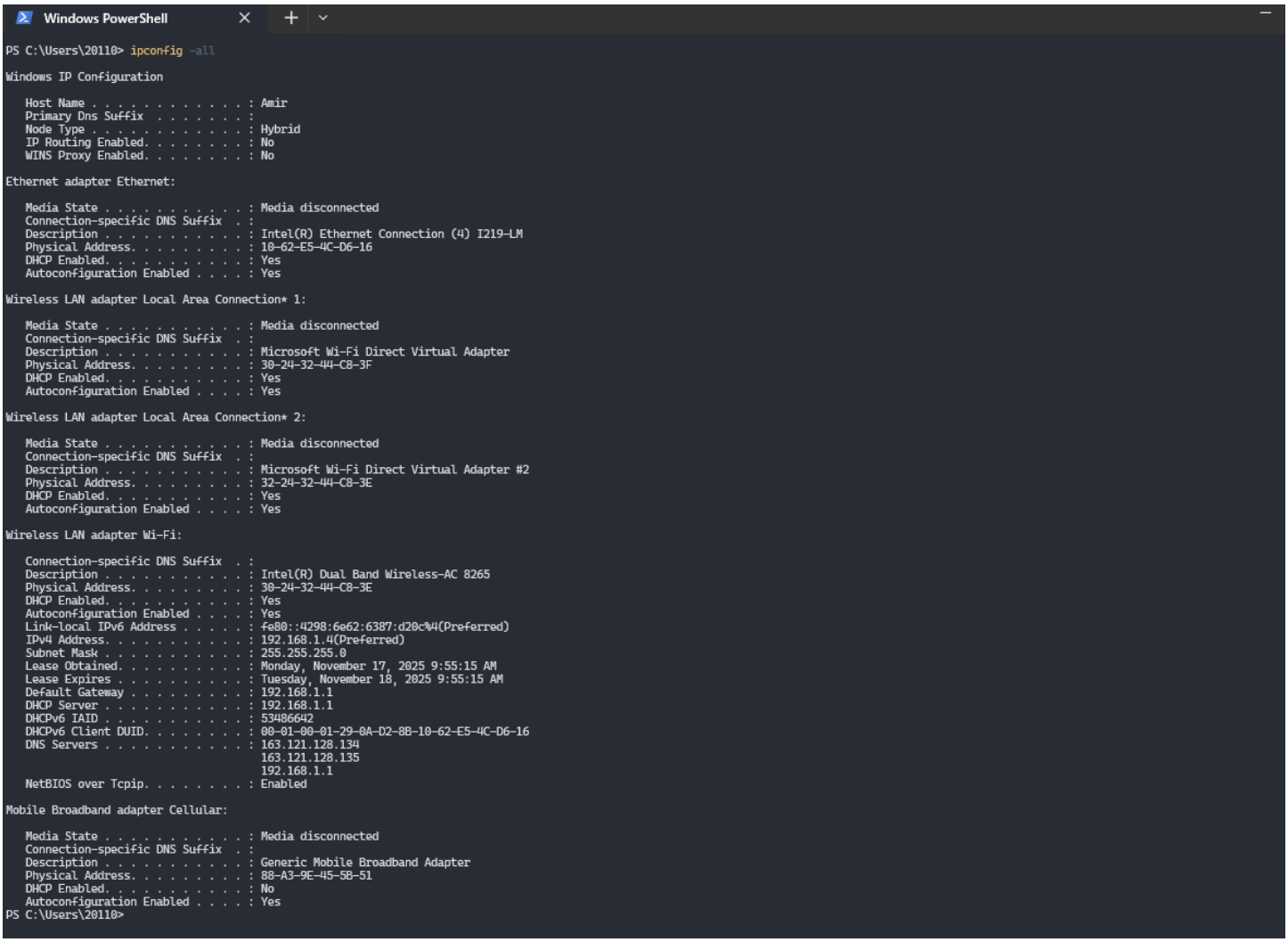
Lab 1: Network Commands & IP Addressing

Checking Physical (MAC) Address

1. What command shows all network details including the physical (MAC) address?
    - ipconfig /all

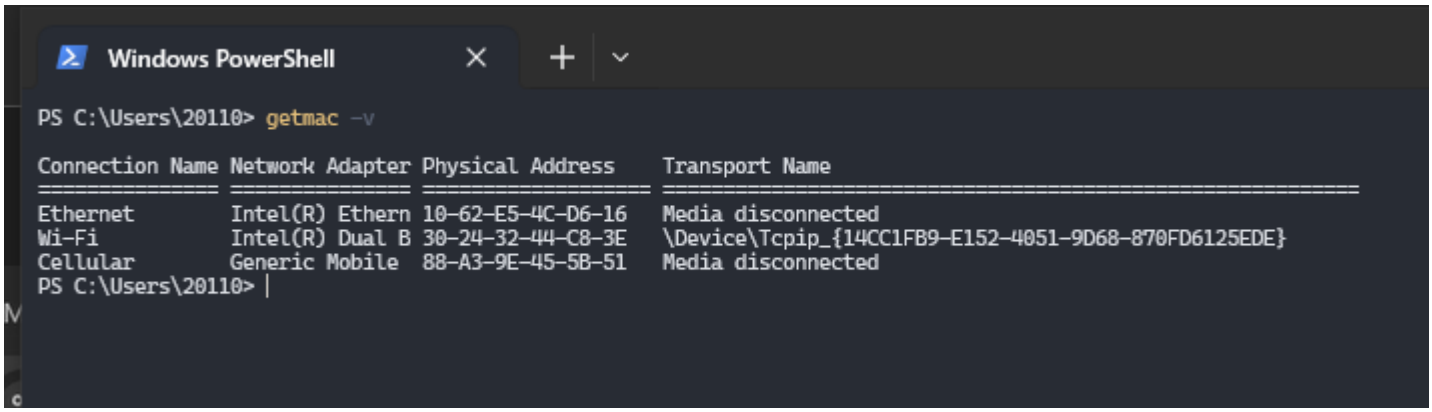


2. How can you see your device’s MAC address?
    - Getmac

```
PS C:\Users\20110> Getmac

Physical Address    Transport Name
=================== ============================================================
10-62-E5-4C-D6-16   Media disconnected
30-24-32-44-C8-3E   \Device\Tcpip_{14CC1FB9-E152-4051-9D68-870FD6125EDE}
88-A3-9E-45-5B-51   Media disconnected
PS C:\Users\20110>
```

