Curriculum Vitae – Chris M Evans

Overview

An Independent Storage Consultant with over 22 years' experience of delivering solutions and advice to major clients across a wide range of industries.

The major part of my career has been spent as an independent consultant to large IT clients, specialising in creating storage solutions and managing storage hardware and software; planning and implementing systems; designing architectures; implementing procedures and processes; writing software and scripts and providing advice and general consultancy.

Personal Details

Full Name: Christopher Morgan Evans
Date of Birth: 27 April 1966 (43)
Marital Status: Married with two sons

Education

1984-1987   University of Leeds, BSc (Hons) in Computational Science and Mathematics
1977-1984   Hermitage Comprehensive School, Chester-le-Street, Co. Durham, 4 'A' Level passes (Mathematics, Further Mathematics, Physics and Chemistry), 10 'O' level passes (including Mathematics, English, Physics, Chemistry, Biology)

Career Summary

- **Independent Consultant (Brookend Ltd & Langton Blue Ltd), 2001 – Present**
    - Architecture Design for UK2.NET (December 2009 – April 2010)
    - Storage Architect at Rabobank International (January 2010 – April 2010)
    - Storage Architect at Storage Fusion Limited (March 2008 – April 2010)
    - Storage Consultant at Hitachi Data Systems (July 2009 – January 2010)
    - Storage Consultant with Dell UK & TNWSC (November 2007 - June 2009)
    - Storage Consultant at Rabobank International (April 2007 – November 2007)
    - Storage Consultant at JPMorgan Chase & Co (October 2004 – April 2007)
    - Storage Consultant at Lehman Bros. (May 2004 – October 2004)
    - Storage Consultant at JPMorgan Chase & Co (June 2001 – May 2004)
- **Technical Director and Co-founder, Razorcuts Entertainments PLC (1999 – 2001)**
- **Independent Consultant (Starlight Software Ltd) 1990 – 1999**
    - Independent Consultant with Lloyds TSB (1999)
    - Independent Consultant with CSC (1998)
    - Technical Consultant/Systems Architect, Storage Technology (1996 – 1998)
    - Technical Consultant with British Gas Services (1995 – 1996)
    - Technical Consultant with Retail Logic (1994 – 1995)
    - Senior Systems Programmer with SNCF (1991 – 1994)
    - Systems Programmer with Tesco Stores (1990 – 1991)
- **Systems Programmer, British Gas North Thames. (1989 – 1990)**
- **Analyst, IMI Computing Ltd (1987 – 1989)**
    - Support Analyst, EftPos UK Ltd (1988 - 1989)
    - Analyst Programmer, IMI Computing Ltd (1987 – 1988)

In addition to my consultancy work, I write articles on storage for technical publications, including www.storagewiki.com, www.techworld.com www.techtarget.com and www.ittoolbox.com. I also run a successful and popular blog at www.thestoragearchitect.com and am a co-founder of www.gestaltit.com

Career Detail

I operate my own Storage Consultancy (Brookend Ltd) and provide consulting services through Langton Blue Ltd, an IT Consultancy I co-founded in November 2009. Under the banner of both companies I've provided consultancy advice as follows:

Rabobank International (January 2010 – April 2010)

I returned to Rabobank to develop the new storage architecture as part of the migration of the Utrecht data centre to Boxtel. The work involved creating a new target architecture and design, negotiating terms with the storage vendor and evaluating options for creating a new file services environment.

UK2.NET (ISP) – (December 2009 – April 2010)

I worked with the cloud services division of this internet services provider to develop a bespoke storage infrastructure to support their on-demand cloud services. I developed a target architecture, which is now in the pilot rollout phase. This is a unique challenge, as it requires the implementation of a bespoke solution using commodity components rather than selecting standard vendor technology.

Storage Fusion Limited - (March 2008 to April 2010)

My role at Storage Fusion was to develop the product architecture and strategy for the SRA (Storage Resource Analysis) product. I was instrumental in the initial development of the SRA tool, which is used by organisations to analyse their storage infrastructure without deployment of software or agents. I held responsibility for development of the platforms the product supports, producing roadmaps and technical documentation. Whilst working in an architecture role, my time at Storage Fusion required me to develop an in-depth knowledge of the major storage platforms, including technology from EMC, HDS, IBM and HP. This included the creation of best practice storage array configurations for performance and efficiency.

