

"Linux control to Major Cloud"

The business case for employing Linux with Windows® networking and "cloud-based" applications in the enterprise.

A summary paper reflecting our opinion on why you should utilise the www.betterandcheaper.co.uk method of running your business' applications. Apologies to David Bowie.

Introduction

In September 2000 RedHat® released version 7 (RH7) of their Linux operating system. At the time it was something of a step-change as it introduced much in the way of a graphical user interface (otherwise known as a GUI).

It was at this time that we became interested in the business possibilities of an operating system that was inexpensive and rock-solid. RH7 fitted the bill on both counts, and its rock-solid pedigree came from the fact that all Linux is a fork from Unix which began its development in the 1960's, some 20 years before Microsoft appeared.

By March 2003 and the release of RedHat Linux 9 we felt things had got to the point where we could provide an end-to-end solution for business, one that met the business case full on. Indeed many of our clients are still running RedHat Linux 9.

What is ICT/IT, and why use it anyway?

ICT or IT is simply a business tool. If it doesn't meet that, it's useless; just a toy. Indeed too many people become enmeshed in the go-faster stripes that slick IT marketing campaigns push, and lose sight of this overriding criterion.

So why use it anyway? In a word, productivity. The original driving force for the spread of the IBM PC in the 1980's was the spreadsheet, hotly followed by the word processor. The fundamentals have not changed since. Software is now more capable, certainly, but anyone using Microsoft Office® or OpenOffice.org® (which is our favourite) is still paying homage to the spreadsheet and WP. The new kid on the block for business use is the internet and email, although those had their origins in the cold war era, long before the IBM PC!

And what's this "cloud-based" thingy?

Computer people love coming up with names! "Cloud-based" is just a fancy title for using the internet as a resource for software. You launch your browser, point it to your service provider, and up come your tools – email, calendar, even word processing and spreadsheet. No fuss, no installation, no local resource needed. As with most things, this concept isn't new, and has actually been used since computer systems were first invented!

Microsoft then persuaded us that we should have "big power" on our desktops to do our daily work. We bought copious licenses from them, installed stuff, and by-and-large we were happy with it. But it was expensive. "Big power" on desktops needs management.

This is where "cloud-based" comes in. Every bit as good, just a whole lot less costly.

At the moment we don't suggest you employ anything more than email and calendaring "in the cloud", for four reasons:

- at prices that most businesses would like to pay, the internet in the UK isn't yet fast enough to really handle a lot of word processing, etc., traffic;
- although email and calendars can be set to be readable "off-line", the same isn't so true of documents and other data, therefore if the internet goes down, your work stops;
- the "cloud-based" applications, save for email and calendaring, are still a little "clunky";
- there may be legal compliance issues with having everything sitting "in the cloud": after all, there is at present no guarantee that your stuff will be sitting on a server in the UK, let alone Europe!

These are, of course, things that in time will be resolved. So for now we think "in the cloud" is only for email and calendar data. Even then, some companies may have data which needs to be housed on their own server, and our www.betterandcheaper.co.uk method covers for that eventuality.

Who is using Linux?

Been on the internet today, picked up your email, looked at a page or two? Then you probably are!

The well respected Netcraft Web Server Survey (http://news.netcraft.com/archives/web_server_survey.html) found 225,950,957 hostnames in August 2009. Not all of these will be separately hosted on individual machines, but the vast majority will. Of that number 71.97% were Linux based developers, with Microsoft trailing a distant 21.94%, and another 6.08% on other platforms.

In addition, the list of corporate users is an A to Z of all business types and sizes. For example, RedHat users include:

- airlines (e.g., Air France-KLM)
- publishers (e.g., AutoTrader)
- cars (e.g., Avis Europe)
- government (e.g., LearnDirect)
- education (countless universities)

Indeed the list is huge. You can find it on <http://customers.redhat.com>.

Who is using "cloud-based" applications?

Again, strictly speaking, you are when you do things with email or the internet. However, a quick look at <http://www.google.com/apps/intl/en/business/customers.html> shows a considerable variety of size and type of user. Of course, Google® isn't the only "cloud" application provider, but seems dominant. Indeed it has Microsoft seriously concerned, and they are developing their own "cloud" platform, called Azure®. This is, of course, welcome and healthy competition, which has been lacking in recent years. However, Google have stolen a march, and have a more mature offering, and it seems clear that their "cloud" offering will remain dominant.