3. How can you show the MAC address with more details?
    - getmac /v

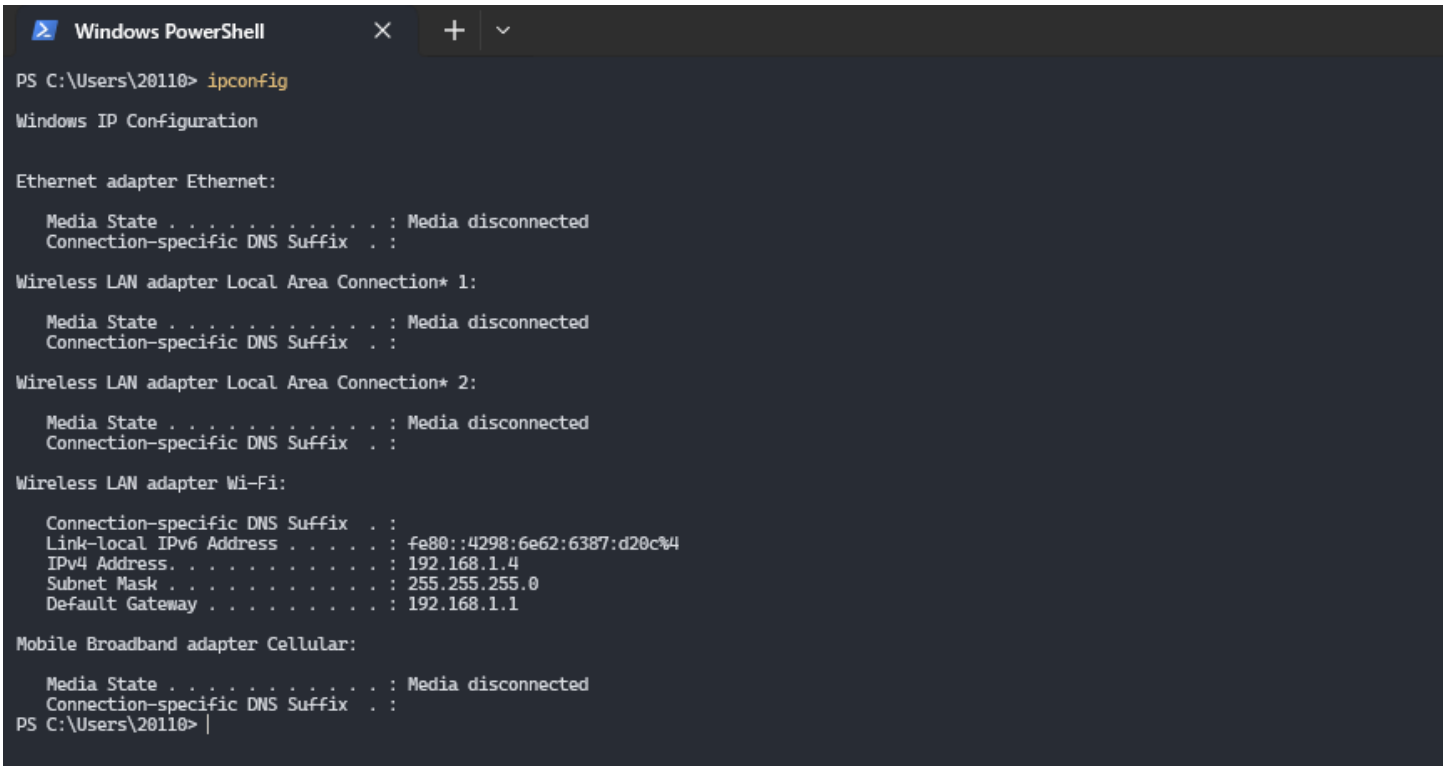


APIPA & IP Configuration

4. What is the default APIPA address when the device fails to get an IP from DHCP?
    - Starts with: 169.254.x.x

```
   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::4298:6e62:6387:d20c%4
   Autoconfiguration IPv4 Address. . : 169.254.91.107
   Subnet Mask . . . . . . . . . . . : 255.255.0.0
   Default Gateway . . . . . . . . . :
```

