

SEAN W. BRUNO

Objective: Position as a Kernel Hacker and FreeBSD Contributor.

Contact:

38248 Corrigan Ct.
Fremont, CA 94536
(510)468-9465(cell)
Email: sbruno@freebsd.org

SKILLS AND CAPABILITIES

Programming/Scripting Languages (0 - 5 based on experience)

- C Rating 3(debugging, construction of new code for day to day use)
- Perl Rating 1 (debugging, occasional use)
- /bin/sh Rating 3(construct rc scripts for production)
- PHP Rating 3 (constructs new applications and interfaces to databases)

Systems Administration

- ZFS and ZFS tuning
- New hardware (amd64) qualification
- QEMU bsd-user emulation (mips/arm/armv6/armv8)
- Driver update/Bug Fixes (storage, network)
- Perforce and Subversion setup/administration
- hwpmc(4) and pmcstat use for application diagnostics
- patch/compile/test for kernel and userland
- Custom FreeBSD package builds via poudriere for personal and production use

Communication and Interpersonal

- Presenter BSDCan (2009, 2015)
- Presenter EuroBSDCon (2014)
- Presenter/Organizer, MeetBSD California (2012/2014)
- Presenter, AsiaBSDCon Tokyo (2012)
- Effective in groups and group management.
- FreeBSD SRC Committer 8 years
- FreeBSD Port Maintainer 2 year
- FreeBSD Clusteradm 6 years

EXPERIENCE

FreeBSD CDN Team, LimeLight Networks

Senior Engineer for LimeLight's FreeBSD distribution. Responsible for compatibility testing with proprietary kernel modules and user land software. Optimize network interface drivers (Intel) for CDN performance patterns. Primary engineer for build reproduction (Jenkins) and build integrations (github). Created panics database (php + email) to track trends in 10,000 node CDN behavior during FreeBSD 8->10 rollout. Implemented PLPMTUD for FreeBSD to assist in connections where ICMP responses may be blocked. Acts as FreeBSD Project liason to Intel Networking Group for the purposes of bi-monthly status presentations, bug tracking, feature tracking and patch management for releases to FreeBSD. (June 2014 - Present)

Kernel Team, Yahoo! Inc

Team lead for Yahoo's FreeBSD distribution. Responsible for integration with vendor source (FreeBSD) and Yahoo proprietary code base. Aggressively interacts with Operations on a daily basis with kernel panic reports and performance optimizations. Provide patches for upstream source (FreeBSD) when vendor hardware updates are required [e.g. ciss(4), mfi(4)]. Use kgb and backtrace analysis on a daily basis. Provide fully backwards compatible KABI to FreeBSD 4.3 for Yahoo application stack in newer distributions of FreeBSD(9/10). Assist in network tuning (IPv4) for groups that push x86 hardware to its limits. Expert knowledge of IPMI management, tuning and deployment at scale for replacement of serial console/remote power. Created OpenStack compatible O/S images for use as production serving replacements in private cloud deployment. Integrated Cavium Networks SSL accelerator code with existing code base and refreshed openssl library for use with encryption stack in production(stunnel/apache). (January 2010 - May 2014)

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Kernel Application Developer, Miralink

Primary maintainer of proprietary kernel loadable module utilizing the FreeBSD CAM layer's implementation of TARGET_MODE. Developed customized SNMP MIB's and SNMP daemons(via net-snmp) in C programming language to implement company requirements for remote monitoring of existing product. Developed stored procedures for PostgreSQL to allow remote retrieval of application status via SNMP. Updated kernel source(FreeBSD4) to allow usage of SATA drives in new production unit. Updated kernel source to enable firewire disk targets(SBP-2) under FreeBSD 6. Currently implementing entire SBP-2 specification for the firewire disk target driver. Maintained all source in Subversion source control system. Implemented SSL support (C application) to encrypt and compress user data. Familiar with SCSI I/O protocol development. Linux and FreeBSD kernel development with proprietary drivers. Responsible for analysis of current application capabilities through the use of tools such as Doxygen and Glimpse. Creates requirements and plans for the company's software development life cycle based on the requirements of the company and customers. (August 2005 - December 2008)

Systems Administrator (National Marine Fisheries Service, NMFS)

Responsible for administration of Linux, Windows and Mac servers for 500+ scientists and researchers in a wide range of specialties and disciplines. Implemented Subversion source control system for group of 15 scientists and programmers for Oracle Collaboration Suite deployment and other Java based web apps. Administered Windows Active Directory Domain and integration of single sign-on(SSO) for Unix/Linux work-stations via LDAP. Setup several Samba servers for sharing files between the Mac, Linux and Windows users. Administered and setup CUPS server for centralized printer management.(March 2006 - November 2006)

NOCC Manager, Metro One Telecommunications

Responsible for operations of Network Operations Communication Center. Led team of 12 technicians in day to day operations of network of 30+ remote sites. Worked with third party vendors (Dell, Sun, Red Hat) to implements company design and infrastructure requirements. Created specifications for third party software developers to implement new product features and correct deficiencies in existing products. Conducts application debugging of running applications, core and log files using GCC, CC(Sun Compiler), GDB and DBX. provides expertise and guidance to technicians on various applications. Created clusters for load sharing with DHCP's load balancing features to alleviate load conditions on existing servers, resulting in an increase in application speed and a decrease in database search time.(October 2004 to August 2005)

Senior Telecommunication Engineer, Metro One Telecommunications

Independently analyzed, created, and implemented applications for Linux and Solaris operating systems. Designed remote monitoring applications via SNMP for 24/7 real-time monitoring. Wrote Perl/CGI programs for customized billing interfaces utilizing Oracle stored procedures. Senior engineer in support of voice over IP integration with telephone switching platform(Excel EXS 2000) utilizing both H.323 and SIP. Ported telephone switch control application to Linux from Solaris in order to reduce hardware costs involved with VoIP implementation. (January 2000 to October 2004)

Satellite Communications Maintenance Supervisor

Determined requirements, assigned and coordinated the activities of 16 personnel for communications facility. Created equipment requirements for system upgrades to adequately handle the functions of 40 users. Established workloads, work schedules, and repair priorities. Performed and supervised quality control inspections. Trained personnel in proper use of tools and test equipment. Fulfilled the role of Information Management Officer, including proper use of Anti-Virus tools, intrusion counter-measures and network efficiency. (August 1993 to December 1999)

EDUCATION

Bachelor of Science - Portland State University (2010)

Basics of Leadership, Primary Leadership Development Course - U.S. Army