Richard Morrell and SmoothWall
SMOOTHWALL

Linux Magazine What is SmoothWall?
Richard Morrell SmoothWall is a specialist version of Linux, which has been carefully designed, secured and optimised in order to provide a network with all the functionality of a secure router and firewall, but at a fraction of the normal cost.

It started out as a personal project. I didn't want to, and couldn't afford to, buy a watchguard box (£1600 – £1800). That's a lot of money and I have a young family so couldn't afford it. I was involved with user groups in the Bay area and Silicon Valley, where I was working with VA. I also discovered a young chap called Lawrence Manning and we spent more and more time together. In the end what we wanted to do was try and do the development all by the Web.

It all sort of snowballed from there, we said, hmmm this works, maybe we can elaborate on this and see if anyone else is interested. We decided that maybe we could make it into a project, because at the time I was involved in deploying Sourceforge in the US. It was really quite an exciting time to be part of VA Linux. There was plenty of money about, plenty of bandwidth and maybe some of that excitement rubbed off and we came up with SmoothWall. From there we came up with a logo and decided that if we were going to do this properly as a project that we should come up with a brand before we came up with the product. With properly designed logos, proper domain names, proper architecture, we were ready to roll, should the project ever to take off.

SmoothWall was available on July 15 2000, on Sourceforge initially, and I still remember the first 16 people to download it. It then grew from there, after the first three or four weeks we had four and a half thousand users and I thought that I was completely out of my depth. At this point, I was spending a lot of my work time with SmoothWall.

A lot of VA corporate customers in the UK started to use it. That was because VA would send me to customers and they would end up talking about SmoothWall instead of VA. Then it appeared on Linux Magazine in the States and in Linux Journal. All the big magazines carried it as a coverdisc and we got prime billing because at the time there wasn't a huge amount of stuff going on in the UK. We were the only Linux project in Britain going apart from woffle.

As we started growing we began using more and more bandwidth, and costs started increasing. I've had to put the best part of £35,000 in just to keep it

afloat, which is a lot of money when you have a young family. Unfortunately, open source doesn't pay the bills and geeks expect stuff for nothing. If you try and turn commercial, then they attack you and they've attacked my like I've never been attacked before. I've received nasty mail, and even my son has suffered part of a death threat: some guy in America threatened to burn my house down, and told my son that. This is all because I want to take part of the project and make it non-GPL because part of it will use non-GPL code that we couldn't GPL even if we wanted to.

The Linux community is full of wonderful people, but it also has its fare share of morons who haven't got a clue. They sit in their bedrooms developing code and think that anything that involves a GUI or a browser is not suitable for public consumption. They take the GPL to its extreme and I know most of the Linux luminaries because of my time at LinuxCare and VA. I've been around long enough, I am Richard@linux.com. One of the biggest voices we have is Alan Cox, and if I have a problem with SmoothWall at one o'clock in the morning and I need kernel advice I know I can phone up Ted Searle, or anyone, and get advice.

There aren't many other projects that have the breadth of friends that we do. If I need bandwidth or testing I phone up Larry Augustine and it happens. Last night we were working on licensing issues and it was Chris di Bona and Joe Ruiner and you can't get much higher than that, without going to Linus, and that's an advantage we have that other Linux projects in the UK just don't. A lot of it is built on cronyisms and that certainly helps. It's hard graft and when you are putting, very often 21-hour days into open source, you can't be a family man as well.

So far, so good though, we are up to 740,000 installs worldwide since 2000 We know this because each individual Smoothie calls home to register – we are very open about that fact – we now have to support users in 107 countries.

LM Is that the best way to describe how big the SmoothWall project is, by the number of installs?
RM I prefer to use financial figures. We have over 70,000 SmoothWall installs that manage systems with more than 300 clients behind them. So, if you imagine that company would have had to buy a Cisco pixie box for $15,000 to $18,000 and instead

Richard Morrell tells us about SmoothWall, it's development and shares with us his views on Open Source software

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Smoothwall on a chip.

