

OSI Model and Networking

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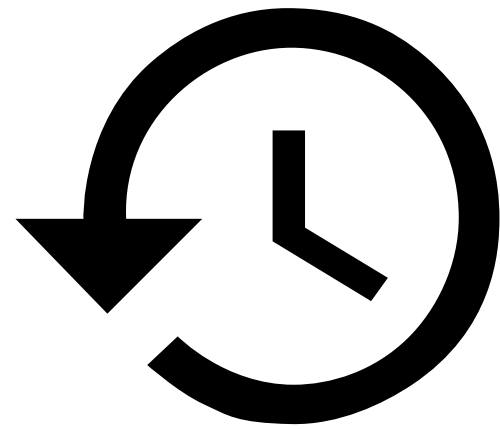
01 Osi model overview and history

02 Layers of OSI model

03 Pros & Cons

04 Summary

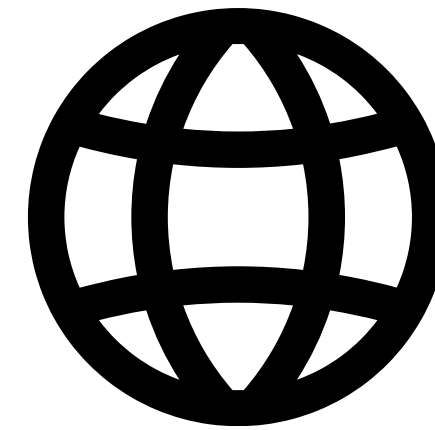
OSI model overview



late 1970s
by ISO



7 layers



network basics

The 7 Layers

1	<i>Application</i>	<i>Application</i>
2	<i>Presentation</i>	
3	<i>Session</i>	
4	<i>Transport</i>	<i>(Host-to- Host) Transport</i>
5	<i>Network</i>	<i>Internet</i>
6	<i>Data Link</i>	<i>Network Interface</i>
7	<i>Physical</i>	<i>(Hardware)</i>
<i>OSI Model</i>		<i>TCP/IP Model</i>