Hitachi Data Systems - (July 2009 to January 2010)

Within Hitachi I provided consultancy for major high profile clients. To date I have:

- Produced an RFP to a major high street bank creating a reference architecture implementing Hitachi products and services. The RFP covered the implementation of and migration to new technology and the implementation of a new service-based architecture.
- Developed storage reference architectures for two major investment banks, including integration into the strategic virtualisation programs for VMware and private cloud implementations.

Dell UK (formerly TNWSC) - (November 2007 to June 2009)

My role at Dell was within the GICS (Global Infrastructure Consulting Services) team, based in the UK. Initially I worked with The Networked Storage Company (TNWSC) for 3 months until their acquisition by Dell in February 2008. I worked with a wide range of clients, providing technical expertise, leadership and guidance on major projects for the company. This has involved working with UK, EMEA and US customers, including the following:

- *Storage Transformation project for a large Dutch bank*; creation of a new architecture design and standards for storage; implementation of new processes and procedures for storage deployment and reclamation; execution of a migration project moving over 1PB of data to new strategic infrastructure; redesign and implementation of a new ECC 6 environment.
- *Storage healthcheck for a global pharmaceutical company*; Analysis of 3PB of storage resources, which resulted in the discovery and reclaim of over 600TB of reusable storage resources.
- *Healthchecks for numerous organisations*; including manufacturing, healthcare, insurance and legal. This work involves performing detailed analysis of customer technology and practices and developing a new strategic framework for technology that delivers significant cost savings.

As well as consulting work, I presented at the Dell's Networked Exchange event, an invitation-only technology discussion forum.

Rabobank International (April 2007 to November 2007)

I joined the London storage team at Rabobank for the deployment of a new data centre and migration of existing storage and servers into the new site. During my time at Rabobank I completed the following pieces of work:

- Designed and implemented a storage architecture for the new data centre based in Croydon.
- Designed and implemented a new replication architecture between London, Croydon and Utrecht (The Netherlands) based on FCIP and Cisco 9500 directors.
- Created and implemented new standards for the deployment of storage within the three data centres.
- Developed and executed the project plan for migration of all data out of London to the new data centre in Croydon.

At the completion of the 6-month project, all servers and data were successfully migrated from London to Croydon, maintaining existing replication functionality.

Storage Architect (October 2004 to April 2007)
JPMorgan Chase & Co, Based in London but EMEA wide responsibility

My role was designing and implementing storage infrastructures within the EMEA region for JPMC, covering the SAN, NAS and backup platforms. My work involved obtaining and developing requirements from the customer and converting these into storage infrastructure designs. I also worked on the deployment of designs through to production acceptance. As part of my work I:

- Investigated vendor products and solutions and determined their suitability to match customer requirements.
- Worked with internal Engineering and Product Management teams to develop generic product solutions and standard storage frameworks.
- Project managed the deployment of new storage infrastructures.
- Assisted where required in the technical deployment of storage hardware and software.
- Developed standards for the implementation of storage products.

I have also been the technical lead for storage on the design and deployment of three new UK data centres for JPMC. Other projects have included Storage Tools Virtualisation under VMware, backup Remote to Core migration, a 500TB data mobility solution, backup remediation and Cisco SAN design. I had responsibility for determining the technical architecture for SAN and NAS components and for delivering detailed infrastructure design. I worked closely with vendors (including EMC, HDS and Brocade) to ensure the deployed solutions were fit for purpose and to understand how future products could be used to implement cost effective business solutions.

Storage Consultant (May 2004 to October 2004)
Lehman Brothers, London

My position was within the European Storage Management Team, based at Canary Wharf. The work included the support and implementation of projects providing storage infrastructure to the bank. This was a short-term role, providing storage technical resources during the transitioning in of a new storage team. Projects worked on included:

- Application Migration to DMX Storage.
- Windows Exchange Server implementation on DMX.