5. What command shows your current IP settings?
    - Ipconfig



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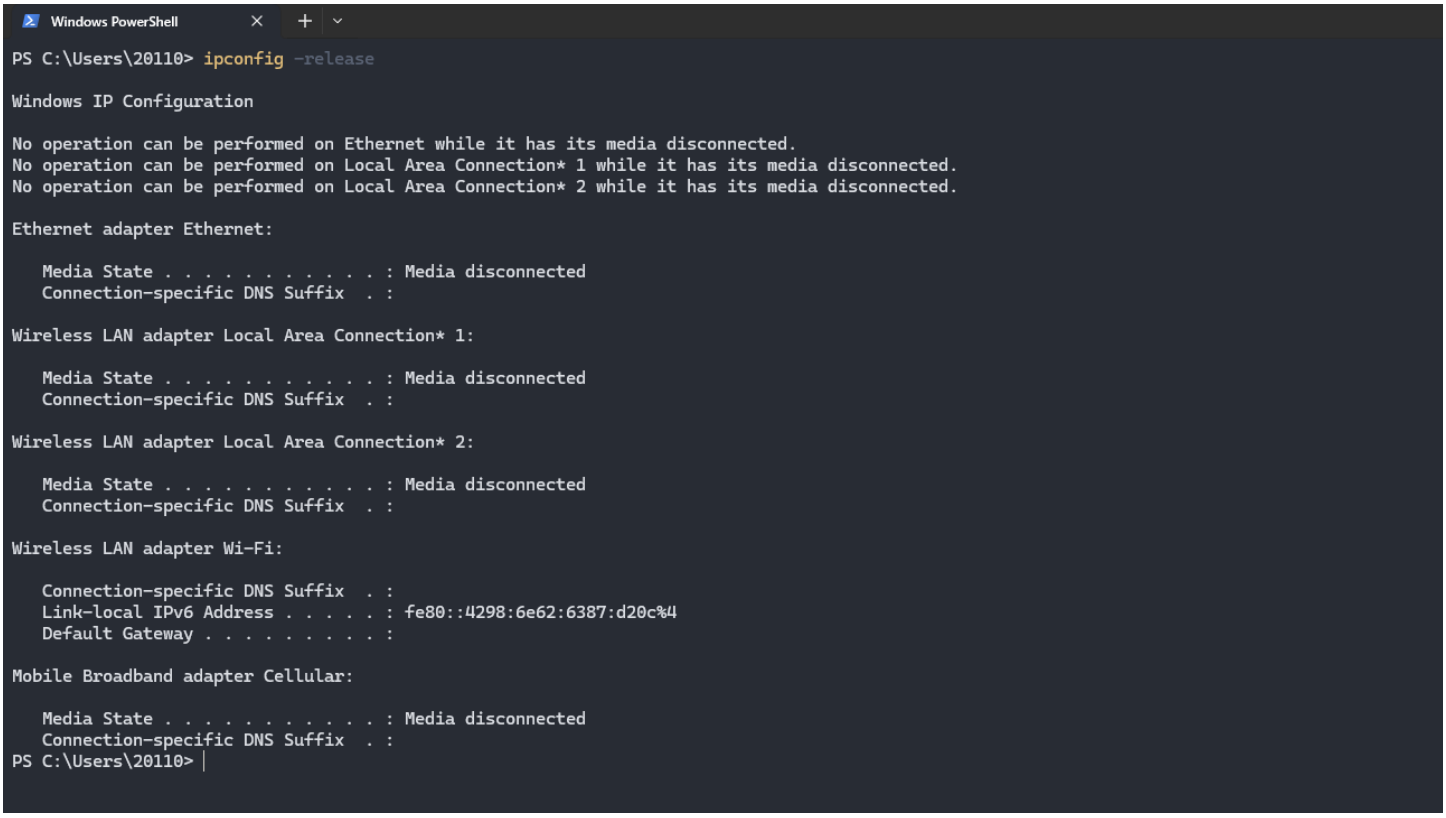
6. How do you release your current IP address?
    - ipconfig /release



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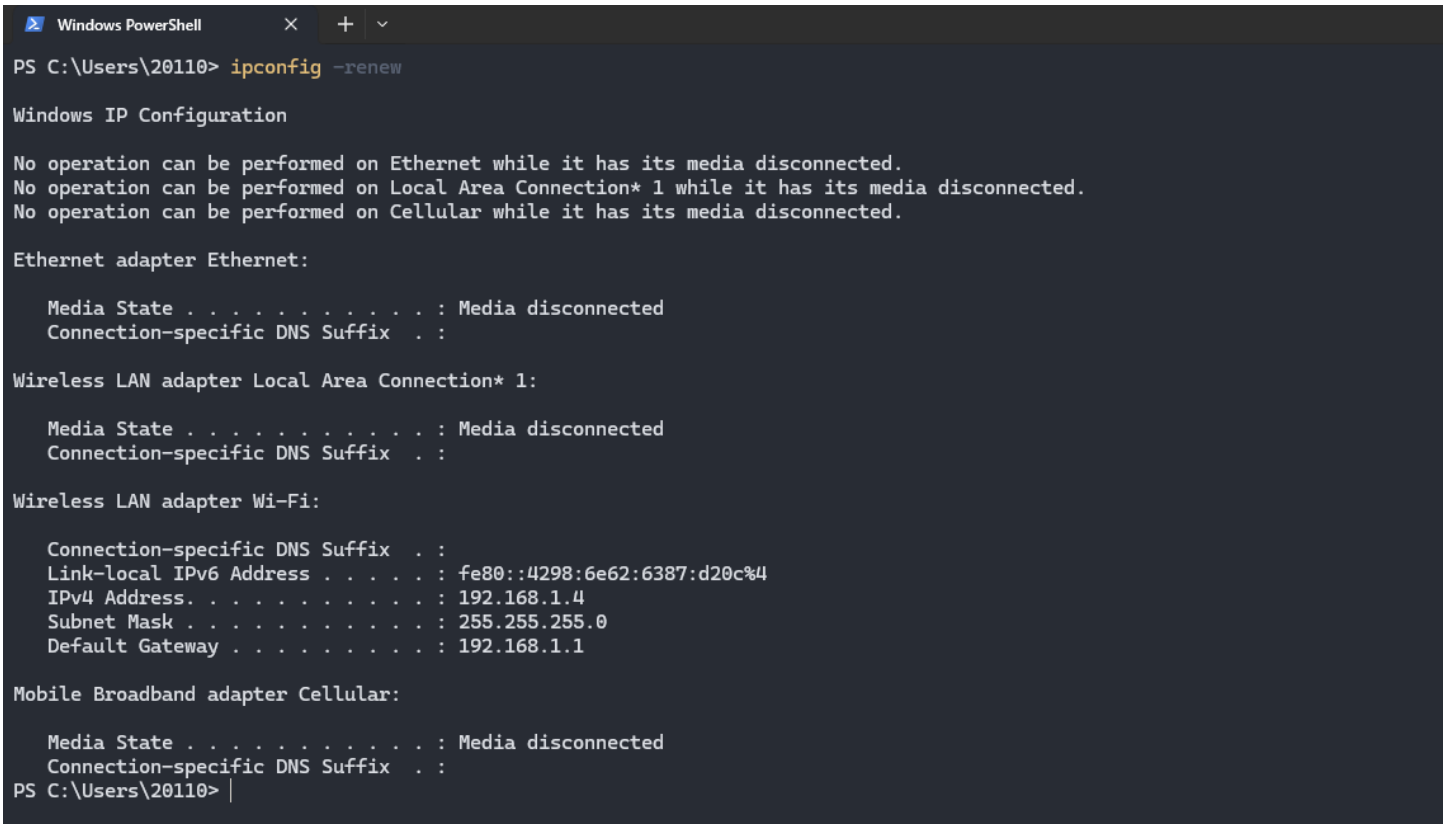
7. How do you request a new IP address from DHCP?
    - ipconfig /renew



