

UKCMG Seminar
Systems Engineering for Availability and Performance
Colin Butcher, XDelta Limited

30th & 31st October 2007, Hilton Hotel, Olympia, London

Seminar Overview

This two day seminar based on many years of practical experience provides an opportunity to discuss and develop your understanding of how and why systems behave as they do. The rapid pace of change and the wide range of available technologies make it increasingly important to have a good understanding of the underlying principles and a clear view of how to apply systems to solve business issues.

Legislative requirements such as Sarbanes-Oxley, best practice models such as ITIL, delivery mechanisms such as SOA, business practices such as SLAs and the need for business continuity all require a sound understanding of how to implement and manage the technology infrastructure in a business context. A key reason for importance of performance management and capacity planning is that the failure of a system to meet its performance requirements usually causes loss of service, thus affecting overall system availability.

Designing, implementing and trouble-shooting business-critical systems are complex skills that are difficult to acquire and develop. System designers need to understand both the application and the behaviour of their target systems and surrounding infrastructure in order to create applications that are reliable, which have minimal performance impact and which scale well in a production environment.

The overall performance of a system is largely determined by three main factors:

- Bandwidth, which governs throughput,
- Latency, which governs response time, and
- Jitter (or variation of latency with respect to time), which governs the predictability of response.

This seminar will discuss these factors, how to observe them and ways in which they can be dealt with. The seminar is intended to give an understanding of the factors governing systems performance and an approach to performance trouble-shooting which can be applied to a variety of situations, especially those requiring high availability.

This seminar will cover the performance, capacity and availability aspects of a wide range of topics – think of it as a wide-ranging “how it works” discussion touching on:

- Microprocessor architecture, including dual-core / multi-core and hyper-threading
- The IO subsystem and memory latency effects
- Storage subsystems and SAN infrastructure
- Network connectivity and network infrastructure
- Operating systems and how they manage resources in a multi-user environment
- Compilers and Java virtual machines
- Virtualisation, blades, energy budgets and carbon footprint
- Scalability and segmentation
- Performance investigation and analysis

There will be plenty of opportunity for discussion along the way.

Speaker Biography – Colin Butcher



Colin has an engineering background, which gives him a thorough understanding of the importance of usability and reliability aspects of computer systems and communications networks. He specialises in high performance and high availability real-time systems, providing authoritative technical advice and project direction based on a sound understanding of both the business requirements and the complex technical problems.

He has been responsible for the architectural design, implementation and management of several major projects, including satellite control, air traffic monitoring, finance data services and large hospital infrastructures.

Colin was one of four finalists in the 2003 BCS IT Professional Awards for "IT Consultant of the Year". He was presented with the "John Wisniewski Spirit Award" at the HP OpenVMS Advanced Technical Symposium in 2005 in recognition of the quality and value of his work over many years.

Colin is a well-known presenter of educational seminars, often for the HP User Group and other international organisations.

In 1996 he established XDelta Limited as an independent consulting organisation, working as a source of external expertise to mentor and assist clients working on business critical infrastructure projects.

Previous Feedback

"This was one of the best presented and documented seminars I have ever been on." – Dave G., UK.

"Colin Butcher opened my eyes to new ways of thinking about designing systems for high availability. I am a firm believer that investing in good planning helps guarantee successful projects and Colin provided a host of insights into how to think through issues from a fresh perspective." – Bruce C., Colorado, USA.

"Having worked with Colin Butcher on many occasions, I have each time seen his attitude, approach and delivery as that of the professional engineer. His analysis skills are first rate and he is thorough in all things. It is also a pleasure to work with him." Dave F.- UK.

For more information or to register please contact the office on 020 8421 5330 or email ukcmg@ukcmg.org.uk.