

JESSI FRENZEL | 8/13/25

CS 373 Final Presentation

What is Phishing?

A deceptive process whereby an attacker manipulates someone into giving up personal information or login credentials by appearing to be legitimate [1].

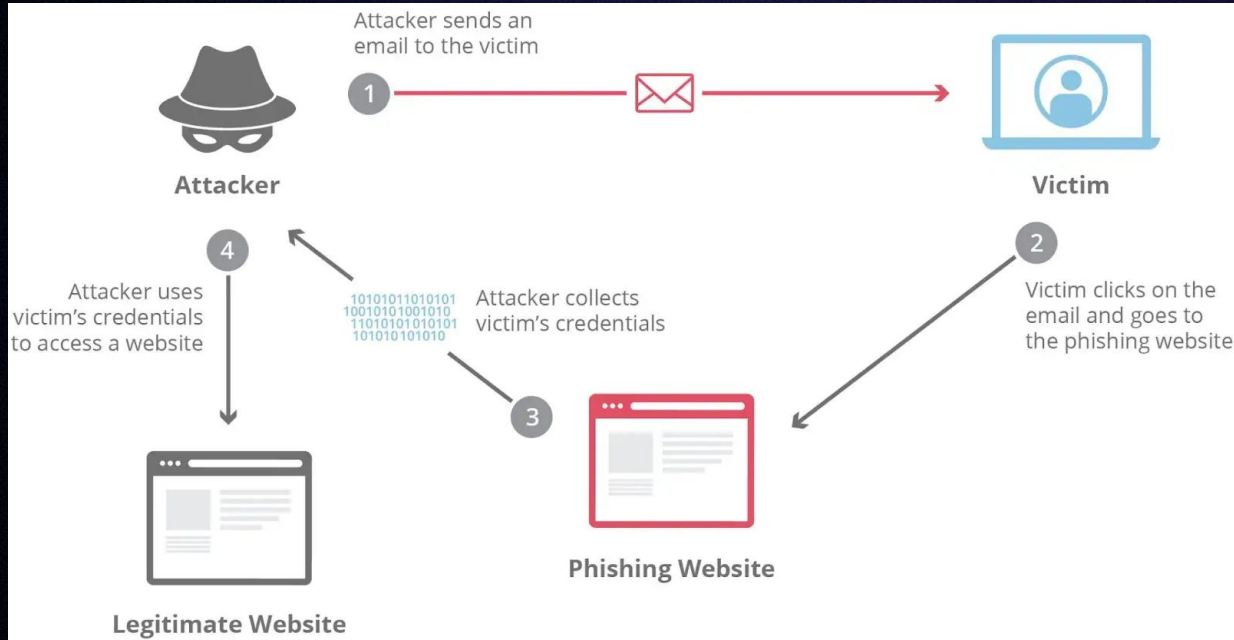


Image: <https://www.paloaltonetworks.com/cyberpedia/what-is-phishing> and
<https://www.cloudflare.com/learning/access-management/phishing-attack/>

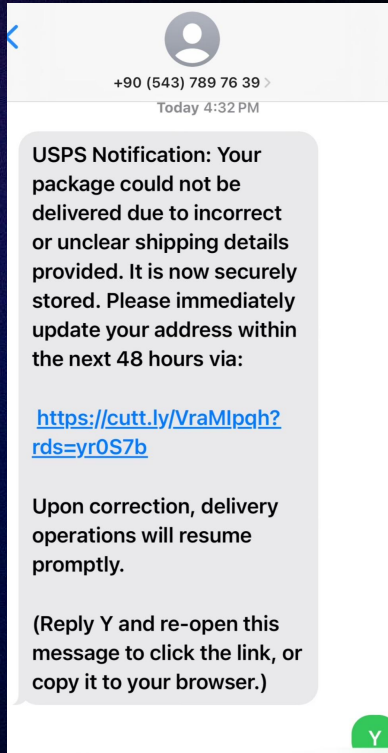
How Are Attacks Delivered? [1, 2]

- Email or text posing as a vendor requiring payment or bank needing you to log in
- Malicious link posted to collaboration platform (Slack, Teams,) or social media (Facebook/LinkedIn) that looks legit
- Voice calls
- QR codes

