

# John M. Simpson

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## Summary

Experienced in Development Operations (DEVOPS), including Linux System Administration, TCP/IP Network Administration, Programming, and Documentation.

- Linux System Administration (primarily Red Hat/CentOS, also Debian/Ubuntu)
- Virtualization (KVM, VMWare, VirtualBox)
- TCP/IP Network and Service Administration (DNS, SMTP, VPN, etc.)
- Programming in C, Perl, and Shell scripting
- Continuous Integration (Jenkins)
- Configuration Management (Puppet, Foreman)
- Source Code Management (git, Subversion)
- Software Repository Management (yum)

## Experience

### **Unix System Developer and Engineering Operations, Voalte, September 2012 to present**

Designed and implemented the Deployment Strategy for the company's upcoming software release, while managing the servers and network for the Engineering Department.

- Designed and implemented a reverse proxy solution which allows selected users outside the hospital to securely access Voalte's servers within the hospital.
- Designed and implemented a solution which allows Voalte's servers to authenticate users against the hospital's existing Active Directory database.
- Designed and implemented an OpenVPN system to support remote developers and QA.
- Designed and implemented the Puppet-based deployment strategy for Voalte's upcoming Version 3 product release, reducing an error-prone 4-6 hour process to under twenty minutes.
- Designed a Puppet-based system to manage the Engineering Department's development, staging, and infrastructure systems. This includes management of user accounts, sudo access, software installation and configuration.
- Mentored other Voalte employees, contractors, and interns.

### **Linux System Administrator, Federal Express Services (Contractor), July 2011 to June 2012**

Administered the Linux servers for the FedEx Services Revenue Systems Performance Analysis environment.

- Administered over 200 Linux physical and virtual servers used in the Revenue Systems Performance Analysis environment. This included installing and validating software, as well as verifying database, JMS, and mainframe connections.
- Developed a set of scripts (in Shell, Perl, and expect) to automate software deployments to groups of machines, turning a three-day two-man software install process into a one-day one-man exercise in watching the script for error messages.
- Developed a command-line and web-based inventory tool which allows the Performance Analysis team to easily monitor the hardware and software status of all of the machines in the environment.
- Developed a set of scripts which analyzes the network connections created by the software running on a machine in order to figure out how the software works.
- Used the output of the network analysis scripts to develop Visio diagrams documenting the software running on the machines.

### **Senior Linux Engineer, Highwinds CDN, February 2010 to June 2011**

Administered the Linux servers for a Global Content Delivery Network.

- Administered and maintained over 800 Linux/UNIX servers (Gentoo, Red Hat, Solaris) and 400 Windows servers, in eleven POPs, used as part of a global Content Delivery Network (CDN.)
- Provided Tier-3 customer support for CDN issues, including streaming, propagation, and billing issues.

- Wrote, deployed, and administered a system for propagating DNS data to a network of tinydns servers around the world.
- Assisted in writing the documentation of how the CDN works. This included writing a strategic overview document which became required reading for all new technicians and software developers.
- Designed, built, and deployed a world-wide distributed nagios monitoring system.
- Assisted other engineers in day-to-day maintenance of the various CDN servers.

### **Senior Linux System Administrator, Atlantic.net, April 2009 to October 2009**

Administered and maintained all Linux servers for an ISP and Commercial Data Center.

- Administered and maintained over 120 Linux servers (Red Hat, Debian), used for all client-facing ISP functions (DNS, RADIUS, qmail, shared web hosting, XMPP, etc.) and some internal functions.
- Provided Tier-3 support for clients with dedicated and managed Linux servers.
- Trained junior-level technicians in how to work with Linux, including command line, scripting, and packet filtering (iptables.)
- Assisted the Sales department with large and/or complicated proposals.
- Assisted with network management issues, including the configuration of routers and switches.
- Wrote scripts allowing the lower-level technicians to administer shared hosting web sites and email domains without needing root access on the relevant servers.

### **Independent Consulting, July 2002 to Present**

Various computer- and networking-related consulting engagements.

