

Alexander Kachanov

Java / J2EE developer

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Objective

Looking for a full-time position of a project manager or a project lead Java / J2EE in a financial institution in Tokyo, Japan.

Experience

Core Java / J2EE	since 2000
Financial trading technologies	since 2008
Web-application development	since 1997
Total IT experience	since 1992

My Strongest Skills

Lead Core Java Developer:

- Core Java programming for high performance, low-latency, highly scalable concurrent applications for financial trading industry; Java performance engineering and full application lifecycle support

Financial Technologies experience:

- Familiarity with the technologies used in front office, middle office and back office
- Hands-on experience of developing and supporting market connectivity applications, order management and order execution systems, trade cost analysis systems, market data engines, and front office middleware
- Solid background knowledge of different types of financial instruments, life cycle of the trade orders
- Excellent view of the whole picture of electronic trading technologies: high-frequency trading, direct market access, algorithmic trading, ultra-low latency market access, client connectivity

Project Management skills:

- Organizing and coordinating development process using Agile methodology
- Collecting requirements from business side and communicating progress to business side; supporting business side feedback loop
- Tracking development progress and quality of code; QA testing and deployment to production environment
- Supporting other developers of the team by sharing experience and mentoring on best development practices and design patterns
- Designing applications architecture and choosing best technologies and solutions to match requirements and meet the budget within time constraints

Work Experience

2014.09 – present **Bank of America Merrill Lynch (Japan, Tokyo)**

Role: 2019.01 – present: VP, Java Developer for Portfolio / High Touch Equities Trading technology

Experience: Core Java, FIX Protocol, C#.NET, multithreading and concurrency, TibcoEMS

Order Management System for Equities

As a part of global OMS team my current task is develop and improve Order Management System for Portfolio/Program and Single Stock equities trading flows. My daily tasks are responding to traders requests and questions, collecting requirements from them, conducting analysis and planning and implementing those requirements into code. I'm also providing help to Level 1 PROD support team, coordinating production releases, interacting with other team members and regional managers as well with other teams responsible for other systems with which our OMS is integrated: Swaps trading system, Fidessa OMS, Booking and Reporting systems, Stock loan systems, Electronic trading technology stack. I personally implemented a component that allowed traders to send orders to Instinet broker for VWAP fills.

System performance and resilience

Our team pays close attention to performance of OMS and tries to use effective approaches in system design and writing code to mitigate risks, eliminate bottlenecks and meet performance requirements for busy trading days especially during regional market events.

Japan equities trading

I was directly responsible for adapting Global OMS code to Japanese equities market and regulations to support Agency and Risk desks in Japan. Completion of this project in Japan in Year 2019 allowed to decommission a legacy homegrown and expensive vendor trading systems, simplified support, reduced support costs.

Market regulations support

I developed piece of code in OMS that facilitate the reporting of trades to regulatory organizations in Japan and Hong Kong.

Technologies used: Core Java 8, C#, Protocol Buffers, JMS/TibcoEMS, Oracle DB

Tools used: Eclipse IDE, Gradle, Jenkins, JUnit, Confluence, Git, JIRA, BitBucket

Role: 2014.09 – 2018.12: VP, Java Developer for Futures and Options and OTC Clearing Technology

Experience: Core Java, FIX Protocol, TCP/IP, multithreading and concurrency, Java NIO, Java Native Interface, C++ (basics)

Responsibilities:

- BAML's market connectivity for APAC region derivatives exchanges: development, testing, release and L2 support
- Collection and analysis of requirements coming from trading desk and sales for changes and improvements
- Algorithmic trading development for APAC derivatives markets
- Order management system development for APAC derivatives and equities trading

This job demands from me great attention to details and quality of code, understanding of derivatives trading nuances, multitasking with constant concentration on priorities, and every-day interaction with my team members in different regions and members of other teams from Middle and Back Office technology, business analysts, desk traders, clients' onboarding division and 1st line of PROD support.

My daily work is related to performance improvements of market connectivity platform, adding new required functionality, refactoring the code for better flexibility, and fixing bugs.

Derivatives Exchanges Connectivity

On regular basis I make changes to the Market Connectivity code to meet new requirements of exchanges, compliance and regulations. Also supporting new instruments, changes in trading hours, and changing code to support new trading engines of OSE/JGATE, SGXFO, SFE/ASX24 exchanges.

Derivatives Algorithmic trading

Writing automated tests for BAML's proprietary algorithmic trading engine. Adding new derivative markets to this algo-engine and supporting release to production.

