



Yell

A case study of a successful desktop virtualisation solution

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DESKTOP VIRTUALISATION CASE STUDY

COMPANY

Yell began life in 1966 as a 'Yellow Pages' section in the Brighton telephone directory. Yellow Pages, as part of BT, grew to become the UK's leading provider of classified directory advertising and associated services. In April 2000 the Yellow Pages division of BT became Yell and in June 2001 it was purchased by a consortium of private equity investors. In July 2003 Yell was listed on the London Stock Exchange and became Yell Group plc.

Yell is now a leading international directories company that aims to be the best provider of quality leads and marketing solutions in all its markets, through an integrated portfolio of simple-to-use, cost effective advertising. Its products are available through printed, online and local search and mobile based media. Yell UK has around 3,300 employees, with about 1,500 working across three different locations in Reading, where it has its corporate headquarters, and one in Slough. It operates two data centres at Newbury and Swindon, and has a number of other regional offices that operate on a business-unit basis in dedicated teams.

BUSINESS DRIVERS

Yell recognised some time ago that its previous business model that had primarily focused on 'hardcopy' Yellow Pages advertising, needed to change – becoming a much broader, multi-channel directories publisher offering a wide range of internet and mobile phone products and services within its portfolio. Alongside the development of the business model, a major decision was taken to centralise all four office buildings in Reading and Slough into a single new corporate headquarters in Reading.

This transformation from a print-focused advertising business, to that eventually of a more dynamic and flexible marketing solutions provider for SMEs, required Yell to consider IT resources in a far more strategic way.

One key characteristic identified by Yell as an important capability was the need for greater flexibility in its operations. Ideally, teams would require the ability to function from a number of different locations and be able to change roles quickly as new market opportunities became apparent. Desktop Architect for Yell, Ian Marshall, termed the client usage model they were aspiring to as the 'Martini' approach – any time, any place, any where. Marshall went on to explain that, for Yell, it was all about implementing an architecture which included provision for home working, temporary redeployment of employee roles and responsibilities, and more self-service as needed by different business units.

This transition towards a flexible and agile desktop architecture was governed by two main principles. Firstly the business user's experience would be paramount, and secondly, it had to enable the IT department to become less reactive and more proactive in its delivery of IT support.

With UK operations spanning 12 different offices across the country, the PC estate has proven to be expensive to support and resource intensive. The pressure this created for the relatively small desktop support team meant that 'firefighting' to maintain or quickly repair the service had become its primary function. Yell, however, was looking for this team to be more proactive and shift its focus onto preventing service failure, instead of responding to outages as they occurred.

The business users at Yell all spend a significant part of their time using the company's IT systems. As such, Yell was looking to improve its end-user experience so that the working environment would act as a catalyst for increasing efficiency. Marshall outlined the current situation, describing how most employees' desktop devices would take three or four minutes to boot up and become operational. His observation was that this delay resulted in many employees beginning the boot-up process and then going off to do something else for a short while, rather than sitting and waiting. Implementing a desktop system that was able to boot up in a much shorter time introduced a subtle cultural change, bringing with it an improvement in productivity.

Finally, the decision to combine four offices into a single, new building raised a number of critical questions for Yell regarding its choice of desktop infrastructure.

- Firstly, the target building was of a modern, eco-friendly design that used natural ventilation and cooling to reduce its carbon footprint. The impact of this was that for Yell to move all 1,500 employees and their PCs in to the new office, the ventilation and cooling system would need to be replaced as it was not designed to cope with a high density of people and computers.
- Secondly, the new office was more open plan, so heat and noise generated by PCs would create a less than ideal environment for Yell's employees to conduct business.
- Thirdly, the practical aspects of physically moving all the PCs, installing them, and getting them operational presented a genuine logistical problem.

SOLUTION

Yell has had a long standing relationship with UKN Group, ever since the independent desktop specialists introduced them to the zero-client concept of Sun Ray terminals. UKN specified a complete solution, incorporating Yell's various business requirements and designed to cope with the extensive number of legacy applications still in use, including some which were over ten years old.

