Greg Lewis

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Career Summary

•	Sep. 2001 – Current	Snr Software Engineer	Linux Networx
•	Jan. 2001 – Current	Self employed	Eyes Beyond IT
•	Sep. 2000 – Jan. 2001	Snr Analyst/Programmer	Camtech (SA) Pty Ltd
•	Dec. 1997 – Aug. 2000	Analyst/Programmer	Teletraffic Research Centre
•	Feb. 1995 – Jan. 1999	Computing Officer	TeχAdel Scientific Publishing

Core competencies

- High levels of proficiency in a variety of programming languages:

Java	6+ years	Swing (JFC), threads, distributed programming
C/C++	8+ years	GNU C/C++
Perl	6+ years	Perl 4 and 5
JavaScript	4+ years	Netscape 3, 4 and 6, IE 3, 4, 5 and 6, Mozilla
SQL	4+ years	Oracle, MySQL, PostgreSQL
Unix shell	6+ years	sh, csh
PHP	4+ years	PHP 3 and 4

- Experienced software developer, capable of working both in a team environment and alone. Involved in all stages of software development, from initial concept through design, implementation and maintenance.
- Knowledgeable in distributed and scaleable architectures in large scale environments.
- Longstanding Unix system administrator (6+ years), managing BSD Unix, Linux and Solaris machines.
- Extensive background in numerical simulation of fluid dynamics.
- Demonstrated ability to prepare written submissions, procedures, reports and recommendations for both clients and management.
- Strong customer relationship skills with a proven ability to identify and recommend workable solutions to a broad range of people including senior management, direct users and technical staff.
- Proven ability to manage time, create schedules and consistently meet deadlines to client satisfaction.

Education

All degrees undertaken at the University of Adelaide.

- Bachelor of Science in the Faculty of Mathematical Sciences.
- Bachelor of Science (Honours) in the Faculty of Mathematical Sciences.
- Doctor of Philosophy candidate.

Employment Details

Senior Software Engineer: Sep. 2001 – Current

Linux Networx

Responsibilities

- Design, implement and maintain components of Linux Networx award winning Clusterworx cluster management software suite.
- Liaise with customers and our own support and integration teams to troubleshoot and resolve cluster management issues.

Achievements

- Initially work to maintain and then to design and implement modules of Linux Networx cluster management suite, Clusterworx. Due to the nature of clusters, almost all Clusterworx components include key aspects of distributed and scaleable programming. My work on Clusterworx included:
  - Provided maintenance and support for the existing Clusterworx node agent (C++, Perl). By separating source code into stable and development branches, a high quality release was able to be made which was significantly more stable than previously possible. At the same time, optimisation of CPU and memory usage was undertaken on the development branch for a later release, without affecting release code stability.
  - Provided a user utility (C++) to interface with multiple ICE boxes (Linux Networx hardware management appliance). The user was able to query health data concerning nodes and perform power management operations, via both serial and network connected ICE boxes.
  - Initially maintained the Clusterworx imaging software (C++) before being tasked with designing and implementing completely new versions of this software to meet additional requirements in new versions of Clusterworx.
  - The Clusterworx 2.2 imaging software was based on Red Hat's Anaconda installer, with more than 50% of the source code being rewritten. The software was capable of both image creation (from a Red Hat Linux distribution or from an existing installation) and editing. Image creation included the ability to create an image for non-native hardware, for example, creating an ia64 image on an x86 compatible machine.
  - The Clusterworx 3 imaging software was a clean reimplementation, written primarily in Java, but interfacing with native tools where necessary. The image creation and manipulation functionality of Clusterworx 2.2 was surpassed, with additional editing facilities and version controlling of images being provided. This implementation also featured a client/server design which allows images to be created remotely by administrators using a local client.
  - Extended the Clusterworx 3 monitoring framework to add support for user defined events and the Linux 2.6 kernel. This framework must run unnoticeably on all nodes across the cluster to gather such information as health metrics.
  - Designed and implemented a scaleable logging service for Clusterworx 3 that allows log messages from across the cluster to be efficiently consolidated on a central server.

The logging service also provides an interface for client applications to be able to list, query and delete log messages.

- Work with our support and integration teams as well as customers to troubleshoot issues and provide enhancements and necessary fixes to Clusterworx software and system configuration.

Self employed: Jan. 2001 – Current

Eyes Beyond Information Technology

Responsibilities

- Develop technical proposals for client projects and review proposals from clients with regards to suitability, costing and scheduling.
- Maintain existing client relationships and establish relationships with potential and new clients.
- Self-manage projects from both a technical and administrative perspective, ensuring budgets and time lines are adhered to.

Achievements

- Worked as part of a small team implementing a highly secure web site to serve sensitive data to competitive clients of a highly regulated and security conscious company. The entire scope of the site development was undertaken, commencing with hardware specification, recommendation and installation and finishing with deployment of client and administrative sites. Tasks also involved operating system, web serving and database software installation, configuration and lock down. The site was subject to a fall range of testing and security auditing and was signed off to full management and staff satisfaction.
- Developed database integrated web sites to allow online access and management of timetable information and course structure by a university. As a result students and staff can create, view and print customised timetables and staff can manage degree programs and associated courses.
- Implemented a dynamic web site for an innovative online venture based on static templates produced by a web development company. The site included membership and purchase areas and incorporated an e-commerce payment gateway.
- Installed BSD Unix and troubleshot BSD Unix and Linux systems, resulting in increased performance, security and hardware utilisation.