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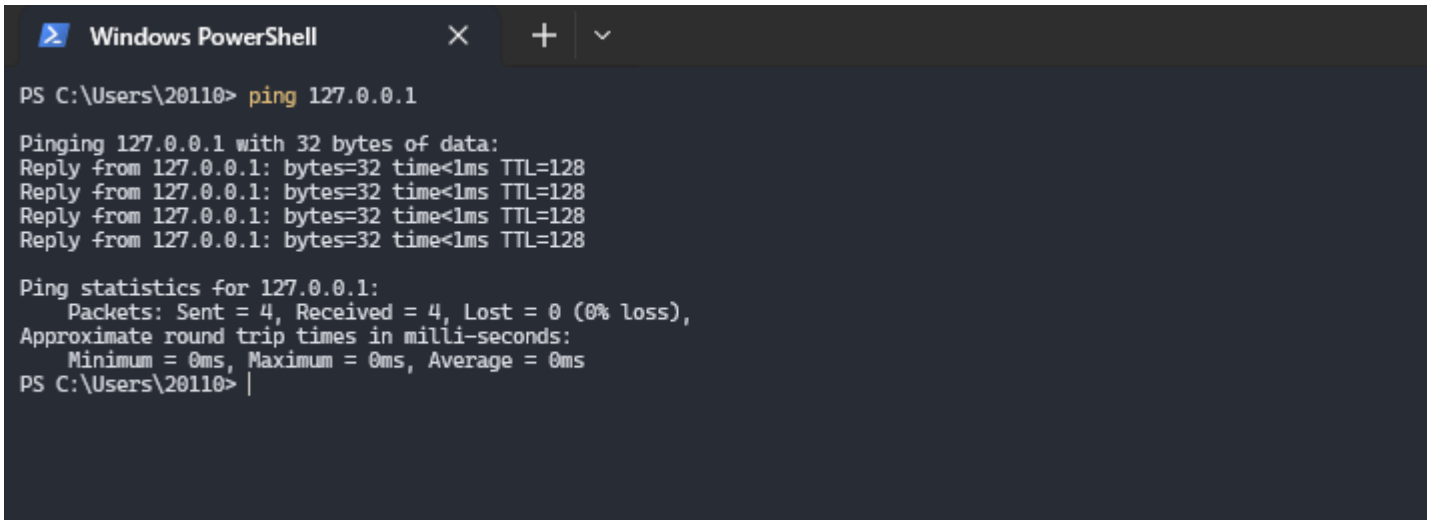
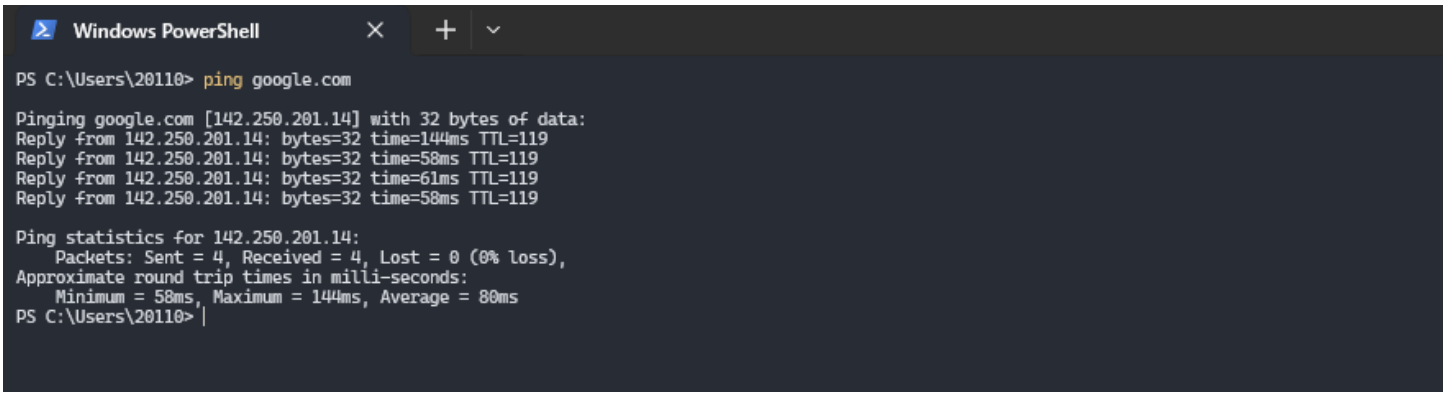
Ping Commands

