John SJ Anderson

301.246.0369 • john.sj.anderson@gmail.com • Gaithersburg, MD

SUMMARY

Knowledgeable open source systems architect, developer, and systems administrator with over 10 years of experience in large production-scale data center environments delivering high-impact web services to the public.

SKILLS

Project management and planning, system and architecture design, Perl development (procedural and object-oriented; one-off and application-scale), Catalyst MVC framework, Moose meta-object framework, education/training on Perl and best practices for software development, development against Facebook API and Twitter API, PHP, Python, Ruby, Rails, source code control (git, Subversion/SVN, CVS), Apache, FastCGI, MySQL, Request Tracker/RT, Redmine, Emacs, XHTML and HTML including HTML5, CSS, management and automation of system deployment and configuration, CfEngine, Puppet, Linux (including SUSE/SLES, RHEL/CentOS/Fedora, Slackware, Gentoo, Debian/Ubuntu), molecular biology and biochemistry bench work (DNA/RNA/protein) and experiment design

SELECTED OPEN SOURCE CONTRIBUTIONS

Public repositories on Github   https://github.com/genehack
Perl distributions on CPAN   http://search.cpan.org/~genehack/

WORK EXPERIENCE

Independent consultant (Apr 2011 - present)

Working on a full time contract with FlightNetwork.com to serve as a senior developer and tech lead. 100% remote/telework. Serving as tech lead on a small virtual team of Perl and web developers, based in the US, Canada, and India. Completing a project to re-implement the existing FlightNetwork.com air reservation booking engine from legacy CGIs to a modern, Catalyst/Moose/DBIx::Class-based application. Introduced git version control system. Developed and documented git-based workflow used by all new projects. Provided code review and advice on other existing projects.

Chief Technical Officer and Chief of Information Engineering Branch, National Institute on Drug Abuse, National Institutes of Health, Rockville MD (Dec 2009-Mar 2011)

Leading long-term effort to integrate clinical trial support services into a single contract. Participated in working group that harmonizing common clinical trial data items into a standardized way. Heading project to replace workflow and data management system used by drug discovery program. Managed team of three contractors to develop software applications for internal use.

Program Manager, Kelly Government Services, Rockville MD (Oct 2009-Dec 2009)

Contracted to National Institute on Drug Abuse, National Institutes of Health as a Senior Systems Architect. Technical lead in developing programs and plans for newly formed Office of Bioinformatics and Information Management. Evaluating all technical aspects of existing IT infrastructure and projects. Leading project to implement new Linux-based infrastructure to support "private cloud" virtualization model. Leading project to develop interactive Web 2.0 style site to showcase research projects funded by NIDA. Leading long-term effort to integrate different aspects of multiple clinical trials programs into unified form.

Lead Systems Architect, Quotient Inc, Columbia MD (May 2008-Oct 2009)

Contracted to U.S. Census Bureau, Suitland, MD as a Lead Systems Architect. Contractor technical lead on project to develop Centurion system, a web-based data collection application for accurate and effective collection of all Census Bureau economic and other data for a wide variety of survey customers and respondents. Developed internal educational/training programs to introduce and reinforce best practices-based software development methods. Worked to get large legacy code base (approx. 45K lines of Perl code) under revision control using Subversion. Deployed Trac project management software to coordinate and manage work on both new and legacy code bases. Scaling out the Linux/Intel-based application infrastructure to introduce redundancy at the hardware layer, using IBM blade systems and RHEL Cluster Services and Global File System (GFS). Developing automation of infrastructure deployment so that future scaling needs can be rapidly met and addressed as anticipated load on the system materializes. Also involved in day-to-day operational aspects such as system monitoring, capacity projection, and troubleshooting, analysis, and remediation of any issues that arise with the production hardware or software.

Other responsibilities include day-to-day on-site management tasks for 5 Quotient, Inc. FTEs at this site: collection of task reports, coordination of leave requests, interaction with government customers to assure contract objectives are being met, reviewing and interviewing potential new hires prior to government customer interviews, and other common managerial tasks.

