

Huw Lynch

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Enquire for further personal details

Internet Systems Engineer

I am a broadly skilled and experienced IP network engineer (11 yrs), specialising in **network design for security, availability and manageability**. Assignments in the London finance industry (nearly 6 years) have allowed me to develop and apply these skills to **large-scale e-Commerce projects** with great success. My diverse background of **UNIX system administration** and **software development** provide a depth of understanding of Internet systems, software, networks and applications to a level that is rare among my peers. These skills and experience allow **exceptional technical problem solving** capability. My open minded, committed work-place ethics and "can-do" approach allow me to effectively apply these skills to the benefit of my assignment.

The appreciation and respect that I have earned in the workplace is reflected in CSFB's decision to retain myself working for them despite me leaving London to live in Perth. This highly successful work-from-home situation continued for almost 2 years and is very unusual for CSFB.

Key Capabilities

- Secure internet gateway (DMZ) design and operational management in financial environments 6 years
- Secure internet firewall systems and rule-base design and management 10 years
- IP networking 10 years
- Expert 2nd, 3rd line support and trouble shooting for internet systems (gateways, firewalls, protocols, applications etc). Outstanding fault solving abilities. 6 years
- Expert scripting capabilities in PERL and unix shells 10 years
- Enterprise network architecture blue-print development and authoring in a team / peer review environment 2 years
- Liaising with application integration and development teams to ensure application design and deployment compatibility with firewall/DMZ design and security policies. 6 years
- Operational management of gateway networks and change implementation in a demanding financial environment 6 years
- Level headed and dedicated approach to work even under excessive loads, as demonstrated on recent projects in the financial industry.

Technology Skills

Internet transport protocols	IP IPsec HSRP, VRRP, BGP, EIGRP, OSPF, RIP Network address translation
Internet application protocols	SMTP (sendmail, postfix) DNS (bind v8 and v9) HTTP/HTTPS including proxy technologies FTP, NTP

Firewall systems	Juniper Netscreen Firewall v4-v5.2 including Netscreen Security Manager (NSM) Secure Computing Sidewinder G2 v6.1 including enterprise management platform. Network Associates Gauntlet v6 on Solaris Checkpoint Firewall 1 up to v4.1 on Nokia IPSO and Solaris IP access lists on numerous platforms
Virtual Private Network (IPsec)	Cisco IOS and VPN 3060 concentrators Juniper Netscreen ScreenOS Nokia Cryptocluster Checkpoint Firewall-1
Network Load Balancing (SLB/GLB)	Server load balancing (NAT based) on Cisco Local Director, Cisco Content Switch (CSS) and Cisco Content Services Module (CSM). Global local balancing (DNS based) on Cisco Distributed Director and Cisco Global Site Selector
IP Networking Equipment	Cisco IOS platform (25xx, 26xx, 36xx, 37xx, 49xx, 72xx, 75xx and 65xx sup720 up to IOS v12.2) Cisco CatOS platform (5505 v5.4) Enterasys SSR (v7 – v10) SSR 2000 and SSR8600 series
Unix System Administration	Solaris v1 through Solaris v8 (Sun OS 2.8) on SPARC Linux v1 through v2 (not enterprise experience)
Authentication Systems	TACACS+, RADIUS Cisco Secure ACS RSA SecurID LDAP
Network Monitoring	SNMP, Torrus (RRFW), Cricket, MRTG
Web Development	Apache mod_perl, HTML::Mason

Employment History

12/05 – now Network Engineer, Network Technology Services (45 day project)

Consultancy for Credit Suisse First Boston (Hong Kong), working from Perth W. Australia

- Engaged for fast track implementation of an internet services and remote access gateway in Hong Kong. Architectural design changes necessary to meet business requirements of business continuity plans.
- Critical third line support for internet and e-commerce trading infrastructure.

10/05 – 12/05 Network Engineer, Network Technology Services

Consultancy for Credit Suisse First Boston (Australia), working from Perth W. Australia

- Engaged to train CSFB Asia Pacific Network Operations Centre staff in support and operational aspects of the internet DMZ environment, such that those staff may take over my support responsibilities.
- Training sessions conducted on-line from Perth and on-site in Singapore, Sydney and Tokyo.
- Provided critical third line support for internet DMZ and e-commerce trading infrastructure.