9. How do you test connection to an IP address?
    - ping [IP address]



10. How do you test connection to a website (URL)?

- ping www.example.com



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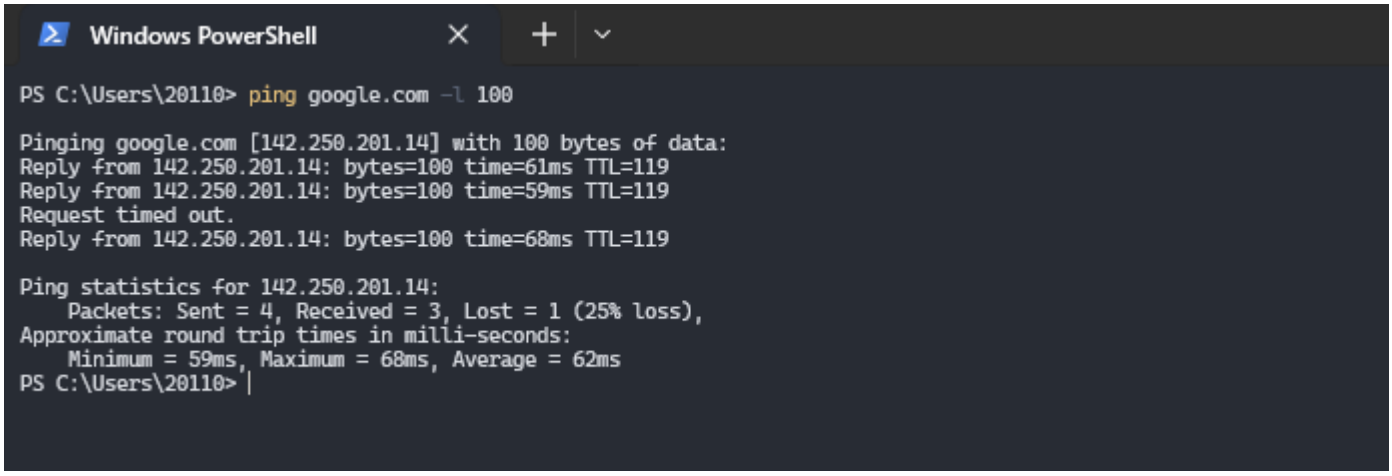
11. How do you send a ping with a specific data size?

- ping [IP]-l [size]



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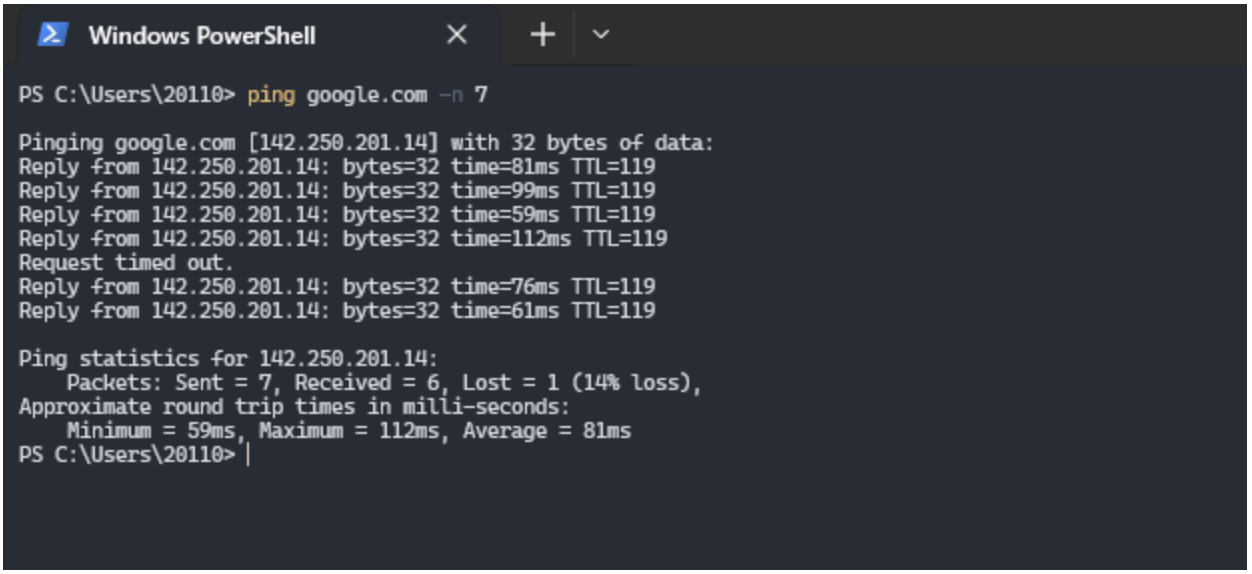
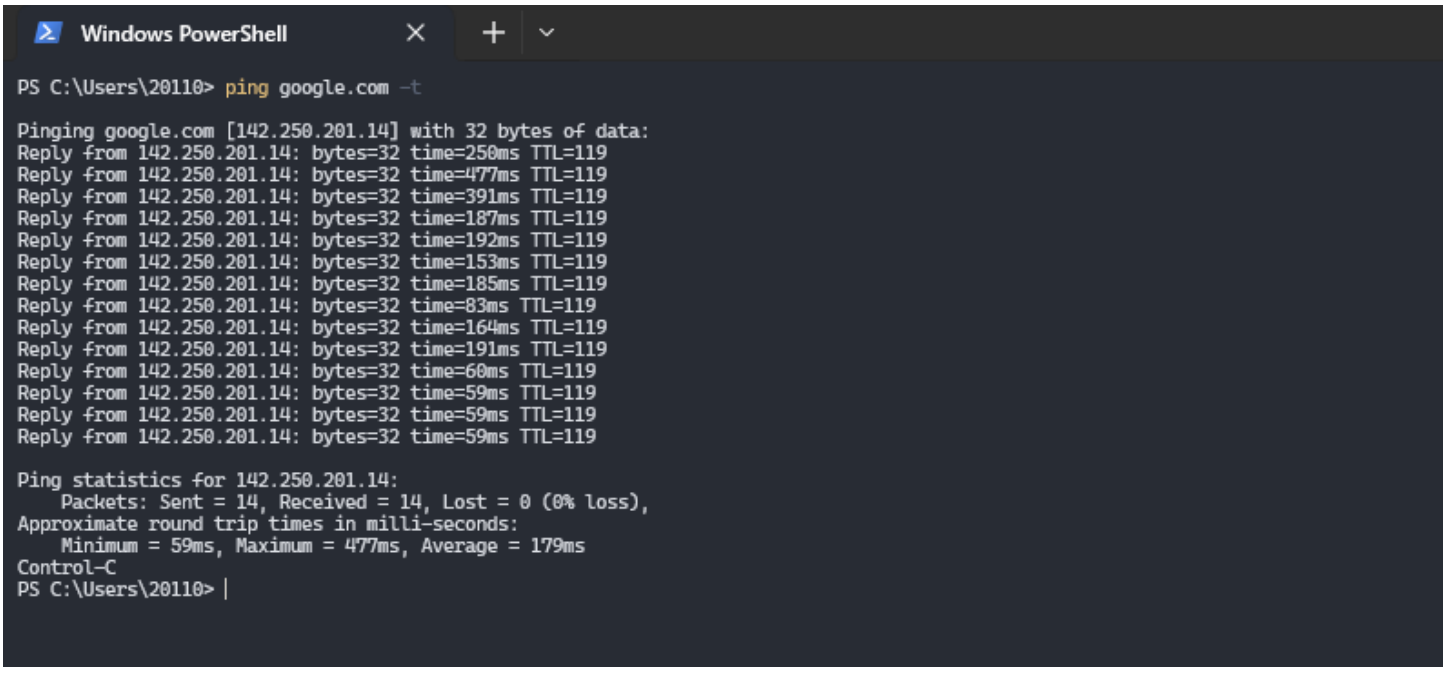
12. How do you send a specific number of ping requests?

