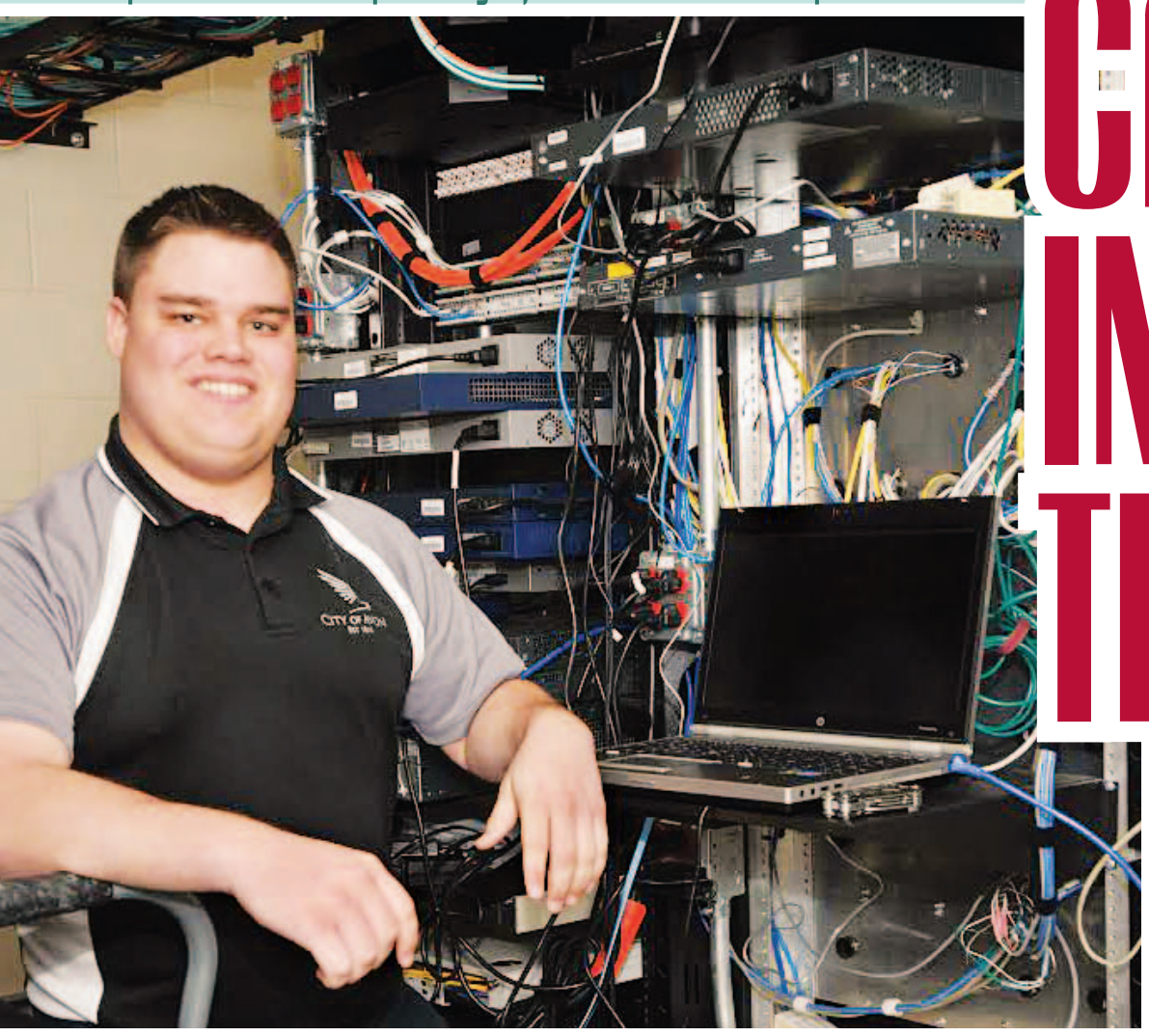
Career Profile

A weekly series devoted to providing information on career exploration



CAREERS IN INFORMATION TECHNOLOGY

For the next several weeks, we are focusing on careers in Information Technology.
The products of information technology are a part of our daily lives, whether it's the operating systems on mobile phones, the computer networks that automate everyday financial transactions, or the reams of information sought and found on the Internet.

