

Richard Dawe's Curriculum Vitae

Name: Richard Dawe
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Software engineer with 9 years' commercial experience of developing C/C++ software on Linux and Unix in small- and medium-sized companies. Self-starter, with a desire to understand the big picture as well as the details. History of delivering solid, reliable code in managed-service and embedded environments. Results-driven, focused on team success.

Skills

- C: proficient (12 years)
- C++ (STL, [boost](#)): intermediate (8 years)
- Perl: intermediate (10 years)
- Shell scripting (bash, Korn shell): intermediate (8 years)
- Assembler: custom processors (2 years); some exposure to i386, PowerPC, MIPS
- XML (DOM, SAX, DTD, XML Schema, XSLT): intermediate (6 years)
- E-mail standards: SMTP, ESMTTP, POP3, RFC 2822, MIME (6 years)
- Networking protocols: TCP/IP (IPv4, IPv6, UDP, TCP); SNMP (3 years)
- Team leadership (3 years)
- Experience of working with in-house and contract developers across multiple timezones
- Version control:

	CVS	ClearCase	AccuRev	subversion (SVN)
User	7 years	3 years	4 years	4 years
Administrator	4 years	2 years	3 years	-

- Development on: Red Hat Linux (11 years); Debian GNU/Linux (2 years); Solaris (4 years); BSD sockets
- **GNU** tools: [gcc](#) (compiler), [binutils](#) (assembler & linker), Emacs, make (11 years)
- Debugging: GNU debugger ([gdb](#)) (11 years); [valgrind](#) (7 years); [strace](#) and [ltrace](#) (6 years)
- [rpm](#) (Red Hat Package Manager) (6 years)
- User of Microsoft Windows and Office (various versions)
- Basic French and German

Employment

September 2007 - (current)	Message Systems , (working from home), UK Message Systems is a leading provider of email software solutions for email marketers, service providers and corporate enterprises.
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	<p><u>Senior Software Engineer</u>: My primary focus is the provision of Professional Services, primarily within EMEA, but also in North America. Where the Message Systems mail platform does not meet customer requirements out of the box, this entails either building a solution with the platform, or extending the platform to meet requirements. Other activities include working with the Engineering Team on development of the mail platform, and occasional support work with EMEA partners and customers.</p>
<p>May 2003 - May 2007</p>	<p><u>MessageLabs, Gloucester, UK</u></p> <p>MessageLabs is a provider of managed services for e-mail, Instant Messaging (IM) and web communications, to companies of all sizes, and with partners such as IBM and Verizon. In the case of e-mail, messages sent to/by a customer pass through MessageLabs's e-mail infrastructure before being delivered. Services such as anti-virus (AV), anti-spam (AS), Image Control (IC) and Content Control (CC) are applied as the message passes through.</p>
<p>October 2005 - May 2007</p>	<p><u>Senior Software Engineer</u> at MessageLabs:</p> <ul style="list-style-type: none"> • Responsible for the SMTP mail server software at the core of MessageLabs's e-mail infrastructure. This software accepted, scanned, modified (if required; e.g.: tag with " [SPAM] ") and delivered messages according to customer-configurable policy. Written in a mix of C and C++ (STL and boost), packaged for installation with rpm, all on Red Hat Linux. • Designed & implemented new features in the mail server to support updated versions of AV/AS/IC/CC services, working closely with cross-functional teams (Development, Test, Operations, Client Services, Product Management). • Lead a team of 2 - 4 people implementing new features and bugfixes in the mail server, and associated software. This included maintenance releases for critical bugs in tight timescales. • Supported the Operations and Client Services teams in resolving customer issues. • Experience of the full software lifecycle, from requirements analysis to ongoing maintenance. • Ensured quality: peer code reviews; unit testing; end-to-end test suites (using Perl and other harnesses); memory debugging/validation tools such as valgrind; helped define C++ coding recommendations; investigated and evaluated static analysis tools for improving C++ code quality; local expert resource on rpm (mostly from painful real-life experience). • Technical Lead for two projects to improve mail reporting to customers: one succeeded; one failed, due to factors including problems with project dependencies, and storage limitations. • Technical Lead for a proof-of-concept (PoC) to evaluate a replacement for the aging SMTP mail server software. The PoC was successful, <u>Ecelerity was chosen</u>. Subsequently I advocated its adoption in several solutions, to improve time-to-market, reliability and manageability. • AccuRev and CVS administrator; Linux systems administration
<p>May 2003 - September 2005</p>	<p><u>Software Engineer</u> at MessageLabs:</p> <ul style="list-style-type: none"> • Responsible for the SMTP mail server software at the core of MessageLabs's e-mail infrastructure. • Designed & implemented new features in the mail server, working closely with cross-functional teams. • Supported the Operations and Client Services teams in resolving customer issues. • Ensured quality through thorough testing, and validation with tools such as valgrind. • Integrated Symantec Brightmail Anti-Spam into the SMTP mail server. Packaged the Brightmail server provided by Symantec, and wrote monitoring software for the Operations team. Both the mail server and Brightmail server software were

