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The Story:
A Week in the life of a loaded Counter-Strike Server

Internet Video Games follow a simple client-server model:
Multiple transient clients connect to a pre-existing stationary game server

Bandwidth usage is nearly constant:
It is composed by a number of low-bandwidth non-responsive UDP flows

Network usage is unlike traditional Internet applications: Bandwidth is not self-similar, and aggregates well
Which is not to say that it's smooth on all scales: Bandwidth is characterized by highly periodic broadcasts at the millisecond level

Client bandwidth is designed to saturate the narrowest last-mile link (56K modems): The game must provide uniform & fair user experience

Network use is primarily composed of large bursts of small packets:
This is due to low-latency requirements of game mechanics
Which can be disastrous if the server's network cannot switch at a high enough speed:

- Routers must be able to handle a large bursts of small packets
- Experiments with commercial NAT devices show a high packet loss rate, due to under-provisioned hardware
- But buffering is not the solution! Buffers introduce latency - which is detrimental to client performance

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