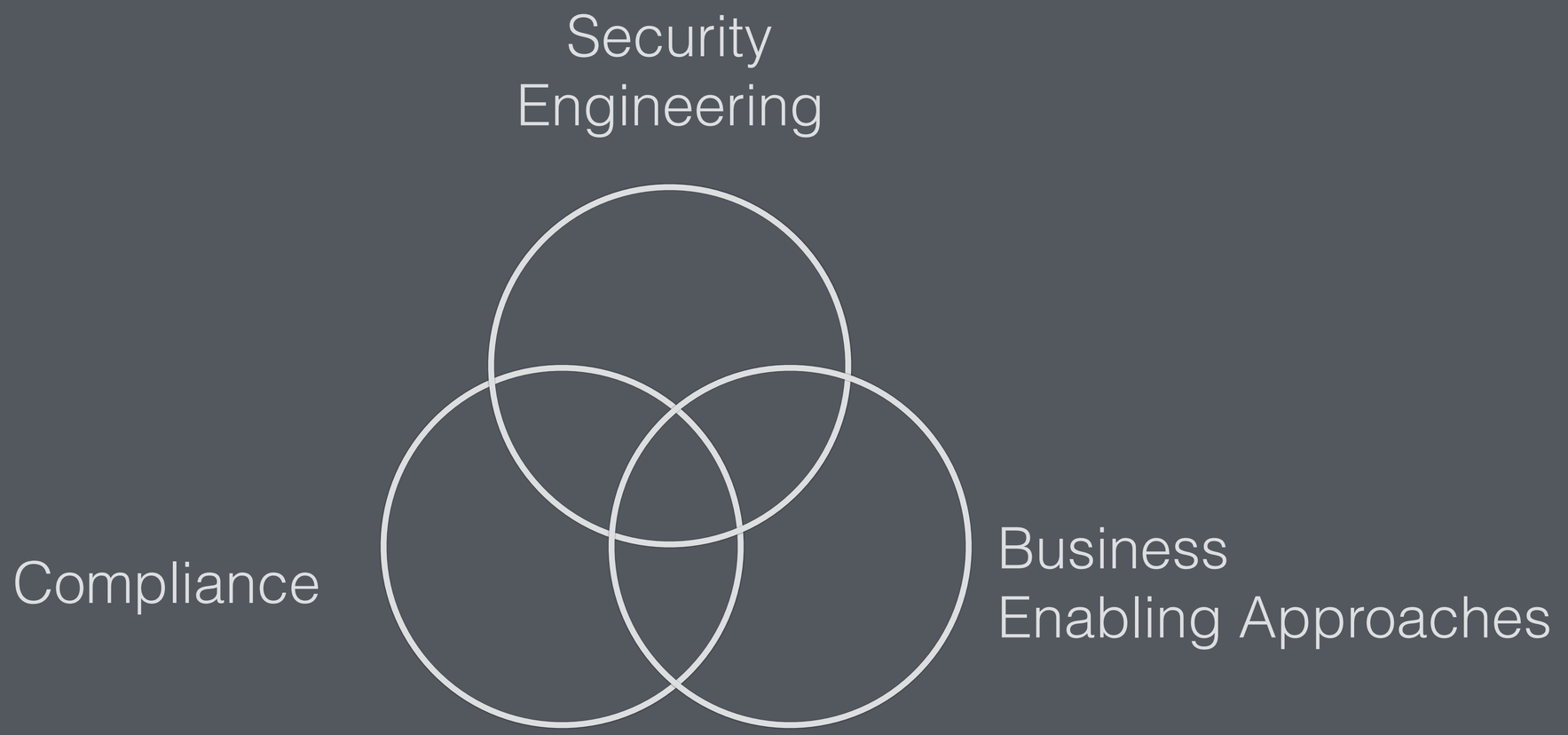
Expect compliance requirements, but remember its role



People Don’t Care About Security
…. It Is Expected


CR
Consumer
Reports™


BBB
Start With Trust

Usability Is King

We've Selected Academically Correct Security Over Practically Usable Security

Password Requirements

- Be a minimum of eight (8) characters in length.
- Be memorized; if a **password** is written down it must be secure.
- Contain at least one (1) character from three (3) of the following categories: Uppercase letter (A-Z) Lowercase letter (a-z) Digit (0-9) Special character (~`!@#$%^&*()+=_-{}[]\ ...
