

Curriculum Vitae: Brett Carr

PERSONAL INFORMATION:

Date of Birth:	26 th June 1968	Nationality:	British
Address:	1 Clapcot Way, Wallingford, Oxfordshire, OX10 8HS, United Kingdom		

KEY SKILLS:

Managing critical systems:

- Extensive experience of delivering globally dispersed critical technology platforms including:
 - DNS Services for an Internet Root DNS Operator (K Root)
 - DNS Services for an Internet Country Code top level operator (.uk)
 - Recursive DNS Services for thousands of end users throughout the UK public sector.
 - Authentication for a Global Investment bank.

DNS

- Implementation and administration of recursive and Authoritative DNS servers .
- Architectural design experience of global DNS Systems.
- Extensive knowledge of commonly deployed DNS software (BIND, NSD)
- Experience presenting to both technical and non technical audiences about DNS/DNSSEC.

DNSSEC

- Design and deployment of highly available DNSSEC systems for critical TLD and SLD level zones
- Knowledge of hardware security modules (Thales and Sun/Oracle) in relation to DNSSEC
- Over 10 years operational experience with DNSSEC signing systems based on BIND and OPENDNSSEC..
- Experience in writing and operating security procedures in relation to DNSSEC

Internet Community Engagement:

- Member of the ICANN CCNSO Tid-Ops steering committee, engaging with the ccTLD community to help foster relationships and develop documentation and processes.
- Vice chair of the ICANN CSC (Customer standing committee) ensuring that the PTI adheres to current SLAs and ensuring the same agreements are updated where necessary.
- Active participation and presentations at industry forums, RIPE, DNS-OARC, IETF, ICANN, UKNOF, CENTR.
- Provide reports and commentary on DNS Standards development from the IETF to the NCSC.
- Member of DNS OARC programme committee.

Linux/Unix:

- 20 years experience in Linux/UNIX system architecture, administration and support.
- Experience in standardization and automation of Linux systems using configuration management systems.
- Experience of configuration management using ansible
- Bash Shell scripting

Networking:

- Expert knowledge of VMware networking, including Standard and Distributed Virtual Switches
- Experienced in configuration and administration of Cisco and Juniper switches and routers.
- Knowledge of BGP/Anycast in relation to the operation of highly available DNS infrastructure.

Management:

- Experience with presenting technical subject matter to a broad range of stakeholders both within and outside the organization.
- Assessing, recruiting and developing staff.
- Project planning and management.
- Manage business needs and suggest solutions.
- Managing vendors during projects and in ongoing operations.
- Defining requirements and vendor selection for project needs.
- Service delivery.

- Incident management.
- Change management
- ITIL Foundation qualified

EMPLOYMENT HISTORY:

January 2017 – Present

Nominet – Manager DNS and Network Engineering

Key Responsibilities:

- Manage a team of 6 engineers responsible for:
DNS and DNSSEC Infrastructure for .uk and 80 GTLDs (including 30 for Amazon)
A critical security focused recursive DNS service for the NCSC providing lookups for thousands of users across the UK.
All Nominet network infrastructure (16 Datacenters globally)
- Review Architectural designs for new DNS Services:
Check network security specifications are suitable but restrictive. Allowing only network traffic appropriate for the service.
Check DNS Software installation design provides a resilient and secure service. Ensuring software is up to date, not subject to any vulnerabilities and is configured in a secure manner.
- Develop and refine IT Service Management functions (Incident, Change, Problem)

Key Achievements:

- Deliver a design and project plan for deployment of a protected recursive DNS service for the UK public sector.
- Design and deliver changes to DNS systems in relation to Nominet's EBERO (Emergency Back End Registry Systems) provision.
- Work with stakeholders within Nominet and its customers to ensure the smart delivery of several highly critical DNS services.
- Deploy DDOS protection on all Nominet's external connectivity
- Manage the deployment of a new virtualization platform (based on vmware)
- Active member of the ICANN TLD Ops Standing committee helping to deliver documentation to protect from DDOS and recover from business continuity incidents.
- Vice Chair of the IANA CSC (Customer standing committee) overseeing IANAs performance against defined SLAs.

January 2015 – December 2016

Nominet – Senior DNS Engineer/Architect

Key Responsibilities:

- Manage the DNS and DNSSEC Infrastructure for .uk and several GTLDs
- Manage and deliver the Turing DNS statistics analysis tool.

