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Citizenship Canada
New Zealand

Skills

Knowledge of Unix Systems Administration including PostgreSQL, MySQL, Apache, Postfix, BIND, L^AT_EX, Emacs, vi, X11R6 and other UNIX tools on Debian GNU/Linux, Redhat, BSDi and Solaris.

Programming Languages: C, C++, Haskell, Perl, PHP, Prolog and shell script (including bash).

Knowledge of Aldus PageMaker and the major Microsoft applications including their Office suite, Visio, Windows 95, 98, 2000, NT and XP, MS SQL 6.5 and 7.0, MS IIS 4.0 and MS Exchange Server.

Administrative and maintenance experience of Unix systems. Most of this experience is with systems being used as servers on the Internet using a variety of software.

Professional Memberships

Associate Member of the New Zealand Computer Society

Work Experience

Sep 04 – Present **Catalyst I.T. Limited**
Wellington, New Zealand
Senior Developer

1997 – Present **Ogre Systems**
Wellington, New Zealand
Consultant (self employed)

Provide IT consultancy (mostly related to Linux) to a number of Wellington-based and Wairarapa-based companies and schools.

Responsibilities & Major Projects:

- Designed and installed networks at four schools.
- Maintained a Sun SPARCstation 20 running Solaris, which included the configuration and maintenance of disk mirror, software upgrades and various other system administration tasks for a graphic design company.
- Built and installed PCs at the Open Polytechnic of New Zealand.
- Completed various network cable installations for a number of companies around the Wellington region.
- Provided on-site technical expertise to Actrix Networks Limited (while not an employee for Actrix Networks Limited).
- Wrote various programs using Perl for Victoria University of Wellington.
- Provided MacOS X technical advice and support to a Wellington Macintosh solutions company.

Mar 01 – Sep 04 **Connections Incorporated Limited / Actrix Networks Limited**
Wellington, New Zealand
Senior Systems Engineer

Initially employed by Connections Incorporated Limited, the network service provider to Actrix Networks Limited. Although subsequently employed by Actrix Networks Limited, employment responsibilities remained the same throughout.

Member of the team responsible for the administration of a nationwide network. The network was constructed using a mixture of E1, ATM and Ethernet circuits from a variety of suppliers.

Products used included:

- Alteon AD3s
- BSDi
- Cisco Routers
- Cisco Managed Switches
- Debian GNU/Linux
- Lucent Routers (AP-500 and AP-1000)
- Lucent Max TNTs (with DSP cards to provide both data and VoIP connections)
- Lucent Multi Voice Access Manager (MVAM)
- NetAppliance Filer
- Proxim Orinoco Wireless Access Points (AP-1000, COR-1100 and ROR-1000)
- Solaris 7
- Summit Extreme 48is
- Sun Cobalt RaQ4is

Responsibilities & Major Projects:

- Provided third level support for a large nationwide Internet Service Provider.
- Provided support for a nationwide network and servers.
- Designed and wrote programs to perform tasks as and where required.
- Designed and rolled out 802.11b wireless networks in three rural New Zealand towns.
- Member of a small team responsible for the design and build of low cost Linux-based customer premise equipment initially designed for wireless networks. These boxes are now being used for other services.
- Provided ongoing maintenance of the billing software (refer to the 1996–1999 period). This maintenance included rewrites of data import system and data storage to reflect current requirements. This work also extended the system to support billing data for additional services.
- Designed and implemented a free phone helpdesk VoIP application using Lucent technology, which significantly reduced the cost of the helpdesk to the company.
- Implemented the Spong Network Monitoring System using SMS text messaging to cellphones. This included continuing work to improve functionality.
- Maintained the Multi Router Graphing Tool (MRTG) and deployed Cricket, and wrote tools for graphing additional information.
- Researched and designed method to migrate mail servers from mbx format to Maildir.
- Designed and implemented a multi-tier mail server structure with support for virus scanning messages based on subscription to a service. This structure had redundancy of all servers and is expected to easily scale to high load levels. This included support for multiple data centres with mailboxes spread between them.
- Wrote reporting tools to generate reports on the performance of the virus scanners and other tasks as required.
- Wrote interfaces between Spong, the virus reports and CVS check-ins to an in-house Internet Relay Chat (IRC) server.
- Wrote a web based interface to the Vision call data provided by Telecom. This tool reported on several factors, which include the performance of dial-in lines and the number of simultaneous calls.

- Designed, implemented and maintained a system using the Debian Fully Automatic Installer (FAI) to allow a non-interactive build of servers and customer premise equipment (refer above).
- Designed and built a test bed to assess a NetScreen firewall and VPN solution.

Jul 99 – Mar 01

Chelmer Limited
Wellington, New Zealand
Unix Systems Administrator

Maintained Unix servers in a multiple architecture and operating system environment. These systems included Solaris, Redhat and Debian.

Responsibilities & Major Projects:

- Wrote CGI programs, maintained DNS servers, MRTG, assorted web-based services and CGI programs, installed and configured servers, general administration tasks.
- Rolled out Linux servers for the new trading system of the New Zealand Stock Exchange (NZSE).
- Wrote system to remotely upgrade approximately 30 Linux servers for the NZSE.
- Wrote various patches on the Spong Network Monitoring System, which included fixing bugs, adding features and adding plug-ins to monitor more services. All of these have been accepted by the Spong maintainer.
- Developed a web-based application to manage the Spong system.
- Developed a traffic monitoring system based on NeTraMet.
- Installed and maintained request tracking software for in-house developers (Gnats).
- Converted Linux servers to use software RAID1.

