**CALCULO DE SUBREDES**

|  |  |  |  |
| --- | --- | --- | --- |
| **CLASSE** | **PRIMEIRO OCTETO** | **RANGE** | **MÁSCARA PADRÃO** |
| A | 1-126 | 1.0.0.0 – 126.255.255.255 | 255.0.0.0/8 |
| B | 128-191 | 128.0.0.0 – 192.255.255.255 | 255.255.0.0/16 |
| C | 192-223 | 192.0.0.0 – 225.255.255.255 | 255.255.255/24 |

EXEMPLOS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **REDE** | **HOST** | **HOST** | **HOST** |
| CLASSE A | **110** | 14 | 20 | 12 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **REDE** | **REDE** | **HOST** | **HOST** |
| CLASSE B | **172** | **168** | 20 | 12 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **REDE** | **REDE** | **REDE** | **HOST** |
| CLASSE C | **200** | **178** | **12** | 242 |

**Observações:**

Em cada range de redes teremos dois números reservados

Ex. o primeiro -> REDE | último -> Broadcast

192.168.8.12 / 2552-.255.255.0/24

Rede: 192.168.8.0

Broadcast: 255.255.255.255

Endereços Classe C

|  |  |  |  |
| --- | --- | --- | --- |
| **Mascara** | **CIDR** | **HOSTS** | **SUBREDES** |
| 255.255.255.0 | 24 | 254 | 1 |
| 255.255.255.128 | 25 | 126 | 2 |
| 255.255.255.192 | 26 | 62 | 4 |
| 255.255.255.224 | 27 | 30 | 8 |
| 255.255.255.240 | 28 | 14 | 16 |
| 255.255.255.252 | 30 | 2 | 64 |

CALCULOS / SUBREDES

MASCARA = 255

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **27** | **26** | **25** | **24** | **23** | **22** | **21** | **20** |
| **126** | **64** | **32** | **16** | **8** | **4** | **2** | **1** | **255** |

MASCARA = 128

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **27** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **126** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **128** | **Acresce 0 do ultimo octeto = 2 subredes** |
|  | | | | | | | |  | **1111111.1111111.1111111.10000000** |
|  | **255.255.255.128 = 25 bits especifica o host** |

MASCARA=192

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **1** | **0** | **0** | **0** | **0** | **0** | **0** |
| **27** | **26** | **0** | **0** | **0** | **0** | **0** | **0** |
| **126** | **64** | **0** | **0** | **0** | **0** | **0** | **0** | **192** | Resumo: |
| **255-192=63 – numero de hosts por sub-rede**  **0 – 255 = 256**  **0 – 63 =64**  **256 / 64 = 4 | que é o total de sub-redes** | | | | | | | | | 255 – 192 = 63   * 0-63 * 64-127 * 128-191 * 192-255   256 / 64 = 4 Sub-redes. |

MASCARA

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **1** | **1** | **0** | **0** | **0** | **0** | **0** |
| **27** | **26** | **25** | **0** | **0** | **0** | **0** | **0** |
| **126** | **64** | **32** | **0** | **0** | **0** | **0** | **0** | **224** | **Resumo:** |
|  |  |  |  |  |  |  |  |  | **255 – 224 = 31**   * **0-31** * **32-63** * **64-91** * **92-123**   **256 / 32 = 4 Sub-redes.** |