Key Achievements:

- Deliver a design and project plan for deployment of a global authoritative Anycast based DNS infrastructure.
- Manage the deployment of a new global DNS platform.
- Design and deliver changes to DNS systems in relation to Nominet's EBERO (Emergency Back End Registry Systems) provision.
- Deliver in depth documentation in relation to the design and operational practices for Nominet's DNS systems and train engineering staff.

July 2014 – December 2014 **ICANN – Senior Manager Technical Services**

Key Responsibilities:

- Manage and deliver the registry reporting interface system.
- Manage and deliver the Zone File Access system.
- Manage and deliver the Bulk Registration Data system.
- Provide key technical knowledge to help troubleshoot TLD level DNS/DNSSEC issues reacting to alerts in the ICANN monitoring system.

Key Achievements:

- Deliver a technical monitoring system in relation to TLD Controlled Interruption.
- Deliver key changes to the Registry Reporting Interface based on requirements gathered from both internal and external customers.

April 2008 – July 2014 **Nominet UK – Systems Engineer/Architect**

Key Responsibilities:

- DNS and DNSSEC operations and consulting.
- Virtualisation Infrastructure design, deployment and support.
- Infrastructure standardization and automation.
- Stakeholder engagement within and outside the business.
- Advising the business on new technologies related to infrastructure.
- Assessment of new technologies, and making recommendations for where the business can benefit.
- Standardization, architecture and lifecycle management for virtual and physical server environments (Linux and Windows).
- Assessing project pipelines and making infrastructure recommendations.
- 3rd level incident and problem management.
- Training and mentoring other team members.
- Subject Matter Expert within the organisation for:
 - DNS
 - DNSSEC
 - VMware VSphere and Vcenter
 - VMware Operations manager
 - VMware Site recovery manager
 - HP 3par Storage

Key Achievements:

- Architectural design and implementation lead for a large program of infrastructure change based around GTLD requirements.
- Lead a team to design a new generation DNS constellation for .uk and new GTLDs.
- Designed and deployed infrastructure for DNSSEC on the .uk top level domain.
- Defining and documenting standards as part of an infrastructure transformation project.
- Patch test and rollout for several major DNS vulnerabilities affecting the .uk top level domain.
- Architected Virtualisation, server and storage as part of an infrastructure transformation project.
- Designed and deployed operations and capacity monitoring technologies based on VMware VC Operations manager and Vfabric Hyperic.
- Designed Vsphere 5 infrastructure for new datacenter rollout.
- Liason with project stakeholder board (Comprising people from several parts of the business including several C Level roles) regarding infrastructure architecture.
- Developing, documenting and promoting processes to help gain ISO20000/200001 accreditation.

October 2007 – April 2008 **Merrill Lynch – Active Directory Operations Team Lead.**

Key Responsibilities:

- Support and design Global Microsoft Active Directory services in a critical environment.
- Lead globally distributed team members.

- Co-ordinate change management for critical authentication services.
- Manage incidents in Active Directory services as they arise.
- Provide expert consulting services for DNS.
- Support and availability reporting.
- Issue escalation.

Key Achievements:

- Led a project to remediate problems from an AD audit.
- Took part in project to deploy RSA Securid Services
- Developed changes to departmental change management processes.
- Developed and implemented a global shift handover procedure.

November 2006 – October 2007

RIPE NCC – Manager DNS Technical Operations (Amsterdam, NL)

Key Responsibilities:

- Setup and management of a department with a high technical profile.
- Interview, hiring and performance management of engineering staff.
- Own and deliver several core Internet facing services including a root DNS server.
- Interaction with key Internet community members to promote the department services.
- Establishing and managing relationships with ccTLD operators.
- Project planning and management.
- Support and availability reporting.
- Issue escalation.
- Problem, Incident and Change management.
- Drawing up budgets and ensuring they are adhered to.
- Ensuring company IT practices and policies are followed.
- Representing RIPE NCC DNS Services at Root Operator and ICANN RSSAC Meetings.
- Planning for continuity of operations.

Key Achievements:

- Created and publicised a vision and goals for the new department.
- Communicated with fellow managers regarding the purposes of the group.
- Frequent presentations about DNS Services at key Internet and Network Operator meetings.
- Assessed all DNS services for continuity of operations issues and recommended changes.
- Helped to develop change and issue management methodologies.
- Coached and mentored new members of staff.
- Developed and applied change management methodologies.
- Developed and implemented incident management procedures.
- Developed and documented disaster recovery procedures.

