



Going Pro with Linux

The Linux gurus at **UKFast** explain the best routes to a career in Linux and explain how the LPI qualifications relate to life as a sysadmin.

Trying to break into Linux engineering can be challenging for even the most determined individual. Coupled with this year's Linux Jobs report, which revealed that 9 out of 10 employers found the recruitment of Linux professionals as either "somewhat difficult" or "very difficult" (an increase on the previous years' findings), it becomes clear that a new approach is needed.

Linux plays a big part in service delivery and technical support at UKFast, so when it built, set up and supports servers in a Linux

"9 out of 10 employers found recruiting Linux professionals difficult."

environment, it is essential that it has well trained engineers. Whilst the LPI Certifications won't turn you into a sysadmin overnight (that

comes with time served), they do hold a range of positives that translate into massive advantages in the workplace.

One of the key benefits to the LPICs is standardisation. The training provides the basics from which you can approach other systems with the confidence that you will be able to work out ways around the different deviations on your own.

The LPI qualification, with its progressive pathway, is a great way of initialising and growing your knowledge. LPI1 provides the



► With a LPIC qualification, you too can work in a place ideal for recreating *Dr Who* chase sequences.

basic skills common across all distributions of Linux, such as system architecture, administrative tasks and GNU and UNIX commands. LPIC2 builds on this and covers advanced skills for the Linux Professional. To pass this level, engineers are required to be able to administer a small to medium sized site. LPIC3 is aimed at the 'Enterprise' level engineer and introduces specialised areas of expertise such as mixed environments and security.

Whilst the traditional approach of 'on-the-job' mentoring in which senior engineers would train 'newbies' worked well, UKFast found that different mentors resulted in different training outcomes, depending on the success of the partnership. The LPICs provide a much better way of learning the basics without picking up bad habits and provides everyone an equal chance to master the knowledge and become a skilled Linux professional. This allows companies to provide consistency across the board to clients.

As you'd expect, being a leading hosting company, UKFast receives a lot of CVs from engineers who have taught themselves the LPIC essentials by using books or watching training videos online. The dedication required in arming

themselves with an LPIC qualification by 'whatever means necessary', shows that you're dealing with a motivated individual. UKFast certainly doesn't believe that the qualification needs to be attained via a costly course.

It explained that it felt an obligation to share ownership of the Linux engineer shortage issue and realised that part of the solution lay within our means. Along with training providers, it built a programme to get engineers, the newbies and the stalwarts, armed with the same shared knowledge. Thankfully its CEO Lawrence Jones has a forward-thinking commitment to training and so our bespoke training facility allows them to do this onsite.

It's still early days of course as the model is very new, but the answer to the initial question: "Can we take an 18-year-old with no previous training and use our course to get them through the LPIC?" appears to be a resounding "yes"! If more companies join UKFast in delivering the LPIC and schools continue to embrace programming and other key computing skills then hopefully it'll be possible to create a catalyst to get more talented young people interested in and trained up for careers in Linux. **LXF**

A Day in the Life of a Junior Sysadmin

Being a new Linux engineer can be intimidating given the variety of problems thrown at you and the sheer number of commands and tools at your disposal. My job is to take calls and tickets from customers relating to any issues they have on the servers hosted with us; including (but certainly not limited to) performance issues, spam problems, questions on various upgrades available and the daunting compromises.

When I first started I could see that running certain commands with specific flags set would

solve a particular problem, and it was tempting just to memorise this and run them when needed. This can become awkward when customers are asking what you've actually done and how they can do it for themselves, or when a command doesn't run as expected.

Having the chance to take the LPIC gave me time to step back and actually find out the purpose of specific flags and alternatives to various commands, and allowed me to appreciate why we run a specific command, as opposed to just doing what I'm told.

Studying at University I had an introduction to Linux but the course was generally Windows oriented. However, this brief introduction showed me that being a Linux engineer was a career I was interested in, and my company has allowed me to build my knowledge on the job alongside studying for qualifications such as the LPIC. I feel the biggest challenge for people getting into Linux careers would be the exposure it has, certainly in school when I was making decisions about my future, I wasn't aware of Linux or the opportunities it offered.

A Linux CHAP

CEO of LPI UK & Ireland, **Bill Quinn**, explains how certification can help you build a Linux career.

