

What is Torrenting and How does It Work

Basic Introduction –

Torrenting is considered as the act of downloading and uploading various files with the help of the BitTorrent network. Torrenting is also regarded as the involvement of downloading different files from other users' devices on the network in lieu of downloading files to a central server.

Alternatively, the users upload such files from their personal devices for the purpose of other users to download and use.

In other words, Torrenting is also reckoned as a very renowned form of peer-to-peer (P2P) file-sharing, which requires torrent management software to get connected to the BitTorrent Network. This kind of software can be downloaded to various different devices free of cost.

In the following region, we will learn more and delve deep into the facts of what exactly Torrenting and how does it work!

Torrenting –

Before gaining a clear insight into what 'Torrenting' is, first we must know that what is 'Torrents' is exactly! That way, we can develop a better understanding of 'Torrenting'.

What are 'Torrents'? –

'Torrent', this very terminology refers to a process, where a file is shared or about to be shared through a decentralized, peer-to-peer sharing network.

The excellence of P2P file sharing lies in the provision of permitting users to exchange any kind of files without uploading them to a related server.

Sometimes, the term 'Torrent' also refers to a metadata or file name extension which informs the trackers-programs about the receiving place of the Torrent files. These tracking programs actually coordinate the transference of torrents.

Rather, as a means of daily practised term, 'Torrents' are simply files, that keep certain information and details related to other files and folders, which are about to be distributed.

Naturally, the size of a Torrent file remains between a few kilobytes of data, but these tiny files are even capable of downloading many bigger files. This process is usually conducted through a system.

Oftentimes, when a user starts downloading files from a torrent, he or she can see a file that is not recognizable with the other data. The user must immediately know that those files are just values utilized for verifying the file.

The Basics of Torrenting –

If we shed some light on the history of Torrenting, we will discover that the brilliant Python-language programmer – Bram Cohen got us introduced to Torrenting long back in 2001. The world will be always thankful to Bram Cohen for this wonderful brainchild as a form of amazing technology.

According to the status of things, this was a very innovative approach of that time.

Back in the time then, the internet was still a lot slower and the cloud-based technologies were slowly flourishing for enterprise customers. Within a few years of time, Torrenting really became very renowned and appealing with the help of computer users.

However, it was not so acclaimed amongst the piracy-preventive government agencies.

Basically, it was just the start for the global citizens to make unlimited usage of the torrent files as well as create downloads of various kinds of media files into a wide variety of devices and across multiple platforms.

What is ‘Torrenting’? –

Torrenting is referred to as a kind of peer-to-peer (P2P) file-sharing technology, which extends the possibility and advantage for many users to connect and share their files anonymously. Here, they are not required to depend on any individual website or source to receive their desired content.

Here, every peer functions as a mini-server and individually minimizes the network load substantially.

Suppose, a person is unaware of Torrenting, still he or she can search and download any file from the internet without much difficulty. But, if the person understands the technology behind Torrenting, then he or she will gain a much greater experience while performing the same deed.

Torrenting helps users to download any file, not only from the direct resources but also from any other users of a similar torrent. The particular user will enjoy a much smoother and relaxed transfer within the domain of other users.

The mechanism of Torrenting is really simple to understand. It is just a process where a user installs a torrent client on their system, access various files from one or multiple torrent sites, and then download their desired contents which can be anything like movies, TV shows, games, other content.

However, all these downloads become possible through the torrent client only and Torrenting keeps the option of file-sharing open to other users inside the network.

BitTorrent –

BitTorrent is regarded as another file transferring protocol that provides power to Torrents. Instead of considering it a file type, the users can regard it as a protocol to break down the large files into small ones and connect these small pieces with the large files of the computer.

How does Torrenting Work? –

Torrenting merely doesn't depend upon a centralized server for the file storage, rather bits and pieces of data are collected from the individual large files and saved in the peers or participating computers of a network or swarm. This is solely done for facilitating the file-sharing procedure.

On the other hand, a peer-to-peer communicative protocol like BitTorrent helps in breaking down the files into pieces and moving them from uploaders to downloaders through a torrent file. This is basically a transferring of files from seeders to leechers through a separate program that reads every information from the .torrent file and makes a connection within the users for exchanging data.

The Torrenting procedure remains compact and security-proof by the mentioned system of checks and balances in the following region;

1. .torrent file comprises information about the computers, that are part of the file-sharing procedure which are later informed to the users. It also mentions the details of the files and folders which are downloaded by the user.
2. The torrent client gets connected to a tracker and that contains the IP addresses of the devices in a particular network. Afterward, all the IP addresses are forwarded to all the torrent clients by the tracker. This process assures that the peers are well connected.
3. As we know, the torrent client initiates the download. As soon as the client obtains enough amount of data, it automatically starts to upload the file. This way, the other innumerable users remain benefitted.

Torrenting, in other terms peer-to-peer file-sharing procedure can be well understood if the following terminologies are known in-depth;

Peers – All the users, who are involved in the process of sharing files through the peer-to-peer sharing medium are called to be peers until the time they continue to share files on the torrenting network.

Seeders – Seeders are those users who are downloading files from a torrent and simultaneously uploading them for the usage purpose of other users.

Indexers – Indexers refer to different websites which act as search engines for the purpose of getting files and contents downloaded by the medium of a torrent. Amongst the most popular indexers; Torrentz, ExtraTorrent, and The Pirate Bay are regarded as the ones which are capable of generating the maximum amount of torrenting traffic in the server.

Trackers – Trackers are just the servers that function as a connection between peers. The primary action of the trackers is to direct the packets from one user to the other, as well as assist in finding the required peers in the network for performing a particular download.

Swarms – Swarms are the number of peers who download and upload similar downloadable files.

Leechers – Leechers are those peers who download a torrent file but restrain the upload of the same file from their server or end the torrent instantly once their file is downloaded. Leechers prevent the upload, as they don't want other peers to download.

BitTorrent Client – A client must be present during the time of torrenting. This is one of the most important requirements. Popular BitTorrent Clients like uTorrent or Deluge activate this process by blending and assembling all fragments from lots of seeds. They also manage the download.

In a nutshell, when a user is torrenting a file, it is clearly meant that the user is transferring a file through a peer-to-peer or BitTorrent network.

In the case of a P2P network, the network is created with 2 or more computers that are interconnected to share various resources without reaching a distinct server computer. Hence this can be termed as a higher level of an ad-hoc network which is much more complex. However, the files are then minimized into short bits and stay downloaded via passing through a verification process. This is the way torrenting works for P2P.

In the light of that, whereas, BitTorrent works only in the user's personal system

Conclusion –

The above-mentioned details can be considered as a guidance of a very modified description of What is Torrenting and how it works for the users.

However, the users can find various dimensions of the minute as well as elaborate details of the subject with a few pieces of research.

Although, it is expected that this information can help the users to get started.

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