**Information Security**

**Chapter 1: Cybersecurity and the Security Operations Center**

1. **Lab 2 - Learning the Details of Attacks**
2. **Objectives**

Research and analyze IoT application vulnerabilities.

**Part 1:** Conduct a Search of IoT Application Vulnerabilities.

1. **Background / Scenario**

The Internet of Things (IoT) consists of digitally connected devices that are connecting every aspect of our lives, including our homes, offices, cars, and even our bodies to the internet. With the accelerating adoption of IPv6 and the near universal deployment of Wi-Fi networks, the IoT is growing at an exponential pace. According to Statista, industry experts estimate that by 2030, the number of active IoT devices will approach 50 billion.

However, IoT devices are particularly vulnerable to security threats because security has not always been considered in IoT product design. Also, IoT devices are often sold with old and unpatched embedded operating systems and software.

1. **Required Resources**

* PC or mobile device with internet access.

**Instructions**

**Part 1: Conduct a Search of IoT Application Vulnerabilities**

Using your favorite search engine, conduct a search for Internet of Things (IoT) vulnerabilities. During your search, find an example of an IoT vulnerability for each of the IoT verticals: industry, energy systems, healthcare, and government. Be prepared to discuss who might exploit the vulnerability and why, what caused the vulnerability, and what could be done to limit the vulnerability.

[IoT Security Foundation](https://iotsecurityfoundation.org/)

[Business Insider IoT security threats](http://www.businessinsider.com/iot-cyber-security-hacking-problems-internet-of-things-2016-3)

**Note**: You can use the web browser in the virtual machine that was installed in a previous lab to research security issues. By using the virtual machine, you may prevent malware from being installed on your computer.

From your research, choose an IoT vulnerability and answer the following questions:

1. What is the vulnerability?

***Type your answers here.***

1. Who might exploit it? Explain.

***Type your answers here.***

1. Why does the vulnerability exist?

***Type your answers here.***

1. What could be done to limit the vulnerability?

***Type your answers here.***