

## Networking Tutorials for Beginners : Get Your Basics Right

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Computers were a rarity even a few decades ago, in the 1970s or even the 1980s. The computers that people had were standalone computers – they didn't need to be connected to other computers or electronic devices to run. However, the Internet changed all that when it arrived on the scene. The ARPANET (Advanced Research Projects Agency Network) was the first network that actually linked two computers together, using TCP/IP. It was introduced in 1969, and it was the precursor to the internet. The Internet helped usher in the computer age – it helped connect people from around the world. Earlier computers were seen as essentially luxury items and computer users were nerds and geeks. Today, computers and the Internet have both become indispensable. The world would stop spinning if the Internet went down – at least the global economy would crash, at any rate! The Internet is a vastly complicated network of computers joined to each other through a countless number of cables and satellite links. We rely on servers to communicate with other servers, which enables us to send data back and forth, from and to the "Internet".



In this networking tutorial for beginners, we're going to give you an overview of the basics of networking. You can also take our [introductory course on computer networking](#) to learn more about the basics.

## What is a Computer Network?

So, what is a computer network exactly? A computer network is a group of computers, two or more, connected to each other through a wire or a cable or even wireless. You can share files with other computers this way easily. If the network is large enough and lets you access a large number of computers, it becomes even more useful. You can share a modem, printers, storage space and DVD drives with the other computers on the network. You can video conference with the other people using the network or you can work together on a complex task with your connected systems. [Learn more about how computer networks communicate using the TCP/IP protocols with this course.](#)

## What do you need to set up a Network?

You need at least two computers to let your network be referred to as a network. Your network will also have a server and client model architecture. The server will handle requests from the client computers and let them communicate with other client computers. If the network is small, the client computers may themselves act as servers. Modern computers are more than powerful enough to handle a small network. The network computers will need Network Interface Cards (NICs) installed- hardware that lets them connect to other computers. They will also need software that is capable of handling networking operations. Your modern operating system handles this for you, thankfully, so you don't have to install separate software. Finally, the network computers need to be connected physically (through a cable or wirelessly). These are, of course, the most basic requirements to set up a network. For more details on how to set up a network, following the different network models, you can [sign up for this networking course.](#)

## Different Types of Networks

Networks are classified on basis of scale. The area a network covers determines the type of network it is. Originally, there were only two types of networks: LAN and WAN. But over the years, other types of networks have evolved, like MAN, SAN, PAN, CAN and DAN. Let's take a look at the more popular ones:

**LAN:** LAN is the acronym for Local Access Network. A LAN network is a short-distance network. It connects computers that are close together, usually within a room or a building. Very rarely, a LAN network will span a couple of buildings. An example of a LAN network is the network in a school or an office building. A LAN network doesn't need a router to operate.

**WAN:** WAN stands for Wide Area Network. WANs cover a huge geographical area. A WAN is a collection of LAN networks. LANs connect to other LANs with the help of a router. The router has a LAN address and a WAN address, which lets it send data to the desired location. The biggest WAN in the world is, of course, the Internet.

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WANs are different from LANs in that they're not owned by a single person/organization. They also use different technology that enables them to communicate over long distances, like Frame Relay and ATM.

**VPN:** VPN stands for Virtual Private Networks. VPNs are very important today. They let you connect to your network from a remote location through the Internet. This saves you time and money- you don't need to set up a physical connection with your network. The Internet acts as a medium between you and your network. For example, you can access your computer at work through your computer at home.

**MAN:** MAN stands for Metropolitan Area Network. The network in a metro area is a MAN. They are usually more limited in scope than WANs, but essentially work the same way.

**CAN:** CAN stands for Campus Area Network. The network that spans a University or College campus is a CAN. CANs are like WANs or LANs, except they have more restrictions on them. They let students communicate with each other as well as the administration.

There are two major types of network architectures at the moment. The first model connects computers with each other without the need for an intermediary computer. This is known as the peer to peer style of networking. This tutorial explains **peer to peer networks** in more detail. The other model relies on a server to act as an intermediary between the network computers. This is known as the client server architecture model.

Now that you are familiar with the basics of networking, you can begin learning more about the different networking models and network architecture. You can **check out this advanced networking course** for more details.

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