

**My Name is Aditya Gopakumar
I am a System Administrator**

**Why did I become a system administrator,
you ask?**

Let me tell you a story,



We live in a world where you either own an organization or you're part of an organization. In whatever big or small way. If you're not, well, you're probably Robinson Crusoe. And organizations of all sizes, shapes, and sectors have computer networks. Businesses must build and maintain a strong, secure computer infrastructure for digital communications. Getting all the hardware and software to operate together properly is a difficult task though. That's why companies need skilled administrators with the experience and knowledge to manage their complex computer options.



Systems administrators can be called IT directors who ensure enterprise networks are installed and updated right. Getting

desktop and mobile computing devices synced to share workplace data electronically is their mission. This article provides a comprehensive overview of what these professionals do day-to-day.

My job is to be responsible for the configuration, upkeep and reliable operation of a company's network and computer systems. In addition to identifying and fixing any network issues, I also have to make updates to the equipment and software to ensure they are current. They may work in office settings for small or large companies or in government organizations. Some of the specific responsibilities that my job may have include the following:

- Providing technical support for software and hardware issues that users encounter
- Managing the configuration and operation of computer operating systems

- Monitoring the system daily and responding immediately in the event of security or usability concerns
- Upgrading systems and processes as necessary for enhanced functionality and security issue resolution
- Installing and testing computer-related equipment and reviewing application logs
- Responding to and resolving help desk requests and creating and verifying backups of data

But what do I do most of the time?



We, systems administrators are responsible for the daily management, upkeep, and configuration of business computer systems. It isn't an easy job. We're busy installing desktops, laptops, intranets, servers, cybersecurity software, and a lot lot more. We develop local-area networks (LANs)

and wide-area networks (WANs) to connect all the computers in the company groups digitally.



We hook up routers, modems, and firewalls for safe, high-speed internet access. And if that's not easy enough, we also format the network

interface card (NIC) to send and receive data appropriately.

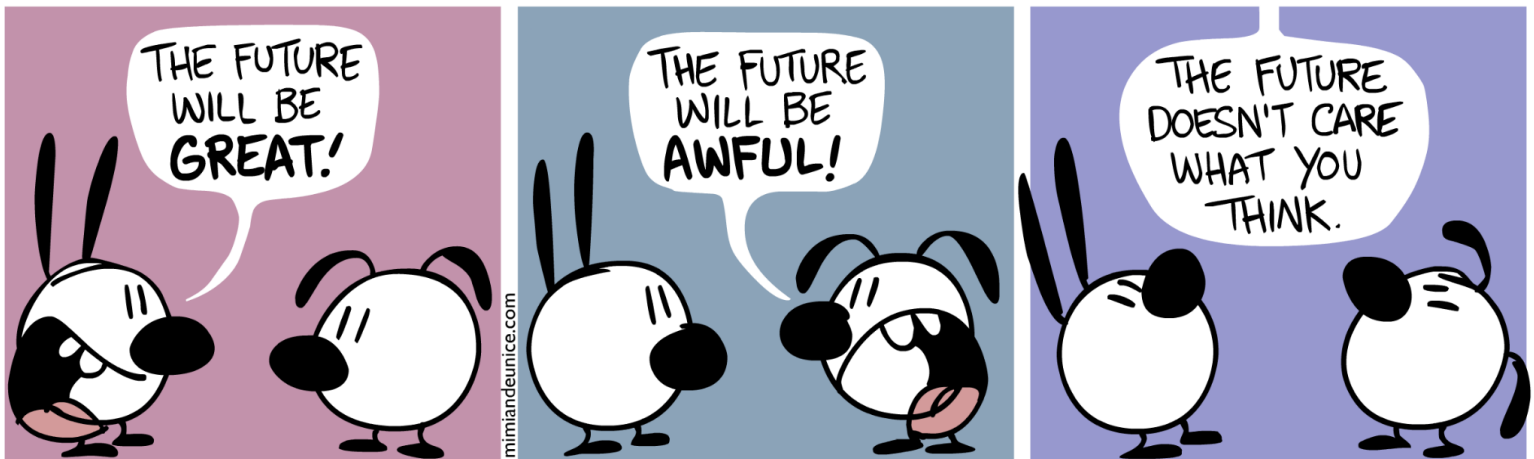
We also tweak the cables to repair transmission media when signals stop. We have the IT know-how to troubleshoot any glitches that interrupt system performance. Systems administrators handle all of the critical components in business IT infrastructure.

