

Transport Layer Introduction

Introduction

Next Layer in OSI Model is recognized as Transport Layer (Layer-4). All modules and procedures pertaining to transportation of data or data stream categorized into this layer. As all other layers, this layer speaks to its peer Transport layer of the remote host.

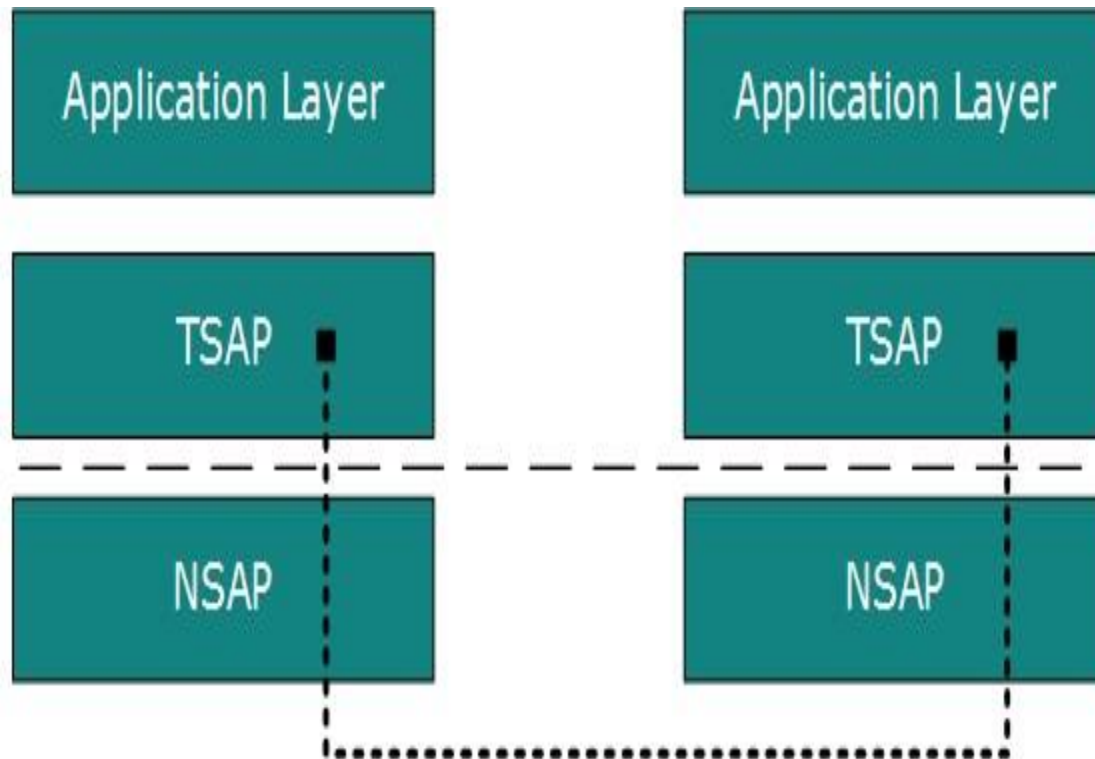
Transport layer offers peer-to-peer and end-to-end connection between two processes on remote hosts. Transport layer takes data from upper layer (i.e. Application layer) and then breaks it into smaller size segments numbers each byte and hands over to lower layer (Network Layer) for delivery.

Functions

- This Layer is the first one which breaks the information data, supplied by Application layer in to smaller units called segments. It numbers every byte in the segment and maintains their accounting.
- This layer ensures that data must be received in the same sequence in which it was sent.
- This layer provides end-to-end delivery of data between host which may or may not belong to the same subnet.
- All server processes intend to communicate over the network are equipped with well-known TSAPs (Transport Service Access Point) also known as port numbers.

End-to-end communication

A process on one host identifies its peer host on remote host by means of Transport Service Access Points, also known as Port numbers. TSAPs (Ports) are very well defined and a process which is trying to communicate with its peer knows this in advance.



[Image: Transport Layer | TSAP]

For example, when a DHCP client wants to communicate with remote DHCP server, it always request on port number 67. When a DNS client wants to communicate with remote DNS server it always requests on port number 53 (UDP).

Two main Transport layer protocols are:

- **Transmission Control Protocol**

Provides reliable communication between two hosts.

- **User Datagram Protocol**

Provides unreliable communication between two hosts.

Source:

http://www.tutorialspoint.com/data_communication_computer_network/transport_layer_introduction.htm