12/03 – 10/05 Network Engineer, Network Security & Internet, Architecture & Engineering

Contract for Credit Suisse First Boston (UK), working from Perth W. Australia

- Rollout out of upgrades and architecture changes across CSFB's Asia Pacific internet gateway network infrastructure (5 gateways)
- Regional coordinator and technology expert in major project to replace global Gauntlet firewall installations with Secure Computing Sidewinder G2. Extensive testing, fault finding and problem solving involved.
- 2nd and 3rd line technical support of internet DMZ infrastructure

- Liaising with application integration and development teams to ensure compatibility of new applications with the DMZ infrastructure and security policies.
- Operational changes to firewall policies in cooperation with application deployment and integration teams.
- Consultation with Information Security department over internet/gateway related risk assessments.
- Relocation of DMZ infrastructure during a high risk and highly ambitious CSFB Japan headquarter relocation project. This project was exceptionally demanding due to ever changing constraints. The DMZ relocation was carried out smoothly over several weeks via a migration plan carefully designed to minimise impact to the applications within the DMZ while preserving DR capability. This plan minimised application impact at the expense of network infrastructure complexity. Some particularly difficult multi-vendor spanning tree issues were anticipated, encountered and solved in the course of this project.
- Investigation of BGP route optimisation technologies including Cisco OER and InterNAP FCP platforms.
- Developed an in-house SNMP switch port monitoring system to fix critical functionality shortcomings in enterprise SNMP solution. PERL scripts monitored DMZ switch infrastructure globally, feeding results into alerting systems and web pages. Also developed plugs for Cricket and RRFW to monitor Enterasys SSR, Cisco LD, DD, CSS and CSM platforms.

3/02 - 12/03 Network Engineer, Global Internet Firewall Team
Contract for Credit Suisse First Boston (UK), London

- A Key participant of the global internet firewall engineering team
- Migration of global internet firewall infrastructure from CheckPoint Firewall-1 to Netscreen platform.
- Developed an automated device configuration tracking and reporting system (using PERL, XML, Solaris, Expect, RCS) according to the strict requirements of the company security policies.
- Developed a firewall device database encompassing all devices in the firewall infrastructure. This database enabled extensive automation of configuration management, monitoring, backup and audit tasks.

9/01 - 10/01 e-Commerce Infrastructure Consultant
 Consultancy for Credit Suisse Private Banking (Singapore)

- Engaged to address network design and security issues for an on-line e-Commerce investment project for the CS Private Banking group in Singapore.
- Reviewed and restructured existing e-Commerce network (DMZ) to achieve a superior balance of flexibility, security, bandwidth, and suitability to the application design. Restructure achieved with minimum down-time by means of a well coordinated project plan and careful coordination with the support and development teams.
- Identified and resolved the cause of numerous long running (>1 year) network "glitches" - due to the combined effect of several undetected faults in network equipment and firmware.
- Implemented a security policy for the DMZ using Checkpoint Firewall-1 (IPSO), router & VLAN ACLs (Cisco/Cabletron), VPNs (CryptoCluster) and NAI Gauntlet Firewall (Solaris) in accordance with local information security standards.
- Produced detailed documentation and handed over support and on-going work to the global support & engineering groups.

4/00 - 7/01 IP Network & Security Engineer, Global Internet Firewall Team (GIFT)
Credit Suisse First Boston, London (Contract)

- Engaged to provide network and security design and support for CSFB's Electronic Investment Services division - a large scale and aggressively paced implementation of a multi-site on-line investment application. The production system consists of 10 layered application servers (E10K), numerous support servers, a complex switched and routed VLAN design, administration networks, 4 Checkpoint firewalls (on Nokia IPSO), 6 Gauntlet firewalls (Solaris) and HA VPN infrastructure (IPsec / Nokia Crypto Cluster). Project concluded with the hand-over of first line monitoring of infrastructure to the network operations centre (consisting of in-depth monitoring tools, documentation and training sessions).
- Assisted in implementation, on-going design and support of all aspects of infrastructure supported by the GIFT group. Systems include a multi-site six layer e-Commerce hosting environment (Solaris, Cisco, Cabletron, Checkpoint Fw-1, NAI Gauntlet).

