



MIS|TI™ PRESENTS

InfoSecWorld

Conference & Expo 2018

LIFE AFTER PHISHING: WHAT'S NEXT

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PHISHING: A MODERN TAKE ON A TIMELESS TACTIC

- Phishing = Social Engineering
 - Exploiting human behavior to create a desired outcome
- Social engineering attacks have been around FOREVER
 - Ulysses & the Trojan Horse
 - Victor Lustig
 - Charles Ponzi
 - Frank Abagnale
- Phishing is merely a social engineering stepping stone
 - Fraudsters will always evolve and adapt to new defenses and new technologies

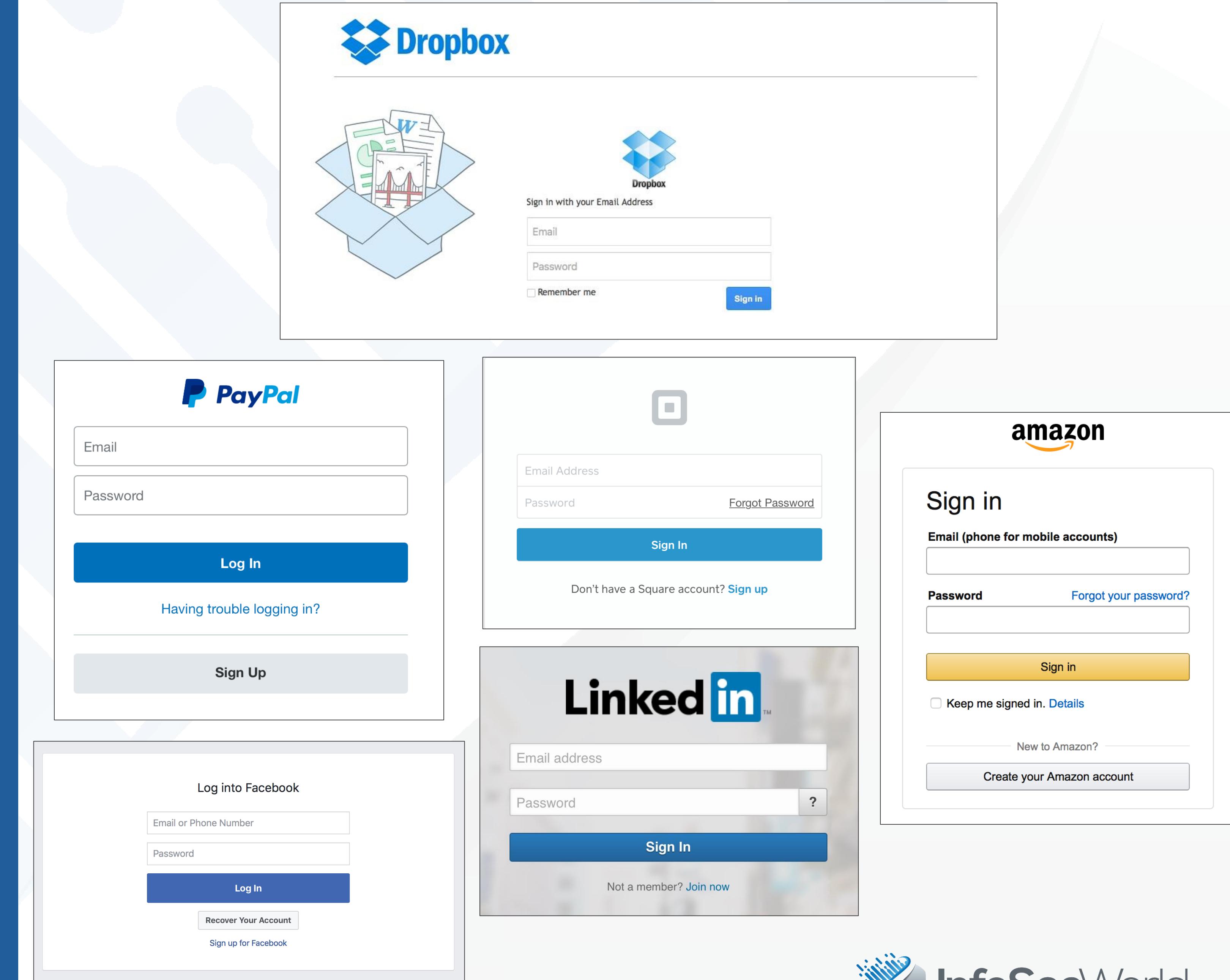


PHISHING TRENDS IN 2017



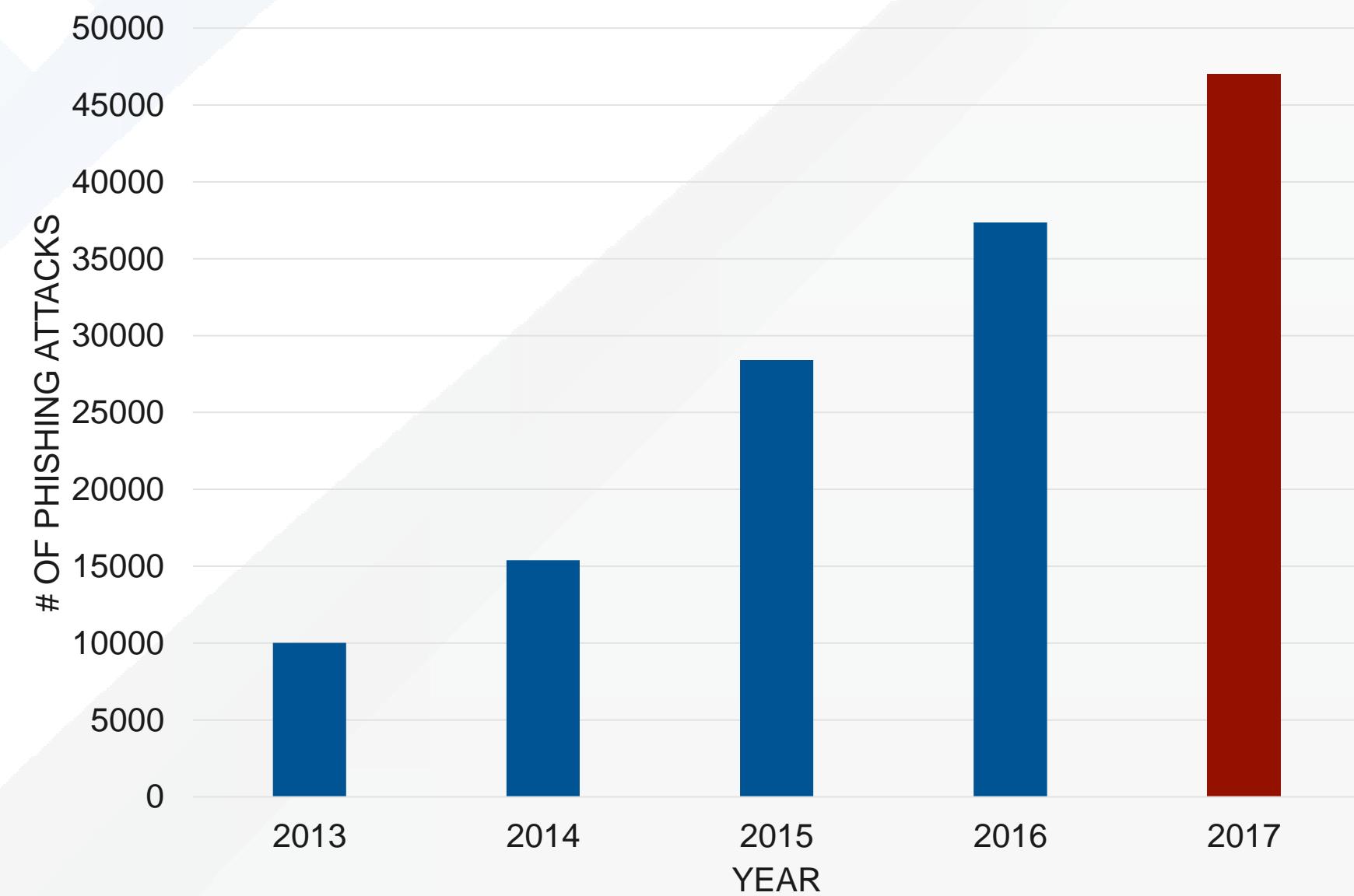
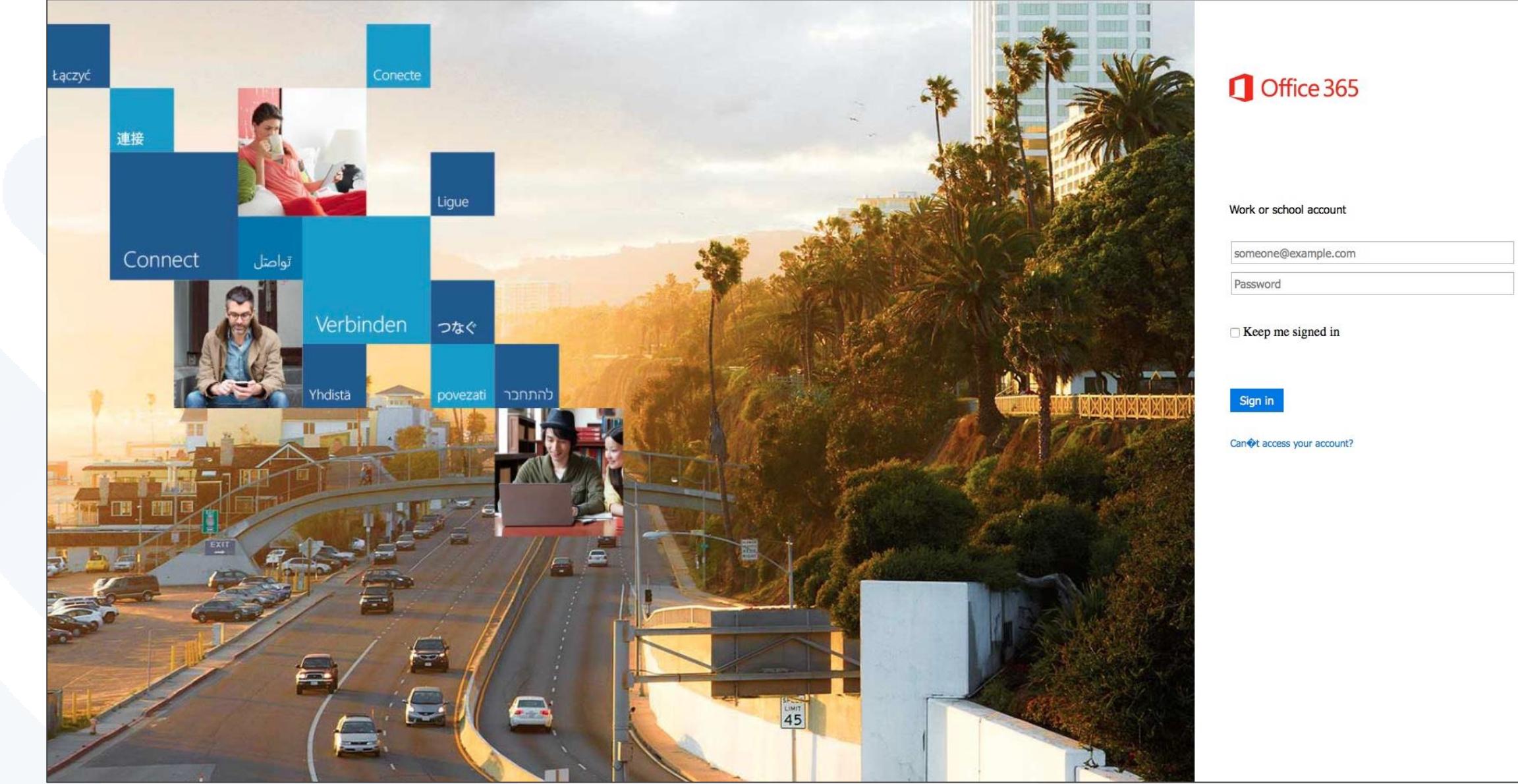
SHIFT IN TARGETING TACTICS

- 2016 saw a shift in **how** victims were targeted
 - Increase in “all-in-one” phishing sites used for mass credential harvesting
 - Driven by the use of email as a primary account credential
 - Facilitates password reuse/reset attacks



SHIFT IN TARGETING TACTICS

- 2017 saw a shift in **who** phishing attacks target
 - Evolution from individuals to enterprise users
 - Business-oriented services saw major increases
 - Webmail became the #1 targeted industry – driven by Office365/OWA phish
 - SaaS attacks more than tripled – driven by Adobe/ DocuSign phish
 - Follows similar evolution of ransomware targeting in 2016
 - Facilitates BEC attacks, data/IP theft



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From: "Mr Danny" <CustomerService@gmail.com>
Subject: You received an INVOICE via DocuSign
Date: October 16, 2017 at 8:53:12 AM EDT
To: Recipients <CustomerService@gmail.com>