Senior Analyst/Programmer: Sep. 2000 – Jan. 2001

Camtech (SA) Pty. Ltd. (Australia)

Responsibilities

- Develop technical proposals to support tenders and client projects.
- Produce and implement functional specifications within tight time frames and budgetary constraints, employing the most appropriate technology.
- Manage clients using regular communication, addressing their concerns and managing project scope revisions from project commencement to completion.
- Act in a troubleshooting role, identifying and resolving on-site issues.

Achievements

- Maintained a large web-based Java application. Managed and supported the existing client base to their complete satisfaction.
- Developed a database integrated web site in PHP for a recruitment company. The site allowed users to browse and apply for positions based on extensive selection criteria. The company gained an online presence and an administrative interface to allow staff to manage the job database from a web browser.
- Produce an auditable web presence proposal for a highly security conscious company. The proposal covered the full scope of site development: from development, hardware purchase, operating system installation and security auditing through to database integration and development of a web interface. The proposal was successfully presented to management, audited and approved for production.
- Successfully prepared and submitted a database and web integration proposal for an innovative online project, complete with e-commerce gateway.

Analyst/Programmer: Dec. 1997 – Aug. 2000

Teletraffic Research Centre (Australia)

Responsibilities

- Undertake project design and implementation as determined by research projects and client contracts.
- Provide system administration, hardware and user support in a mixed Unix and Windows environment.
- Research and advise on IT infrastructure requirements, both hardware and software, in the short and long term.

Achievements

- Worked within a design team to construct a flexible and extensible object oriented network modelling toolkit. Led the software development team implementing this toolkit and the associated database-backed network dimensioning and verification tool for ATM and Frame Relay networks in Java.
- Joined an existing team, quickly adapting and comprehending the key issues to make a positive contribution on a large C++ based network dimensioning tool.
- Researched and installed a software version management system. Trained other staff in its use, resulting in less code duplication and loss. Projects managed under this software gained an auditable trail of code changes as well as developer accountability.
- Scoped and performed a significant upgrade of core Unix server hardware infrastructure and operating system. The server was integrated with minimal impact into the existing network to provide measurably increased levels of performance and service.
- Established and maintained heightened security practises and continuous monitoring procedures to protect sensitive client data.
- Created Unix shell scripts and Perl programs to automate common administrative tasks, decreasing both day to day and setup time spent performing system administration.
- Planned and implemented a central networked file and print server for a mixed Unix and Windows environment, unifying access across platforms.
- Provided user support to coworkers with a broad range of technical levels for both Unix and Windows, resolving issues in a timely fashion and using opportunities to increase user knowledge.
- Designed and produced a new web site to provide a more consistent and polished corporate presence.

Computing Officer: Feb. 1995 – Jan. 1999

TeχAdel Scientific Publishing (Australia)

Responsibilities

- System administration and hardware support in a mixed Unix and Windows environment.
- Research and advise on IT infrastructure requirements. Implement solutions after management approval.
- Maintain and create style templates in LaTeX and TeX.
- Process technical papers for various journals in a efficient manner and ensure publication deadlines are met.

Achievements

- Provided system configuration flexibility and rapid response by bringing system administration in-house, creating significant cost savings.
- Scoped and over saw a significant upgrade of core Unix server hardware infrastructure and operating system, resulting in increased software performance and capabilities.
- Created a C++ based processing program for journal submissions to automate a large portion of the initial formatting of technical papers, significantly decreasing the staff hours involved in this process.
- Designed and created an initial corporate web presence. As part of this process LaTeX style templates were made available online for journal submitters, resulting in decreased staff processing time for papers prepared using these official styles.
- Managed a significant version update in the LaTeX typesetting software, including designing new style templates and ensuring compatibility through the changeover. This upgrade allowed for increased compatibility and typesetting capabilities.

Activities

- FreeBSD ports and documentation committer.
- Member of the BSD Java (J2SDK) Porting team.

Publication Record

Noye, B. J., Bills, P. J. & Lewis, G. D. (1994). Prediction of oil slick movement in northern Spencer Gulf, *in* D. Stewart, H. Gardner & D. Singleton (eds), *Computational Techniques and Applications: CTAC-93*, World Scientific, Singapore, pp. 320–328.

Lewis, G. D., Noye, B. J. & Bills, P. J. (1996). Oil spill trajectory modelling in northern Spencer Gulf, *in* T. H. Aung (ed.), *Proceedings of the Ocean and Atmosphere Pacific International Conference*, South Pacific Sea Level and Climate Monitoring Project, The National Tidal Facility, The Flinders University of South Australia, pp. 177–182.

Lewis, G. D., Noye, B. J. & Evans, P. L. (1996). A comparison of finite difference and Lagrangian-stochastic methods for oil slick tracking, *in* R. L. May & A. K. Easton (eds), *Computational Techniques and Applications: CTAC-95*, Swinburne University of Technology, Melbourne, Australia, World Scientific, Singapore, pp. 471–478.

Lewis, G. D. & Noye, B. J. (1998a). Analysis of "clipped" tidal signals, *in* E. O. Tuck & J. A. K. Stott (eds), *Engineering Mathematics and Applications Conference: EMAC '98*, The University of Adelaide, The Institute of Engineers, Australia, pp. 307–310.

Lewis, G. D. & Noye, B. J. (1998b). Analysis of tidal eddies in northern Spencer Gulf, *in* B. J. Noye, M. D. Teubner & A. W. Gill (eds), *Computational Techniques and Applications: CTAC-97*, The University of Adelaide, South Australia, World Scientific, Singapore, pp. 377–384.

Lewis, G. D. & Noye, B. J. (2000). Analysis and prediction of tide heights over tidal flats and currents involving eddies, *in* B. J. Noye (ed.), *Modelling Coastal Sea Processes*, World Scientific, Singapore, pp. 81–106.