- HA technologies applied extensively in this position include VRRP, HSRP, VPN HA/clustering, switch redundancy (STP), server redundancy and dynamic routing (OSPF, BGP).
 - Security advisor to the CSFB and information security teams on an ad-hoc basis.
 - Implementation a general purpose Internet facing IPsec VPN for service provision to CSFB partners over internet infrastructure. This included integration of VPN equipment into existing complex network designs as configuration of IPsec nodes for interoperation with third party/vendor devices.
 - Carried out analysis and subsequent overhaul of CSFB's global Windows 2000 DMZ network infrastructure.
- 10/99 Network Security Consultant
LASMO Plc, Netherlands (2 Week part-time consultancy)
- Security audit of CheckPoint (v4/NT) firewall deployment in Holland. Several critical corrections proposed and followed through to implementation.
- 9/99 - 11/99 IP Network & Security Engineer, Internet Connectivity Solutions Development Group
Motorola, Basingstoke, United Kingdom (10 week contract)
- Assisted chief network architect in IP design and security issues in the primary UK test environment for 2.5G mobile technology (GPRS).
 - Technologies deployed included firewalls (Sunscreen EFS), Netscape SuiteSpot servers, Solaris SKIP, Sun Cluster, Security Dynamics ACE (SecureID), Steel-Belted RADIUS, Cisco routers with detailed extended ACLs, Solaris Backup and Solaris DHCP.
- 10/98 - 6/99 Network Security Engineer
LASMO Plc, London, United Kingdom (Contract)
- Deployed Checkpoint Firewall-1 firewalls and VPN for LASMO global offices to replace a single Gauntlet 4 firewall. The VPN was used to great success to provide access to central office intranet resources.
 - Deployed a highly secure remote access service built on Security Dynamics ACE/SecureID, Cisco Secure ACS, ISDN, PPP multi-link and CheckPoint SecuRemote. Trained support staff and coordinated transition of the system to a fully supported production service.
 - Restructured internal IP network to a
- 4/97 - 6/98 Open Systems Engineer
Alphawest Pty Ltd, Perth, Western Australia
- Design, installation and on-going maintenance of Internet infrastructure for substantial corporate and government clients on a project basis. Typical components include firewalls (Firewall-1 on Solaris/Windows NT, Watchguard), routers (Cisco, Ascend), WAN links (ISDN, leased-line), proxy servers (Netscape, Microsoft, Squid) and integration with internal email systems (including content scanning servers such as MIMESweeper and VirusWall). Largest project involved connecting 8 independent organisations to each other and the Internet with a series of Solaris servers, a complex security policy and implementation of a robust bandwidth accounting system developed in PERL.
 - Numerous Solaris system administration projects. Including pre-sales support, server installation, OS upgrades, NIS+ deployment and handling of Sun Service support calls.
 - WWW application development. Although this was not the primary focus of the position several complex projects were completed either independently or in collaboration with the software development group. All involved adapting existing applications to the Internet; the most complex example being an AS400 based application accessed via SNA APP-C. Web servers included Netscape Enterprise (v2.51 and v3.x), IIS and Apache.
 - Miscellaneous software development in PERL, Python and C primarily on Solaris (2.51/2.6). Usually small projects up to one month duration.
- 6/93 - 4/97 Computer Services Manager (~3 years)
World Geoscience Corporation, Floreat, Western Australia
- Development of image processing and mapping software for use by WGC in eight international installations. Key role was in software design using object-oriented techniques and implementation of components in C++, PERL, Python and Postscript.
 - Installation and on-going support of a 60 node switched LAN including UNIX (SunOS 4.1.x, Linux 2.x), Windows (95 to NT4), MacOS8, Cisco routers, large-format plotters and backup systems

(Arcada Enterprise & Cheyenne ArcServe). Support for six remote offices is also co-ordinated from the Perth office on a 24-hour basis.

- Implementation and maintenance of global network infrastructure over the Internet including five permanently connected sites (ISDN and leased lines) and three dial-up offices. This included development of custom built firewall systems based on Linux 2.x with the TIS Firewall Toolkit (application gateway and proxy based) and numerous public-domain servers (some of which were modified to include data encryption). A fully archived e-mail system based on SMTP/sendmail was also implemented. Numerous scripts were developed in Python to automate administration tasks. From this work an extensive understanding of the Internet and its underlying protocols was gained.
- Development of the WGC corporate world-wide-web site and small intranet in the Perth office. This included installation of all web-serving infrastructure (Linux 2.x & Apache 1.x), coordination of numerous people involved in compiling content, development of some CGI applications and some scripts for maintenance of the site (PERL & Python).

6/93 – 8/93 Satellite Data Archive Maintainer (part-time)
Western Australian Satellite Technology & Applications Consortium, Floreat, WA

- Automated archive maintenance tasks by developing a suite of C-Shell scripts.

7/92 - 6/93 Research Assistant (part-time)
Remote Sensing & Satellite Research Group, Curtin University of Technology

- Developed satellite imagery rectification and navigation correction software in Fortran 77 for the research group's VAX VMS based data processing system.
- Assisted PhD (Physics) students with software design, management and programming.

Education

90 - 6/93 Bachelor of Applied Science (Multi-disciplinary Science)
Curtin University of Technology, Perth, Western Australia

Major: Computer Science
Minor: Physics, Computer Graphics
Unit assessment ranged from 71% to 99%

Awards

1991, 1992 Vice-Chancellor's List
Curtin University of Technology, Perth, Western Australia

The Vice-Chancellor's List consists of the top 1% of all students enrolled at Curtin University of Technology.

- Nominee for academic performance during 1991.
- Awarded membership for academic performance during 1992.

Interests

Surfing, Snowboarding, Cycling, Travel

Referees

Outstanding verbal references available on request.