



HIGH-AVAILABILITY

**HAMBLETON
DISTRICT COUNCIL**

Success Story



The world never stops...



for you, with you

ORACLE®

The Customer

Covering the broad Vale of York between the Yorkshire Dales to the west and North York Moors to the East, Hambleton District Council's area is that region of North Yorkshire famed for being the inspiration for James Herriot's books on the life of a vet. Herriot, alias real life vet Alf Wright, had his surgery in Thirsk, one of the rural district's busy market towns which also include Bedale, Easingwold, Northallerton and Stokesley.

The council – www.hambleton.gov.uk - is an experienced and mature user of IT with a mixed hardware infrastructure running such traditional local authority applications as housing, benefits, revenue and accounting, council tax, payroll and others. Largely, these are handled by standard, proprietary packages common throughout the UK local authority sector.

Hambleton's strategy has been to separate these applications into two categories – roughly split 75/25 per cent. The larger category contains the less critical applications where problems or downtime would have little or no impact on provision of services or receipt of income. These run on traditional PC-based servers operating under Windows 2000 and Windows 2003. Those applications considered crucial, for which unplanned downtime is not acceptable, include revenues and benefits, accounting and payroll. These were moved several years ago to two Unix clusters.

The Business Need

"We've had a full network running for about eight years, says Chris Fawcett, Hambleton District Council ICT Support Manager. "This replaced, as it did around the same time for many other councils, a former Wyse terminal solution. At that time we conducted a full IT review. Council service provision and revenue generation were becoming increasingly computer-focused and we were aware of vulnerability to unexpected failure of systems. For some applications a day or so down would not be a major problem, although obviously undesirable".

"However, there were other applications for which downtime was entirely unacceptable. For example administration of benefits provision, payroll and accounting. These we moved onto Sun Unix hardware – initially a pair of E250s. These were all proprietary packages – used widely by local authorities. They include, for example, First Software's iWorld system for revenues and benefits; PowerSolve for accounts; and Selima's payroll package which administers salaries for 550 council staff. Some applications still running on PC servers are becoming increasingly critical, for example, email, which is probably the next to be migrated to a Unix cluster".

"Some time after we had the revenue and benefits system running on a Unix machine, we had some technical problems which resulted in downtime. The situation was unacceptable and so we decided that we needed a solution to guarantee services".

"But this was six or seven years ago and there wasn't much on the market that could handle automatic failover. We also wanted a system that was robust and reliable – and importantly, easy to use. Most of our IT personnel are more Microsoft focused where the bulk of our applications are running. Unix experts here were a bit thin on the ground".



“...the GUI made it easy to use for non-Unix buffs...”

”The users don’t even notice ... the transfer is completely transparent”

Chris Fawcett



The Solution

Hambleton was steered in the direction of High-Availability.Com’s RSF-1 system by their Sun hardware supplier Esteem – www.esteem.co.uk. “We liked the look of it,” says Fawcett. “It seemed easy to use and, very importantly, the graphical user interface made it easy to use for non-Unix buffs. No struggling with command lines.”

RSF-1 was originally released in 1995 and is designed to make services ‘highly available’ by switching between servers if a server or service fails. It provides multi-directional redundant ability that allows servers to constantly monitor and shadow each other. Rather than maintain a standby option idle as a failover server, RSF-1 allows operational systems to act as standby servers, ensuring that hardware investment is optimized.

In the event of server failure, RSF-1 includes both Java and Windows based system admin modules that allow the cluster to be monitored and administered in real time – showing the status of any RSF-1 instances available on the network and provide manual switchover functions.

High-Availability.Com designed and developed the first high availability solution for Sun Unix servers and has been leading the mission-critical market ever since with innovative products to help customers maximise their business IT and Internet functions. The company sells and supports products to customers throughout the world, ensuring critical applications and services keep running in the event of system failures.

Hambleton then installed another Sun cluster – dual SunFire 280Rs, together with a Sun workstation Ultra 5 as logon server. This handles the council’s revenue and benefits operations. “Since we took RSF-1, there has been no unplanned downtime. In fact we once had an automatic failover following a fault that that we didn’t immediately notice”.

“Unknown to us, a CPU on the E250 cluster failed during the night. The server crashed and rebooted, and RSF-1 seeing that it was down for more than thirty seconds, immediately failed-over to the backup machine. We came in, in the morning, and it was only when we looked through the messages that we saw RSF-1 had recognised the problem and acted. In fact, we now opt for manual failover, but it is nice to have the automatic option”.

