**For your discussion post, list the five layers of the TCP/IP (transfer control protocol/internet protocol) model, as well as the seven layers of the open systems interconnect (OSI) model. Compare both models and discuss how they send secure data over the LAN (local area network) and WAN (wide area network). Discuss the difference between TCP and user datagram protocol (UDP). List which one is connection-oriented, and which one is connectionless, as well as which one has security.**

Hello everyone.

There are five layers to the TCP/IP (transfer control protocol/internet protocol) model:

* Application layer
* Transport layer
* Network layer
* Data Link layer
* Physical layer

It is also important to note, the older TCP/IP model was a four-layer model where the data link layer and physical layer were together as one layer called the network access layer.

There are seven layers to the OSI (Open Systems Interconnect) model:

* Physical layer
* Data Link layer
* Network layer
* Transport layer
* Session layer
* Presentation layer
* Application layer

There are some key differences between the two models. First, the OSI model is a logical and conceptual model and can only be used as a reference model, whereas the TCP/IP model is a protocol-oriented standard. Next, the OSI model is vertically oriented, with layer one on the bottom, and data packets are encoded from top to bottom and decoded from the bottom up. TCP/IP is horizontally oriented, with data packet encoding from left to right and decoding from right to left. The transport layer for the OSI model is only connection-oriented. In contrast, the TCP/IP model supports connection-oriented with the TCP protocol or connectionless with the UDP (User Datagram Protocol) protocol. The TCP protocol provides some security in error handling by resending damaged frames. At the same time, UDP is considered unreliable because it acknowledges errors but does not specify them because it only uses a checksum with no data segment ID.