I have a clear understanding of key network communication protocols.

* **HTTP (Hypertext Transfer Protocol)** is the foundation of data communication on the World Wide Web. It is a stateless application-layer protocol used for transferring web content like web pages and media between clients and servers.
* **HTTPS (Hypertext Transfer Protocol Secure)** is the secure version of HTTP. It uses **SSL/TLS encryption** to protect data transmitted between a web browser and a server. This ensures confidentiality, integrity, and authentication, making it much safer for activities like online banking, shopping, or logging into websites.
* **FTP (File Transfer Protocol)** is also an application-layer protocol, mainly used for uploading and downloading files between computers on a network. FTP establishes separate control and data connections between the client and server.
* At the transport layer, I understand that **TCP (Transmission Control Protocol)** provides reliable, ordered, and error-checked data delivery by establishing a connection before transmission.
* At last, **UDP (User Datagram Protocol)** is another transport-layer protocol in the Internet Protocol suite. It is a connectionless protocol that allows fast, low-overhead data transfer without guaranteeing delivery, making it ideal for real-time applications like streaming and online gaming.