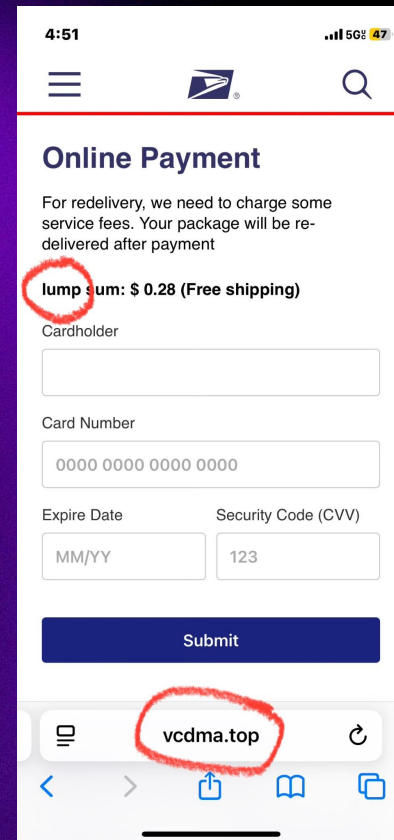
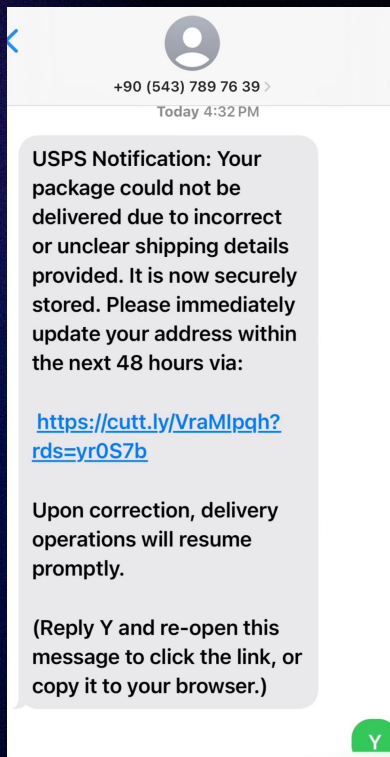
What's the target?

- Usernames
- Passwords
- Credit card numbers
- Social security numbers
- Other transactions: Bank transfer, gift card purchases

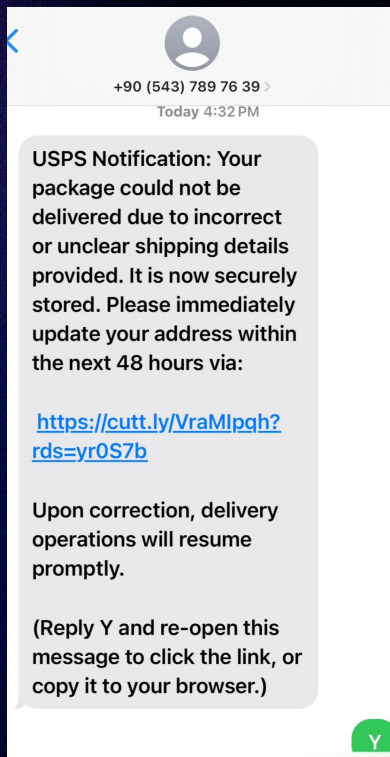
Phishing - Text Example



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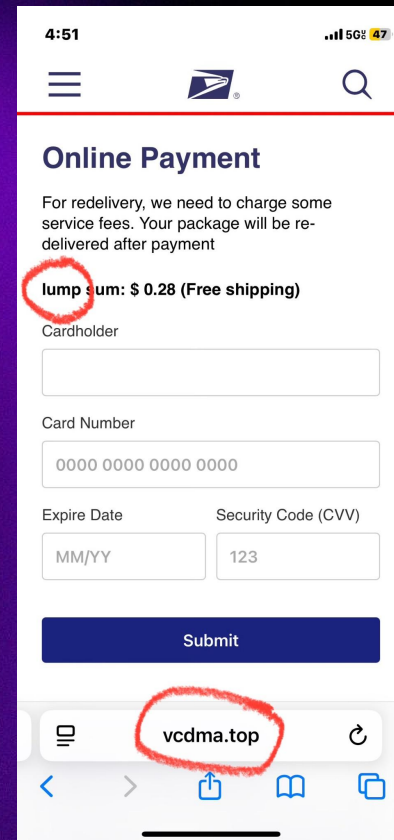


Signs of a Fraudulent Message:

- Strange URL (not .gov official)
- Poor grammar/capitalization
- International phone number

Why they could have succeeded:

- The chance someone is actually waiting on a package is high.
- Small request - easy to comply
- Overall it looks authentic!



Phishing Text Example - Outcome:

Yes, it was less than \$0.28 at that time.

They would be disappointed if they found out my bank balance



Things to look for: strange/unofficial URL or email address (in this case it should be usps.gov)

Misspelling, poor grammar, incorrect capitalization or punctuation

I've got to say, it's a clever trick. Ask for an amount so small anyone would gladly pay it, then capture all their credit card details and use as you wish.

