Service Access Point

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A **Service Access Point** (**SAP**) is an identifying label for network endpoints used in Open Systems Interconnection (OSI) networking.

The SAP is a conceptual location at which one OSI layer can request the services of another OSI layer. As an example, PD-SAP or PLME-SAP in IEEE 802.15.4 can be mentioned, where the Media Access Control (MAC) layer requests certain services from the Physical Layer. Service access points are also used in IEEE 802.2 Logical Link Control in Ethernet and similar Data Link Layer protocols.

When using the OSI Network system (CONS or CLNS), the base for constructing an address for a network element is an NSAP address, similar in concept to an IP address. OSI As is protocols as well as Asynchronous Transfer Mode (ATM) can use Transport (TSAP), Session (SSAP) or Presentation (PSAP) Service Access Points to specify a destination address for a connection. These SAPs consist of NSAP addresses combined with optional transport, session and presentation selectors, which can differentiate at any of the three layers between multiple services at that layer provided by a network element.

The protocol for each layer is concerned with providing a peer-to-peer service with the corresponding layer at the other end of the path (a hop for the lower three layers, end-to-end for the upper four). Each layer uses the services of the layers below it, by communicating via a Service Access Point (SAP).

During peer-to-peer communication, information at the sender (i.e. a Protocol Data Unit, PDU) flows down through each of the lower layers in the same node. At the lowest (physical layer) the information passes over the communications cable to the corresponding physical layer entity.

When information is received, the information (a Service Data Unit, SDU) is passed up to the next higher layer.

The boundaries between adjacent layers in the same system are called Interfaces. Service Primitives are used to pass the information, and the protocol entity to which the information is delivered is called a Service Access Point (SAP).

THE END