Ethernet

WiFi

Bluetooth

Zigbee

Cellular
- GSM
- UMT
- LTE
- 5G

Fibre channel

CAN-BUS

RS-485

Infiniband

OPA (OmniPath)

NVLINK

Slingshot

Aries

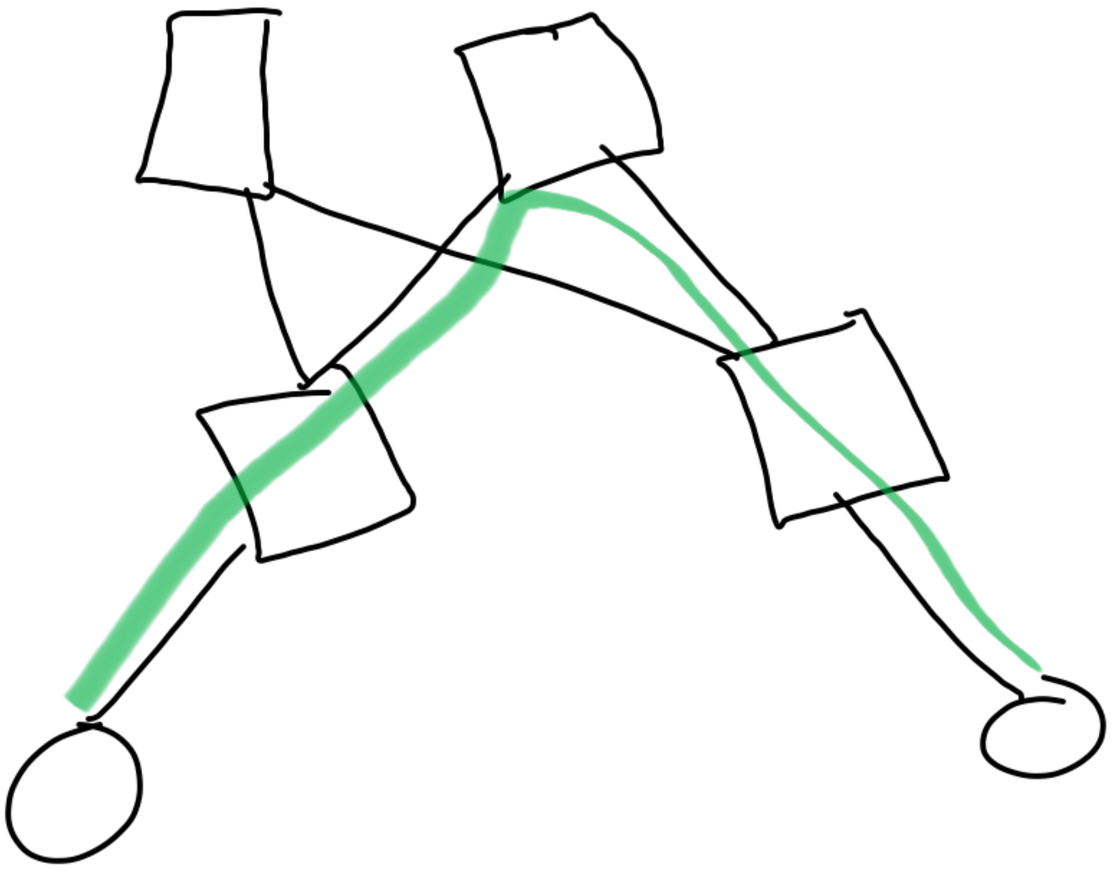
Bxi

Ethernet compatible eventually

add the best of both by Intel

Fabric — managed network

