

Both UDP and TCP use port numbers to identify the destination entity when delivering a message. Give two reasons for why these protocols invented a new abstract ID (port numbers), instead of using process IDs, which already existed when these protocols were designed.

- (1) Process ID is not static. Since process ID is assigned dynamically to the process when a process is created (forked), it cannot be used for well-known service such as HTTP.
- (2) In some situations, one process manages multiple sockets on different TSAPs. If process ID is used, it cannot be implemented since one process can have one process ID.

A Transport Services Access Point (TSAP) is an end-point for communication between the Transport layer (layer 4) and the Session layer in the OSI (Open Systems Interconnection) reference model. Each TSAP is an address that uniquely identifies a specific instantiation of a service.

Responsibilities of the Network Administrator

As a network administrator, your tasks generally fall into the following areas:

- Designing and planning the network
- Setting up the network
- Maintaining the network
- Expanding the network