

PEER-PEER NETWORKING



A network of computers configured to allow certain files and folders to be shared with everyone or with selected users. Peer-to-peer networks are quite common in small offices that do not use a dedicated file server. All client versions of Windows, Mac and Linux can function as nodes in a peer-to-peer network and allow their files to be shared. Files and folders can be configured to allow network users to copy them, but not alter them in their original location, which is a common safety precaution. However, files and folders can also be assigned a “read/write” status that allows either selected users or all users on the network to change them. See share. See also grid computing. Using the Internet as the world’s largest file sharing network. Originally for music files, and subsequently for videos, this type of sharing was popularized by the famous Napster service as well as Gnutella (www.gnutella.com), Grokster (www.grokster.com), KaZaA (www.kazaa.com) and others. Users upload copyrighted songs to a central server, a group of servers or to selected user computers, and people download the files that are available. Almost every song ever recorded has been uploaded to some music sharing venue. Characteristics of a Peer Network Peer to peer networking is common on small local area networks (LANs), particularly home networks. Both wired and wireless home networks can be configured as peer to peer environments. Computers in a peer to peer network run the same networking

protocols and software. Peer networks are also often situated physically near to each other, typically in homes, small businesses or schools. Some peer networks, however, utilize the Internet and are geographically dispersed worldwide. Home networks that utilize broadband routers are hybrid peer to peer and client-server environments. The router provides centralized Internet connection sharing, but file, printer and other resource sharing is managed directly between the local computers involved. Peer to Peer and Ad Hoc Wi-Fi Networks Wi-Fi wireless networks support so-called ad hoc connections between devices. Ad hoc Wi-Fi networks are pure peer to peer compared to those utilizing wireless routers as an intermediate device. Benefits of a Peer to Peer Network You can configure computers in peer to peer workgroups to allow sharing of files, printers and other resources across all of the devices. Peer networks allow data to be shared easily in both directions, whether for downloads to your computer or uploads from your computer. On the Internet, peer to peer networks handle a very high volume of file sharing traffic by distributing the load across many computers. Because they do not rely exclusively on central servers, P2P networks both scale better and are more resilient than client-server networks in case of failures or traffic bottlenecks.

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