

Broadcast

In general, network communication can happen in two kinds of ways: Communicating with a single computer (sometimes referred as uni cast, as the communication it only with one, unique computer). This is done for example via [UDP](#) or [TCP](#). However, it is also possible to communication with many computers at once, but not in the fashion to simply have multiple unicasts going simultaneously but by sending broadcasts. Broadcasts are send to all computers, that are reachable and they can decide whether to answer or not. As this kind of communication obviously does not work in a TCP manner, it is only suitable for UDP, where it is not guaranteed to be received or answered. In the IP world, the destination IP is always 255.255.255.255 (or on [mac](#) level, FF:FF:FF:FF:FF:FF), meaning everyone on the local [subnet](#) as addressed. [IPX](#) also works on the basis of broadcast messages.

In the gaming context, broadcasts are very often used, to determine available game servers on a local network. The client, looking for a server to connect to, sends a broadcast out and waits for answers. There are three possible outcomes of that (provided the network is set up properly):

- No one answers, so no servers available.
- One computer answers (probably the most often encountered case, as only one person hosts a match).
- Multiple computers answer (if there are at least two hosts open for connection).

As this is a crucial process for playing with others via network, problems such as blocking [firewalls](#) can make actually available games invisible, either because the server refuses to let the broadcast in, or the client is not even allowed to send it in the first place (or receive the answer from the server). This is the main reason, computer games won't find each others games on the network, besides of faulty network configurations or different game versions being use.

Broadcasts via UDP are never routed via the internet. They are (depending on the game) however, via [VPNs](#).

[[games_database](#)] [[network_terms](#)]

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