



UNIVERSIDAD DE LAS FUERZAS ARMADAS

REDES DE COMPUTADORES

DEPARTAMENTO DE CIENCIAS DE LA COMPUTACIÓN

Deber 3: IPs Binaria a Decimal y Decimal a Binaria

Estudiantes:

Ednan Josué Merino Calderón

Docente:

Ing. Walter Marcelo Fuertes Diaz

1. Objetivos de Aprendizaje

1. Comprender las Direcciones IP y sus Representaciones Binarias y Decimales. Entender cómo se representan las direcciones IP en formato binario y decimal.
2. Realizar Conversiones de Direcciones IP entre Binario y Decimal, seleccionar 10 direcciones IP en formato binario y convertirlas a formato decimal y seleccionar 10 direcciones IP en formato decimal y convertirlas a formato binario.

2. Desarrollo

Transformar 10 direcciones ip decimales a binarias y 10 direcciones binarias a decimales.

2.1. Decimal a Binario

2.1.1. Transformar 193.178.101.11

| 193 | | | | | | | | 178 | | | | | | | | 101 | | | | | | | | 11 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 128 | 64 | 0 | 0 | 0 | 0 | 0 | 1 | 128 | 0 | 32 | 16 | 0 | 0 | 2 | 0 | 0 | 64 | 32 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | 2 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |

Figura 1: 193.178.101.11 a Binario

La Respuesta es: **11000001.01100100.01100101.00001011**

2.1.2. Transformar 150.130.99.10

| 150 | | | | | | | | 130 | | | | | | | | 99 | | | | | | | | 10 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 128 | 0 | 0 | 16 | 0 | 4 | 2 | 0 | 128 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 64 | 32 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | 2 | 0 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |

Figura 2: 150.130.99.10 a Binario

La Respuesta es: **10010110.10000010.01100010.00001110**

Deber 3: IPs Binaria a Decimal y Decimal a Binaria

2.1.3. Transformar 120.101.90.2

| 120 | | | | | | | | 101 | | | | | | | | 90 | | | | | | | | 2 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 0 | 64 | 32 | 16 | 8 | 0 | 0 | 0 | 0 | 64 | 32 | 0 | 0 | 4 | 0 | 1 | 0 | 64 | 0 | 16 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |

Figura 3: 120.101.90.2 a Binario

La Respuesta es: **01111000.01100101.01011010.00000010**

2.1.4. Transformar 128.45.7.1

| 128 | | | | | | | | 45 | | | | | | | | 7 | | | | | | | | 1 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 128 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 8 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |

Figura 4: 128.45.7.1 a Binario

La Respuesta es: **10000000.00102101.00000111.00000001**

2.1.5. Transformar 47.50.3.2

| 47 | | | | | | | | 50 | | | | | | | | 3 | | | | | | | | 2 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 0 | 0 | 32 | 0 | 8 | 4 | 2 | 1 | 0 | 0 | 32 | 16 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |

Figura 5: 47.50.3.2 a Binario

La Respuesta es: **00101111.00110010.00000011.00000010**

2.1.6. Transformar 124.45.6.1

| 124 | | | | | | | | 45 | | | | | | | | 6 | | | | | | | | 1 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 0 | 64 | 32 | 16 | 8 | 4 | 0 | 0 | 0 | 0 | 32 | 0 | 8 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |

Figura 6: 124.45.6.1 a Binario

La Respuesta es: **00111100.00101101.00000110.00000001**

Deber 3: IPs Binaria a Decimal y Decimal a Binaria

2.1.7. Transformar 10.0.3.2

| 10 | | | | | | | | 0 | | | | | | | | 3 | | | | | | | | 2 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 0 | 0 | 0 | 0 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

Figura 7: 10.0.3.2 a Binario

La Respuesta es: 00001010.00000000.00000011.00000010

2.1.8. Transformar 170.118.102.15

| 170 | | | | | | | | 118 | | | | | | | | 102 | | | | | | | | 15 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 128 | 0 | 32 | 0 | 8 | 0 | 2 | 0 | 0 | 64 | 32 | 16 | 0 | 4 | 2 | 0 | 0 | 64 | 32 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | 4 | 2 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |

Figura 8: 170.118.102.15 a Binario

La respuesta es: 10101010.01110110.01100110.00001111

2.1.9. Transformar 192.168.1.1

| 192 | | | | | | | | 168 | | | | | | | | 1 | | | | | | | | 1 | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 128 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 0 | 32 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

Figura 9: 192.168.1.1 a Binario

La respuesta es: 11000000.10101000.00000001.00000001

2.1.10. Transformar 10.0.0.1

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

Figura 10: 10.0.0.1 a Binario

La respuesta es: 00001010.00000000.00000000.00000001

2.2. Binario a Decimal

2.2.1. Transformar 11000000.10101101.01011001.01010010

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 0 | 32 | 0 | 8 | 4 | 0 | 1 | 0 | 64 | 0 | 16 | 8 | 0 | 0 | 1 | 0 | 64 | 0 | 16 | 0 | 0 | 2 | 0 |
| 192 | | | | | | | | 173 | | | | | | | | 89 | | | | | | | | 82 | | | | | | | |

