Linux
Career Guide

Second Edition

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Welcome to the Exciting World of Linux

Phones, cars, even space ships. Just about everywhere you look, you'll find Linux enabling organizations to drive digital transformation and capitalize on new opportunities in the marketplace.

Because it is found across technology platforms (mobile, social, networking, cloud computing, and Big Data), the jobs requiring Linux knowledge are abundant. According to the 2017 Open Source Jobs Report, 65% of hiring managers are looking for Linux professionals. Studies show that half of all hiring managers look specifically for Linux certifications, and certified employees are rewarded with higher pay increases and bonuses than their noncertified colleagues.[1]

But certification isn't the only route to a successful Linux career. With Linux at the foundation of so much technology, even a little Linux knowledge can make you more valuable to employers.

> **"We need to have more people with Linux skills, because the writing is on the wall. Up to this point it was optional, but for people entering the field today it's not optional. It's just part of the base repertoire of skills that you need."**
>
> **Nick Goldwater, Cisco Engineer**

Increasingly, businesses are favoring application-level and programming-level skills over traditional networking skills. As one Cisco engineer recently told us, "We need to have more people with Linux skills, because the writing is on the wall. Up to this point it was optional, but for people entering the field today it's not optional. It's just part of the base repertoire of skills that you need. You don't have to be an expert. But you do need to be able to navigate and understand what you're doing enough to do your job." Not everyone is ready to make this transition, but those who are will have a significant advantage over those who lack open-source skills.

Fortunately, it's easier than ever to learn Linux. With NDG's online courses, you don't even need to know how to set up a Linux box. Our courses include a live Linux environment right alongside course materials, so you can practice commands as you go along and learn by doing. It's the easiest and most effective way to learn Linux, and it's free to get started.

Whether you're a newbie or a seasoned IT professional, learning Linux gives you a life-changing skill upgrade that can help you build a rewarding career in a rapidly growing field. Explore this guide to learn about the many career paths and opportunities available for Linux-trained professionals.

[1] 2017 Open Source Jobs Report, CompTIA HR Perceptions of IT Training and Certification Study.

System Administrator

Do you like problem solving or have a knack for troubleshooting complex issues? You may want to consider a career as a System Administrator. With the ever-increasing volume of Linux devices and servers, "sysadmins" are in high demand and command competitive wages.

Linux System Administrators are responsible for the day-to-day maintenance and operation of Linux systems and support of their users. Employers typically look for a bachelor's degree in addition to certifications such as Linux Professional Institute's LPIC-1: Certified Linux Administrator and CompTIA Linux+. Prospective employees will also benefit from experience with virtualization, logging, user support, and hardware maintenance.

Salary

System Administrator
Salary Range: $52,000 to $99,000

52K	99K

Average US Salary: $71,144

Worldwide Job Openings
USA   47,528
China   22,357
India   2,919
UK   11,739
Brazil   3,969

All salaries are in USD
Source: Payscale, Indeed.com

Salary

System Engineer
Salary Range: $86,000 to $104,000

86K	104K

Average US Salary: $103,312

Worldwide Job Openings
USA	162,246
China	165,031
India	17,225
UK	38,059
France	18,891

All salaries are in USD
Source: Payscale, Indeed.com

System Engineer

Are you a natural problem solver with an interest in scripting, fixing major issues, and designing and deploying new systems? Then you may want to set your sights on a career as a Linux System Engineer. As more and more businesses adopt open-source technologies, demand for professionals who can design and deploy these systems continues to grow.

Linux Systems Engineers frequently come up out of the ranks of System Administrators. They typically have mid-level career experience in installing, configuring, testing and maintaining systems and infrastructure, along with the ability to write custom scripts to improve efficiency and automate common tasks. Employers typically look for a bachelor's degree, several years of related experience, expert knowledge of Linux, and administrative scripting experience (Perl, Python, shell, etc.).

System Architect

Are you a visionary leader who enjoys working at the forefront of technology transformation? As a Linux Systems Architect, you'll work closely with multiple stakeholders across an organization to understand their business requirements—and then research, plan and architect the systems needed to meet their needs, now and in the future.

As business systems continue to grow in both size and complexity, so does demand for trained professionals who are capable of addressing the architectural challenges they face. Because of the complexity of the role, a Linux Systems Architect typically is a senior engineer with substantial knowledge of hardware, software and business systems. Employers typically look for at least a bachelor's degree in information systems or a related field, as well as mastery of the concepts and theory behind high-performance computing, Linux systems administration, platform management, and other related disciplines.

