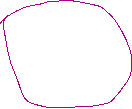
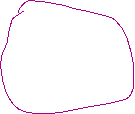
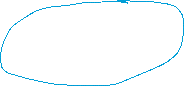
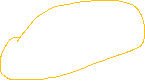
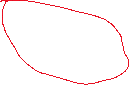
A diagram of a computer network

Description automatically generated



Network: 179.26.224.0/19 🡺 (32-19) = 13 bits for hosts 🡺 2^13 hosts

Network routers : 10.10.128.0/26 🡺 (32-26) = 6 bits for hosts 🡺 2^6 hosts

Netmask: 255.255.224.0

N + NA(network address) + BA(broadcast address) + 1 router

N01: 2 hosts

N12: 2 hosts

N24: 2 hosts

N14: 2 hosts

N34: 2 hosts

🡪LAN1 : 2048 + 3 = 2051 < 4096 =2^12 can host🡺 12 bits for hosts 🡺 netmask = /(32-12) = /20

🡺LAN2: 1021+3 = 1024 < 1024 = 2^10 can host🡺10 bits for hosts 🡺netmask = /(32-10) = /22

🡺LAN3: 256+3 = 259 < 512 can host = 2^9 🡺9 bits for hosts 🡺 netmask = /(32-9) = /23

🡺LAN4: 125+3 = 128 < 128 can host = 2^7 🡺 7 bits for hosts 🡺 netmask = /(32-7) = /25

=>N01 ; 2+ 2 = 4 < 4 = 2^2 can host🡺 2 bits for hosts 🡺 netmask = /(32-2) =/30

=>N12 ; 2+ 2 = 4 < 4 = 2^2 can host🡺 2 bits for hosts 🡺 netmask = /(32-2) =/30

=>N24 ; 2+ 2 = 4 < 4 = 2^2 can host🡺 2 bits for hosts 🡺 netmask = /(32-2) =/30

=>N14 ; 2+ 2 = 4 < 4 = 2^2 can host🡺 2 bits for hosts 🡺 netmask = /(32-2) =/30

=>N34 ; 2+ 2 = 4 < 4 = 2^2 can host🡺 2 bits for hosts 🡺 netmask = /(32-2) =/30

NETWORKS

-LAN1: Network = 179.26.224.0/20

BA = 179.26.224.0 + 4096 -1 = 179.26.1110 0000 0000 0000 + 0000 1111 1111 1111

= 179.26.239.255

Ip range: 179.26.224.0 - 179.26.239.255

-LAN2: Network =179.26.240.0 /22

BA = 179.26.241.0 + 1024 - 1 = 179.26.1111 0000 0000 0000 + 0000 0011 1111 1111 =

179.26.243.255

Ip range: 179.26.240.0 – 179.26.243.255

-LAN3 : Network = 179.26.244.0 /23

BA = 179.26.244.0 + 512 -1 = 179.26.1111 0100 0000 0000+ 0000 0001 1111 1111 =

179.26.245.255

Ip range: 179.26.244.0 - 179.26.245.255

-LAN4: Network = 179.26.246.0/25

BA = 179.26.246.0 + 128-1 = 179.26.246.127

Ip range: 179.26.246.0 -179.26.246.127

-N01: Network = 10.10.128.0/30

BA = 10.10.128.0+ 4-1 = 10.10.128.3

Ip range: 10.10.128.0- 10.10.128.3

-N12 Network = 10.10.128.4/30

BA = 10.10.128.4+ 3 = 255.255.224.7

-N24 Network = 10.10.128.8

BA = 10.10.128.11

-N14 Network = 10.10.128.12

BA = 10.10.128.12+ 3 = 10.10.128.15

-N34 Network = 10.10.128.16

BA = 10.10.128.19

**NETMASKS:**

**/20 = 255.255.240.0**

**/22 = 255.255.252.0**

**/23 = 255.255.254.0**

**/25 = 255.255.255.128**

**/30 = 255.255.255.252**