- Be private.

```
-----BEGIN PGP PRIVATE KEY BLOCK-----
Version: GnuPG v1.2.2 (MingW32)

lQHhBEWK+kkRBAC6OwYQKi8Y9okxVaasqA3fwNfsMXvXjRin6B4kWDVrWiMiO3fi
qCwzL403JXDWI9xn9UAuEG6uMCqyz71EgcyXZtTWbfQeqUxb3Imb6+EHrnHyirq4
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```
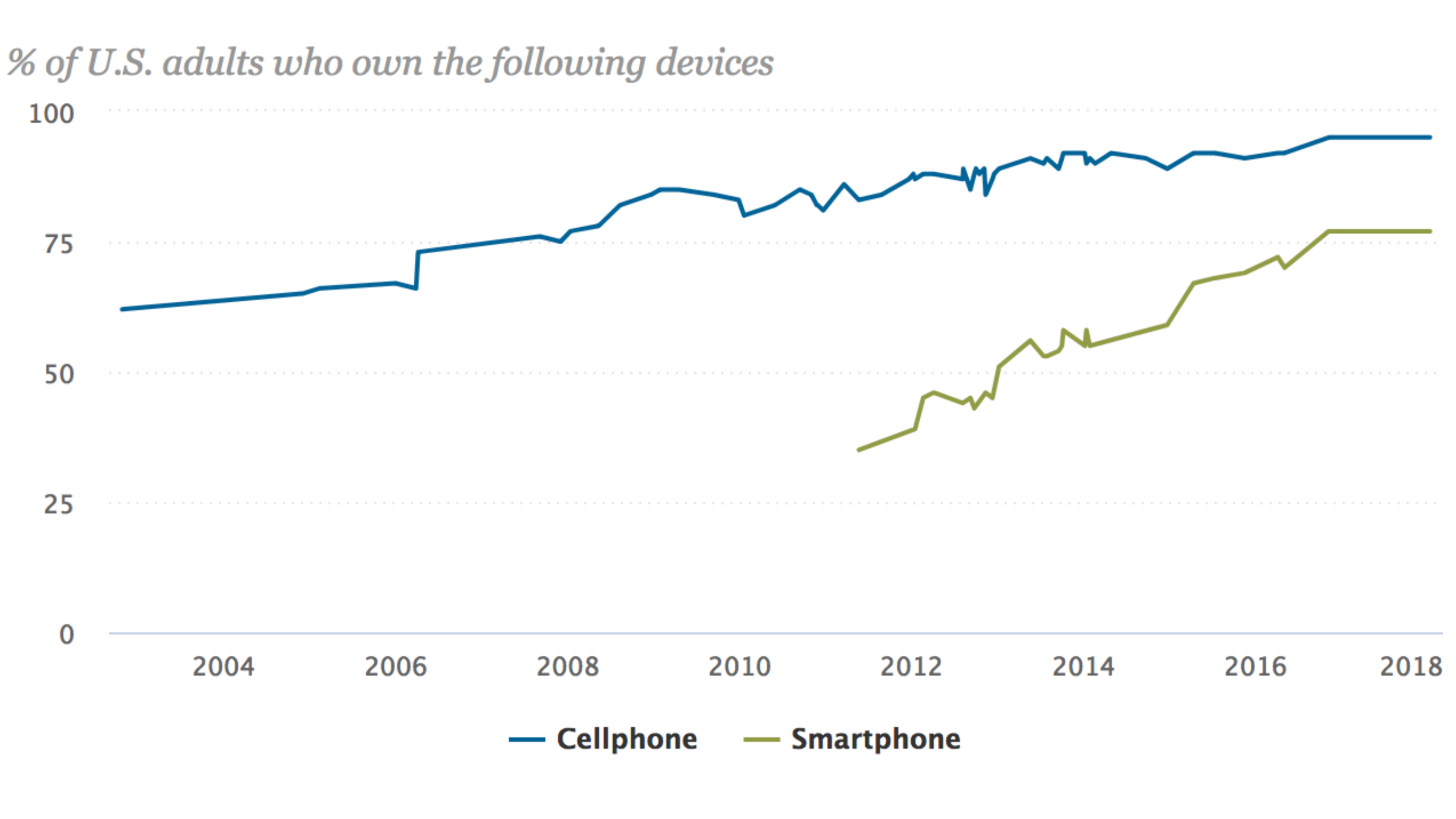

Adoption of Two Factor Authentication (2FA)

Less than 10% of Google user accounts use 2FA

2016 Dropbox reported 2FA adoption rates of less than 1% of users

