application —
message
ex) HTTP, DNS

사용자 상호작용(웹페이지,
응용 프로그램)
HTTP, DNS, P2P,
blockchain, video
streaming(CDN, DASH),
QUIC

transport —
segment
ex) TCP, UDP

프로세스 간 논리적 통신
multiplexing, UDP, rdt
TCP, congestion control

network —
datagram
ex) IP, routing
protocol

라우팅을 통한 호스트 간 논리적 통신
packet/circuit
switching,
data & control plane,
router, IP
network

link
frame
ex) ethernet,
wiFi

LAN 내부의
물리적
통신

physical —
데이터의
전기신호화

process = 응용 프로그램

application
(data 처리)

data ← port # [data]

host
process
port#
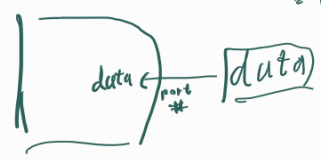
transport
(TCP/UDP)

host
iP

network
(forwarding
& routing)
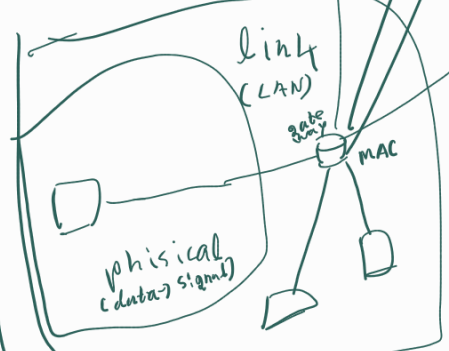
link
(LAN)

gate way

MAC

phisical
(data→signal)

network ⊃ AP (ISP 관리 네트워크)
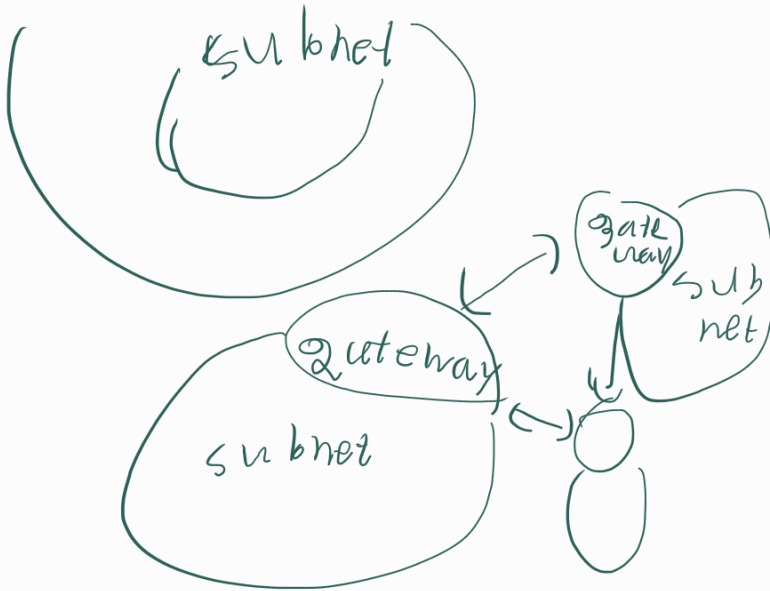
subnet

gate way

subnet

gate way

sub net

subnet

(network layer 개념)
subnet ; 네트워크를 작은
            단위로 나눈 것

local   (link)
network ; 라우터를 거치지)
(LAN)   안고 연결 가능한
            (physical)
            물리적 영역 내
            장치의 집합

목적서버

process process
1   2
ip   # port (transport)
(network)

HTTP: 웹페이지 요청
(application)

TLS (application) : 보안
④ +
    TCP: 통신 프로토콜
    (transport)
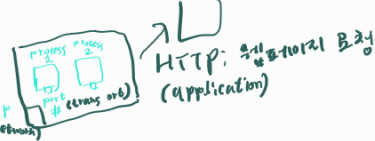
ARP (network) : ip → mac

gate way

③   DNS : domain-name
     (application)   → ip

LAN : 물리적 영역
      내 장치의
      집합

DHCP : ip 제공
(application)

② gateway
    mac 저장

broad
cast

①

Ethernet : 네트워크 연결
(link)