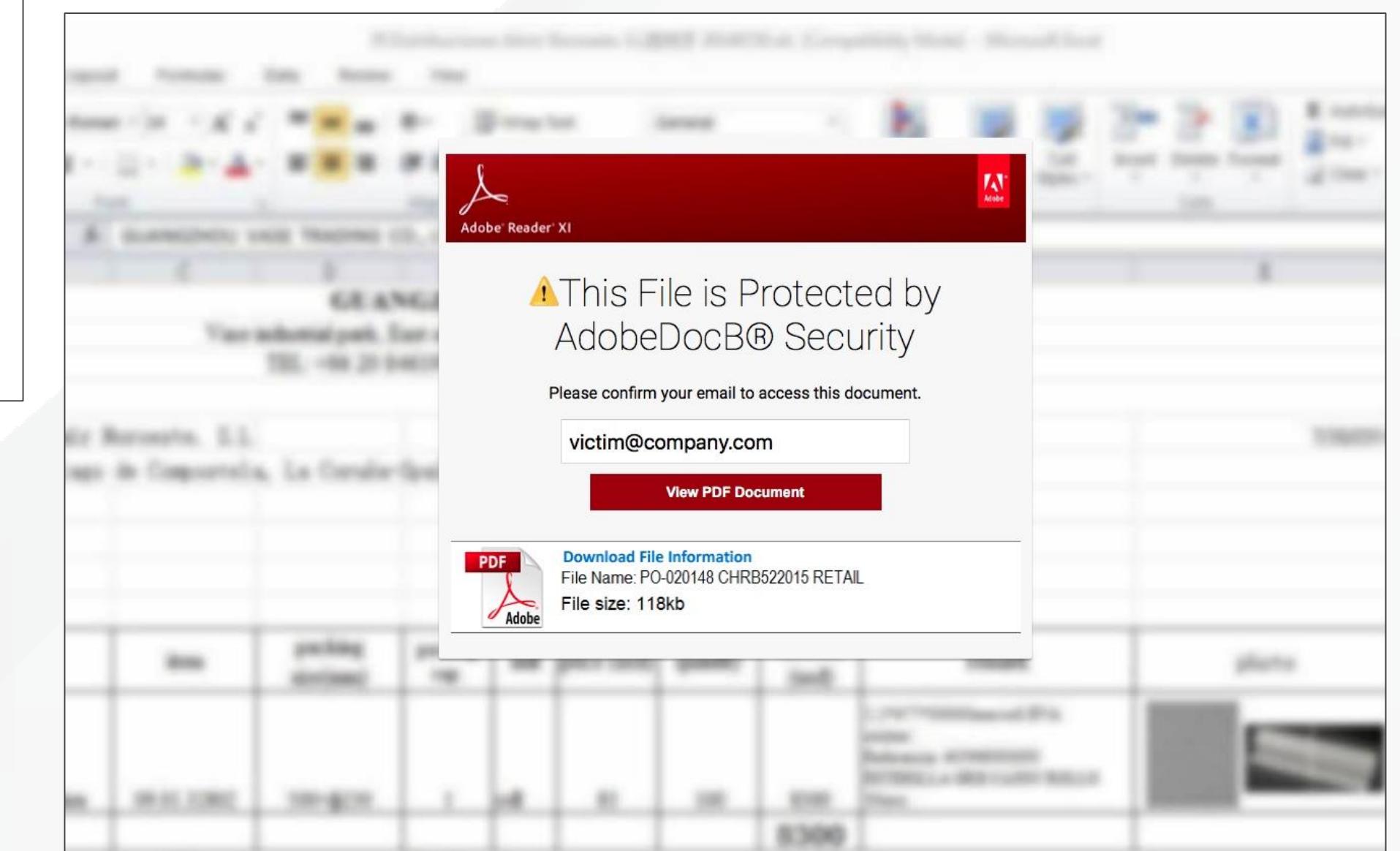
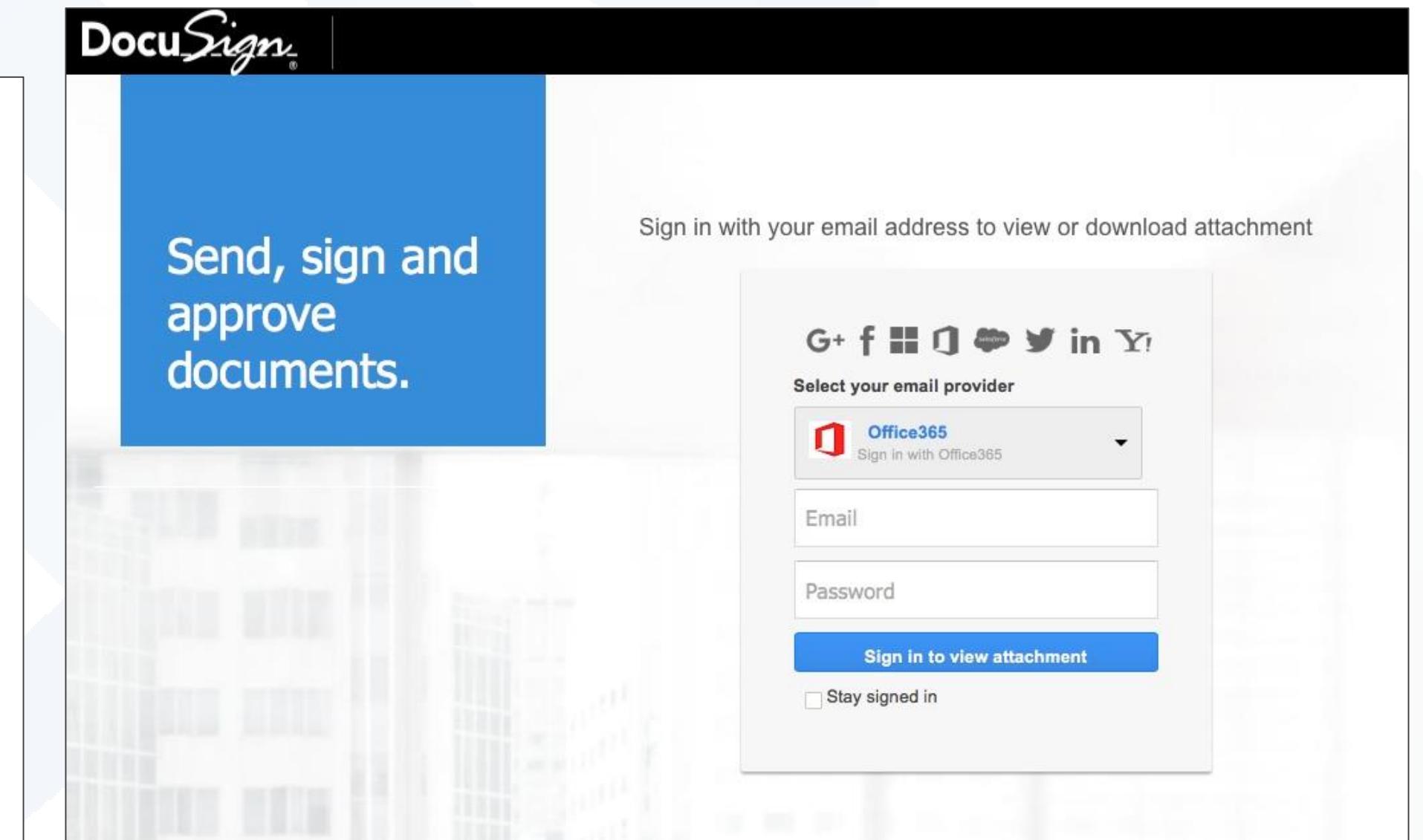
DocuSign

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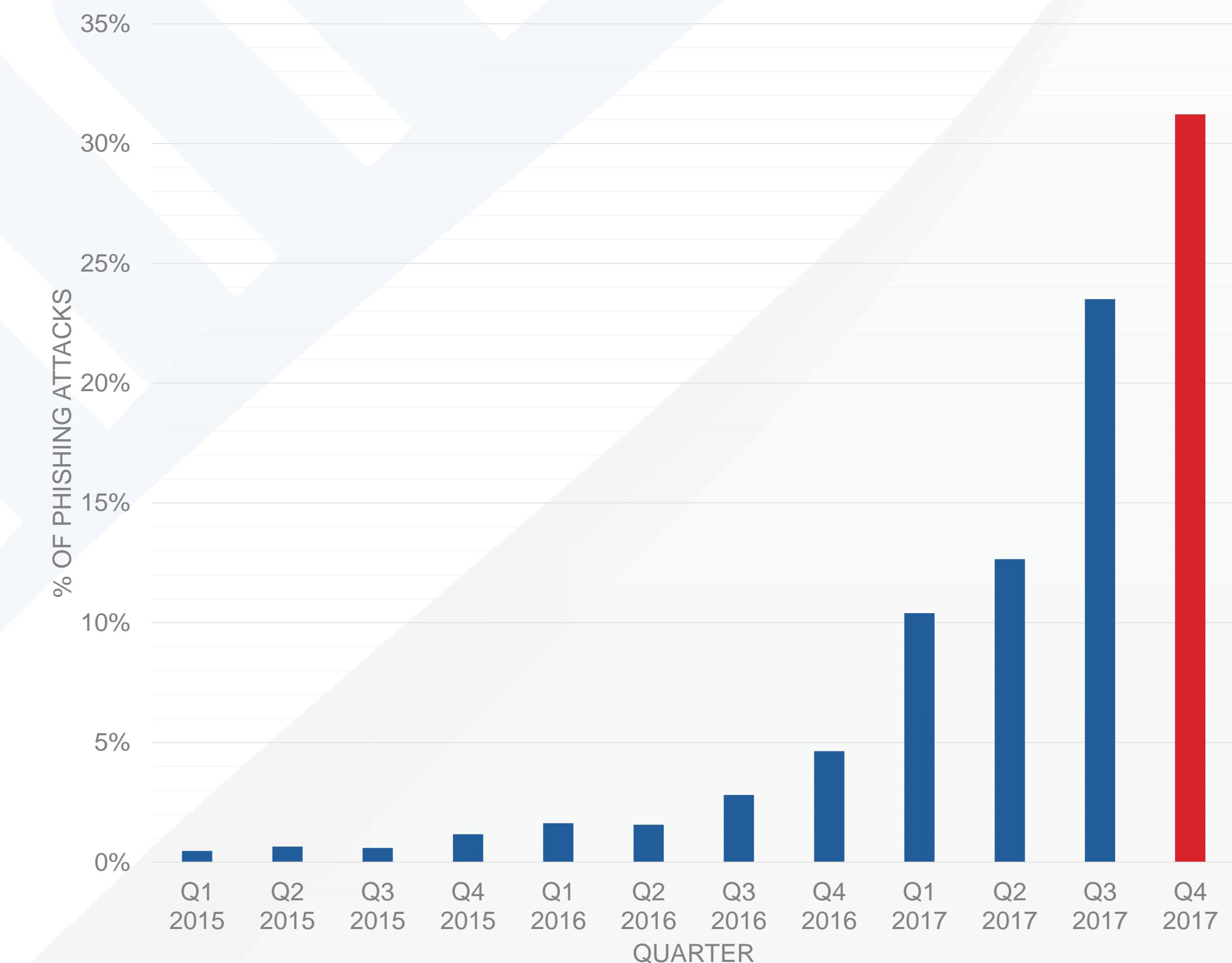
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Google.



