Alexander Goncharov

Moscow, Russia

Work Experience

Flashrom (OSS)

Remote

May 2022 - Present Software Developer

flashrom is a utility for identifying, reading, writing, verifying and erasing flash chips.

- Participating in project meetings with the core development team (my colleagues are engineers from Google/secunet/etc).
- Moving memory management behind the initialization API of programmers to provide an unambiguous lifetime of drivers.
- Refactoring the codebase to reduce global state and improve code flow to be easy to keep track of.
- Reviewing patches in my area of responsibility from enthusiasts and regular developers.

3Logic Group Moscow, Russia Apr. 2021 - Present

Firmware Engineer

- Participated in the development of a system for user authorization using electronic keys (USB-key / RFID) to provide access to a PC at BIOS level. Wrote a core driver which performs main checks; contributed to the hardware driver.
- Ported a few utilities to UEFI Shell (for use within the company). One of them is dd (copying between hard disk drives and files).
- Extended our custom BIOS with different features for Setup pages, DXE drivers, BMC, etc.
- Developed server software for collecting data from tested devices, storing them in a database and transferring them to a web interface. During testing, 100k+ connections at the same time were supported.

Projects

UEFI File Manager $\mid C, EDKII$

- A dual pane file manager with a text-based user interface for UEFI environment.
- 2 distribution options: standalone application and integrated into UEFI Shell.
- Works with all block devices that produce Simple File System Protocol.
- Supports all basic operations: editing, executing, copying, creating, moving/renaming, deleting files and directories.

LockPassword | C, GPGME, X11

- A terminal password manager that uses GnuPG to encrypt passwords.
- Uses the file system to store logins and passwords (hierarchical tree structure).
- Isolates the decrypted password in RAM (tmpfs) while editing it.
- Interacts with X11 and Wayland interfaces to copy a password to the clipboard.

WantChat $\mid C++, FLTK, MariaDB, Cross-platform, TCP/IP$

- Single-threaded TCP chat and server in 80s style.
- The client runs on Windows and Linux and is available in two forms: GUI and CLUI.
- The server supports account registration, room creation, and other commands.

Skills

Operating Systems Linux and other *nix systems

Development tools git, gcc, autotools/make, gdb, valgrind, qemu, EDKII

Programming C, C++ (without STL), shell and standard UNIX/Linux tools, x86 assembler, SQL

Languages Native fluency in Russian (C2), basic knowledge of English (B1)

Licenses & Certifications

2022 Certificate of Intermediate Level English (B1), American Club of Education

Education

Moscow Polytechnic University