Sergei Shilko

Head of Engineering

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English, Russian, German, Polish

BACKGROUND

ABOUT

IT Professional with 15+ years experience in backends, mobile APIs and AWS platform. Recently i was working at Tandem: an online language exchange app to learn languages, chat, video call, book tutors, get certified in language and find new friends.

WORK EXPERIENCE

Head of Engineering at Tandem,

Jan, 2016 - Present

Support backend code & infrastructure, grow & manage team, more analytics, long-term goals. Ensure that the business is capable of building and running software at scale

- Scaled backend infrastructure from 1000 RPM to 80000 RPM, from 100kDAU to >1mDAU and <50ms API response time
- Scaled backend capacity from 1000's of users to >15M users
- Applied cost savings plans and utilized AWS Spot instances to reduce costs by 32%
- Hired multiple AI/ML, Data, Backend and devOPS engineers.
- Migrated monolithic backend application into 15 independent services
- Introduced Golang & AWS Keyspaces/Cassandra, DynamoDB for high-load group chat application storage
- Promoted AWS Best Practices, executed AWS Well-Architected framework together with AWS solution architects
- Managed >40 EC2 servers across 3 AWS regions, migrated from AWS EC2 Classic to AWS VPC
- Updated codebase from PHP5 to PHP 7.4, Go 1.14 Docker 19, PHPUnit 9
- Supervised development of serverless microservices in Java/Kotlin/Golang & DynamoDB
- Split monorepository into >30 separate repositories with separate CI/CD
- Executed multiple refactoring projects in code, infrastructure, raw storage and databases
- Maintained backend roadmap and technology radar tech-radar.opensource.tandem.net based on ThoughtWorks
- Improved user retention analytics, subscriptions and overall revenue tracking
- Updated realtime messaging server RabbitMQ, secured authorization, added 3rd websocket/MQTT browser client
- Added support for in-app purchase gifting, subscription hold, grace periods, geo-search.

- Increased application infrastructure and performance/APM monitoring automation and alerting via NewRelic
- Built full CI/CD pipeline on AWS Pipeline inc. Blue/Green deployments and AWS ASG/AutoScaling
- Improved China & SEA connectivity via transparent HAProxy, ICP/Hosting issues resolved
- Built internal business KPI, retention, engagement and revenue tracking systems
- Enforced PHPUnit & integration testing, code reviews & code style policies
- Migrated application services into containers (Docker)

Senior FullStack Software Developer at Tandem,
Jun, 2013 - Jun, 2016 ⏱ 3 years

Mature backend solutions for audio/video (tele)communications software. Developing public API for mobile clients.

- Refactored of old inherited prototype codebase into working product, did first production release
- Celebrated first 50 users sign-up on GA dashboard and first promotions on iTunes
- Implemented json-rpc API for mobile app based on Adobe Flex and added support later for native iOS & Android app
- Deprecate legacy on-premise hosting and migration into AWS EC2-Classic
- Celebrated 2015 Most innovative app of the year (Apple iTunes)
- Implemented custom framework with open-source components
- Reduced API response times from >=2000ms to ~100ms
- Implemented critical app functionality: messenger, userfeed, email-reminders, search and more

Lead Software Developer at Yangutu LLC,
Nov, 2011 - Nov, 2012 ⏱ 1 year

Working on web based social network.

- Added API for supporting external 3rd party Game-platform add-on's
- Added AMF Flex/ActionScript API Server for import/export of data to mobile platform
- Added Facebook, Instagram, VK and other social networks integrations
- Extended import/export API's

Software Engineer at eHarmony Inc,
Aug, 2008 - Sep, 2011 ⏱ 3 years 1 month

eHarmony Reporting and Management Tools for Risk Management team.

- Developed CMS/RMS Internal service from specification to manage and automate risks and fraud detection
- Working with sensitive client payment information
- Extended CMS/RMS service with flexible and configurable multi-role authentication system for different regions
- Added support for localization and translation of CMS/RMS
- Added analytics and audit tools for tracking and optimizing team (users or the CMS/RMS) performance
- Received feedback: UI/UX, bugs, new features suggestions and implemented

Software Engineer at IponWeb,
Aug, 2007 - Sep, 2011 ⏱ 4 years 1 month

SOAP/Rest API for real-time AD Exchange platform - RightMedia

- Worked on SOAP-API for high-load real-time advertising platform at scale
- Heavily extended and rewrote existing funtional test coverage, integrational e2e testing
- Covered many new edge cases in tests which lead to fixes in critical API parts

Software Engineer at Yahoo!,
May, 2008 - Mar, 2009 ⏱ 10 months

AD Exchange API - RightMedia

- Refactoring tests, code and documentation, working with remote Yahoo developers team. SOAP API. Perl. PHP5

SKILLS

AWS

EC2 · ELB · Lambda · S3 · RDS · ElastiCache · VPC · CloudFront · Route 53 · API Gateway · CodeCommit · CodeBuild · CodeDeploy · CodePipeline · CloudWatch · IAM · ECR · Cognito · Certificate Manager · WAF & Shield · SQS · SNS · Mobile Hub · PinPoint · WorkMail · Organizations · DynamoDB · Secrets Manager

Backend

PHP · MySQL · Redis · Percona · SphinxSearch · ManticoreSearch · Docker · Beanstalkd · RabbitMQ · AMQP · MQTT · Puppet · Nginx · Git · PHPUnit · NewRelic APM · HAProxy

EDUCATION

Experimental psychology, MSc Psychologe Pädagoge, Grodnenski Dzjaržauny Universitet
Sep, 2005 - Sep, 2010

Elektrische Energietechnik (Power engineering), MSc Electrical Engineering, GGPEK Elektrotechnik College
Sep, 2000 - Sep, 2005

AWARDS

AWS Certified Solutions Architect - Associate (SAA) , 3GV5K7KKC14Q17W1
Awarded on: Dec 13, 2018

Telc Deutsch B1 Zertifikat , 0503718
Awarded on: May 01, 2018

AWS Certified Cloud Practitioner , 3B28554BK2EQ1PSD
Awarded on: Nov 21, 2020

INTERESTS

Events

Belin - AWS Summit 2014, 2015, 2016, 2017, 2019 · KubeCon + CloudNativeCon 2018, 2019

Podcasts and Forums

Golang

Reading

Management · Agile · Scrum · Sci-Fi · Fantasy · Horror · Clean Code · TDD · Architecting for the Cloud · Best practices · High performance · IT novels · Marketing and selling high-tech products · Scalable and maintainable systems · Algorithms · Managing successful projects · Building teams · Software architect wisdom · Isaac Asimov · Robert Heinlein · George Orwell · Terry Goodkind · Alan Kuper · Tom DeMarco

REFERENCES

Arnd Aschentrup Co-Founder & CEO at Tandem / www.tandem.net

> Sergei is an outstanding engineer! We have worked together very closely for more than 7 years and during this time Sergei played a decisive role in Tandem's success. For example, Sergei built Tandem's complex, high-load backend application, infrastructure and API initially single-handedly, later leading, mentoring and developing our growing backend engineering team. Our backend serves more than 10 million community members with close to perfect uptime, high efficiency and performance across four separate client applications. Sergei always goes above and beyond the day to day responsibilities to solve to a broad spectrum of engineering and IT challenges, such as connectivity for our members in mainland China, building analytics infrastructure + tools and working with all teams to find the best solutions.

Mark Dalby Chief Technology Officer at Tandem / www.tandem.net