We estimate that there would be necessary 6 subnetworks, with two more neccesary subnetworks in the future.

So we use 3 bits for subnetworking S=3 ; 2^3=8 subnetworks

So we have H=5, with 30 hosts per subnetwork. 2^5-2 = 30 hosts

We have the IP 212.100.60.0/27

Subnet mask = 11111111.11111111.11111111.11100000

255.255.255.248

IP adresses of the subnetworks:

|  |  |  |
| --- | --- | --- |
| Subnetwork | Subnetwork ID (binary) | IP adress of the subnetwork |
| #0 | 000 | 212.100.60.0  11010100.01100100.00111100.00000000 |
| #1 | 001 | 212.100.60.32  11010100.01100100.00111100.00100000 |
| #2 | 010 | 212.100.60.64  11010100.01100100.00111100.01000000 |
| #3 | 011 | 212.100.60.96  11010100.01100100.00111100.01100000 |
| #4 | 100 | 212.100.60.128  11010100.01100100.00111100.10000000 |
| #5 | 101 | 212.100.60.160  11010100.01100100.00111100.10100000 |
| #6 | 110 | 212.100.60.192  11010100.01100100.00111100.11000000 |
| #7 | 111 | 212.100.60.224  11010100.01100100.00111100.11100000 |

|  |  |  |  |
| --- | --- | --- | --- |
| Subnetwork | IP adress of the subnetwork | Hosts adresses range | Broadcast adress |
| #0 | 212.100.60.0 | 212.100.60.1-212.100.60.30 | 212.100.60.31 |
| #1 | 212.100.60.32 | 212.100.60.33-212.100.60.62 | 212.100.60.63 |
| #2 | 212.100.60.64 | 212.100.60.65-212.100.60.94 | 212.100.60.95 |
| #3 | 212.100.60.96 | 212.100.60.97-212.100.60.126 | 212.100.60.127 |
| #4 | 212.100.60.128 | 212.100.60.129-212.100.60.158 | 212.100.60.159 |
| #5 | 212.100.60.160 | 212.100.60.161-212.100.60.190 | 212.100.60.191 |
| #6 | 212.100.60.192 | 212.100.60.193-212.100.60.222 | 212.100.60.223 |
| #7 | 212.100.60.224 | 212.100.60.225-212.100.60.254 | 212.100.60.255 |

