

Answer to Question #73612, Programming & Computer Science / Computer Networks

Explain the layers of TCP/IP reference model. Compare its advantages and disadvantages with respect to OSI model.

Answer:

TCP/IP reference model four layers: Network Access, Internet, Transport, and Application.

The application layer is provided by the program that uses TCP/IP for communication. An application is a user process cooperating with another process usually on a different host.

The transport layer provides the end-to-end data transfer by delivering data from an application to its remote peer.

Internet layer shields the higher levels from the physical network architecture below it.

Network Access layer is the interface to the actual network hardware.

Advantages of TCP/IP reference model with respect to OSI model:

- It operated independently
- It is scalable
- Client/server architecture
- Supports a number of routing protocols
- Can be used to establish a connection between two computers

Disadvantages of TCP/IP reference model with respect to OSI model:

- The transport layer does not guarantee delivery of packets
- The model cannot be used in any other application
- Replacing protocol is not easy
- It has not clearly separated its services, interfaces and protocols

Reference: <http://dayaramb.files.wordpress.com/2011/03/computer-network-notes-pu.pdf>

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