UKN also helped to design a turnkey, end-to-end process which addressed the technical and strategic challenges of migrating Yell's business users from PCs to Sun Ray devices. The zero-client solution itself would be able to act as the front end to a range of concurrent desktop infrastructures. With guidance from UKN, Yell opted for a combination of session-based desktop delivery, utilising the latest iteration of Microsoft Remote Desktop Services (formerly Terminal Services), with App-V, Microsoft's own application virtualisation product.

UKN Group specified the AppSense management suite to ensure an optimal user experience as well as improved management and personalisation of the remote desktop. This combination of technologies would ultimately provide users with a near native Windows experience and allowed individual preference setting in accordance with Yell's existing group policies.

The Sun Ray terminals addressed many of the issues raised by the office move, with ultra low power consumption of only five watts and low heat output. Devoid of moving parts, the zero-client devices would run silently, keeping the level of ambient noise to a minimum – essential to the open plan design of the new building.

The infrastructure used the N+2 approach to resiliency at the remote desktop server layer (each location having two additional servers than sized for) and scalability was based around support for 60 sessions per server. Load testing identified a ceiling in end-user experience as user density approached 70 concurrent sessions per dual quad-core server.

Yell already operated a centralised storage policy, with no user data hosted on local machines, allowing them to focus entirely on delivering the right blend of functionality and compute power to the desktop.

APPROACH

Yell used a three-phase approach to selection and deployment of the technology. The first phase was selection and involved a proof of concept, the second was deployment of the solution to a discrete department, and the final phase (not part of this case study) would be the roll-out of the solution to an entire office building and other locations within the UK.

Proof of concept

Yell provided potential suppliers with a synopsis of the business challenge and asked them to build a small two-person working model that could be demonstrated to business executives. UKN Group was the only supplier that could, and did, fulfil Yell's working demonstration requirement. Yell then asked that this solution be implemented for a small user base of two to five users in a selected department. Marshall recalled how one user's comments clearly demonstrated to him the success of that stage. When asked how everything was going the user replied, "don't bother me I'm too busy working now, I'll let you know later". This response demonstrated to Marshall that the solution had been implemented transparently for the user, whose focus remained their day job, an assertion subsequently backed up by that person.

Pilot

After the successful proof of concept, in the most significant and challenging stage of the project so far, UKN deployed the solution to a pilot department of 120 users. This phase involved a complex integration with Yell's telephone system, the ability to populate screens with customer data before a call was taken and involved several old, legacy, customised applications.

Yell's objectives from the pilot were the same as for the proof of concept: to make the deployment transparent to the user, but also to focus on operational activities that would improve business efficiency. For example, the ability to accommodate temporary change: if a supervisor was off ill the new solution enabled the department manager to allocate another senior employee the same role without changing desks, rebooting or submitting a request for service to the desktop support team. Such changes could also be rolled back with equal speed.

LESSONS

Yell has successfully completed this pilot, which was the trigger to write this case study, and is now moving on to the deployment for the new office move. Marshall pointed out that along this journey he has learnt several valuable lessons that will help him in managing the next, much larger, phase of the deployment.

Firstly, any organisation must fully understand their applications, and how the users actually use them. Marshall added that the scripting of the applications in App-V was initially planned as a single, all-encompassing task that would incorporate all the interrelationships. However, based on experience from the pilot, it was going to be more efficient to perform many small iterations of a single application and to do the scripting as an ongoing activity throughout the project lifecycle.

Secondly, it is important to accurately categorise users and their environments: for example, single-use or low-use applications were not considered a priority and will be implemented after the more widely used applications have been migrated. Also, laptops were excluded along with any scenario where local scanners were used. Marshall stated that by using this categorisation he could identify the 80% of users that could be successfully migrated.

Thirdly, any deployment must be invisible to the end user, but that is not an excuse for not involving them in the project. Marshall states that the active involvement of business unit managers was essential in communicating the importance and significance of activities, as well as providing a valuable source of feedback.

Finally, the partner selected should be a non-aligned supplier, effectively one who will use the exact combination of technology most appropriate to delivering the correct solution. Marshall added that getting a working demonstration for business executives is a powerful weapon that proves the credentials of the supplier as well as the technology.

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