

Brian Elliott Finley

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December 2009 – Present: Manager Application Platforms, Argonne National Lab, Lemont, IL – Responsible for providing a robust application platform and service infrastructure to the Laboratory's business application and computing environments supporting ~3000 employees plus collaborators. Supervise 6 direct reports and 13 indirects. Responsible for all business system application platforms, including application delivery controllers, Java application servers (GlassFish, JBoss, Tomcat, Sun Java System Application Server), web farms (Linux, Solaris, Windows), SharePoint, XenServer virtualization, F5 BigIPs, HA NAS, MySQL, SAN.

- Negotiated feature improvements with Zimbra Inc. allowing Argonne (and others) to share calendar free/busy information between our Zimbra and Exchange services, dramatically increasing lab-wide efficiency for scheduling meetings.
- Envisioned and pursued virtualization as a division wide service. This service progressed from VMWare Server, to Xen, to Argonne's current highly available XenServer service running numerous production and development services on ~200 VMs.
- At the request of NEXSAN tech support, asking "How did you get it working? We've tried to no avail.", I provided them with a copy of my documentation on Linux kernel multi-path configuration for NEXSAN storage with working path prioritization. Part of their response to my documentation was, "It was your working configuration that re-ignited our research and resulting in us getting ours working too."

March 2006 – December 2009: Manager Open Source Technologies Group and Deputy Manager Unix Storage and Operations, Argonne National Lab – Manage team of 4 directs, and 8 indirects. Responsible for all CIS Linux system operations including Linux and parallel file-system consulting to scientific divisions. Established and maintained numerous lab-wide and public services including internal and external DNS, Zimbra enterprise email, LAMP Farm, public software mirror, secure LDAP Address Book, Wiki, SVN, Trac, NDT, Cisco Wireless Services, CRYPTOCARD, and others.

- Won the participation of three major divisions, with a fourth pending, in migration from self-supported email systems to a centrally managed enterprise email solution via Zimbra. This is a significant win for the lab, breaking through political barriers over technology support, and saving hundreds of thousands of dollars a year in equipment and reduction of duplication of effort.
- Established CentOS as a CIS approved and recommended alternative to Red Hat for lab-wide use, saving the lab 62% of the year one cost by year three of the program, while achieving a higher level of customer satisfaction with the service.
- Led my team in taking the Linux infrastructure from a handful of barely managed machines, into an enterprise class environment. Established configuration and administration standards, and employed the use of state management software to enforce consistency across the environment, as well as to reduce administrative effort. These practices and standards are well understood, and are in use by all members of the Linux team. Linux is now the OS of choice for most new Unix applications and services.
- Led my team in the architecture and implementation of a highly available LAMP Farm that is a well structured platform for full application life-cycle including a dev, test, stage, and production environment for both sensitive and non-sensitive applications. This service currently supports over 65 business applications.
- Created an iptables "chunking" system, allowing for centralized changes to "chunks" of iptables firewall rules used by our Linux boxes allowing us to enforce standard configurations across many systems, while maintaining flexibility with individual systems.
- Led my team in deploying a high-performance, high-availability NAS service to act as the data store for our entire VM infrastructure.

March 2005 – March 2006: Linux Strategist, Argonne National Lab – Open source representative to the lab. Set Linux and open source standards for the CIS (Computer and Information Services) division, and published them for use lab-wide. Coordinated Argonne's Red Hat subscription program. Founder and leader of Argonne's Linux Admins Group.

- Managed an international open source project with the goal of using BitTorrent as a transport for SystemImager. We achieved remarkable success and produced a solution that is more scalable and with a more deterministic deploy time than existing transports, including multi-cast.
- Created SSM (System State Manager) – an open source configuration management tool for applying and maintaining package and configuration state on Linux systems. This tool was created to meet the CIS division's need for flexible yet conservative management of Linux based business systems. It remains the tool of choice today.
- Maintained WiFi Radar open source project. WiFi Radar is a graphical tool, written in Python, for use on Linux, that automatically discovers and connects to wireless networks.

September 2002 – March 2005: Senior HPC Systems Engineer, Argonne National Lab – Responsible for leading efforts to design, maintain, and operate high-performance Linux clusters. Led efforts to investigate and evaluate emerging technologies in the areas of computing, storage, and networking, and contributed to the development of these technologies. Collaborated with colleagues within the division, across the Lab, and at other laboratories and universities, in support of research in advanced computing.