- ping [IP]-n [count]

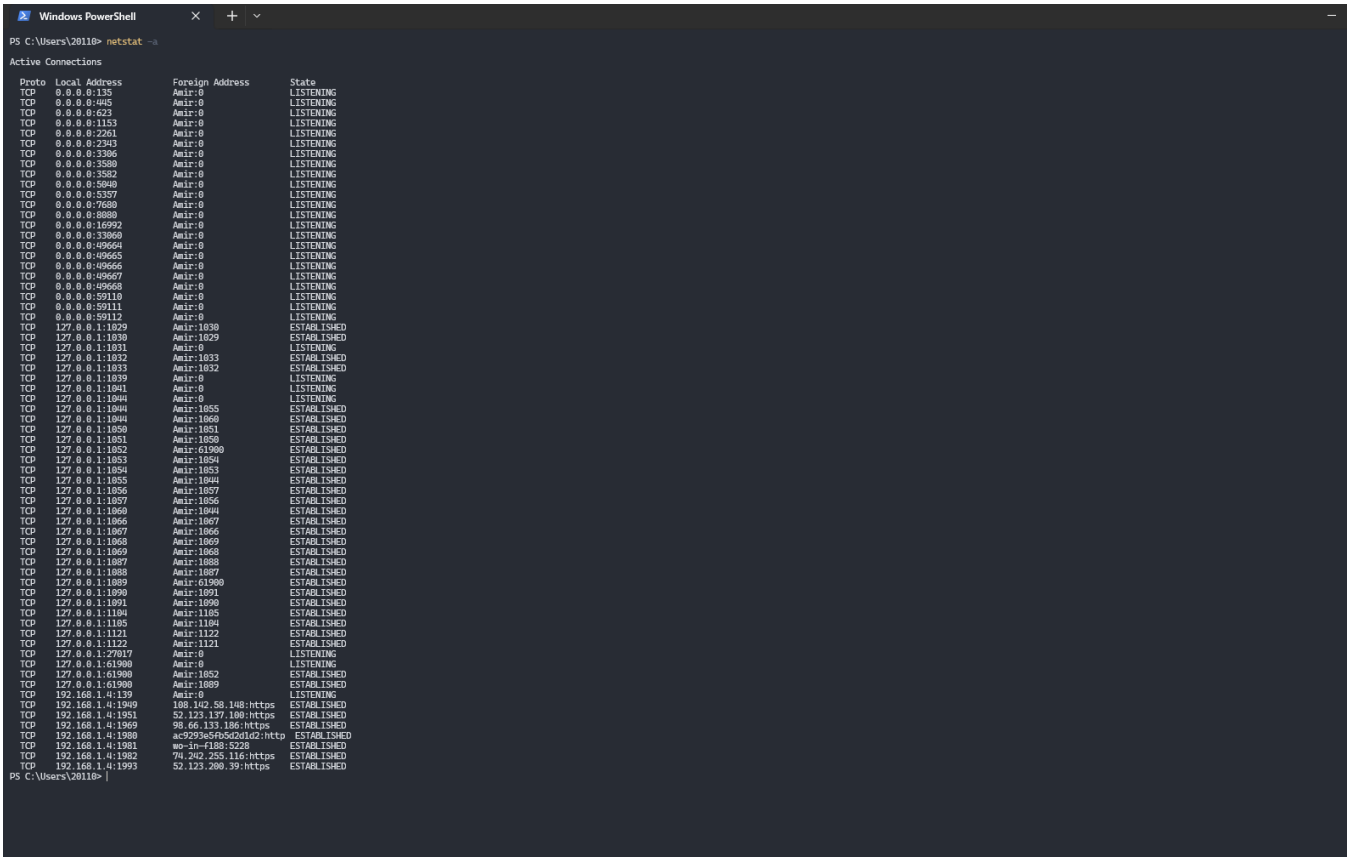


13. How do you send continuous ping requests until you stop it manually?
    - ping [IP]-t



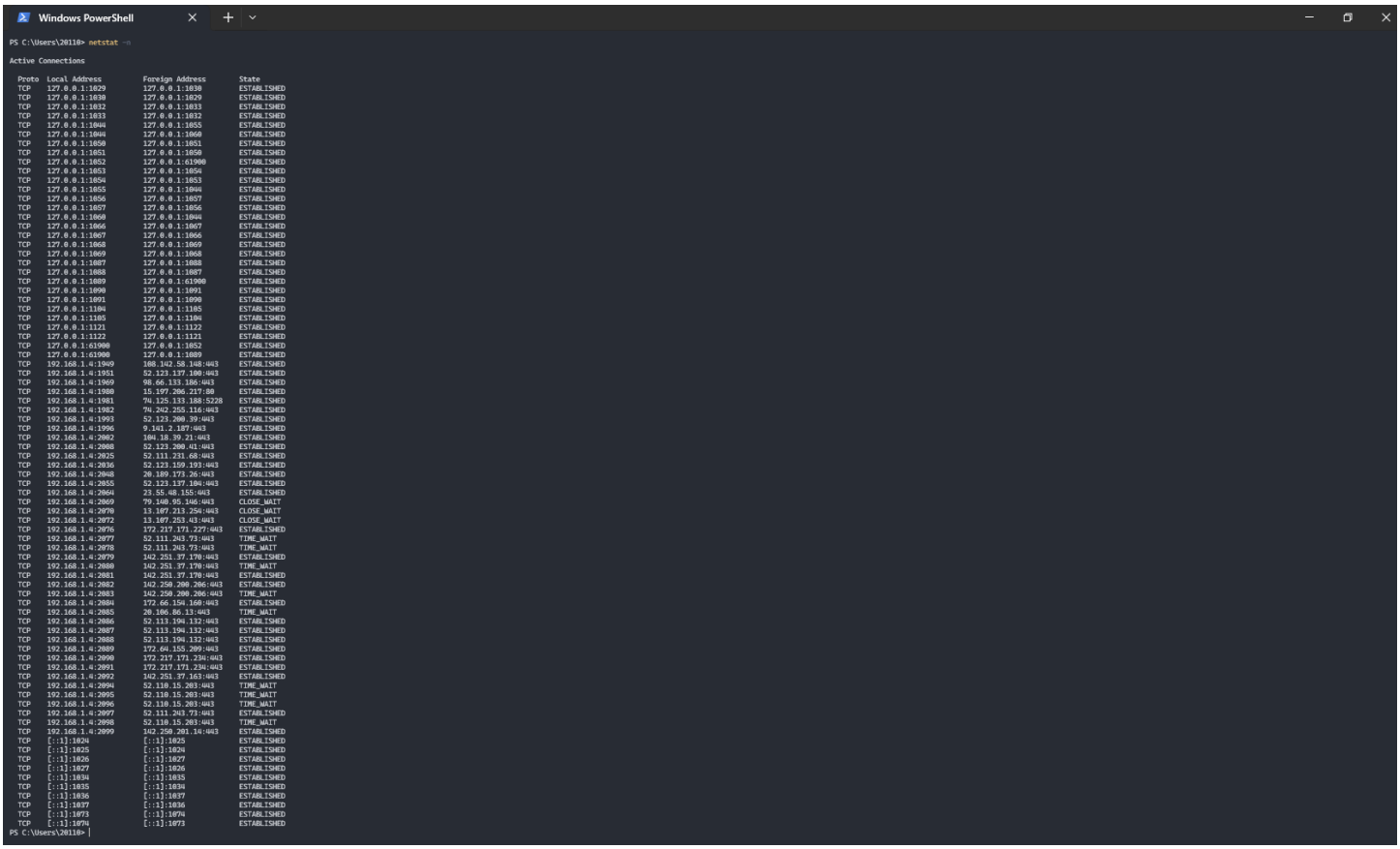
