



**STUDENT ACTIVATION**

# Network Engineer

For decades, Itron has been delivering critical energy and water infrastructure services and products to customers around the globe—and the company is just getting started. Its various systems communicate, and data is transported across different networks, including **RF** and cellular. As part of the internet technology (IT) team, **network engineers** manage and troubleshoot network communication and help support Itron’s company purpose to be more resourceful with energy and water.

## NETWORK ENGINEER

**Network engineers** manage data centers, **WAN** networking, network security, and **VPNs**. They interact with internal and external customers to resolve issues and plan and execute projects. Network engineers have a strong knowledge of industry-wide network and security protocols, efficient administration strategies, and effective troubleshooting abilities.

**RF (radio frequency network):** wireless electromagnetic signals that carriers use as a form of communication

**WAN (wide area network):** a telecommunications network that extends over a large geographic area

**VPN (virtual private network):** a private network that is extended over a public network and allows users to send and receive private data

## IS NETWORK ENGINEER A GOOD CAREER FOR ME? <sup>1</sup>

Me	Network Engineer
I like to solve big problems and increase efficiency.	Network engineers are complex problem-solvers and are good at seeking solutions.
I have an analytical mind. I like to predict and address problems before they happen.	Network engineers predict future network needs by analyzing current data traffic and estimating how changes will affect the network.
I like working with computers and enjoy learning how to build and manage networks.	Network engineers are proficient in routing and security protocols and the use of various systems’ hardware.
I am interested in school subjects like science, technology, and computer science.	Network engineers study computer science and computer engineering in college.
I am patient and flexible. I like helping others solve their problems, and I can “go with the flow.”	Network engineers are patient with others and able to troubleshoot efficiently and effectively.

<sup>1</sup> <https://www.bls.gov/ooh/computer-and-information-technology/computer-network-architects.htm#tab-4>

How does this career help me?	How does this career help the world?
<p>Has a member of your family ever tried to use an ATM, make a purchase online, or access a website and found an error or offline message? Apart from being frustrating, these outages can cost companies and customers money! <b>Network engineers</b> are responsible for getting a network back online and working properly after an outage.</p>	<p>It seems like almost everything in the world, from communication to commerce, has become digital. The number of “Gs” needed to communicate efficiently is ever increasing. As this technological evolution forces most of us online, <b>network engineers</b> are there to develop, manage, and troubleshoot all the networks that play a role in global daily life!</p>

What are some similar careers?
<p><b>Computer systems analysts</b> study an organization’s current computer systems and design ways to improve efficiency.</p> <p><b>Network administrators</b> are responsible for the day-to-day operation of computer networks.</p>

Here are ways to practice the skills to be a successful **network engineer**:

- Interview people who work in IT or networking management or who build computers and networks about the role they play in managing and troubleshooting network conditions. Ask about other teams or departments they work with and how problems are addressed in their business. What workplace skills do they find most valuable in their career?
- Does your family use a mobile phone service? What kind of data do you use? Research the network your family uses, such as RF networks, and explore the difference between 3G, 4G, and 5G. Do the intricacies of networking and computer science interest you?
- Work with your guidance counselor to take any available computer science or computer engineering classes at your school or offered through the local community college. Look into possible internships or associate degree programs.