Ethernet - only very minimal fabric capabilities

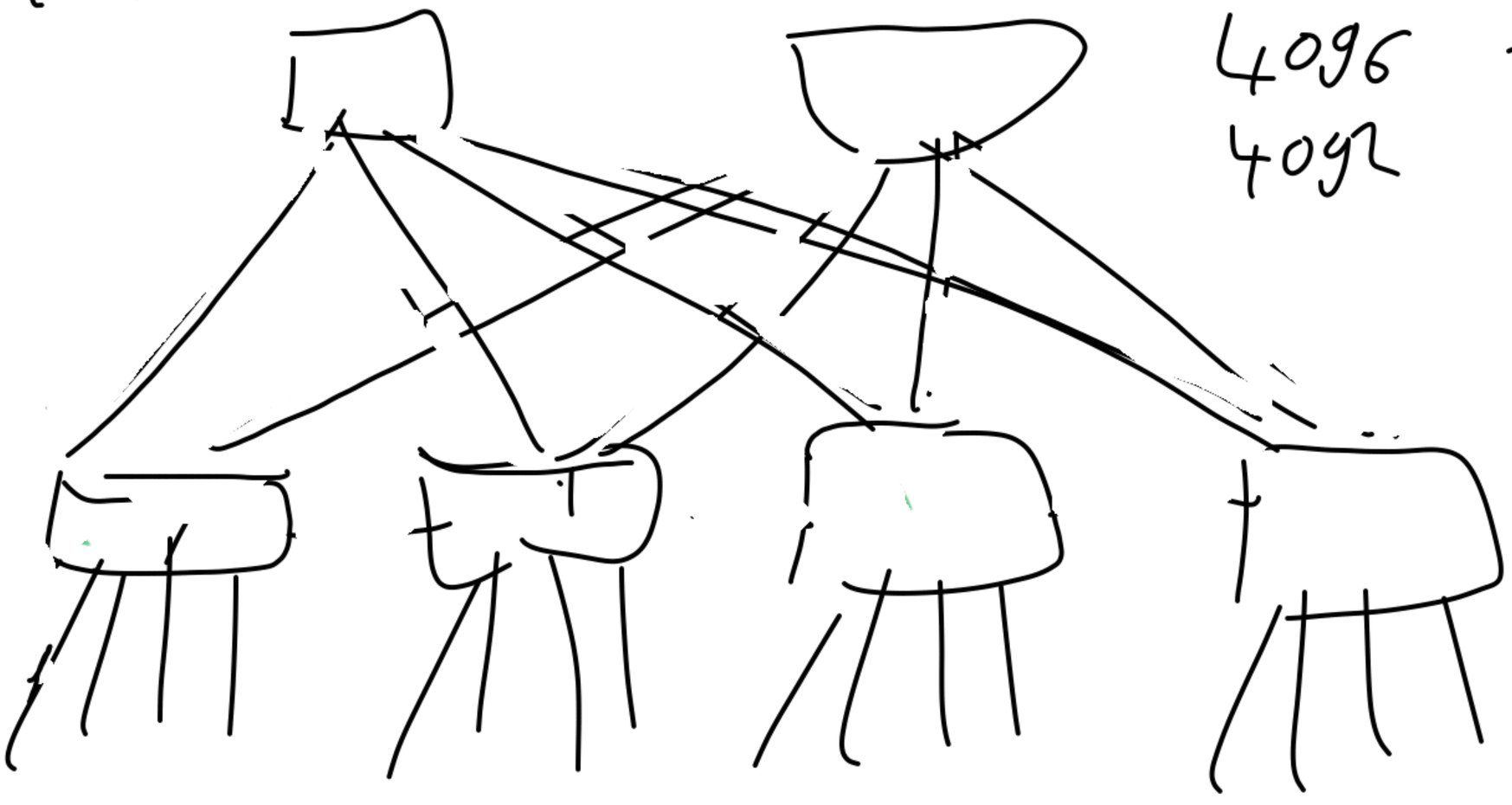


Fat Tree

non-blocking

blocking factor

2



IB v ETH

frame overhead

4 bytes 36 bytes

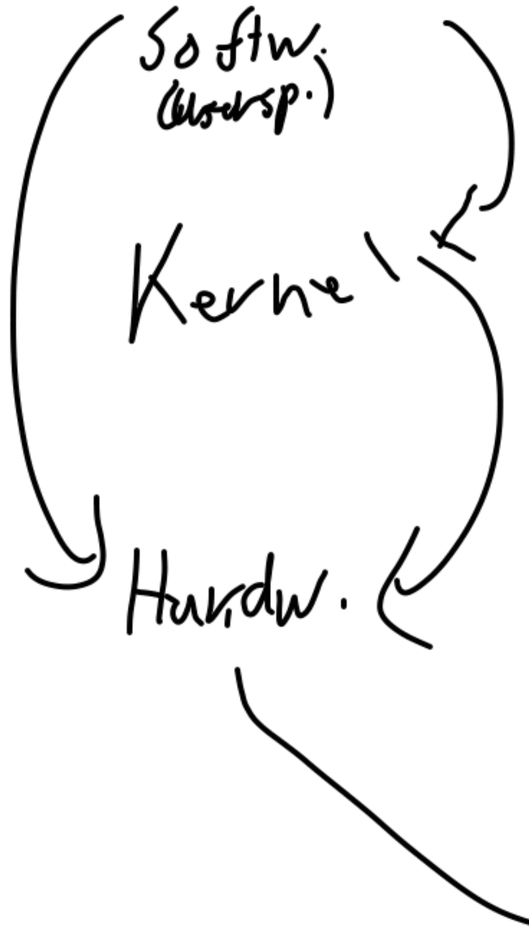
4096 153 90%

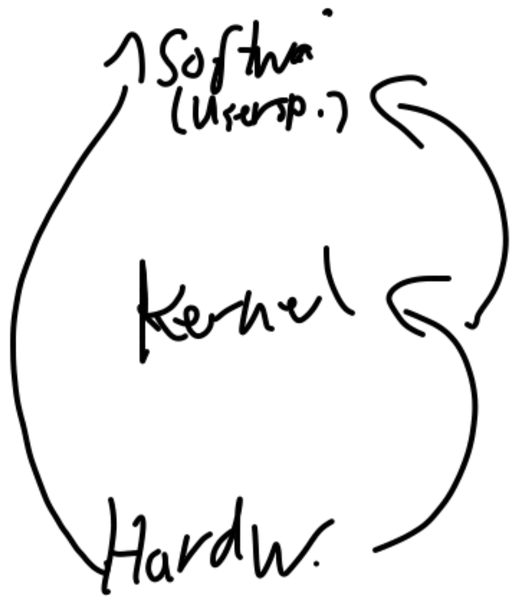
4092 1500 9000

RDMA vs Sockets (e.g. TCP)