“It’s not actually that horrible”: Exploring Adoption of Two-Factor Authentication at a University 2018


% of U.S. adults who own the following devices
100
75
50
25
0
2004
2006
2008
2010
2012
2014
2016
2018
Cellphone
Smartphone

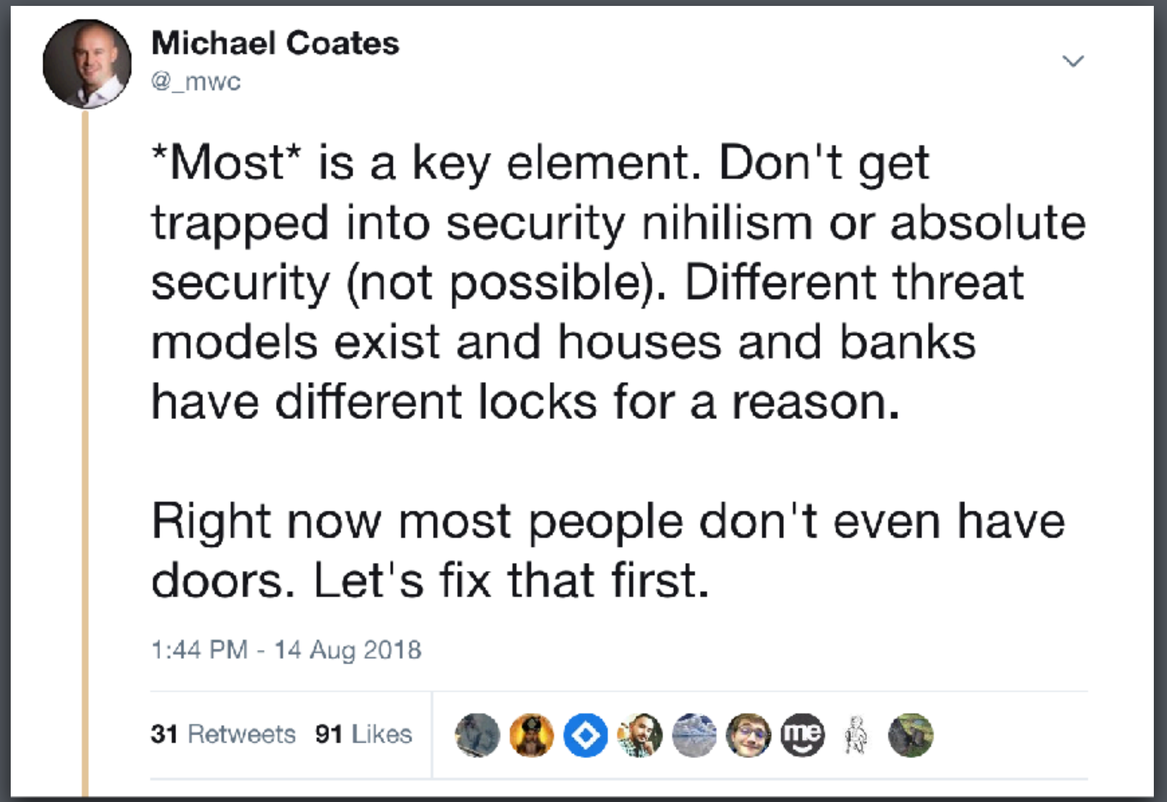
Smartphones are more common in Europe, U.S., less so in developing countries

Percent of adults who report owning a smartphone

Note: Percentages based on total sample.
Source: Spring 2015 and 2016 Global Attitudes surveys.