Figura 11: 11000000.10101101.01011001.01010010 a Decimal

La respuesta es: **192.173.89.82**

2.2.2. Transformar 11111111.00000000.11111111.00000000

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

Figura 12: 11111111.00000000.11111111.00000000 a Decimal

La respuesta es: **255.0.255.0**

2.2.3. Transformar 10101100.00010000.11000000.00000001

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 0 | 32 | 0 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 128 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 172 | | | | | | | | 16 | | | | | | | | 192 | | | | | | | | 1 | | | | | | | |

Figura 13: 10101100.00010000.11000000.00000001 a Decimal

La respuesta es: **172.16.192.1**

2.2.4. Transformar 00001010.00000000.00000000.00000001

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

Figura 14: 00001010.00000000.00000000.00000001 a Decimal

La respuesta es: **10.0.0.1**

2.2.5. Transformar 11000000.11100100.00010010.00000010

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 64 | 0 | 0 | 0 | 0 | 2 | 0 | 128 | 64 | 32 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | |
| 194 | | | | | | | | 228 | | | | | | | | 18 | | | | | | | | 2 | | | | | | | |

Figura 15: 11000000.11100100.00010010.00000010 a Decimal

La respuesta es: **194.228.18.2**

2.2.6. Transformar 11001000.10110110.01011010.00000111

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|-----|----|----|----|----|---|---|-----|----|----|----|---|---|----|---|-----|----|----|----|---|---|---|---|---|
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | | |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | |
| 128 | 64 | | 0 | 0 | 8 | 0 | 0 | 0 | 128 | | 0 | 32 | 16 | 0 | 4 | 2 | | 0 | 64 | | 0 | 16 | 8 | 0 | 2 | 0 | | 0 | 0 | 4 | 2 | 1 |
| 200 | | | | | | | | 182 | | | | | | | | 90 | | | | | | | | 7 | | | | | | | | |

Figura 16: 11001000.10110110.01011010.00000111 a Decimal

La respuesta es: **200.182.90.7**

2.2.7. Transformar 10100010.10101110.11001011.10000111

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 0 | 32 | 0 | 8 | 0 | 2 | 0 | 128 | 0 | 32 | 0 | 8 | 4 | 2 | 0 | 128 | 64 | 0 | 0 | 8 | 0 | 2 | 1 | 128 | 0 | 0 | 0 | 0 | 4 | 2 | 1 |
| 170 | | | | | | | | 174 | | | | | | | | 203 | | | | | | | | 135 | | | | | | | |

Figura 17: 10100010.10101110.11001011.10000111 a Decimal

La respuesta es: **170.174.203.135**

2.2.8. Transformar 10111010.11101010.11100101.10011101

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 0 | 32 | 16 | 8 | 0 | 2 | 0 | 128 | 64 | 32 | 0 | 8 | 4 | 2 | 0 | 128 | 64 | 32 | 0 | 0 | 4 | 0 | 1 | 128 | 0 | 0 | 16 | 8 | 4 | 0 | 1 |
| 186 | | | | | | | | 238 | | | | | | | | 229 | | | | | | | | 157 | | | | | | | |

Figura 18: 10111010.11101010.11100101.10011101 a Decimal

La respuesta es: **186.238.229.157**

2.2.9. Transformar 10101010.11000100.10110011.11001101

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 0 | 32 | 0 | 8 | 0 | 2 | 0 | 128 | 64 | 0 | 0 | 0 | 4 | 0 | 0 | 128 | 0 | 32 | 16 | 0 | 0 | 2 | 1 | 128 | 64 | 0 | 0 | 8 | 4 | 0 | 1 |
| 170 | | | | | | | | 196 | | | | | | | | 179 | | | | | | | | 205 | | | | | | | |

Figura 19: 10101010.11000100.10110011.11001101 a Decimal

La respuesta es: **170.196.179.205**

2.2.10. Transformar 11111010.01111100.11011001.10000111

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|-----|----|----|----|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 128 | 64 | 32 | 16 | 8 | 0 | 2 | 0 | 0 | 64 | 32 | 16 | 8 | 4 | 0 | 0 | 128 | 64 | 0 | 16 | 8 | 0 | 0 | 1 | 128 | 0 | 0 | 0 | 0 | 4 | 2 | 1 |
| 250 | | | | | | | | 124 | | | | | | | | 217 | | | | | | | | 135 | | | | | | | |

Figura 20: 11111010.01111100.11011001.10000111 a Decimal

La respuesta es: **250.124.217.135**

3. Conclusiones

- A través de la práctica, se ha adquirido una sólida comprensión de cómo se representan las direcciones IP tanto en formato binario como en decimal. Esto incluye la capacidad de reconocer y manipular cada octeto individualmente, entendiendo que cada octeto en binario consta de 8 bits y puede tomar valores de 0 a 255 en su forma decimal.
- Se ha aprendido a identificar la estructura de una dirección IP y cómo cada segmento u octeto contribuye al valor total de la dirección.

4. Referencias

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