

1. Drew Sadler
2. ens3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
 inet 165.134.107.80 netmask 255.255.255.224 broadcast 165.134.107.95
 inet6 fe80::85dc:69e6:4998:2e79 prefixlen 64 scopeid 0x20<link>
 ether 52:54:00:bf:f4:05 txqueuelen 1000 (Ethernet)
 RX packets 1570087411 bytes 2196761911420 (1.9 TiB)
 RX errors 0 dropped 4777357 overruns 0 frame 0
 TX packets 1632400210 bytes 1757171772606 (1.5 TiB)
 TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
3. inet 165.134.107.80 netmask 255.255.255.224 broadcast 165.134.107.95
 inet6 fe80::85dc:69e6:4998:2e79 prefixlen 64 scopeid 0x20<link>
4. ether 52:54:00:bf:f4:05 txqueuelen 1000 (Ethernet)
5. DESKTOP-629ELPH
6. www.google.com has IPv6 address 2607:f8b0:4009:804::2004
7. slu.edu has address 173.213.236.59
 slu.edu mail is handled by 20 mxb-00234e01.gslb.pphosted.com.
 slu.edu mail is handled by 10 mxa-00234e01.gslb.pphosted.com.
 It possibly has multiple IP addresses due to proxies that are open, or other hosting sites
 for the same sites just built to handle mass amounts of logins and request around the
 site
8. Physical layer used an Ethernet protocol which was a physical electronic circuit that
 transmits raw bits of signals through a wire which connected networks with the speeds
 reaching around 1 Mbit/s and a 8 bit address that allowed differences between ports; it is
 the lowest layer of all as it works as the underlying medium it all functions off of. Making
 sense to be called the physical layer as it requires a non-digital medium to function off of,
 and one of the tangible layers out of all of them.
 The Data Link Layer functions on the hosts that are connected through the physical layer
 and contains the addresses of the source and destination using ARP(Address
 Resolution Protocol) as a way to transfer by using the IPv4 flat addresses to map
 functions and either requesting or responding to addresses and the size of the message
 and header depending on the address/packet size. Being called this as a layer due to
 addresses being shared between the 2 host that are connected allowing for a link
 between them that can have data sent over it, as it's building off of the physical layer and
 links the digital layer.
 For the Network Layer it uses the protocol of ICMP(Internet Control Message Protocol)
 which is used to send error messages and information showing if successful or not in it's
 operation when trying to communicate with another IP address, as ICMP is part of the IP
 packets and transfers the information of time, size, either TCP or UDP, or even fail or
 success along with the data sent as well. It is being best called the Network layer as
 many of the processes and protocols function off of the IP address and how it updates
 and gives information constantly about the process of transferring data from one network
 to another, being very centered around the management of the bytes in the transfer.
 For the Transport Layer using the Fibre Channel Protocol(FCP) that allows fast and
 reliable transfers of large amounts of bits, with the speed being as high as 16

gigabits/second using multiple layers to compartmentalize certain processes to go faster from interfacing the media, to transfer of frames, and interfacing with the channel acting as a large process with many functions in one application allowing easy ability to send bits between addresses. With the Network layer consisting of many protocols that control this spider web of connecting addresses of request and responses, it makes sense to call it the Transport Layer as it marginalizes and handles different points in the data. In the Session Layer using the RTP Control Protocol (RTCP) which is a protocol of a protocol Real-time Transport Protocol (RTP) and provides a structure of information over a RTP session which give feedback on service, out-of-band statistics, and other information such as packet counts letting controllers know the quality of service from their media. With it being hard to understand why it would be called the Session layer at first, but when looking at more of the protocols it shows a lot of processes that handle as a aid to another process or applications/sessions managing the sessions in a way that it acts as a reporter or controlling aid.

On the Presentation Layer it uses a protocol called Transport Layer Security (TLS) which gives security over the network by using cryptography and authenticity certifications between a linked session of two hosting computers, using different port numbers to sort out traffic and switches connections around by making different types of request making it a secure network due to it being a symmetric cipher. With my justification of its name being that many of its applications are HTTP and based on handling of an application and or modification of such, as well as it handles a lot of formats that are transmittable as it must be able to switch between many different formats when transmitted.

Lastly for the Application Layer using the Simple Object Access Protocol (SOAP) is used as a message exchanging structure that displays XML information that uses the Layer below to show the information over HTTP and allows users to authenticate, authorize, and communicate using XML over the servers, So that it can receive and send information that doesn't have to follow any language or platforms as it's not a part of it. With it making the most sense to be called the application layer due to many of its protocols having to use an interface either from the Presentation layer or independent application and is used to and by hose of the network being communicated over, being the highest layer of course since it uses every one below it in order to function.