The type of work

- Maintain and administer computer networks and related computing environments including computer hardware, systems software, applications software, and all configurations.
- Perform data backups and disaster recovery operations.
- Diagnose, troubleshoot, and resolve hardware, software, or other network and system problems, and replace defective components when necessary.
- Plan, coordinate, and implement network security measures to protect data, software, and hardware.
- Configure, monitor, and maintain email applications or virus protection software.
- Operate master consoles to monitor the performance of computer systems and networks, and to coordinate computer network access and use.
- Load computer tapes and disks, and install software and printer paper or forms.
- Design, configure, and test computer hardware, networking software and operating system software.
- Monitor network performance to determine whether adjustments need to be made, and to determine where changes will need to be made in the future.
- Confer with network users about how to solve existing system problems.
- Research new technologies by attending seminars, reading trade articles, or taking classes, and implement or recommend the implementation of new technologies.
- Analyze equipment performance records to determine the need for repair or replacement.

More Facts

it should come as no surprise that careers in the IT field are expected to grow significantly in the next decade - jobs in computer software engineering, for example, are expected to grow by 32% by 2018, according to the Bureau of Labor Statistics.

THE FUTURE OUTLOOK

Employment of network and computer systems administrators is projected to grow 8 percent from 2014 to 2024, about as fast as the average for all occupations. Demand for information technology workers is high and should continue to grow as firms invest in newer, faster technology and mobile networks. In Ohio there were 14,700 individuals employed with a projected increase of 10% over the ten year period of 2012-2022.

EARNINGS POTENTIAL

Annual Salary for 2014

Location	Low	Median	High
United States	$46,220	$75,790	$120,000
Ohio	$45,530	$68,440	$98,440
Cleveland-Elyria-Mentor, OH PMSA	$49,240	$69,410	$97,894

O*Net Online, http://online.onetcenter.org

Pathways to success:

Although some employers require only a postsecondary certificate, most require a bachelor's degree in a field related to computer or information science. There are degree programs that focus on computer network and system administration. However, because administrators work with computer hardware and equipment, a degree in computer engineering or electrical engineering usually is acceptable as well. Programs in these fields usually include classes in computer programming, networking, or systems design.

Because network technologyis continually changing, administrators need to keep up with the latest developments. Many continue to take courses throughout their careers and attend information technology (IT) conferences to keep up with the latest technology. Some businesses require that an administrator get a master's degree.

What Employers look for in individuals:

- Computers and Electronics - circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- Customer and Personal Service - principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- English Language - structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Telecommunications - transmission, broadcasting, switching, control, and operation of telecommunications systems.
- Clerical - administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.
- Administration and Management - business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Engineering and Technology - practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

NETWORK AND COMPUTER SYSTEMS ADMINISTRATORS

Aaron Jenkins
IT Technician, City of Avon, Avon, OH

Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Monitor network to ensure network availability to all system users and may perform necessary maintenance to support network availability. May monitor and test Web site performance to ensure Web sites operate correctly and without interruption. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software.

Q. How did you become interested in your particular field?

A. I became interested in computers and how they work at an early age. I decided to take advantage of the NCT (Network Communications Technology) Lorain County JVS satellite program at Amherst Steel High School where I was exposed to different areas of IT. I specifically took interest in system administration.

Q. How did you get to where you are today? What path did your employment journey take?

A. Being employed with the JVS after high school allowed me to work with great instructors, mentors, and co-workers. My co-workers were always helpful and pushed me out of my comfort zone to learn new skills and technologies. Working for the City of Avon allows me to get my hands in every aspect of IT. I get to plan, implement, and maintain systems for the city. Working for the city adds value to my career as I have a vast amount of responsibilities.

Q. What skills or certifications do you think are needed to be successful in this field?

A. Great problem-solving and communication skills will help with success in the IT field. Any certification(s) will make you proficient in the area you are studying. It also shows the employer that you took the initiative to learn every aspect of the subject. Certifications improve your chances to further your career in IT.

Q. What changes have you seen in the last few years in your industry?

A. There have been a lot of changes in the past few years due to advances in technology. Hardware is becoming more powerful and compact; software is more enhanced and easy to use. IT positions are becoming more specialized so the individual can be proficient in certain areas of the field.

Q. What is the best part of your job?

A. There is a lot I like about my job. The best part is the everyday interaction with co-workers. I make it a priority of mine to talk to my end users and educate them on issues I fix or projects I am working on.

Q. Do you have any words of advice for someone considering a career in your field?

A. With technology advancing so fast, keep learning. Take advantage of every opportunity you get to make yourself better.

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nie The Chronicle Newspaper Internet & Education

Elyria City School District
Ensuring that each child reaches his or her full potential

Sources: Occupational Information Network, O*Net Online, http://online.onetcenter.org.** U.S. Department of Labor, Bureau of Labor Statistics, Occupational Outlook Handbook, http://stats.bls.gov/ocoeHow.com