

Lab – Threat Identification

Objectives

Explore the security features used by organizations to keep data safe.

Part 1: Exploring the Threat of Cyberattacks

Part 2: CIA Triad

Background / Scenario

The threats posed by the cyber world are real. These threats have the potential to wreak havoc on life in a computer centric world. Understanding these threats is important to everyone and in order to combat them, the world needs committed individuals that can recognize threats, and outmaneuver and outsmart cyber criminals. In order to develop the talent needed, organizations like CompTIA, Cisco Systems and ISC2 have created programs to educate and certify cyber professionals.

Required Resources

- PC or mobile device with Internet access

Part 1: Exploring the Threat of Cyberattacks

Cyberattacks top the list of threats facing countries around the world. When people think of threats to national or world security, most people think of physical attacks or weapons of mass destruction. The fact is cyber threats top the list in over twenty countries around the world. The ranking of cyberattacks in the number one spot reveals a few things about how society has changed. Computers and computer networks affect the way we learn, shop, communicate, travel, and live. Computer systems control almost every aspect of our lives. The disruption of computer systems and computer networks can have a devastating impact on modern life. Electrical power generation and distribution systems, water treatment and supply systems, transportation, and financial systems are all targets of cyberattacks. Each of these systems has been a victim of cyberattacks. Watch the video below. Break into groups of 3-4 people. After viewing the video, answer the questions below.

Step 1: Research Threats.

In step 1, you will research threats.

- Click [here](#) to view the video. According to the video, what is the most dangerous weapon in the world? Why? Do you agree?
- List five ways a cyber-criminal can use computers to break the law. Can any of the crimes you listed affect you personally? Have you or your family members been affected by these crimes?
- Have any of the potential threats portrayed in the video actually happened? Click [here](#) to learn more about these attacks.

Step 2: Explore Recent Attacks.

- a. The impact and scope of recent cyberattacks have many business and government officials concerned. Click [here](#) to review the top 10 most devastating cyber hacks of 2015.

How many people did the US Office of Personnel Management data breach affect?

- b. Describe the TalkTalk attack of 2015. Who was responsible and what did the cyber criminals steal?

Part 2: CIA Triad

Confidentiality, integrity, and availability are the three fundamental cybersecurity principles. These three principles make up the CIA triad. The elements of the triad are the three most crucial components of security. All cybersecurity professionals should be familiar with these core principles.

Step 1: Explore the CIA Triad.

- a. Click [here](#) to view the video. What is data confidentiality? Why is data confidentiality so important to people and organizations?

- b. What is data integrity? Name three ways data integrity or trustworthiness is affected.

- c. What is system availability? What can happen if a critical computer system is no longer available?

Step 2: Explore Cyberattacks.

Click [here](#) to watch a video. What were the cybercriminals trying to do? What time of the day did the attack occur? Are network attacks likely to occur after hours? Why?