The Benefits

“The bottom line is that we have a solution that works and that we can rely on. While we’ve had no unplanned downtime, RSF-1 is invaluable when it comes to maintenance and installing patches. Its important to compare how we handle these operations on the one hand on Unix, and on the other – on Windows PCs”

“For example, if we needed to do maintenance on our email system that runs on Windows and Microsoft Exchange, we’d have to send a message to each of the 350 plus network users informing them that we would be shutting email down from, say, 9 am to noon on a Sunday”.

“This would be the least inconvenient day for users – but the most expensive for the cost of maintenance personnel who would be on weekend double-time. Then we’d get the staff in, perform the maintenance and (assuming it had been completed in the announced downtime) issue another message to all users confirming that email was now up again”.

“For applications running on the Unix boxes, we have frequent need to install patches, as well as take the system down for regular maintenance. With RSF-1, the scenario is very different. We pick a day and time that is best for maintenance personnel and just failover to the standby machine”.





HIGH-AVAILABILITY

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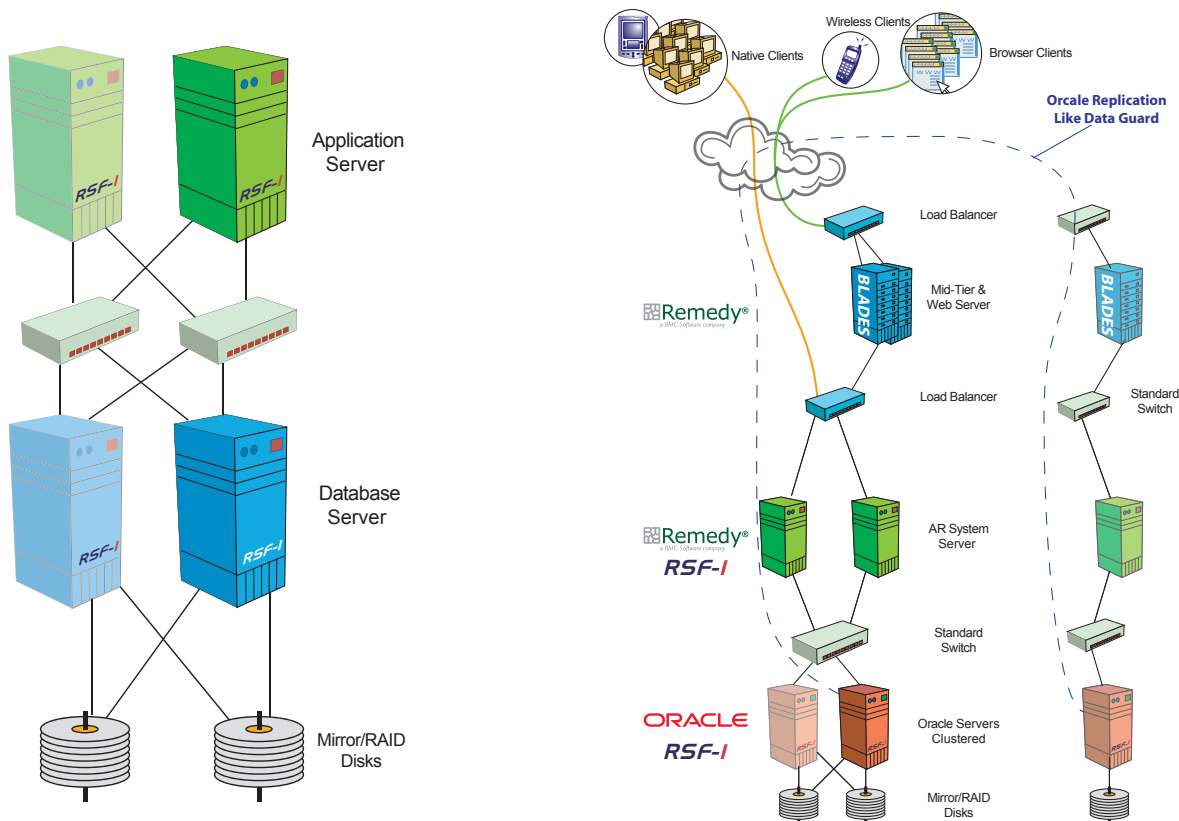
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“The users don't even notice – and there's certainly no need to announce what we've done. The transfer is completely transparent – and takes less than a minute. Once we've performed the patch, maintenance or whatever on the first machine, we failover back to the original and do the same on machine two – so they are both running exactly the same versions. There is generally no need for out-of-hours working”.

In fact, to boost performance the council balances the load by splitting the applications across each pair of Sun machines – revenues on one 280R; benefits on the other. Likewise: accounts on one E250; payroll on the other. When maintenance is necessary, everything is moved to a single machine in each pair.

“Altogether, RSF-1 has given us peace of mind,” says Fawcett. “It works; its robust, reliable easy to use and well supported.”



Example RSF-1 Architectures