THE RISE OF “SECURE” PHISH

- Phishing sites hosted on HTTPS domains increased significantly in 2017
- In Q4, nearly a third of all phishing attacks were hosted on domains with valid SSL certificates
 - Compared to less than 5% at the end of 2016
- Phishers are using freely available SSL certificates (Let’s Encrypt, Comodo)
- Most HTTPS phish hosted on maliciously-registered domains

WHY?



THE “HTTPS PARADOX”



- Users have been conditioned to look for the green lock in the URL bar
- In July, Google will begin displaying a “Not Secure” warning in Chrome for all non-HTTPS websites
- Many people falsely believe this means a website is legitimate or trustworthy
 - HTTPS = secure transmission of data**
 - HTTPS != authentic website**

THE “HTTPS PARADOX”

PhishLabs
@PhishLabs

Following

What does a green lock in a browser URL bar mean? #CyberAware

- 10% Website is legitimate
- 18% Encrypted Communication ✓
- 19% Website is safe
- 53% All of the above

1,213 votes • Final results

THE “HTTPS PARADOX”



‘S’ = ‘Secure’

#CyberAware

Look for  <https://>, not <http://>. Never log into a website that's not secure.

SFU IT SERVICES

Test your cyber security intelligence at www.sfu.ca/itservices.

THE “HTTPS PARADOX”

The screenshot shows a web browser displaying a Dropbox login page. At the top left, there is a green lock icon followed by the word "Secure" and the URL "https://ijaz.ga/admin/dpbx/". A red rectangular box highlights the "Secure" text and the URL. To the right of the URL, there is a "Try Dropbox Business" button. In the center, the Dropbox logo is displayed with the word "Dropbox" next to it. On the right side, there is a "Download the app" link. Below the logo, there is a cartoon illustration of a smartphone and a laptop screen. The smartphone screen shows the Dropbox logo, and the laptop screen shows a smiling face with orange horizontal lines. The background of the slide features abstract white shapes on a blue gradient background.

Secure <https://ijaz.ga/admin/dpbx/>

Try Dropbox Business

Dropbox

Download the app

Now , you can sign in to dropbox with your email
Select your email provider

Gmail by Google

YAHOO!

Outlook

Aol.

Other Emails

THE “HTTPS PARADOX”



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- In July, Google will begin displaying a “Not Secure” warning in Chrome for all non-HTTPS websites
- Many people falsely believe this means a website is legitimate or trustworthy
 - HTTPS = secure transmission of data**
 - HTTPS != authentic website**
- Two things will become more common as HTTPS is more commonly used:
 1. Phishers obtaining SSL certificates for maliciously-registered domains
 2. Phishers hosting malicious content on compromised HTTPS websites

FUTURE ATTACK VECTORS

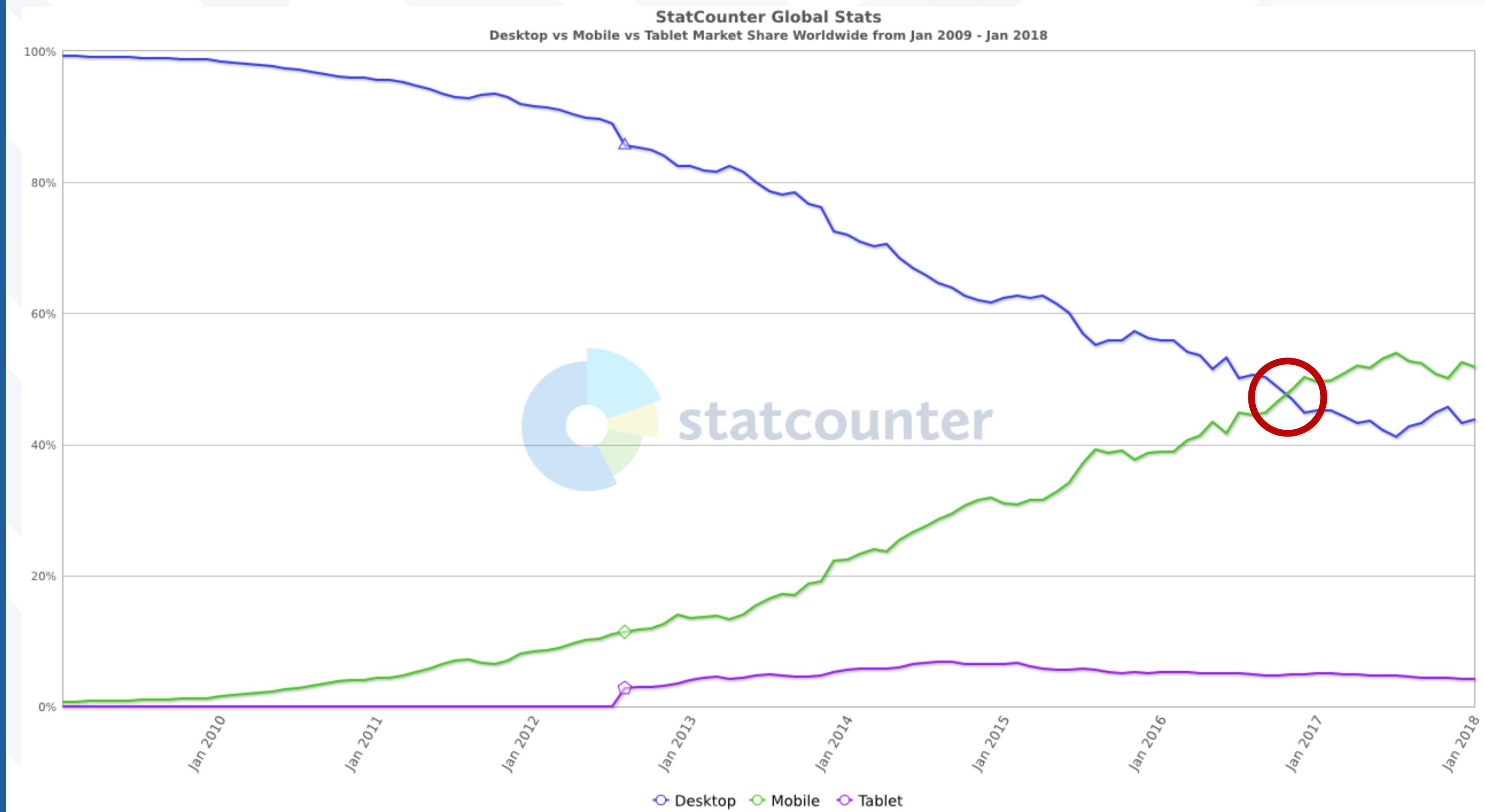


EMAIL AS AN ATTACK VECTOR

- Email traditionally the primary attack vector for cyber attacks
 - 91% of targeted cyber attacks use phishing as the primary infection vector
- Rise in email attacks in 2016 due to ransomware surge
- Email-based attacks may start to fade
 - User awareness training has been adopted by a growing number of companies
 - Technical defenses are improving
- Threats won't go away; tactics will simply evolve