	<p>deployed and went live with no major issues.</p> <ul style="list-style-type: none"> • Produced security updates for vulnerabilities announced via Bugtraq and other sources. This included porting fixes to older, vulnerable versions of the software. • AccuRev and CVS administrator; Linux systems administration
August 1999 - October 2002	<p>Cabletron Systems / Riverstone Networks, Reading, UK</p> <p>Cabletron (now Enterasys) was a producer of enterprise networking equipment. Riverstone Networks was spun-off to focus on equipment for Metropolitan Area Networks (MAN) and the Internet edge.</p>
June 2000 - October 2002	<p><u>Software Engineer</u> at Riverstone Networks:</p> <ul style="list-style-type: none"> • Sole microcode author for one custom processor. Wrote microcode (assembler) for two custom processors, including support for Multi-Protocol Label Switching (MPLS) and IPv6 protocols. Worked closely with the hardware, software and simulation teams in California. • Initiated and wrote significant portions of some tools in C++ for end-to-end black-box testing of microcode, software and hardware simulations. These were used to find several hardware bugs during simulation, avoiding re-spins of hardware, saving significant sums of money. • Responsible for porting the existing IP, TCP, UDP and PPP MIB support to a new SNMP agent, as part of a project to support monitoring and managing Riverstone's Metropolitan Area Network (MAN) routers with SNMPv3. • Developed using the GNU tool-chain on Debian GNU/Linux and Solaris. Extensive TCL, Perl and shell scripting for testing. • ClearCase administration; Solaris, Linux and Windows systems administration
August 1999 - June 2000	<p><u>Software Engineer</u> at Cabletron Systems:</p> <p>Worked on Cabletron's Virtual Private Networking (VPN) software in embedded C for its range of small-office routers:</p> <ul style="list-style-type: none"> • Extended the software's command-line interface. • Internet security protocol testing: IKE & IPsec. • Worked on support for Public Key Infrastructure (PKI) using digital certificates, which included porting a vendor's PKI toolkit to the router software environment. Liaised closely with the PKI toolkit vendor to report bugs, then test and integrate bugfixes into their toolkit. • Developed using the GNU tool-chain on Digital Unix.
Summer 1996, 1997, 1998	<p>Alchemetrics Ltd., Wokingham, UK</p> <p><u>Programmer</u>: Wrote database programs on SCO Unix in C; wrote "man" page documentation for their C database library; wrote a caching library for their database library to speed data access; worked on a Motif-based database viewer.</p>
Summer 1995	<p>Murray Computing Ltd., Wokingham, UK</p> <p><u>Programmer</u>: Wrote database programs which eliminated invalid data and extracted statistics from the data. Used Borland C on DOS.</p>

Education

1995 - 1999	<p>University of Bristol, UK</p> <p><u>MSci Physics with First Class Honours</u>: Four-year course, combining a BSc and Masters degree. Final year included: 20-week research project with a partner on nanofabrication; 45-minute</p>
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	presentation on Free Electron Lasers. For my elected modules, I tried to focus on Quantum Mechanics, mathematics and the properties of materials.
1988 - 1995	<p>St. Crispins's Comprehensive School, Wokingham, Berkshire, UK</p> <p><u>A-Levels (1995):</u> Chemistry (A), Maths (A), Physics (A) <u>AS-Level (1995):</u> German (A) <u>GCSEs (1993):</u> 8 As, 2 Bs</p> <p><u>Prizes for GCSEs:</u> Design & Technology; Physics; joint-best grades overall <u>Prizes for A- and AS-Levels:</u> AS-Level German; best grades overall</p>

Interests And Hobbies

- Travelling: previous trips to mainland Europe, South Korea, Japan, USA.
- Member and [speaker](#) at [Birmingham Perl Mongers](#), a Perl user group.
- Yoga; cycling & mountain biking; squash.
- Member of the Institute of Physics (MInstP)

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