

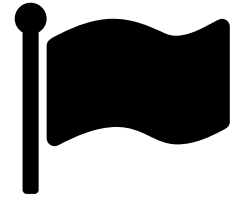
Thesis
B.Sc.

IDP

Design of Hacking Challenges on Network Security

Motivation

For two years now we offer hacking challenges as a way to achieve a grade bonus for the course Network Security [1]. The course covers many topics from cryptography to web security and PKI. This opens up a great range of opportunities for creative challenges of differing complexity. The current challenges are designed such that the students connect to a TCP port and exchange messages which exploit a simulated vulnerability to get a flag (secret string). There are however many topics and concepts not covered by the current challenges, which is why this project aims to rework them. The main goal is to identify weaknesses in the semester plan of challenges, which are to be developed/reviced in Python. Additionally, data on the participation and feedback from the previous year should be analyzed and incorporated into the new semester plan.



Your Task

- Familiarize yourself with the existing hacking challenges
- Evaluate data and feedback from last years lecture
- Design a semester plan for lecture-accompanying challenges
- Rework/replace existing challenges and add new ones

References

[1] <https://net.in.tum.de/teaching/ws2425/netsec.html>

Requirements

Familiarity with the contents of the Network Security lecture, best having participated in the hacking challenges before, good programming skills in Python, optionally some experience with CTFs and familiarity with coldmirror jokes or other good memes.

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