

## Paul B. Schroeder

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### Objective:

I am interested in finding a development and/or DevOps position involving **Linux** and/or **open source** technologies. A position located in/near downtown Austin, or telecommuting, would be ideal.

### Technical Skills:

Much of my career has been spent developing/creating custom, **Linux Standard Base (LSB)** compliant **Linux distros**. I have a strong background in systems administration and development. I am very familiar with rapid system development using scripting languages (**Python, Perl, PHP**). **Java** and **C++** add to my object-oriented skills. I am well versed in developing web based, **database information systems** with **Perl, Python, PHP, Java/JDBC/J2EE**.

**Languages:** Python, shell, Ruby, Perl, PHP, Java, Javascript, C, C++, Tcl/Tk, awk, SQL, SGML, XML, HTML

**Software/Technologies:** Apache, Websphere, J2EE, Oracle, DB2, PostgreSQL, MySQL, MS-SQL, CVS, subversion, git, perforce, jira, Jenkins, sendmail/postfix (SMTP), spamassassin, clamav, DNS, NIS, NFS, IMAP (dovecot, cyrus), POP3, DHCP, LDAP, tftpd, PGP/GPG, VMware GSX/ESX servers, Xen, KVM, docker, LXC/LXD, Vagrant, python-virtualenv, make, autoconf/automake, expect, ncurses, gdb, kdb, glib, gnet, QT, pygtk, pthreads, libpcap, mtrace, gprof, kismet, wireshark, tcpdump, ejabberd (XMPP), sleekxmpp, JSON, Flask, Django, Authorize.net, koji, mock, punji, revisor, anaconda, OpenStack, RDO, packstack, puppet, facter, hiera, r10k, reaktor, SendGrid, celery, SQLAlchemy, AWS: EC2, EBS, S3, SMS, Route 53, Hadoop, Mesos, Marathon, Chronos

### Work Experience:

**Senior HPC Software/Applications Engineer**, [Nimbix](#); Austin/Dallas, TX (Nov '15 - Present)

- Development, build, devops of the Jarvice **high performance computing (HPC) cloud platform**.
- Continuous integration/deployment (CICD) using **Jenkins**.
- Extensive use of **linux containers (LXC)** within the Jarvice cloud platform.
- **Python** development of Jarvice software and shell scripting.
- Cross compiling/building Jarvice as a part of platform enablement.
- HPC application configuration/deployment on the Jarvice cloud platform.

**Senior Systems/DevOps Engineer**, [Yodle](#); Austin, TX (May '15 - Oct '15)

- Migration to, and deployment of, Platform as a Service (PaaS) technology stack using Linux, **Foreman, puppet, VMware vSphere**. Platform services use **Docker, Mesos, Marathon, Chronos**.
- Monitoring of PaaS stack with **SolarWinds** and PagerDuty.
- Creation and execution of scripts to perform needed system functions.
- Participating in on-call rotation and servicing incoming tickets.
- Creating/updating puppet classes and managing/updating third party puppet modules.
- Creating/maintaining system wide apt repositories with **aptly**.
- Administration of Ubuntu and CentOS systems.
- Additional user administration using winbind and Active Directory.

**Senior Software/DevOps Engineer**, [Draker](#); Austin, TX (Nov '13 - Apr '15)

- Developed python, **Flask/WSGI, AWS**/cloud based web applications which used **SQLAlchemy** and **PostgreSQL** with a **RESTful API** using **JSON** data.
- Created a "Live" **ARM Linux** distro for Wandboard based hardware.
- Administration of Debian ARM Linux nodes in the field.

**Senior Software Engineer**, [Virtual Bridges](#); Austin, TX (Jan '10 - Oct '13)

- Chief architect, designer, developer of **LEAF** and VERDEOS Linux distros.
- Installed/configured **koji** in **KVM** virtual machines for building distros.
- **Makefile/kickstart/mock** scripting/configuration for building **RPMs**, ISO images, update packages, **PXE boot packages**.
- Integrated **VERDE** client components into LEAF "Live" Desktop distro.
- Continuous updating/backporting of distro components (kernel, X server, drivers, etc.) from newer Fedora releases.
- Patched/customized dracut, plymouth, other Fedora packages for LEAF.
- Developed **python/pygtk GUI** installer which installs LEAF to internal or external drives/USB sticks.
- Wrote several python/pygtk GUIs for LEAF config, setup, support, gathering system hardware info, logs, etc.
- **Gnome** and other GUI customization/configuration for LEAF.
- Wrote custom rc startup scripts with **bash** shell.
- Created original LEAF based on Ubuntu "Live", it's now **Fedora 14** based.
- Dev of **CentOS 6** based VERDEOS distro integrating VERDE server pieces.

- Customized/patched **anaconda** installer for VERDEOS.
- Developed RPM packaging for **Django** web applications.
- Developed RedHat **RDO/packstack** distro which configures **OpenStack** and **Django** web app **out-of-the-box**.
- Wrote **scripts** to automate RPM/ISO builds and deployments.

