cisa.gov

Avoiding Social Engineering and Phishing Attacks | CISA

7–9 minutes

What is a social engineering attack?

In a social engineering attack, an attacker uses human interaction (social skills) to obtain or compromise information about an organization or its computer systems. An attacker may seem unassuming and respectable, possibly claiming to be a new employee, repair person, or researcher and even offering credentials to support that identity. However, by asking questions, he or she may be able to piece together enough information to infiltrate an organization's network. If an attacker is not able to gather enough information from one source, he or she may contact another source

within the same organization and rely on the information from the first source to add to his or her credibility.

What is a phishing attack?

Phishing is a form of social engineering. Phishing attacks use email or malicious websites to solicit personal information by posing as a trustworthy organization. For example, an attacker may send email seemingly from a reputable credit card company or financial institution that requests account information, often suggesting that there is a problem. When users respond with the requested information, attackers can use it to gain access to the accounts.

Phishing attacks may also appear to come from other types of organizations, such as charities. Attackers often take advantage of current events and certain times of the year, such as

- Natural disasters (e.g., Hurricane Katrina, Indonesian tsunami)

- Epidemics and health scares (e.g., H1N1, COVID-19)
- Economic concerns (e.g., IRS scams)
- Major political elections
- Holidays

What is a vishing attack?

Vishing is the social engineering approach that leverages voice communication. This technique can be combined with other forms of social engineering that entice a victim to call a certain number and divulge sensitive information. Advanced vishing attacks can take place completely over voice communications by exploiting Voice over Internet Protocol (VoIP) solutions and broadcasting services. VoIP easily allows caller identity (ID) to be spoofed, which can take advantage of the public's misplaced trust in the security of phone services, especially landline services. Landline communication cannot be intercepted without physical access to the line;

however, this trait is not beneficial when communicating directly with a malicious actor.

What is a smishing attack?

Smishing is a form of social engineering that exploits SMS, or text, messages. Text messages can contain links to such things as webpages, email addresses or phone numbers that when clicked may automatically open a browser window or email message or dial a number. This integration of email, voice, text message, and web browser functionality increases the likelihood that users will fall victim to engineered malicious activity.

What are common indicators of phishing attempts?

- **Suspicious sender's address.** The sender's address may imitate a legitimate business. Cybercriminals often use an email address that closely resembles one from a reputable company by altering or omitting a few characters.

- **Generic greetings and signature.** Both a generic greeting—such as "Dear Valued Customer" or "Sir/Ma'am"—and a lack of contact information in the signature block are strong indicators of a phishing email. A trusted organization will normally address you by name and provide their contact information.
- **Spoofed hyperlinks and websites.** If you hover your cursor over any links in the body of the email, and the links do not match the text that appears when hovering over them, the link may be spoofed. Malicious websites may look identical to a legitimate site, but the URL may use a variation in spelling or a different domain (e.g., .com vs. .net). Additionally, cybercriminals may use a URL shortening service to hide the true destination of the link.
- **Spelling and layout.** Poor grammar and sentence structure, misspellings, and inconsistent formatting are other indicators of a possible phishing attempt. Reputable institutions have dedicated personnel that produce, verify, and proofread customer

correspondence.

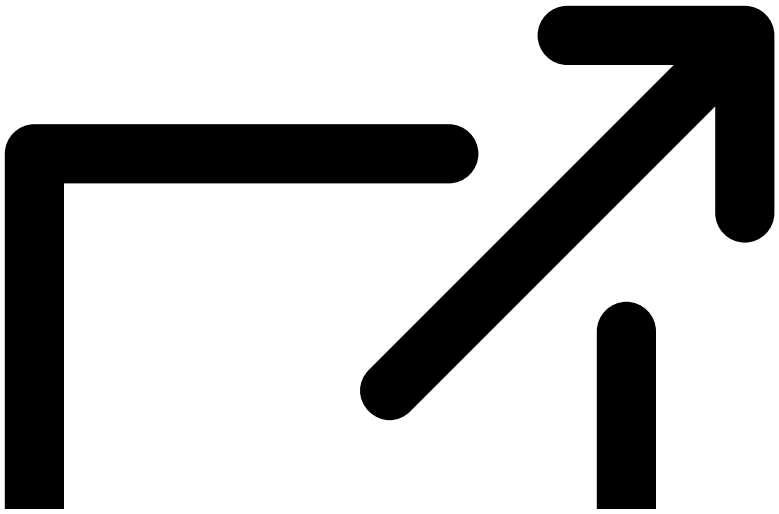
- **Suspicious attachments.** An unsolicited email requesting a user download and open an attachment is a common delivery mechanism for malware. A cybercriminal may use a false sense of urgency or importance to help persuade a user to download or open an attachment without examining it first.