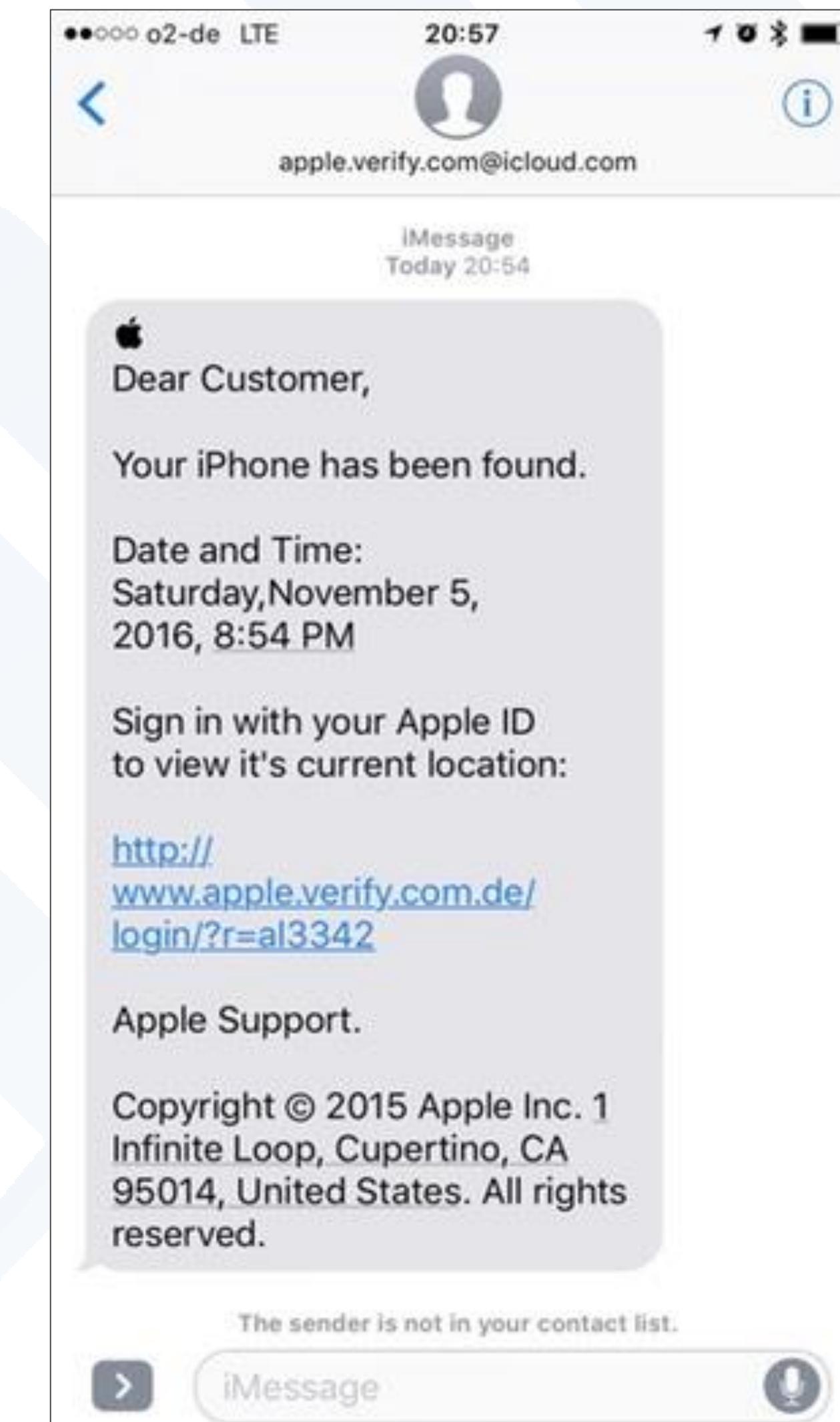
SMS AS AN ATTACK VECTOR

- Mobile devices are becoming the primary way people access the internet

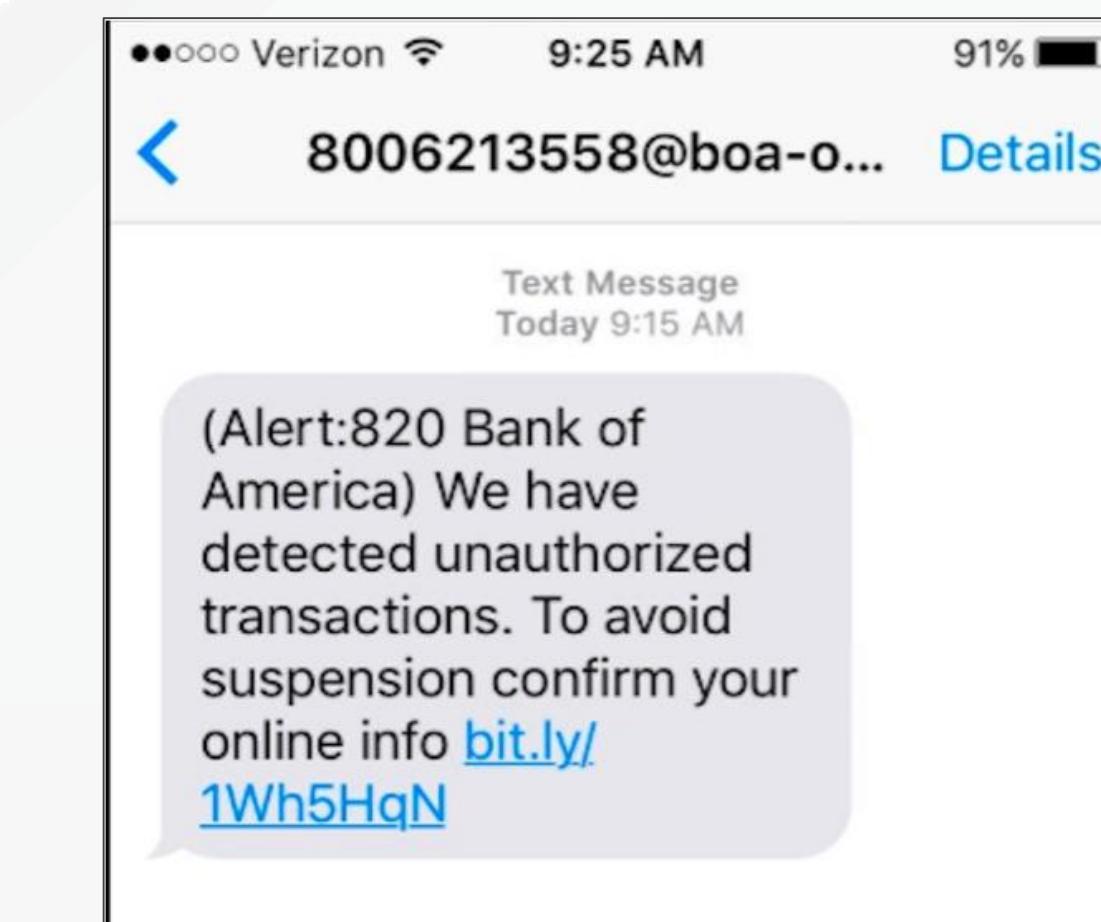
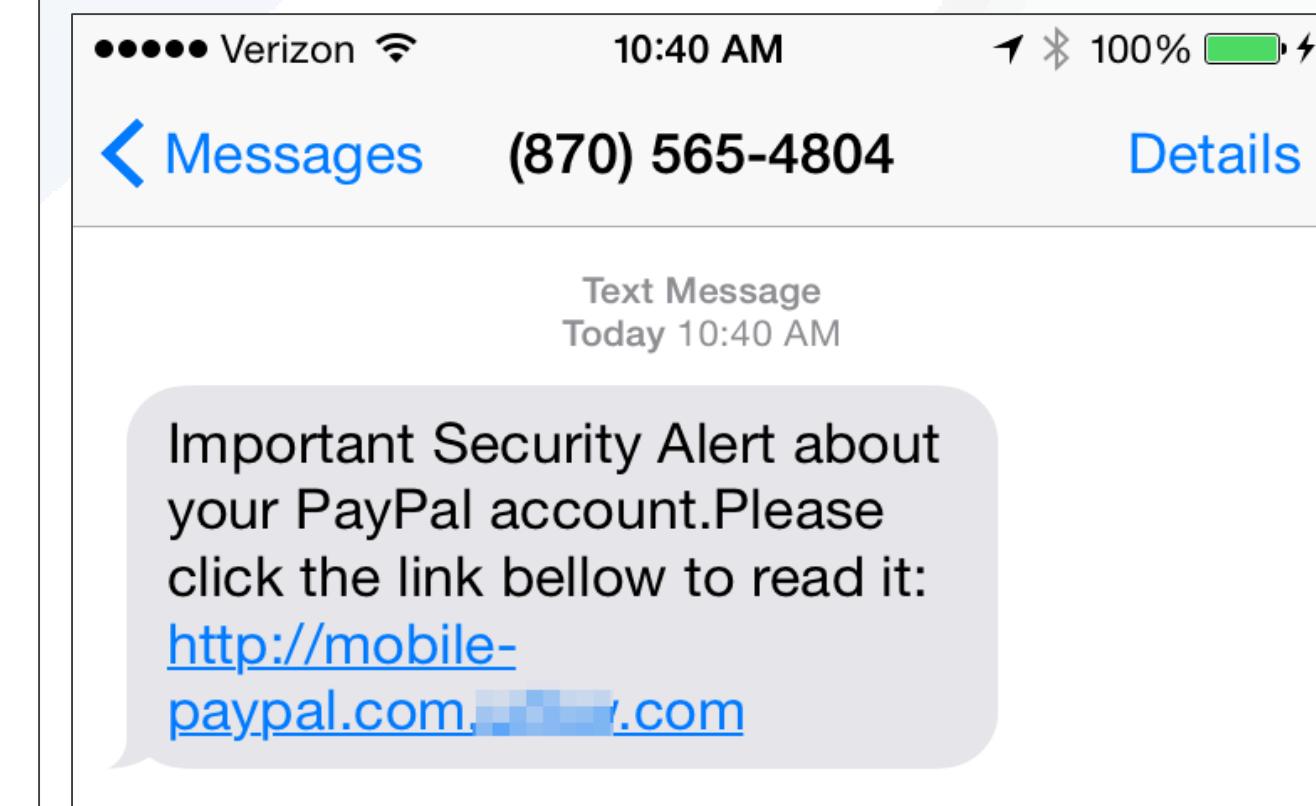


