```
E94111091@raspberrypi:~/introduction_to_computers_labs/lab09 $ ping 8.8.8.8

PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.

64 bytes from 8.8.8.8: icmp_seq=1 ttl=112 time=8.94 ms

64 bytes from 8.8.8.8: icmp_seq=2 ttl=112 time=8.24 ms

64 bytes from 8.8.8.8: icmp_seq=3 ttl=112 time=8.07 ms

64 bytes from 8.8.8.8: icmp_seq=4 ttl=112 time=8.37 ms

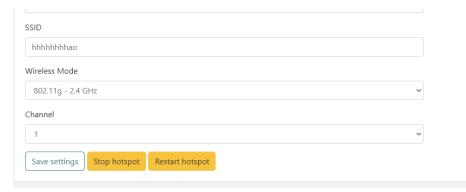
^C

--- 8.8.8.8 ping statistics ---

4 packets transmitted, 4 received, 0% packet loss, time 3004ms

rtt min/avg/max/mdev = 8.073/8.406/8.939/0.325 ms
```

```
E94111091@raspberrypi:~/introduction to computers labs/lab09 $ dig google.com
; <>>> DiG 9.16.33-Raspbian <<>> google.com
 ;; global options: +cmd
;; Got answer:
;; —>HEADER«— opcode: QUERY, status: NOERROR, id: 20337
;; flags: qr rd ad; QUERY: 1, ANSWER: 9, AUTHORITY: 0, ADDITIONAL: 0
;; WARNING: recursion requested but not available
;; QUESTION SECTION:
;google.com.
                                                            Α
                                                IN
 ;; ANSWER SECTION:
google.com.
                                                IN
ns1.google.com.
                                                 IN
ns1.google.com.
                                                                         2001:4860:4802:32::a
                                                             AAAA
ns2.google.com.
ns2.google.com.
                                                 IN
                                                             AAAA
                                                                         2001:4860:4802:34::a
ns3.google.com.
ns3.google.com.
ns4.google.com.
ns4.google.com.
                                                                         216.239.36.10
2001:4860:4802:36::a
                                                             AAAA
                                                IN
                                    Θ
                                                 IN
                                                                         216.239.38.10
2001:4860:4802:38::a
                                                             AAAA
                                                IN
;; Query time: 0 msec
;; SERVER: 192.168.137.1#53(192.168.137.1)
;; WHEN: Tue Nov 29 08:49:59 GMT 2022
 ;; MSG SIZE rcvd: 286
```



■■ 叩マ提小子兀

```
Microsoft Vindows [版本 10.0.22000.1219]
(c) Microsoft Corporation. 著作權所有,並保留一切權利。

C:\Users\tom73>ping 8.8.8.8

Ping 8.8.8.8 (使用 32 位元組的資料):
回覆自 8.8.8.8: 位元組=32 時間=8ms TTL=112
回覆自 8.8.8.8: 位元組=32 時間=8ms TTL=112
回覆自 8.8.8.8: 位元組=32 時間=8ms TTL=112
回覆自 8.8.8.8: 位元組=32 時間=19ms TTL=112
8.8.8.8 的 Ping 統計資料:
封包:已傳送 = 4,已收到 = 4,已遺失 = 0 (0% 遺失),
大約的來回時間 (毫秒):
最小值 = 8ms,最大值 = 19ms,平均 = 10ms

C:\Users\tom73>
```



Clients with a particular hardware MAC address can always be allocated the same IP address. This option adds dhcp-host entries to the dnsmasq configuration.

54:8d:5a;9b:cb:84	10.3.141.71	MSI	Û
			=

```
E94111091@raspberrypi:~/introduction_to_computers_labs/lab09 $ traceroute google.com
traceroute to google.com (142.251.42.238), 30 hops max, 60 byte packets
1 140.116.118.253 (140.116.118.253) 2.839 ms 2.863 ms 2.946 ms
2 140.116.243.33 (140.116.243.33) 0.540 ms 0.893 ms 0.899 ms
3 140.116.243.193 (140.116.243.193) 1.607 ms 1.556 ms 1.452 ms
4 140.116.243.177 (140.116.243.177) 2.182 ms 3.522 ms 3.458 ms
5 192.192.61.146 (192.192.61.146) 3.026 ms 2.958 ms 2.791 ms
6 192.192.61.24 (192.192.61.24) 15.646 ms 192.192.61.32 (192.192.61.32) 5.547 ms 192.192.61.24 (1
92.192.61.24) 6.629 ms
7 192.192.61.184 (192.192.61.184) 6.959 ms 7.079 ms 192.192.61.188 (192.192.61.188) 7.311 ms
8 192.192.61.203 (192.192.61.203) 6.810 ms 6.686 ms 7.385 ms
9 72.14.202.60 (72.14.202.60) 7.177 ms 7.126 ms 7.189 ms
10 * * *
11 108.170.225.176 (108.170.225.176) 7.563 ms tsa01s11-in-f14.1e100.net (142.251.42.238) 7.094 ms
142.251.77.86 (142.251.77.86) 7.421 ms
```