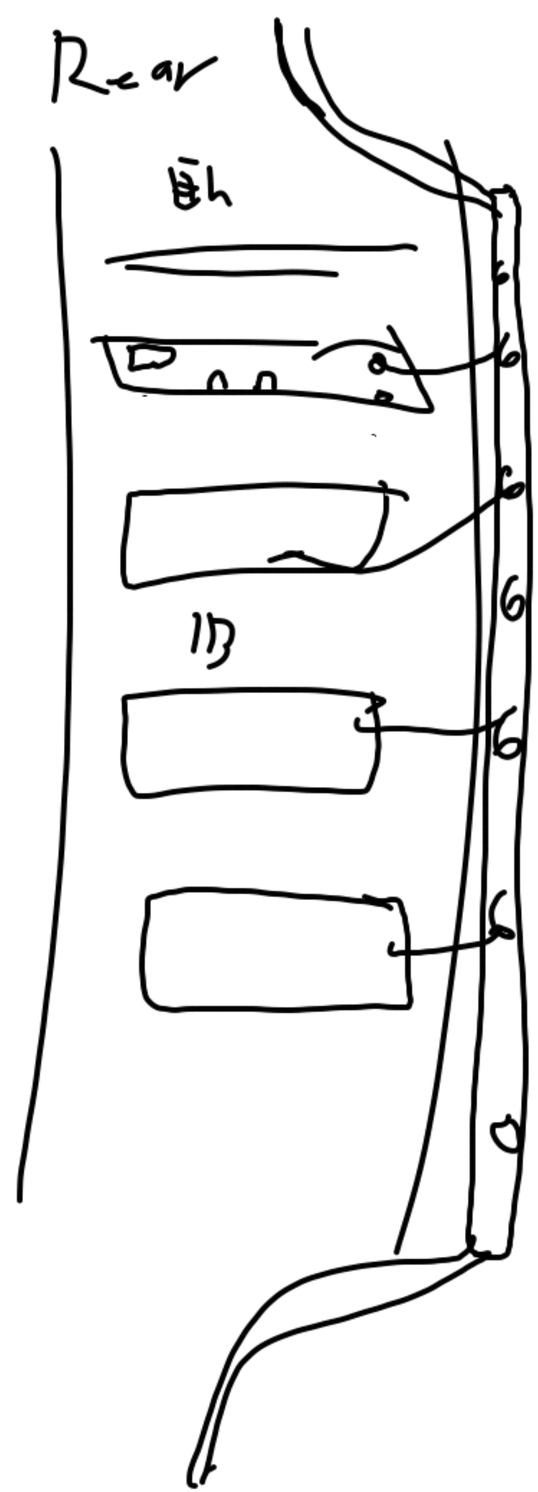
≈ 1–1.5 µs

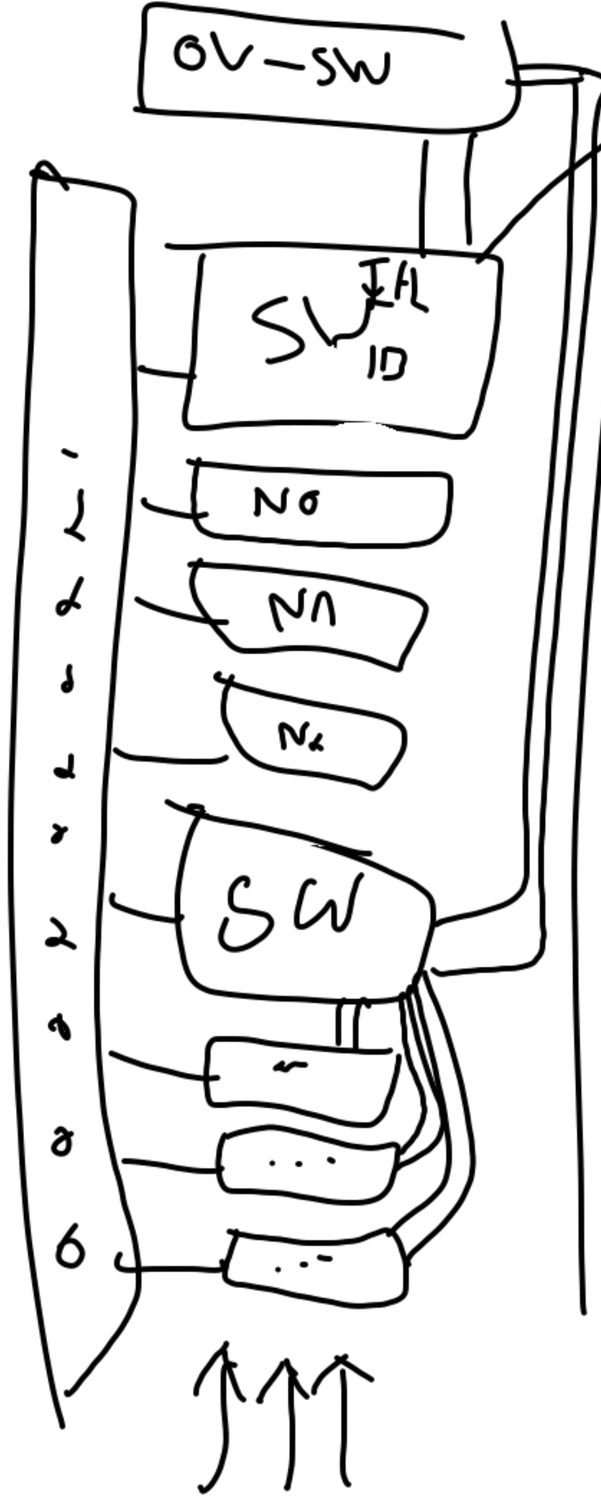
> 8 µs





