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How torrent works
Decentralized file sharing portal

We all have seen or shared some pirated software or web series from someone, well sharing such pieces of data is illegal and hosting such files will certainly end up something against you but from where this kind of data comes from? Most of it comes from torrent where someone magically uploaders these files and allows us to experience everything for free!

The story of torrent is based on the robustness of peer to peer networks in a nutshell peer to peer or P2P networks there is no concept of server or client no node on the network entirely designated to serve and no node is designed to just download something very node has same functionality they can upload as well as download. Each file gets broken down into pieces which are then hosted by nodes that already downloaded those pieces of

file, the network does not really care from where those pieces come from one might come from a node on your lan or from a different continent. Those pieces are then compiled natively on the device you are downloading by something called torrent client, it's basically a software or application which can upload, download, locate pieces and help locate pieces, example of torrent are BitTorent and µ torrent. Defining or perhaps creating such nodes is a piece of cake but the main problem lies in how to keep track of files or I should say pieces of files. In infant state of P2P systems they relied on a tracking server which had only one purpose- to keep track of files on the network and nodes hosting those files through their public IP, but such systems are prone on too much reliance on tracking server where individual nodes can come and go without affecting the network throughput or reliability but if the tracking server goes down the whole system goes down,.

So, after some failures bittorrent architecture and protocol got introduced, it consists of an application layer protocol which provides an efficient algorithms that decide which peers to upload to and which pieces of the file to download first on a hybrid network using both client server and peer to peer network, centralized part being tracking server which is based on distributed computing. Choke algorithm is used which distinctly maintains records of uploaders and downloader which is called a different interval of time to keep record and creates the entry accordingly and these network protocols are used on predefined ports.

In conclusion using such networks is not illegal promoting piracy is not legal, it is one of the most robust and largest peer 2 peer network on this planet and it is estimated that half of world's internet traffic is torrent!