

Types of Cyber Attacks You Should Be Aware Of:

Viruses

Malware

Phishing Attacks

Ransomware



Virus

A **computer virus** is a type of **malicious software (malware)** that attaches itself to other programs or files, replicates, and spreads from one computer to another. It is designed to **damage data, disrupt system operations**, or steal personal information.



Effects of a Virus

Erase vital data

Scramble data on a hard disk

Cause erratic screen behavior

Halt the PC

Damage hardware

Many viruses do nothing obvious at all except spread!



Malware

Malware is malicious software designed to disrupt, damage, or gain unauthorized access to computer systems. Cybercriminals use malware to infect devices to steal data, obtain banking credentials, sell access to computing resources or personal information, or extort payments from victims.



Malware

Nuance Communications, a health care software company, may have compromised personal data from major hospital systems in the state, including UNC and Duke. The company's Global Operations Center was notified of a widespread desktop outage around 7 a.m. on June 27, which was part of the global NotPetya attack. Nuance realized quickly it was not just a desktop issue but part of a larger global attack. The company shut down procedures, powered down systems, and suspended data backups to prevent infection and contain the spread.





Phishing

Phishing is a cybercrime in which a target or targets are contacted by email, telephone, or text message by someone posing as a legitimate institution to lure individuals into providing sensitive data, such as personally identifiable information, banking and credit card details, and passwords.

Phishing through emails

Atrium Health, a healthcare provider with 40 hospitals and over 1,400 care locations in North Carolina, South Carolina, Alabama, and Georgia, was targeted by a phishing attack that compromised tons of employees' email accounts. The attack was on April 29, 2024, and unauthorized access to employee accounts continued until April 30th. It led to the potential exposure of sensitive patient data. Atrium Health has since committed to enhancing its security measures to prevent similar incidents in the future.



Ransomware

Ransomware is a type of cyberattack in which malware infiltrates a computer system and encrypts the data or gains control of the computer. Hackers then demand that victims pay a ransom to get everything back. PCs and business computer systems alike are vulnerable to ransomware.



Ransomware attack in North Carolina



STUDENT PERSONAL FILE TABLE

Student Personal File Form				
basic situation				
Name		former name		gender
age		date of birth		nationality
ID number		contact number		guardian
Guardian Phone		native place		
Home address				
learning situation				
attended school				
class leader				
academic performance				

There was a Virus Attack in North Carolina on the PowerSchool that was discovered on December 28, 2024, with notification to the North Carolina Department of Public Instruction in January 2025. The breach compromised personal information of over 60 million students and 9.5 million teachers. The attacker demanded ransom to delete the stolen data, which included Social Security numbers and medical information; it also breached Canada and other countries. The PowerSchool did pay a ransom to hackers; they are now being targeted for ransom payments again. All North Carolina public schools have transitioned from PowerSchool to Infinite Campus, which will serve as digital platform for managing student information, grades and schedules.

Game Time

Match words with definitions.

WORDS



PHISHING



VIRUS



RANSOMWARE



MALWARE

DEFINITION

Malicious software designed to block access

Attaching themselves to files or software

Programs that infect computer systems

Targets are contacted by email

Answer Sheet to Game Time

Phishing- Target are contacted by email

Virus- Attaching themselves to files or software

Ransomware- Programs that infect computer systems

Malware- Malicious software designed to block access



Incident Reporting – Where to Report Incidents



Report to your Supervisor and CSS Security immediately.

Report an incident to:

<https://security.ncdhhs.gov/>



Also, the IRS Office of Safeguards must be notified immediately, but no later than twenty-four (24) hours after identification.