Storage Consultant (June 2001 to May 2004)
JPMorgan Chase & Co, Bournemouth for JPMC and IBM Global Services

I worked as a Senior Storage Consultant to JPMorgan Chase & Co (formerly Chase Manhattan Bank) in Bournemouth and London as part of the Storage Management Team. My role was to implement large-scale storage projects for Open Systems environments. This included looking at all aspects of service delivery, from design and hardware installation (including project management) to management processes, procedures and service levels. I took a major lead in the implementation of the following projects (including some mainframe work):

- **McData SAN Implementation.** As part of a bank-wide refresh project, I implemented a 16-director 1280-port Connectrix (McData) SAN. This supports a heterogeneous environment of EMC (Symmetrix) and HDS (9980V) storage products, UNIX hosts (both Solaris and AIX), Windows 2000 Hosts and Netware 6 clustered hosts, spanning 2 data centres. Specific issues in this project were designing the SAN for future scalability, ensuring the correct management tools and infrastructure were in place and creating a change management process to ensure documentation accurately reflected the operating environment. This infrastructure supported approximately 70TB of storage on 300 hosts and was expanded twice (by

more than doubling the infrastructure) to implement a dual-core director configuration, a new 6140 core configuration and an additional 300 new hosts.

- **Storage Deployment.** Project management of the deployment of additional storage capacity and new infrastructure into the Bournemouth campuses.
- **Design and Implementation of NAS Solution.** This project aimed to remediate an existing NFS solution used within the bank. I designed and implemented a multi-cluster multi-site Netapp environment supporting an initial 2TB of storage. This supported heterogeneous platforms including Linux.
- **ECC Open Edition Deployment.** Installation and deployment of EMC Control Centre, Open Edition into the Bournemouth campus.
- **Automated Billing/Chargeback Solution.** Development of processes and scripts to extract and produce automated storage (both backup and tape) billing information to internal customers.
- **Timefinder BCV Implementation.** Development of processes to implement a 'fast-backup' solution for Oracle and Sybase using Timefinder. Work included design of a BCV architecture within the existing SRDF environment, testing and implementation of the final solution.
- **SRDF Automated Failover Scripting.** Development of an automated HACMP solution to provide SRDF failover between multiple clustered AIX hosts operating at local and remote sites. Work included the development of UNIX shell scripts to manage the SRDF failover process, including dynamic device group creation.
- **Mainframe Portfolio Refresh.** Replacement of the entire mainframe DASD infrastructure with new hardware. Work has included the installation and configuration of new hardware, development and implementation of data migration strategies using TDMF and data migration work.

In April 2003, JPMC outsourced all enterprise IT services to IBM Global Services and my contract was transferred to IBM, working on the JPMC account.

Technical Director and Co-founder (1999 – May 2001)
Razorcuts Entertainments PLC

In 1998, I co-founded Razorcuts Entertainments PLC to deliver music through new distribution channels. I moved at the beginning of 1999 to work full-time at Razorcuts. As a director of the company I managed day-to-day operations however I also continued to work at the technical level, developing software and implementing systems to manage the music that we offered. During my time at Razorcuts the following projects were achieved:

- **Creation of a 700GB Music Archive.** The archive was based on Windows NT Server and used SQL Server as the database engine for storing metadata information on each track. The server used a gigabit Ethernet network to deliver content to the CD burning stations, where customised CDs were created.
- **Design and Implementation of a Bespoke Order Management System.** Razorcuts used an in-house developed solution for automating the entry and production of customer orders. I designed and wrote the entire system using Visual Basic and SQL Server. At its peak, the system received a new order every 6 seconds and produced over 3000 customised CDs per day.
- **Project Management of Customer Websites.** Creation of music plugins to customer websites and bespoke music related website design projects.
- **Development of encrypted Music Content.** Creation of downloadable encrypted music content that could be purchased over the Internet.

Razorcuts was an excellent learning opportunity in terms of delivering customer value and creating a unique product from a blank canvas. In May 2001 I chose to leave Razorcuts and return to consultancy work.

