# 8Addressing

September 9, 2025

[ ]:
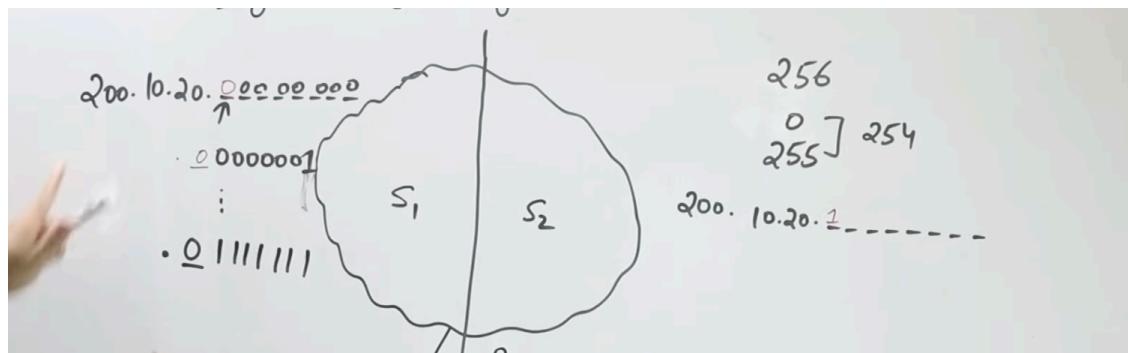
disadvantages of classefull addressing
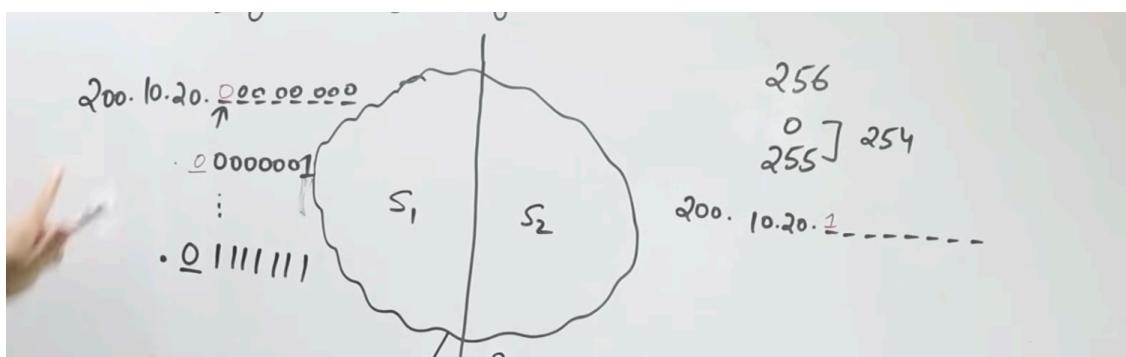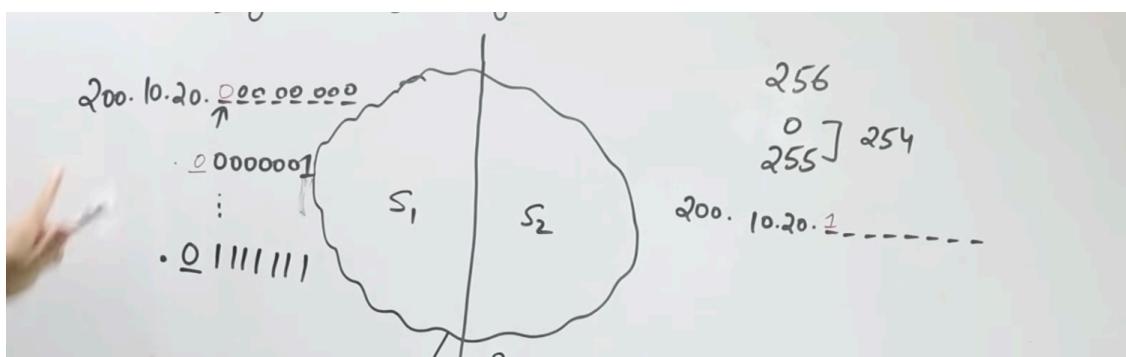