

**In your opinion, what are the biggest IoT security risks and challenges?**

IoT security is an area of technology that mainly protects connected devices and networks in the Internet of Things. Like anything that involves technology, IoT security consists of many risks and challenges to overcome. Furthermore, with the rapid growth and evolution of technology come several more obstacles to learn to overcome.

One of the most significant challenges of IoT security is the lack of user knowledge and awareness. “Over the years, Internet users have learned how to avoid spam or phishing emails, perform virus scans on their PCs, and secure their Wi-Fi networks with strong passwords” (Intellectsoft). However, because it is relatively new, people know little about IoT technology. Due to users’ and businesses’ ignorance, social engineering attacks have become “the easiest way to gain access to a network,” targeting humans instead of devices using the Internet of things (Intellectsoft). An example of a social engineering attack is the 2010 Stuxnet attack against a nuclear facility in Iran. “The attack was directed to industrial programmable logic controllers,” corrupting 1,000 centrifuges and causing the plant to explode. (Intellectsoft). The worst part is that all it took to execute the attack was a worker plugging a “USB flash drive into one of the internal computers” (Intellectsoft).

Additionally, due to their high vulnerability to Malware attacks, IoT devices are highly susceptible to botnet attacks. With an army of malware-infected bots, a hacker can perform a botnet attack, sending thousands of requests per second to bring down the target.” Moreover, botnet attacks pose a security threat for many facilities, including “electrical grids, manufacturing plants, transportation systems, and water treatment facilities,” threatening large groups of people (Intellectsoft).

In summary, with the continuous evolution of technology, many vulnerabilities will be thwarted, while more challenges will continue to arise.

**Works Cited:**

Intellectsoft. “Top 10 IoT Security Issues: Ransom, Botnet Attacks, Spying.” *Intellectsoft Blog*, Intellectsoft, 13 Aug. 2020, [www.intellectsoft.net/blog/biggest-iot-security-issues/](https://www.intellectsoft.net/blog/biggest-iot-security-issues/)