IP Subnet Calculator

This calculator returns a variety of information regarding Internet Protocol version 4 (IPv4) and IPv6 subnets including possible network addresses, usable host ranges, subnet mask, and IP class, among others.

IPv4 Subnet Calculator

Result

IP Address:	147.28.196.163
Network Address:	147.28.196.160
Usable Host IP Range:	147.28.196.161 - 147.28.196.174
Broadcast Address:	147.28.196.175
Total Number of Hosts:	16
Number of Usable Hosts:	14
Subnet Mask:	255.255.255.240
Wildcard Mask:	0.0.0.15
Binary Subnet Mask:	11111111.11111111.11111111.11110000
IP Class:	C
CIDR Notation:	/28
IP Type:	Public
Short:	147.28.196.163 /28
Binary ID:	10010011000111001100010010100011
Integer ID:	2468136099
Hex ID:	0x931cc4a3
in-addr.arpa:	163.196.28.147.in-addr.arpa
IPv4 Mapped Address:	::ffff:931c.c4a3
6to4 Prefix:	2002:931c.c4a3::/48

All 16 of the Possible /28 Networks for 147.28.196.*

Network Address	Usable Host Range	Broadcast Address:
147.28.196.0	147.28.196.1 - 147.28.196.14	147.28.196.15
147.28.196.16	147.28.196.17 - 147.28.196.30	147.28.196.31
147.28.196.32	147.28.196.33 - 147.28.196.46	147.28.196.47
147.28.196.48	147.28.196.49 - 147.28.196.62	147.28.196.63
147.28.196.64	147.28.196.65 - 147.28.196.78	147.28.196.79
147.28.196.80	147.28.196.81 - 147.28.196.94	147.28.196.95
147.28.196.96	147.28.196.97 - 147.28.196.110	147.28.196.111
147.28.196.112	147.28.196.113 - 147.28.196.126	147.28.196.127
147.28.196.128	147.28.196.129 - 147.28.196.142	147.28.196.143
147.28.196.144	147.28.196.145 - 147.28.196.158	147.28.196.159
147.28.196.160	147.28.196.161 - 147.28.196.174	147.28.196.175
147.28.196.176	147.28.196.177 - 147.28.196.190	147.28.196.191
147.28.196.192	147.28.196.193 - 147.28.196.206	147.28.196.207
147.28.196.208	147.28.196.209 - 147.28.196.222	147.28.196.223
147.28.196.224	147.28.196.225 - 147.28.196.238	147.28.196.239
147.28.196.240	147.28.196.241 - 147.28.196.254	147.28.196.255

Network Class ◯ Any ◉ A ◯ B ◯ C

Subnet 255.255.255.240 /28

IP Address 147.28.196.163

Calculate Clear

IPv6 Subnet Calculator

Prefix Length:

/64

IP Address:

2001:db8:85a3::8a2e:370:7334

Calculate Clear

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A subnet is a division of an IP network (internet protocol suite), where an IP network is a set of communications protocols used on the Internet and other similar networks. It is commonly known as TCP/IP (Transmission Control Protocol/Internet Protocol).

The act of dividing a network into at least two separate networks is called subnetting, and routers are devices that allow traffic exchange between subnetworks, serving as a physical boundary. IPv4 is the most common network addressing architecture used, though the use of IPv6 has been growing since 2006.

An IP address is comprised of a network number (routing prefix) and a rest field (host identifier). A rest field is an identifier that is specific to a given host or network interface. A routing prefix is often expressed using Classless Inter-Domain Routing (CIDR) notation for both IPv4 and IPv6. CIDR is a method used to create unique identifiers for networks, as well as individual devices. For IPv4, networks can also be characterized using a subnet mask, which is sometimes expressed in dot-decimal notation, as shown in the "Subnet" field in the calculator. All hosts on a subnetwork have the same network prefix, unlike the host identifier, which is a unique local identification. In IPv4, these subnet masks are used to differentiate the network number and host identifier. In IPv6, the network prefix performs a similar function as the subnet mask in IPv4, with the prefix length representing the number of bits in the address.

Prior to the introduction of CIDR, IPv4 network prefixes could be directly obtained from the IP address based on the class (A, B, or C, which vary based on the range of IP addresses they include) of the address and the network mask. Since the introduction of CIDRs, however, assigning an IP address to a network interface requires both an address and its network mask.

Below is a table providing typical subnets for IPv4.

Prefix size	Network mask	Usable hosts per subnet
/1	128.0.0.0	2,147,483,646
/2	192.0.0.0	1,073,741,822
/3	224.0.0.0	536,870,910
/4	240.0.0.0	268,435,454
/5	248.0.0.0	134,217,726
/6	252.0.0.0	67,108,862
/7	254.0.0.0	33,554,430
Class A		
/8	255.0.0.0	16,777,214
/9	255.128.0.0	8,388,606
/10	255.192.0.0	4,194,302
/11	255.224.0.0	2,097,150
/12	255.240.0.0	1,048,574
/13	255.248.0.0	524,286
/14	255.252.0.0	262,142
/15	255.254.0.0	131,070
Class B		
/16	255.255.0.0	65,534
/17	255.255.128.0	32,766
/18	255.255.192.0	16,382
/19	255.255.224.0	8,190
/20	255.255.240.0	4,094
/21	255.255.248.0	2,046
/22	255.255.252.0	1,022
/23	255.255.254.0	510
Class C		
/24	255.255.255.0	254
/25	255.255.255.128	126
/26	255.255.255.192	62
/27	255.255.255.224	30
/28	255.255.255.240	14
/29	255.255.255.248	6
/30	255.255.255.252	2
/31	255.255.255.254	0
/32	255.255.255.255	0