PEW RESEARCH CENTER

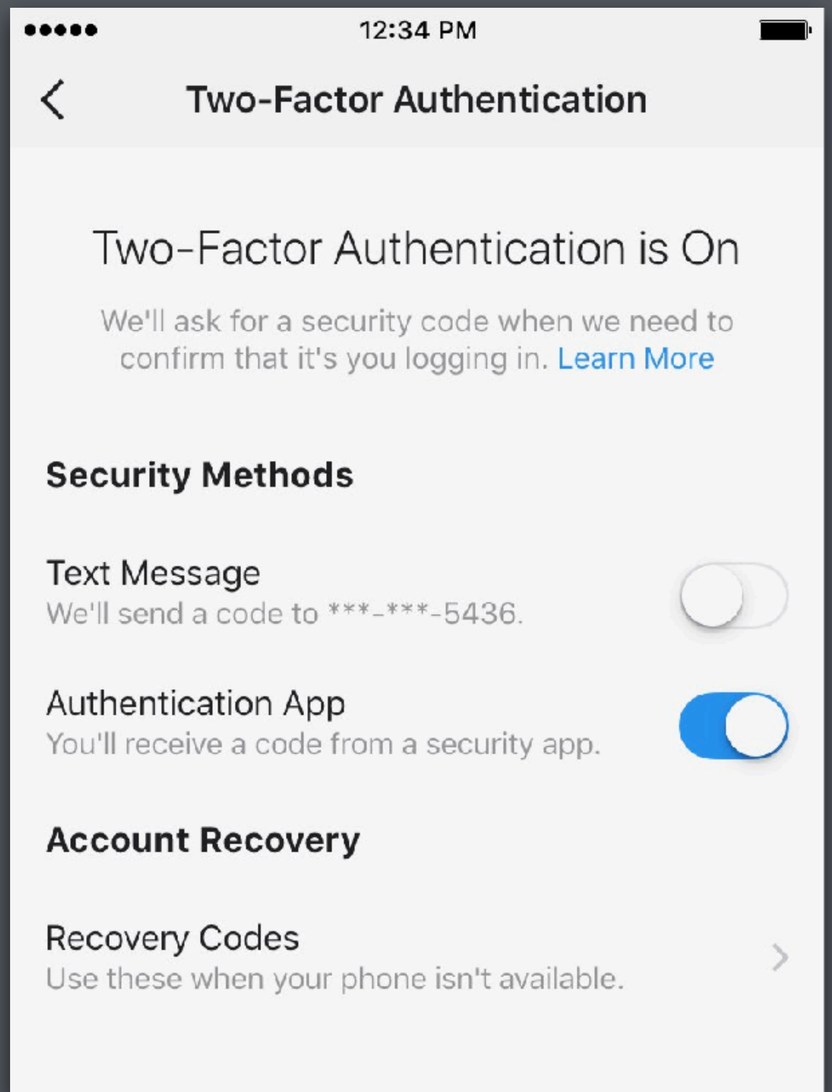
One Size Does Not Fit All



We’re Getting Better

SAFETY & SECURITY

Google’s strongest security, for those who need it most



(1) Security Must Be Interwoven and Part of an Elegant User Experience

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(2) Not All Users & Threat Models are the Same

THE FUTURE OF SECURITY IS

Speed, Scale, and Autonomy

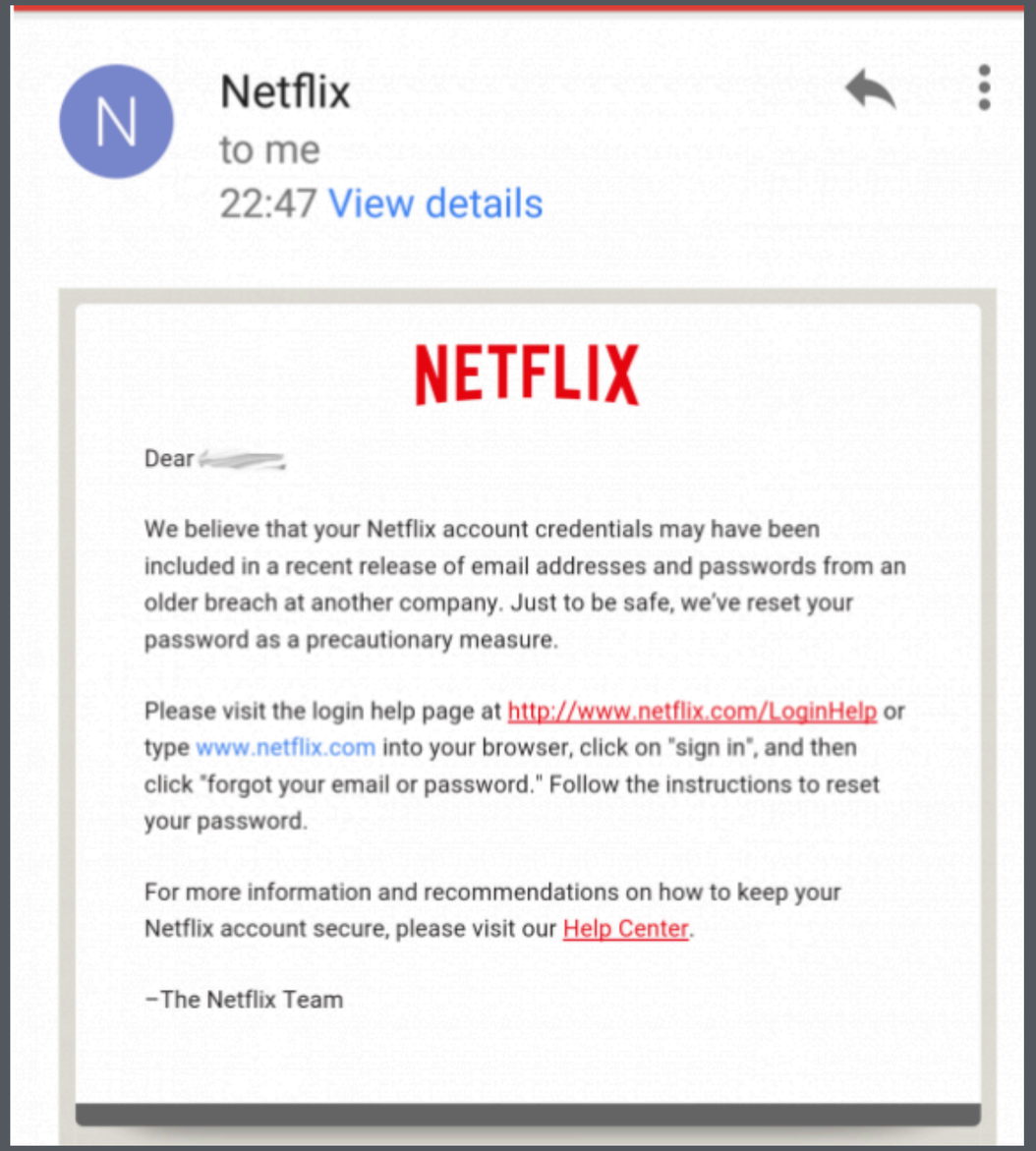
KrebsonSecurity

In-depth security news and investigation

06 Password Re-user? Get Ready to Get Busy

JUN 16

In the wake of megabreaches at some of the Internet's most-recognized destinations, don't be surprised if you receive password reset requests from numerous companies that *didn't* experience a breach: Some big name companies — including **Facebook** and **Netflix** — are in the habit of combing through huge data leak troves for credentials that match those of their customers and then forcing a password reset for those users.


N
Netflix
to me
22:47 View details
NETFLIX
Dear
We believe that your Netflix account credentials may have been included in a recent release of email addresses and passwords from an older breach at another company. Just to be safe, we've reset your password as a precautionary measure.
Please visit the login help page at http://www.netflix.com/LoginHelp or type www.netflix.com into your browser, click on "sign in", and then click "forgot your email or password." Follow the instructions to reset your password.
For more information and recommendations on how to keep your Netflix account secure, please visit our Help Center.
–The Netflix Team


Michael Coates
@_mwc
We have investigated reports of Twitter usernames/passwords on the dark web, and we're confident that our systems have not been breached.
9:30 PM - 8 Jun 2016 from San Francisco, CA
356 Retweets 244 Likes

2017 Credential Stuffing Analysis

80-90%

Credential stuffing attacks make up, on average, 80-90% of an online retailer's login traffic

Online retailers face the highest proportion of credential stuffing as attackers exploit retailers' desire for a frictionless customer experience.

Shape Security 2018 Credential Spill Report

ars TECHNICA

BIZ & IT —

All your Googles are belong to us: Look out for the Google Docs phishing worm

An e-mail disguised as a Google Docs share is ingenious bit of malicious phishing.

