

# Malware

## July 5, 2023

Malware, or malicious software, is a blanket term for any kind of software created to cause harm. Hackers create it to make money, steal data, spy, blackmail, or even prank. It is a serious crime. The most common way to spread malware is through email (SPAM/phishing).

According to the SonicWall Cyber Threat Report, education is the number one target industry for malware attacks (2022) – this is up from number three (2021). The top 5 target industries (1-5) are: Education, Healthcare, Finance, Retail, and Government.

## 4 Common Types of Malware

Malware is categorized by how it spreads or what it does. Below are 4 common types:

- Trojan – tricks users into installing malware by posing as a valid program
- Virus – inserts hacker's own code in other programs
- Spyware – allows access to user's keystrokes, passwords and other sensitive information
- Ransomware – encrypts important files on user's computer and requires user to pay to decrypt

## Fun Fact

The first virus, Creeper (named after a Scooby-Doo cartoon character) was created in 1971, by programmer Bob Thomas. This was as an experimental computer program – not harmful – and displayed the message, "I'm the creeper: catch me if you can".

## New Threat

Credential harvesting, or password harvesting, is one of the newest threats. Hackers use a tool to collect (harvest) usernames and passwords (credentials).

A common source of credential harvesting is phishing emails. Other avenues include: malware viruses, cloned website links, the use of unsecure third-party vendors, and ransomware.

## How it Works

### 1. **Hacker sends a phishing email.**

The hacker takes great care to create a phishing email that seems real, even adding logos

and important titles. The subject seems applicable to the reader. Fear is used as a motivator – with subjects such as unpaid parking ticket, past due invoice, etc.

2. **You are encouraged to click on a link and perform a task.**

You are encouraged to act quickly, and click on a link to resolve the issue.

3. **Link takes you to a web page.**

Along with an elaborate phishing email, the hacker also makes a replica of a real website that looks legitimate. What appears to be a valid site is actually the hacker's server. The server detects and captures any secure information you type into the password fields.

4. **You are tricked into entering your email address and password.**

You see a short message and are encouraged to sign-in, using your cloud-based company email and password.

5. **Hacker retrieves the password from their server.**

The information you entered goes straight to the hacker.

6. **Hacker exploits harvested credentials.**

Once the hacker has the credentials, they may be used in a number of ways – carry out more attacks, take over bank accounts or employer files, or sold on the dark web.

## In the News

In early June 2023, Stephen F. Austin (SFA) State University was hit by a cyberattack. This attack is at least the 12th confirmed in Texas since March 2022, according to Comparitech.

Other recent cyberattacks, in Texas, include: The City of Dallas, Mansfield Independent School District, Rice University, the City of Tomball and the Dallas Central Appraisal District. Follow this link to view the full article from [The Daily Sentinel](#).

With so many attacks, Highlanders must stay vigilant.

## How to Prevent

STOP, LOOK and THINK, before you click.

Remember the PHISHING red flags we mentioned in the April IT Cybersecurity Newsletter:

- **FROM:** an email from an unknown sender; or, you know the sender, but the email looks funny
- **TO:** you were copied on an email, and you do not know the other individuals in the email
- **DATE:** you receive an email you would normally receive during business hours, but it was sent at 3am
- **SUBJECT:** the subject line does not make sense or does not match the message content; the email is about something you never requested, or a receipt for something you never purchased
- **CONTENT:** the sender is asking you to click on a link to open an attachment; you have an uncomfortable feeling, or it seems odd
- **ATTACHMENT:** any attachment you receive and were not expecting

- **HYPERLINKS:** misspellings in the link, hyperlinks asking you to take-action; you hover your cursor over the link, and the link address is for a different website

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