We are also responsible for forming recommendations on their organization's IT policies. We love to advise the senior managers on the best practices to optimize their computer networks, because let's face it, most of them only know how to work on a Powerpoint presentation. We are the ones who suggest new software and the required upgrades to keep infrastructure current and running at their best. We frequently have the purchasing power to buy IT equipment on a set budget. A lot of us play a leadership role in supervising lower-level IT technicians and staff. We also oversee the work of computer support specialists and systems analysts.

We also spend a lot of time training other employees on how to access the network and connect devices too. And some of us are also typically IT generalists and don't necessarily specialize in one concentration. They wear many hats to

ensure all computer-related activities run smoothly and efficiently.

Does a System Administrator have a future?



Absolutely yes! System administration roles are diversifying and we are growing as humans. We have various roles such as system engineers, application engineers, devops engineer, devsecops engineer, Virtualization engineer , release engineer, cloud engineer etc. Because of scale in cloud

computing and additional layers of Virtualization, the infrastructure engineering is managed as a code by using automation tools such as Cfengine and Puppet. The rise of ubiquitous computing and analytics have given tremendous elasticity and stress to the back-end infrastructure by deploying distributed computing frameworks such as Hadoop, Splunk, Cloudera etc and load balancing technologies.

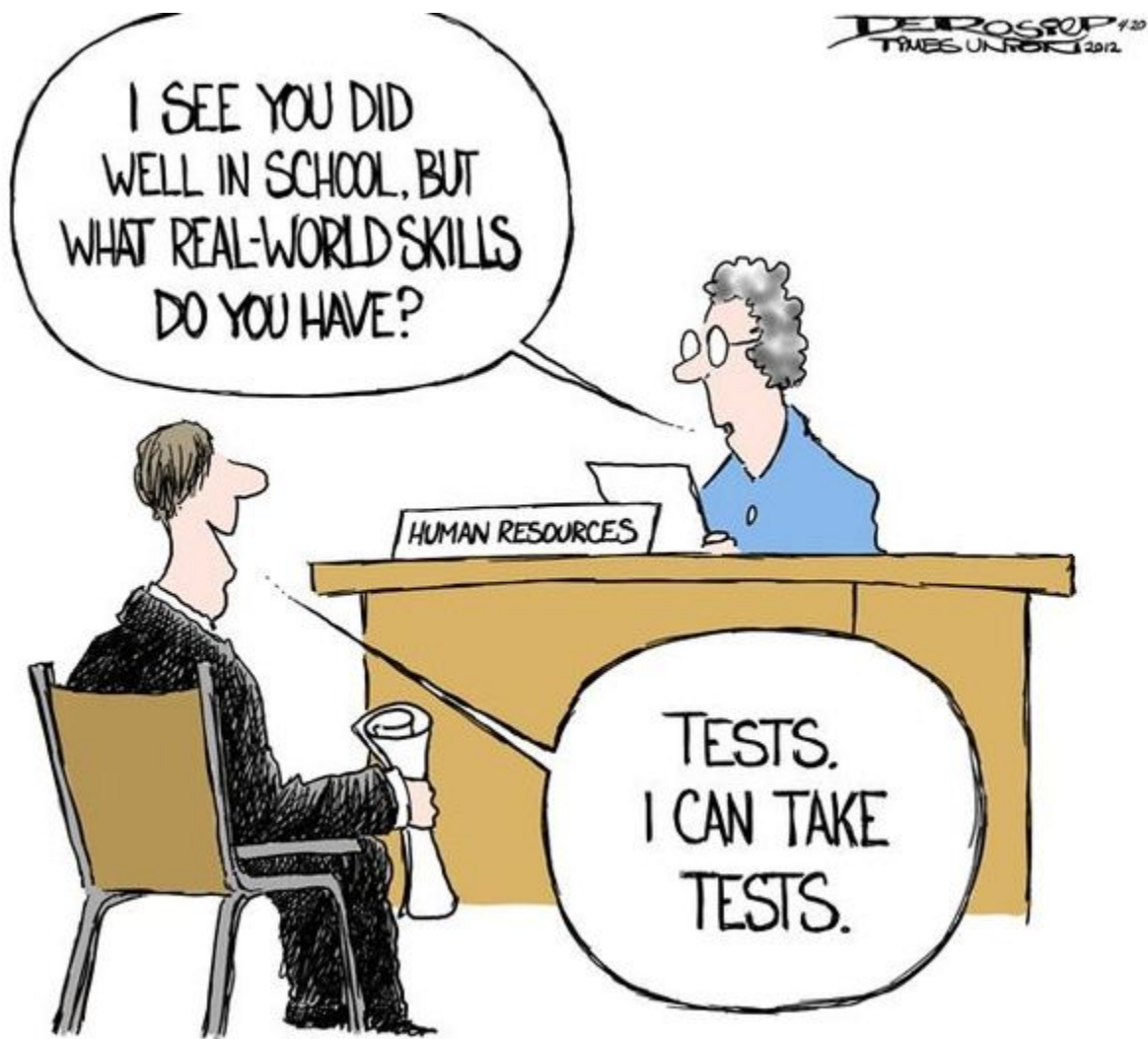
One of the biggest technologies is the cloud. The emergence of which has shifted the traditional role of system admin to the cloud engineer but infrastructure design and basic system services such as mail server, DNS, DHCP remain intact. A lot of us are also now moving to the cybersecurity role which is growing exponentially and can one day be very important for the future and safety of all of us. If the cyber security is weak, the entire company can fall and this can only