Rear





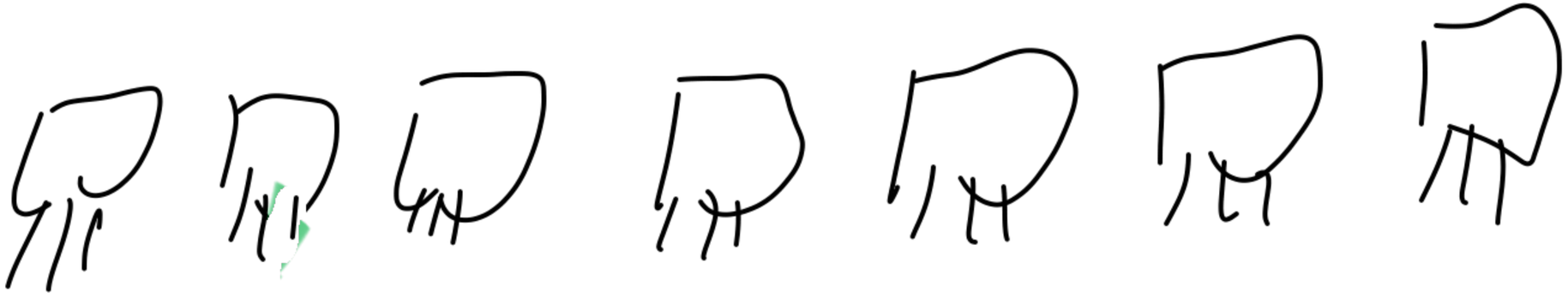
120 nodes + 120 uplinks → 240 ports 7 switches