Salary

System Architect

Salary Range: $87,000 to $153,000

87K	153K

Average US Salary: $112,743

Worldwide Job Openings

USA	34,034
China	6,395
India	4,908
UK	5,197
Germany	3.906

All salaries are in USD
Source: Payscale, Indeed.com

Salary

Support Technician

Salary Range: $35,000 to $68,000

35K	68K

Average US Salary: $49,643

Worldwide Job Openings

USA	120,809
China	45,628
UK	10,438
Mexico	2,828
Russia	1,404

Support Engineer

Salary Range: $51,000 to $105,000

51K	105K

Average US Salary: $75.253

| USA | 132,918 |
China	98,448
India	12,179
UK	32,825
France	11,239

All salaries are in USD
Source: Payscale, Indeed.com

Enjoy working directly with the public or with other end users of technology? Support Technicians and Engineers are responsible for the day-to-day support and assistance of IT products. This may include support over the phone, in person, or via email. Support can be an important entry point into other career openings, and you can gain valuable experience from interacting with customers.

Support roles require solid customer service skills, the ability to quickly diagnose issues, an aptitude for creating clear documentation, and the ability to work as part of a larger team. While support jobs typically have lower requirements than other positions, having Linux certifications and qualifications can help distinguish you from other candidates and increase your compensation.
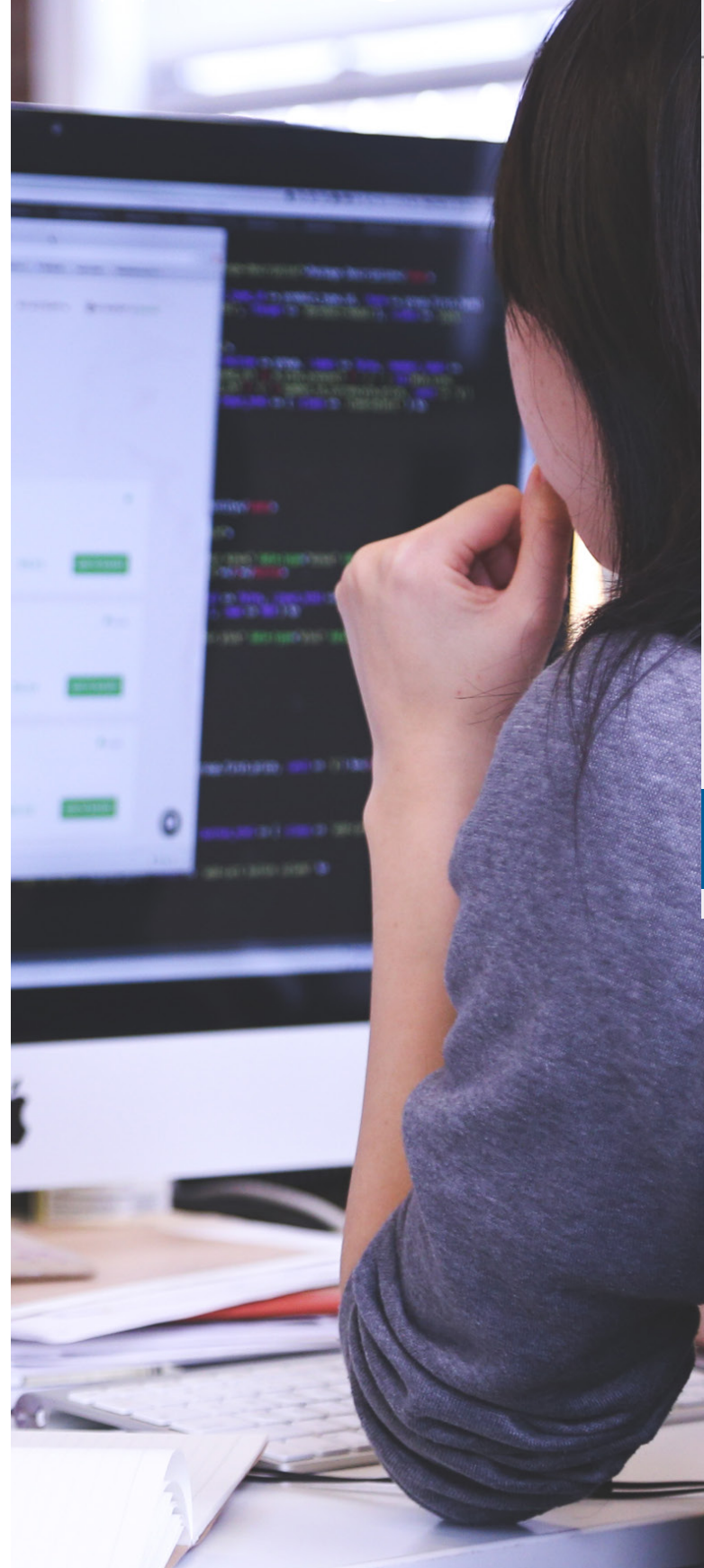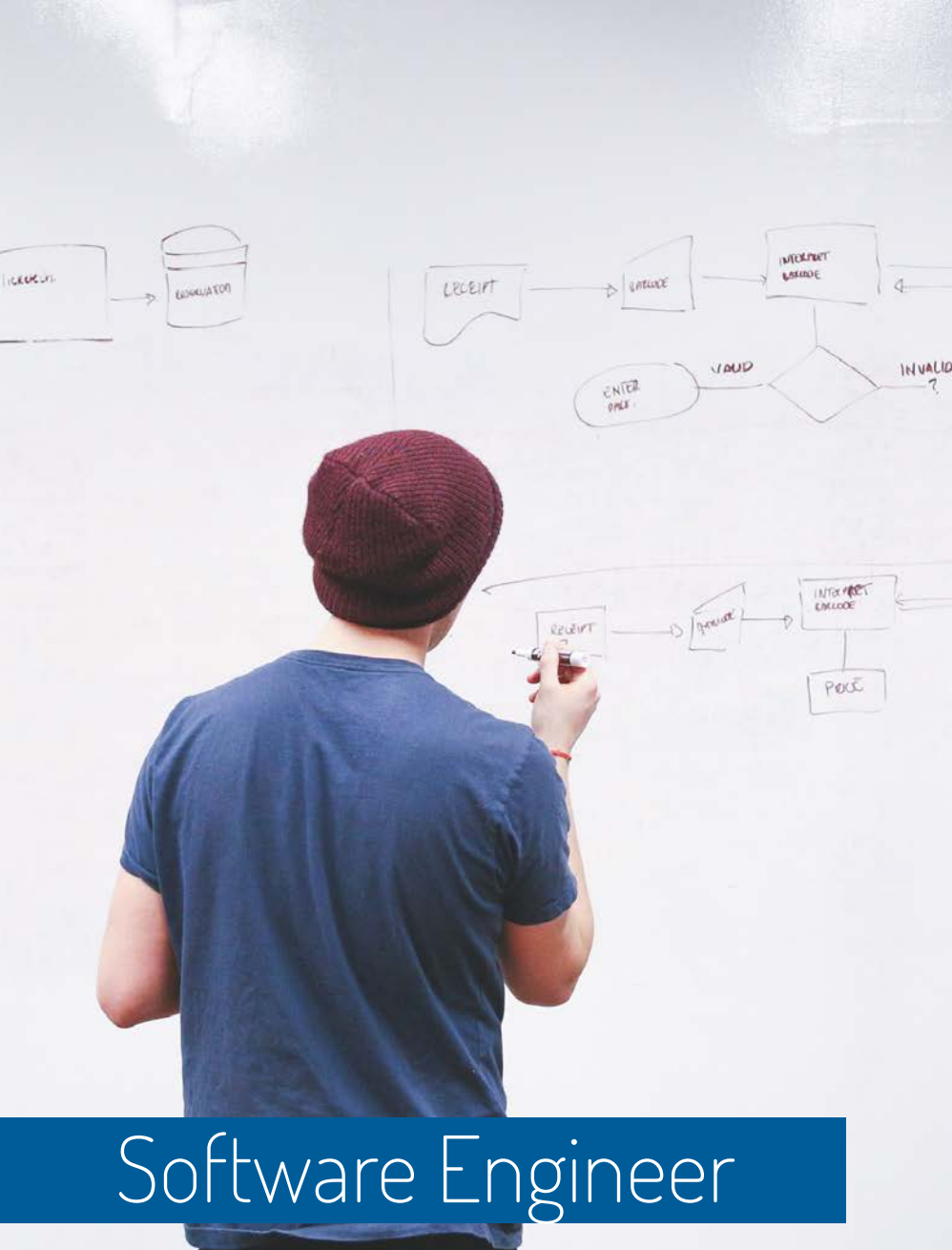
Salary