Netstat

19. How do you show all active connections?
    - netstat-a

- 

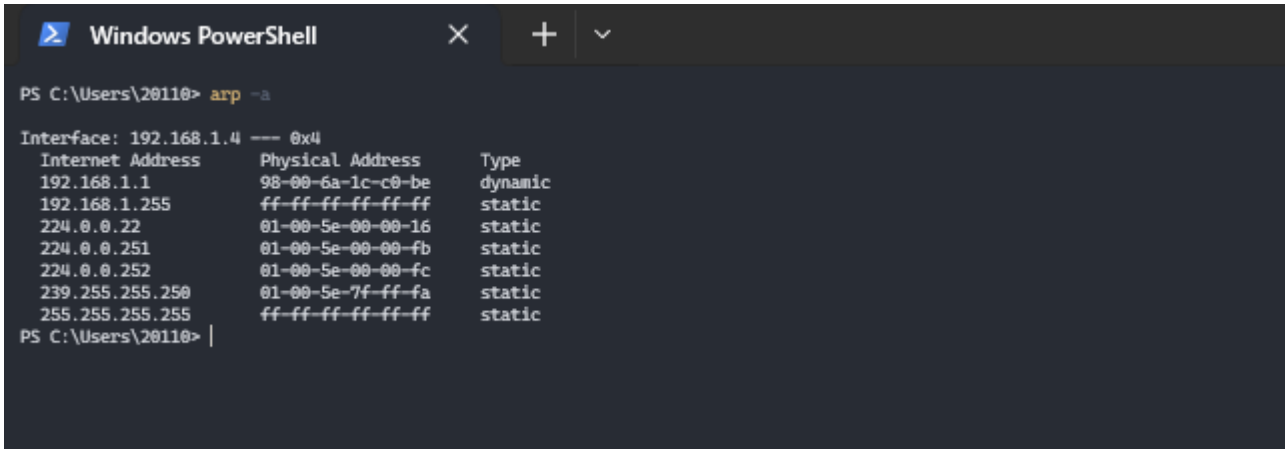
20. How do you show active connections with numbers only?

