

Vlad Arkhipov

Staff Software Engineer. Distributed systems, identity, infrastructure.

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Twenty-two years building distributed systems. Since 2018 — identity and access management for Yandex Cloud: millions of authorization requests per second, with no room for error. Lately SIEM and CNAPP: turning a firehose of security events into something an analyst can act on.

I build reliable systems that hold up under heavy load. I like clean, efficient code that someone can still read in ten years — the PostgreSQL extension I wrote in 2013 is still in use by people I have never met.

WORK

YANDEX 2023 — NOW 3 YEARS

Staff Software Engineer

June 2023 — present · Yandex Cloud · Belgrade, Serbia

Back to hands-on engineering after the management track: designing and building high-load systems in the SIEM, Security Deck and Smart Web Security teams.

NEBIUS 2022 — 2023 7 MONTHS

Senior Engineering Manager

December 2022 — June 2023 · Nebius · Amsterdam, Netherlands

A cloud provider being built from scratch for GPU workloads. I led the security services track there.

YANDEX 2016 — 2022 6 YEARS

Senior Engineering Manager

May 2019 — December 2022 · Yandex Cloud · Moscow, Russia

Two platform systems: identity and access management, and resource management.

Engineering Manager

June 2018 — May 2019 · Yandex Cloud · Moscow, Russia

The first year of identity and access management.

Lead Software Engineer

December 2016 — June 2018 · Yandex · Moscow, Russia

Java, real-time stream processing, ZooKeeper, MongoDB.

IRKUTSK DIAGNOSTIC CENTER 2007 — 2016 10 YEARS

Engineering Manager

July 2014 — December 2016 · Irkutsk Diagnostic Center · Irkutsk, Russia

Java EE (WildFly, clustering and HA, Hibernate Envers), JavaFX, XSL-FO (Apache FOP), PostgreSQL.

I led three teams, ten engineers in total, and kept my hands in the code: reviewing and writing the critical parts, working through requirements, training staff and interviewing candidates. The system was a complex distributed ERP for a large healthcare enterprise, written mainly in Java EE and running on CentOS, WildFly, Mondrian BI and PostgreSQL, with web-based and JavaFX front ends powered by REST, JSON and WebSockets.

Replacing the legacy document renderer with XSL-FO templates let end users customize medical documents themselves. The hard part was performance on large documents — and it was a good excuse to brush up on computer typography.

My work in this position began with replacing the legacy document rendering system with XSL-FO templates, generating medical documents as PDF through Apache FOP and Saxon. Other projects were mostly upgrading legacy UI with JavaFX and ReactFX, refactoring the domain model, and integrating third-party services — including online payments through Sberbank over SOAP.

Until then my work had been almost entirely technical; this role tested my judgment about people as much as about systems.

Senior Software Engineer

April 2010 – July 2014 · Irkutsk Diagnostic Center · Irkutsk, Russia

Java EE (JBoss, Hibernate, WebSockets), OSGi, PostgreSQL (PL/pgSQL), JTAPI, SMPP.

I started by leading a team of two on the migration from MaxDB to PostgreSQL. The total scope was approximately two million lines of application code. There were significant technical challenges: the database had to be bitemporal, managing time-varying data and keeping a history of all data changes. We completed the project on time in December 2010.

The history requirement is what later became **temporal_tables**.

The next project migrated the application server while keeping legacy applications operational. Most of the work involved managing a team of two or three developers, supervising and training staff, writing and tuning the most critical parts, and reviewing the code of others.

Aside from routine integration with SMSC providers over SMPP and JasperReports Server, we integrated the system with our Avaya phone system (AES and WFO) using JTAPI. The most interesting part was building a solution to aggregate and distribute real-time events from the phone station across clients over WebSockets.

As a side project: an automated scheduler for patient appointments. The problem is NP-hard in general — optimal solutions came from IDDFS at small dimensions and simulated annealing at large ones.

Software Engineer

February 2007 – April 2010 · Irkutsk Diagnostic Center · Irkutsk, Russia

Java SE (multithreading, JNI, Swing), C++ (DirectX, Video4Linux, ffmpeg), DICOM (dcm4che), MaxDB, Mondrian ROLAP (MDX).