Software Engineer

Salary Range: $75,000 to $150,000

75K	150K

Average US Salary: $109,087

Worldwide Job Openings

USA	208,203
China	238,139
India	56,775
UK	23,553
France	12,959

Software Developer

Salary Range: $58,000 to $113,000

58K	113K

Average US Salary: $81,994

USA	89,408
China	61,292
India	34,715
UK	17,965
Australia	4,172

All salaries are in USD
Source: Payscale, Indeed.com

Software Engineer
Software Developer

Are you looking for a stable career with growth potential? Software Engineers and Developers are highly sought after and are in ever-increasing demand. Nearly every business and industry uses software for a core part of their operations, and this trend will only become more pronounced as new technologies become available. Software Developers can either work as a contractor or as a permanent part of a larger team.

Those looking for jobs in this sector typically require a bachelor's degree in Computer Science or Mathematics, skills in various computer languages, the ability to document, and familiarity with the software development/release process. Prospective employees may also wish to have an understanding of the industry they desire to work in, as well as other relevant technical training. Foundational Linux skills can be an important first step in a successful career.

Network Administrator

Network Engineer

Do you take pride in your ability to manage every detail to make complex systems bulletproof? As the name implies, Network Administrators and Engineers are responsible for the day-to-day administration of computer networks. These positions are usually more narrowly focused than most IT jobs, but typically involve working as part of a larger team.

A large percentage of the network gear that makes the Internet and intranets work correctly is running some form of Linux. Having the ability to dig deeply into these systems and knowing your way around a command line is crucial. Most Network Administrators and Engineers have multiple certifications such as the LPIC-1: Certified Linux Administrator and Cisco Certified Network Associate (CCNA). Knowing these core technologies is essential.

