What is a network engineer?

This is someone who you may also hear referred to as a computer network architect. Network engineer requirements include essential skills in the design, planning, implementation and monitoring a computer network that supports wireless network services, video, data, and voice. This is a high-level profession. There are a lot of different types of networks that someone in this role can work with. Some examples include VoIP, which is Voice Over Internet Protocol Network, DAN - Desk Area Network, PEN - Personal Area Network, WLAN, which is Wireless Local Area Network, and LAN, which is Local Area Network.

### Job Responsibilities of a Network Engineer

This includes maintaining and controlling computer networks and any computer environments that are related to configurations, hardware programs software, and structures software.

You will also be troubleshooting, diagnosing and resolving problems, as well as implementing and designing network solutions. You can find out more about the job responsibilities of a network engineer [here](https://www.fieldengineer.com/skills/what-is-a-freelance-network-administrator).

The network engineer’s job description varies, as it relies upon on whether or not the activity focuses on engineering a new network or on an already existing network.

Although some of their job responsibilities overlap with that of network administrators, they have more decision-making responsibilities.

#### Network Engineer Requirements Include Being Responsible for these Tasks:

* They need to maintain and control computer networks and related computing environments together with structures software, programs software, hardware, and configurations.
* They need to troubleshoot, diagnose and resolve software, hardware, and other network and system problems.
* Have to layout the design and implementation of new solutions and improve the resilience of the modern surroundings.
* Must perform disaster recovery operations and record backups when required.
* They need to monitor overall network performance to decide if changes want to be made.
* Must carry out the configuration of routing and switching equipment.

Network engineer requirements include establishing, developing, and maintaining computer networks between organizations. They need to provide support to all users, including team members and clients and fix any issues that occur. They may also have to design new networks.

Engineers provide support for system installation and define, document, and put into effect system standards. They secure network systems by setting up and applying policies, and define and oversees access.

Engineers must hold discussions with network customers and resolve present system problems. If required, they would need to replace the defective network hardware components. For network optimization, they schedule upgrades and partner with [network architects](https://www.fieldengineer.com/skills/what-is-a-network-architect).

They also configure [firewalls](https://www.fieldengineer.com/blogs/what-is-firewall-important-network-security) and hosted IP voice services. Architects must be able to assess where there would be the requirement for communications, devise plans for the network, submit them to senior management for approval, and be abreast of the latest developments in the technological arena. Engineers need to comprehend and zero in on the wiring and hardware requirements for the premises of their organizations or clients. They are also responsible for improving or maximizing the network’s performance.

Engineers choose the relevant data communications components and configure them to meet the requirements of their users.

### Network Engineer Requirements & Education Qualifications

Network Engineer Requirements include having a bachelor’ degree in the field of computer science or something that is related to technology.

They should have a solid understanding of the network infrastructure and hardware.

The person must have a good understanding of hardware and network infrastructure. There are a lot of specialist courses that can enable you to get the skills and knowledge needed regarding networking certifications. Some of these include

* CCIE (Cisco)
* CCNP (Cisco)
* JNCIE-ENT (Juniper)
* Network+ (CompTIA)
* WCNA (Wireshark)

Engineers should be able to think through problems and provide solutions for them. They need to learn quickly about new technology and product related things.

They should have had experience in network security, LAN, and WAN. Engineers must be able to work with all levels of staff within and outside of IT.

IT pros skilled in the areas of networking are always in demand in trending marketplaces. They need to have one of the following specialized networking certifications to stand out in the competition.

The featured top five certifications represent all fundamental ranges of networking process roles, from the access (Network+) to the expert degree (CCIE).

Engineers should have solid analytical and problem-solving skills. They should also have excellent written and verbal communication skills.

Those who want to become [wireless network engineers](https://www.fieldengineer.com/skills/wireless-network-engineer) need to have experience in wireless equipment, protocols, standards, and [wireless LAN](https://www.fieldengineer.com/blogs/what-is-wireless-lan) design. They should have specialized in wireless technologies, including WiMax, Wi-Fi, and WAP. They should ideally gain a professional certification like the Certified Wireless Network Professional (CWNP).

A wireless network engineer researches, designs, deploys a wireless network and suggests recommendations for optimizing and upgrading wireless networks to meet the requirements of organizations. They should carry out and document radio frequency (RF) site surveys and coverage and document infrastructure and design of networks.