Software Security

Matthew Crocker

04/23/2021

Software security is a major issue in today's technology driven world. Breaches alone have created billions of dollars in expenses in just the past five years. They also affect millions of people each and every day. This paper will cover the questions: What is secure software? What testing tools are available? What can you do on the job to make your code more secure?

What is secure software? Secure software is the application of techniques that assess, mitigate, and protect software systems from vulnerabilities. [1] These techniques ensure that software continues to function and are safe from attacks. [1] Developing secure software involves considering security at every stage of the life cycle. [1] The major goal is to identify flaws and defects as early as possible. [1]

What testing tools are available? One tool is Zed Attack Proxy. Developed by OWASP (Open Web Application Security Project), ZAP or Zed Attack Proxy is a multi-platform, open-source web application security testing tool. ZAP is used for finding a number of security vulnerabilities in a web app during the development as well as the testing phase. [2] Another tool that exists is Wapiti. One of the leading web application security testing tools, Wapiti is a free of cost, open source project from SourceForge and develop. In order to check web applications for security vulnerabilities, Wapiti performs black box testing. [2] For checking whether a script is vulnerable or not, Wapiti injects payloads. The open source security testing tool provides support for both GET and POSTHTTP attack methods. [2]

What can you do on the job to make your code more secure? No. 1: Test inputs rigorously. [3] Attackers need a path into your machines, and the easiest routes are through the doors your code opens. [3] If your software takes input from the Internet, someone will try to sneak something past you. [3] No. 2: Store what you need, and not one bit more. [3] Programmers often think like obsessive hoarders, storing away copies of anything that stands the least chance of someday being useful. This instinct may help debug software, but it leaves a trail of data for anyone to find. [3]

These are just a few or many answers to these questions asked. Software security is a big priority now a days as more and more technology gets brought into our lives. With these tips and answers, one can improve their code to becoming very safe and secure.

Sources:

Edmiston, T. (2019, August 28). What is software security? Retrieved April 24, 2021, from https://medium.com/the-framework-by-tangram-flex/what-is-software-security-e03a5ee7a6b5

Top 10 open source security testing tools for web applications (updated). (n.d.). Retrieved April 24, 2021, from https://hackr.io/blog/top-10-open-source-security-testing-tools-for-web-applications

Wayner, P. (2013, February 04). Safeguard your CODE: 17 security tips for developers. Retrieved April 24, 2021, from https://www.infoworld.com/article/2078701/safeguard-your-code--17-security-tips-for-developers.html