

Objective

To work in a fast-paced organization that lets me contribute my extensive UNIX and software-development skills to varied, interesting projects, and build stable, secure, scalable systems.

Work Experience

Senior Performance Engineer
2010–present

Akamai Technologies, Inc.
Cambridge, MA

- Maintain the stability, scalability, and performance of Akamai’s globally distributed storage network.
- Design and implement tests to measure the performance of the storage network, and document the results concisely for interested executives.
- Constantly return to first principles, asking “Why do we do it this way?” In so doing, identify places where the company can save substantial sums of money while providing better performance to Akamai’s customers.
- Automate very-large-scale systems-administration tasks in Perl, Python, and shell.
- Craft storage- and edge-network alerts using Query, Akamai’s massively scaled SQL-based reporting system.
- Create procedures that the Network Operations Control Center, Akamai’s global team of first responders, can use to triage and solve routine problems, or use to escalate thornier problems to my team.
- Work with storage engineering to ensure that products are ready for field deployment (“operationalized”).

Software developer
2009–2010

HubSpot, Inc.
Cambridge, MA

- Migrate (using Python) millions of data rows out of a Microsoft SQL Server backend and into a new MySQL database running in the Amazon web-services cloud; rewrite legacy C# code in Java.
- Build web apps all the way up the stack: MySQL backend, Hibernate ORM layer, Java/Struts2 MVC, FreeMarker templates, JavaScript/Ajax behaviors, CSS styling. (Built most everything in Eclipse+Maven+Subversion.)
- Agile development on two-week and one-month sprints with daily standup meetings. Rigorous unit testing with JUnit (Java) and nose (Python); end-to-end testing with Selenium. These allow us to build applications quickly and correctly, and to adapt quickly to customer needs.

Operations programmer
2007–2009

ITA Software, Inc.
Cambridge, MA

- Built out an infrastructure to guarantee 24/7 uptime in our hosted environment and reliably diagnose failure.
- Wrote tools (mostly in Twisted Python) that managed applications across thousands of Fedora Core, Debian, and Ubuntu servers.
- Worked with engineers and sysadmins to gather requirements for an in-house service-management application based on RPM/yum repositories and a custom yum replacement. This application allows centralized, transactional control of many thousands of servers and services, thereby allowing 24/7 uptime. Tested this application alongside engineers, and wrote admin tools using its APIs.
- Developed coding standards to keep Perl and Python well-documented and manageable.
- Standardized branching and merging Subversion trees. Integrated svn with a ticketing system to correlate checkins with customer requests.
- Mentored new employees in Perl, Python, and the Linux toolchain.

Unix system administrator/web developer
2005–2007

Center for American Progress
Washington, DC

- Configured and administered many Unix variants and many Linux distributions: FreeBSD, Gentoo, Debian, Ubuntu, Mandrake, OS X. Responsibilities included ensuring uptime for the mission-critical blog ThinkProgress.org, which received 1.3 million unique visitors per month.
- Migrated tens of thousands of objects out of the company's legacy CMS into a new Zope Enterprise Content Management System (ZECMS) using hand-rolled Perl.
- Coded new Zope templates and new Zope content types in Python.
- Administered high-availability MySQL databases.
- Designed rigorous tests to estimate the performance impact of migrating from MyISAM to InnoDB backend database engines.

Education

Carnegie Mellon University
Bachelor of Science in Mathematical Statistics
1996-2000

Pittsburgh, PA

Technical skills

- **Programming Languages:** Daily use of Python, Perl, bash, SQL (primarily MySQL and an Akamai SQL dialect that's similar to SQL92). Daily use of Java, Twisted Python, JavaScript, jQuery at previous employers (skills need refreshing, but shouldn't be difficult to refresh). Exposure to C, C++.
- **Presentation languages:** Daily use of HTML, CSS. Decent L^AT_EX.
- **Operating systems:** Daily use of Debian and Ubuntu Linux and Mac OS X. Daily use of FreeBSD, Mandrake, Gentoo, Fedora Core at previous employers (skills need refreshing, etc.). Worked with all Microsoft desktop OSes from DOS to XP, plus some Windows 7; wrote a lot of batch files.

Hobbies

- Book reviewing at stevereads.com.
- Coffee snobbery
- Cocktail experimentation
- I love math, but I'm not convinced that math loves me.