

# Alexandre Kandalintsev

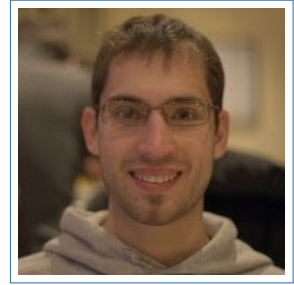
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## Work Experience

June 2016 – **One Man Army, AdminCup** (*no site yet*).

now I always dreamed about having a nice pet project and here the dream come true :). It's an e-learning system for system administrators. The first demo is yet on its way, but I can summarize the technologies I'm using:

- PostgreSQL + SQLAlchemy for database
- ZeroMQ for RPC
- aiohttp (Python) + nginx for backend
- Ansible for deployment / automation
- QEMU / LXD for isolation and containers

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

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:
    - Understanding Nginx and "10k clients" problem
    - Using tcpdump to watch traffic
    - Basic database tuning and optimization
    - Right backup strategies

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

Nov 2007 Standard requirements and duties of a system administrator.

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## Education

2010 – 2016 **PhD**, *Telecommunications*, University of Trento, Italy.

Thesis: “Application Interference in Multi-Core Architectures: Analysis and Effects”

2006 – 2010 **MSc**, *Computer Science*, University of Russian Academy of Education, Moscow, Russia.

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## Selected Personal Projects

**Qemu named interfaces:** Assign meaningful names to tap interfaces:  
[https://github.com/kopchik/patches/blob/master/qemu\\_ifname.patch](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](https://github.com/kopchik/vmc)

**Parallel Downloader:** downloads chunks in order so video files can be viewed before they completely downloaded: [github.com/kopchik/pdl](https://github.com/kopchik/pdl)

**IPv4/IPv6 proxy:** enables IPv6 for legacy applications:  
[github.com/kopchik/proxy64](https://github.com/kopchik/proxy64)

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## 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 (to appear). *Software: Practice and Experience*, 2016.

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## Skills

Programming **Advanced:** Python

**Intermediate:** shell scripting

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

Tools Valgrind, GDB, Qemu/KVM, Docker/LXC/LXD, perf, SaltStack, OpenVpn, VCS and other tools

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## Languages

English fluent (C1)

Russian native

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## Hobbies

DIY electronics (STM32 microcontrollers, robot platforms, linear power supplies, interaction with the real world).