- netstat-n



21. What command shows MAC addresses of other devices on the network?

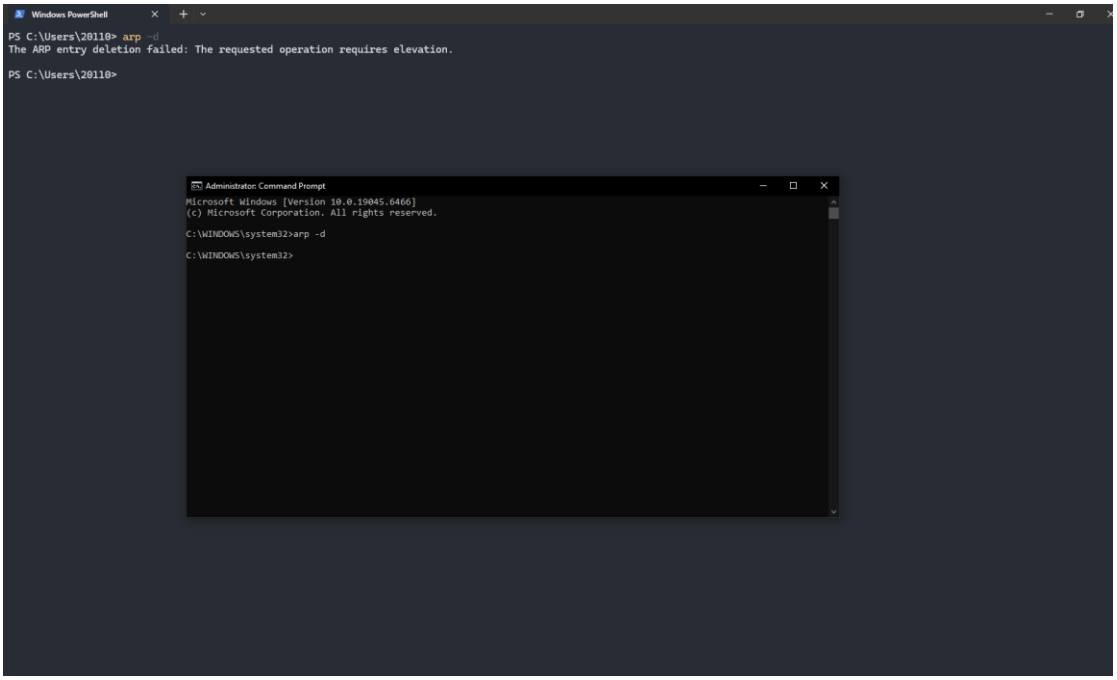
arp -a



22.

23. What command deletes the ARP cache?

arp -d

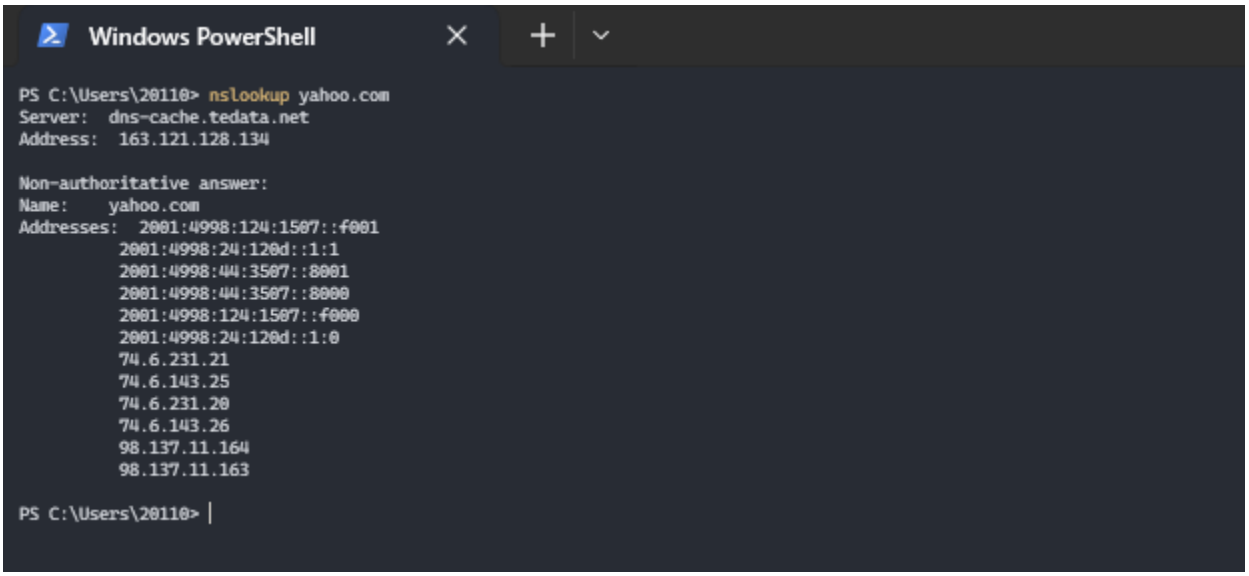
24. 

25. To know which IP address belongs to a domain name:

nslookup Domain_Name

Example:

nslookup Yahoo.com



26. To know which domain name belongs to a specific IP address:

Type this command:

nslookup IP_address

Example:

nslookup 87.248.113.14