

Peer-To-Peer Communication Solution.

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Abstract: These days in time of pandemic when the whole world has gone online using Internet has become one of the greatest effects that has been adopted by almost every individual across the globe. As being online also means that you are not safe from security breaching & hacking. Why this is so, is only because of networking bugs & loopholes which are used by hackers to peek into your privacy. The present **Client-Server Based** networking system is probably the best but not that much secure as we expect as our search query or anything that we search on web comes to us after being redirected by many hosts or we can say that many **IP Addresses**, privacy policy of every organization may not be same, they can check your searched contents as your data is received to their redirecting server. In **Peer-To-Peer** it's not the same, your searched query would come directly to you using **API** of that web server without being redirected to any 3rd Party web server/IP Address. But still before adopting Peer-To-Peer there are some setbacks which are needed to be resolved.

Introduction: Peer-to-peer (P2P) computing or networking is a distributed application architecture that partitions tasks or workloads between peers. Peers are equally privileged, equipotent participants in the application. They are said to form a peer-to-peer network of nodes. A peer-to-peer network is designed around the notion of equal peer nodes simultaneously functioning as both "Clients" and "Servers" to the other nodes on the network. This model of network arrangement differs from the **Client-Server** model where communication is usually to and from a central server. A typical example of a file transfer that uses the **Client-Server** model is the File Transfer Protocol (FTP) service in which the client and server programs are distinct: the clients initiate the transfer, and the servers satisfy these requests.

Methodology: There comes need of creating a **Hybrid P2P Network**, which means a network made up of using both **P2P** & Client-Server Based networking technologies. As an example, if we tend to create a messaging application using Peer-To-Peer networking base. Then the devices will communicate using **IP Address** as an identity but IP Address may not be the same all the time, so we will introduce a Client-Server which will keep a record of changing IP Address across the messaging application user & will send the IP Address to the communicating devices to share resources, here the Client-Server acted as an node to Peer-To-Peer Network to make it more reliable to work upon and making it more sustainable to adopt it is a major networking architecture.

Conclusion: So, as per seen from an networking aspect both the networking architecture are the best as per present usage, but **Hybrid Networking** would help to create more secure networking architecture as per being used now times. Also it would help to take a step to create a **Decentralized Network** which will worth of privacy & usage making network strong & may be lesser Data breaching and Cyber-attacks.