RevNIC for L4
Diplom- oder Masterarbeit

Reverse Engineering of Binary Device Drivers with RevNIC [1] describes a tool that takes a closed-source binary driver, automatically reverse engineers its logic, and synthesizes a new driver that implements the exact same hardware protocol as the original driver. The synthetic driver can be targeted for a different OS or the same OS. This thesis will investigate how RevNic can be used to synthesize drivers for a L4-based operating system.

![Diagram of RevNIC process]

Prerequisites:
Must be familiar with operating systems structures. Must be willing to develop and debug OS and low-level code for a fairly complex software environment. Having attended the course System Design and Implementation, or knowledge of L4, kernels, or virtualization are a big plus.

[1] Reverse Engineering of Binary Device Drivers with RevNIC
Vitaly Chipounov and George Candea
Proceedings of the 5th ACM SIGOPS EuroSys Conference (EuroSys’10), Paris, France, April 2010
Visit http://dslab.epfl.ch/proj/reveng for access to publication

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