SMS AS AN ATTACK VECTOR

- Mobile devices are becoming the primary way people access the internet
- Security measures on phones have not caught up to email
 - People aren't conditioned to review contents of SMS

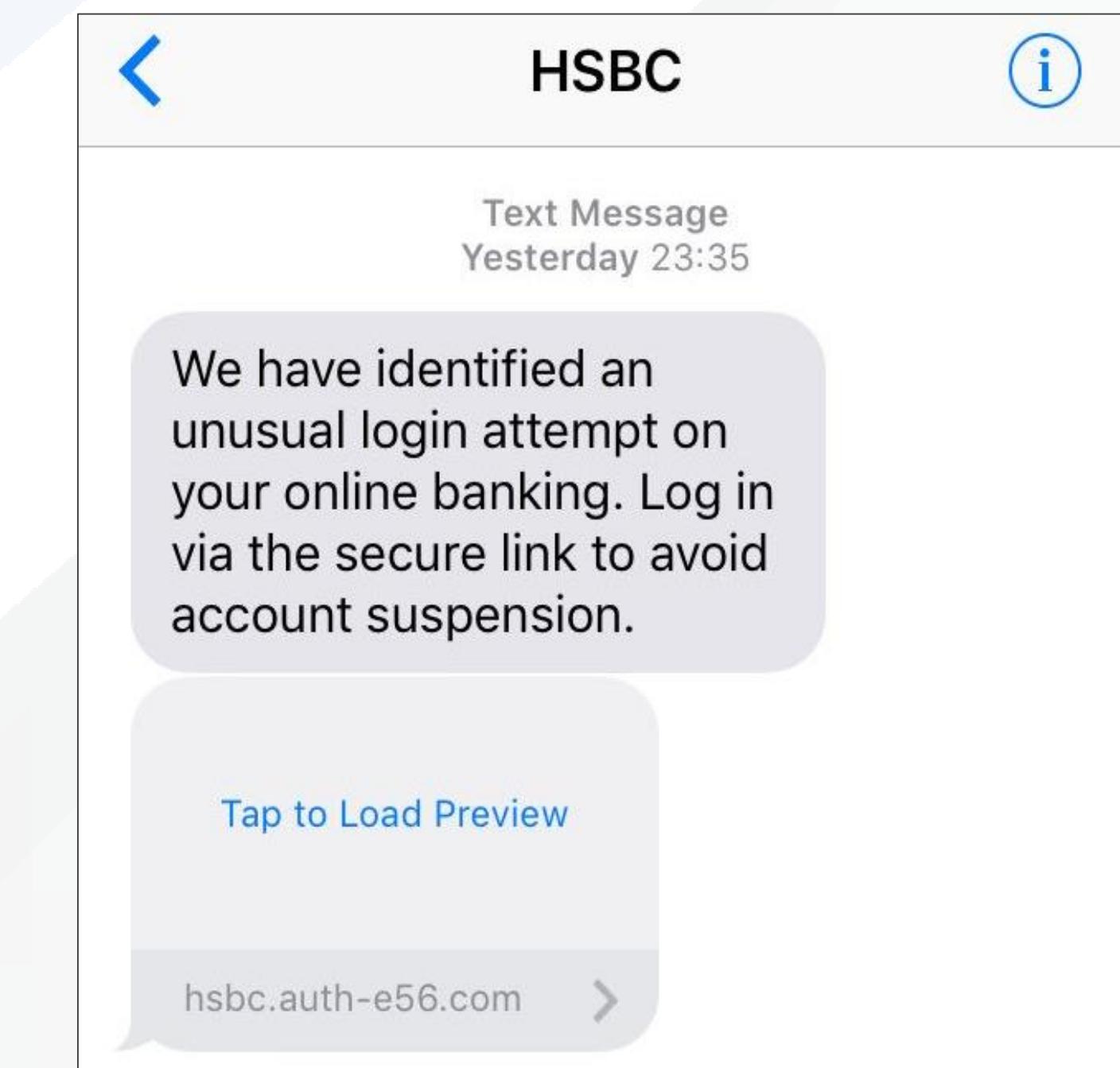


Your NAB account has been blocked for unusual activity. Please log on to: www.nabpersonalbanking.com and follow the unlock procedure. NAB



SMS AS AN ATTACK VECTOR

- Mobile devices are becoming the primary way people access the internet
- Security measures on phones have not caught up to email
 - People aren't conditioned to review contents of SMS
 - Previews may give false sense of authenticity
 - Mobile browsers do not block as well as desktop browsers
- Banking Trojans moving to SMS as an infection vector
 - Marcher, BankBot, RedAlert2