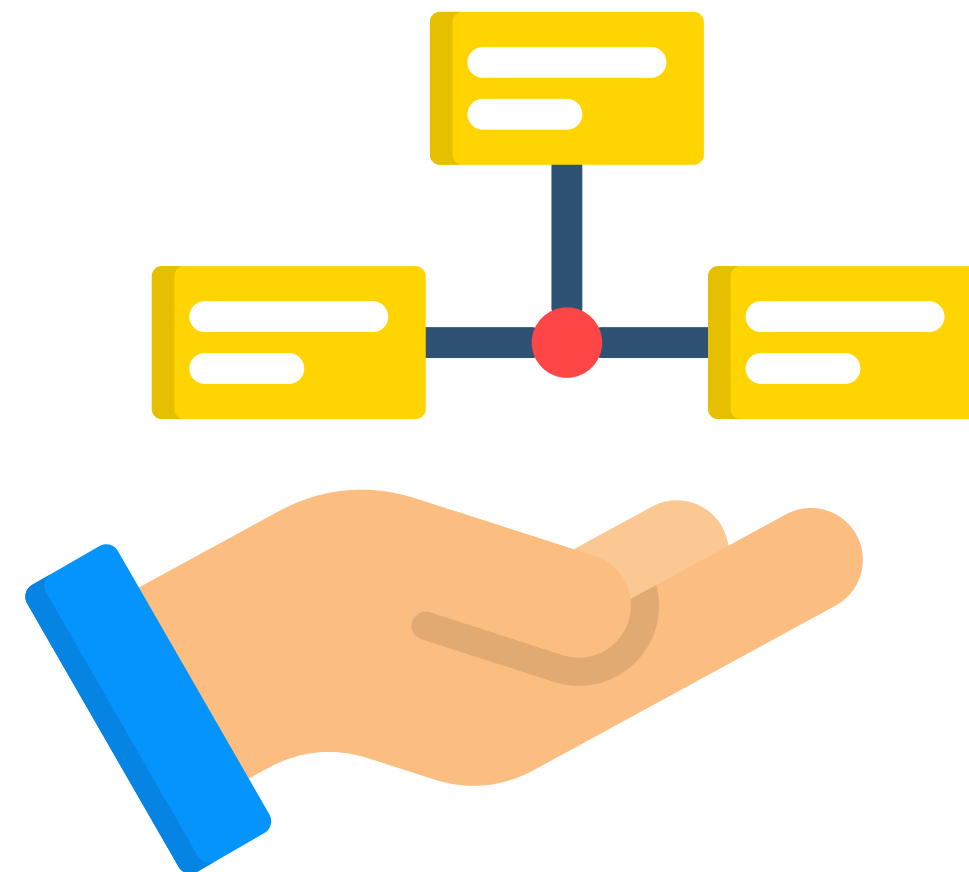
Characteristics of the OSI Model

Layered Architecture

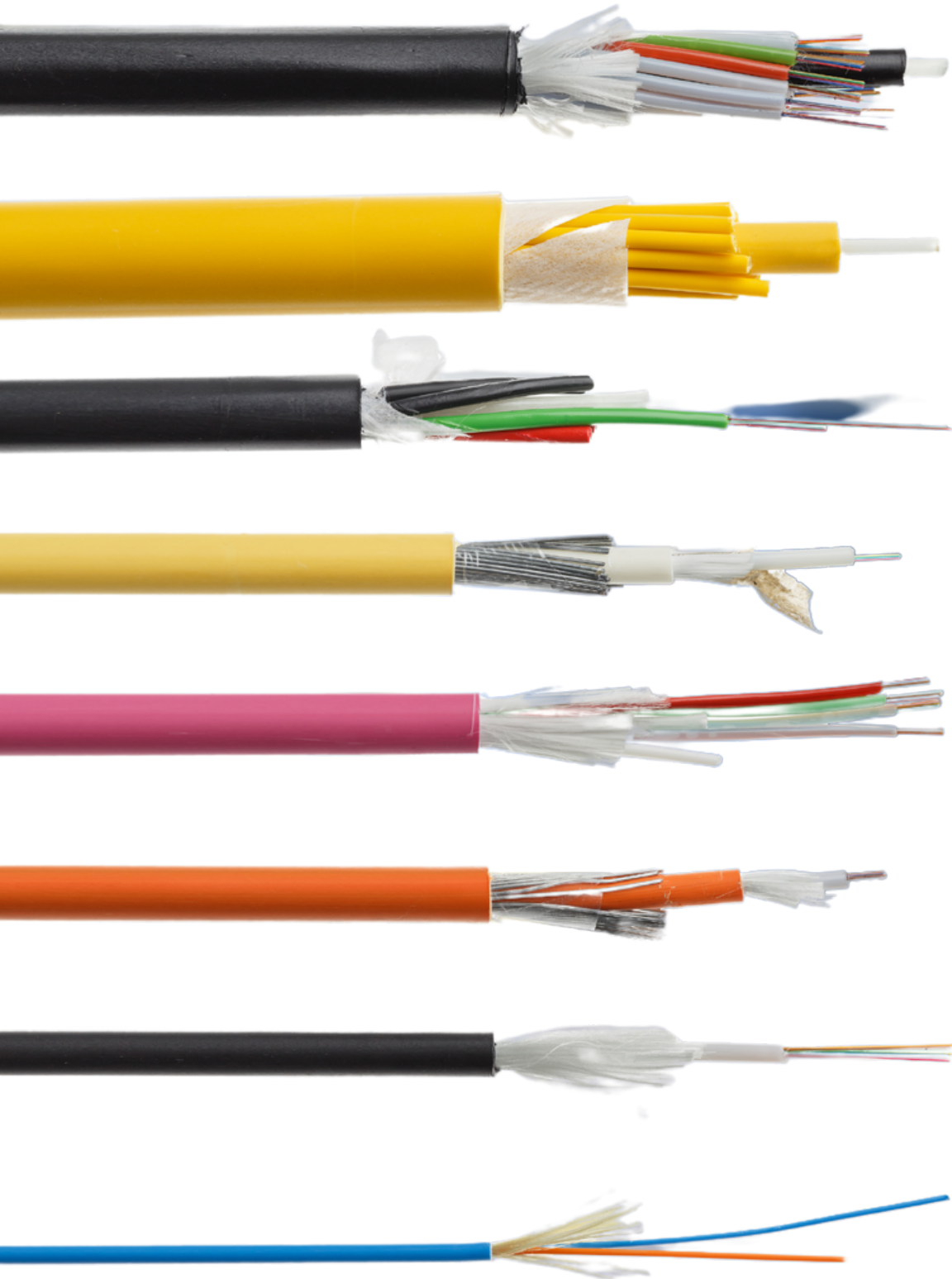