> **The government of Peru, they are running Smoothwall instead of Cisco**

they have replaced it with something open source. They don't necessarily know it's Linux and they don't really care, it does the job. Now if each of those PCs has an inert value the SmoothWall protects something in the region of $3.1 billion worth of hardware worldwide and that's just the corporate clients, that doesn't include home use. That also doesn't include the cable users. In the UK alone we have over 24,000 installs. Now each one of those SmoothWalls calls home, and you can't argue with the figures, they are in black and white, and we make those figures public.

In the UK, we've been logging since April this year, prior to that we didn't bother because it was still just us having fun. We then realised that this could be commercial and we could be acquired. If you are acquired you need to be very adult and grown up and you need to be able to prove to people what you've actually done. You can say I've got 50,000 users, but unless you can prove it, it doesn't mean a thing.

Now if you look at the Web site you'll see about three or four thousand people who have written back to say "Hey, we like this" and "Hey, we don't like that", but you will also see some really nice quotes. This is what really makes it worthwhile. It's not the money – because we don't get paid. It's things like the government of Peru, they are running SmoothWall instead of Cisco. Colleges in the UK, they are ditching Cisco and being able to use that money on teaching budgets, hospitals in Australia, schools in China. You think "Cool!", that's the nice thing.

You get the gimps and the gits who haven't got a clue. They read part of the GPL and don't understand what it means. If Richard Stallman says I'm GPL, I'm GPL and we regularly go to battle with the Free Software Foundation, who are a paper tiger with no teeth at the moment.

LM How do you see the SmoothWall project developing?

RM As of mid-November we became a limited company. We've put too much money into SmoothWall to keep it as a project. Just to keep it alive costs me around £4,000 a month. We use something like 1.4 terabytes of bandwidth a month on the Web site. We get 16.1 million Web page hits

a month that's a lot of hits and unfortunately that's got to be paid for, you can't get sponsorship for that. We are currently located in Raleigh, North Carolina, alongside Red Hat: same ISP, different boxes. We pay our bills, we have some sponsorship by High Speed Web.net, a dubious ISP in North Carolina, but I don't care what their money is like, they pay for our hosting. And then we have Tucows mirror sites in 11 or 12 countries.

We based the way that we've grown on what Jeremy Allison has done with Samba. We have learned to sit back and watched the failing of other projects. We are quite aggressive and I think we are seen as quite rude and arrogant, but then there's a reason for that – we're not a Linux project. Over 70 per cent of our users don't use Linux for their systems. Once SmoothWall is up, it's up – it's just a box. You could paint it pink and put a bow on it, it doesn't matter, no keyboard, no mouse – it's a device.

SmoothWall enables someone to take some old hardware, P133 or P100 and turn it into a box that would have cost them thousands of dollars. Now we've got our knockers that say that the Linux Router project does this, and yes it does, but they do it for the Linux community. How many Windows users use that project? None. There are hundreds of comments on the Web site from people that say "This is the first time I've used Linux, I didn't know about it, thank you for making it so easy". I go on what people tell me.

LM What are the disadvantages with the way the project has grown, did it grow too fast?

RM It didn't grow too fast, it's always been managed, the trick with an open source project is 'plan the team'. It's not different from building a sales team or a management team. You've got to understand the strengths and weaknesses of the people involved. As project manager you've also got to be able to stand back and let people stand on their own two feet, without standing on their toes – too much.

My gut feeling with SmoothWall is that we, deliberately, didn't grow too fast. We could have grown to 50 or 60 developers by opening up a CVS tree and we didn't. A CVS tree is all well and good if you are running something like Gimp, or if you are developing a multimedia application, or a theme for KDE, where you need the input from designers and graphics bods, and people with a knowledge of X and KDE, from all over the world. SmoothWall is a secure system, whether it's based on Linux or BSD or Mac, who gives a monkeys it's secure. When we release the product we release the source – that is our definition of open source. If we used open source ways of working, open source methodologies we would be dead 13 months ago.

LM It's obvious that you do spend a lot of time on this project.

