Bachelor's Thesis Specification/21160/2017/xdudla00

Brno University of Technology - Faculty of Information Technology

Department of Information Systems | Academic year 2017/2018

Bachelor's Thesis Specification

For: **Dudlák Tibor**
Branch of study: Information Technology
Title: **Porting Tang to OpenWRT**
Category: Operating Systems

Instructions for project work:

1. Study the Tang server for binding data to network presence. Focus on build and runtime aspects of the project.
2. Study the use of Tang for decrypting disk volumes with Clevis.
3. Study the OpenWRT system. Focus on the packaging system and build processes.
4. Port the Tang server and its dependencies to OpenWRT. Contribute changes needed to achieve the port to respective upstream projects.
5. Demonstrate Clevis/Tang unlock operation using an OpenWRT server running Tang server.
6. Document the process of building packages on OpenWRT. Focus on hurdles that had to be overcome specifically for Tang and its dependencies.

Basic references:

- Nathaniel McCallum. Tang [online]. Available on: https://github.com/latchset/tang
- Nathaniel McCallum. Clevis [online]. Available on: https://github.com/latchset/clevis
- OpenWRT [online]. Available on: https://openwrt.org/

Detailed formal specifications can be found at http://www.fit.vutbr.cz/info/szz/

The Bachelor's Thesis must define its purpose, describe a current state of the art, introduce the theoretical and technical background relevant to the problems solved, and specify what parts have been used from earlier projects or have been taken over from other sources.

Each student will hand-in printed as well as electronic versions of the technical report, an electronic version of the complete program documentation, program source files, and a functional hardware prototype sample if desired. The information in electronic form will be stored on a standard non-rewritable medium (CD-R, DVD-R, etc.) in formats common at the FIT. In order to allow regular handling, the medium will be securely attached to the printed report.

Supervisor: **Lichtner Ondrej, Ing.**, DIFS FIT BUT
Beginning of work: November 1, 2017
Date of delivery: May 16, 2018

L.S.

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