CLINTON MAINA SCT212-0591/2022

The difference between the OSI reference model and the TCP/IP model

OSI	TCP/IP
OSI represents Open System Interconnection.	TCP/IP model represents the Transmission Control Protocol / Internet Protocol.
OSI is a generic, protocol independent standard. It is acting as an interaction gateway between the network and the finaluser.	TCP/IP model depends on standard protocols about which the computer network has created. It is a connection protocol that assigns the network of hosts over the internet.
The OSI model was developed first, and then protocols were created to fit the network architecture's needs.	The protocols were created first and then built the TCP/IP model.
It provides quality services.	It does not provide quality services.
The OSI model represents defines administration, interfaces and conventions. It describes clearly which layer provides services.	It does not mention the services, interfaces, and protocols.
The protocols of the OSI model are better unseen and can be returned with another appropriate protocol quickly.	The TCP/IP model protocols are not hidden, and we cannot fit a new protocol stack in it.
It is difficult as distinguished to TCP/IP.	It is simpler than OSI.
It provides both connection and connectionless oriented transmission in the network layer; however, only connection oriented transmission in the transport layer.	It provides connectionless transmission in the network layer and supports connecting and connectionless-oriented transmission in the transport layer.
It uses a vertical approach.	It uses a horizontal approach.
The smallest size of the OSI header is 5 bytes.	The smallest size of the TCP/IP header is 20 bytes.
Protocols are unknown in the OSI model and are returned while the technology modifies.	In TCP/IP, returning protocol is not difficult.

Similarities

- Both are logical models.
- Both define standards for networking.
- Both provide a framework for creating and implementing networking standards and devices.
- Both divide the network communication process into layers.
- In both models, a single layer defines a particular functionality and sets standards for that functionality only.
- Both models allow a manufacturer to make devices and network components that can coexist and work with the devices and components made by other manufacturers.
- Both models simplify the troubleshooting process by dividing complex functions into simpler components.
- Instead of defining the already defined standards and protocols, both models referenced them. For example, the Ethernet standards were already defined by IEEE before the creation of these models. So instead of defining them again both models used them as IEEE Ethernet standards.