

Alexandre Kandalintsev

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Work Experience

Nov 2015 – **Infrastructure Architect, Backend Developer (Python), CoDesign.IO.**

now I have two roles in this project: software developer and infrastructure architect. As a developer, I work on our Django backend (Python). As an infrastructure guy I do ... well, pretty much everything required to run our production platform :). My duties and contribution:

- **Backend:** database query/layout optimization, caching, code sanitizing (pyflakes, autopep8), tests (py.test)
- **Infrastructure:** migration to private infrastructure, backups, monitoring, infrastructure-as-a-code (saltstack)
- **General duties:** architecture design and implementation, documentation, code review, supervision of interns, customer support.

Jul 2014 – **Site Reliability Engineer, Google, London, UK.**

Jan 2015 Support of AdWords/Double-click backends. Some highlights:

- Developed team-wide Service Level Objectives (SLO)
 - Defined objectives for supported projects
 - Created general guidelines for new projects
 - Designed and implemented SLO dashboard (*Python* and *JS/JQuery/NVD3*)
- Implemented script that exported job parameters to team dashboard (*Python*)
 - Queried database for running and recently terminated job
 - Parsed config files for periodic ("cron") jobs
 - Performed sanity checks: permission problems, duplicate jobs and other checks
- Maintained high SLO
 - Configured monitoring and alerting systems
 - Resolved production issues
- General duties:
 - Standardization and unification of production configuration
 - Review of proposed system designs
 - Performance analysis
 - System tuning

Nov 2007 – **Senior Unix Administrator, Agava Company, Moscow, Russia.**

- Jul 2010
- Managed a team of four system administrators
 - Solved the most complicated technical problems
 - Consulted VIP-clients and provided them with personal support
 - Gave trainings and seminars for system administrators on the following topics:
 - Apache web server course
 - Understanding Nginx and "10k clients" problem
 - Using tcpdump to watch traffic
 - DDoS defense methods
 - Basic database optimizing
 - Right backup strategies

Oct 2005 – **Unix Administrator, Agava company, Moscow, Russia.**

Nov 2007 Standard requirements and duties of a system administrator.

Feb 2005 – **Junior Unix Administrator, Agava Company, Moscow, Russia.**

Oct 2005 Provided the first line full-time technical support. Assembled, installed and maintained equipment in data centers.

Education

- 2010 – 2016 **PhD (defense March 2016)**, *Telecommunications*, University of Trento, Italy.
Thesis: “Fighting Application Interference”
- 2006 – 2010 **MSc**, *Computer Science*, University of Russian Academy of Education, Moscow, Russia.
- 2003 – 2005 **BSs (3 semesters)**, *Computer Systems and Networks*, Bauman Moscow State Technical University, Moscow, Russia.

Selected Personal Projects

Qemu named interfaces: Assign meaningful names to tap interfaces:
https://github.com/kopchik/patches/blob/master/qemu_ifname.patch

Virtual Machine Commander: a tool to orchestrate multiple virtual machines at once: github.com/kopchik/vmc

Parallel Downloader: downloads chunks in order so video files can be viewed before they completely downloaded: github.com/kopchik/pdl

IPv4/IPv6 proxy: enables IPv6 for legacy applications:
github.com/kopchik/proxy64

Publications

A. Kandalintsev and R. Lo Cigno. A Behavioral First Order CPU Performance Model for Clouds’ Management. In *Proc. of ICUMT’12*, 2012.

A. Kandalintsev, R. Lo Cigno, and D. Kliazovich. Profiling Cloud Applications with Hardware Performance Counters. In *Proc. of ICOIN’14*, 2014.

A. Kandalintsev, R. Lo Cigno, and D. Kliazovich. Estimation of performance isolation in cloud environments (submitted). *Software: Practice and Experience*, 2015.

Skills

OS Linux, FreeBSD

Programming **Advanced:** Python

Intermediate: shell scripting

Basic skills: SQL, Java, JavaScript/LiveScript, C, C++

Tools Valgrind, GDB, Qemu/KVM, perf, OProfile, OpenVpn, VCS and other tools

Languages

English fluent (C1)

Russian native

Hobbies

DIY electronics (microcontrollers, robot platforms and interaction with the real world).