Checkpoint Networking

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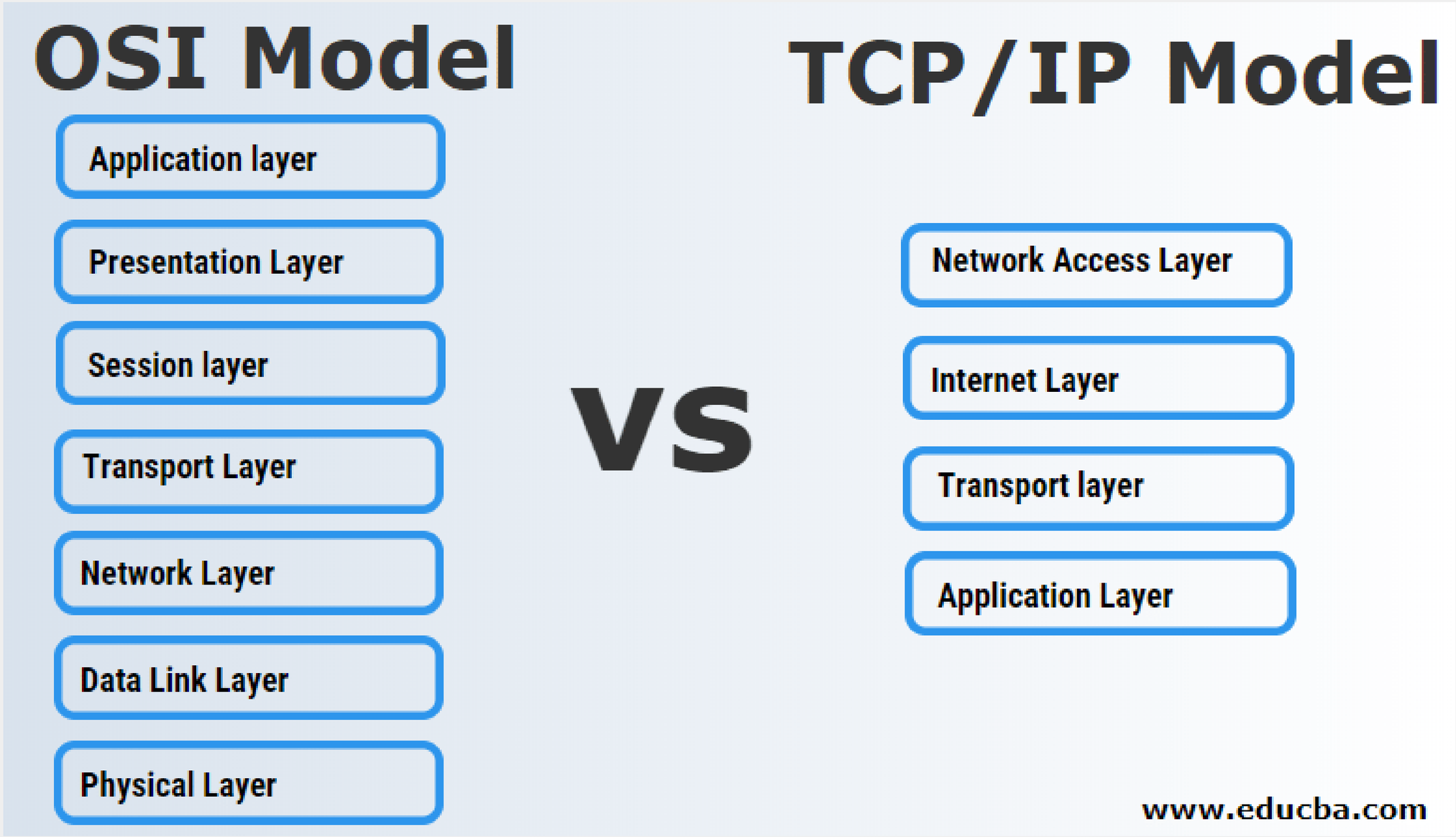
OSI Model
Application layer
Presentation Layer
Session layer
Transport Layer
Network Layer
Data Link Layer
Physical Layer
vs
TCP/IP Model
Network Access Layer
Internet Layer
Transport layer
Application Layer
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Difference between OSI model and TCP/IP model.

