

With the development of technologies such as 5G, the use of wireless networks is rapidly becoming widespread in the world. However, we cannot reach the bandwidth and data transfer rates provided by the infrastructure of wired networks with wireless communication methods. Both wired and wireless networks have their own advantages and disadvantages. Wired connection for computer or other devices provides a secure, faster, reliable and continuous internet connection. In wired networks, connections are made with fiber optic cable, copper wires, flexible cables, and twisted pairs cables. In wired networks, data is carried as electrical signals on wires. Now let's talk about the pros and cons of the Wired Networks.

Pros:

Speed is one of the most important things about wired networks. Data transmission in wired networks is faster than the wireless networks. Wired networks are reliable and stable. There is no degradation of signals in wired networks. But in wireless networks signals can interfere with each other and there might be corruption. We can also say that wired networks are better in security concept. A wired network is protected from unknown/unauthorized access when we use updated next generation firewalls and some different security applications. When we configure all of them, the only thing that we should do to make sure that the network is secure is, monitoring the active ports for suspicious activities.

Installing a wired network is not so expensive as it sounds. Routers, L2 & L3 switches, ethernet cables and other hardware are cost effective. When we install everything, we can continue in the same setup for a long time without making any changes. We only need to make changes when we want to upgrade. Data transmission distance of wired networks can be so long unlike wireless networks. With the fiber optical cable systems, we can communicate intercontinental in these days. Wired networks are also so easy to control.

Cons:

Maintenance is one of the most demanding tasks in wired networks. If there is something wrong with the cables, it should be intervened immediately. When we consider the maintenance of the network devices there would not be a big problem. However, if our network is not small and if we use server for capacity, storage and workload, then the maintenance might be expensive. And we need to constantly employ an IT specialist to ensure controls. Wired networks are also inflexible when it comes to mobility. We need extra cables every time we want to make a change in the network. For example, if we want to use our computer in another location, we have to run a new cable to new location. We may even need to use a new switch!

Since there more components are required, installation of wired networks may take longer time. If we want to establish an intercontinental communication infrastructure with fiber optic cables under the ocean, then the cost and the installation time will be too much. Wires can also pose a fall hazard to office workers or cleaning crews, or they can be accidentally disconnected. In addition, Coaxial cables have only one copper conductor unlike twisted pairs. Twisted pair cables may be affected by an external magnetic field because there might be interference. Fiber Optic cables are the best for this situation.