- Designed a system of programs to import data from multiple state government sources into a combined database, and the framework of a web site for clients (private investigators) to search the database.
- Designed and coded a custom content distribution system using high-speed satellite links to push multimedia content to thousands of locations throughout North America, and low-speed (dial-up, DSL, and cable) links for the endpoints to report usage and/or file fragments needing to be re-sent.
- Designed and implemented a custom firewall and bandwidth management system for an executive office building. Wrote a web site which allowed building management to monitor tenants' bandwidth usage. Assisted building personnel and tenants with system, network, and security issues.
- Designed and implemented interstate VPN solutions for two different clients, one with three locations in Florida and Georgia, the other with six locations around the country.
- Built, installed, and still providing maintenance of Linux- and BSD-based qmail servers for several clients, with many acting as spam and virus filtering systems to protect Microsoft Exchange Servers.

### **Internet Infrastructure Coordinator, KUA.net, March 2000 to July 2002**

Designed, implemented, and managed the technical operations of an ISP operated by a municipally-owned electric company in Florida. (Became an employee after two months as a contractor.)

- Performed an initial assessment of the ISP's existing systems, which were a mixture of Linux, BSD, and Windows servers. Identified and corrected several immediate security and stability issues.
- Designed and implemented a procedure to rebuild the existing servers, standardizing on a RedHat Linux, qmail, and djbdns, while minimizing the impact on users and non-ISP staff.
- Migrated a single Sendmail server to a set of qmail servers, with real-time virus scanning of all email. We were the only ISP in the Orlando area to not be affected by the "Melissa Virus" a few weeks later.
- Wrote a custom RADIUS server in Perl to support custom rules, such as rejecting calls from phone numbers belonging to known spammers, or from numbers with no Caller ID.
- Wrote an internal web page for use by KUA's billing department, making CSRs' jobs easier by combining information from five different systems into a single web page with flexible search options.
- Provided consulting services to KUA's commercial customers for installing, upgrading, and troubleshooting their servers and networks.
- Wrote several server-side web site scripts for clients, including a script which accepted a credit card number, authorized a charge, and sent a PGP-encrypted email to the web site owner with the details.

## **Independent Consulting, September 1999 to March 2000**

Various computer- and networking-related consulting engagements.

- Wrote the framework for a system which allowed users to perform basic web page layout and authoring functions using only a web browser.
- Assisted another consulting company with a Y2K assessment for a financial institution in Boston.
- Provided as-needed system and network consulting services to previous employer.

## **System Architect and Head Programmer, Internet Access Group, September 1995 to August 1999**

Started in Technical Support, worked up through System and Network Administration, and ended up doing full-time programming while supervising a team of System and Network Administrators.

- Provided technical support to dial-up and dedicated ISP users, for Windows, Mac, and Linux systems.
- Designed an automatic monitoring system to identify problematic telephone lines and modems.
- Rebuilt most of the ISP's servers, standardizing on Red Hat Linux for all PC hardware.
- Designed, coordinated, and implemented the addition of four new points of presence, involving T-1 WAN and PRI connections, routers, terminal servers, and local DNS and RADIUS servers.
- Designed a web interface to allow domain owners to administer mailboxes within their domains without needing help from ISP personnel.
- Designed and implemented scripts to automate RADIUS log processing, allowing direct import into the company's accounting system, saving two days of manual work each month.
- Designed and implemented a process to automatically process the ISP's monthly credit card transactions using CyberCash, reducing a three-day process for two people into a four-hour process for one computer.
- Assisted clients, including other local ISPs, with internal system and network issues.

## **Sales Management, Radio Shack, December 1990 to September 1995**

Retail sales of consumer electronics, and Sales Management training.

- Product sales.
- Assisted customers with questions relating to the products, and to general technology issues.
- Trained in sales and personnel management.
- Assisted in moving, opening, and managing Radio Shack stores in New Hampshire and Florida.

## **Education**

### **University of New Hampshire, 1992**

Courses in Data Structures and Operating System Design.

### **Virginia Institute of Technology, 1991**

A nine-month course in Computer Programming, including various languages and business applications (i.e. dBase IV, Lotus 1-2-3, etc.) leading to a Certificate of Completion.

### **Defense Language Institute, 1988-1989**

A year-long course in the language, culture, and customs of the Korean people, completed while enlisted in the US Army.

## **Other Information**

- Author of <http://qmail.jms1.net/> , an established qmail reference web site
- General class Amateur Radio operator (call sign KG4ZOW)