

Rob Shakir

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P S I have been involved in the design and implementation of Internet infrastructure and connected systems from a young age – pursuing startup ventures through my high school, college and University educations. Since this induction, I have focused on the design and architecture of IP/MPLS networks, and particularly on finding the optimal solutions to the technical and commercial challenges that exist for network operators. I actively contribute to solutions and strategy both on an intra-company basis, and within the Internet community – both through presentations and actively participating in working groups at standards bodies such as the IETF. Personally, I strive to further my knowledge, and continually seek new challenges.

C H **Network Designer**, Cable&Wireless Worldwide (AS1273/AS4445) *June 2010 - Present*

- Design/Architecture role, primarily focused on the Multi-Service Platform (MSP) (AS4445), within a team acting as the technical design authority (TDA) for all IP/MPLS deployments within C&W. Directly involved in translating 5+ year technology strategies into robust scalable network architectures.
- Personally acted as the TDA for core technologies, network robustness and scalability on the MSP platform – including leading technical involvement with key vendors in order to measure and manage existing performance, and improve ongoing network performance and operation.
- Acted as technical lead for MSP Core Stability project aiming to reduce network outages and increase resilience, by implementing best-practice deployments and protocol developments. Developed a strategy for core network monitoring for use by operations, capacity planning and platform support teams.
- Technical prime for MSP Scaling, ensuring that the global IP/MPLS network elements scale to accommodate service growth. Particular focus on the scaling and failure modes of MPLS-TE and BGP-4, including consultation and development of an Operator-led approach to BGP error handling within the IETF. Developed a statistical model for capacity planning purposes for PE network elements in C&W's IP/MPLS networks.
- Contributed to the technical strategy and best-practice for C&W Internet networks (AS1273/AS2529/AS6660).
- Devised and specified a testing approach for node software type approval intended to balance cost of testing and operational overhead against network risk whilst maintaining robust testing methodologies.
- Represented C&W's strategy and requirements within the IETF, operator communities, and with network equipment implementors – particularly focused around MPLS and intra- and inter-domain IP routing protocols.

Network Development Engineer, Vialtus Solutions (AS5413) *June 2008 - June 2010*

- Role within the Network Development team, providing critical fault resolution, and acting as a technical design authority for an EU-wide 60+ node MPLS-TE network with direct responsibility for internal and external routing policy, transit and peering connectivity, and network feature enhancements.
- Developed platforms for the delivery of access services (Ethernet, leased line, and xDSL) for Internet, L2 VPN and IP VPN products, including migration of the UK-wide ATM/Frame-Relay network to third-party SDH. Provided design services for a UK-wide hosting network – including advising on network strategy for physical site migrations.
- TDA for the former PIPEX Business, Vialtus and Daisy data product sets with responsibility for developing detailed high and low level designs, technical service descriptions and training material for internal and external use.
- Acted as an external-facing contact to allow the resolution of complex technical issues with vendors and the technical community (e.g. IETF IDR). Liaised externally as an operational security contact for incident mitigation to support the Vialtus DDoS mitigation platform.
- Developed and managed internal OSS providing services for Engineering – such as configuration backup, failure modelling, traffic analysis and capacity management applications.
- Provided technical consultancy for Product, Sales and Pre-Sales teams – providing opportunity analysis, feasibility studies, and proof-of-concept deployments to deliver new and bespoke products. Presented detailed architectural and commercial analysis to CxO level personnel to assist in overall company development.

Technical Architect, Catalyst2 Services (AS29636) *2003 - 2008*

- Co-ordinated technical operations, with overall responsibility for all *nix systems and network services supporting a SME-focused managed services and hosting provider, based in London, UK.
- Directed external and internal routing policy and operation of AS29636 – including defining detailed technical roadmaps for network and hosting services with a particular focus on supporting high-performance, high-availability services.
- Supported commercial elements of the company, including providing pre-sales consultancy, to ensure the continued growth and success of the company.

Systems Administrator, UH Hosting 2001 - 2003

- Developed and managed a hosting platform for the delivery of personal HTTP/e-mail and communication services.

A Programme Committee, LINX October 2006 - January 2009

E Operator, Sovereign House Internet Exchange (SovEx) November 2005 - April 2007

T E Networking

- Expert knowledge of Layer 2/3, and MPLS network operation, including over 8 years practical operational and architectural experience in content-provider, IXP, NSP and telco networks.
- Excellent knowledge of MPLS within an SP deployment – including the delivery of L2VPN (PWE3, VPLS) and L3VPN (VPNv4, VPNv6) services. Extensive experience of MPLS QoS including TE and DS-TE.
- Expert level knowledge of intra-/inter-domain IPv4/IPv6 unicast, and MPLS routing. Extensive operational experience of BGPv4, IS-IS, OSPF, and LDP along with typical L3 routing protocols (e.g. RIP, HSRP). Knowledge of intra- and inter- domain multicast routing – including within L3VPN environments.
- Extensive knowledge of access service provision, including excellent knowledge of SDH (for delivery of n*DS-0 upwards), L2TP (for xDSL services), and Ethernet (and OAM such as 802.1ag and Y.1731).
- Extensive experience of Cisco Systems routing and switching devices including detailed knowledge of ISR, 7200, 6500 (with VSS), 7600, GSR and CRS-1. Experience of both IOS and IOS XR.
- Design and operational experience of Alcatel-Lucent 7750SR and 7450ESS routing equipment, including detailed knowledge of TiMOS (7.0+) for L2 and L3 service delivery.
- Good knowledge, and operational experience of Juniper Networks routers (MX/M/J-Series), and Extreme switching (including EAPS) for large metro network delivery.
- Experience of Cisco PIX and ASA, Fortinet Fortigate, and Juniper ISG and SSG for packet filtering – including IPS and IDS services. Excellent knowledge of Cisco Detector/Guard DDoS mitigation products.
- Good knowledge of the delivery of VoIP services – including LAN and WAN implementation experience with Asterisk and Avaya based PBX systems. Experience of IP infrastructure (address-translation, and SBC) for shared VoIP deployments.

Systems Administration

- Extensive experience of *nix platforms – including Linux (2.4, 2.6), FreeBSD, Mac OS X and Solaris.
- Excellent knowledge of a variety of daemons for HTTP, Mail, AAA (TACACS+, and RADIUS), syslog, and DNS services – including extensive operational experience in SPs and hosting provider environments.
- Excellent knowledge of cPanel and HELM for large shared hosting platform delivery, and knowledge of Xen, and KVM for virtualisation.

Development

- Extensive knowledge of Python, Perl, Tcl and bash for web developing and scripting. Experience of development of system utilities and simulations in C/C++.
- Good knowledge of LaTeX, git and Subversion for documentation creation and revision control.

E Physics, Imperial College London 2005 - 2005
BSc (Hons) - 2:1 Classification. Tessella Prize for Software for Final Year Project.

A-Level, Greenhead College, Huddersfield 2003 - 2005
5 A-Levels (3A, 2B) and 1 AS-Level (A).

GCSE, The Crossley Heath School, Halifax 1998 - 2003
11 GCSEs (7A* and 4A). Halifax plc Award for Academic Achievement (Autumn, 1999)

P I

- Keen cyclist – both for transportation and recreation.
- Completed the Duke of Edinburgh Bronze, Silver and Gold awards.
- Alto, Tenor and Soprano Saxophonist (Alto to ABRSM Grade 6) and pianist (Grade 2 Jazz and classical).

P I

- Full clean UK driving licence.
- British Citizen

P R *Available on request*