

CURRICULUM VITAE – NICOLA WORTHINGTON

14-Jul-2010

PERSONAL DETAILS

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PERSONAL SUMMARY

I am an experienced Linux system administrator (RHCE, VCP) and Perl programmer, working in the ISP and software development industries. I enjoy writing Perl software, much of which I have released publicly as open source software on CPAN. PSMON, RRD::Simple and iNagios are used by system administrators around the world. I am also currently a silent director of TFB Technology Ltd.

I am a highly motivated individual and pride myself on completing tasks to the highest possible standard the first time around. As such I find designing, planning and improving networks and other systems' infrastructure very rewarding, and is an area that I would like to continue to work in and develop. I am specifically interested in continuing my career in LAMP Development and/or System Administration and monitoring (in or out of a NOC environment), and related areas where I can continue to use my Perl knowledge.

I prefer to work within 1 hour's drive of Watford, or close to mainline rail stations. I am currently passively seeking and interested in full-time permanent opportunities.

EMPLOYMENT HISTORY

Aug 2009 - The Cloud Networks Ltd, Senior Systems Engineer

Core Roles/Skills: Linux system administration of ~150 hosts, monitoring (Nagios/Cacti/OpenNMS/SNMP/RRD), ad-hoc automation scripting, out of hours on-call cover, infrastructure deployment & consolidation, shared support of edge and core network infrastructure.

The Cloud Networks is currently the WiFi Hotspot market leader in the UK, serving over 5,000 venues around Europe. The Network Operations team of four (2 systems engineers and 2 network engineers), maintains the majority of this estate, including POPs in datacentres in the UK, Germany and Sweden. There is a strong skills overlap within the team, which is necessary given the relative size of the team compared to the size of the network.

I am responsible for maintaining The Cloud's server infrastructure and ensuring uninterrupted service to customers at venues 24/7. While this involves some support ticket escalations from our customer services and provisioning teams, the majority of my time is spent writing various scripts, automation and monitoring improvements.

I am currently working to move our servers to disklessly boot CentOS from the network using shared NFS storage, the benefits being faster deployment of additional service nodes, reduced disk failures, known consolidated and revisioned OS builds, easier maintenance and deployment processes. In preparation of migration to a diskless server build I implemented a Git revision controlled repository of existing production server configurations and runtime information, and physical device inventory using RackMonkey that could be used by Netops, development and QA departments as a reference for the production network.

Other changes include deployment of a custom patched bash (jointly developed with a colleague) and centralised syslog server to aid auditing from servers and network equipment, coupled with rollout of AAA against Active Directory and Radius. Close communication between development, support and provisioning teams mean that I have been able to implement various tools and interfaces for other teams, thus reducing their dependency on the Netops team, and offloading some work from development.

2006 - McAfee International Ltd, Senior Infrastructure Engineer

Core Roles/Skills: Linux system administration, monitoring (Nagios/SNMP/RRD), VMware ESX VI3 virtualisation, automated infrastructure deployment & consolidation, backend LAMP software development, ad-hoc automation scripting, out of hours on-call cover.

The AVERT (Anti-Virus Emergency Response Team) division of McAfee is the core of McAfee's product development and back-office service delivery. I worked on all back-end services and infrastructure in the ASE (Anti-Spam Engineering) team within AVERT. I implemented and maintain comprehensive monitoring of the ASE & AVERT infrastructure (>500 hosts, >2000 services) using Nagios and a custom installation of my open source RRD monitoring software. For my RRD software, see rrd.me.uk & RRD::Simple. I have recently migrated to a scalable distributed Nagios configuration (10 interconnected Nagios servers worldwide) to allow monitoring of more hosts and services throughout the company, worldwide.