be stopped by us, System administrators. And with the growing number of users, companies and startups in this world, we need more people who are willing to sit in front of a computer and do what is right for the world and keep us safe.

We are the silent guardians, the watchful protectors.

To sum everything up, I strongly believe that the system administration role is evolving , diversifying and skewing towards system programming , cloud engineering , performance engineering and infrastructure engineering. And as these roles evolve, so do we as a human, and one day all this evolution can take humanity into a new galaxy.

Which Skills Must Aspiring Systems Administrators Possess?



If you want to be succeeding in systems administration, it requires both hard IT and soft skills, so you need to put in a

lot more effort into yourself. Technical skills, as you might guess, are foremost to ensure computer networks are arranged precisely. We systems administrators are innovative problem-solvers who think outside the box to fix issues creatively. We need critical thinking skills to quickly diagnose IT troubles and develop action plans.

Analytical skills help systems administrators run network tests and identify inefficiencies and security vulnerabilities. Leadership skills and the ability to communicate are needed to make sure your ideas are being communicated and various policies are taken care of to enforce protocols for IT department staff. As mentioned earlier regarding your speaking skills, they are probably the most important and critical in order to be able to describe how computer networks work to managers without technical jargon. As

Einstein once said, you don't truly understand a concept unless you're able to explain it to a 6 year old.

We are also savvy with multitasking to make certain all network components work at once. If one system should fail, it can cause a huge problem to the company and our customers. All in all, we should also be patient, ambitious, determined, and enthusiastic about computers.

If all the skills mentioned above are part of who you are, then you shouldn't think twice before becoming a system administrator, after you learn the technical aspects required to become one.



What Type of Education Is Needed to Become a Systems Administrator?

I Love Education!



**But Without
Examination!!**

Becoming a system administrator involves going to college and taking information technology courses. Most businesses and big companies only hire systems administrators with at

least a bachelor's degree, so you do need to put in a lot of effort.