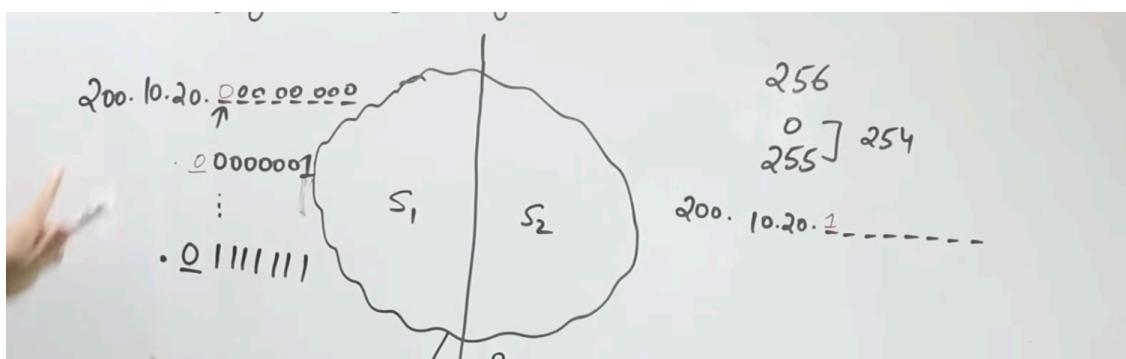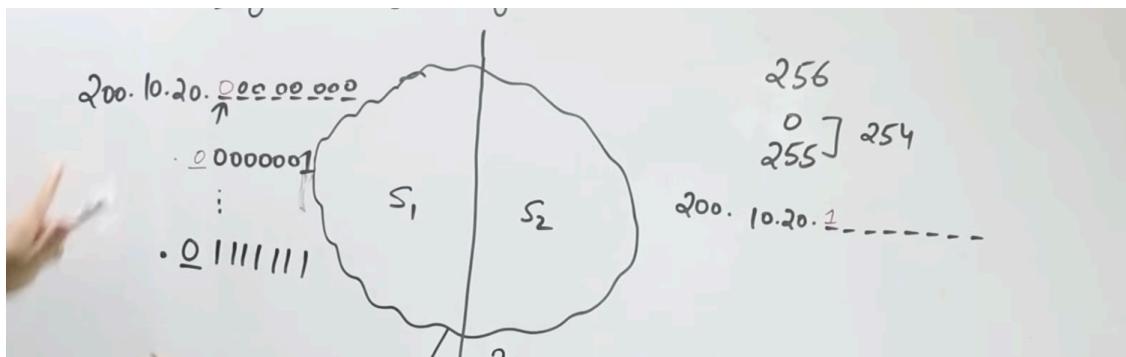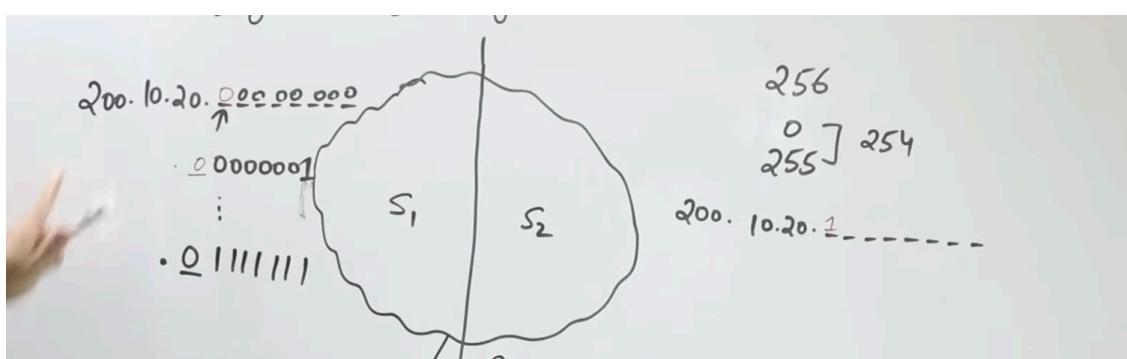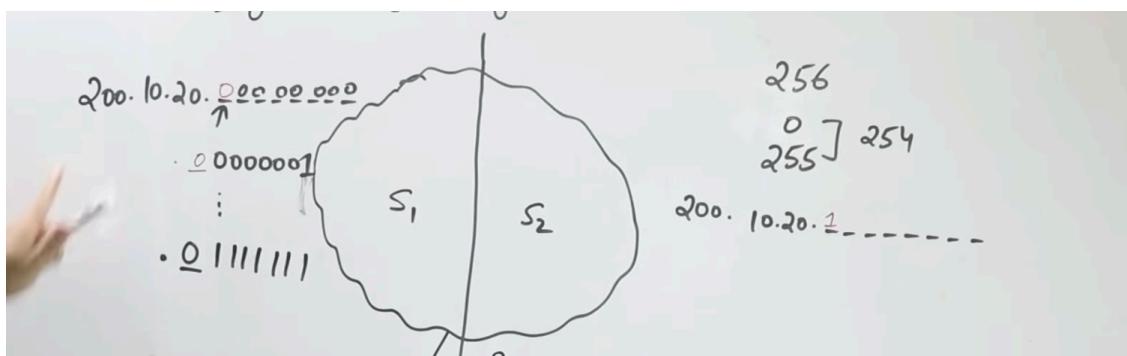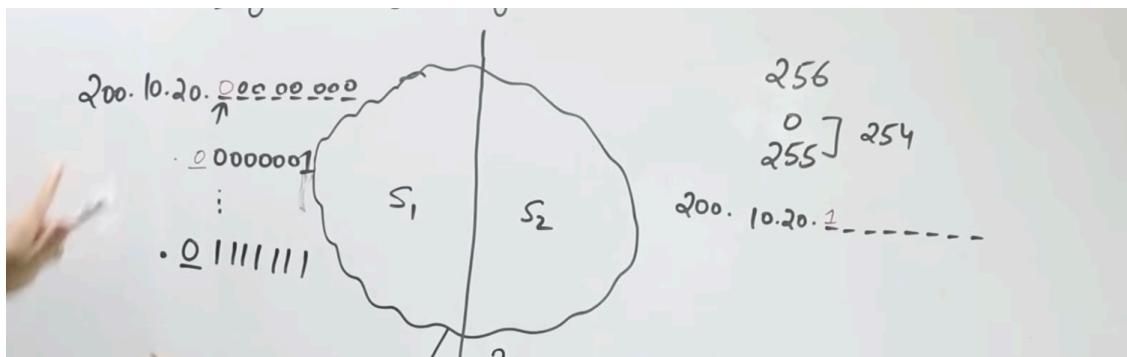