I have worked continuously to consolidate and improve the building, installation and continuing maintenance of servers and services within the AVERT organisation. I have done this, where possible, through standardisation of hardware and automated unattended OS installations using PXE network boot servers and Kickstart with RHEL & CentOS. I have played a central role in further consolidating existing physical infrastructure through VMware ESX VI 3.5 cluster and NetApp SAN and NAS storage, and have since achieved VMware Certified Professional certification. My experience and knowledge of Nagios, RRD, SNMP and Perl have enabled me to provide valuable tools to monitor virtualized service availability and capacity utilization, enabling us to better plan and budget for future infrastructure requirements.

2005 - BBC Technology, Internet Operations, UNIX Engineer

Core Roles/Skills: Perl software auditing, participating in Perl coding standards guidelines working group and Internet Operations steering meetings, system administration, monitoring (in-house solution/RRD), ad-hoc automation scripting.

BBCT (now SIS/Siemens IT Solutions & Services) provide and manage the BBC's online internet presence. I worked in a team of nine UNIX engineers who managed a large farm of Solaris Apache web servers, mod_perl application servers and Real streaming servers at multiple locations throughout the UK and US. These provide all dynamic and streaming content to www.bbc.co.uk and news.bbc.co.uk. My primary responsibilities were managing the core mod_perl application server farm and their hosted Perl applications. This included auditing Perl code before installing it in the live production environment, to ensure that the code was secure, efficient, and would not adversely effect the smooth operation of the mod_perl server pool.

Other projects I managed include the migration of mod_perl instances from legacy Perl 5.004 and 5.6.1 installations to Perl 5.8.7, and development and implementation of automated mod_perl server performance monitoring and analysis tools. I also rewrote and optimised the in-house Perl monitoring software suite "statuschk" (used to monitor all servers, devices, services and network circuits), to be multi-threaded for faster performance and better fault diagnosis through it's comprehensive scoreboard.

2004 - BBC, Interactive Factual & Learning, Software Engineer

Core Roles/Skills: Linux, Solaris & Windows system administration, database administration and development, monitoring (Nagios/RRD), backend CMS and customer facing LAMP software development for www.bbc.co.uk, software peer-review, ad-hoc automation scripting.

Working within a team of six other software engineers responsible for maintaining the CMS and development servers (Linux, Windows and Solaris), developing new Perl applications and reusable development tools for the department, webmasters, technical project managers and client-side developers. Primary technologies were Perl, Apache, mod_perl, MySQL and Oracle 8 and 9. Examples of if&Ls work were the integration of interactive technologies for "Test The Nation" and "The Big Challenge".

2001 - Frontier Internet Services Ltd, Network Operations Engineer

Core Roles/Skills: Linux system administration, building core and customer managed server hardware, on-site customer leased-line installations, network administration, administrator of all online customer services (Exim, Apache, BIND, QPopper, ProFTPD etc.), monitoring (in-house solution/MRTG/RRD/SNMP), ad-hoc automation scripting, out of hours on-call cover.

I worked in the core Network Operations Centre team of six in London Docklands, managing and maintaining all aspects of core servers, services and network infrastructure. We exclusively used Linux on our servers (primarily, but not limited to, Red Hat 6.0 through to Red Hat 8.0), which helped me develop strong Linux administration skills. I also learned to configure Lucent/Ascend NAS (Network Access Server) hardware and Cisco 1600 & 3600 series routers. My Cisco router knowledge played an essential role during configuration of leased line installations while visiting customer offices. During my time at Frontier I developed an appreciation of the Exim MTA and MySQL, and how to integrate them in to highly flexible and performant mail routing and delivery farm. Other responsibilities included server provisioning (from building server hardware, to installing and configuring both operating systems and hosted applications and services), CGI application development, ad-hoc systems automation programming in Perl + shell scripting, and 24 hour out of hours on-call for network emergencies.

2000 - Optio Software UK Ltd, Technical Consultant

Core Roles/Skills: Designing and programming business documents for customers in OptioDCS DCL, teaching customers DCL scripting language, on-site software installation and troubleshooting, project management, on-site customer support.