SFE Boomerang project

Design, development, deployment and support of algorithmic application to trade Australian Bond Futures Calendar Spreads at SFE (Sydney Exchange). The goal of application was to put client orders at top positions of the order book immediately after the opening of the market. Environment includes colocation, low-latency computing and connectivity hardware, tuning of Linux operating system and Java Virtual machine for top performance and predictable results. Project successfully runs since Dec.2015 every other 3 months and delivers 30% of annual profits of BAML's Australia trading desk.

Silver project

With limited resources, short time and a team of 4 developers and 1 product owner delivered a trades futures clearing application as a replacement of a vendor service that was supposed to be decommissioned in 6 months. Application was delivered ahead of schedule, with good quality of code and works since then without any production issues which was recognized by management as an excellent achievement. Application is a mix of AngularJS/HTML code for front-end and Java/Spring Boot/C++ JNI code at the back end.

Technologies used: Core Java 8, JNI, C++, FIX Protocol 4.2, 4.4, 5.0, JMS/TibEMS, Oracle database

Tools used: Eclipse IDE, Maven/Gradle, TeamCity/Jenkins, JUnit, Confluence, SVN/Git, JIRA

2012.01 – 2014.08 Bank of America Merrill Lynch (Japan, Tokyo) as contractor

Roles: Java Developer for DMA Derivatives Exchange Connectivity

Experience: Core Java, FIX Protocol, TCP/IP, multithreading and concurrency, Java NIO, Java Native Interface, C++ (basics)

As a member of international team of developers I was responsible for collecting requirements for new features and bug fixes, development, code review, builds and deployment of code to QA environment, coordinating change management and deployment

to PROD environment to meet sometimes tight schedules and important milestones, and clients' expectations and demands, with providing 2nd line of support.

Derivatives Exchanges Connectivity

During this period I developed and deployed connectivity modules for the following derivatives exchanges of APAC region: Tdex+ Tokyo Derivatives Exchange (Liffe Connect API C++/Java), Nasdaq OMX Nordic (FIX), Taiwan TAIEX (FIX), Thailand TFEX (FIX), Korea KRX (proprietary API C++/Java), Malaysia MDEX (FIX), Tokyo TFX (FIX), Australia SFE (FIX).

Order management system

Developing components for BAML's proprietary Order Management System / Execution Management System and integrating it with middle and back office systems. The nature of projects gave me insight into the concepts of a modern trading order management system, client and market connectivity, order routing, order validations, position management, instruments data and market data feeds management.

Performance Improvements And New Features

Worked on performance improvements of market connectivity platform, adding new required functionality, refactoring the code for better flexibility, and fixing bugs.

Technologies used: Core Java 6, JNI, C++, Liffe Connect API, FIX Protocol 4.2, 4.4, 5.0, JMS/EMS, Oracle database, Apache Camel

Tools used: Eclipse IDE, Maven, MinGW C/C++ compiler, JUnit, Confluence, SVN, JIRA, Jenkins

2010.05 – 2011.12 Mizuho Securities (Japan, Tokyo)

Roles: Java/J2EE/Web-developer, Assistant Manager

Experience: Java, Spring, Tomcat, Flex

Architectural design, implementation, testing and deployment of post-trade analytics web-application for institutional clients of Mizuho Securities. This is the second application of Equity Web Portal project of Mizuho developed for prime institutional clients developed by Electronic Trading Technology department of Mizuho Securities Co. Ltd.

TradeView application

This application allows Mizuho's institutional clients to make Trade Cost Analysis of execution of their orders by Mizuho's traders and algorithmic engine, to compare performance of order execution with a list of benchmarks and to view the lifecycle of each order execution using visually rich charts and grids. After presentation to CEOs of ATS in Japan, TradeView was named the best tool for institutional clients to evaluate quality of execution of their SOR orders.

See report here: http://www.thetradenews.com/news/Regions/Asia/Mizuho_unveils_new_Asian_analytics_suite.aspx

My role as team member and lead developer was to develop general design of the application, write implementation code (Java/Flex), write documentation, and provide support to other team members and to the project manager. The 1st stage of this application was finished in 3 months due to experience the whole team gained while developing StockView project and due to extensive reuse of code, components, design patterns and solutions based on previous project.

Flow360 application

Along with TradeView I was supporting and refactoring Flow360 application created for sales traders to track trading activity of institutional clients of Mizuho. Flow360 was refactored and improved to bring it to the level of quality of other applications in EWP suite.

