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① Encapsulation is the mechanism of taking a packet consisting of packet header and data and putting it into the data part of a new packet.

② The reverse operation, taking a packet out of the data part of another packet, is called decapsulation.

③ Encapsulation and de-encapsulation are the operations typically performed when a packet is transferred from a higher protocol layer to a lower layer or from a lower to a higher layer respectively.

④ Types of encapsulations:

- IP in IP encapsulation
- Minimal encapsulation
- Generic Routing Encapsulation (GRE)

⑤ Generic Routing Encapsulation

- It is a method of encapsulation of IP packet in a GRE header which hides the original IP packet.
- Also a ~~new~~ new header which hides named delivery header is added above GRE header which contains new source and destination address.
- GRE header acts as new IP header with delivery header containing new source



and destination address only routers between which GRE is configured can decrypt and encrypt the GRE Header

— The original IP packet enters a router, travels in encrypted form and emerges out of another GRE configured router as original IP packet like they have travelled through a tunnel. Hence, this process is called GRE tunneling.