LXF: When was the LPI first exam launched?

BQ: LPI was formally incorporated as a non-profit organization in New Brunswick, Canada on October 25, 1999. The first exam was launched the same year.

LXF: How important is it to gain an LPIC if you want to go into a career as a Linux engineer? Is it the best route?

BQ: IT certification, including LPI, is a vital component on a technology professional's CV. It demonstrates that you have a base level of knowledge as defined (in our case) by the industry. If you are seeking a career with Linux, LPI is the world's leading certification. Over 350,000 exams have been taken to date, with more than 125,000 certified individuals worldwide. The key difference with LPI's program is we're vendor independent – we do not focus on one particular Linux distribution, instead, we focus on the technology.

There are many ways to obtain a career with Linux – apprenticeship schemes, college courses, commercial training, self-study or being mentored on the job. Invariably, at some stage in your career, you will need to demonstrate a base level of knowledge. Certification with a recognised body is the easiest way of demonstrating this knowledge. No matter what form of study a person

completes, they should always be seeking to demonstrate learning by certification.

LXF: People say there's a skills shortage when it comes to Linux engineers. Do you agree and, if so, what needs to be done?

BQ: There is a staggering skill shortage in the IT industry. Depending on how you measure it, it is estimated that there will be between 300,000 and 1,000,000 IT jobs vacant across Europe by 2017 because skills aren't available.

If you focus on the growth areas in IT – mobility (in particular Android), virtualisation, cloud and big data they all are built on Linux/Open Source. eSkills UK believes that 69,000 Big Data specialists will be needed by 2017. The demand for Linux Professionals is high, so they command a higher wage.

The UK is recognising the need for change, the need for Computing skills. This is reflected in the changes in schools, from an ICT curriculum to computing, but more can be done. Colleges and Universities need to recognise the benefits of aligning education programs with vendor certification – offer the students both. In Ireland, they are driving change faster – the Irish Government has recognised in its action plan for Jobs that it needs more Linux Professionals in order to sustain its position as tech capital of Europe.



LXF: Do you think even an experienced Linux engineer would see positive benefits to their work if they went through LPI?

BQ: The bigger problem is the younger generation. The IT industry is seeing the average age of employee increase to the 35-45 band, whilst the 20-30 band is decreasing. This is potentially causing a longer term problem as the next generation is not coming through.

However, everybody can benefit from a program of continued development. In particular, in the IT industry you need to be revisiting your skills. By utilising a tiered program of certification, like LPI, an employee can be challenged to progress their base knowledge into more advanced areas. With the LPI, you have to re-certify every five years so you or your employees will have the most up to date and relevant skills.

Aaron Saxton, Director of Training at UKFast



LXF: How would you describe your role?

AS: As the Director of Education and Training my responsibility is to develop people and grow talent through a

curriculum-driven educational programme that leads to a number of nationally recognised certifications. Here at UKFast we know that empowering the right people will lead to natural growth and development of not only the individual but by proxy, the company for which they work.

LXF: How important is the LPI certification to UKFast and to business in general?

AS: It's very important. It provides us with an

opportunity to ground our Linux engineers in the fundamentals without being corrupted by their own methods – and by this, I mean any bad habits that more experienced engineers might have picked up. Some methods, for example, can be more long winded or inefficient compared to others. Training for the LPICs is a great way to test their aptitude and their abilities and, as well as validating the skills they do have, it also introduces the ones they might not have done. For those new to Linux, the LPICs are just right for them – the right framework, content and certifications.

LXF: Do UKFast develop their own training materials? What are good resources for LFX readers to use?

AS: Yes, it's not just generic – we align the

learning outcomes and objectives to our business goals. Because the LPIC training can be easily combined with practical activities, we also provide our new Junior Linux Engineers with virtual environments set up in a similar way to some of our customers' solutions. For your readers, I'd recommend CBT nuggets (www.cbtnuggets.com) which provides online training videos and practice exams. The LPIC study guides and e-books are also a great resource and have mock exams and practice papers. I'd also suggest speaking to experienced engineers who have advice and tips to give. It's in the nature of Linux as an open source community to be open and sharing, and with social media and online forums, you should be able to find someone who will share their knowledge.