

What Is a Peer-to-Peer Network?

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When developing an effective networking system, your choice can have a serious impact on your company's communication processes, cybersecurity and overall efficiency. Peer-to-peer networks are an extremely popular choice for many organisations all around the world. In this article, we explain what a peer-to-peer (P2P) network is, how it works, ways to use a P2P network and how to make sure that your P2P network is secure.

What is a peer-to-peer network?

A peer-to-peer network is a technology that allows you to connect two or more computers to one system. This connection allows you to easily share data without having to use a separate server for your file-sharing. Each end-computer that connects to this network becomes a 'peer' and is allowed to receive or send files to other computers in its network. This enables you to work collaboratively to perform certain tasks that need group attention, and it also allows you to provide services to another peer.

Why is a peer-to-peer network important?

This technology is a big advancement in the IT world since it enhances companies' efficiencies. Peer-to-peer networking has also made communication far easier than it used to be, which is why many businesses have quickly adapted to this technology.

Another primary benefit of this software is that it allows companies to stay connected within the workplace, increasing a business's overall efficiency. Additionally, once your entire computer system has synced, you may be able to keep your data collected and checked in one place, advancing the overall security of your data.

How does a P2P network operate?

This software works to prohibit the sharing of information until a peer grants you access. So, if a computer wants to access files from a different computer, it will need permission to access it. A peer is in full control of their files and has the option to allow or deny access to another peer. For instance, if user X wants to see the files of user Y, user X must first seek permission from user Y to reach the files. User Y can deny this access or accept it and provide the password to user X.

Other key uses of a P2P network include:

- **File sharing:** The use of P2P in file sharing is extremely convenient for businesses. P2P networking can also save you money with this feature because it eliminates the need to use another intermediate server to transfer your file.
- **Direct messaging:** Another great feature of P2P networks is that they provide a secure and quick way to communicate. This is possible when you follow a certain protocol that permits encryption at both peer computers and gives easy messaging tools.
- **Collaboration:** The easy sharing of files also helps build stronger collaboration with the rest of your colleagues. You can perform an extensive amount of work with this tool and do certain tasks that need thorough checking.
- **System back-up:** Another strong P2P networking feature is that even if one computer shuts down for some reason, the rest of the computers continue working. This networking only stops when all the peer computers shut down at once. So, the chances of losing data are minimal and the chances of securing file sharing are maximum. This feature also increases the reliability of P2P networking.

How to keep your P2P network secure

Keeping your P2P networking systems secure increases your company's protection and allows it to operate more effectively. Follow these steps to help you properly secure your P2P networking systems:

1. Share and download legal files
2. Keep your security up-to-date
3. Scan all of your downloads
4. Shut down the P2P networking system after use

1. Share and download legal files

When using the P2P network, try to download only legal files. You can use the P2P network to download music, video and work-related files to share with other employees. Double-check that the files you're sharing and downloading are all legal files.

2. Keep your security up-to-date

Similar to a majority of computer and software technologies, a P2P network is often prone to damage. Use antivirus software to keep your files protected from any damaging viruses. Ask your IT team to assist you in downloading antivirus software to ensure your computer and supporting equipment is properly secure.

3. Scan all of your downloads

A quick way to keep your P2P network safe is to constantly check and scan your files for viruses before downloading them. This helps ensure your computer is safe from potential harm. If it detects any viruses, immediately report it to the IT staff members at the company.

4. Shut down the P2P networking system after use

Try to make sure you correctly shut down the software to avoid unnecessary access of a third person into your files. An unauthorized third person gaining access to your files can be a major security breach in your network. Even if you close the windows after sharing files, someone else can still gain access to your files if the software remains active and isn't shut down.

Where are peer-to-peer networks used?

Many systems have used P2P networking to make money and keep their systems running smoothly. Because the P2P network is user-friendly, it makes it easier for users to regularly store their data. You can make P2P a part of your business to streamline your data filing and sharing systems. Your business can also earn an income from P2P networking. Here are ways most businesses use a peer-to-peer network system:

1. Cloud servers

This is a very common form of using a P2P network because many users share data on their cloud. It helps them in accessing their files from many other sources. The storage facility is another factor for uploading files on a cloud, because even though many applications charge money for additional storage, the current amount of storage offered on the cloud is enough for most users.

2. Business communication and messaging applications

Most workplace messaging systems and business collaboration hubs develop a direct way of [communicating with colleagues and coworkers](#). Similar to how P2P networking systems encrypt texts and calls, many direct chat and video messaging systems use the same method to share information and keep user communication secure from any third parties.

3. Content distribution

Many applications use the encryption provided by the P2P network to devise a way to share files on a larger scale. Most content distribution applications work based on the P2P network to prevent a file and data from piracy. The encryption of these messages has proven to increase the users' overall safety and protection. This way the users can sell and efficiently use these sites to convey messages.

Many people enjoy content distribution software because they can access files and videos without having to wait a significant amount of time. Additionally, the increased traffic makes these sites more cost-effective, since there's no need for a central server.

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Careers that utilize a P2P network

Many jobs regularly use a P2P network to help them work more efficiently in their role. These careers include:

[Content writer](#)

National Average Salary: [₹15,599 per month](#)

Primary Duties: A content writer crafts copy for a company's website and creates other written material. This can be blog posts, articles, eBooks, white papers and advertisement material. Other responsibilities include strategising when and where to publish content, researching content topics and details online, interviewing industry experts to strengthen the content and ensuring the content follows search engine optimisation guidelines.

[Web developer](#)

National Average Salary: [₹16,262 per month](#)

Primary Duties: A web developer uses their advanced technical knowledge to build websites and create accompanying applications for a website using different software solutions. Other responsibilities include monitoring a website's production process, downloading and integrating different database systems and identifying the needs of users to enhance the user-friendly features of the site.

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[Video editor](#)

National Average Salary: [₹16,358 per month](#)

Primary Duties: Video editors collect previously shot footage and edit it down to a visually appealing video or film for an audience to view. Their main responsibilities include learning the needs of the production team or director, developing a shot list for the video, inserting graphics, effects and music to support the video and creating rough editing cuts for the director to analyze and provide notes.