|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
|  |  |  |  |  |  |  |  |  |

**192.168.10.10 /24 (255.255.255.0)**

**IP**

**192** (128+64=192)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 192 | **1** | **1** | **0** | **0** | **0** | **0** | **0** | **0** |

**168** (128+32+8=168)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 168 | **1** | **0** | **1** | **0** | **1** | **0** | **0** | **0** |

**10** (8+2=10)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 10 | **0** | **0** | **0** | **0** | **1** | **0** | **1** | **0** |

**10** (8+2=10)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 10 | **0** | **0** | **0** | **0** | **1** | **0** | **1** | **0** |

**MASQUE**

**255** (128+64+32+16+8+4+2+1=255).255.255.0

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 255 | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| 0 | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

**ip : 11000000.10101000.00001010.00001010**

**masque : 11111111.11111111.11111111.00000000**

**réseau : 11000000.10101000.00001010.00000000**

(1 et 1 = 1 // 1 et 0 = 0)

***NOMBRES DE MACHINES***

**masque :** 11111111.11111111.11111111**.00000000**

 **28-2=254 pc**

**192.168.10.0 reseau**

**255.255.255.0 masque**

**192.168.10.255 broadcast**

***DIVISER EN 4 SOUS RESEAUX***

**2²=4** (le résultat 4 est le nombre de sous réseau)

/24 on ajoute la puissance /24+2 = /26

donc 4 sous réseaux en /26 (255.255.255.192)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 192 /26 | **1** | **1** | **0** | **0** | **0** | **0** | **0** | **0** |
| /24 | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

11111111.11111111.11111111.11000000

Donc : 26-2=64-2 = 62 pc (+64-1)

1. 192.168.10.0 > 192.168.10.63 > passerelle 62
2. 192.168.10.64 > 192.168.10.127 > passerelle 126
3. 192.168.10.128 > 192.168.10.191 > passerelle 190
4. 192.168.10.192 > 192.168.10.255 > passerelle 254

 ########################

23=8 (8sous-reseaux) de /24 + 3 (la puissance)=/27

111111111.11111111.11111111.11100000

255 .255 .255 .224 (128+64+32)

111111111.11111111.11111111.11100000

25 – 2 = 32-2=30pc (par réseau +32-1)

1. 192.168.10.0 > 192.168.10.31 > p 30

2. 32 > 63 > p 62

3. 64 > 95 > p 94

4. 96 > 127 > p 126

5. 128 > 159 > p 158

6. 160 > 191 > p 190

7. 192 > 223 > p 222

8. 224 > 255 > p 254