

## **Cálculo de redes.**

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Fundamentos de Telecomunicaciones

<b>172.16.0.0/19</b>					
IP	10101100	00010000	00000000	00000000	172.16.0.0
MASK	11111111	11111111	11100000	00000000	255.255.224.0
ID	10101100	00010000	00000000	00000000	172.16.0.0/19
WCARD	00000000	00000000	00011111	11111111	0.0.31.255
BCAST	10101100	00010000	00011111	11111111	172.16.31.255
1ST IP	10101100	00010000	00000000	00000001	172.16.0.1
LAST IP	10101100	00010000	00011111	11111110	172.16.31.254

<b>172.16.0.0/21</b>					
IP	10101100	00010000	00000000	00000000	172.16.0.0
MASK	11111111	11111111	11111000	00000000	255.255.248.0
ID	10101100	00010000	00000000	00000000	172.16.0.0/21
WCARD	00000000	00000000	00000111	11111111	0.0.7.255
BCAST	10101100	00010000	00000111	11111111	172.16.7.255
1ST IP	10101100	00010000	00000000	00000001	172.16.0.1
LAST IP	10101100	00010000	00000111	11111110	172.16.7.254

<b>172.16.8.0/22</b>					
IP	10101100	00010000	00001000	00000000	172.16.8.0
MASK	11111111	11111111	11111100	00000000	255.255.252.0
ID	10101100	00010000	00001000	00000000	172.16.8.0/22
WCARD	00000000	00000000	00000011	11111111	0.0.3.255
BCAST	10101100	00010000	00001011	11111111	172.16.11.255
1ST IP	10101100	00010000	00001000	00000001	172.16.8.1
LAST IP	10101100	00010000	00001011	11111110	172.16.11.254

<b>172.16.12.0/22</b>					
IP	10101100	00010000	00001100	00000000	172.16.12.0
MASK	11111111	11111111	11111100	00000000	255.255.252.0
ID	10101100	00010000	00001100	00000000	172.16.12.0/22
WCARD	00000000	00000000	00000011	11111111	0.0.3.255
BCAST	10101100	00010000	00001111	11111111	172.16.15.255
1ST IP	10101100	00010000	00001100	00000001	172.16.12.1
LAST IP	10101100	00010000	00001111	11111110	172.16.16.254

<b>172.16.16.0/23</b>					
IP	10101100	00010000	00010000	00000000	172.16.16.0
MASK	11111111	11111111	11111110	00000000	255.255.254.0
ID	10101100	00010000	00010000	00000000	172.16.16.0/23
WCARD	00000000	00000000	00000001	11111111	0.0.1.255
BCAST	10101100	00010000	00010001	11111111	172.16.17.255
1ST IP	10101100	00010000	00010000	00000001	172.16.16.1
LAST IP	10101100	00010000	00010001	11111110	172.16.17.254

<b>172.16.18.0/23</b>					
IP	10101100	00010000	00010010	00000000	172.16.18.0
MASK	11111111	11111111	11111110	00000000	255.255.254.0
ID	10101100	00010000	00010010	00000000	172.16.18.0/23
WCARD	00000000	00000000	00000001	11111111	0.0.1.255
BCAST	10101100	00010000	00010010	11111111	172.16.18.255
1ST IP	10101100	00010000	00010010	00000001	172.16.18.1
LAST IP	10101100	00010000	00010010	11111110	172.16.18.254

<b>172.16.20.0/24</b>					
IP	10101100	00010000	00010100	00000000	172.16.20.0
MASK	11111111	11111111	11111111	00000000	255.255.255.0
ID	10101100	00010000	00010100	00000000	172.16.20.0/24
WCARD	00000000	00000000	00000000	11111111	0.0.0.255
BCAST	10101100	00010000	00010100	11111111	172.16.20.255
1ST IP	10101100	00010000	00010100	00000001	172.16.20.1
LAST IP	10101100	00010000	00010100	11111110	172.16.20.254

<b>172.16.21.0/24</b>					
IP	10101100	00010000	00010101	00000000	172.16.21.0
MASK	11111111	11111111	11111111	00000000	255.255.255.0
ID	10101100	00010000	00010101	00000000	172.16.21.0/24
WCARD	00000000	00000000	00000000	11111111	0.0.0.255
BCAST	10101100	00010000	00010101	11111111	172.16.21.255
1ST IP	10101100	00010000	00010101	00000001	172.16.21.1
LAST IP	10101100	00010000	00010101	11111110	172.16.21.254

<b>172.16.22.0/24</b>					
IP	10101100	00010000	00010110	00000000	172.16.22.0
MASK	11111111	11111111	11111111	00000000	255.255.255.0
ID	10101100	00010000	00010110	00000000	172.16.22.0/24
WCARD	00000000	00000000	00000000	11111111	0.0.0.255
BCAST	10101100	00010000	00010110	11111111	172.16.22.255
1ST IP	10101100	00010000	00010110	00000001	172.16.22.1
LAST IP	10101100	00010000	00010110	11111110	172.16.22.254

<b>172.16.23.0/25</b>					
IP	10101100	00010000	00010111	00000000	172.16.23.0
MASK	11111111	11111111	11111111	10000000	255.255.255.128
ID	10101100	00010000	00010111	00000000	172.16.23.0/25
WCARD	00000000	00000000	00000000	01111111	0.0.0.127
BCAST	10101100	00010000	00010111	01111111	172.16.23.127
1ST IP	10101100	00010000	00010111	00000001	172.16.23.1
LAST IP	10101100	00010000	00010111	01111110	172.16.23.126

172.16.23.127/26					
IP	10101100	00010000	00010111	01111111	172.16.23.127
MASK	11111111	11111111	11111111	11000000	255.255.255.192
ID	10101100	00010000	00010111	01000000	172.16.23.64/26
WCARD	00000000	00000000	00000000	00111111	0.0.0.63
BCAST	10101100	00010000	00010111	01111111	172.16.23.127
1ST IP	10101100	00010000	00010111	01000001	172.16.23.65
LAST IP	10101100	00010000	00010111	01111110	172.16.23.126