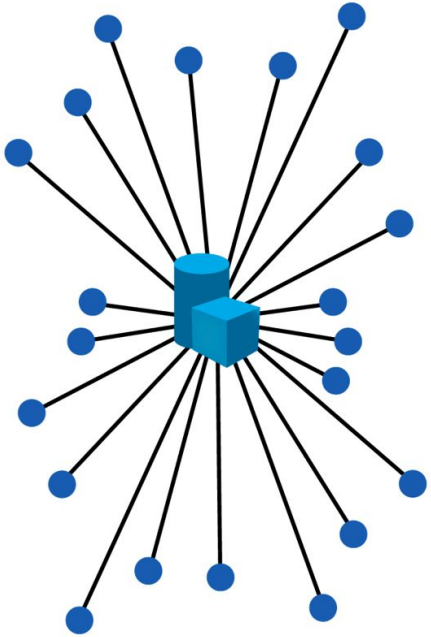
Why is Blockchain a Distributed, P2P Network?

Types of Network



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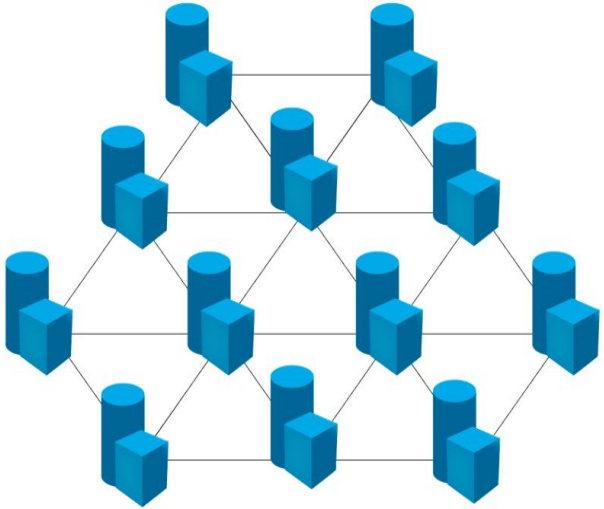

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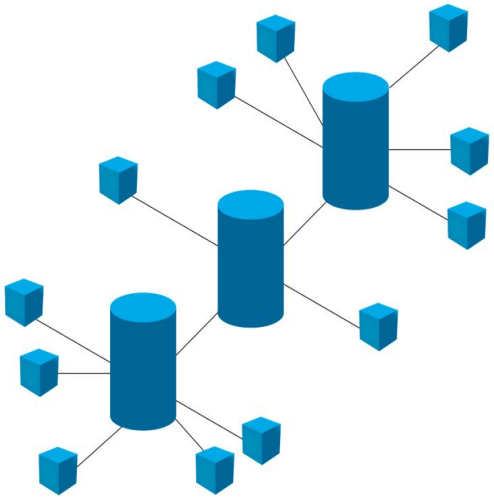

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Peer-to-Peer (P2P) Network

In a P2P network, there is no central governing authority.

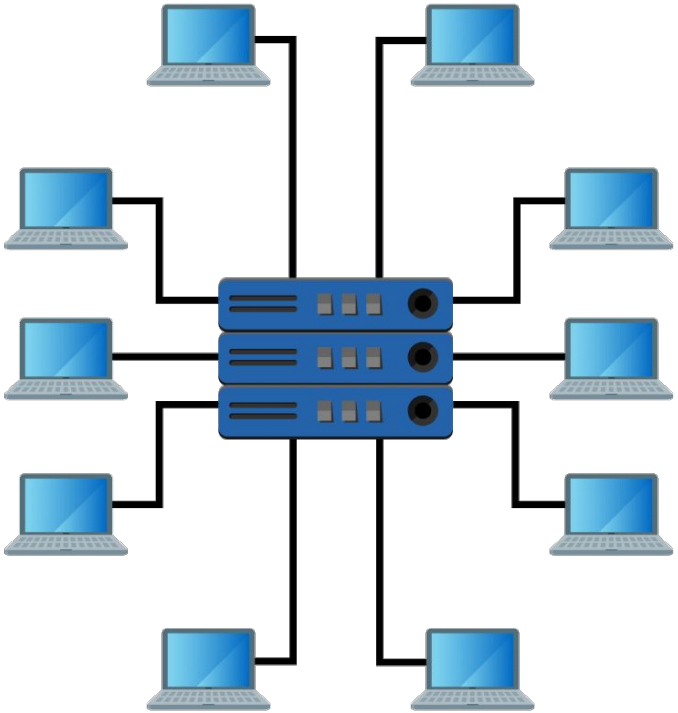
All nodes in a P2P distributed network are equal to each other.

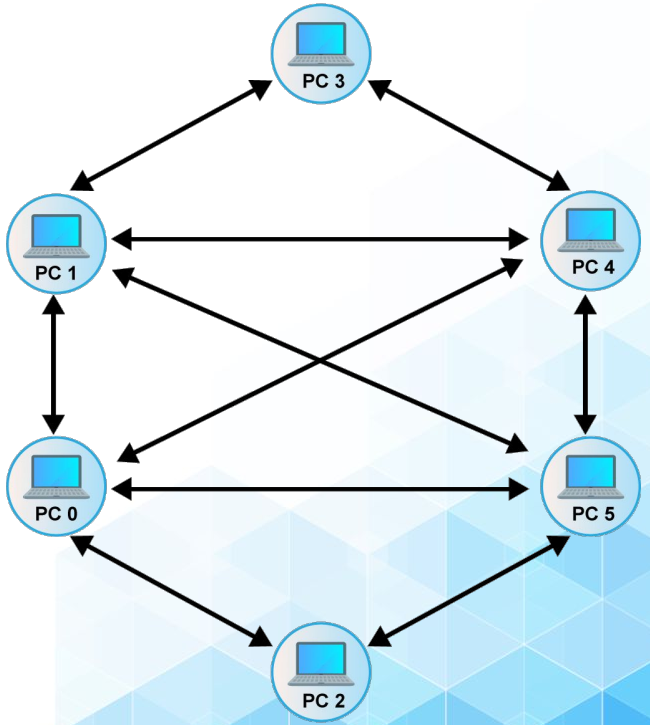
Anyone connected to the network is free to share and download any file shared by other users in the network.

Peer-to-Peer systems are classified as:

- **Unstructured** - No specific organization of the nodes. Participants communicate randomly with one another.
- **Structured** - Allows nodes to precisely search for files, even if the content is not available.
- **Hybrid** - Combines the conventional client-server model with some facets of the peer-to-peer architecture.

Server-based Vs Peer-to-Peer Network





Distributed P2P Network - Blockchain

The traditional client-server network keeps all the required information in one place, which makes it easy to update. But the network is controlled by a number of administrators with permissions.

In a distributed P2P network of blockchain architecture, each participant within the network maintains, approves, and updates new entries.

The system is controlled by everyone within the blockchain network and not just by a single authority.

Each member ensures that all records and procedures are in order, which results in data validity and security.

The P2P architecture of blockchains provides benefits of greater security than traditional client-server based networks as distribution of large numbers of nodes creates an immune system to the Denial-of-Service attack.