

## Advance7 bulletin 23

# ADVANCE KNOWLEDGE

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### ACCURATELY PINPOINTING PERFORMANCE BOTTLENECKS

Users have come to expect responsive business applications. Whether you have performance SLAs or not, users will soon complain if response times are slow when opening emails, loading documents or entering a sales order. Performance problems also have a nasty habit of escalating to a point where key business applications become unstable or unusable.

You need evidence of the root cause of the problem before you invest time and money in possible solutions. A common approach to providing this evidence is to collect and study capacity management data; network load, CPU utilisation, free memory, etc. However, this approach only works if it's quite evident that a resource is overloaded. Unfortunately easily identifiable overloads rarely occur. After all, if the CPU Utilisation graph is swinging back and forth between 10% and 90% does that mean it's overloaded?

Ideally you would have a more direct measurement of the delay caused by each component in the end-to-end system, so that the performance bottleneck could be identified. With that information you could make an informed decision about reconfiguration and capital investment to improve the performance of any IT system.

Using advanced network analysis techniques, it is possible to break down a response time into its component parts – even for the most intermittent response times. advance7 has developed a method to take a snapshot precisely at the exact time your users experience the problem. Using unique tools to analyse the snapshot data we can determine precisely how much time is spent in each component of the system, pinpoint the performance bottleneck and determine the fix. What's more, the snapshot is totally non-disruptive to IT and the business applications.

**advance7's FOCUS service identifies the location of performance bottlenecks and determines the fix. Unlike other approaches which use capacity management information, personal opinion and third party advice, FOCUS will:**

- Break down actual end-user response times into their component parts.
- Show points of high latency within the architecture.
- Detail configuration changes to optimise performance.
- Highlight program logic changes that would improve performance.
- Identify infrastructure upgrades that would reduce response times.

Best of all, we deliver impartial advice backed with the hard evidence you need to be sure you make the right IT investment decision.

**For further information please contact Dilip Hirani on 01371 876805.**

**FOCUS is just one of a range of decision-support services to help you justify IT investment**

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### FACES: JOHN WALLER

Each month advance7 focuses on one of our technology staff, putting them in the spotlight.

John has recently joined the team from Energis bringing with him a wide range of invaluable expertise in the telecommunications industry. John is a highly experienced network design consultant. He specialises in network audit, design and documentation and the migration and introduction of new network technologies.

John has worked on a number of key projects including WAN network design for an integrated voice and data solution, network design authority for creating the architecture of a remote access solution for on-line betting and building the design and technology platform for an Internet Service Provider.

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## RECENT PROJECTS

### Impact Assessment of Data Centre Migration

A global financial institution was embarking on a data centre migration to a more cost-effective location. advance7 assessed the business impact of the move. This was achieved by investigating a number of critical trading applications and projecting the impact upon response times of extended network links. advance7 also provided recommendations to enhance the performance pre-migration.

### Performance Enhancement of eCommerce Website

Our client's high volume eCommerce website was experiencing slow response times. advance7 was asked to investigate the issue and determined that the problem was due to incorrect operation of a service provider's equipment. The evidence produced enabled our client to have the service provider take ownership of the problem and subsequently resolve it.

### Network Stabilisation

A large financial firm had been experiencing various network outages over a 6-month interval. advance7 was brought in to audit and evaluate the third party support procedures and to recommend a lasting solution to the network problems. Within a week, the network was stabilised and the outages eliminated.

### Business Critical Database Restore

Our customer, a supplier of real estate services, had problems with their Microsoft SQL database. Restoration of the database had only partially worked and so the customer asked advance7 for help. We restored the database, resolved a permissions problem and tested the server before handing it back to operations within 2 hours.

### System Authentication Stress Test

An international financial corporation was rolling out a world-wide login system. The solution provider invited advance7 to conduct stress testing of the product. The testing highlighted areas where the proposed design did not meet the company's performance and compliance requirements. advance7 recommended appropriate solutions to these problems.

### Bandwidth Planning

A major law firm had embarked on a server platform migration project. The firm wanted assurance that the WAN had adequate bandwidth to sustain the platform at its remote sites. advance7 verified that the network capacity was sufficient for the project and for future growth.

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