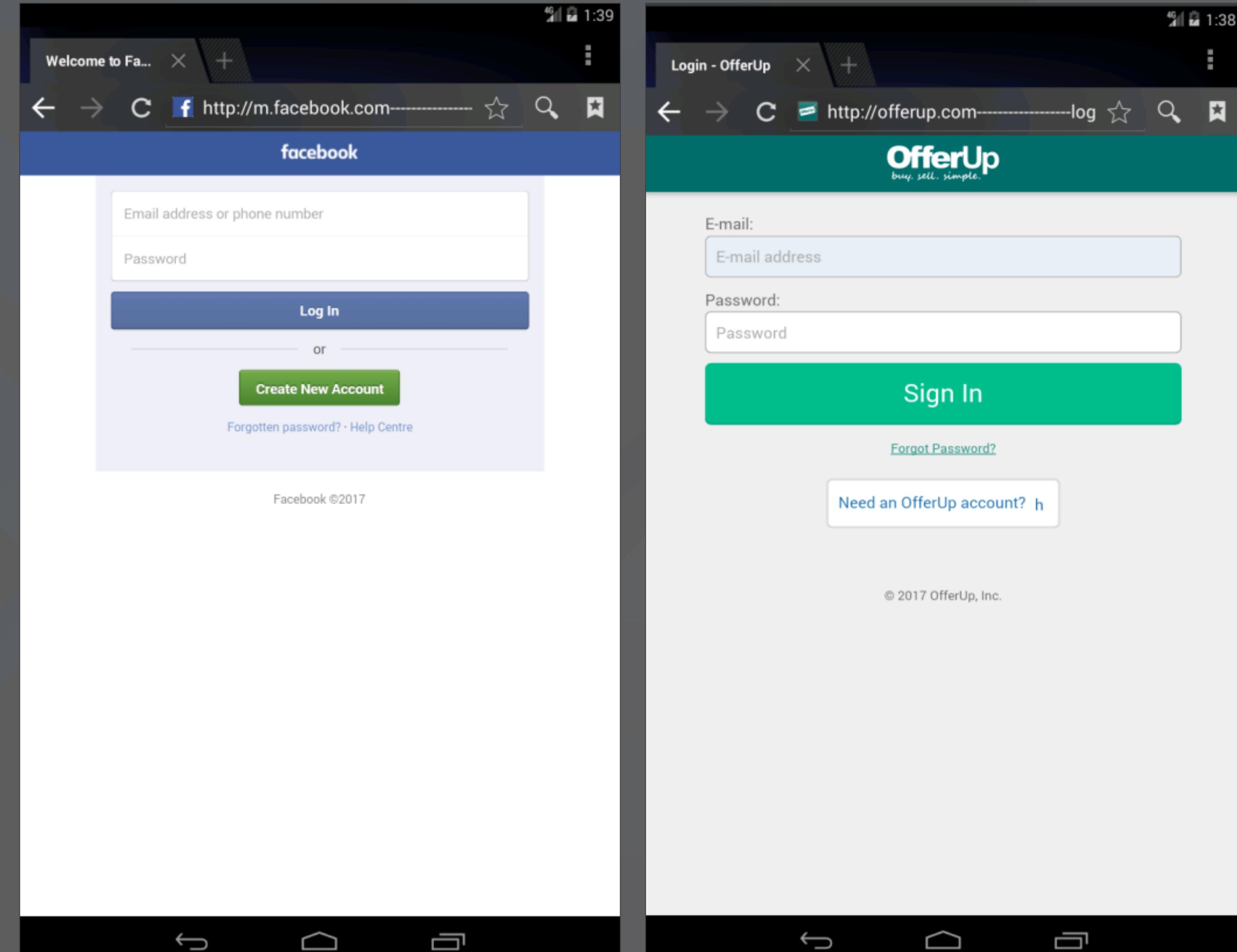
NEW PHISHING TECHNIQUE: URL PADDING

- First observed in January 2017
- Focused on mobile device users
- Subdomain contains legitimate target website followed by numerous hyphens
- Used to obscure real destination

http://m.facebook.com-----validate----step1.rickytaylk.com/sign_in.html

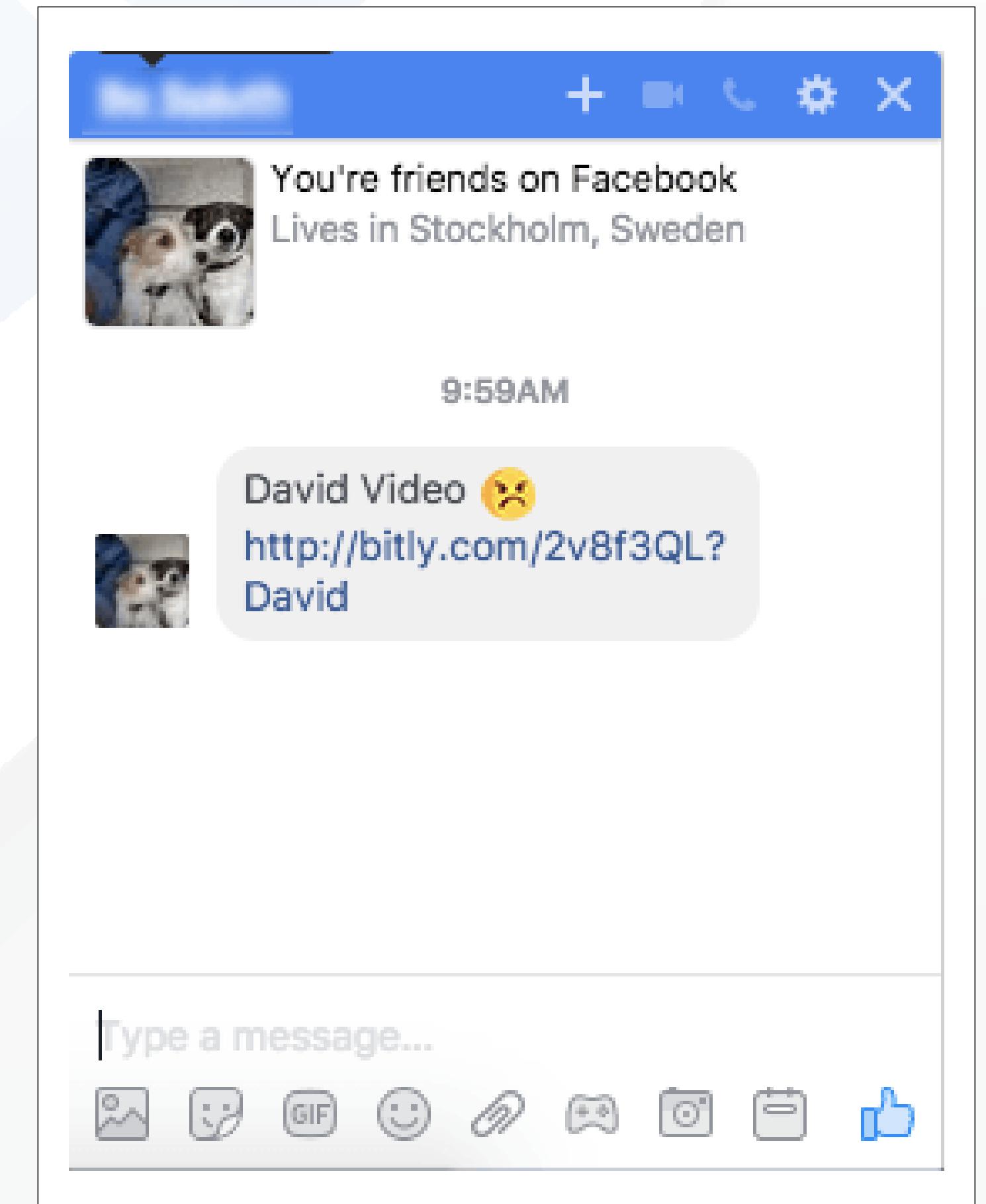
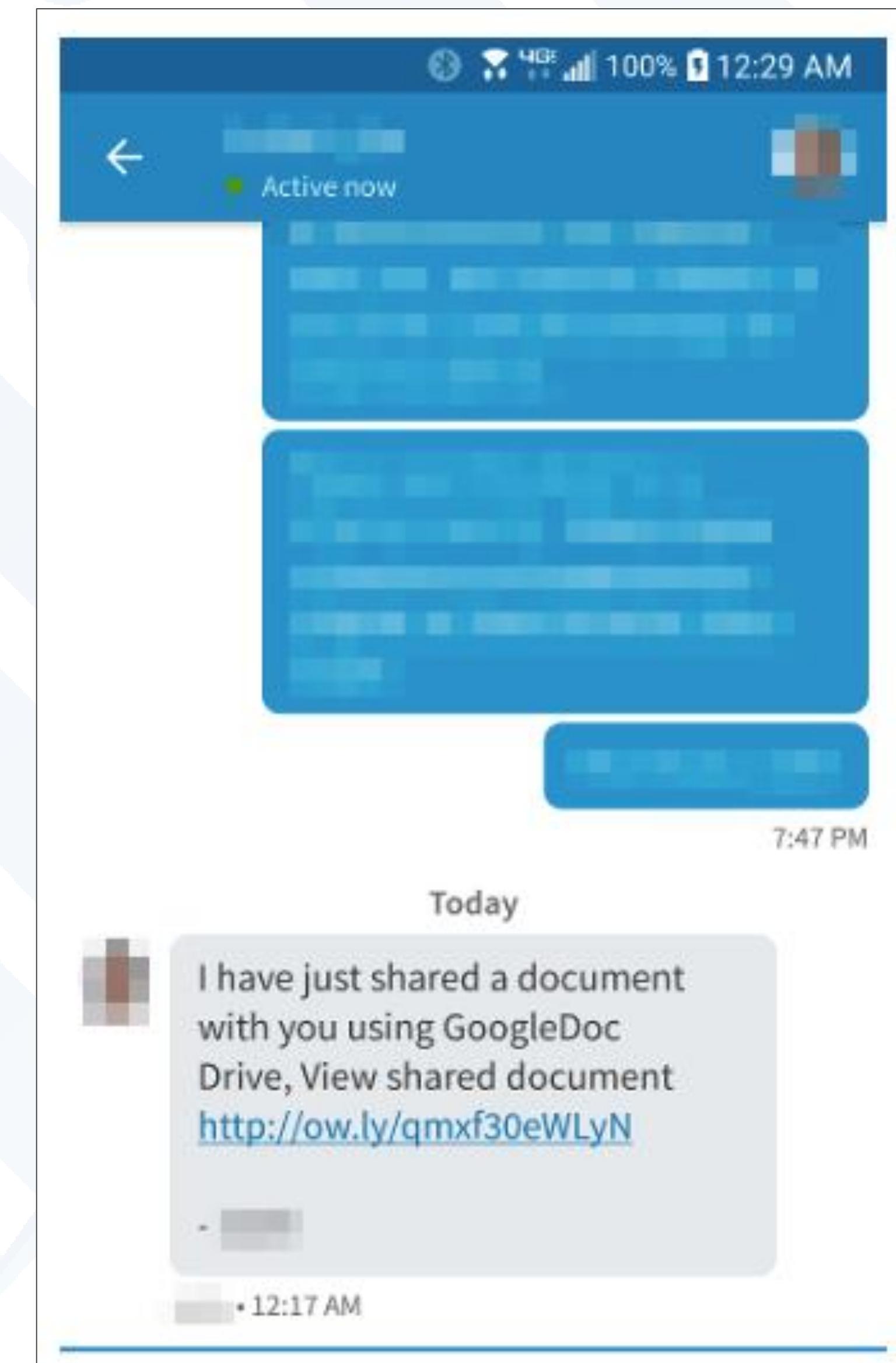
NEW PHISHING TECHNIQUE: URL PADDING