Independent Consultant (1990 – 1999)
Lloyds TSB, CSC/BHS, StorageTek, British Gas Services, Retail Logic, SNCF & Tesco Stores

- **Lloyds TSB.** From July 1998 to January 1999 I consulted to the Lloyds TSB PLC mainframe storage management team, providing advice and technical support across MVS (OS/390 and MVS/ESA) storage platforms. Achievements included the re-organisation of storage management processes for TSB mainframe systems, including cost reductions via the rationalisation of existing disk and tape storage. I implemented SMS on existing systems not already converted to SMS management and performed maintenance and rationalisation work on DFHSM and CA-1.

- **CSC/BHS.** From January 1998 to June 1998, I consulted to Computer Sciences (CSC) providing technical expertise to one of their major retail customers (BHS). Working on a major project with specific responsibility for Storage Management (on an Open Systems platform) and the delivery of Unicenter TNG

to manage the environment, I developed a storage management-reporting tool based on UNIX standard system reporting facilities and the Microsoft Office products Access and Excel (VBA).

- **StorageTek.** I joined StorageTek in November 1996 as a Technical Consultant and Systems Architect in the Solutions Business Group. In June 1997 I moved to a permanent position within the company. My role was to provide technical advice and planning for storage projects with major customers. I also worked at delivering storage solutions based around an internally developed Storage infrastructure analysis methodology. Major projects were:

  - Batch backup time reductions using an implementation of Snapshot on IBM RVA subsystems.
  - Development of a data archiving strategy for a major pharmaceuticals company.
  - Creation of a network backup product offering for PC systems.

  The work at StorageTek was both hands-on technical and consulting.

- **British Gas:** From February 1995 to November 1996 I consulted to British Gas Services as a Senior Team Leader with responsibility for mainframe systems. Major projects completed included the implementation of Iceberg DASD subsystems and Snapshot, after which I was asked to present my project work to the StorageTek Forum in New Mexico.

- **Retail Logic:** I worked for Retail Logic, a developer of credit card authorisation software, from August 1994 to February 1995 as a Senior Product Specialist. I was responsible for the support and development of in-house software products.

- **SNCF:** From December 1991 to July 1994 I consulted to SNCF France, as a Senior Systems Programmer. I was responsible for the MVS environment, and creating a Storage Management Team.

- **Tesco Stores:** From November 1990 to November 1991, I worked for Tesco Stores as a Systems Programmer and was responsible for the support of the Info/Man Problem and Change Management System.

Systems Programmer (1989 – 1990)
British Gas North Thames

- I worked for the company as a Systems Programmer from June 1989 to November 1990 and was responsible for the provision of support for three MVS systems and a VM/MVS environment.

Analyst (1987 – 1989)
IMI Computing Ltd

- **EftPos UK Ltd.** I was employed by the company as a Support Analyst from October 1988 to June 1989 to support and maintain the Info/Man Problem and Change Management System.
- **IMI Computing Ltd.** I joined the company as a graduate trainee in September 1987 and was subsequently promoted to Analyst Programmer. I worked initially, on the Technical Helpdesk in the Customer Care Unit.

Knowledge of Architecture and Major Products (Examples)

Hardware:	EMC Symmetrix & DMX; HDS Lightning USP & USP V; IBM DS8000 Series; HP XP Series; EMC CLARiiON; HDS AMS; HP EVA; Sun 7000 Series USS; Cisco MDS Series Switches; Brocade Directors and Switches (including legacy McDATA). Network Appliance filers, IBM & Sun StorageTek tape libraries.
Operating Systems:	Sun Solaris; Microsoft Windows; IBM AIX; HP HP-UX; Linux, z/OS & OS/390.
Software Products:	VMware ESX/i 3.5 & Vsphere 4.0; replication technologies (SRDF, TrueCopy, Continuous Access, Global Mirror); Management Tools (ECC, HiCommand Suite, Storage Essentials); Databases (SQL Server, MySQL, MS Access); Office Products (MS Word, MS Excel, MS PowerPoint).
Software Languages:	Unix shell, PERL, SQL, Visual Basic, C#, HTML, Javascript.

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