

**Novell is hoping to catch up with Red Hat and win more customers through its new certification scheme, says Rob Buckley**

# Are you certifiable?

In the great battle for distribution supremacy, there have been only two Linuxes that have had a chance of dominating the enterprise. Forget the purity of Debian. Forget the also-rans like Sun's Linux distribution. Red Hat and SuSE have been the only ones with a hope in hell of convincing IT managers to standardise on them.

Each has had its own strongholds. Red Hat has always been in the lead worldwide, but has done particularly well in the US, while SuSE has a firmer hold on continental Europe. Both have maintained their leadership and are fighting for marketshare by appealing to the one thing all IT managers want to avoid: management problems.

From the point of view of the IT manager, both Red Hat and SuSE (the latter now owned by Novell, of course) claim to provide an operating system that is reliable, high performance and easy to use. But nothing short of a mainframe can claim 100% reliability, and even then there are occasions when the mainframe may have a hiccup. Plus there's always the possibility of crashes from which the organisation's IT activities will need to recover. Then there's tuning, planning policies, low-level configuration and a dozen other things that are needed to ensure servers run reliably and at optimum

willing to use a piece of software for mainstream operations, he or she needs to know that when things go wrong, it can and will be supported. So, with the benefits of Linux and open source software in general becoming clear, the need for support with enterprise Linux deployments is becoming stronger every day, if Linux is to continue its growth in the enterprise.

Support of course comes from two possible locations: inside and outside the enterprise. Either service providers can offer support or the organisation can develop in-house skills for maintaining its servers. In both cases, can you simply take it on trust that a potential employee or contractor has the skills necessary to do the job? Some ask for references, but certification of skills can often be seen as better proof, particularly if it's an industry-recognised certification.

Certification has a number of benefits. Vendors, including Microsoft, Sun and IBM, have spent millions of pounds convincing managers that there is value in certification. To a certain extent, this is still true, even though Microsoft's MCSE has devalued the certificate currency somewhat: the emergence of 'boot camps' that train up everyone in a week to an almost-certain pass, even if they have little actual experience, has led to the concept of the 'paper MCSE' -

not have the time or money to create their own course or course material, turn the next generation of IT staff away from Windows.

There are a number of skills certification schemes available for Linux. The first Linux certification to appear came from SAI/GNU, quickly followed by the Linux Professional Institute's (LPI) Level 1 and Level 2 accreditations and CompTIA. These were all vendor neutral, covering Linux in general. Red Hat, however, developed certifications that focused on its particular distribution: the Red Hat Certified Engineer (RHCE), soon followed by the Red Hat Certified Technician (RHCT) and very recently the Red Hat Certified Architect (RHCA). Novell, too, has joined in with certification. A year ago, it developed the Certified Linux Professional (CLP) exam and it launched its Certified Linux Engineer 9 (CLE9) at its Brainshare conference in September.

"Quite a lot of people have been saying 'We're looking into Linux but we have no clue about this.' That's why I'm here," says Peter Albrecht, manager of Linux certification and testing at Novell. "Linux training can be a driver for follow-up business. Companies can start with Linux training and if it goes well, start moving projects and applications to Linux."

Already Novell's Linux courses are a success. Compared with the previous SuSE Linux training, demand for the new courses has doubled over the past year. They are already the most popular training courses offered by Novell, easily beating NetWare training and notching up 120,000 training days worldwide. It's being taught two to three hours a week in some US high schools and is proving popular in Asian markets such as Singapore and China, where it's been adopted by 40 universities.

Novell's own courses are, naturally enough, focused on its own distribution,

## **Huxtable-Wright feels so unthreatened by Novell, she hasn't even sent anyone on Novell's course to see what it's like**

performance levels. If anything goes wrong and nothing can be done about it quickly, the company loses money and the IT manager almost certainly loses his or her job.

In short, before an IT manager is

someone who has skills on paper but cannot actually do the job.

In addition, certification can recruit new Linux users, create new Linux advocates and, when offered in universities and schools, which might

although Albrecht says the syllabus includes virtually all the LPIC syllabus and the distribution-neutral parts of the Red Hat course, making it transferable to other distributions. It's aiming the CLP exam at anyone who needs to administer a single server running SuSE Linux Enterprise Server or Open Enterprise Server and connect it to a network. The CLE9 course builds on top of CLP and is aimed at anyone who needs to know how to manage multiple Linux servers in an enterprise environment. Anyone taking the certificate already has to have passed the CLP.

The Novell courses are practicals - which is where they differ most from the LPIC and indeed the MCSE, which are mainly based on multiple-choice answers. In this, they follow Red Hat. "Our exams are 100% performance-based," says Jasmine Huxtable-Wright, EMEA manager for Red Hat Global Learning Services. "We're testing skills in real world situations. You have a real piece of hardware, which you have to load and set up."