1998 – 2000

Victoria University of Wellington,
School of Communications and Information Systems
Wellington, New Zealand
Developer of Web Enabled Applications

Member of the team responsible for faculty website redesign and web server rebuild.

Responsibilities & Major Projects:

- Developed web-based tools in Perl to aid course administration. These tools ran on a Windows NT Server with an interface to an MS SQL database. This involved the administration of Windows NT Server, MS SQL 7.0 and MS IIS 4.0.
- Maintained a Redhat Linux server, which was used as a web server, CVS server and general sandbox for programs that were not compatible with Windows NT.
- Recommended software and other tools to carry out the tasks listed above.

1996 – 1999

Actrix Networks Limited
Wellington, New Zealand
Unix Systems Administrator / Programmer

Member of the team responsible for maintenance of Unix servers in a multiple architecture and operating system environment. The operating systems included SunOS, Solaris, BSDi and Linux.

Responsibilities & Major Projects:

- Wrote parts of the billing system in Perl, rewrote other parts from shell script to Perl and maintained the billing system. This included adding support for accessing data from MySQL and MS SQL databases.
- Created ad-hoc reports in Perl and SQL to summarise information from a variety of sources, which included the databases mentioned above, and various assorted log files.
- Installed and maintained the following major packages:
 - BSDi
 - Debian and Redhat Linux

- Network and machine monitoring software (Big Brother, MRTG, Spong)
- Radiator (included adding a new feature which was accepted by the author)
- RealAudio Server and encoders to perform live broadcasting across the Internet of various Wellington radio stations
- Windows NT Server
- Configured and installed Ascend Pipeline 50 ISDN routers (and some other brands of small ISDN routers/modems). Configured and maintained an Ascend MAX ISDN router.
- Performed basic configuration and diagnostics of Cisco routers and configuration of 3Com switches.
- Provided administration of the office network which included: Windows NT, Windows 95, MS SQL 6.5, MS IIS, MS Exchange Server, Openlink Software ODBC Gateway, TCP/IP enabled printers, MacOS 8.x.
- Configured and maintained X terminals.
- Performed network diagnostics which included decoding network packets from network dumps by using network sniffing software.

1995 – 1996

Heretaunga College

Upper Hutt, New Zealand

Provided assistance with the installation and configuration of Microsoft NT Workstations.

Setup Internet services, which included:

- Installation and configuration of Slackware Linux system
- Registration of “heretaunga.school.nz” domain name
- Configuration of UUCP feed for news and mail
- Installation of SMTP gateway and Bootp on Novell Netware servers
- Installation of user software
- Providing training and support for newly-installed software to Head of Computing Department

1995 – 1996

Onslow College

Wellington, New Zealand

Provided technical expertise and set up the Local Area Network strategic plan, including installation of network cable and infrastructure.

Provided assistance with the maintenance of existing Novell Netware 3.12 system.

Setup Internet services, which included:

- Requested IP address range
- Installation and configuration of Slackware Linux system
- Registration of “onslow.school.nz” domain name
- Configuration of UUCP feed for news and mail
- Installation of SMTP gateway and Bootp on Novell Netware servers
- Installation of user software
- Providing support where needed

Education

2000

Victoria University of Wellington

Wellington, New Zealand

B.Sc. with Honours (Computer Science)

Completed a research project relating to an area of Artificial Intelligence called Machine Learning.

Studied:

- AI and Advanced AI which covered many areas relevant to Artificial Intelligence including Machine Learning and Computer Graphics.
- Distributed Systems which looked at a selection of distributed systems and what can be done. It involved programming a simple distributed system and using CORBA.
- Functional Programming in which I learnt Haskell.
- Hypertext Systems which looked at a variety of different Hypertext systems (not just the world wide web).
- Object Oriented Paradigms which investigated a number of different object oriented languages and the differences between them. We looked at some different object oriented design techniques, including Xtreme Programming.

1996 – 1999

Victoria University of Wellington

Wellington, New Zealand

B.Sc. (Computer Science)

Learnt how to use Emacs as a programming environment for coding in a large collection of programming languages. Became proficient with the GNU Debugger for debugging my code and other people's code.

Completed a variety of Information Systems papers and the following 300-level Computer Science papers:

COMP 301	Software Engineering Principles	A
COMP 302	Database Systems	A
COMP 304	Programming Languages	A
COMP 305	Operating Systems	A
COMP 306	Data Communications	A–
COMP 307	Artificial Intelligence	B+

1991 – 1995

Onslow College

Wellington, New Zealand

Achieved Bursary with the following subjects:

- Chemistry
- Computer Studies
- English
- Maths with Calculus
- Maths with Statistics
- Physics

Personal Development and Achievements

Royal Port Nicholson Yacht Club

Wellington, New Zealand

- Crew member of the yacht *Gucci*, winner of the Challenger Cup.
- Keeler sailing course
- Sunburst sailing course

Ceroc Dance

Wellington, New Zealand

- Member of the winning team in the Ceroc Team Challenge competition