Middleware projects

I was also responsible for development and support of other two utilities of the project: tools that was interfacing with Fidessa Export servers Reuters Market Data system and Reuters Tick Capture Engine. These applications heavily rely on multi-threading and concurrency API of Java.

Technologies used: Java 6, Tomcat, Flex3, ActionScript, Tcl, Spring, Jersey/JAX-RS, Fidessa, RMDS, RTCE Tick Capture Engine

Tools used: Eclipse IDE, Flex Builder (Eclipse plug-in), Ant, RTCE Studio, Confluence, SVN, JIRA

2009.07 – 2010.05 Mizuho Securities (Japan, Tokyo) as contractor

Roles: Java / J2EE-developer

Experience: J2EE/EJB/JMS, Java, JBoss

Architectural design, implementation, testing and deployment of pre-trade analytics web-application for institutional clients of Mizuho Securities. This is the first application of Equity Web Portal project of Mizuho developed for prime institutional clients developed by Electronic Trading Technology department of Mizuho Securities Co. Ltd.

This web-application allows company's institutional clients to do a pre-trading analysis of a single stock, based on live and historical data retrieved from real time market data feeds, market data database records and quantitative analysis applications.

At the first stage of the project my role as a team member was to assess technologies that would be most suitable for this project, develop prototypes using Flex, Portal API (JBoss Portal, Liferay Portal), mix of HTML, Flex/Flash (for charting) and AJAX (YUI, jQuery, DWR), and GWT. Finally the team decided to use Flex technology on client side and Java technology on the server side.

The project started from scratch and finished in 6 months mostly due to good team of developers, common understanding of development process and good choice of tools and methods.

This project required deep understanding of market data, quantitative methods of finance, knowledge of statistics as well as close interaction with Electronic Trading department, bank's infrastructure team and other vendors that took part in this project.

Technologies used: Java 6, JDBC, Spring, Tomcat, Flex3, ActionScript, Tcl (Reuters Tick Capture Engine and Analytical Engine)

Tools used: Eclipse IDE, Flex Builder (Eclipse plug-in), Ant/Hudson (continuous integration), RTCE Studio, Confluence (Wiki documentation), SVN (source control), JIRA (bug tracking), JUnit (unit testing)

2009.03 – 2009.07 Intersoft K.K. (Japan, Tokyo)

Roles: Java / J2EE-developer

Experience: J2EE/EJB/JMS, Java, WebLogic, Oracle

I took part in an internal product development - a Know-Your-Customer Search Engine coupled with a composite database sources (including **OFAC-SDN**) to detect and identify anti-social forces associated with Anti-Money Laundering activities. I designed and developed a JavaEE component for this product. This component allows to search up to 1 mil. names in the database simultaneously. JMS technology was used to create multiple parallel searches and to persist results in the database for later review by the user.

Database stores information from newspaper articles that are analyzed by a special Natural Language Parser. Names of criminals found in this articles are processed by special rules (JBoss Drools rule engine). Currently product is able to analyze texts in Japanese and Chinese with more languages to be added: Korean, English, Russian and Spanish etc.

Technologies used: Java6, XML, EJB3, JPA, JMS, Hibernate, Oracle, WebLogic 10,

Tools used: Eclipse IDE, JIRA, SVN

2008.02 – 2009.02 Goldman Sachs through Intersoft K.K. (Japan, Tokyo)

Roles: Java / J2EE-developer

Experience: J2EE/EJB, Core Java, JBoss, MySQL

As a member of international multinational transcontinental team of 10 people I take part in development, programming, user interface designing of internal HR Java/J2EE Web-application. This system is an application written from scratch as a substitution of a third-party vendor's product.

I joined the project at it's early stage and contributed my knowledge of JBoss, EJB, JPA and web-applications design to the project. Development process requires extensive knowledge of Java Collections framework, EJB, JBoss, database, unit testing and extensive interaction with business analysts and future users of the system from HR department.

It will be used by HR staff to calculate benefits data of 1.500 employees of GS Japan (commutation, retirement, rent) and generate reports for other institutions. For GS it will be a more flexible, more powerful, more precise, thoroughly tested and robust substitution of a legacy vendor product with excellent prospects to expand its coverage to GS China.

