

Aaron Fabbri

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Senior software engineer specializing in Networks / Distributed Systems, Filesystems, and Security.

Specialties

Software development lead and project management. Performance-critical code. Low latency messaging (HFT etc.). FreeBSD and Linux kernel/user development. Scalable, fault-tolerant systems, network protocol design and implementation. Web/enterprise security and performance.

Experience

Cisco Systems

06 / 2006 - Present

Technical Lead

- Lead developer for low latency, kernel-bypass drivers for the Cisco Virtual Interface Card (VIC), a 10 GbE adapter which supports both hypervisor and kernel bypass.
- Lead architect and developer of Cisco Datagram Acceleration Layer (DAL), an ultra low latency (ULL), kernel-bypass UDP/IP network stack which accelerates unicast and multicast traffic over InfiniBand and 10 Gig Ethernet networks.
- Wrote hardware requirements for OS-bypass and worked with multiple 10GbE NIC vendors on next generation silicon features.
- Accelerated performance of top market data middleware (Tibco RV, 29West LBM, Wombat, Reuters RMDS, MRG) with or without help of the ISVs. Google "Cisco DAL" for press releases.

isilon systems

2001 - 2005

software developer

- Primary developer of new InfiniBand (IB) network stack based on FreeBSD and Linux. Project was a success: We were the first clustered storage system to ship an IB back end, outperforming Gigabit Ethernet and reducing host utilization. Implemented seamless fail-over and a number of kernel optimizations.
- Developed high-performance distributed filesystem code and modifications to a well-known open source kernel. Responsible for key early filesystem features such as multiple drive support.
- Increased filesystem and NFS server performance by analyzing network traces and kernel profiles, redesigning distributed algorithms, and modifying server code.
- Modified network and disk controller drivers to add features such as host

bus error detection and sector remapping support.

- Turned a disaster scenario into a top repeat account by designing and executing a delicate data recovery operation.

University of Oregon

04 / 2000 - 06 / 2001

Graduate Research Fellow

- Increased performance of content distribution networks using Linux, IP Multicast, C/C++, TCL, and Perl.
- Designed and implemented multicast routing protocols and wrote protocol specifications. Wrote automated test tools, evaluated performance, and presented results.
- Designed and programmed efficient network simulations, processed data, and plotted graphs.
- Co-authored two original research papers and attended networking conferences and workshops.
- Designed and built a multicast-enabled Linux cluster for testing network routing protocols.

Environmental Protection Agency

06 / 1999 - 09 / 1999

Software Engineer

- Developed scientific computation and data acquisition software using C, Java, Perl, SQL, and TCP/IP.
- Implemented, tested, documented, and deployed application-layer protocol for collecting environmental sensor data.
- Supported research staff as a contractor to the U.S. Environmental Protection Agency (EPA).
- Administered Oracle database system including performance tuning, backup and restore, reporting, and UNIX Solaris and Linux administration.

Entertainment Data Solutions

01 / 1998 - 06 / 1999

Senior Software Engineer

- Designed and implemented multi-user database-driven point of sale and inventory management software using (Java, SQL).
- Developed Internet messaging client and server to reduce customer support costs and improve response times.
- Installed and tested Ethernet networks, servers and clients at customers' sites.
- Designed and built company network and services; Routers, Switches,

Linux, Windows NT, Apache, Sendmail, CGI, etc...

Education

University of Oregon

1999 - 2001

MS , Distributed Systems

University of Oregon

1993 - 1997

BS , Computer and Information Science

Honors

Cisco Individual Achievement Award, September 2007