Hierarchical

Uniform Interfaces

Functional Distribution



1 Physical Layer



Ethernet

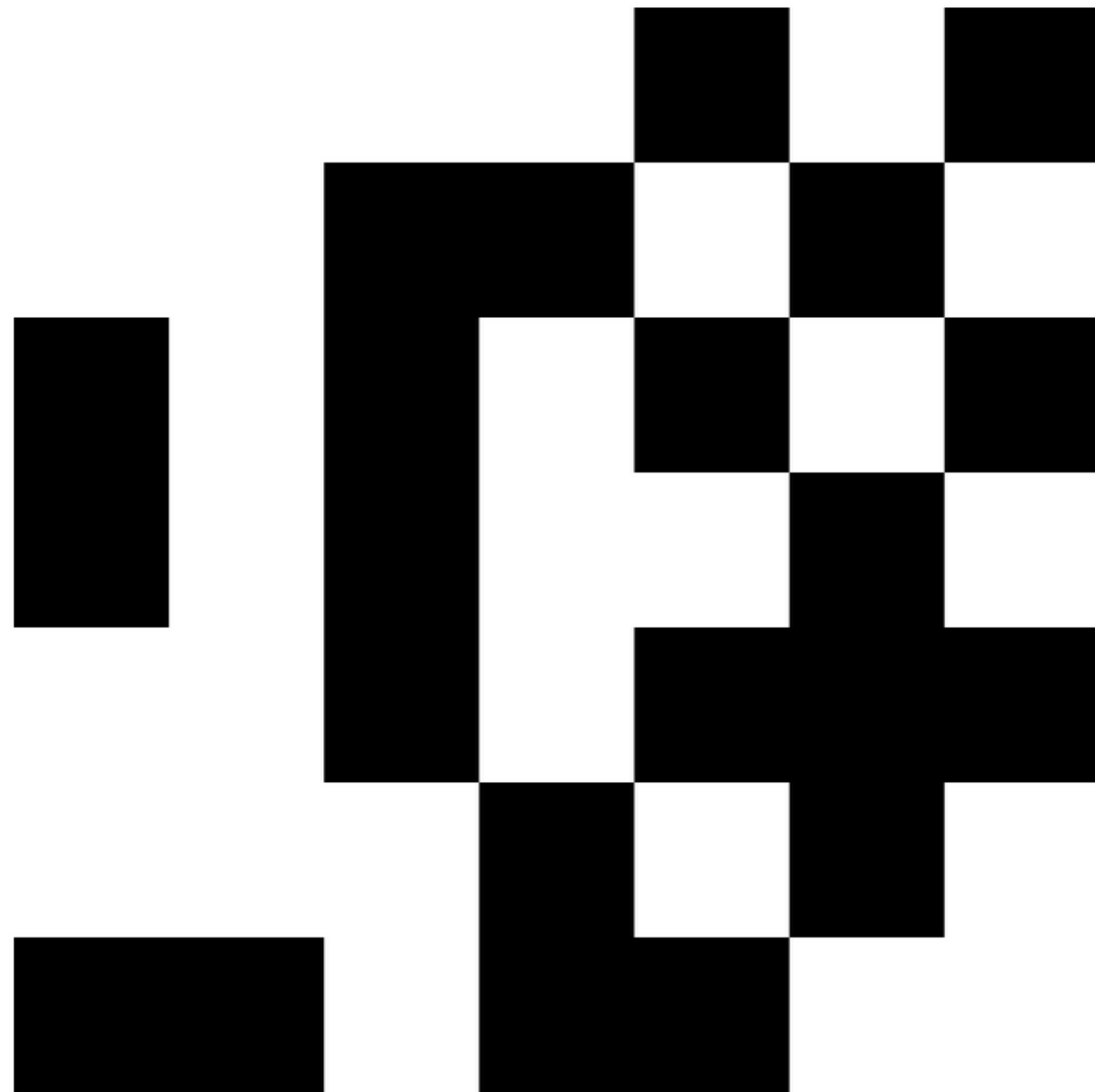
USB

Bluetooth