December 2004 – October 2006:

RIPE NCC – Senior Systems Engineer (Amsterdam, NL)

Key Responsibilities:

- Primary knowledge contact for DNS based services in the organization.
- Linux server administration and shell scripting.
- BIND and NSD DNS server administration.
- Dealing with requests from ccTLD operators
- Windows 2000 and 2003 Active Directory administration.
- Writing and reviewing technical documentation.
- 24/7 On call responsibilities.

Key Achievements:

- Engineering lead on DNSSEC deployment project (signing all RIPE NCC maintained zones)
- Deployment of VMware based Virtualisation solutions.
- Designed, specified and implemented a distribution system for DNS configuration files.

- Implemented a DNS provisioning system for a partner RIR (AFRINIC).
- Developed a process for ccTLD change requests.
- Mentored junior staff on DNS technologies.
- Setup a Windows monitoring system based on Microsoft Operations Manager.
- Upgraded all Windows desktops to XP using SMS 2003.
- Specified and designed improvements to the Windows Server infrastructure.
- Took part in an IT CMM Assessment.
- Setup server test environments using VMware.

Jun 2003 – Nov 2004:

Intrum Justitia Group IT - Windows AD & Exchange Systems Administrator (Den Haag, NL)

Key Responsibilities:

- Windows 2000 and 2003 Active Directory and Exchange 2000 and 2003 administration.
- Designing, developing and implementing security policies for Windows servers.
- Design, implementation and administration of Internet web servers running Windows 2000/2003 with backend databases running Microsoft SQL Server 2000.
- Administration of forward and reverse Internet Proxy servers running Microsoft ISA 2000.
- Fault management via a ticketing system.
- Installing and maintaining Dell and HP/Compaq Server Hardware.
- Third level support to IT Departments throughout Europe.

Key Achievements:

- Designed, specified and implemented backup solutions for Windows 2000/2003 Servers using Commvault software.
- Setup test Active Directory and Exchange systems on VMware based infrastructure.
- Planned, identified and implemented server monitoring solutions based on HP Openview Operations and HP Insight Manager.
- Designed and specified a Disaster Recovery Solution for Windows 2000/2003 Servers.
- Implemented Virus Control for the enterprise using McAfee products.
- Designed and implemented Change Management Procedures.

Nov 2002 – Jun 2003

WorldCom – Windows 2000/NT Systems Administrator (Amsterdam, NL)

Key Responsibilities:

- Installation and Maintenance of 150+ Compaq server farm, running Windows 2000 and NT4.
- Escalation point for Internet Web Server problems within EMEA.
- Creating users/groups and assigning permissions to resources on servers throughout Europe.
- Administering Active Directory Services and installing Domain Controllers, Monitoring Replication etc.
- Configuring and developing the use of Compaq Insight Manager for monitoring of Servers.
- Monitoring the backup solution and investigating failures, working with Legato backup software.
- Scheduling maintenance on servers using a Change Management system.
- Acting as an escalation point for all Microsoft server related issues in EMEA when required.

Key Achievements:

- Assisted with a move of 20+ servers and filers/Backup Library between Data centres in Amsterdam, including planning the solution, allocating IP address space, liaising with suppliers.
- Developed new systems and procedures for the administration of the backup solution for over 40 Servers in 2 data centres in Amsterdam.
- Developed systems and procedures for the monitoring of servers using Compaq Insight Manager, liaising with other engineers across EMEA in the use of the monitoring tool.

Nov 2000 – Nov 2002

UUNet – Server & Hosting Operations Control Centre (SHOCC) Engineer (Amsterdam, NL)

Key Responsibilities:

- Administration and troubleshooting of UNIX and Windows 2000 servers and routers in the EMEA region on a 24 by 7 basis, experience of Solaris 2.6, & 8, Windows 2000, Active Directory.
- Support and administration of multiple internet services including DNS, Radius, Web servers, Mail servers. Use and configuration of Micromuse Netcool Internet monitoring systems.
- Configuration and administration of Cisco and Juniper Internet routers.
- Responsible for setting up and terminating UNIX and TACACS accounts for all users within EMEA.
- Perform essential maintenance on the Servers/Hosting network, via a Change Management system.

Key Achievements:

- Assisted the manager of the department to implement a new ticketing system and specified procedures for its use and escalation of issues.
- Led a project to document existing Internet monitoring systems and suggest improvements.
- Identified and developed tracking and managerial procedures for dealing with faults and escalation to other departments.
- Act as a back up for the SHOCC manager when required. This involved acting as an escalation point, and ensuring that processes and procedures were being properly adhered to by other colleagues.

REFERENCES:

Names and addresses of previous employers and personal referees are available upon request.