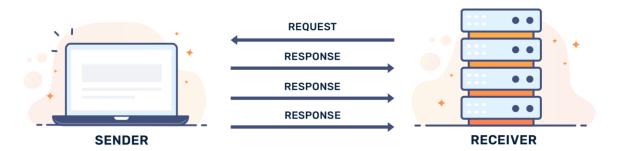# UDP Protocol

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What is UDP and how it operates?

UDP is a Transport Layer protocol. It does not require establishing a connection before data transfer and it is designed for low-latency and loss-tolerant communication over a network and supports process-to-process communication. Because of UDP not needing to establish a connection, this results in very fast communication speeds. UDP includes checksums for making sure data is sent accurately and port numbers for defining the role played by the data being transmitted.

Common use cases for UDP

- Gaming
- Playing videos
- VPN
- DNS lookups
- DDoS protection
- Media streaming
- Multicasting

Advantages and disadvantages of using UDP

Using UDP comes with several merits such as using small packet size with small header which makes processing time less. It is faster also due to the absence of acknowledgement field. Moreover, checksums prevents errors by detecting them. However, UDP is often considered unreliable as there is no way to make sure data is received in the right order. There is also a good chance that data packets may get lost during transmission. Lastly, it does not include congestion control.