I worked on a range of projects: implementing an ERP, building a data warehouse, and writing video capture software for medical equipment. I had never written Java and never built anything cross-platform, so the first months were a steep climb through both the language and the system.

Subsequently I created cross-platform video streaming and recording software that streams and stores video from DICOM and non-DICOM modalities to a PACS server. It had to run on a variety of systems, so we wrote two implementations — DirectX and Video4Linux/ffmpeg — and integrated them with the clients through JNI. Threading and streaming were the hard part: not every codec is frame-based.

Also a minor part in the client portal built with GWT and the BI server on Mondrian ROLAP and PostgreSQL.

IRKUTSK STATE TECHNICAL UNIVERSITY 2004 – 2007 3 YEARS

Junior Software Engineer

January 2004 – February 2007 · Irkutsk State Technical University · Irkutsk, Russia

Microsoft SQL Server (Transact-SQL), Borland C++ Builder.

OPEN SOURCE

temporal_tables

PostgreSQL extension · 1.0k ★ · 52 forks

Maintains an audit trail of changes to PostgreSQL tables. We never used it as originally intended — we switched to Hibernate Envers — but other people have found it useful.

acl

PostgreSQL extension

Provides a mechanism to control access to data using ACLs. Works either with the PostgreSQL roles system or with application-specific roles and users.

PATENTS

Arkhipov V.V., Dedov A., Sidorov E., Vyaznikov A. Method and system for managing access to resources in an identity and access management system. *Patent RU 2852932 C1*, Rospatent. Application 2025105094, filed March 5, 2025, published December 16, 2025. Assignee: Yandex LLC.

TALKS

Arkhipov V.V. An engineer's bestiary: under the hood of Yandex Cloud Security [in Russian]. *Young Con*, Yandex, Live Arena, Moscow, June 25, 2026.

Arkhipov V.V. YCDR from the inside [in Russian]. *Cloud Security Day*, Yandex Cloud, Moscow, June 19, 2025.

Arkhipov V.V., Namestnikov Y. How we do near-real-time protection in Yandex Cloud: AI in processes and technologies. *PHDays Fest*, Luzhniki, Moscow, May 23, 2025.

Arkhipov V.V. Order out of chaos [in Russian]. *Cloud Security Meetup*, Yandex Cloud, Moscow, April 25, 2024.

PUBLICATIONS

Arkhipov V.V., Namestnikov Y. Near-real-time protection inside the cloud: turning an avalanche of security events into useful data [in Russian]. *Habr*, Yandex Cloud & Yandex Infrastructure blog, February 10, 2025.

Martyanov V.I., **Arkhipov V.V.**, Katashevzev M.D., Pakhomov D.V. Logic-Heuristic Methods for Solving Combinatorial Problems of High Complexity. *Modern Technologies. System Analysis. Modelling*, 4 (28), 61–67, 2010.

Arkhipov V.V., Konstantinov Y.M., Martyanov V.I. Logic-Heuristic Methods for Considering Secondary Structure of RNA. *Modern Technologies. System Analysis. Modelling*, 1 (25), 162–167, 2010.

Martyanov V.I., **Arkhipov V.V.**, Pakhomov D.V. Methods of Rational Management and Maintenance Planning of Road Networks. *Modern Technologies. System Analysis. Modelling*, 2 (22), 42–50, 2009.

Martyanov V.I., Pakhomov D.V., **Arkhipov V.V.** Review of Methods of Maintenance Planning of the Road Network of the Irkutsk Region. *New Technologies in Investment and Construction Activities*, 1, 123–129, 2005.

EDUCATION

MSc in Applied Mathematics and Computer Science

September 2001 – June 2006 • Irkutsk State University

With honors. Selected courses: software engineering, analysis of algorithms, database theory, cryptography, game theory, discrete mathematics.

Information Security

September 2001 – June 2006 • Irkutsk State University

With honors. A second degree, earned in parallel with the first.

Certifications

2017	Oracle Certified Expert, Java EE 6 Enterprise JavaBeans Developer
2016	Oracle Certified Expert, Java EE 6 Java Persistence Developer
2015	Oracle Certified Professional, Java SE 8 Programmer
2015	Oracle Certified Associate, Java SE 8 Programmer