

# The TCP/IP Reference Model

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## 4- Application Layer

The application layer in TCP/IP is equivalent to the combined session, presentation, and application layers in the OSI model.

Many protocols are defined at this layer.

**Domain Name Service (DNS):** DNS protocol is used to **resolve Internet names** to **IP addresses**.

**Dynamic Host Configuration Protocol (DHCP):** Enables devices on a network to obtain **IP addresses and other information from a DHCP server**. DHCP allows a **host to obtain an IP address dynamically** when it connects to the network.

**File Transfer Protocol (FTP):** FTP was developed to allow for **file transfers** between a **client and a server**. (FTP) Protocol is used for interactive file transfer between systems.

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**Simple Mail Transfer Protocol (SMTP):** is used for the transfer of mail messages and attachments.

**Terminal Emulation Protocol (Telnet):** is used to provide remote access to servers

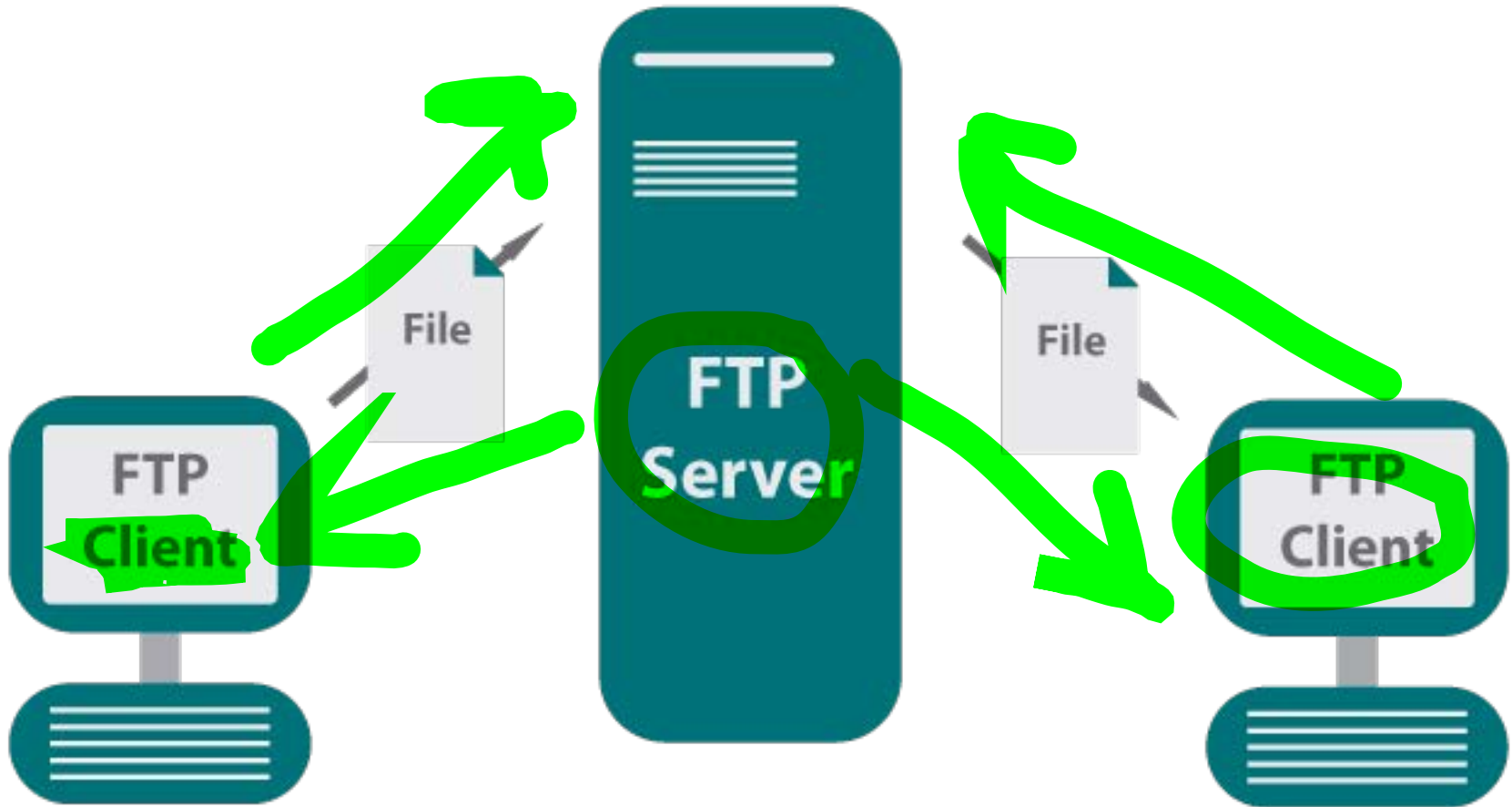
**Hypertext Transfer Protocol (HTTP):** is one of the protocols in the TCP/IP suite, was originally developed to publish and retrieve HTML pages and is now used for distributed, collaborative information systems. and networking devices.

**Uniform Resource Locator (URL):** When a web address (or URL) is typed into a web browser, the web browser establishes a connection to the web service running on the server using the HTTP protocol.



216.3.128.12

domain.com



ools

Help

ONS

URL: <http://www.internet.com>



# Difference between OSI Layer & TCP/IP Layer

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TCP/IP	OSI
Refers to transmission control protocol.	Refers to open systems interconnection.
It has 4 layers.	It has 7 layers.
TCP/IP is a Protocols	OSI is a Model
Network Layer in TCP/IP Model provides only Connectionless service.	Network Layer in OSI Model provides both Connection-Oriented & Connection less service.
Combines the session and presentation layer in the application layer.	Has separate session and presentation layer.

# ADDRESSING

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Four levels of addresses are used in an internet employing the TCP/IP protocols:

Physical (link) addresses, logical (IP) addresses, Port addresses, Specific addresses

