Server OS Buyer's Guide

Vendor-neutral tips for excelling with Linux in your IT department
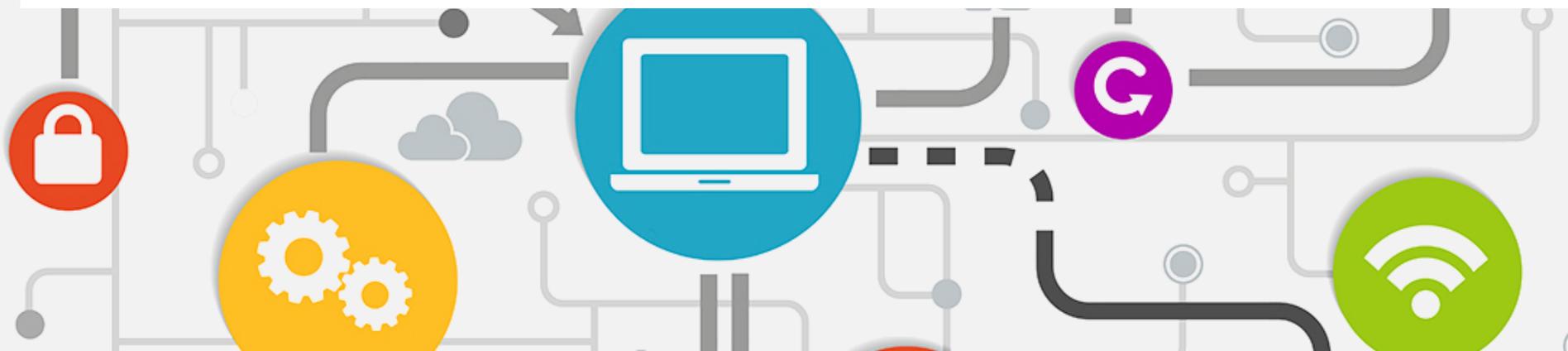
In this e-guide

Traditionally, choosing a server operating system meant simply selecting
between Windows or Linux—however, over the last few years, Windows has
taken off running and left IT Linux pros somewhat in the dust.

While Linux does have its known vulnerabilities, if utilized correctly, it can
deliver key benefits over Windows, and drive significant business success. This
brand-new guide digs deep into utilizing Linux and Windows together, major
Linux vulnerabilities to watch out for, and the future career outlook for IT Linux
pros.

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🚩 Why choose Linux or Windows when you can have both?

http://searchenterprisedesktop.techtarget.com/feature/Why-choose-Linux-or-Windows-when-you-can-have-both

In The Brady Bunch Jan famously whined, "Marcia, Marcia, Marcia" when her more popular older sister stole attention away from her. In the enterprise desktop OS family, Linux shares Jan's plight, always overshadowed by something more popular.

But being part of the same family, Marcia and Jan were actually capable of working really well together ("It's a Sunshine Day" anyone?) and the same can be said for Windows and Linux. It's time to spread the love and shine a light on Linux. Linux distributions rarely have licensing fees, so you can have 100 -- or even 1,000 -- Linux instances. You never have to worry about upfront costs; you can run as many instances as you want.

If you have some hardware that the manufacturer no longer supports, you can turn to Linux. Many distros have drivers that support aging hardware. Another Linux perk is that some distributions can run as virtual containers on a desktop.

If a user wants to run Linux as a host and Windows as a guest (or vice versa) he can.

Linux is not perfect though, particularly in terms of support. Only you can identify and fix your Linux problems. You can search online for ways to fix things and you'll probably find answers, but ultimately it's up to you to figure out what's wrong and make the changes. Alternatively, you could pay the creators of your Linux distro or a third-party consultant to make the fixes.

When it comes to running apps on Linux, they are almost all open source. But if an app isn't directly designed for your Linux distribution, it might not work correctly. And you could run into problems if you need a client app to hook your Linux distribution into your backend infrastructure -- apps such as Microsoft Outlook can only run in Windows.

Now that you know some of the pros and cons of Linux it's time to learn more about it, including what the advanced package tool (apt-get) is, how to install the OS, and whether you really need to choose Linux or Windows.

What are the two types of Linux files?

With Linux, installation file type determines the distribution and brand of Linux you are working with. The first file type is Debian or APT-based packages, which includes Zorin, Ubuntu and Xubuntu distributions among others. The second file type is Red Hat-based packages which include Fedora and CentOS. So what's the difference between the two? It comes down to the programs they include and how they compress software and metadata. Debian uses .deb and Red Hat uses .rpm.

Speaking of apt-based packages, what is the advanced package tool?

