Data Integration

Atkins

Atkins retains performance for centralised applications and avoids hefty WAN upgrade costs with optimisation solution from Data Integration

When Atkins, the UK's largest engineering consultancy, decided to make improvements to its back-office infrastructure and centralise its enterprise applications, the company knew this would mean that more data would be pushed across its WAN which could lead to poor application performance for branch office workers. Atkins chose Data Integration to deploy a WAN optimisation solution to ensure application performance standards would be maintained throughout the centralisation project.

"The required skill set for deploying WAN optimisation solutions combines networking expertise with both application and server knowledge. Data Integration had the proven track record in delivering large-scale WAN optimisation projects over a number of years. They handled the evaluation process very professionally and gave us all the assistance we required. This focus and commitment gave us the confidence that our project would be in safe hands."

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With a turnover of £1.4bn and 16,000 staff, Atkins is the largest multi-disciplinary consultancy in Europe and the third largest design firm in the world. It provides a diverse range of professional, technologically-based consultancy and support services to customers spanning the public and private sectors both in the UK and internationally.

Driving efficiency through IT

Atkins' network of branch offices is vital for maintaining close contact with its customers - the company has more than 100 branches throughout the UK from Aberdeen to Exeter. During recent years an increasing range of applications has been rolled out to these branches to enable Atkins' regional staff to deliver the top quality, responsive services its customers expect.

However, maintaining and supporting IT systems in so many branches is costly and time consuming. Atkins operates in a highly competitive environment, which means the company is always seeking ways to gain advantage by increasing productivity, whilst controlling costs. Atkins identified that efficiencies could be gained by streamlining its IT delivery infrastructure, so it decided to embark upon a programme of IT upgrades and application centralisation.

The first stage of this IT centralisation plan was to replicate data stored in the branch offices back to the company's main data centre.

Selecting the right solution

Atkins knew that centralising services would add 3-4 times more traffic onto its WAN, so a plan was needed to ensure that application performance and availability would not be degraded.

Increasing WAN bandwidth to cope with the extra traffic was not an attractive option; Atkins had calculated that 80% of sites would need a WAN link upgrade which would give rise to estimated first year costs of £1.7m and an ongoing rental increase of £900k per year. Furthermore, simply adding bandwidth could not guarantee response times would be maintained because the latency aspect of application performance would not be addressed. So Atkins set about finding the 'best fit' WAN optimisation solution.

Atkins shortlisted a proposal from Data Integration to use the Juniper Networks WX platform, along with bids from two other suppliers proposing solutions from Packeteer and Expand.

Data Integration spent time with Atkins' team understanding the objectives of the IT upgrade and centralisation projects, and finding out how this project fitted in to the company's overall IT strategy.

Data Integration established that whilst the immediate concern was to deal with the extra WAN traffic that would be created by centralising email servers, in the medium term Atkins planned to replicate data across the WAN and centralise file services, so comprehensive QoS capability was imperative to guarantee this would not adversely affect business-critical applications.

With this insight, Data Integration demonstrated that Juniper Networks' technology provided the most comprehensive WAN optimisation functionality and was only one of the shortlisted solutions which would help accelerate specific application protocols such as MAPI, CIFS and NFS as well as providing the necessary QoS and data reduction needed to avoid ongoing bandwidth charges.

Choosing the solution

Having understood the strategic benefits of selecting a solution that comprehensively addressed every aspect of WAN optimisation, Atkins decided to evaluate the shortlisted solutions against a comprehensive set of criteria:

- Ability to monitor, classify and report on network traffic
- Prioritisation and Quality of Service capability
- Ability to compress and accelerate all traffic including UDP and GRE
- Security
- Centralised management capabilities

Against these criteria, Atkins concluded that Juniper's technology gave the best results.

Phil Hedges, UK Infrastructure Design Engineer at Atkins, explains why, "Retaining application performance is one of the critical success factors of our IT centralisation project. We needed a product that was capable of optimising not just TCP but UDP and GRE traffic as well. Juniper allows us to honour existing QoS settings on the WAN, but we can enhance them with more granular shaping where required. Given the number of sites we have to deal with, the ability to centrally deploy and manage the solution was also essential. We chose the Juniper technology as the most comprehensive WAN optimisation solution on the market, the caching and acceleration allowed us to retain user performance whilst at the same time centralising our applications."

During the evaluation it also became clear to Atkins that finding the right solution for the business would not just be a matter of choosing the correct technology, but also the correct partner to implement and support it.

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The end result

During the 12 months from March 2005 Data Integration rolled out more than 120 Juniper WX and WXC units to over 100 Atkins sites throughout the UK.

Data Integration pre-configured each accelerator and project managed the shipment of all units to ensure the correct product arrived at each site with the correct configuration. This preparation work meant that staff in Atkins' branch offices, who did not have technical knowledge of the accelerators, could install the units without any specialist training. It was simply a case of plugging them in and switching on the power.

With the units in place, Data Integration then assisted the Atkins team to complete the installation using the central management system. Atkins' IT team is now able to monitor and report on application performance throughout its WAN from this centralised system.

Whilst Atkins IT centralisation project is a massive undertaking that is still ongoing, the WAN optimisation technology that has been rolled out by Data Integration means that branch office users have not experienced any drop in performance during or after the centralisation of their enterprise application services.

Deploying Juniper WX accelerators has enabled Atkins to cope with the sharp growth in end-to-end WAN data throughput caused by the increase in backup traffic and data replication without having to undertake costly bandwidth upgrades.

Atkins' forward-thinking IT team is amongst the first wave of companies to embark upon large scale centralisation projects and recognise that the ability to control delivery of information out to the network edge will be a critical success factor for IT effectiveness in the coming years.

> "Data Integration's solution was to roll out centralised enterprise applications without upgrading our WAN and to retain performance for our end users. Data Integration's solution has cost around one fifth of the £3.5m that would have been required for WAN upgrades over the next three years and has enabled us to mitigate the risks of application performance degradation whilst we undergo this major IT centralisation project. In fact we are managing to centralise all our enterprise applications without the need for any significant WAN upgrades whilst retaining, and in some instances improving, application performance."
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> **Phil Hedges, UK Infrastructure Design Engineer at Atkins**

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