Some employers may consider administrators with a two-year, 60-credit associate degree. A B-tech or an M-tech in information technology, computer science, and management information systems can help you and goes a long way.

A lot of universities and colleges offer more specialized courses, such as database administration and network administration. A lot of my co-workers have a bachelor's degree in computer hardware or software engineering, so that can be a good place for you to start. Bigger companies may require an information systems master's degree for upper-level admin jobs. Along with all the courses and degrees you get, experience can also go a long way. Unless

you know how to apply what you've learnt into the real world and bring value to the companies, they won't have any reason to hire you and give you a job. So internships and work exposure where you do the work you love and to meet and network people is very important. Who knows, the people you meet at these internships could be your future employers or your business partner 5 years down the line. Or they could help you out in the future when you're stuck at a problem and cannot come up with an out of the box solution to help your employers. As they say, it's not *what* you know, but *who* you know.

So to sum it up, education, exposure and networking can go a long way in your career as a systems administrator.

**How much does a
system admin make?**



The bottom 10 percent of systems administrators earn a median income of \$50,990 / 38,18,070 rupees.

The top 10 percent of systems administrators bring home median earnings of \$130,720 / 97,88,156 rupees.

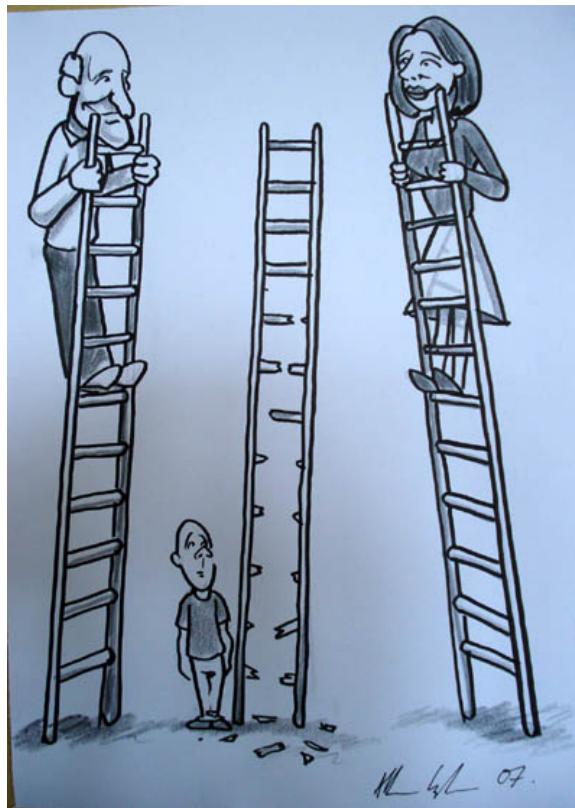
Most fall into the salary range of \$64,010 to \$104,970.

Salary potential will depend a lot on your education level, years of experience, location, and industry you're working for.

For instance, systems administrators at universities make \$77,740 / 58,21,077 rupees on average.

Systems administrators working for the federal executive branch reap mean profits of \$102,990. Oil and gas extraction companies pay the highest median wage of \$114,570 / 85,78,864 rupees.

Do Systems Administrators Have Upward Mobility?



Most of the time, the larger organizations offer a lot of us, system administrators the opportunity to advance with upper-level promotions. It's common as we need to learn how the company works. Experienced administrators often become network architects to engineer data communication systems from the ground up.

A few of us excel as information systems managers to determine the whole company's technology needs, which is very important.

Information security managers gain higher responsibilities defending confidential info from hackers and protect the information and data of the companies.

Computer research scientists design studies to identify new, effective approaches to information technology. Computer hardware engineers put together the circuit boards and processors to build functioning desktop or mobile devices.

System administrators can eventually become chief technology officers and chief information officers which are few of the most important roles anyone can get in a company.

But it's not easy. To get into these coveted C-Suite roles, people need at least five to 10 years of relevant, continuous job experience.

But don't be afraid to go forward and pursue a dream of becoming a system administrator. We are in demand and well-compensated with good pay plus benefits and good job security.

