

ANDREI IZRAILEV

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EDUCATION

Saint Petersburg State University

Bachelor of Software and Administration of Information Systems

GPA: 4.85 out of 5

Sep 2019 - Jul 2023

St. Petersburg, Russia

TECHNICAL SKILLS

Programming languages	C (proficient), C++/Bash (intermediate), Python/SQL (basic)
Technologies	Linux, Networking, Git, SVN, Make, Meson, QEMU, nDPI
Languages	English (fluent), Russian (native)

EXPERIENCE

OKTET Labs

Software Engineer

Oct 2019 - Present

St. Petersburg, Russia

- Developed a DPI-aware application for selective traffic acceleration on proprietary routers, which allowed to increase bandwidth **by up to 8 times**
- Collaborated with a 15-man industrial team in improving a **distributed testing system** written in C and Bash
- Extended port mirroring support in a proprietary **Linux kernel driver** to mirror traffic based on VLAN tag and direction

PROJECTS

Application for selective hardware traffic acceleration

C, Networking, Parallelism, nDPI, Make

Nov 2021 - May 2022

- Augmented router's built-in network accelerator software to allow choosing what connections to work with
- Developed a **multi-threaded** DPI user-space application that helped to increase network bandwidth **by 4–8 times** in different scenarios by interacting with the accelerator

Distributed Software and Firmware Testing System

C, Bash, Meson, Git

Oct 2019 - Mar 2022

- Taught myself the complex design of a big proprietary industrial system written in C and Bash
- Designed and implemented **APIs for 9 utilities** that allowed a larger development team for testing network and filesystem performance of customer devices
- Simplified a running tools control process by extending a certain library to support **multiple backends integration**
- Incorporated **PCRE partial matching feature** to ease logs collection

Custom embedded Linux kernel and drivers

C, Linux kernel, Networking

June 2022 - Present

- Improved **port mirroring support in a proprietary driver** to selectively mirror traffic according to its direction and VLAN tag
- Introduced a kernel command line option to enable debug output in the SPI NAND flash driver, which helped to find bad blocks on 17 routers

ACHIEVEMENTS

Winner of the Russian National Informatics Olympiad Semi-Finals

Mar 2019

- Semi-finals of the largest computer science competition for high school students in Russia
- 23th place out of more than 18,000 participants