How do you avoid being a victim?

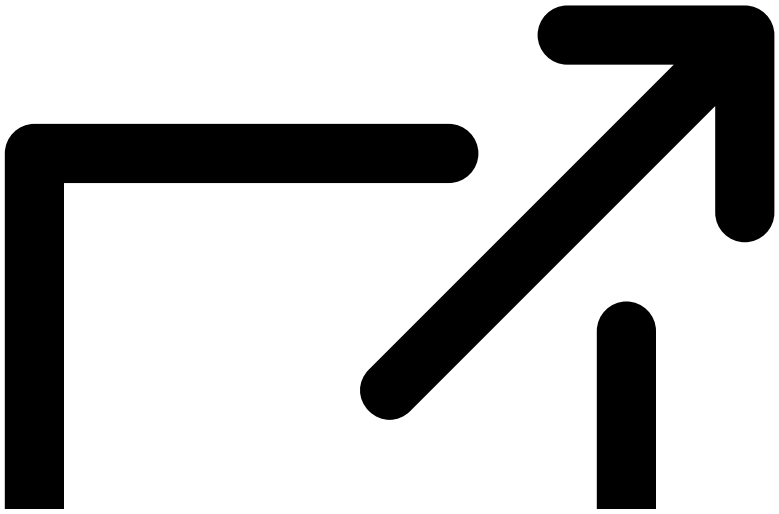
- Be suspicious of unsolicited phone calls, visits, or email messages from individuals asking about employees or other internal information. If an unknown individual claims to be from a legitimate organization, try to verify his or her identity directly with the company.
- Do not provide personal information or information about your organization, including its structure or networks, unless you are certain of a person's authority to have the information.
- Do not reveal personal or financial information in

email, and do not respond to email solicitations for this information. This includes following links sent in email.

- Don't send sensitive information over the internet before checking a website's security. (See Protecting Your Privacy for more information.)
- Pay attention to the Uniform Resource Locator (URL) of a website. Look for URLs that begin with "https"—an indication that sites are secure—rather than "http."
- Look for a closed padlock icon—a sign your information will be encrypted.
- If you are unsure whether an email request is legitimate, try to verify it by contacting the company directly. Do not use contact information provided on a website connected to the request; instead, check previous statements for contact information. Information about known phishing attacks is also available online from groups such as the Anti-Phishing Working Group



. (See the APWG eCrime Research Papers



).

- Install and maintain anti-virus software, firewalls, and email filters to reduce some of this traffic. (See Understanding Firewalls for Home and Small Office Use, Protecting Against Malicious Code, and Reducing Spam for more information.)

- Take advantage of any anti-phishing features offered by your email client and web browser.
- Enforce multifactor authentication (MFA). (See Supplementing Passwords for more information.)

What do you do if you think you are a victim?

- If you believe you might have revealed sensitive information about your organization, report it to the appropriate people within the organization, including network administrators. They can be alert for any suspicious or unusual activity.
- If you believe your financial accounts may be compromised, contact your financial institution immediately and close any accounts that may have been compromised. Watch for any unexplainable charges to your account.
- Immediately change any passwords you might have revealed. If you used the same password for multiple resources, make sure to change it for each account, and do not use that password in the

future.

- Watch for other signs of identity theft. (See Preventing and Responding to Identity Theft for more information.)
- Consider reporting the attack to the police, and file a report with the Federal Trade Commission.