Released in 1998 so IT admins could retrieve and load apps in Debian systems, advanced apt-get is the application manager for Unix and Linux systems. It uses .deb files and is most useful in resolving software dependencies. You can even modify apt-get to manage Red Hat's Package Manager with apt-rpm.

⚑ Be on the lookout for Linux security vulnerabilities

http://searchenterprisedesktop.techtarget.com/tip/Be-on-the-lookout-for-Linux-security-vulnerabilities

Linux doesn't dominate the desktop world -- it's a niche operating system -- but is has important use cases in the shops where it's deployed. And those shops still have to worry about the security of their Linux desktops.

Linux certainly has its place in the enterprise. Shops use it to support specific business applications and end-user needs. But it's not a universally used OS, and it sometimes doesn't get the same attention as servers or Windows-based workstations. This treatment of Linux systems ends up creating a gray area for security and often leaves unnecessary gaps that are waiting to be exploited.

Linux needs to be treated and secured as any other system in the enterprise; not securing your Linux desktops is a big misstep, and it can open your network to some of the same common vulnerabilities as unsecured Windows desktops:

Weak passwords are crackable, and cracked passwords can lead to exposure of information within the OS or applications and databases on separate

systems. A lack of system monitoring can lead to data leakage, unknown network intrusions and related issues, and without malware protection your network is open to infections; a botnet could be set up on your network, for example. Unnecessary services can lead to exploitation and exposure of sensitive information, for example via anonymous File Transfer Protocol connections. Without full disk encryption on laptops, there's the possibility of improper storage of sensitive information. Missing patches can lead to denial-of-service attacks, someone obtaining remote control using a tool such as Metasploit, and network snooping via the weak Secure Sockets Layer protocol and encryption ciphers. And open Network File System or Samba shares sometimes allow anyone on the network to access files that they shouldn't otherwise be privy to.

How to find Linux security vulnerabilities

You can get started testing for Linux security vulnerabilities with tools such as NetScanTools Pro (it runs on Windows) or Kali Linux. NetScanTools Pro lets you run port scans, identify specific versions of Linux and running services, and you can perform a slew of other tests such as DNS, email and even packet generation against your Linux systems. Kali Linux has just about every

conceivable vulnerability scanner, penetration testing tool and forensic analysis tool you can imagine, and they're all great for uncovering and exploiting Linux-based security flaws.

I also recommend that you test your Linux systems using traditional commercial network vulnerability scanners such as Nexpose and LanGuard. They're easy to use and you'll likely find a lot of weaknesses in a short period of time using them. Some good, old-fashioned manual analysis of Linux systems -- supported by tools such as Tiger, Linux Security Auditing Tool and Bastille UNIX -- is a great idea as well.

Reviewing the security of your Linux systems shouldn't be a one-time event. Rather, it should be part of your overall security testing program that involves all operating systems, applications and network systems.

▮ Data center managers struggle to fill Linux admin jobs

http://searchdatacenter.techtarget.com/news/2240242351/Data-center-managers-struggle-to-fill-Linux-admin-jobs

It's a great time to be an IT pro with Linux skills.

The rise of open cloud platforms has had a positive impact on the Linux admin jobs market, with data center managers doing their best to attract and retain Linux talent.

Nearly all of the over 1,000 IT managers surveyed by Dice, an IT career website, and The Linux Foundation said they plan to hire professionals with Linux skills.

Half of respondents to the March 2015 Linux Jobs Reportsaid they'll hire more Linux talent this year than last year, and Linux skills have furthered 90% of respondents' careers.

To find these prospective candidates, 70% of hiring managers incentivize to retain Linux talent with more flexible work hours, telecommuting and raises, according to the survey.

Although this year's findings are similar to the 2014 Linux report, some major technologies are changing the Linux jobs game.

Linux skills for success

The most important Linux skill to have right now is general systems administration, said Jack Wallen, a Kentucky-based Linux expert and avid promoter and user of the Linux OS.

But there is a major shift happening that will lead to specialization in certain areas of Linux, although not as much on the distribution.

"Everything will be less platform-specific. It's hard to specialize on a specific platform, except if you're a sys admin," Wallen said.

Big data, databases, cloud and mobile are among the important skills to acquire to succeed in Linux, said Wallen.

Only 6.5% of respondents said a majority of their time is dedicated to database administration, according to The TechTarget 2014 Salary survey, which surveyed over 1,000 IT respondents in North America, not just Linux pros. Mobile technology is believed to be most important, according to 14.5% of the TechTarget survey respondents. A number of respondents -- 14.5% -- are concerned with application development and design for 2015.

Everything in the future will be accessible through mobile technology, and those seeking positions in Linux need to develop skills associated with mobile. Linux professionals will retool websites, services and systems to work on mobile devices.

Linux staffing in the last year was driven by the rise in open cloud platforms, security and software-defined networking.