4:51 5G 47

Online Payment

For redelivery, we need to charge some service fees. Your package will be re-delivered after payment

lump sum: \$ 0.28 (Free shipping)

Cardholder

Card Number

0000 0000 0000 0000

Expire Date Security Code (CVV)

MM/YY 123

Submit

vcdma.top

More Sophisticated Phishing Attacks: Spear Phishing [4]

Phishing - casts a wide net



Images: Pixabay

Spear Phishing - specific target



More Sophisticated Phishing Attacks: Spear Phishing [4]

Spear Phishing - specific target

Information gathered through reconnaissance:

- Public website
- Facebook
- LinkedIn

Personalized attack

Spear Phishing Example...Whaling [5]

Phony emails sent to chief accounting officer Chakravarthy

Senders claimed to be CEO Robert Pera and lawyer Tom Evans

A second signer was not required

\$46.7 million lost

Company was unaware until the FBI alerted them



More Sophisticated Phishing Attacks: Quishing (QR Codes) [6]

QR Codes leading to malicious websites

- Flyers at conferences
- Restaurant QR code for payment
- Parking meter payment code
- Charity event donation boxes
- COVID vaccine appointment codes
- Hotel wifi codes
- Social media promotions - “enter the contest”
- Real estate listings and “For Sale” signs

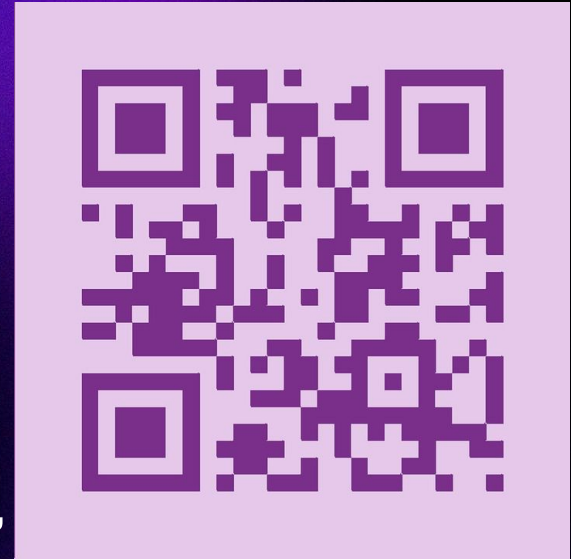


Image: Pixabay. Do NOT Scan This.

Defending Against Phishing Attacks [5-7]

Know the Signs

- Check the sender
- Check the URL where you're being sent
- Check spelling and grammar
- Don't download files or attachments from unknown senders

Verify it

- Hang up and call back using a trusted number
- Close the email or app and open a new tab, go directly to the website

Require 2+ people for sensitive or high-value transactions

Security Awareness Training

Take a Zero-Trust Stance!

References

- [1] Palo Alto Networks, “What Is Phishing?,” *Palo Alto Networks*.
<https://www.paloaltonetworks.com/cyberpedia/what-is-phishing> (accessed Aug. 13, 2025).
- [2] CloudFlare, “What is a Phishing Attack?,” *Cloudflare*. Accessed: Aug. 13, 2025. [Online].
Available: <https://www.cloudflare.com/learning/access-management/phishing-attack/>
- [3] Palo Alto Networks, “What Is Spear Phishing?,” *Palo Alto Networks*, 2015.
<https://www.paloaltonetworks.com/cyberpedia/what-is-spear-phishing#types> (accessed Aug. 14, 2025).
- [4] SentinelOne, “What is Spear Phishing? Types & Examples,” *SentinelOne*, Jun. 14, 2025.
<https://www.sentinelone.com/cybersecurity-101/threat-intelligence/spear-phishing> (accessed Aug. 13, 2025).

References

[5] N. Vardi, “How A Tech Billionaire’s Company Misplaced \$46.7 Million And Didn’t Know It,” *Forbes*, Feb. 08, 2016.

<https://www.forbes.com/sites/nathanvardi/2016/02/08/how-a-tech-billionaires-company-misplaced-46-7-million-and-didnt-know-it> (accessed Aug. 13, 2025).

[6] Keepnet Labs, “10 Real-Life Quishing Attack Examples to Strengthen Your Cybersecurity,” *Keepnet Labs*, Nov. 15, 2024.

<https://keepnetlabs.com/blog/10-real-life-quishing-attack-examples-to-strengthen-your-cybersecurity> (accessed Aug. 13, 2025).

[7] Palo Alto Networks, “What Is Smishing?,” *Palo Alto Networks*, 2015.

<https://www.paloaltonetworks.com/cyberpedia/what-is-smishing#spot-smishing-attempt> (accessed Aug. 14, 2025).