The Novell and Red Hat certifications both differ in how these real-world practicals take place. Red Hat testing puts you in front of a PC, onto which you install the relevant software. You then have to configure it according to the instructions in the exam, using whatever means you can think of. When the exam is over, a Red Hat Linux expert will examine your configuration files and determine whether you've made the right changes or not.

By contrast, the Novell examination uses two VMWare images hosted on servers in Provo, Utah. Candidates access the images via a portal at <practicum.novell.com> and make their changes, again in whatever fashion they like. At the end of the exam, automated scripts

## How the Novell certificates work

Essentially, you can pass any Novell certificate without attending any courses or providing coursework, since the exam is a practical. Nevertheless, if you're unsure of any areas, there are courses and training material available.

### CERTIFIED LINUX PROFESSIONAL (CLP)

To earn the CLP, you need to be able to prove that you have the ability to effectively implement, manage, and support SuSE Linux and the enterprise services that run on top of it. There are no prerequisites for the CLP certificate. However, for those with no Linux knowledge, there are three instructor-led courses that are available: course 3036: SUSE Linux fundamentals, which lasts three days; course 3037: SUSE Linux administration, which lasts five days; and course 3038: Advanced SUSE Linux administration, which lasts five days. There is also an alternative three-day course for administrators of other Linux distributions that want to acquire Novell-specific knowledge: course 3019: Migrating to SUSE Linux. VMWare images are provided for practicals. If you don't want to attend any courses, self-study material is available.

The CLP tests a number of areas, including: customised installation of SUSE Linux Enterprise Server; user management; configuration of local services; network configuration; basic security considerations; and shell scripting.

**Costs: Migrating to SuSe Linux (3019) £960+VAT; SuSe Linux Fundamentals (3036) £995+VAT; SuSe Linux Administration (3037) £1,425+VAT; Advanced SuSe Linux Administration (3038) £1,425+VAT; Practical \$195/£110+VAT**

### CERTIFIED LINUX ENGINEER 9

The Novell Certified Linux Engineer 9 certification is aimed at those that want to master advanced SUSE Linux Enterprise Server administration skills. Unlike CLP, CLE9 has a prerequisite: you'll need to have already passed the CLP practical before you can take the CLE9 practical. Again, you can take the practical without having attended or studied any courses. But there are two courses that Novell recommend: Course 3057: SuSE Linux Network Services and Course 3058: SuSE Linux Security.

The first of these covers areas such as configuration of network services like DNS and Samba; infrastructure services like DHCP and OpenSLP; configuring Postfix, IMAP, POP3 and SpamAssassin to set up a mail server; and monitoring network traffic. The second looks at security concepts such as host security; network security; firewalls; packet filters; application-level gateways; Virtual Private Networks; and intrusion detection and incident response. Both the CLE9 and CLP will be upgraded to match future releases of SuSE Linux. Existing certificate holders will be able to retake future exams and courses at a discount.

**Cost: SuSe Linux Network Services (3057) £1,495+VAT; SuSe Linux Security (3058) £1,495+VAT; Practicum: \$195/£110+VAT**

study configuration files and check to see if the correct changes have been made. Candidates are able to appeal if they feel they've been too clever for the automated system, but Novell's Albrecht says there's only been one incident where they've been correct and the system has been wrong.

Both approaches have their pros and cons. Novell's can face problems with poor Internet connections or if candidates kill processes or log out of their machines. Red Hat's system has none of those issues, but it does place greater investment requirements on testing centres and makes troubleshooting an option only in exams where the OS is pre-installed.

Red Hat has ten training and testing centres in the UK. "You get training and testing in the same room and at the same machines," says Huxtable-Wright. These centres are mostly in the South of the UK, but there is a Glasgow centre. However, despite the virtual nature of Novell's tests, requiring only a PC and an Internet connection, Novell has 16 training partners but only six testing partners. The latter are in Glasgow, Wokingham, Reading, London, Sheffield and Wakefield.

Red Hat's certification schemes have been running since 1999 and the

**Novell's 'practicum' exam is run in VMWare images over the Internet from testing centres around the world**



## How the Red Hat certificates work

Red Hat has a number of certificates and training courses available. It is possible to study online, rather than attend the courses, but the company recommends attending the courses - something 95% of candidates end up doing. Since the exams and coursework are updated within two weeks of a new release of a Red Hat Linux update, people who already hold certificates will need to retake the exam every few years to ensure their skills are up to date. Those who do so are entitled to a 50% or more reduction in the cost of the exams.

