

## Stephen Harris - Curriculum Vitae

### PERSONAL DETAILS

Name: STEPHEN William Edward Harris  
Nationality: British  
Employment Status: Legal Permanent Resident  
(Green Card)

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### PROFESSIONAL PROFILE

Primary skills:

- Unix Systems Engineer with a security focus
- 25+ years commercial experience in Unix Systems Administration and designing/architecting, engineering and implementing technology solutions.
- Very competent in Perl and ksh scripting, competent in C, basic SQL, some experience in other languages (Java, Python, Go etc)
- Deep knowledge of "how Unix works", including libraries (e.g. PAM, NSS), services (e.g. send-mail, apache) and protocols (e.g. HTTP, SMTP, NNTP).
- Able to explain technology in a manner people understand
- Take an overall view of processes and solutions to determine process/technology gaps, and how to remediate them.

Education: MA Oxford University, Mathematics and Computation (1987-1990)

### EMPLOYMENT HISTORY

**Oct 2006-date: Vice President, JP Morgan Chase**

**Oct 1999-Oct 2006: Senior Computer Scientist, Computer Sciences Corporation (CSC)**

*These two have been linked together because they are effectively one continuous employment. When I joined, JP Morgan had outsourced their IT to CSC; in 2006 I was insourced as a VP.*

My current role is security engineer for internal and external cloud development; primarily one of building "secure from the start" technologies. This includes closing gaps in common products (eg Cloud Foundry passing credentials in plain text); ensuring that other parts of the engineering team don't make mistakes; creating new solutions to problems that haven't been solved before. This combines the "infosec" roles of defense and attack, along with understanding of regulatory requirements, to create solutions.

#### **Major tasks/roles**

- Designed and implemented an encryption tool to allow applications on Cloud Foundry to receive credentials in a secure manner ("miniVault")
- Designed and implemented reporting portal for Unix authentication infrastructure (vendor product was a "black box" to end users).
- Voting member of "Global Authentication Committee" (defining and promoting corporate standards).
- Architected and implemented multiple automation tools
- Participated in multiple external audits, representing central technology.
- Participant in 'Expert Engineer' (E2) programme. E2 is a JPMC internal course for top performing technologists (less than 40 participants at the time) introducing them to techniques such as how to create effective proposals for presentation to senior management, helping them expand their scope of effectiveness. This allows me to promote solutions to senior management and obtain buy in.
- Designed, implemented, deployed, documented tool to track remediation status of machines, which involved tracking 10,000 machines, 4 million accounts, ownership, trending etc. This was part of a 3 year programme to convert the existing environment into the corporate central account provisioning/administration tool (Keon aka BoKS). Passed audit with no comments.
- Evaluated then-current (2008) market options for centralised account provisioning and controls. This involved requirements definitions (controls and end-user), interaction with other parts of the company, vendor interaction, product evaluation, proof of concept build out, recommendations to management
- "Unix Collection and Reporting Facility" (UCRF) deployed globally. This was a centralised data collection from all servers (approx 2,000), web front end reporting, integration with asset management systems, CA Unicenter TNG, etc, with daily reports to risk management and SA teams
- Designed and implemented early automation tools; Y2K health checks - validated all managed servers for core functionality on Y2K, which became "BAU" tests running for 8+ years; mass password changes; code deployments; etc

**June 1995-Oct 1999: Senior Infrastructure Administrator, VNU Business Publications Ltd**

*VNU BPL was the London division of a Dutch based global publishing company. I started in the "Matrix Publishing Network" department as Unix & Network Administrator and developer, but as the company evolved my role expanded to cover "VNU Online Europe" and then I moved into the core IT department as Senior Infrastructure Administrator*

My primary role was as Systems and Network administrator, initially focused on managing the web content delivery services and then later the core infrastructure for BPL, including Unix (Solaris, HP-UX, Linux), Oracle (7.\* ,8i), NT4, routers (Cisco), switches (DEC, 3Com) and firewalls (Firewall 1, Linux iptables).

**Major tasks/roles**

- Restructuring and rationalising of network for stability and load balancing.
- administration and automation scripts (eg DNS, POP, tacacs, monitoring)
- Reconfigured sendmail for dialup SMTP sending and firewall rules
- Implemented INN based Usenet NNTP server, co-ordinating with BTnet
- Wrote first Java applet sold commercially in the UK
- Internal Intranet site combining file system, systems monitoring, pager, fax services
- Design and implementation of European wide ISDN network based on RFC1918
- Designed customers networks (internet access, servers, etc)
- Built generic persistent interface layer between CGI and backend databases
- Design and implementation of asynchronous Oracle logshipping to standby databases
- NT user creation automation via ksh scripts combining permission/quota settings

**July 1990-June 1995: Computer & Communications Manager, Papachristidis Ltd (Hellasport Group)**

*Hellasport consisted of four offices worldwide (London, Aberdeen, Greece, Philippines) as well as various companies owning different ships. Papachristidis Ltd provided most of the administration and technical support for the group based in London. This was my first full time job after leaving University.*

My role was to manage the group computing and communications, with an assistant based in the Greek office, and an assistant in the London office. Based in London but traveled frequently to Greece and once to the Philippines. Systems used include Sun Sparc (SunOS 4.x), various SVR2 and SVR3 machines, and Linux machines, with primary access being from DEC VT and Wyse terminals using terminal servers.

**Highlights**

- Building rewiring (Ethernet, serial)
- Server upgrades (eg migration from DEC Ultrix to SunOS)
- Integrated communications (telex, fax, email, leased lines, Inmarsat)
- Developed various applications
- Built Linux distribution for installing on ships  
Interviewed on this project by Linux Journal, Aug 1995
- Participated in and listed contributor to the Linux Filesystem Hierarchy Standard

TRAINING COURSES TAKEN

- Mar 2008: Software Architecture Principles & Practices (Carnegie Mellon SEI)
- Oct 2006: Solaris 10 Features for Experienced Solaris SAs (SA-225-S10)
- Mar 2004: Solaris 9 Advanced System Administration (SA-299)
- Jul 1998: Supporting Microsoft NT Server: Core Technologies (Azlan training)
- Feb 1998: Oracle 7 Backup and Recovery (O7DBA/BR7, Oracle Training London)
- Feb 1998: Oracle 7 DBA (O7DBA/AD7, Oracle Training Richmond)
- Jun 1996: Oracle 7 PL/SQL (SPL7, Oracle Training Bracknell)
- Jul 1995: Sun Solaris Administration (by Sun for Competency 1000 accreditation)