Technologies used: Java 5, EJB3, JPA, Hibernate, IBM UDB DB2, JBoss AS, client-server web-technologies

Tools used: Eclipse IDE, Tracker, Hudson, SVN

Achievements: Though my project was not connected directly to investment banking business, I expanded my knowledge of capital market by reading books on equities, fixed income and derivatives trading, financial mathematics and financial applications programming.

As a side project I took part in development of a internal portal application for Intersoft K.K. I took the lead part in the project and contributed my knowledge of JBoss application server, JBoss Portal server (JSR-168 and JSR-286), JPA/Hibernate, JSF and Facelets.

2006.04 – 2007.12 SIDC K.K. (Japan, Tokyo)

Roles: Web-developer, Web-master

Experience: Apache, HTML, CSS, JavaScript, Ajax, XML, PHP, PHP-Pear, Perl, MySQL database

Development, programming, designing and maintaining the web-applications for Trust-Watch daily network security scanning service: www.trust-watch.jp. I was responsible to take over the process of creating a web-interface for SIDC staff to accept new customers, manage security scans, review reports and deliver them to customers through www.trust-watch.jp web-site.

This task required close interaction with security scanner developers and sales department of SIDC and working in team with them to deliver the service on schedule.

I designed and developed two parts of the web-application using PHP, MySQL, XML, HTML/CSS and JavaScript technologies. I was managing a small team of developers (1 web-designer and 1 PHP programmer). I developed SOAP web-service to interact with external partner who was adding new customers to Trust-Watch web-site remotely. This task was an unexpected requirement from management and sales team, and I'm proud we quickly found the solution for this project and this new requirement didn't break our development schedule.

Interaction between Trust-Watch front-end (web-application written in PHP) and Trust-Watch backend (network scanners written in C/C++) was based on XML-RPC code. I was responsible to design the protocol and implement it into the code. This allowed us to decouple the whole system and make it more flexible, extensible and reliable.

This Trust-Watch application allowed SIDC to accept more customers for network security auditing and to increase its market share of security services in Japan. Customers included banks, telecommunication companies, media companies and numerous IT companies.

2002.10 – 2006.03 ADOS Co., Ltd. (Japan, Tokyo)

Roles: Java programmer, Java web-developer, web-master

Experience: Tomcat/JBoss, JSP/Servlets, JavaScript, Ajax, XHTML, XML/XSL, JDBC, MySQL, Oracle, Mighty for RosettaNet B2B server, jBPM, rsync, Hibernate, QuickSolution indexing server

Development, programming, designing web-systems for ADOS's clients. I was responsible for development of web-applications and web-interfaces for various company's products and services.

My primary task was to develop web front-end for "Mighty" e-commerce B2B server. Using this web front-end Mighty Customers are able to track bids and purchase orders from their trade partners using RosettaNET B2B protocol. All information was stored in MySQL database, B2B server was running on Tomcat and JBoss, and Linux/UNIX was primary deployment platform.

I also developed Content Management system for ADOS Customer with support of version control (CVS), XML/XSL documents (DocBook XML) conversion (using Java Batik and FOP technology) to multiple formats, business process management engine (using jBPM library) and staging – live server replication (using rsync). This application allowed Customer to store information in XM format and to search and retrieve it in any other format needed (PDF, HTML, SVG).

Also I was responsible for design and development of company's web-site: www.a-dos.com. Web-site is using MySQL as database storage and is a Java web-application (JSP/Servlets) running on Tomcat web-server.

2001.10 – 2002.10 IntaDev (Japan, Tokyo)

Roles: Web-developer, Java developer, Development team leader

Experience: JSP, Servlets, JavaScript, XML, XSL, JDBC, MySQL, Oracle, J2EE Application servers

Development, programming, designing web-systems for clients of IntaDev.

My primary project was a Java server application for delivering web content to mobile devices (mobile phones) using XML/XSL technologies. This application was using XML as content format and then it converted content into HTML, WML, XHTML or cHTML depending on the model of mobile phone that was sending requests. This server could be integrated with Exchange server to view emails, with RSS data feeds and any database to make simple e-commerce.

Under sub-contract with Stellent company I was developing portlets for BEA WebLogic Portal to integrate Stellent Content Management System with BEA products. Localization.

2000.06 – 2001.10 Merrill Lynch Japan Securities (Japan, Tokyo) through IntaDev

Roles: Web-master, web-programmer, IIS administrator

Experience: ASP/IIS, SQL, Oracle, MS SQL, Access, Perl, HTML, JavaScript, Perl, Photoshop, Fireworks, Stellent CMS (now Oracle CMS)

Development, programming, designing and maintaining the Intranet web-site of Merrill Lynch Japan Securities. Xpedio/Stellent web content management administration, deployment and customization.