- IA64 and IA32 Kernel Maintainer for the TeraGrid, which included 9 national labs, universities, and computing centers. This responsibility included identifying and evaluating kernel related security, bug, and driver issues, modifying and patching SuSE provided kernel source code as necessary, building new kernels and associated separate driver packages, and packaging them up in an easy to distribute and install, RPM based format.
- Creator and lead administrator of the TeraGrid Construction Team's collaborative development resource, "repo.teragrid.org". This resource provides a single point for software, policy, and documentation development, including secure web space, CVS, and bug tracking, for the initial and continuing development of the National Science Foundation's TeraGrid.
- Significant contributor to foundational design decisions, and the establishment of standards, which are now implemented as part of the TeraGrid infrastructure.
- Lead System Administrator, UC/ANL TeraGrid Cluster. Designed and developed much of the infrastructure code used every day to manage the UC/ANL TeraGrid compute and visualization cluster. Some of this code has also been implemented by staff at other TeraGrid sites.
- Achieved SystemImager support integration into xCAT, IBM's cluster administration toolkit. Integration was partially implemented by myself, and was completed by Viet Hoang of IBM. SystemImager is open source software I created that automates Linux installs, software distribution, and production deployment.
- Founded openXcat, a project to provide open source, drop-in replacements, for proprietary xCAT components, with the goal of also providing easily modifiable feature enhancements. The primary openXcat developer is Jason Brechin of NCSA. This project was founded with the blessing of and encouragement from the author of xCAT, Egan Ford, of IBM.
- Established a relationship with vendor Terra Soft Solutions, and helped them port SystemImager to the Apple Macintosh and other PowerPC 64 platforms. This port was demonstrated at SuperComputing 2004 by Terra Soft Solutions in the Argonne booth.

July 2001 – March 2003: CTO, Bald Guy Software, Dallas, TX – Responsible for all aspects of operation including, contract negotiation, software development, and maintaining relationships with customers such as Hewlett-Packard, Compaq, and OSDN. Long term contracts included the following:

- OSDN – Foundry Guide on the SourceForge Clustering Foundry. As the guide, developed with other OSDN staff what a foundry should be, and how to make foundries useful to visitors and sponsors. Wrote articles and edited submissions by contributing authors. Developed and maintained a relational database and web application (The Clustering Taxonomy Database).
- Hewlett-Packard – Two project-based contracts to add specific functionality to SystemImager, including support for IA64 GUID Partition Tables (GPT), Dynamic Partitioning, and multi-cast for initial image deployment.

June 2000 – July 2001: Sales Engineer Manager, VA Linux Systems, Dallas, TX – Promoted from within the organization to be the first Sales Engineer manager at VA Linux Systems. Supervised 6 directs spread across the Western United States and traveled weekly (~100k annual miles). Established policies and procedures for the Sales Engineer organization. Coordinated training and team building activities. Managed professional services operations performed by the team. Top-level technical resource for team members in the field. Continued to work as a technical closer on high level deals.

May 1999 – June 2000: Sales Engineer, VA Linux Systems, Dallas, TX – Sales Engineer specializing in scientific and cluster computing. Territory included all of the United States. Assisted in the architecture and implementation of dozens of Linux clusters and Internet server infrastructures. Provided design support and guidance to the VA Linux Professional Services group during their first few contracts. Selected as the Sales Engineer to represent VA Linux Systems at the company's debut in Japan.

August 1998 – May 1999: IT Consultant, CL Finley Corp., Dallas, TX – Independent Contractor, PrimeCo PCS, Westlake, Texas. One of two Senior System Administrators on a team of four. Administered 150+ Solaris, SunOS, and AIX systems across a nationwide network. This was a high-pressure telecommunications environment with about one-third of these systems running Oracle and other relational or object oriented databases. Established standards for system management across the enterprise. Supported experimental labs, radio frequency engineering teams on development systems, and the development, acceptance testing, and production environments for production applications. Coordinated with upper management on major architectural decisions. According to a commissioned study by the Gartner Group, they had "never seen an environment with such a low ratio of administrators to systems" and were impressed that our team was able to successfully support the environment.

February 1998 – August 1998: Senior System Administrator, Dataplex, Dallas, TX – System administrator of NetWare, Windows NT, Local Area Network (physical), and Wide Area Network. Primary architect for protocol migration, LAN backbone redesign, and multiple OS integration projects. Team lead for technical personnel in several departments. Coordinated installation and troubleshooting of T1 and frame relay connections to client sites. The Dataplex business focus was providing outsourced document imaging services. It was the largest FileNET shop in the world at the time.

May 1996 – February 1998: IT Consultant, Berger and Co., Dallas, TX – Primary clients were the Unix and Billing Transaction Monitor teams at PrimeCo, PCS. Often called in to assist other consultants with difficult technical situations at other client sites. Taught classes to customers and other consultants on TCP/IP, disaster recovery, and Solaris. Chosen to represent Berger and Co. as the Systems Engineer for startup operation BTI (Berger Technologies Inc.), a Sun Microsystems and Compaq reseller.