**Types of Malware and Their Characteristics**

Malware, or malicious software, is any software designed to harm, exploit, or otherwise negatively affect users, data, or devices. It comes in various forms, each with specific characteristics and methods of infection. Here are five common types of malware:

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1. **Viruses**

Characteristics and Behavior: Viruses attach themselves to legitimate files or programs. They remain dormant until the infected file is executed, at which point they replicate by attaching to other files on the system.

Spread Method: Typically through infected email attachments, downloads from untrustworthy websites, or USB drives.

Impact: Corrupt or delete data, slow down system performance, or serve as a gateway for additional malware.

Real-life Example: The "ILOVEYOU" virus in 2000 caused global damage by overwriting files and spreading through user contacts.

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2. **Worms**

Characteristics and Behavior: Worms are self-replicating and spread without human action by exploiting network vulnerabilities.

Spread Method: Through networks, often by exploiting security flaws or weak passwords.

Impact: Can cause network congestion, slowdowns, and sometimes carry payloads like ransomware.

Real-life Example: The "Code Red" worm in 2001 attacked Microsoft IIS servers, resulting in widespread network slowdowns.

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3. **Trojans**

Characteristics and Behavior: Disguise as legitimate software to trick users into installation. Unlike viruses, they do not self-replicate.

Spread Method: Through email attachments, malicious websites, or software downloads from unverified sources.

Impact: Can give attackers unauthorized access or install additional malware.

Real-life Example: The "Zeus Trojan" was used to steal banking information by logging keystrokes.

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4. **Ransomware**

Characteristics and Behavior:Encrypts the victim’s data, demanding a ransom for decryption.

Spread Method: Phishing emails, infected websites, or drive-by downloads.

Impact: Can cause operational disruptions, financial loss, and potential permanent data loss.

Real-life Example: The "WannaCry" ransomware in 2017 infected systems globally, halting operations in hospitals, businesses, and government agencies.

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5. **Spyware**

Characteristics and Behavior: Monitors and gathers information from an infected system without the user’s knowledge.

Spread Method: Through malicious downloads, email attachments, or bundled with legitimate software.

Impact: Compromises privacy, can lead to identity theft or financial loss, and slows down devices.

Real-life Example "FinFisher," used for surveillance, has raised privacy and ethical concerns due to its use by some governments.

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Each of these types can have severe consequences, emphasizing the need for robust cybersecurity practices, such as anti-malware software, regular updates, and user education.