I worked in a small team for UK and European operations (four in the UK, ten in France), primarily focused on customer specified programming projects. My responsibilities included managing projects from initial concept to installation, programming, through to final user acceptance testing, documentation and project completion. Also included training customers OptioDCS DCL programming language and general product support for all Optio Software products. I was frequent required to visit customer sites throughout the UK and Europe which required a high degree of professionalism and self-confidence. My last major projects included writing document generation code for Dell EMEA and HJ Heinz including invoicing, statements and order acknowledgments. Troubleshooting and integration with various host UNIX and Windows operating systems and often unfamiliar customer software installations was an integral part of my duties, which required good analytical skills and the ability to quickly adapt and learn on the job.

1996 - Interactive (UK) Ltd, Software Integration Programmer

Core Roles/Skills: Customisation programming in UniData and SB+ of the Inflo and Avanté ERP products to customer specification, telephone and on-site customer support, teaching OptioDCS DCL training courses, integrating a host of third party products in to the Inflo and Avanté ERP products.

Responsibilities included on-site installation and integration of third party products in to the Avanté ERP database. Including custom development, sales demonstrations and training with COGNOS ODBC, Smart Forecasting, BACSTEL, UniData RDBMS, OptioDCS and OptioFAX. I gained experience with many flavours of UNIX during this time, including HPUX, AIX, DG-UX, SCO, Solaris and Linux.

QUALIFICATIONS & COURSES

- Aug/2008 - ExpertRating Unix Test (Expert Level) GPA 3.3 (Transcript #1817269)
- Feb/2008 - VCP310 / VMware Certified Professional on VI3 (VCP #22953)
- Feb/2008 - TVD-901-LVW / Live Virus Workshop (2 day)
- Jan/2008 - VMware Infrastructure 3: Fast Track Program (5 day extended hours)
- Dec/2006 - MySQL 5 Cluster for High Availability (3 day)
- Apr/2006 - ExpertRating Perl 5 Test (Expert Level) GPA 3.6 (Transcript #1031056)
- Feb/2006 - Red Hat Certified Engineer (100% exam pass mark) #804006064719004
- Apr/2005 - ITIL foundation course (1 day)
- Nov/2004 - Learning Tree Course 590, Oracle9i: A Comprehensive Hands-On Introduction (5 day)

SKILLS

Programming

- Perl (including OO coding techniques) (X, 10yrs)
- UNIX shell scripting; mainly BASH (X, 9yrs)
- mod_perl 1.x, 1.99 & 2.x (X, 8yrs)
- HTML::Mason (X, 7yrs)
- CGI application development (X, 10yrs)
- HTML, XHTML & CSS (X, 15yrs)
- JavaScript (B, 9yrs)
- Learning ANSI C (basic understanding of)
- OptioDCS DCL (XH, 4yrs)
- R83 DataBasic & PICK RDBMS (PH, 4yrs)
- SystemBuilder SB+ 4GL (PH, 4yrs)

Hardware

- NetApp FAS (B, 4yrs)
- Dell PowerEdge 7, 8 & 9 Series servers (P, 6yrs)
- Dell PERC 4/5 RAID controllers & software (P, 6yrs)
- IPMI & BMC remote access cards; DRAC / ILOM / ILO (P, 6yrs)
- Sun Fire X Series & Netra X Series servers (B, 1yr)
- Cisco 800 series routers (B, 1yr)
- Linksys WRTR54G OpenWRT based routers (B, 1yr)
- IBM PC / x86 hardware maintenance (X, 17yrs)
- Cisco 1600 & 3600 series routers (PH, 3yrs)
- Ascend/Lucent Pipeline routers & NAS (PH, 3yrs)
- LAN cabling