SEAN GALLAGHER - 5/3/2017, 1:25 PM

Subject [redacted] has shared a document on Google Docs with you 12:20 PM -0700

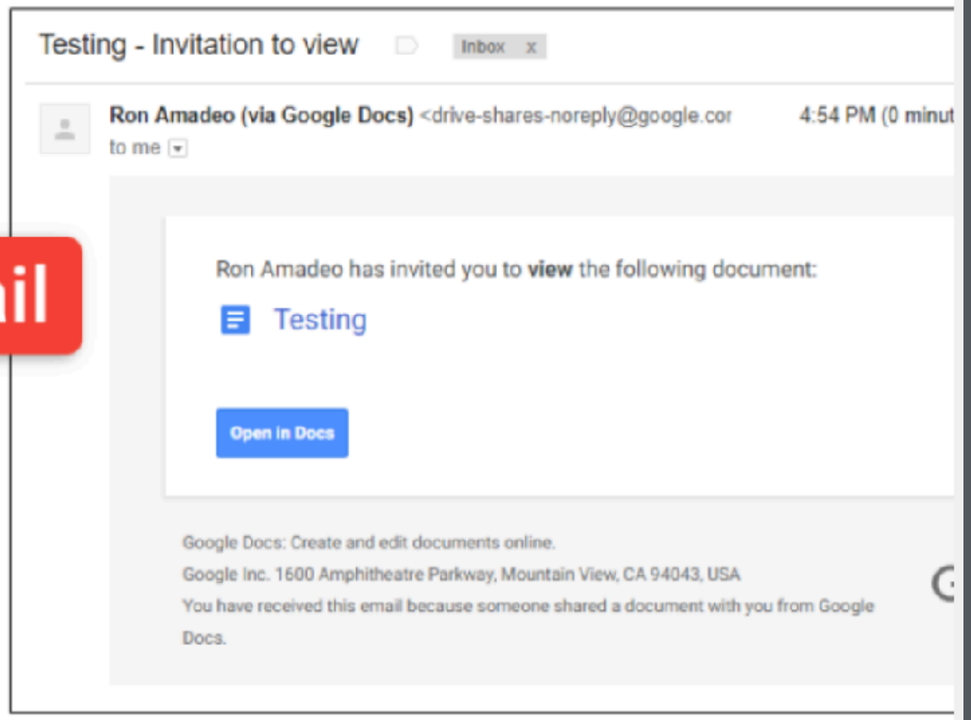
To hhhhhhhhhhhhhhhh@mailinator.com

Bcc Me <sean.gallagher@arstechnica.com>

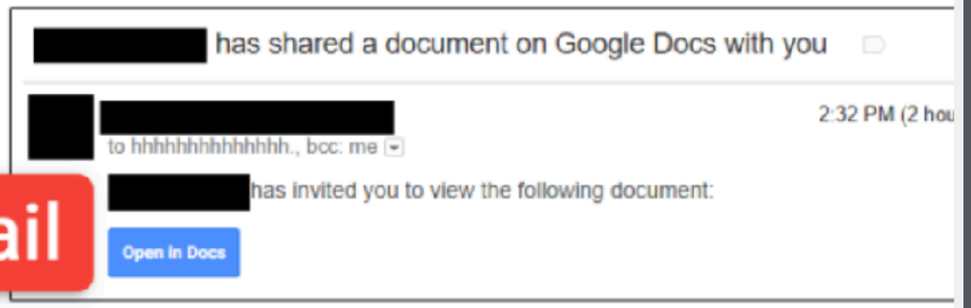
[redacted] has invited you to view the following document:

Open in Docs

Real E-mail



Fake E-mail



The New York Times

Target to Pay $18.5 Million to 47 States in Security Breach Settlement

Bolt on ‘State of the Art’ security is no longer relevant

TO THE FUTURE

Shift Our Approach

Change

Dramatic change is needed - the old ways of security lead to more failure

Expected

Humans expect security and we must provide
the right security for their threat models

Usability

Usability will be the defining characteristic of security - effective, seamless & elegant

Autonomous & Integrated

We must adopt defensive systems that are autonomous and integrated - from detection to mitigation

Speed

Defensive security systems must operate at the speed of computers, not the speed of humans

Role of Defensive InfoSec

Security professionals bring security expertise

↓

build, design, control, tune software

↓

autonomous security defensive systems

“Those who cannot learn from history are doomed to repeat it” — George Santayana

Thank You

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