Less flexibility

As the networks is very big, problem of maintenance, we can use the concept of subnetting
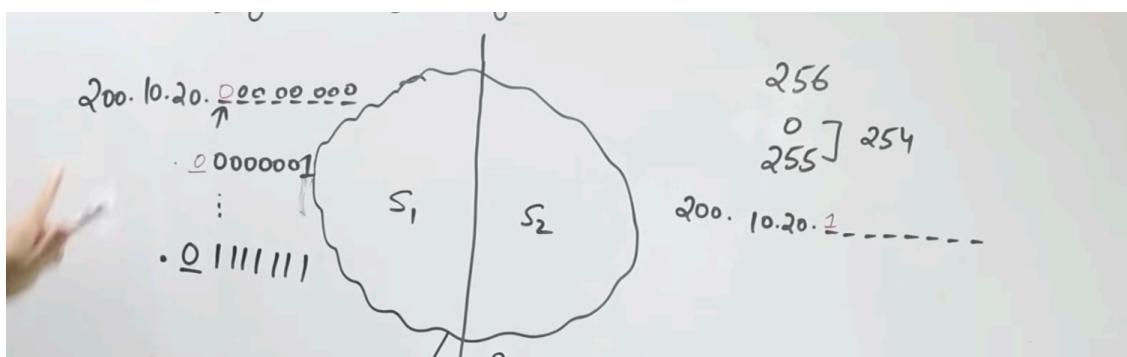
1 Classless addressing / CIDR

200. 10.20. $\underset{\uparrow}{0\,0\,0}\,0\,0\,0\,0\,0$

· $\underline{0}\,000000\,1$

⋮

· $\underline{0}\,111\,111$

S_1 | S_2

256

0
255] 254

200. 10.20. $\underline{1}$ ─ ─ ─ ─ ─ ─

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200. 10.20. $\underset{\uparrow}{0\,0\,0}\,0\,0\,0\,0\,0$

· $\underline{0}\,000000\,1$

⋮

· $\underline{0}\,111\,111$

S_1 | S_2

256

0
255] 254

200. 10.20. $\underline{1}$ ─ ─ ─ ─ ─ ─

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200. 10.20. $\underset{\uparrow}{0\,0\,0}\,0\,0\,0\,0\,0$

· $\underline{0}\,000000\,1$

⋮

· $\underline{0}\,111\,111$

S_1 | S_2

256

0
255] 254

200. 10.20. $\underline{1}$ ─ ─ ─ ─ ─ ─

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200. 10.20. $\underset{\uparrow}{0\,0\,0}\,0\,0\,0\,0\,0$

· $\underline{0}\,000000\,1$

⋮

· $\underline{0}\,111\,111$

S_1 | S_2

256

0
255] 254

200. 10.20. $\underline{1}$ ─ ─ ─ ─ ─ ─

200.10.20.$\underset{\uparrow}{000}$ 00 000   256

· $\underline{0}$ 0000001   0
                                              255 $]$ 254
    ⋮ S_1 S_2

· $\underline{0}$ 111 111   200.10.20.$\underline{1}$ _ _ _ _ _ _ _

200.10.20.$\underset{\uparrow}{000}$ 00 000   256

· $\underline{0}$ 0000001   0
                                              255 $]$ 254
    ⋮ S_1 S_2

· $\underline{0}$ 111 111   200.10.20.$\underline{1}$ _ _ _ _ _ _ _

200.10.20.$\underset{\uparrow}{000}$ 00 000   256

· $\underline{0}$ 0000001   0
                                              255 $]$ 254
    ⋮ S_1 S_2

· $\underline{0}$ 111 111   200.10.20.$\underline{1}$ _ _ _ _ _ _ _

2   Subnetting

200.10.20.$\underset{\uparrow}{000}$ 00 000   256

· $\underline{0}$ 0000001   0
                                              255 $]$ 254
    ⋮ S_1 S_2

· $\underline{0}$ 111 111   200.10.20.$\underline{1}$ _ _ _ _ _ _ _

EXample a clas C ip address

200.10.20.$\underset{\uparrow}{000}$ 00 000

.0 0000001

$\vdots$

.0 1111111

S_1 S_2

256

$\left.\begin{matrix}0 \\ 255\end{matrix}\right]$ 254

200.10.20.$\underline{1}$_____

3 In classless