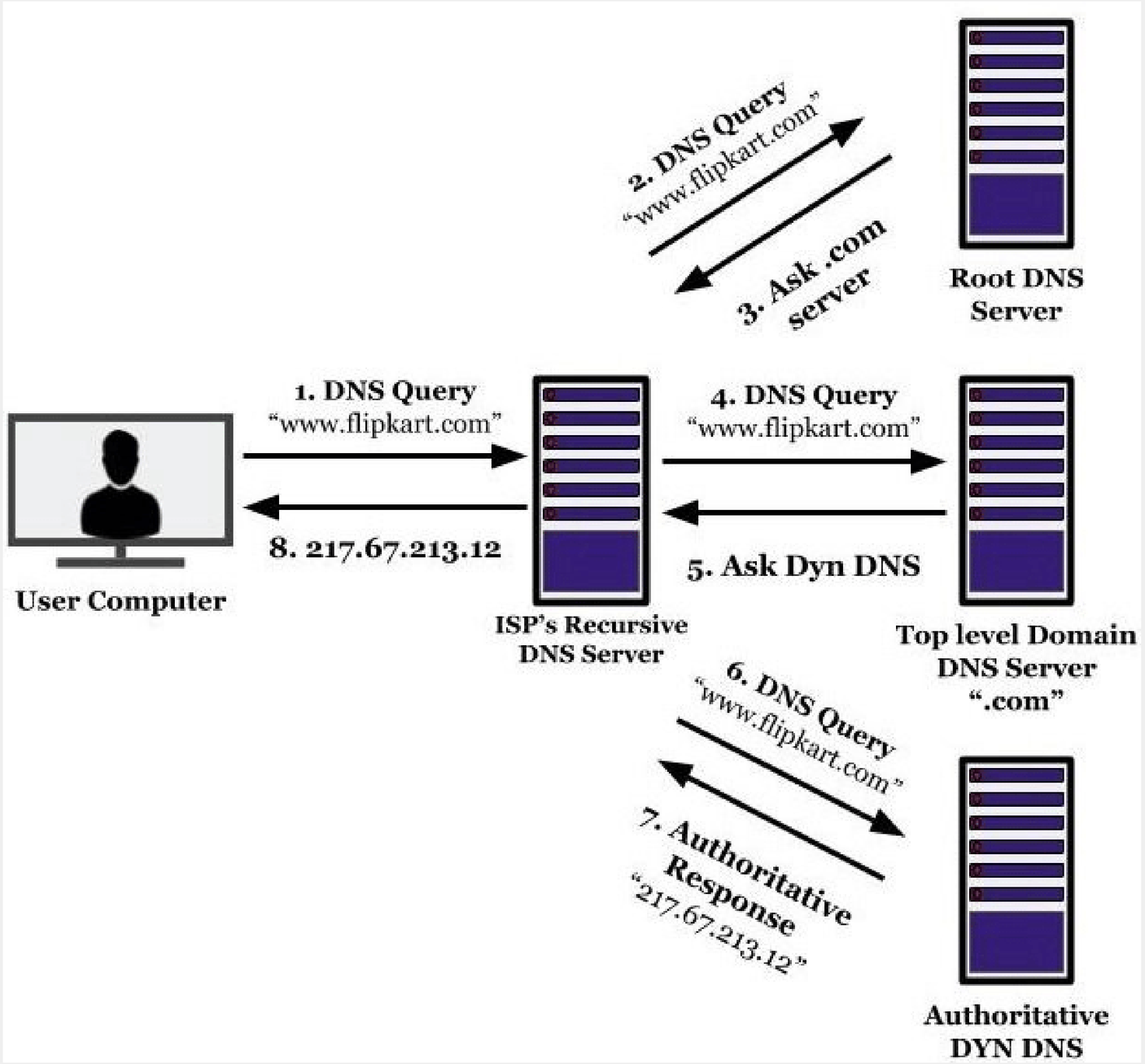
Is TCP/IP a part of the OSI Model?

There is a separate layer for Data Link and Physical in the OSI Model, whereas, the TCP/IP has a single Network Interface layer for the same. Similarly, there is Application, Presentation and Session layers in OSI, which are combined into one layer (Application) for TCP/IP.

What are the different layers?

The TCP/IP Model comprises four layers: Network Interface, Internet, Transport and Application. The OSI Model comprises seven layers: Physical, Data Link, Network, Transport, Session, Presentation and Application.

the application service layers and what happen when you write your url and click enter.



WHAT IS A DOMAIN NAME AND THE RELATION BETWEEN THE DNS AND THE @IP ADDRESS.