Systems

- Linux (various distributions) (X, 14yrs)
- Red Hat Enterprise Linux (RHCE qualified) (X, 6yrs)
- VMware Server & Virtual Infrastructure 3 / VI3 / ESX3 (VCP qualified) (X, 3yrs)
- Apple OS X Leopard 10.5, 10.6 (P, 3yrs)
- Cisco IOS (B, 3yrs)
- Some SunOS, Solaris & OpenSolaris (SPARC & Intel) (B, 10yrs)
- Windows 9x, ME, NT 4, 2000, 2003 & XP (P, 15yrs)
- IBM AIX, SunOS / Solaris, HP-UX (PH)
- OS/2 2.1 (BH, 1yr)
- MS-DOS 3-6.22 (XH, 6yrs)

Experience

- Excellent Linux administrative experience
- NOC & SysAdmin emergency on-call cover
- Frequently worked abroad throughout Europe visiting customer sites while at Interactive (UK) Ltd and Optio Software
- Excellent diagnostic and analytical skills
- Experienced Perl programmer & CPAN author
- Confident and experienced in mod_perl & HTML::Mason
- 4 years teaching OptioDCS classes
- Experience of MRP and ERP software
- Operated a 3 node FidoNet NetMail dial-up BBS for 5 years
- Pre-sales & customer facing technical support experience
- Integrating software with BACSTEL

Experience Key

The following is a brief guide to indicate my level of knowledge in each of my key skills. Some technologies that I may not have used in some time are marked with **H** to indicate historical use, in addition to the level of understanding and experience I demonstrated in the past.

- **X** - expert / highly proficient
- **P** - used professionally / competent and confident knowledge
- **B** - basic to intermediate understanding / confident to develop skill further
- **H** - historical skill no longer actively using / need to "brush up" knowledge

Software

- Perl DBI (X, 9yrs)
- Apache 1.3, 2.0 & 2.2 (X, 10yrs)
- Red Hat's Kickstart & PXELinux (X, 5yrs)
- MRTG, RRD & Nagios (X, 6yrs)
- Cacti, OpenNMS (P, 1yr)
- SNMP, Net::SNMP, net-snmpd (P, 8yrs)
- Linux Virtual Server / LVS HA Load Balancing (P, 3yrs)
- ipchains & iptables (X, 9yrs)
- Linux software RAID & LVM (X, 9yrs)
- PostgreSQL 8.3 (P, 1yr)
- MySQL 3, 4, 5 and MySQL Cluster 5 (P, 8yrs)
- BIND 8 & 9 (w/SQL hooks) (P, 9yrs)
- Exim (w/SQL, TLS & PAM hooks) (P, 9yrs)
- CVS & SVN / Subversion RCS (P, 9yrs)
- ProFTPD (P, 3yrs)
- SpamAssassin
- OpenSSH
- OptioDCS, OptioFAX, e.ComPresent (XH, 4yrs)
- UniData & UniVerse RDBMS (PH, 4yrs)
- Hybrid & Bahamut IRC Daemons (PH, 6yrs)
- Adobe Photoshop 4, 5, 6, 7 & CS
- Microsoft Office, OpenOffice, NeoOffice

Publicly Released Software

- Psmon – Process monitoring script
- iNagios - iPhone interface to Nagios
- RRD::Simple, rrd.me.uk - System performance graphing
- Nagios Check Plugins
- Parse::DMIDecode
- Apache2::AutoIndex::XSLT
- WWW::FlexTel
- Sys::Filesystem
- Util::SelfDestruct
- Colloquy::Data, Colloquy::Bot::Simple, Parse::Colloquy::Bot, Apache2::AuthColloquy
- Proc::DaemonLite
- Tie::TinyURL
- WWW::Dilbert, WWW::VenusEnvy, WWW::Comic

- Web design

PERSONAL INTERESTS

I have a keen interest in British and American politics, and international current affairs. I enjoy amateur photography, watching international tennis events and am a regular BBC Radio 4 listener. In my spare time I write and release open source Perl software, am an active member of CPAN, and have been a member of the Free Software Foundation since 2004.



Linked  profile