### RED HAT CERTIFIED TECHNICIAN

The RHCT proves core system administrator skills. An RHCT can install and configure a new Linux system, and attach it to the corporate network. The RHCT certificate is granted upon passing the RHCT exam, which can be taken as a standalone exam or on the final day of the RH133 Red Hat Linux System Administration course, which lasts four and a half days. You can also get the certificate by passing all RHCT-specific areas in the RHCE exam. Red Hat Linux Essentials (RH033) is recommended for anyone without Linux experience.

**Cost:** Red Hat Linux Essentials (RH033) £1,295+VAT; Red Hat Linux System Administration (RH133) £1,450+VAT; Exam only £250+VAT

### RED HAT CERTIFIED ENGINEER

The RHCE demonstrates senior system administrator skills. An RHCE has RHCT skills plus the ability to configure network services and security. An RHCE can make decisions about which services should be deployed on the corporate network and how. DNS, NFS, Samba, Sendmail, Postfix, Apache, and the key security capabilities are all covered in detail.

You can earn the RHCE certificate by passing the RHCE exam, which you can take by itself or as the final day of the RH300 RHCE Rapid Track course, which lasts five days including the exam. There are three preparatory courses for those who are not already Red Hat Linux experts: RH033 and RH133 from the RHCT course; and RH253 (networking and security).

**Cost:** Networking and security (RH253) £1,295+VAT; RHCE Rapid Track (RH300) + exam £1,599+VAT; Exam only £485+VAT

### RED HAT CERTIFIED ARCHITECT (RHCA)

RHCA establishes architect skills. An RHCA has RHCE skills (and needs to have already passed the RHCE exam) plus additional skills needed to deploy and manage Red Hat Enterprise Linux throughout the enterprise in numerous and varied applications. The curriculum emphasises technology and processes for software deployment and systems management, directory services and authentication, storage management, system monitoring, performance tuning, and advanced network services and security. There are five exams to prove these skills.

The full RHCA curriculum consists of four advanced enterprise architect courses and an upper-level security course. All of these courses take four days to complete, with an additional day for the exam.

Since the RHCA is a new exam, is far longer and more complex than other certificates and quite expensive, don't be surprised that only 200 people have passed individual parts of the exam and only nine people hold a certificate. Red Hat is only expecting another 100 passes in the next year or so.

**Cost:** There are five exams, each costing £525+VAT. The costs of the courses are: Security (RH5333) £1,599+VAT; Deployment and systems management (RH401) £1,860+VAT; Directory services and authentication endorsement (RH423) £1,750+VAT; Enterprise storage management (RH436) £2,220+VAT; Performance tuning and system monitoring (RH442) £1,750+VAT

## Why are people taking training courses?

- 85% say more jobs are asking for Linux skills
- 42% wanted to improve their skills by preparing for certification
- 28% say their employer requested they do the certification
- 23% wanted formal proof of their knowledge

Neither Novell's nor Red Hat's tests will appeal to everyone. Some people are wary of taking vendor-specific exams. Charlie Collins, a Linux user who has taken certifications from Microsoft, Novell, IBM and Sun, says that many vendors' tests are not designed to test knowledge of subject matter "but rather to get the test taker to pass and therefore have more x-certified people in the field proclaiming mastery in and recommending the respective products." Both Albrecht and Huxtable-Wright counter this by pointing out the pass rates of their exams are closer to 40-50% than the 70%+ of the MCSE. Using the same pass rate logic, LPIC's results indicate it's a harder certificate to get than Red Hat's at least.

Similarly, the community nature of Linux makes many want to avoid anything proprietary, right down to training courses. And since the LPIC and other tests are forms-based, those taking the test don't need to visit testing centres. They're also much cheaper: you can take both exams in LPIC, level one, for a total of US \$200.

Since both Novell and Red Hat's exams are practicals, they are less likely to suffer the 'paper MCSE' fate of other certifications - which might well befall LPIC and CompTIA. Ultimately, the backing that both Red Hat and Novell bring to their own certificates make them that much more appealing to potential and existing employers. That will be the main test anyone deciding whether to take the exam needs to make.



**Jasmine Huxtable-Wright, EMEA manager for Red Hat Global Learning Services**

company has greater market share and greater mindshare in the corporate world than Novell. Novell hopes in part that its certification schemes will help it close the difference with its rival by making it seem an equal. Nevertheless, with only 700 people having qualified for CLP and only 20 for CLE9, compared with the tens of thousands that have passed LPI and Red Hat certifications, it'll be some time before Novell can catch up with Red Hat's trained elite. Huxtable-Wright feels so unthreatened by Novell, she hasn't even sent anyone on Novell's course to see what it's like.



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