Wi-Fi

2 Data Link Layer

MAC: 0a:6a:ad:22:e2:b6



MAC address

3 Network Layer

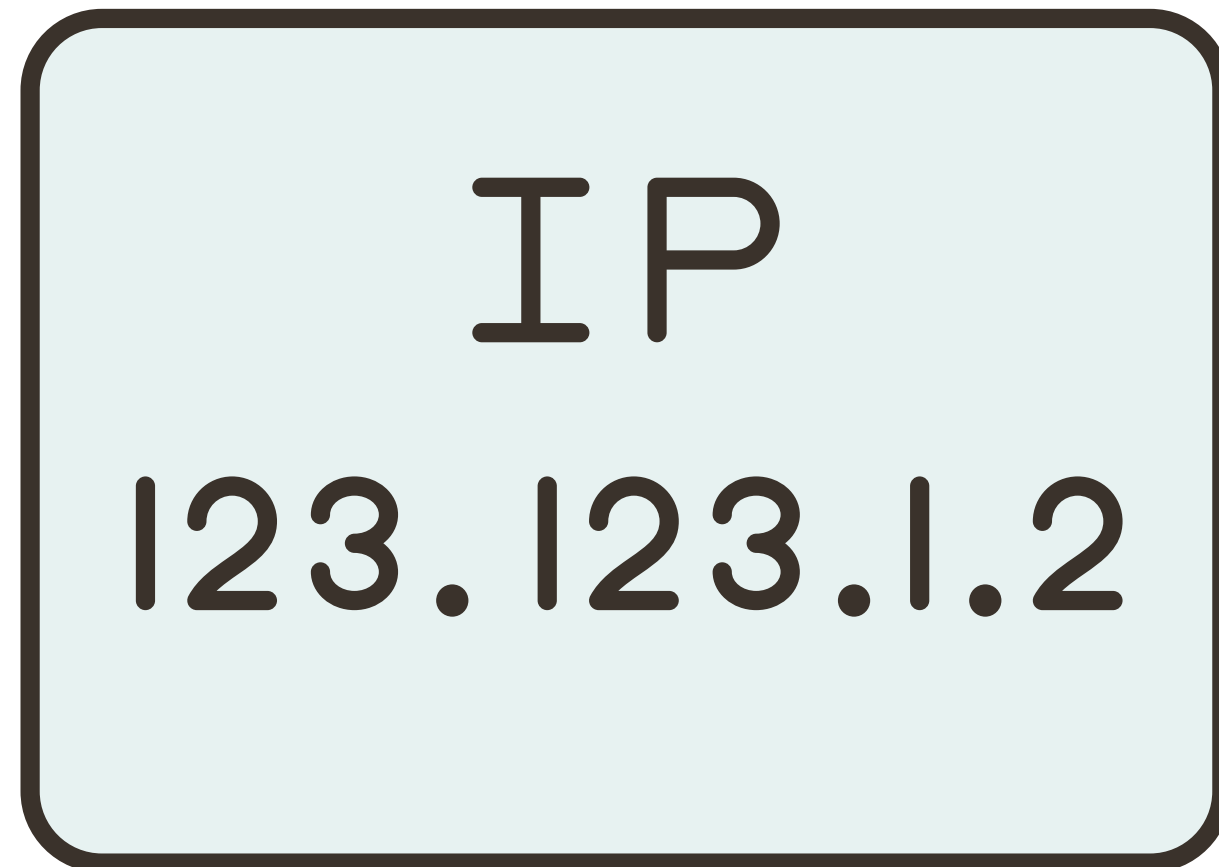
IP (IPv4, IPv6)

