

# OPEN SOURCE ALTERNATIVES TO WINDOWS ON SERVERS

There are several good reasons to consider running a server with Free and *Open Source Software*. It's frequently significantly less expensive than Windows, the *software* tends to be more secure and robust, there are more options for support, keeping track of software licences is easier and many people feel there are strong ethical reasons too.

## What is Free and Open Source Software

The term “free software” means free as in freedom, not cost (software rarely costs nothing once you've taken implementation and support into account). The freedoms you get from free and open source software include:

- Installing the software on as many computers as you like
- Giving (or selling) the software to other people or organisations
- The freedom to make changes to the “source code” yourself (or get a friendly programmer to do it for you). This gives users the ability to add features and fix bugs without going back, cap in hand, to the vendor.

As a user of Free and Open Source Software, you have the opportunity, should you wish, to play an active role in the communities around the products you use: helping others, submitting bugs and influencing development. Being a member of a community in this way is quite different to the traditional passive consumer of *proprietary software*.

## Cost savings and where your money goes

We are used to the idea of buying locally-produced food, in part to keep money in the local economy. The same issue exists around software. When you buy software from a company such as Microsoft, most of

your money leaves the country. Microsoft is based outside the UK and doesn't pay taxes (apart from VAT) here.

The business model for Open Source Software is different. The licence cost of the software is typically zero. Open Source companies make money from consultancy, implementation and support which normally means local companies employing local people, paying taxes locally and putting money back into the local economy.

## Support options for Open Source Software

Support is another area where Free and Open Source Software scores well, giving users the freedom to decide what they want based on their budget and technical abilities. For those with some technical ability, there are a host of free (as in no-cost) routes to get help from users and experts around the world: websites, forums and chat rooms. If you would prefer paid support, many circuit riders have good skills and there is a growing number of specialist companies (see the Open Source Consortium to find many of them, others can be found in the Suppliers Directory).

## Re-using older computers as servers

There is a common myth that servers need to be more powerful than desktop computers. Of course, it depends what you do with them but, for many uses, a PC that no longer cuts the mustard can be pressed into service as a server running Linux (the most common open source *operating system* and an alternative to Windows). The reason is simple: much of a modern PC's power goes into the whizzy graphics, but most Linux servers don't even need monitors: you access them from your PC and manage them via a *web browser*. Re-using computers is good for the environment (around two-thirds of the lifetime energy use of a computer occurs before it reaches its first owner).

Be careful though: some servers do need to be more resilient and if you need, for example, to carry on working even if a disk fails on the server, you might need to buy a new computer or upgrade an old one.

## Do you need your own server?

You may not need, or even want, to have your own server sitting in your office. There are several alternatives which might suit you better, including:

- Buying your own server and have it hosted in a professional hosting centre with a fast Internet connection, a secure environment and experts on hand if anything goes wrong.
- Renting a server in a professional hosting centre for a monthly fee.
- Renting part of a server in a hosting centre (this could be having your website running on a system that also hosts websites for lots of other people).
- Using a managed service, for example for email, where someone else owns and manages the server and you pay a fee to have email accounts or other services.

## Storing files centrally with Samba and Linux

A Linux server running the Samba software can provide an excellent alternative to a Windows server to store and share files. Files are kept on the server and can be accessed from desktop or laptop computers running Windows, *Mac* OS X or Linux. This allows everyone in your organisation (including those working out of the office) to access files and makes taking backups easier.

Samba implements access controls (so different users or groups of users can be given different access rights). It can also act as part of an Active Directory Windows domain and as a print server.

Typically, a Linux server running Samba “just works”, offers superior performance and will quite happily run for months or even years without needing to be fixed or rebooted.

## Running a web server with Apache

More and more organisations have not only Internet sites but also an intranet: a private set of websites for internal use. When it comes to web servers to host these sites, Apache is by far the world's most popular choice - around two thirds of the world's websites run on Apache.

If you want more than a basic website, there are hundreds of applications that offer additional features.

Some of the most common are Content Management Systems (CMSs), which allow websites to be updated by non-technical users. Common CMSs include TYPO3, Joomla, EZPublish and Plone.

## Collaboration with Jabber, Asterisk, wikis, mail lists and forums

There are a host of Open Source collaboration tools that allow organisations to both keep in touch and bring their collective knowledge together effectively.

- Jabber is an Instant Messaging system similar to MSN. Run your own secure server and have online meetings with participants across the world.
- Asterisk is the leading Voice-over-IP PBX. A few years ago a good office phone system cost tens of thousands; today with Asterisk, advanced telephony can cost a fraction of that. Features include directing numbers to any phone (including mobile phones and home phones), automated call answering, call forwarding, hunt groups and voicemail.
- Wikis are collaborative tools allowing anyone with access to add, amend or delete information. The system records all changes which can be rolled back. The most famous wiki is Wikipedia, the online encyclopedia written collaboratively by people all over the world.
- The most common mailing list software is Mailman (others include Subetha). These allow you to create mailing lists which end users can subscribe to and unsubscribe from. You can control who is able to send emails to each list (normally, either list members or just administrators, depending on whether the list is for announcements or discussions).

- Web-based forums can be used instead of mailing lists where you want to make it easy for people to find older information, though they have to make the effort to visit the website.

## **Firewalls, anti-spam, anti-virus and content filtering**

If you run Windows on your PC, the chances are that it's infected with viruses or spyware, though if you have up-to-date anti-virus software you're a little safer. Security has always been a strong point for Linux (on which viruses are virtually unknown). There's no shortage of high quality Open Source security software. To filter spam from email, use SpamAssassin. If you have a broadband router, that may provide a firewall that's good enough for your needs, but if you need something with more functionality, tryIPCop. ClamAV is a high quality email anti-virus package that runs on your Linux server. DansGuardian is web filtering software (for example, to block adult sites from web browsers) increasingly used in schools.

## **Email and groupware servers**

Open Source email and groupware servers, including Zimbra,Horde, Open-Exchange, OpenGroupware, SquirrelMail, eGroupware, Citadel and Kolab are covered in a separate article.

## **All-in-one servers**

Microsoft Small Business Server is an example of an all-in-one server which bundles together several applications in one package. It's cost-effective if you have a handful of users, but starts costing a lot more when you grow. There are several similar Open Source servers, bundling together a file server, print server, email/groupware, collaboration tools and more on one system and they normally scale up much more effectively. Often these servers are well integrated, offering simple web-based management, though they may be built and sold by a single company.

Source: <http://www.ictknowledgebase.org.uk/opensourceservers>