

## BJ Black

bj@wjblack.com ◇ San Jose, California ◇ (408) 621-4648

### Objective

BJ hopes to apply his extensive experience in Linux OS development, device drivers, network security, release engineering, software sustainability, and engineering leadership to help usher in a useful and safe future in the Linux device space, the IoT space, and/or the virtualization space.

### Highlights

- **C/C++, Java, perl, PHP, Go, Lua** Development. Release engineering and CI testing via **Jenkins** and **Travis**, persistence via **MySQL, Oracle, Hibernate, TokyoTyrant (NoSQL)**, and others. Virtualization development on **VMware, Xenserver, Hyper-V, AWS, Azure, Google App Engine**, et al. **Linux kernel** (driver, etc) development and OS distro and packaging.
- Software Sustainability Engineering Thought Leader, Including **Code Maintenance, Devops, Release Engineering, and Manufacturability**.
- Featured in **Business Insider's** "13 Secret Rock Stars Of Silicon Valley":  
<https://goo.gl/ywJ4Tv>
- **Two Patents Pending** in SSL Certificate Management and Firewall Autoconfiguration.
- **IoT Development** Including Hardware Bringup, WiFi/Electrical Certs, **Linux Kernel**.
- **Hands-on** Technical Manager and reasonably prolific codewriter, writing approximately **20k SLOC/year**. Equally happy managing humans and writing code.
- Wide technical aptitude, from devops to hardware development.
- Open Source releases on Github -- See <https://github.com/wjblack> active on StackExchange -- See e.g. <https://goo.gl/VBHZxs>
- Immediate Availability as FT, a W2 Contractor, or a 1099 Contractor. US Citizen.

### Work Experience

**2016 to Present - Founder** at Sustaining.Biz LLC, working with series B startups to develop software sustainability practices. Projects in the IoT, Devops, and Container (Docker) spaces. Code in Go and lua, plus kicad for PCB design. Further projects in Java EE (using Tomcat) and integration using Jenkins CI and Docker.

**2008 to 2016 - Platform Engineering Lead** for Barracuda Networks, 50/50 Developer/Manager (beginning as a pure dev in 2008 with increasing responsibility over the years). Recent highlights include:

- 2016 - Hardware bringup, Linux kernel, manufacturability, and OS distro for the Barracuda SC-1 appliance (based on Allwinner/ARM SoC, board similar to Raspberry Pi). Code in C, perl, Go.
- 2016 - Hardware quality initiatives designing process and infrastructure for additional hardware QA. Implemented using Docker with code in Go and PHP.

- 2012-6 - Manage team of 6-20 engineers and sysadmins to deliver code to customers via manufacturing and continuing updates. 50% lower attrition when compared to peer managers.
- 2015 - Designed and implemented a prototype data structure to represent IP blacklists. Code in C with bindings in various languages via SWIG.
- 2014-5 - Implement VM preboot architecture for licensure and virtual appliance maintenance including a custom embedded web server (based on Mongoose). Implemented using Linux kernel code in C, plus userspace code in C, perl, and Lua. This enabled deployment of Barracuda appliances in VMware, XenServer, Hyper-V, AWS, Azure, and other VM and cloud environments.
- 2012-4 - Create new OS platform based on CentOS including custom features. Code in C, perl, PHP. Integrated with Jenkins CI.
- 2008-2012 - Kernel and hardware maintenance for the Barracuda platform. Code in C and perl.
- 2008-2010 - Integration of 3SP SSL VPN into Barracuda platform. Code in Java and perl.

**2006 to 2008 - OS Analyst** for San Jose State University, running UNIX/Linux infrastructure for the College of Engineering. Projects included a unified authentication/authorization system using PAM, LDAP, and synchronization using Java, perl, and a custom DSL for set arithmetic against database sets in MySQL and Oracle/PeopleSoft. Implemented PHP interpreter customization in C to increase security to the web server (reducing breaches from 1/week to 0/year (!)).

**2002 to 2006 - Lab Manager** for Sun Microsystems, running ~12 engineering labs on all fronts from rack-and-stack to a custom lab management program (Java + MySQL + LDAP sync using perl). Designed and implemented employee recognition portal (Java/J2EE + MySQL + Tomcat).

**1999 to 2002 - Hybrid Sysadmin/Developer** for Taos. Internal sysadmin managing Linux and Windows infrastructure including Citrix MetaFrame-based Windows Terminals, a custom CRM system in Visual BASIC, and an authentication system using PAM and NSS with a MySQL backend.

### Select Additional Skills/Side Projects

**The Woofie Project** -- Virtual Dog implemented with ESP8266 WiFi Microcontroller, NodeMCU (lua), and a Go server backend on the Orange Pi.

**The LCD Broadcast Project** -- WiFi-connected 16x2 I2C LCD display using the ESP8266.

**The Good Neighbor Protocol** -- Modifications to dnsmasq (in C) to modify firewall rules based on published DNS information (similar to how SPF works).

**Calendar Popup & FormLayout** - Java Swing components to make certain UIs easier.

### Education

**Bachelor of Science in Computer Science** from San Jose State University. 2008 Computer Science Outstanding Graduating Senior of the Year.

**Associates of Science in Business Administration** from West Valley College.