

*"I will be happy when
I don't even know I
have a computer
network!"*

*—Danny McNicholl,
Managing Director,
3Peaks Solutions
Ltd*

Case Study: Using Open Source Solutions to Simplify The Network

Summary

An overly complicated IT network and data server causes an SME to look at a simpler approach. User base 20.

3Peaks Solutions Ltd, based in Lymm, Cheshire provide bespoke IT business solutions to the manufacturing sector. The managing director was finding that his technical consultants were spending more time maintaining their own IT infrastructure than generating revenue for his company.

It was time to look at a more creative and less constrictive solution than just replacing the legacy server with the latest Microsoft offering. This would ultimately lead to more spending on hardware, staff training and a more complicated offering than was currently implemented.

3Peaks Solutions Ltd chose ALL-Networks due to their experience in supporting companies in SME market place and because the solutions provided are cost effective reducing the yearly spend by 75%, ultra reliable, scalable, license free and easily maintained and administered remotely.

Customer Profile

3Peaks Solutions Ltd is a well established SME based in the heart of Cheshire, England, whose main area of business is providing bespoke business tools to the manufacturing sector. 3Peaks Solutions provide the following tools: Applications and Databases, Systems Integration, Web Solutions, Business Reports. Current clients include many international companies including, Gillette, GlaxoSmithKline, Boots, Lego and Roche.

Main Issue: Company IT system was unreliable and was unable to be cost effectively maintained by the in-house skill set. A solution was required which would increase reliability of the system and ultimately make the system transparent to its users, whilst reducing costs by becoming license free.

“All I want is for my staff to plug into the network and it work. I want them to be able to access their files and print whenever they need to.”

**—Danny McNicholl,
Managing Director,
3Peaks Solutions
Ltd**

Problem

Context

The company, like so many other SMEs, is dependant upon its IT network (consisting of PC desktops, shared printers, and shared secure internet access) and server based data infrastructure. The problem was that the legacy system was overly complicated for the needs of the business and also unreliable.

3Peaks Solutions wanted to streamline their current IT system to make it more reliable, maintenance and administration free (although the company has many skilled technical staff, it was felt that this resource was best employed providing a revenue stream for the company rather than supporting the company network), and to be able to provide secure remote access for its non office based staff. Of course the solution had to be cost effective.

3Peaks Solutions chose ALL-Networks because of their experience in providing support to the SME market place. From this experience ALL-Networks have developed a deep industry specific understanding of the typical problems faced by SMEs when trying to deploy and maintain their own IT infrastructure.

The answer was to implement an Open Source solution, based on Enterprise Class Server software. The software was scalable, ultra reliable, and easily integrateable into the current desktop architecture. Therefore the cost of the solution was kept to a minimum.

Objectives

The challenge for ALL-Networks was to provide a solution that was ultra reliable, maintenance free (from the perspective of the customer), scalable/future proof without adding extra cost, plug and play in terms of accessing shared network resources. Also it was important that the solution provided secure remote access to company data.

Finding the Right Partner

3Peaks Solutions felt the Open Source solution provided by ALL-Networks, showed that ALL-Networks understood the key issues and concerns. The solution provided was cost effective and future proof. The ability of ALL-Networks to monitor and manage the solution remotely has ensured 100% availability of the system therefore freeing up 3Peaks Solutions technical staff to focus on their core business.

Solution

Process

Having understood the issues and key concerns, it was clear that an Open Source solution was required. The basic idea behind open source is very simple: When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves. People improve it, people adapt it, and people fix bugs. And this can happen at a speed that, if one is used to the slow pace of conventional software development, seems astonishing.

This rapid evolutionary process produces better software than the traditional closed model, in which only a very few programmers can see the source and everybody else must blindly use an opaque block of bits.

Open source software is an idea whose time has finally come. For twenty years it has been building momentum in the technical cultures that built the Internet and the World Wide Web. Now it's breaking out into the commercial world, and that's changing all the rules.

The scale of development has led to literally hundreds of distributions of Enterprise Class Server Operating Systems based on Linux so it is possible to literally pick an off the shelf solution, download it and try before you buy to ensure the solution is the correct one. Of course as the distribution is Open Source it is freely distributable and so the cost saving is passed directly to the customer.

To provide a solution was a case of looking at the features offered by a particular distribution and choosing the best fit. For this particular situation a mixture of two Operating Systems were used. The server was built around the E-Smith SME7 distribution (based on RedHat EL4) and was chosen for its ease of maintenance and administration via a simple web-based GUI, and its rich feature set, providing built in web services, proxies, email, webmail, remote access via PPTP and MySQL database. The distribution also has a very stable support community and has many add-ons available

The environment created was Windows client friendly and so client users were not able to discern whether their workstations were connected to Microsoft domain controllers or workgroups or Linux domain controllers or workgroups. Windows workstations were able to print to three shared network printers and WINS and DHCP services were also provided.

The system was scaleable from 1 – 500 users with no requirement to increase the performance of the hardware, therefore making the system future proof. Also no license fees were payable.

To backup the company server, a NAS was created using CENTOS 4 (based on Redhat EL4) and this provided a GUI based environment for loading the Bacula backup management software suite. Bacula is an advanced backup solution which can manage automated tape or disk arrays and backup any type of file system over the network. The programmed data retention period was 6 months before cycling the backup. However the retention period can be for as long as required. Again all software was Open Source and freely available allowing a substantial cost saving.

Using the Solution to Solve the Problem

Having completed the research phase by identifying the correct software required, the system was built and tested off-site to minimize the impact to the customer. 3Peaks Solutions supplied their user lists. The data was transferred from the old server to the new, down time was 2 hours, causing minimal impact to the running of the business. To date the system has had 100% availability.

Technologies and Delivery Method

Technology used in the solutions was all Open Source derived, based on the Redhat EL4 Linux distribution. The time frame of building, testing, and implementing the solution was three days, with half a day of training. Administration is performed remotely.

Key Components

List the technologies used on the implementation, for example:

Software

- E-smith SME7 Enterprise Server 4.0
- CENTOS 4 NAS Backup Server
- MYSQL Server
- APACHE Web Server
- EMAIL SERVER Qmail
- WEBMAIL SERVER Horde
- OPENSSEL VPN Server
- SAMBA SMB Server
- CLAMAV Anti Virus Server

"You may use us a reference with pleasure...."

As regards the outsourcing we are very happy".

**—Danny McNicholl,
Managing Director,
3Peaks Solutions
Ltd**

Evaluation

Results and Benefits

The implemented Open Source solution has improved reliability of the network to the point where the users have to date not experienced any downtime at all. The system has been 100% available and there have been no logged support calls. The system is used by staff that work away from the office and access the company data via secure VPN connections, these connections have been completely reliable.

The outsourcing has completely removed the requirement for any in-house technical expertise. Outsource cost £5k per annum (or £19 a day) covers day to day administration to bare metal restore. Typical cost of server/network administrator £20K per annum.

Saving on software – 100%

Saving in hardware - 50%

Yearly running costs – 75%

For More Information

For more information about ALL-Networks products and services, call ALL-Networks at +44 (0)161 660 8178

To access information using the World Wide Web, go to:
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