CNN Money gave systems administrators a high quality of life rating with a "B" for personal satisfaction too. Systems administration jobs are ideal for tech-savvy students who know ethernets from intranets and other network parts.

Pursuing a systems administrator career gives individuals a meaningful opportunity to solve real-world computing problems on business networks. And the more experience someone accumulates, the more their value goes up in the market.

How to become a system administrator?



1. Pursue an education.

Perform a search in your geographic area and determine the minimum education required to qualify for a position as a system administrator.

Usually, employers prefer a minimum of a bachelor's degree in computer science, information technology or another closely related field. Obtain the minimum level of education required for the role.

2. Obtain experience.

Most employers prefer to see at least two or more years of experience in system administration. If you lack any experience, you may need to start out in a role as a help desk clerk or an IT specialist before advancing into the role of a system administrator.

To obtain some experience, seek internship opportunities while completing your bachelor's or after graduation. This will provide you with the opportunity to acquire practical experience in a work environment.

3. Acquire certifications.

Certifications verify your skills for employers and many employers require at least an A+ certification to qualify for roles. Consider obtaining, at a minimum, the three core certifications from CompTIA: A+, Network+ and Security+. In addition to verifying your competencies in those areas, demonstrate to employers your desire to grow and advance your career.

4. Update your resume.

Arguably the most or the second most important thing to do from this list. Once you have the required education, experience and certifications, update your resume so the potential employers know what you know.

Include your highest level of education, the certifications you have obtained throughout your career and your relevant work history.

5. Apply for jobs.

Search for openings in your area for system administrator positions. Identify the roles for which you are most qualified based on your experience and education and apply using your updated resume and a cover letter that you have customized for each position.



Which Organizations and Businesses Hire Systems Administrators?



System administrators can be hired by virtually any entity that has a large IT infrastructure. Businesses across industries

need dedicated IT administrators to manage networking systems. In May 2018, the U.S. Department of Labor reported that 18 percent of the 383,900 systems administrators work for computer systems design firms.

10% were employed in educational services, including colleges and K-12 school districts.

10% were working in financial institutions like banks, investment brokerages, and insurance carriers.

Systems administrators are found at hospitals, government agencies, corporations, telecommunications companies, manufacturers, and more. Which is to say, they are everywhere. It's not a question who's looking for a system administrator. It's a question if they have a job open.

The majority of systems administrators work full-time for 40 to 60 hours per week. Some are on call outside normal business hours to keep networks operational 24/7.

An example of a job description of a System Administrator

Ark Health Systems is seeking an experienced full-time system administrator to join it's IT department. This person will participate in technical research and development to enable continuing innovation in our complex infrastructure.

They will be responsible for installing new or rebuilding existing servers, configuring hardware, directories and storage in accordance with our requirements. They will also be expected to develop and maintain installation and configuration procedures. They will further be expected to research and recommend innovative approaches for system administration tasks.

Lastly, this position is responsible for responding to IT tickets and providing support to all employees in a timely manner. A bachelor's degree in information technology or a similar field is required, along with experience with office hardware, software and end-user assistance.

TO SUM UP THE JOB ROLES OF A SYSTEM ADMINISTRATOR

- Analyzing system logs and identifying potential issues with the systems.
- Applying operating system updates, patches, and configuration changes.
 - Installing and configuring new hardware and software.
- Updating user account information, resetting passwords, etc.
 - Answering technical queries and assisting users.
- Responsibility for security and configuring the system.
 - Troubleshooting any reported problems.
 - System performance tuning.
- Ensuring that the network infrastructure is up and running.
 - Configuring, adding, and deleting file systems.
- Ensuring parity between dev, test and production environments.
 - Training users
 - Plan and manage the machine room environment

So, that's the job and roles of a system administrator. If you're interested in the job, please do get in touch with me and my company will gladly employ you as we need brilliant young talent.

I hope I've made you interested in taking the job as a system administrator or what we do on a daily basis.



Thank you

Aditya Gopakumar

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