36 ports per switch
non-blocking

→ 4 SW

11 switches 254
120 short cabl. 40 €
120 exp. cables 154

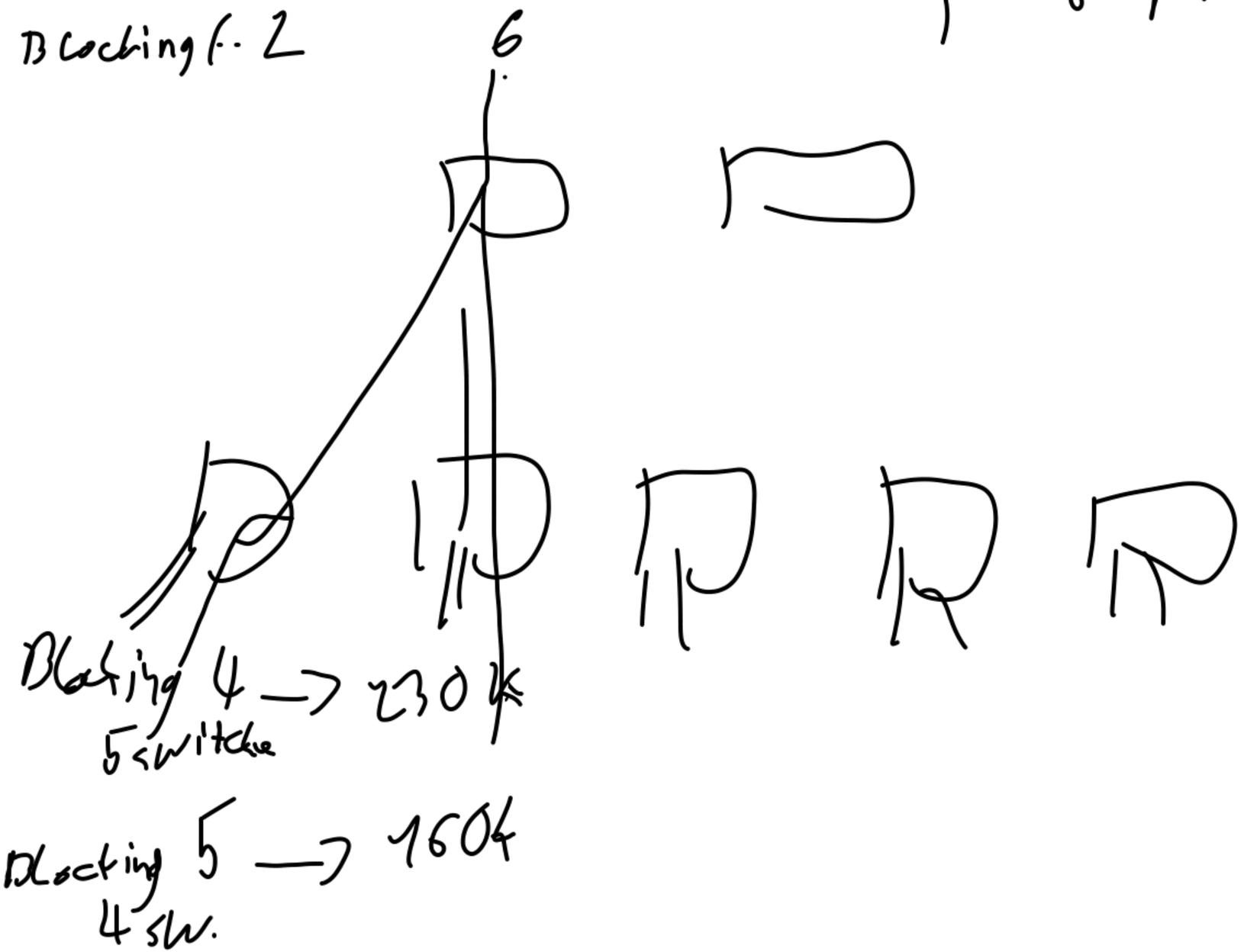
≈ 500 €



120 nodes + 60 uplinks → 180 ports 5 sw.

36 ports p. sw.

Blocking f. 2



60 ports

25 sw

7 sw 25k

no ch. cabl. 400

60 ex. cables 1.5k

≈ 310k