



Bachelorarbeit

IT Security of Blockchain Ecosystems: An Attack Tree for Blockchain Ecosystems

Blockchains such as Bitcoin and Ethereum are used for trading tokens worth several million dollars every day. While these figures demonstrate the importance of these systems, they also illustrate the great interest of malicious parties in illegitimately accessing and stealing these tokens. In addition to the attempt to exploit vulnerabilities of the employed blockchain protocol (51% attack), there are also various other attack vectors, such as the hacking of cryptocurrency exchanges or private key phishing. Since security is a great promise of blockchain-based applications, it is necessary to develop a better understanding of potential attack vectors. Therefore, this thesis should deal with the question of what kind of attack vectors exist in blockchain ecosystems and how they can be systemized by using attack trees.

Empfohlene Einstiegsliteratur:

- Saad et al. (2019): Exploring the Attack Surface of Blockchain: A Systematic Overview arXiv: 1904.03487
- Mosakheil (2018): Security threats classification in blockchains [Direct Link](#)
- Mauw and Oostdijk (2015): Foundations of Attack Trees DOI: 10.1007/11734727_1

Betreuer: Tobias Guggenberger, M. Sc.