Salary

Network Administrator

Salary Range: $50,000 to $112,000

50K	112K

Average US Salary: $69.011

Worldwide Job Openings

USA	17,245
China	12,548
India	1,148
UK	2,147
Russia	2,036

Network Engineer

Salary Range: $54,000 to $109,000

54K	109K

Average US Salary: $78,480

USA	50,177
China	87,365
India	5,752
UK	10,317
France	10,956

All salaries are in USD
Source: Payscale, Indeed.com

Salary

IT Manager

Salary Range: $75,000 to $141,000

75K	141K

Average US Salary: $107,147

Worldwide Job Openings

USA	313,972
China	4,698
India	15,270
UK	93,933
Australia	15,421

IT Technician

Salary Range: $27,000 to $54,000

27K	54K

Average US Salary: $36.924

USA	73,238
UK	9,154
Germany	5,335
France	6 217
Mexico	1,871

All salaries are in USD
Source: Payscale, Indeed.com
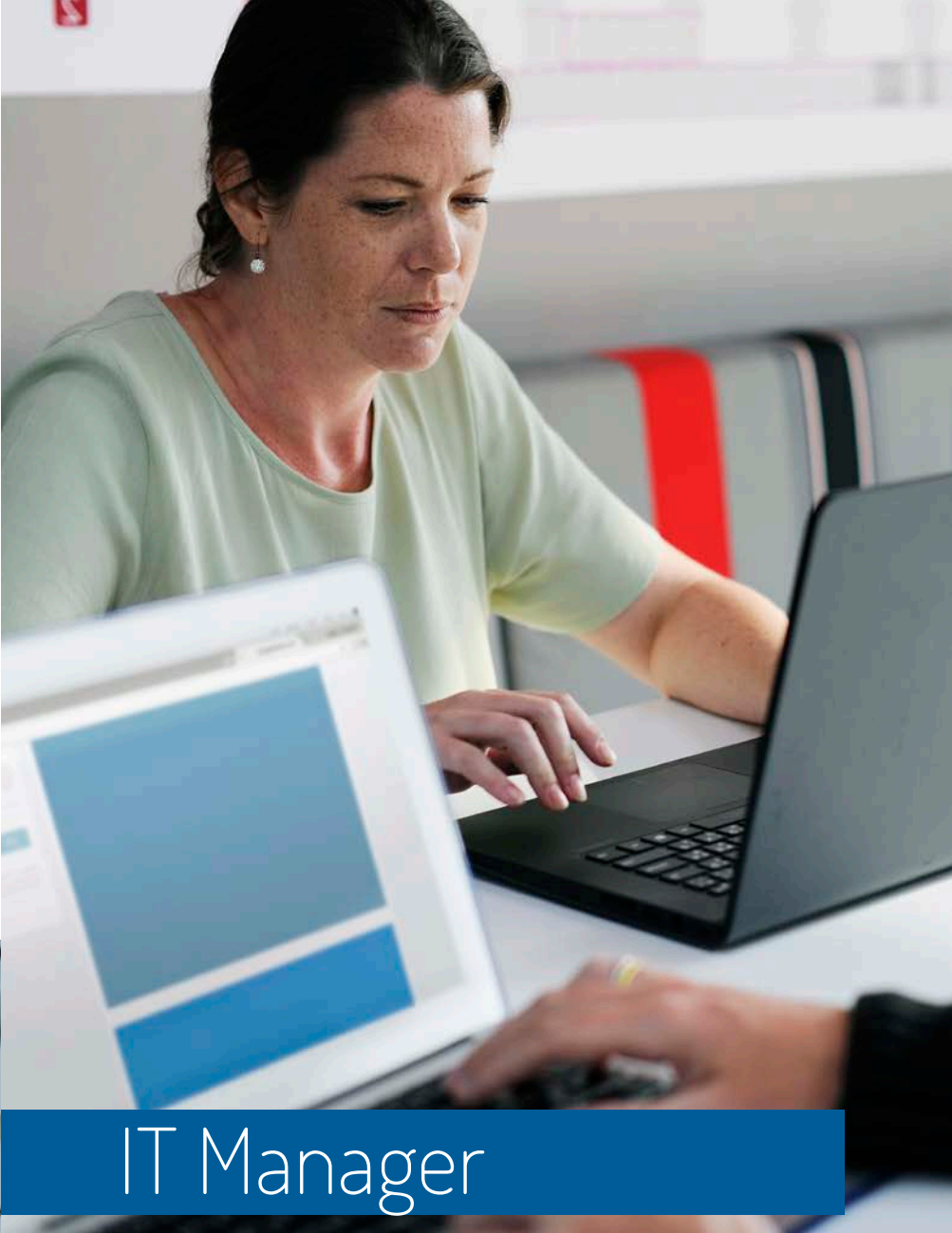
IT Manager
IT Technician

Are you a person who works best in teams and has exceptional organizational skills? If so, you may be a good fit as an IT Manager or IT Technician. IT Managers and Technicians are responsible for maintaining and planning an organization's technology infrastructure, as well as advising on and evaluating projects. Both jobs blend traditional business management skills with those of an IT professional to meet modern technology challenges in today's environment.

Organizations looking to hire for these positions typically look for their employees to provide input on hiring for other technical staff, the ability to delegate projects and responsibilities, meet goals, and have leadership skills. Certifications such as the Cisco Certified Internetwork Expert (CCIE) and CompTIA A+ can help set you apart from other candidates when applying for these positions.

Cloud Engineer
Cloud Developer

Are you a versatile jack-of-all-trades who enjoys working on the cutting edge of technology? Cloud Engineers and Developers are expected to have backgrounds in a wide range of technologies and be able to adapt to one of the newest and most rapidly evolving fields in the industry. Talented individuals with these abilities are in high demand and will continue to be so for some time.

Cloud Engineers and Developers are responsible for the various aspects of both migrating existing services over to the cloud and creating brand new technologies using the cloud. This could include managing teams and projects, working as part of a large team, developing standards, and even innovating entirely new ideas. Most importantly, these jobs require both knowledge of existing cloud tools and a willingness to quickly adapt to new tools as they become available. Since Linux powers a large percentage of both the servers and user devices of this technology, a strong Linux foundation could be essential to success.

