Announcement: Student job in cooperation with Fraunhofer AISEC, Garching

Extension and Evaluation of an Obfuscation Tool

Motivation

Code obfuscation is widely used to protect intellectual property. There are a lot of tools online that do automated obfuscation, but most of them merely focus on semantic changes to the program (e.g. symbol renaming or re-ordering), which can be reversed easily with existing de-obfuscation tools. Goal of this work is to create a sophisticated obfuscation tool that uses control-flow flattening to introduce syntactic changes to the program, effectively prohibiting the use of de-obfuscation tools and even impeding static and dynamic program analysis.

Task Description

- Support the implementation of a tool to obfuscate C/C++ code (Clang is used for parsing)
- Testing of the tool by obfuscating cryptographic source code (e.g. AES implementation from open source SSL library)
- Evaluation of the tool by using existing tools for de-obfuscation

Requirements

- Good programming skills (C/C++)
- Interest in obfuscation techniques and reverse engineering
- Experience with LLVM/Clang is a plus

Contact

Please apply to all contacts listed below. Make sure to include your CV and a current grade report in your email.

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