

## Elias Ross

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### Summary

Architect or technical-lead developer with over fifteen years of experience developing distributed enterprise services, database and personal computer applications, development tools, open source solutions, and technical designs. Highly capable, self-motivated, team player versed in Java and C++, in both technology integration. Able to speak, read, and write Japanese.

### Employment

APPLE Cupertino, California  
Production Operations Software Architect, December 2010–Present

Designed, developed, and deployed the monitoring solution for iAd. iAd is Apple's ad serving network comprised of thousands of hosts. I was in charge for providing monitoring for all systems, applications and third-party services such as Tomcat/JBoss, Oracle, Hadoop, MySQL, MongoDB, Redis, Memcache, NetScaler, etc. I worked with all teams within iAd to develop a complete monitoring system. A team of contractors onshore and offshore support this system and work is ongoing.

I developed the initial monitoring platform using Nagios and Puppet, and eventually it evolved into a highly scalable and easier to manage system using RedHat's RHQ platform. RHQ is built on top of JBoss EAP and uses Cassandra and Oracle Database. The system works across multiple data centers. On top of RHQ, I developed a custom framework for providing easy-to-build dashboards for all systems, including business intelligence and reporting.

I also provided day-to-day assistance to deployment and operations team members for working with git, Puppet, and packaging tools such as RPM.

I worked closely with RedHat, providing patches and fixes through the Apple open source process. I am a recognized and prolific contributor to the RHQ product.

In addition, I worked on designing and developing a Passbook notification and update solution for iAd designed for supporting millions of devices, using clustered JMS and Cassandra. I was first to adopt CDI (JEE) technology and wrote extensions for other team members to expose KPIs through Java annotations for monitoring purposes.

TELECOMMUNICATION SYSTEMS AND LOCATION LOGIC, LLC  
Principal Computer Systems Developer, February 2009-December 2010

Seattle, Washington

Key developer and support person for entire Location Positioning System (LPS) for Verizon Wireless; once the responsibility of a large developer team. This system processed millions of mobile station transactions a day without fault.

Developed a prototype GLA ("Global Location Agent") solution for Huawei, a network technology reseller, in under six weeks. Worked with the customer in Shenzhen China to test our solution on site.

AUTODESK  
Principal Software Engineer, September 2006-February 2009

San Rafael, California

Solutions lead for the Verizon Windows Mobile project. Primary developer for various new server-side components for Verizon billing systems integration and service authorization for support of advanced devices.

Introduced to team new technologies for creating better products and productivity. Technologies included JPA/Hibernate, Maven, JMX, and distributed network caching.

Wrote a performance test harness for the "user-plane mobile positioning client", or "UP-MPC" component, a server component used at Verizon, Sprint, and Alltel.

Member and committer for the Apache Software Foundation.

VERISIGN (ACQUIRED AS M-QUBE)  
Software Architect, 2002-2006

Boston, Massachusetts

Developed a distributed premium messaging billing platform for all major U.S. and many Canadian carriers. Sole author of critical messaging delivery components for m-Qube, including SMS, IM, SMTP. Helped take the company from 20 people to over 200.

Designed, built, maintained an SMS/SMPP messaging server called "SMS Gateway", which delivered \$85 million in premium messaging for 2005. Created a custom language to support SMPP routing and connectivity for over 100 connected customers. System was capable of 3000 standard-rate message deliveries a second. Also, designed a billing server which can process and deliver 200-300 billing or subscription messages per second.

Developed a "dialog XML" language (similar to voice XML) and plug-in system for handling stateful conversations for SMS and other messaging services.

Recognized contributor to the JBoss project, specifically features for the JBoss MQ (messaging) and JBoss Cache products, such as scheduled and delayed message delivery which are now standard JMS features.

OPENWAVE

Bellevue, Washington

Software Developer, 1999–2002

Responsible for creating components to support enterprise-level services for determining mobile handset presence and location. Responsible for own unit-testing, end-to-end testing, technical requirements and design documents.

Used and leveraged existing components to build an instant messaging application supporting mobile presence. Used mobile protocols and network simulators for testing on SS7 networks. Used UML and the Unified Process.

BELLEVUE COMMUNITY COLLEGE

Kirkland, Washington

Instructor, 2001–2002

Computer instruction, teaching a class on UNIX. Responsible for creation of course materials and content.

CATDADDY GAMES

Bellevue, Washington

Software Developer, 1998–2000

Responsible for programming and helping deliver various games and building a 3D game engine. Helped complete the game “Full Strength Challenge” as one of two developers.

Sole and lead developer for UI, network components, sound, input, and 3D model export utilities.

Ported Windows network match server to Linux.

Designed and implemented prototype 3D vehicle game.

## Education

UNIVERSITY OF WASHINGTON

Seattle, Washington

1995–1999

Awarded Bachelor of Science degree. Major in applied computational math science.

TOHOKU UNIVERSITY

Sendai, Japan

1997–1998

Exchange student in Japan in the engineering school. Part-time research in Japanese character recognition, but mostly focused on language skills.

## **Technologies**

Java 15 years. JEE including JPA, CDI; Maven/Gradle.

Puppet 4 years, Ruby templates, large deployments and config management.

C/C++ 4 years. Solaris cc, gcc, VC++, STL, POSIX.

Perl 4 years experience.

SQL 4 years, Oracle, MySQL, SQL Server, stored procedures.

UNIX 15+ years. Linux (OEL/RHEL 5/6), Solaris, BSD variants.

JavaScript 2+ years, mostly Rhino scripting and some UI.

Python 1 year experience.

Cassandra 1 year, deployment and schema design.

Hadoop 3 years, deployment, monitoring; Hive, Oozie, Flume.

Ver Control git, Subversion, Perforce, CVS, Clearquest, VSS.

Networks 4 years. TCP/IP, HTTP, HTTPS, SMPPv3, UDP.

Shells 6 years. Bourne, BASH.

Others Hibernate, Windows, XML, OOP, UML, LDAP, make, ant, Pascal, Scheme, Ruby, ASP, DirectX, 3D Max, Assembler and compiler design.

## **Activities and Interests**

- Cooking
- Sea kayaking
- Road cycling and touring
- Japanese culture and language, volunteering at anime conventions
- Hiking and mountaineering
- Backcountry skiing
- Free Software