

# Ping

Ping is a mechanism for checking if a host (IP address) is alive and responding.

## About the Ping tool

All computers or servers on the Internet have an IP address. "Pinging" this IP address is the quickest way to check if you can reach a particular computer, server or router.

If you are unable to ping an IP address, it may mean the computer or server is turned off, or another network problem is preventing you from accessing it.

## Use Cases

Use the Ping tool on Solid Tools for Developers to:

- See if an IP address can be reached from the Internet
- Check if your local firewall is blocking ping requests (ICMP traffic)
- Eliminate your own network from being at fault during your investigations

## Usage

Enter a hostname, IPv4 or IPv6 address in the "Hostname or IP address" field.

To ping a server if you don't know its IP address, enter its hostname (e.g. **www.google.com**) and select whether to use an IPv4 or IPv6 connection for the ping. If you select IPv6, the hostname must have an IPv6 (AAAA) DNS record.

To ping a server using its IPv4 address, enter the IP address and ensure the IPv4 option is selected.

To ping a server using its IPv6 address, enter the IP address and ensure the IPv6 option is selected.

The ping tool will send 4 packets to the destination address you provided.

## Results

A successful ping result will be displayed in **green**. The following example shows a successful ping result to [www.google.com](http://www.google.com).

You can see that 4 packets were transmitted, and all 4 had a response back from [www.google.com](http://www.google.com) - resulting in no packet loss.

```
PING www.google.com (172.217.26.196) 56(84) bytes of data.  
64 bytes from maa03s23-in-f4.1e100.net (172.217.26.196): icmp_seq=1 ttl=49 time=320 ms  
64 bytes from maa03s23-in-f4.1e100.net (172.217.26.196): icmp_seq=2 ttl=49 time=320 ms  
64 bytes from maa03s23-in-f4.1e100.net (172.217.26.196): icmp_seq=3 ttl=49 time=320 ms  
64 bytes from maa03s23-in-f4.1e100.net (172.217.26.196): icmp_seq=4 ttl=49 time=320 ms  
  
--- www.google.com ping statistics ---  
4 packets transmitted, 4 received, 0% packet loss, time 3003ms  
rtt min/avg/max/mdev = 320.400/320.489/320.635/0.409 ms
```

A failed ping result will be displayed in red. The following example shows a failed result to the unrouteable IP address 10.100.1.2.

You can see that out of 4 packets transmitted, not a single response was received.

```
PING 10.100.1.2 (10.100.1.2) 56(84) bytes of data.  
  
--- 10.100.1.2 ping statistics ---  
4 packets transmitted, 0 received, 100% packet loss, time 3023ms
```

## What is an IP address?

An IP address is an "address" for any device that is connected to a network - a computer, phone, tablet or even a smart fridge. It's how the Internet knows where to send your web pages, email and streaming music, in the same way a postal address tells your mail-person where to deliver your mail.

There are 2 types of IP address currently in widespread use today - [IPv4](#) (the most common) and [IPv6](#) (a newer standard for an ever-expanding Internet.)

## IPv4

IPv4 addresses are four groups of between 1 and 3 digits, separated by dots.

For example, the server that runs Solid Tools for Developers has the IPv4 address:  
**109.228.50.239.**

# IPv6

IPv6 addresses are longer than IPv4 and contain letters as well as numbers. IPv6 networks can accommodate a significantly larger number of devices than IPv4 networks and are growing in popularity.

For example, the server that runs Solid Tools for Developers has the IPv6 address:

**2a00:da00:1800:15a::1.**

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