Salary

Cloud Engineer/Developer
Salary Range: $51,000 to $133,000

51K	133K

Average US Salary: $86,842

Worldwide Job Openings
USA	26,003
China	18,338
India	4,766
UK	4,311
Germany	1,965

All salaries are in USD
Source: Payscale, Indeed.com

Salary

DevOps Engineer

Salary Range: $93,000 to $136,000

93K	136K

Average US Salary: $113,256

Worldwide Job Openings

USA	10,259
China	19,437
India	1,421
UK	3,075
Germany	4,470

All salaries are in USD
Source: Payscale, Indeed.com

Do you excel in a fast-paced environment where seconds matter? As anyone that deals with technology can tell you, things invariably go wrong, and DevOps is usually on the front lines when it happens. Even when there isn't some form of emergency, DevOps is about working with products through their entire lifecycle and maintaining constant vigilance to spot issues before they happen.

While a DevOps Engineer is obviously going to have job requirements specific to the product supported, most individuals in the field are cross-disciplinary and have a large range of skills. Typical responsibilities include building, deploying, and administering software packages in addition to monitoring their performance and stability. Linux knowledge will set you apart, as many DevOps tools and their databases run on Linux and are integrated with tools throughout the enterprise.

Web Developer

Looking for a position that allows you to manage a project from start to finish? Web Developers are responsible for building and maintaining websites, as well as managing their technical operation. This can involve taking a concept through the design process all the way to a finished product, or working as part of a larger team to finish a goal.

Most positions require proficiency in web markup such as HTML and CSS, as well as experience with servers hosting web content. Strong candidates for these positions usually have a bachelor's degree in computer science or a related field, and a solid understanding of various web technologies and practices. Since the majority of websites worldwide are hosted on servers running some form of Linux, skills in this area can be quite valuable to a prospective employer.

Salary

Web Developer

Salary Range: $56,000 to $112,000

56K	112K

Average US Salary: $87,661

Worldwide Job Openings

USA	43,999
China	30,242
India	5,630
UK	4,981
France	8,390

All salaries are in USD
Source: Payscale, Indeed.com

Have you ever thought about changing careers and breaking into the IT field? Or, maybe you're already in IT and dream about leaving the helpdesk behind for a more challenging and rewarding career as a system administrator?

Every year, millions of people do just that. But the big question is: How? How do you get potential employers to overlook the fact that you don't have the right degree or experience to give you a job managing or troubleshooting critical production systems?

This is precisely the challenge Adam Anderson faced a few years ago. After spending several years traveling the world as an English and Drama teacher, Adam decided teach himself Linux and begin a new career as an IT professional.

"I had taught for nine years," he recalls. "I had a really good run at it, with a lot of great experiences, but I felt like I was hitting a ceiling both in my professional skills development and also in terms of earning money. I didn't feel like there was much else I could do that was new and different and a good challenge for me."

Then one day while listening to the Linux Action Show podcast, Adam heard the story from a caller who had earned his Linux+ certification after nine months of study and immediately got a job in IT. A light bulb went off for Adam: "I said, 'Hey, that's very doable and doesn't require going back to university and spending a whole bunch more money.' At that point, I made the commitment to myself to make the transition."

So, Adam bought a couple of Linux textbooks, started taking online courses, and created an open-source blog (Kernel Mastery) to document his journey and further his learning. He quickly realized that certification would be important to successfully making the career change.

"There's obviously a wide variety of certifications, so you have to do your research," Adam explains. "Some are more valuable than others and will give you a better return on your investment over time. I looked at a lot of the surveys and market data showing the compensation for the various IT certifications, and it looked like Linux+ and LPIC-1 were among the best in that category, if not the best. So I think these are great."

After less than a year of studying Linux on his own, Adam got the Linux Essentials certification from CompTIA, followed by the Linux+ certification. One week later he got a job as a Support Technician at Silicon Mechanics. A systems integrator and custom design manufacturer, the company helps customers deploy open technologies, from building out HPC or storage clusters to the latest in virtualization and containerized services.

Today, Adam is a Senior Support Technician supporting everything from low-level hardware issues to firmware questions, remote/out-of-band management issues, networking, file systems, RAID, cluster management, and HPC. Adam is thankful for having an exciting and rewarding career as a Linux professional: "I was able to get a job knowing Linux at a basic or intermediate level after studying it intensely for one year. Plus, it's lucrative, it's fun and it's always changing."

Take Your Career to the Next Level

Start learning Linux today with NDG's self-paced, online courses

There's never been a better time to learn Linux. Everywhere you look—from Apple to Zipcar—employers are looking for professionals with Linux skills to help them succeed in an open-source world. Jobs are plentiful. Salaries continue to outpace the market. And the careers are highly rewarding, giving you the opportunity to make a real difference.