**Senior Software Engineer**, [Blue Coat Systems](#); Austin, TX (Apr '08 - Apr '10)

- **Designed, developed, hardened** Blue Coat Open Platform for Applications (BCOPA) -- **CentOS 5** based Linux distro for **virtual and hardware appliances** running Blue Coat management applications.
- **Integrated** existing Blue Coat products/applications into BCOPA.
- Designed and developed the **common application layer** used by the products/applications. The app layer was **XMPP/XML/json** based and written in **python**. Developed deep understanding of XMPP, ejabberd, sleekxmpp.
- Wrote python **unittest** code for testing system components.
- Designed/developed **koji/mock** based build system. Patched koji and wrote python **expect** script to auto-sign RPMs.
- **Makefile, bash** scripting, mock configuration for **RPM** build system. ISO generation with custom **anaconda/revisor**.
- Automated scripts for development/test installation of BCOPA into Kernel-based Virtual Machines (**KVM**) via **libvirt**.

**Senior Software Engineer**, [Freescale](#); Austin, TX (Jan '08 - Apr '08)

- **Team** developed/supported global software release/distribution process.
- Developed process to **automate** the download, build, debug, installation and support of open source software packages.
- Automated system for **Red Hat Enterprise Linux** installs and upgrades.
- **Perl, Tcl/Tk, shell**, and **kickstart** scripting and **RPM packaging**.
- Wrote **python** scripts to automate the insertion of software usage metrics into **Oracle** and **MySQL** database systems.

**Senior Linux Developer**, [Uplogix, Inc.](#); Austin, TX (Jun '06 - Dec '07)

- Lead architect/developer of **Fedora** based, **embedded** distro for Envoy network management/monitoring appliance.
- Customized distro build environment/scripts, **make files**, RPM spec files.
- Customized **anaconda** system installer for the Envoy hardware platform.
- **Kickstart** and shell scripting to customize and automate system installations.
- Customized Fedora **RPMs** for distro. Created RPMs for JRE, Envoy app, etc.
- Shell scripting, with **bash**, of the various custom Envoy commands.
- Linux **kernel/device driver** development. Maintainer of the Moschip 7840 USB-serial driver.
- **Java** application coding. Much of which was for OS integration.

**Senior Software Engineer**, [High End Systems](#); Austin, TX (Nov '05 - Apr '06)

- C++ development of large lighting control application using the QT library.
- Worked on revamping the print system for the application using QT APIs.
- Ported threadx/windows client/server C++ application to embedded Linux.
- Build system development with autoconf, automake, libtool.

**Senior Software Engineer**, [Sensoria Corp.](#); San Diego, CA (Feb '05 - Nov '05)

- **Embedded Linux** development for mesh **wireless ad hoc networks**.
- **Client/server development** in C using glib and gnet on arm-linux/sh4-linux.
- Extensive use of GNU tools for debugging, tracing, profiling, cross-compiling.
- Use of kismet, wireshark, tcpdump for wireless network sniffing and analysis.
- Shell scripting and extensive use of **Perl** for test automation.
- C++ dev on Defense Against Cyberattack on Mobile Ad Hoc Networks project.

**Staff Software Engineer**, [IBM Corporation](#); Austin, TX (Jul '98 - Feb '05)

\*\*\* Worked in IBM's **Linux Technology Center (LTC)**.

- Worked developing special purpose Linux distros.
- Worked extensively in **patent/IPL review** processes.
- Wrote **C/ncurses** test suite for RS485 serial protocol and device driver.
- Worked as **team lead** of the network I/O and device driver team.
- Contributed to [Linux-ATM](#), evaluated/tested/recommended third-party **ATM** solutions for LTCs carrier Linux project.
- Configured/administrated Cisco IOS ethernet/ATM routers/switches for ATM testing.
- Developed/maintained [Mwave](#) modem Linux driver and application software.

\*\*\* Worked on Linux based **server appliances**.

- Developed/patented **ARPfind** method/software to dynamically assign IP addresses to headless servers using **libpcap**.
- Maintained and configured the **Linux kernel** used by the appliances.
- Developed Perl scripts and **J2EE Java servlets (JSP)** to configure server network settings.
- Produced **Makefiles** and **RPM SPEC** files for the build architecture.

\*\*\* Prototyped "**Managed Linux Clients**".

- Developed/demoed **remotely booted/managed** Linux clients and management tools.

\*\*\* Component owner of **JavaOS System Database (JSD)**.

- Developed **web based**, **glimpse** JOS source code index and search utility.

**Web Applications Developer**, [SmithBucklin](#); Chicago, IL (May '95 - May '98)

- Designed/developed mailer/MTA system incorporating **web tools** for database administration.
- Interacted with clients to develop **PHP** and **Perl web apps** and **Java applets**.
- Installed/managed sendmail and other apps, wrote **Perl** helper scripts, etc.
- Developed **Java/JDBC/J2EE** billing system which tracked data in a **RDBMS**.

**Systems Administrator/Webmaster**, [St. Joseph's College](#); (Sep '94 - May '98)

- **Consulted**/contracted with the school to revamp the Unix based network.
- Set up and administered **DNS**, **NFS**, **sendmail**, **IMAP**, etc.
- Designed/built **dynamic web site** with **team** of student admins using **Apache**, **PHP**, **PostgreSQL**.
- System administration of the **Unix (SunOS, Solaris, Linux)** network.
- Developed, admined, supported web based teacher evaluation software.

**Education:**

University of Texas at Austin

Graduation Date: Dec 2002

GPA: 3.2 / 4.0

Degree: Master of Science in Engineering

Discipline: **Computer Engineering**

Specialization: **Software Engineering**

Saint Joseph's College

Major GPA: **3.9 / 4.0**

Cumulative GPA: 3.4 / 4.0

Degree: Bachelor of Science (May 1998)

Major: **Computer Science**

Minor: Mathematics