Are you interested in building with us the next generation of secure data center networks? Do you want to learn how to setup a research testbed and achieve security with state-of-the-art technologies like Software Defined Networking, artificial intelligence, and more? Then: JOIN US!

We offer Master Thesis (Masterarbeit) or Student Work (SHK) Opportunities

The use of Software Defined Networking (SDN) [1] has become common practice especially for cloud scenarios and data center networks. In SDN, the control plane and forwarding plane are separated from each other allowing centralized network controllers to determine the behavior of switches, routers, or other devices in the network. However, any network component can be compromised by an adversary and consequently operate maliciously. It is very necessary to use advanced techniques and algorithms to detect such malicious networking devices, and mitigate the negative effects of them. The network in the future should be intelligent and adaptive in managing itself. They should be able to react to the security threats in the network in an autonomous way. We are going to investigate the possibility to build an intelligent network security system that is able to smartly isolate the malicious networking devices in an SDN.

We offer the opportunity of master thesis or student work (SHK) on this topic. You are welcome to contact us if you are interested.

Requirements:
- Interest in working with networking security
- Interest in working applying state-of-the-art algorithms to solve networking problem
- Good experience with C/C++ and Python programming language
- Experience with Linux/Unix OS

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