Learning Linux gives you a powerful advantage in a competitive job market. Even basic Linux knowledge can help you climb to the top of the resume pile—or the career ladder. And the more you learn, the more valuable you become.

NDG Online is the easiest and most effective way to learn Linux.
A Linux virtual machine is embedded right alongside the course material. So you can learn on a real system, and start applying your newfound skills right away. Simply launch a module in your web browser and start learning. It's that easy.

> "There are a lot of Linux resources online, but NDG's courses are by far the most comprehensive. They gave me the hands-on experience I needed to pass the Linux+ exam."
>
> Franklin Pierre, Richland College Student

NDG Linux Unhatched

Learn the basics for free! NDG eases you into acquiring Linux knowledge with a free online learning module that teaches basic installation and configuration of Linux software and introduces the Linux command line.

NDG Linux Essentials

This course teaches the fundamentals of the Linux operating system, command line, and open-source concepts. With no previous knowledge required, this free online course gives you valuable skills that will help you compete for a broad range of Linux-based jobs.

NDG Linux I and NDG Linux II

These courses enable you to develop foundational Linux system administration skills and prepare for the Linux Professional Institute LPIC-1 or CompTIA Linux+ certifications, so that you can obtain a rewarding Linux technology career.

Get started today at: netdevgroup.com/linux-careers

Become a Linux-Certified Professional

More money, more respect, and more job security. Research shows that you'll earn a lot more than a bigger paycheck with a Linux certification. You'll enjoy a more rewarding career working at the forefront of technology.

$92,460
Avg Salary of LPIC-1 Certified Linux Administrators

92%
Employers Say IT-Certified Employees Receive Higher Starting Salaries

20%
Increase in Bonus Pay for LPIC-1 Certified Linux Administrators

GET THE CERTIFICATIONS THAT RECRUITERS ARE LOOKING FOR
Our Linux courses align to the following certifications.

LPI Linux Essentials
The Linux Essentials certification is a great way to show employers that you have the foundational skills needed to get your next job or promotion. Getting certified demonstrates that you are familiar with the most popular open-source applications, understand the major components of the Linux operating system, and possess the command-line skills to perform common tasks like managing files, performing backups and writing basic scripts. Linux Essentials is a valuable credential for any IT professional. It's also an ideal stepping stone to the more advanced LPIC-1 certification.

Learn more: www.lpi.org/our-certifications/linux-essentials-overview

LPIC-1 Linux Administrator
The LPIC-1 is the world's largest and most recognized Linux certification. An essential qualification for many system administrator jobs, the LPIC-1 validates that you have the command-line skills to customize the shell environment, write and run scripts, and manage databases and systems. You'll also need to understand the architecture of Linux systems, how to perform routine maintenance tasks, and how to create network connections and secure Linux systems. By passing the LPIC-1 certification exam, you'll gain entry into a special class of Linux professionals who enjoy both high salaries and rewarding careers.

Learn more: www.lpi.org/our-certifications/lpic-1-overview

CompTIA Linux+ Powered by LPI
CompTIA partnered with LPI to create a powerful two-in-one Linux credential. The Linux+ certification uses the same two exams as the LPIC-1 certification. By passing the exams, you're able to earn a Linux+ credential and then submit a request that CompTIA share your results with LPI, so that you can receive a LPIC-1 certification as well. These two certifications validate that you have foundational skills and knowledge in Linux system administration, which can give you a significant advantage on the job market.

Learn more: certification.comptia.org/certifications/linux

Learn how NDG courses can help you get certified: www.netdevgroup.com/certification

Certification Magazine, CompTIA, Foote Partners

We develop training solutions that enable learners worldwide to develop IT skills and prepare for rewarding careers. Our online learning platform makes hands-on, real-world IT training accessible to all, and enables people to contribute better to their organizations, their families and their communities. We're proud to work with a network of partners that includes the Cisco Networking Academy, Linux Professional Institute, and learning organizations around the world.

netdevgroup.com

LPI is the global certification standard and career support organization for open source professionals. With more than 600,000 exams delivered, it's the world's first and largest vendor-neutral Linux and open source certification body. LPI has certified professionals in over 180 countries, delivers exams in 9 languages, and has hundreds of training partners.

Our purpose is to enable economic and creative opportunities for everybody by making open source knowledge and skills certification universally accessible.

lpi.org