Domain name

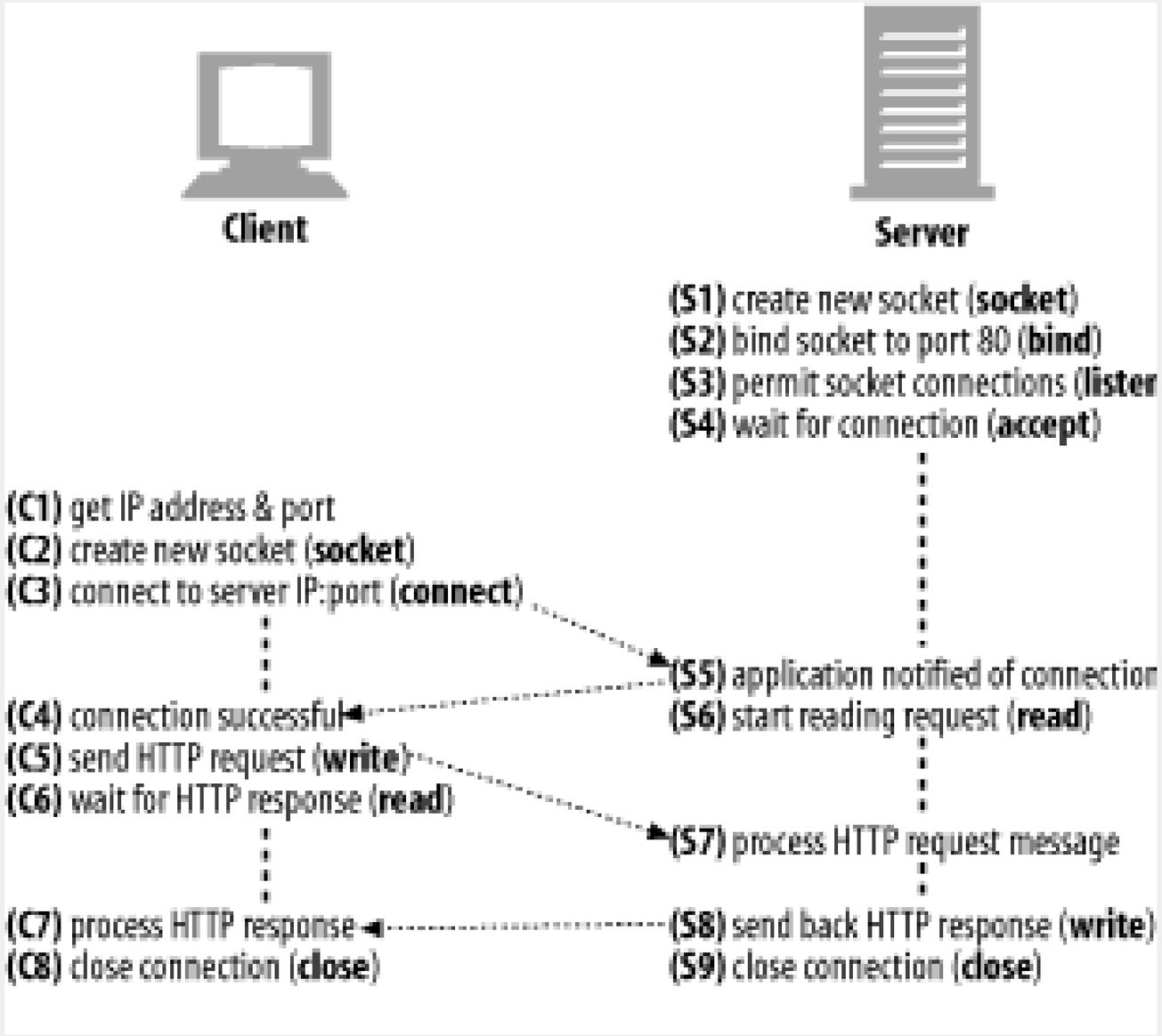
a domain name is a string of web addresses (such as numbers, letters, symbols, etc.) composed of various characters. It is mainly used to identify the name of a computer or computer group on the Internet, such ashttp://lanmicloud.comDomain name.

IP address

IP address is the permanent address format provided by IP protocol. It can assign a logical address to each network and host on the Internet. Each address has a unique IP address (equivalent to the Internet ID card, and the server IP address is the ID symbol of the server). IP address is a 32-bit binary number composed of four “8-bit binary numbers”, For example, 127.0.0.1.

The domain name is mainly aimed at the website address (convenient for people), and the IP address is for the Internet. They are connected through DNS. The general process is: the domain name is resolved into IP address through the resolution server (DNS) “access IP address” to achieve the purpose of accessing the website.
However, there is a problem to be noted here. Although domain name and IP address can access the same website, they are completely two concepts. There is a mapping relationship between domain name and IP, that is, a domain name can only be resolved to one IP address, but an IP address can be resolved and bound by multiple domain names. This is what we often call exclusive IP and shared IP, Exclusive IP means that you own an IP, and sharing is used by multiple people, just like sharing a bike. You, me and him can use it.

The TCP interconnection between your local host and the server.



HOW DATA TRANSFER OVER INTERNET (TCP PACKET)

The packet is the basic unit of information transferred across a network, consisting, at a minimum, of a header with the sending and receiving hosts' addresses, and a body with the data to be transferred. As the packet travels through the TCP/IP protocol stack, the protocols at each layer either add or remove fields from the basic header. When a protocol on the sending host adds data to the packet header, the process is called data encapsulation. Moreover, each layer has a different term for the altered packet, as shown in the following figure.