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September 14, 2021

1 About

Software architect, programmer and researcher with 9+ years of experience. Strong background in software architecture, distributed/concurrent systems and storage, decentralized systems, micro-services. Programming on Java, Go, JavaScript, C, C#, Python. Active [open-source author and contributor](#), maintainer in some open-source organizations.

I have an experience in designing distributed systems from scratch, creating micro-service architecture with Kubernetes, building web applications and components for existing huge infrastructure, making web crawlers, data processors on Apache Hadoop, cloud infrastructure and services, search systems, high performing scalable services with limited resources, mobile applications, REST APIs, web back-ends and CLI applications.

Can write system specifications with TLA^+ , familiar with $L^A T E X$.

2 Jobs

June 2012 Self-employed — Created accounting application server and desktop app for friend's book-store business. C#, MySQL, WF;

- January 2013 Developer in [Mercury development](#) — I worked on different projects there: 1) Android-TV application to browse and display documents and presentations from cloud storage (Android, Java, Apache-POI, C, JNI)
2) Multimedia distributed storage (embedded system): provide RPCs for data access layer, multimedia data processing, background replication (Java, C, Embedded-Jetty, JDBC, Postgres, Linux)
3) Fitness and food services: extended food search system in a high-load web-server; fitness-tracker synchronization protocol implementation for Android devices; worked with tracker data exchange protocol on BLE for mobile applications; created middle-ware services for data processing and replication. (Java, Spring, Solr, Lucene, Android, BLE, HTTP, NodeJS, Redis)
- November 2015 Senior developer in [Eventicious](#) startup — mobile application for conferences and events. Created cross-platform prototype for Android and iOS using Xamarin; Implemented Android base application on Java. Created CI/CD to build and deploy new event applications in one click with customer data. (C#, Xamarin, Java, Android, iOS, Azure).
- January 2018 Self-employed — worked with customers directly and found teams to create a products, sometimes participated in projects as a freelancer. 1) Crypto-currency exchange platform, reliable micro-service infrastructure for fast exchange operations (Java, Go, Kubernetes, gRPC, Blockchain); 2) [Zerocracy](#) – automated project management platform for developers (Java, S3, SQS); 3) Web-crawler and data analyzer system for health-service – downloaded pages from a few millions of websites, parsed and pre-processed automatically, submitted to AWS-MTurk for manual processing, collected the dataset (Java, Python, Apache Hadoop, Apache Nutch, AWS, Terraform); 4) Auto-scaled Go server for custom statistics collection, storing and aggregation (Go, AWS, HTTP); 5) Custom reverse proxy for intranet providing authentication and authorization for public access to local services (Java, Java-servlets, Okta).

January 2020 Huawei — principal engineer. Working in system programming research and development laboratory. 1) Cloud software artifact storage – researching for different repository storage organization, creating artifact management service constructor SDK to process repository metadata, contributing to OSS project to improve dependencies (Java, reactive-streams, NIO, VertX, S3, etcd). 2) Distributed git repository management – researching consistency issues of existing solutions, discovering and reproducing consistency issues, building atomic transaction commit protocol for data replication (Go, *TLA*⁺, 2PC, 3PC, Paxos-commit).

3 Most valuable projects

This is the list of most valuable public (open source, not under NDA) projects I've participated in alphabetical order:

- Artipie** (Maintainer) Binary artifact management constructor and service. Provides components for building custom artifact manager, processes different artifact repository metadata formats (such as Maven, NPM, Docker, and many other), provides assembly as a self-hosted service, and deployed as a free invite-only public server for hosting artifacts from open-source projects. github.com/artipie.
- DeGitX** (Maintainer) Distributed git repository manager. Scale up the read capacity huge amount of git repositories by replicating repository data and providing strong consistency of replication. github.com/cqfn/degix.
- GitLab/Gitaly** (Contributor) Git RPC service for handling all the git calls made by GitLab. gitlab.com/gitlab-org/gitaly.
- Gitstrap** (Author) CLI helps to bootstrap GitHub repositories. User writes configuration files for this tool, and it creates ready to use repository on GitHub with initial documents, branch-protections, CI/CD, etc. github.com/g4s8/gitstrap.
- OOT** (Author) A framework and Maven plugin for object-oriented testing. github.com/g4s8/oot/.

RIO (Author) Java library for reactive input-output operations, initially was a part of Artipie project, the goal is to provide configurable and customizing IO providers for different resources. github.com/cqfn/rio.

Zerocracy (Contributor) Automated project management GitHub bot to help organizing a software team, organizes a scope of work, assign the most relevant performer, estimate tasks, pay for result: github.com/zerocracy.

4 Education

Not finished (2008-2011): Bauman Moscow state technical university, Aerodynamicist.

5 Links

1. My GitHub account: github.com/g4s8
2. My public research documents: www.g4s8.wtf/research
3. StackOverflow: stackoverflow.com/users/1723695
4. My personal blog about software development: www.g4s8.wtf/posts
5. Email: g4s8.public@gmail.com
6. Telegram: [@kirill_g4s8](https://www.instagram.com/kirill_g4s8)