RM A huge amount of time. I'm still on the IRC channels at 2am kicking and banning people who are moaning about the product, people say why are you horrible to them, and I say it's because they are not customers. If they are going to be customers then that is great but don't come in here moaning because you want a print server on SmoothWall.

Linux gives people an opportunity we never had as developers six years ago. What SmoothWall should show people is that you can take a Linux distribution and all we did was take one CD. We cut it from 650 Mb down to 40Mb. Now, with a Linux distribution, you have all the ingredients you need.

People make demands, they will say they want SmoothWall to handle multiple IP aliasing. They demand! Now to me demand means I delete, I'm not interested. If people want to shout at me that's fine, they're not paying me. I do give people want they want, but I give it to them in a controlled manner. We have our updates programme, which works very well. You would expect the same of a commercial software organisation. The product works, it looks clean, it does what it says. The documentation is OK, it's not brilliant, but then it is not a commercial product. Our commercial product does have brilliant documentation, everything you would expect of a professional product. But with the GPL, we try to give people value, but for no money. With the project we have given people the opportunity to go away and think, if the SmoothWall team can do it, as a hobby, imagine what really could be done if someone really tried.

SmoothWall has done a lot of good, we have raised a huge amount of money for charity. We have been earning money for a year now for something called the Dorothy Miles cultural centre in Fleet, Hampshire. We read about them in the papers and what we do is provide them facilities, they need a copy of software or hardware, we will buy it for them. We have always encouraged people who want to give to charity on our behalf to give to Dorothy Miles, I think we've raised about £5,000 for them, which really makes me made up with happiness. We sponsor a junior football team, which keeps you at ground level.

What a lot of Linux companies have done is sponsor beer fests and geek get-togethers.

LM Do you agree that there is a place for that?

RM Oh, yeah, it's very necessary. I was doing it a couple of nights back, I was geeking until 6am. But, we're having to move on.

The Linux industry in the UK doesn't realise that there is a demand for people with Linux skills, there are not enough Linux consultants, spending enough time in reality to address that skill shortage. They are shooting themselves in the foot.

SmoothWall is about trying to be good at one little thing. Don't always try and be good at everything.

SmoothWall is about making something secure, keeping it secure. Not trying to be too big for your boots. Take the product and polish it, if you polish it enough it shines. Were not shiny yet, but we are getting there. It's taken a long time. We are on our ninth release.

LM With your aspiration towards a more commercial project, what complication does that give you with the GPL?

RM Very few!

My personal viewpoint for the necessity for the FSF to remain a fighting political force is marred by the fact that they are a force no more. They shout about how the GPL has never been challenged in court. I think they are probably quite thankful, because they wouldn't have the money to defend it.

LM Do you think the FSF could do more or should have done more in the past?

RM I had an article in SmoothWall last week. I was saying "We want to take SmoothWall commercial. What can the FSF do to help us?". Unfortunately the FSF are not interested in helping good GPL projects go commercial.

LM Why is that?

RM A very honest answer is that they don't have any money. To help people like this costs money. Now, if I wanted advice from the FSF I would be happy to pay for it, just like I would be happy to pay for a consultant from the bank. The problem is they don't have the advice, they don't have the finances to develop advice.

Georg Greve works damn hard to give what help he can. But there are differences between Europe and America. He stands up for Richard Stallamn, who sometimes can be a bit of a liability. Richard is a man with ideologies and I admire him for his persistence. There are people who are put on this planet to make a difference, Richard is one of them.

LM How do you see online.smoothwall.org developing?

RM That's going to be a commercial subscription-based support service, for people who download the free software. They can use that or they can still use the more traditional forms of support like newsgroups and IRC. It costs money to run, but it is important because it puts people in touch and it will foster new customers for us commercially. For us, it is a move away from mailing lists that are becoming unmanageable. We're getting 5,500 posts to some of the mailing list, and I can't cope with that, and if I can't cope with that then God knows what kind of message it is sending to our customers. Flame wars are far too easy to start on mailing lists as well, and flame wars are so nineties!

SmoothWall: *www.smoothwall.org*

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