Linux is "getting more of a security focus from the OS makers themselves, third-party applications and staff maintaining these systems," said Adam Fowler, IT operations manager for a law firm in Australia.

The sys admin role is the most sought after position to fill, with 66% of managers looking for Linux talent to fill this job, according to The Linux Report. The most promising Linux-based technologies for a sys admin are security, databases, cloud, OpenStack and containers, Wallen said. When you put all of the pieces together, he said, you have a cohesive sys admin role.

Cloud computing will be a primary focus for 20.9% of respondents in 2015; cloud occupies 8.1% of respondents' time.

Experience or knowledge of OpenStack and CloudStack is a major consideration in the hiring process, and 49% of Linux pros say that open cloud will grow significantly in 2015.

"We cannot exist or evolve without cloud," Wallen said. "Look at the services they offer-- VoIP, VPNs, SNS recording, etc. [Open cloud vendors] are so much better than others with open source technology."

Part of the reason for open cloud's success is how it works with mobile services, he said. Open cloud is great at deploying mobile services. The biggest market is mobile, and open cloud will eventually own that.

But open cloud is not without fault. For example, Linux-based clouds use the Java-based Rhino tool, which is considered slow and insecure, Wallen said.

Those with skills to secure and advance essential infrastructure projects will do particularly well in the Linux job market, due mostly to the security breaches such as Heartbleed that enterprises experienced in 2014. In the TechTarget 2014 Salary Survey, 22.3% of respondents said that security filled most of their time last year.

Winning Linux certifications

If you've got the cert, you've likely got the job.

According to the Linux Report, 44% of managers said they are more likely to hire an applicant with a Linux certification. When hiring a sys admin, 54% expect a certification or formal training.

Red Hat and SUSE certifications are the highest valued, Wallen said. Ubuntu is also a valid certification since it pushes the Linux desktop further, but Red Hat and SUSE are on the forefront of the technology shift.

Linux certifications are also incentivized: 38% say they will help employees with the cost of certification or help them continue their education to get certified.

The struggle for talent

Demand for Linux talent outweighs supply, and data center hiring managers struggle to find professionals with the proper Linux skills. The Linux Report states that 88% of respondents find it very or somewhat difficult to find such candidates.

The improved economic climate has allowed organizations to offer more money and hire more talent. In 2014, 49.2% of respondents received a raise; only 2.8% experienced a pay-cut, according to the TechTarget 2014 Salary Survey.

Most administrators still focus on learning Microsoft skills since its products have been the standard in the industry for many years.

A fear of change exists in those who hesitate to move from Microsoft to open source, Wallen said. Some are fearful, and others just don't know about it, Wallen said.

Fowler acknowledges the demand for better Linux talent -- his law firm only uses blackbox style devices that run on Linux. Everything else in the data center runs on Windows for budgetary reasons.

"[We are] already heavily invested in Microsoft, so it doesn't make much financial sense to find alternate solutions," Fowler said. "Training of staff is the other factor -- although we wouldn't discount a Linux-based solution, it spreads us thinner across even more technologies that would give us less opportunity to deliver a good, reliable service."

🔖 Linux pro imparts how to get ahead in IT careers

http://searchdatacenter.techtarget.com/feature/Linux-pro-imparts-how-to-get-ahead-in-IT-careers

After 20 years in the tech industry, Linux pro Sander van Vugt knows a thing or two about how to get ahead.

His IT career began with his first job at Novell as a technology trainer. He became an independent IT pro in 2004 to delve deeper into open source and gain hands-on experience. Today, van Vugt is an expert in Linux high availability, virtualization and performance, and continues to teach.

He has also authored several books, including Beginning the Linux Command Line, Beginning Ubuntu LTS Server Administration and Pro Ubuntu Server Administration.

Here, he offers sage advice on navigating the ever-changing tech industry to develop a successful IT career.

What advice would you give someone just starting out in the field?

Sander van Vugt: Focus on Linux because it's getting bigger and bigger, and [it's] replacing Unix. Then, decide which Linux [distribution]. Some people use Ubuntu on their desktop, but that isn't used in data centers for big companies.

SUSE and [Red Hat Enterprise Linux] matter the most, so get skilled in those. Then, get your [Red Hat Certified Engineer] because it is the most demanded [certification]. OpenStack is too complicated.

Hopefully this [provides] a 10-year [career] plan.

What other certifications are important?

van Vugt: [Linux Professional Institute] is a nice starter; it provides the basics. Then you can get SUSE [or Red Hat] certified and become an administrator. SUSE isn't as sought after as Red Hat certifications.

The Linux foundation started a new [certification] that is the equivalent to LPI, but it's too new and hasn't proved itself yet.

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