My primary task was intranet web-site for Merrill Lynch Japan (Worldnet Japan project). I joined the project at early stage and I was responsible for total design of the Worldnet Japan intranet web-site from scratch: coding, web-design, maintenance, training,

documentation. The whole application was built using ASP (IIS / Windows platform), Oracle and Access was used to store content.

This task required close interaction with many departments of ML Japan:

- Public Relations department was using intranet web-site to deliver news and articles (special web-application (Java/Tomcat/Oracle) was designed that would allow PR staff to publish news on the web-site) .
- Human Resources department was using intranet web-site to publish announcements about courses and classes
- Administration office was using web-site to publish day-to-day information for ML staff
- IT department provided technical support to build the whole three-stage development-to-production environment: development servers, staging servers and production servers
- Contingency Department asked for development of a separate web-site to provide their contingency information across all ML Japan offices.
- All ML departments had some kind of presentation of what they are doing on the web-site

I also contacted web-masters of ML Australia and Canada and we created a global search index (using MS Indexing server) of ML intranet web-sites. This allowed ML staff to search information globally from one place. Basically, Worldnet Japan within 1 year became the first web-site everybody at ML Japan (Tokyo, Osaka) was opening at the beginning of their work day.

As a part of Core technologies team I was responsible for introduction of new technologies to ML Japan. I was responsible for integrating Xpedio/Stellent Content management system into ML intranet web-site to automate content publishing process. This would allow content producers to create content, publish it and approve it according to predefined workflow process. My skills in Xpedio/Stellent were used in Analytical department to create distribution system of analytical reports produced by ML analysts.

My web-development knowledge and good teaching skills were used by Human Resources department to teach HTML and basic web-development to ML Japan staff (approx. 150 people).

1999.06 – 2000.06 Neftegazsystema (Gomel, Belarus)

Roles: Programmer, Web-master, Designer, Interpreter

Experience: Delphi, COM, Web, Apache, CorelDraw, Photoshop, HTML, JavaScript, MySQL, Access, VBA

Development of systems to access documents stored in databases through the Web. (SQL, COM, Delphi, HTML, JavaScript).

My primary project was the web front-end to Slider pipeline information management system. This web-application was based on COM and ODBC/Access. This web-application allowed users to access the database without installing rich client application on their computers.

One of the projects was development of VBA application to create, compile and distribute reports via web-server for an oil and gas company. This project required deep knowledge of VBA, Excel, COM technologies, IIS, VBScript. I responsible for designing and developing this project and it took 1 month of my intensive work and debugging to finish it for full Customer's satisfaction.

I was also creating and supporting Company's web-site: www.ogs.gomel.by. It uses PHP as scripting language, Apache and MySQL for deployment. I used my computer graphic skills to design advertising materials for the company including presentations and leaflets. My language skills were used for software localization and translation of company's advertising materials.

Personal Details

Date of Birth: July 26, 1970
Nationality: Belarus
Work permit in Japan: Permanent visa (obtained on 2010.12.24)
LinkedIn Profile: <http://www.linkedin.com/in/alexkachanov>
StackOverflow Profile: <http://stackoverflow.com/users/191995/kachanov>
GitHub: <https://github.com/alexkachanov/>

Education

1987 – 1992 Minsk Linguistics University.
Interpreter of English and French. Master Degree in Linguistics and Philology.

Other skills

- Foreign languages: Russian (native), English (fluent), Japanese (beginner).
- Other foreign languages: Italian (fluent), French, German, Spanish.

Side / Hobby projects

- [Simple FIX Client](#)

Java application that can be used to send predefined FIX protocol messages to any FIX server. Messages are controlled by scenarios using Domain Specific Language (based on Groovy). FIX protocol communication is based on QuickFIX/J open source library. SimpleFIXExecutor can be used as FIX Server to accept messages from Simple FIX Client. Tools: Spring / Spring Boot, QuickFIX/J, Groovy, Maven, Git.

- **Performance**

Personal collection of public documents related to low-latency trading and tunings for performance at different levels of technology stack:

- processors: optimization guides
- hardware: HPE ProLiant DL380 servers and tuning guides
- NIC: Solarflare network card and Open Onload library
- Networking: TCP/IP, Ethernet
- OS: RedHat/CentOS tuning guides
- Java: lock-free algorithms