

### Technical projects of Aleksey Valov

- 1) Created custom Linux repository and published an article about it (<http://linuxnow.ru/view.php?id=92> in Russian)
- 2) Created local repository for CPAN Perl and published an article about it (<http://linuxnow.ru/view.php?id=87> in Russian)
- 3) Studied SSH authentication process and created sequence diagrams (<http://linuxnow.ru/view.php?id=84>)
- 4) Encrypting drive on Linux publication (<http://linuxnow.ru/view.php?id=73> in Russian)
- 5) Creating RPM packages from sources publication (<http://linuxnow.ru/view.php?id=99> in Russian)
- 6) The publication on how to use TOR for anonymity with open source tools (<http://linuxnow.ru/view.php?id=47> in Russian)
- 7) LTSP Project in Kemi-Tornio University of Applied Sciences that was implemented in one class room, the tutorial of it has been published in Russian (<http://linuxnow.ru/view.php?id=25> )
- 8) How to securely delete data publication (<http://linuxnow.ru/view.php?id=23> in Russian)
- 9) Whois web-site information gathering publication (<http://linuxnow.ru/view.php?id=18> in Russian)
- 10) Was in charge of the technical Linux laboratory in Kemi-Tornio University of Applied Sciences
- 11) Was a project leader and main developer for the Governmental project to improve the safety of Tornio. Included 3d modelling of the city, ticketing system handling, gps fetching from pictures or SMS.
- 12) Migrated Majakka RY, Kemi, employees to Linux. Included interviews of employees in order to find open source alternatives for daily used software, taught how to use Linux
- 13) Solaris server configuration and administration at Kemi-Tornio University of Applied Sciences
- 14) Created traceroute that supports TCP, ICMP and UDP protocols. The tool was written using Perl with embedded C
- 15) Created a card game for iOS devices and uploaded to GIT ([https://github.com/xenos88/ios\\_cardgame](https://github.com/xenos88/ios_cardgame))
- 16) Created LiveCD for data rescue. LiveCD was based on Linux From Scratch and Knoppix, had pre-installed gparted, ddrescue, testdisk, photorec, fdisk, parted, partimage and others. Presented at it at the conference in Kemi-Tornio University of Applied Sciences in 2009
- 17) Created a method to secure the physical access to the computer through the Bluetooth connection to a cellphone. Whenever a person was further then 15 meters away, computer was getting locked in and the motion detection of the web-camera was activated. Upon coming close to the computer with the cellphone, it was getting unlocked automatically
- 18) As a part of my previous job, was a technical project manager for the project connected with Sochi Olympic Games that included ski-passes, weather station integrations, info-screens and rentals, etc. That project included 5 Finnish companies and 1 Russian company

- 19) Linux system administration for the Linux lab (backups, RAID, ssh control, securing, updating and maintaining)
- 20) Created a Firewall that was run in VirtualBox (installed OpenBSD and configured iptables to be used as an additional virtual firewall)
- 21) Created numerous deb packages from 3<sup>rd</sup> party developers
- 22) Installed games (tetris) on TI-83 Plus
- 23) CMS management and web-server administration
- 24) Creating Social Media Marketing tool as a SAAS. Working with my wife on the backbone of the cloud based application that uses openstack and Linux servers in several continents. PHP, MySQL and Javascript are used for the application. Still under development ( the link to the thesis of my wife for that [https://publications.theseus.fi/xmlui/bitstream/handle/10024/103196/Valova\\_Olga.pdf?sequence=1](https://publications.theseus.fi/xmlui/bitstream/handle/10024/103196/Valova_Olga.pdf?sequence=1))
- 25) Enhanced the existing spam analyzer to protect against Russian spam. Created rules for SpamAssassin, tested and provided to Koodiviidakko OY. My thesis on this is available at [https://www.theseus.fi/bitstream/handle/10024/58548/Valov\\_Aleksey.pdf?sequence=1](https://www.theseus.fi/bitstream/handle/10024/58548/Valov_Aleksey.pdf?sequence=1)
- 26) Network troubleshooting with Wireshark and tcpdump at the Linux lab and LTSP project mentioned previously
- 27) Linux server with SVN setup for Creeng OY
- 28) Apache server administration for a web-store
- 29) Openmoko Neo Freerunner GTA02 testing. Installed desktop Debian with XFCE desktop to be run on the Samsung S3C2442 SoC (ARM). Ported, Installed and tested android on the device before the release of an adroid for it.
- 30) Created custom Linux distribution for computer security professionals. Initially based on Fedora using Kickstart. Changed the boot design as well as the overall design of the LXDE environment by adding custom menus, wallpapers, colors and sounds. Recompiled the kernel to support Atheros wireless chip. Created LiveCD for i686 and amd64 (an introduction to it is <https://www.youtube.com/watch?v=3qM00BbdOw8>)
- 31) Created a testing platform for exploits and honeypots using Jail
- 32) Developed my own methods for doing penetration testing (the order of the execution and reporting)
- 33) Reported numerous security problems to Kemi-Tornio University of Applied Sciences and methods to avoid them
- 34) Was teaching computer security, Java in the Oulu University of Applied Sciences as a part of extra study time for students
- 35) Helping to implement photo editing with imagemagick to the web-site <http://www.photofacefun.com/>
- 36) Have experience using Busybox, toolchains, git, json, svn, Rest API, OAUTH 2.0, crosstool-ng, netbeans, android studio, xcode, eclipse, coda, photoshop, buildroot, Jenkins, SystemD, , C++, SQLite, MySQL, PostgreSQL, Python, Perl, Bash, PHP, XML, Swift, Linaro, Raspberry Pi, ELDK