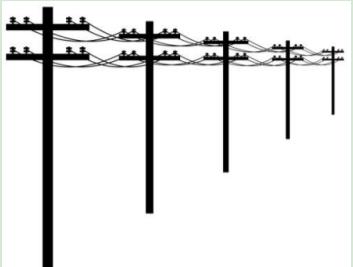


Wired network providers (optical and coax based)



Internet service provider

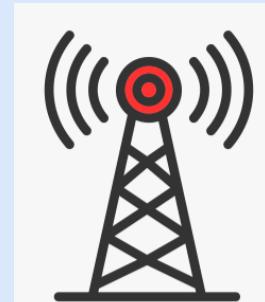


Wired (Optical)



Wired (COAX/Optical)

Wireless (mobile) network providers

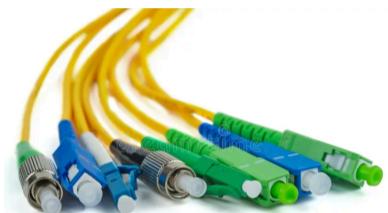


Mobile (4G LTE/5G)



Mobile (5G/4G LTE)

Physical connectivity mode service provider network (telephone poles or mobile networks)



Optical link
best, highest speed and lowest latency



Coax link
still good, acceptable speed (poor uplink) and OK latency



Mobile network link (no cables)
data plan limitations, LTE: limited speed and latency
5G is promising, but less coverage (III. district, Pomaz, etc.)



Example: One Optical modem (in bridge mode)
mapping optical to ethernet
provides PPPOE

OR/AND



Example: Telekom COAX modem (in bridge mode)
mapping optical to ethernet
provides PPPOE

OR/AND



Example: HUAWEI 5G Wi-Fi 6 router
provides "ethernet cable based" internet access (for failover)



Mikrotik RB5009U-Pr+S+IN
firewall/gateway
Default gateway, PPPOE client (internet access),
Failover HA internet logic
Site2Site VPN (wireguard),
firewall, nat, port forward, DHCP, VLANs, etc.

OR*
**(both
to
be
tested)**

* one subnet, one gateway :)
we plan to support both solutions



Fortigate 70F/71F
firewall/gateway
Default gateway, PPPOE client (internet access),
Failover HA internet logic
Site2Site VPN (IPSec),
firewall, nat, port forward, DHCP, VLANs, etc.



Switch: non managed (No VLAN), cheap @1G



Switch: non managed (No VLAN), 10G



Switch: managed (VLANs), 1G or 10G



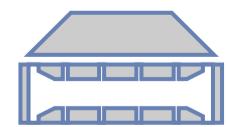
Servers



Printers



Clients (DHCP)



NAS