So, what happens when the internet is down, then? Its a good question. Fortunately, like all good groupware applications, the email and calendar data on Google Apps® can be set to being readable when off-line too. So don't worry!

But shouldn't we just use Windows everywhere?

That depends upon who you are, and what you are. But for most businesses, the reason why you shouldn't is contained in the business case set out below. If you wish to use Windows everywhere, that will do the job, but probably not meet all elements of the business case.

As far as your user experience is concerned, with our www.betterandcheaper.co.uk proposal they *are* using Windows. When they switch on, that's what they see. It will all feel "normal". They won't know what the power behind is. And neither should they have to.

So what is the business case for employing Linux with Windows networking and "cloud-based" applications?

It's better and cheaper – hence our ad campaign based on www.betterandcheaper.co.uk. More of this in a moment.

Let's make something completely clear: Microsoft have done a terrific job with their operating system. On the desktop they are undoubtedly the leader, and nearly all available applications will run on Windows although recently with the introduction of Vista® and Windows 7® things are a little less clear.

However, on the server its a very different story.

- Microsoft will tell you that their server based Active Directory is what all businesses need, and that this is their unique selling point. However, Active Directory is of almost no practical benefit unless you are a large corporate employing several thousand people in different buildings. Even then, a cursory look at the list of corporations using Linux renders this tenuous. For most businesses its simply a costly administrative overhead.
- You may also be bamboozled by talk of "expensive" Linux, and "lack of support". Neither of these are accurate. Indeed Microsoft has in the past been taken to task by the Advertising Standards Authority for misleading claims. Take a look at the "Comparison of Windows and Linux" on our web pages at http://www.ludcastle.co.uk/business_resources.htm .
- For email and calendaring, Google Apps is a mature technology, and therefore you don't need a costly local Microsoft Exchange® Server handling that.

So, why is Windows networking on a Linux server with cloud based email and communications "better and cheaper"?

- The "TCO" – total cost of ownership – is less. Our long experience with both Windows and Linux in the real world leads us to this clear conclusion. We have no figures to back this up, and it is a real challenge to find any that are unbiased, but that's our conclusion.
- Less vulnerable to malware. Linux is modular; Windows has something called a "registry" which knits all its parts together into a monolithic whole. Unfortunately, in our experience, this registry also becomes a virus highway.
- Linux is more reliable. Its our experience that Linux servers stay "up" for longer.

That means less downtime and better productivity. Interestingly in December 2008, Netcraft reported that Linux powered five of the ten most reliable internet hosting companies, compared to Windows' one (http://news.netcraft.com/archives/2009/01/02/new_york_internet_and_hosting_are_the_most_reliable_hosting_companies_in_december_2008.html).

- Cheaper to buy, and about the same price to install. But this isn't where you'll make any real savings. Those come from ownership costs, keeping things running, having fewer hiccups, and so on.
- No licensing constraints. Windows servers will unnecessarily tie you into licensing contracts.
- You don't have to worry about whether your email is properly scanned for nasties. Setting up and using Google Apps (<http://www.google.com/apps>) to do the job means that you benefit from their protection without having to do it yourself, or employ someone else to.
- Google says that "a leading research firm" considered that its email and calendaring system costs 1/3rd of "competing solutions". They provide a cost analysis tool (http://www.google.com/apps/intl/en/business/messaging_value.html) against the cost of Microsoft Exchange Server to prove it. We think this is a little overblown, but agree that there are significant cost savings of perhaps 50%.
- Your system is completely flexible and free to grow or shrink as your needs dictate.

Conclusion

I believe we've shown that there is a solid business case for using Linux on the server, Google Apps for email and communications, and Windows on the user desktops.

We and our clients have had good experiences with Linux over the years. The arrival of "cloud based" computing improves the total cost of ownership, taking much of the strain for the ever growing internet threat, and the user experience on the desktop continues to be Microsoft Windows.

James M Beale MBCS CITP, © Lud Castle (Computing) Ltd., August 2009
Updated September 2009
<http://www.ludcastle.co.uk>
<http://www.betterandcheaper.co.uk>

All trademarks are recognised.