ICMP

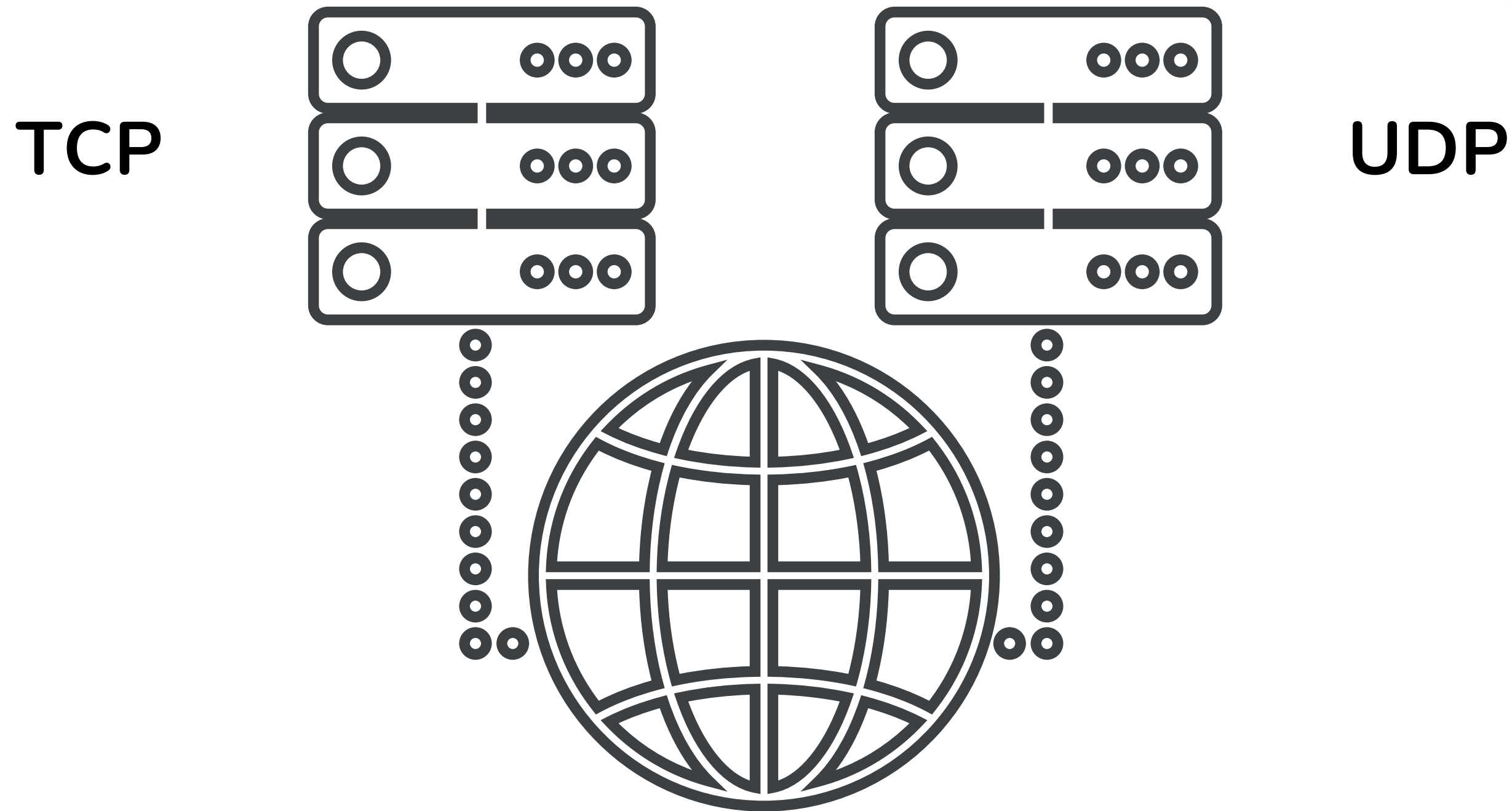
OSPF

RIP

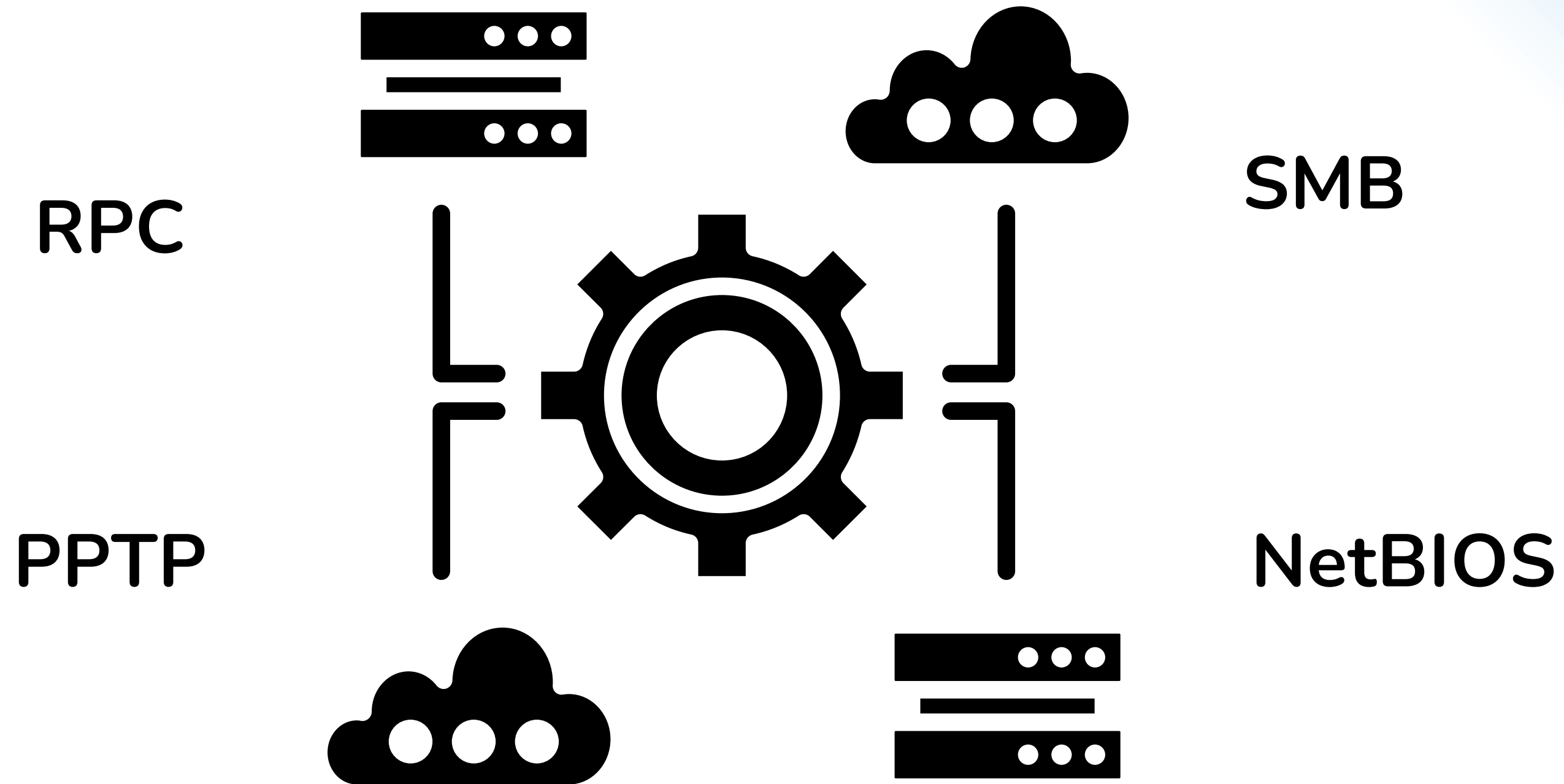
BGP



4 Transport Layer



5 Session Layer



6 Presentation Layer



SSL/TLS

ASCII

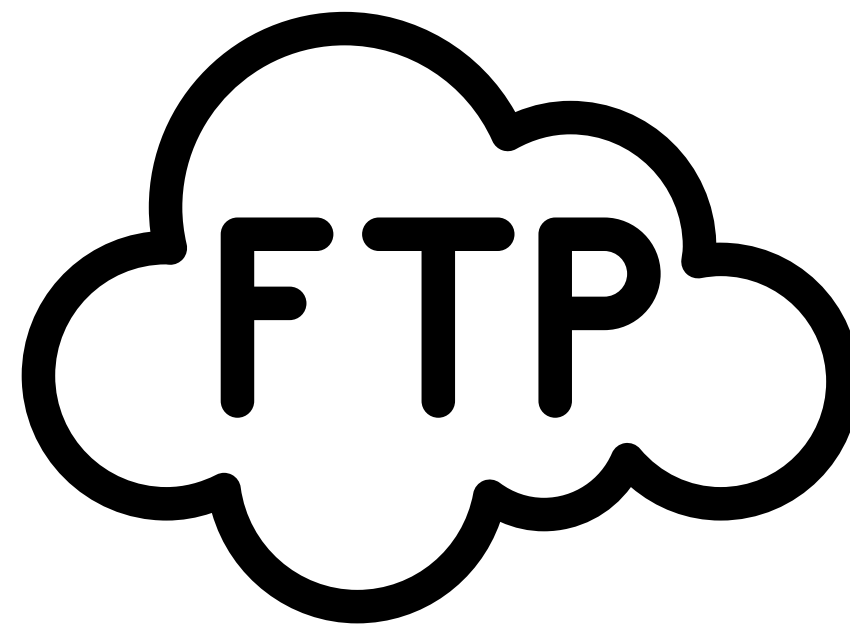
EBCDIC

MPEG

