

# Andrey A. Smirnov

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CITIZENSHIP      Russia

BIRTHDAY      Apr 28th, 1982

OBJECTIVE      Create remarkable service, application or technology. Improve my skills and improve quality of software. Develop product that is useful.

TECHNICAL SKILLS      Development team leadership: gathering requirements, writing technical documentation, building up a team, establishing development process, quality control, testing and deployment, configuration and support.

Experience in software development from backend code up to client-side, creating and implementing architecture for scalability and high availability.

Programming languages: Go, Python, C/C++, Ruby, PHP, JavaScript. Some others: Pascal, Perl, UNIX shell scripting, Prolog, Assembler, ...

Frameworks: Twisted, Ruby on Rails, Boost, ...

Some keywords: PostgreSQL, MySQL; memcached, Redis, MemcacheDB; ØMQ, beanstalkd, RabbitMQ; Linux, FreeBSD; Chef, Zabbix.

## PROFESSIONAL EXPERIENCE

**EMC<sup>2</sup>** (EMC St. Petersburg Development Centre LLC)

*Sr. Consultant, Software Development*

**May 2015 – current**

- Cloud Services Team, Rubicon.
- Building object-based cloud storage platform to store, archive and access unstructured content at scale.
- Working as part of distributed team, software development.

**mc2 software** (MC2 Software LLC)

*Backend Team Lead*

**October 2014 – April 2015**

- Leading development of backend projects for major Russian mobile carriers.
- **Smotri+**: Sport events, video, statistics.
- Design and development of platform for delivery of IPTV, PVR, VoD content.

*Independent Developer*

**November 2013 – September 2014**

- **aptly**: Debian repository management system.
- **Redis Resharding Proxy**: Redis re-sharding without service interruption.
- **Workshop on Building Scalable and Reliable Software Systems**

**Skype/Microsoft**

*Product Engineering Manager*

**January 2011 – October 2013**

- Team leadership: managing async communications backend development.
- Architecture, design, specifications, communication with product team.
- Development of fault-tolerant and high available backend system.
- Operations, infrastructure: monitoring, configuration management, distributed logging, etc.

- Launch of Skype Video Messaging product.

Skype had been acquired by Microsoft on May 2011, I continued to work at Skype Division (Microsoft).

## Qik (Qik RU LLC)

*Web Team Lead*

**May 2009 – December 2010**

- Development manager, building up effective team, establishing transparent development process.
- **Qik.com**: website, client API; metadata storage and processing; scalability. Website redesign and huge code refactoring.
- **Qik Push Engine**: delivery of object changes in real-time; subscription for filtered streams with complex conditions; managing notifications delivery in social graph.

Qik had been acquired by Skype in January 2011.

## NetStream (Netstream LLC)

*Chief Technical Officer (Lead Developer)*

**October 2005 – April 2009**

- Hiring team, managing development process, teaching, lead developer.
- Customer relations, building requirements, quality control, project planning.
- Projects: **Smotri.Com** (custom skins, API), **DELit.Net**, **AudioFind.Ru**, **Yanga!**, **MediaRight**.
- MDC Instant Messenger **MDC**: server-side (Python, Twisted) and client-side (C++, Qt) parts.
- NetStream Media Server **NMS** (pyFMS): Flash broadcasting server (RTMP) with relaying support (much like Adobe FMS).
- **SpamFighter**: web service for spam and other unsolicited content filtering in real-time.

## Moscow State University

*Instructor*

**July 2004 – May 2008**

- Faculty of Computational Mathematics and Cybernetics
- Practical course for 2nd year students, including: C/C++, formal grammar, parallel process programming in UNIX and object-oriented programming concepts.
- Software development in Data Mining area.

## NetStream

*Web Developer/System Administrator*

**January 2003 – September 2005**

- Design, development and operations for projects: **DELit.Net**, **AudioFind** and others.
- Doing full-stack from coding up to hardware.

## eHouse

*Web Developer/System Administrator*

**February 2001 – June 2003**

- Projects: **Damochka** (dating and entertainment service), **RMP** (music service), **InOut** (shop/cinema/restaurant catalog), **BannerBank** (advertising banner meta-network)
- Full-text search engine *pointer* (like today's "sphinx").
- Apache module rendering city maps over HTTP (like eAtlas, Google Maps).
- "Artificial intelligence" module ("Boltun") for Damochka project.

Institute of Philosophy, RAS

*System Administrator*

**January 2000 – January 2001**

- Internet gateway support and other network services (UUCP, sendmail, Apache, etc.)

CONFERENCE  
TALKS

Budapest Devops Meetup Nov 2013: My DevOps Experience and Projects

CONFERENCE  
TALKS (IN  
RUSSIAN)

Golang Moscow Meetup July 2014: Console applications in Go

Devops Meetup Moscow Jan 2014: aptly - Debian repository management

Stachka and RIT++ 2013: Effective teamwork

HighLoad++-2010: High-performance application development using Twisted/Python

RIW-2009: Caching in Web

HighLoad++-2009: Twisted – asynchronous network framework on top of Python

HighLoad++-2008: Web, caching and memcached

RIT-2008: Flash broadcasting server (RTMP) written in Python or high-performance network services in Twisted

RIT: High Load-2008: Video content delivery to end-users

OPEN-SOURCE  
PROJECTS

**aptly**: Debian repository management system.

**Redis Resharding Proxy**: Redis re-sharding without service interruption.

**txZMQ**: ØMQ driver for Twisted.

**SpamFighter**: web service for spam and other unsolicited content filtering in real-time (for web applications).

**FMSPy**: RTMP server written in Python using Twisted Framework.

Other open-source activity at **GitHub** and **Launchpad**.

EDUCATION

**Moscow State University**

Ph.D. student, Faculty of Computational Mathematics and Cybernetics 2004-2008

- Adviser: Professor Igor V. Mashechkin
- Area of study: high-performance computations
- Thesis proposal: *Automatic checkpoint placement in MPI programs*

M.S., Faculty of Computational Mathematics and Cybernetics, 1999-2004

- Department: Computer Systems Architecture
- *Magna cum Laude*
- Specialization: applied mathematics and system programming
- Thesis topic: *Research and implementation of checkpointing subsystem for parallel programs in message-passing environments*