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- Focused on mobile device users
- Subdomain contains legitimate target website followed by numerous hyphens
- Used to obscure real destination
- Brands targeted:
 - Facebook
 - Craigslist
 - OfferUp
 - CenturyLink
 - Visa
 - Apple
 - PayPal
 - Comcast



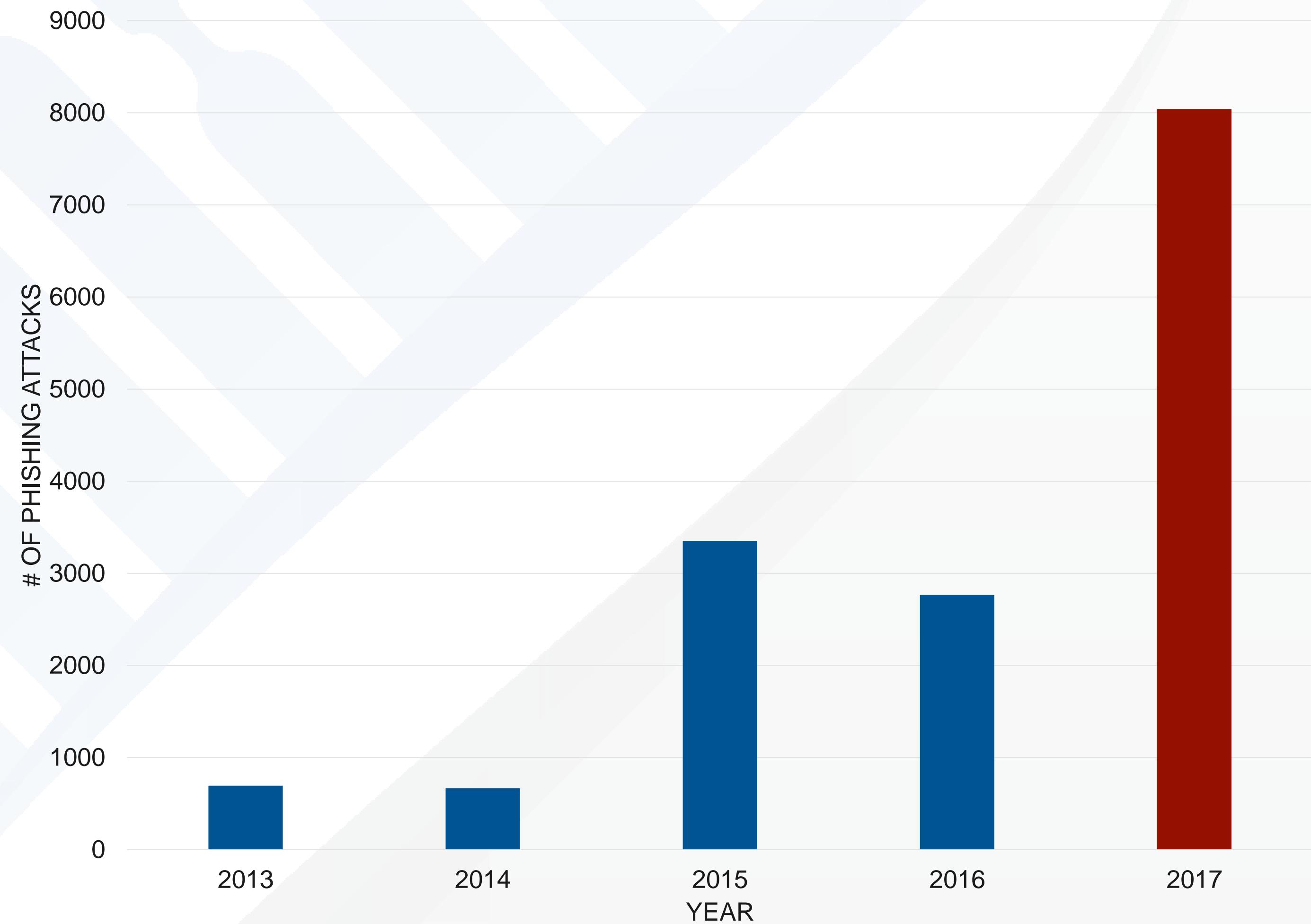
SOCIAL MEDIA AS AN ATTACK VECTOR

- Gaining momentum as an attack vector due to built-in trust
 - Facebook
 - LinkedIn
- Different from email where there is an inherent *distrust* of unknown senders
- Particularly useful in sophisticated “long con” attacks
- Potential targeting of enterprise accounts outside of corporate networks



SOCIAL MEDIA AS AN ATTACK VECTOR

- Number of social media phishing attacks nearly tripled in 2017
 - Q2 2017 exceeded the attack volume of all of 2016!
- Signals a potential evolution in the use of compromised SM accounts and attack vectors



WRAPPING UP

- Social engineering attacks may evolve, but will never stop
- Targets of phishing attacks shifting from individuals to enterprise users
- HTTPS phish are a serious threat due to poor messaging
- SMS/social media are quickly becoming preferred vectors of attack for phishers
- **We need to constantly think ahead to begin protecting against future threats**



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**THANK YOU
PLEASE FILL OUT YOUR EVALUATIONS!**

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