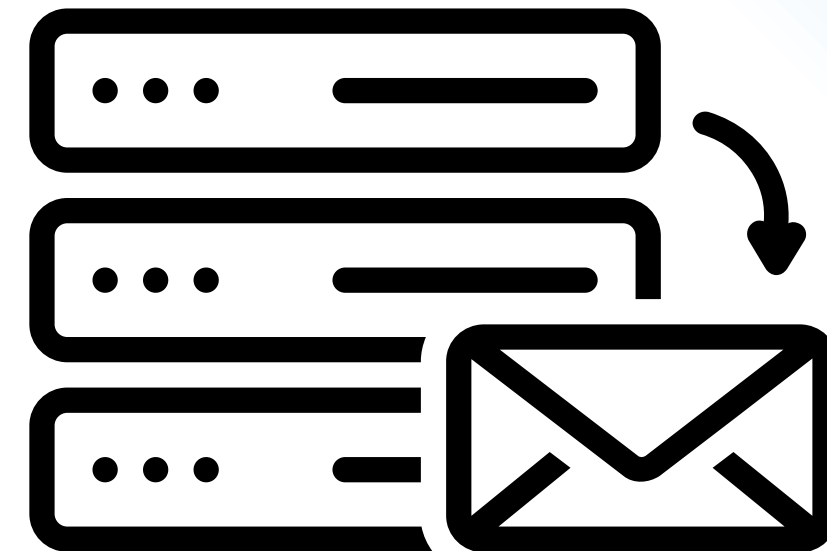
7 Application Layer



HTTP/HTTPS



FTP



SMTP/POP3

PROS

- Modular
- Works Well Together
- Easy to Fix Problems
- Flexible
- Consistent

CONS

- Complex
- Slower
- Not Always Fit
- Some Parts Outdated
- TCP/IP Preferred

Summary

- **OSI's basic principles help in understanding network architecture and troubleshooting.**
- **If you can understand the OSI model and its layers, you can also understand which protocols and devices can interoperate with each other.**