

# Aaron Schrab

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Durham, NC

aaron@schrab.com

<https://schrab.com/aaron/resume/>

## Summary

Over twenty years of experience with Unix-like Operating Systems, doing both development and system administration.

Able to work both on my own or with a team.

Proven success of diagnosing and resolving complex system and network problems.

## Skills

**Programming Languages:** Ruby, TypeScript, JavaScript, Java, Python, SQL, Perl, Bourne shell, C, C++, TCL, Expect, awk

**Tools:** React, Ruby on Rails, Jenkins, PostgreSQL, git, Docker, AWS CloudFormation, AWS Lambda, AWS API Gateway, Webpack, Angular, Catalyst, Subversion, ExtJS, Asterisk, Apache web server, BIND, CVS, make, gdb, m4, MySQL, Squid, postfix

**Operating Systems:** Linux (especially Debian, Ubuntu, and RedHat), Solaris, FreeBSD, OpenBSD, Mac OS X

## Experience

### NetApp

Morrisville, NC

API Engineer

November 2015 – April 2023

Worked to move business rules from monolithic, client-side procedures into more structured code in API server developed with Ruby on Rails.

Mentored team members who were new to Ruby and Ruby on Rails.

Took part in overseeing the development of the beginnings of a new UI developed with Angular.

Converted UI build system from grunt to webpack, eliminating the need for bower which was not supported in the target environment.

Developed API for sending push notifications to mobile devices, using Amazon SNS.

Wrote Hive queries to gather data from a Hadoop cluster. Wrote a Python script to load this data into a MongoDB database. Developed APIs to serve the data using Node.js. Developed UIs to display the data using Angular.

Deployed services to run in Docker containers on Amazon EC2.

Developed serverless APIs to operate as AWS Lambdas via the AWS API Gateway, using both Node.js and Java. Automated deployment of these using Jenkins and AWS CloudFormation.

Created a React-based app for testing OAuth login process.

Worked on GraphQL API server developed in Node.js using the Apollo framework to work with data stored in a MongoDB Atlas database as well as working with other backend-APIs. This was then packaged in a Docker container and deployed to AWS Elastic Container Service.

### Sunbird Software

Raleigh, NC

Senior Software Engineer

May 2015 – October 2015

Worked on the PowerIQ web interface which uses Ruby on Rails to present data from a PostgreSQL database.

Optimized queries to the PostgreSQL database in order to decrease the amount of time users need to wait to see data.

Built a Rails engine to serve JSON data and JavaScript code to build SVG charts replacing a legacy Flash-based solution.

Wrote database migration rules using Liquibase.

Reviewed GitHub pull requests from other team members.

### **NetApp**

Tools Developer

Morrisville, NC

September 2013 – February 2015

Development on the internal issue-tracking system to convert it to using an Oracle database via a JSON API implemented with Ruby on Rails.

Worked on generating testable API documentation to ensure that the described API was accurate and would remain so as additional development was done.

Helped in design of database schema.

Developed a Perl library to minimize changes needed for legacy client applications to work with the new storage system.

Participated in code review process for changes by other team members to improve code quality.

Developed tools to compare data in Oracle database against legacy storage to check for bugs in the data conversion process.

Developed Oracle stored procedures to assist in writing queries to replicate functionality from legacy system.

Assisted users in writing SQL queries based on their described requirements.

### **Corvisa**

Senior Software Architect

Milwaukee, WI

September 2009 – May 2012

Developed a web-based application for mortgage companies using Perl's Catalyst MVC framework and PostgreSQL to run the backend which provided a REST API for a browser-based user interface implemented with the ExtJS toolkit. The initial development to assist with regulatory compliance in dealing with appraisals was done largely by myself. As the scope of the product grew to handle more functionality the size of the team grew to more than 20 developers.

Developed Perl-based tools for keeping database schema and base data synchronized with changes kept in a version control system.

Developed a system for documenting REST-API endpoints which generated PDF documents that gave examples of data structures using either XML or JSON syntax from a common XML source format.

Enhanced WireShark's support for dissecting AMQP messages and added support for binding a queue to an exchange based on message headers to the Net::AMQP::RabbitMQ perl module.

Managed the migration of the source code from subversion to git.

### **Brevient Technologies**

Senior Software Architect

Milwaukee, WI

January 2007 – September 2009

Developed a web-based system for creating marketing messages and distributing them via email, RSS, and website applets using Perl's Catalyst MVC framework along with PostgreSQL.

Used Perl to implement a system for billing thousands of VoIP calls per hour along with other products, generating PDF invoices that could contain more than 10,000 pages each.

Maintained the Jyngle.com site using Perl's Catalyst framework, which allowed users to send voice and/or text messages to large groups of people at a time.

**Enforcer Group, Inc.**

West Allis, WI

Senior Developer

November 2002 – December 2006

Led the design and development of web-based records management, mugshot, and computer aided dispatch (911) systems for public safety agencies using a combination of Ruby, PostgreSQL, JavaScript, and Java.

Developed an embedded Linux platform to be hosted at client sites to run portions of this system and provide VPN connections to the primary hosting site.

Responsible for setting up and administering servers for the previously mentioned systems as well as the company's internal servers.

Configured an Asterisk system to handle the company's telephone system, using a combination of analog phone lines along with both hardware and software VoIP phones.

**CoreComm**

New Berlin, WI

Systems Administrator

May 1996 – March 2002

Administered legacy ExecPC mail systems with over 100,000 client accounts.

Managed internal and customer mailing lists.

Setup and maintained Unix (Linux, FreeBSD, and Solaris) servers providing a variety of services.

Wrote programs in Perl, Bourne shell, and C to automate administration and provide new services.

Assisted technical support and customer service personnel in fixing customer problems.

**Education**

**Marquette University**

Milwaukee, WI

September 1992 – May 1996

Studied Electrical and Computer Engineering, then changed my major to Computer Science.

**Activities**

I contributed code to implement support for pre-push hooks in git.

I have contributed several enhancements to UltiSnips, a Python-based plugin for Vim; including a complete refactoring of the test system.

I contributed the recording history module for the TivoWeb project, a web-based interface for interacting with TiVo DVRs implemented in TCL.

I have contributed minor patches to numerous other projects.

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