

**Differences btw the 7-layer OSI reference and the TCP/IP model**

The 7-layer OSI model and the TCP/IP model are two ways of describing how data is transmitted over a network. Some of the differences in this two are:

- The OSI model has 7 layers while the TCP/IP has 4 layers.
- The OSI model was developed by the International Organization for Standardization (ISO) in 1984, while the TCP/IP model was designed by Vint Cerf and Bob Kahn in the 1970s.
- The OSI model is a logical and conceptual model that defines network communication, while the TCP/IP helps determine how a specific computer can be connected to the internet and how data can be transmitted between them.
- The OSI model has a separate presentation layer and session layer, which are responsible for data formatting and synchronization, while the TCP/IP model does not have these layers. The application layer of the TCP/IP model maps to the first three layers of the OSI model.
- The physical and data link layers are separate in the OSI model, while they are merged as a single network layer in TCP/IP.
- The OSI model is a protocol-independent framework that defines network communication in general, while the TCP/IP model is a protocol-specific suite that enables internet connectivity and data transmission.
- The OSI model is more rigid and distinct than the TCP/IP model, which is more flexible and practical.
- The OSI model has more layers and protocols than the TCP/IP model, which simplifies the network access and interface functions into a single layer and protocol suite.
- The OSI model supports both connection-oriented and connectionless services, while the TCP/IP model only guarantees delivery of packets in the transport layer using TCP.
- In the OSI model, each layer has a specific function, while TCP/IP's layer can offer overlap in functionality.