

Net-Trainer-ST: A Swiss Army Knife for Pentesting, Based on Single Board Computer, for Cybersecurity Professionals and Hobbyists

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Abstract : This article was created as part of the developed master's thesis. It attempts to present a newly developed device, which will support the work of specialists dealing with broadly understood cybersecurity terms. The device is contrived to automate security tests. In addition, it simulates potential cyberattacks in the most realistic way possible, without causing permanent damage to the network, in order to maximize the quality of the subsequent corrections to the tested network systems. The proposed solution is a fully operational prototype created from commonly available electronic components and a single board computer. The focus of the following article is not only put on the hardware part of the device but also on the theoretical and applicatory way in which implemented cybersecurity tests operate and examples of their results.

Keywords : Raspberry Pi, ethernet, automated cybersecurity tests, ARP, DNS, backdoor, TCP, password sniffing

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