Principal Systems Analyst, IS Mavens, Washington DC (2002-May 2008)

Contracted to National Center for Biotechnology Information (part of the National Library of Medicine, National Institutes of Health, Bethesda, MD) as a Senior Linux Systems Administrator. Responsibilities include technical team leadership, project management and oversight, and large-scale systems administration and automation.

<u>**SELECTED PROJECTS AND ACHIEVEMENTS:**</u>
• Team Leadership and Strategic Oversight
Team leader for expansion of Linux deployment from <20 servers to 1000+ over a five year period, including conversion of all public-facing services from Solaris/Sparc systems to Linux/Intel, conversion from 32bit architecture to mixed 32bit/64bit environment, and conversion of all Linux systems across multiple distinct distributions. Responsible for all Linux systems at NCBI, including primary Apache web servers (over 100 million hits/day) and application servers providing Pubmed/Entrez and BLAST services to public (millions of users/month). Manage and oversee development resources for 400+ internal developers and researchers depending on C, C++, Perl, PHP, Python, Subversion, CVS, Microsoft SQL Server, and Sybase ASE and IQ.

Manage 5 person team responsible for maintaining and extending Linux/UNIX environment for C/C++/Perl/Python bioinformatics development, including server provisioning, overseeing help desk system, and meeting with users and management to determine software and hardware requirements. Participate in high-level weekly planning sessions with other senior management regarding application and system configuration, application development, and operational troubleshooting.

• Project Management and Implementation
Maintained and extended Slackware-derived "in-house" NCBI Linux distribution.

Planned and lead migration of environment to SUSE Linux Enterprise Server (SLES) distribution with goals of minimal end-user disruption and no service downtime.

Planning migration from SLES distribution to CentOS with goals of minimal end-user disruption, no service downtime, and provisioning system improvements and support for virtualization via Xen.

• Development and Automation
Planned and led CfEngine deployment to centralize and standardize configuration management and change tracking. Planned and led project extending CfEngine deployment into cross-platform

(Linux/Solaris/Windows/Mac OS X) capable system with RPM update management functionality for centralized deployment of patches and updates.

Planning migration to next-generation Puppet configuration management system, to be executed in parallel with move to CentOS distribution.

Lead team in implementing web-based inventory tracking and management application using MySQL and Catalyst MVC framework. Developed initial production version while simultaneously maintaining and extending development code branch.

Developed several simple web-based applications in Perl: help file viewer, FAQ application, simple content management system.

• **Systems administration**
Assist with management of high traffic web application environment: two-tier reverse proxy configuration with multiple layers of hardware and software load-balancing with multiple distinct geographic locations, serving in excess of 100 million requests/day from over 800,000 unique IP addresses.

Deployed web log application (WordPress) for internal dissemination of system downtime and upgrade announcements. Customized templates to integrate "look and feel" with existing Intranet site.

Lecturer, The Johns Hopkins University (2000-present)
Present lectures in a team-taught introductory-level graduate bioinformatics course. Since 2004, responsible for developing and teaching an advanced-level graduate course on the BioPerl bioinformatics toolkit, designed to give biologists with minimal amounts of UNIX and Perl experience the ability to effectively use the BioPerl framework to accomplish significant bioinformatics tasks.

EDUCATION
IRTA Postdoctoral Fellow, National Center for Biotechnology Information. Mentor: Dr. David Landsman (2000-2001)
Continued research and development of large-scale comparisons for computational identification of regulatory elements

Ph.D., Molecular and Cellular Biology, University of Arizona. Advisor: Dr. Roy Parker (1993-2000)
Developed and implemented a method to identify potential regulatory elements, characterized results with several training sets, and identified a putative element in mitochondrial genes. Also responsible for deployment and administration of Macintosh and Linux computers in lab environment.

B.S., Biology, University of Iowa. (1989-1993)

COMMUNITY INVOLVEMENT
Co-organizer, DC-Baltimore Perl Workshop 2012 – http://dcbpw.org
Speaker ("Intro to Object-oriented Programming in Perl"), DC-Baltimore Perl Workshop 2012
Speaker ("Tweakers Anonymous"), Perl Oasis 2012
Co-organizer, DC PerlMongers group