



Danyal Samak

Newcastle upon Tyne
danyal@greencore.org.uk
+44 (0)7404 44 99 50

EDUCATION

AMSTERDAM TECH

2024 | Amsterdam, NL

BSc Software Eng.

HARVARD UNIVERSITY

2022 | Cambridge, MA

CS50X/P Computer Science

COURSERA

UC Santa-Cruz: C Specialisation
Packt: Docker Hands-On

OPEN UNIVERSITY

2011 - 2022 | Milton Keynes, UK

S104 Exploring Science, 2012
W200 Understanding Law, 2011

FIFE COLLEGE

1997 - 2000 | Kirkcaldy, Fife

HNC Computer Science
SQA Multi-User Operating Systems
SQA Using IT in Business
SQA Programming Pascal

EXPERTISE

Enterprise Computing Linux,
Solaris/OmniOS, Oracle Database,
PL/SQL

Administration RHEL, Oracle Solaris,
OpenBSD, OpenVMS, nsd & BIND,
PostgreSQL, JBoss / WildFly, Apache
HTTPd & TomEE, Nginx.

Security Reverse Engineering, x86+Arm
Assembly language, Malware analysis,
cybersecurity standards including
ISO/IEC 27001 and ISO/IEC 27032.

LANGUAGES

English // CEFR C2+ (Native)
German // CEFR B1
Romanian // CEFR B1

EXPERIENCE

GREENCORE TECH LIMITED | TECHNICAL DIRECTOR

2025 -

GreenCore is a non-profit / charitable organisation focusing on recycling surplus IT equipment and advocating for the use of Free & Open Source software as alternatives to vendor-locked proprietary solutions, empowering communities, organisations, and SMBs with the tools and knowledge for IT infrastructure.

- Establishing internal and template infrastructures built on Proxmox.
- Integrating Keycloak SSO, Matrix, Wagtail CMS, Nextcloud with Docker/Kubernetes and Ansible.
- Design of educational programmes to spread working knowledge about F/OSS, information security, and privacy tools.

SELF-EMPLOYED | FREELANCE SYSTEM ADMINISTRATOR AND ENGINEER

2008 - 2021

- **DevOps:** Red Hat Enterprise Linux, Oracle Solaris, OpenBSD, nginx, Virtualisation (KVM, Proxmox / VMWare ESXi) and Container platforms (Docker, Kubernetes), Ansible, Vagrant.
- **Database Administration:** SQL, PL/SQL, PostgreSQL, MySQL/MariaDB, Oracle Database.
- **Programming:** ANSI C, Perl, Elixir, Bash/Korn Shell, awk, Python

STATIC NETWORKS | INFRASTRUCTURE ENGINEER

April 2004 - Oct 2008

- Development and deployment of VPNs for private clients
- Utilised OpenVPN, BGP, Kerberos, RADIUS and AFS
- Created secure and anonymous platforms
- Other technologies employed included: C/C++, J2EE, VMware ESX, OpenBSD, tinc, Quagga, PostgreSQL, Oracle DB, and Tomcat

VOLUNTARY PROJECTS AND INTERESTS

PERSONAL | A SHORT SUMMARY

Throughout my life, I've dedicated myself to the pursuit of knowledge, accumulating a wealth of experience in computer science, linguistics, theology, and electronic engineering both professionally and as a hobbyist.

CARER | FOR A RELATIVE

I care for a relative with a neurological disease which at times has been challenging but also rewarding.

ANONET | DECENTRALISED NETWORK

Leveraging BGP and other internetworking protocols & technologies we created a decentralised, pseudoanonymous intranet within the internet based chiefly on IPv4.



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SIGNIFICANT PROJECTS AND CONTRACTS

PRIVATE INTELLIGENCE AGENCY | SECURE VIRTUALISATION INFRASTRUCTURE

I successfully executed a twelve-month project where the client sought a robust solution on a specialized platform. Leveraging Oracle SPARC Enterprise hardware, I built a secure cloud-like infrastructure using the SPARC Hypervisor (LDOM, Logical Domain Manager) and OpenBSD operating system (selected for its proactive security and exploit mitigation capabilities).

In alignment with the Unix philosophy, and without reliance on third-party software beyond the base, I engineered a system that is both straightforward to maintain and scalable by administrators with fundamental skills. Furthermore, I ensured the system's adaptability and future integrations (such as web-based self-service functionality for users and developers) with APIs.

To facilitate efficient monitoring, I developed bespoke Korn shell and Perl scripts, utilising RRDtool and OpenBSD's httpd. The configuration of each virtual machine was streamlined through interactive scripts that prompted users for resource allocation specifications. Subsequently, configurations were automatically added to the router (PF), and the operating system was configured using autotinstall based on provided values, adhering to a template. Comprehensive documentation was provided to enable another developer to implement an API seamlessly.

Security was a paramount consideration throughout the project. The client's requirements necessitated robust measures against potential cyber attacks and minimising the attack surface, given the highly sensitive nature of the infrastructure's location and access to resources therein. In response, I implemented onion networking (over Tor) and SSH tunnels with key-based authentication after thorough hardening of the systems. This approach not only proved suitable but also prevented any leaks into the internet from outbound-routed VMs over Tor.

Upon successful implementation, testing, and client approval, I dedicated the remaining project duration to meticulous system documentation and providing comprehensive support and training for the administrators tasked with ongoing maintenance.

- **Key technologies:** OpenBSD, SPARC Hypervisor (LDOM), Korn shell, Tor, PF (Packet Filter), OpenSSH, RRDtool, relayd, httpd, dhcpd, Perl, awk.

STATIC NETWORKS, LLC | VMWARE AND CONTAINER INFRASTRUCTURE

I collaborated remotely with intermittent visits to the AMS9 Digital Reality Data Centre in Amsterdam, undertaking the installation and configuration of a VMware vSphere cluster (ESXi, vCenter) utilising Dell PowerEdge Hardware, Dell PERC H710P, and Fibre Channel storage arrays to support the client's European operations. Additionally, I successfully implemented a Red Hat OpenShift cluster atop this virtual infrastructure.

- **Key technologies:** VMware vSphere (ESXi, vCenter), vSAN, VLAN, Fibre Channel, SAN, iDRAC, Red Hat Enterprise Linux / CoreOS, OpenShift, Puppet, Ansible.

FINANCE / DIGITAL CURRENCY | SQL DATABASE DEVELOPMENT AND ADMINISTRATION

I spearheaded the design, development, and administration of the database and back-end software for a non-blockchain-based anonymous digital currency and banking system. Aligning with the client's preference for open-source solutions, I employed PostgreSQL ORDBMS, Perl, and C++ on CentOS Linux to meet project objectives.

Leveraging PL/pgSQL on PostgreSQL, I was able to ensure the atomicity, consistency, isolation, and durability (ACID) of transactions, protecting their critical role in upholding the banking system's integrity.

Additionally, I took charge of configuring database replication and implementing robust backup strategies in a production environment, further enhancing the system's reliability and resilience.

- **Key technologies:** PostgreSQL, PL/pgSQL, SQL, Perl, C++, CentOS (Enterprise Linux).