DNS Overhead

**1 Bit** 🡪1 Binary Number 🡪 21 = 2 🡪 We have 2 Numbers Below

* 0, 1

**2 Bits** 🡪 2 Binary numbers 🡪 22 = 4 🡪 We have 4 Numbers Below

* 00, 01, 10, 11

**3 Bits** 🡪 3 Binary Numbers 🡪 23 = 8 🡪 We have 8 Numbers Below

* 000
* 001
* 010
* 011
* 100
* 101
* 110
* 111

In below figure if we have number space of n bits then total numbers present in that number space is 2n. And if we choose k bits then we are dividing the entire number system into 2k parts. Then size of each part is 2n-k.

In computer networks:

* N 🡪 Ip address
* K 🡪 Network Id part
* N-K 🡪 Host id part

A picture containing text, whiteboard

Description automatically generated

In computer networks IP address is of 32 bits (X.X.X.X)

Diagram

Description automatically generated

**Prefix for IP addresses:**

Class A: 0

Class B: 10

Class C: 110

Class D: 1110

Class E: 1111

Diagram

Description automatically generated