

1. ipconfig

Command

ipconfig

Purpose

Displays the current TCP/IP network configuration.

Use

- Check IP address
 - View subnet mask
 - Default gateway
-

2. ipconfig /all

Command

ipconfig /all

Purpose

Displays complete network adapter information.

Shows

- MAC Address
- DHCP Status
- DNS Servers
- Lease Time
- IPv4/IPv6

Use

Troubleshooting network connectivity.

3. Release IP Address

ipconfig /release

Purpose

Releases the DHCP-assigned IP address.

Use

When renewing network configuration.

4. Renew IP Address

`ipconfig /renew`

Purpose

Requests a new IP address from the DHCP server.

Use

After changing network settings or reconnecting to a network.

5. Flush DNS Cache

`ipconfig /flushdns`

Purpose

Clears the local DNS resolver cache.

Use

- Website opens the wrong IP
 - DNS changes are not reflected
-

6. Display DNS Cache

`ipconfig /displaydns`

Purpose

Shows cached DNS records stored locally.

7. Ping

ping google.com

Purpose

Tests network connectivity to a host.

Shows

- Latency (ms)
 - Packet loss
 - Reachability
-

8. Continuous Ping

ping -t 8.8.8.8

Purpose

Continuously monitors connectivity until stopped with **Ctrl + C**.

Use

Detect intermittent network issues.

9. Trace Route

tracert google.com

Purpose

Displays the network path (hops) to a destination.

Use

Identify where latency or packet loss occurs.

10. PathPing

pathping google.com

Purpose

Combines ping and tracert to analyze packet loss over time.

Use

Diagnose unstable WAN links.

11. Network Connections

`netstat -ano`

Purpose

Lists all active TCP/UDP connections and listening ports.

Shows

- Local Address
 - Remote Address
 - State
 - Process ID (PID)
-

12. Show Listening Ports

`netstat -an | find "LISTEN"`

Purpose

Displays only listening ports.

Use

Verify whether services are accepting connections.

13. Find Process Using a Port

`netstat -ano | find ":5060"`

Purpose

Finds which process is using a specific port (e.g., SIP port 5060).

14. Identify a Process by PID

tasklist | find "1234"

Purpose

Maps a Process ID (PID) to its executable name.

15. List Running Processes

tasklist

Purpose

Shows all running processes and their memory usage.

16. Force Stop a Process

taskkill /PID 1234 /F

Purpose

Terminates a process using its PID.

/F

Forcefully stops the process.

17. Check System Information

systeminfo

Purpose

Displays detailed system information.

Shows

- Windows version
- BIOS
- RAM
- Processor
- Domain

- Hotfixes

18. Check Hostname

hostname

Purpose

Displays the computer's hostname.

19. Current Logged-In User

whoami

Purpose

Displays the current user account.

20. View Local Users

net user

Purpose

Lists all local user accounts.

21. View User Details

net user Administrator

Purpose

Displays details for a specific user account.

22. View Local Groups

net localgroup

Purpose

Lists all local groups on the system.

23. Check Shared Folders

net share

Purpose

Displays all shared folders on the computer.

24. View Active Sessions

query user

Purpose

Shows users currently logged into the system, including Remote Desktop sessions.

25. Test DNS Resolution

nslookup google.com

Purpose

Queries DNS servers to resolve a hostname.

Use

Troubleshoot DNS issues.

26. Check ARP Cache

arp -a

Purpose

Displays the local ARP table.

Shows

- IP addresses
 - Corresponding MAC addresses
-

27. Display Routing Table

route print

Purpose

Shows the system's IPv4 and IPv6 routing tables.

Use

Troubleshoot routing problems or verify static routes.

28. Check Network Adapter Configuration

getmac

Purpose

Displays the MAC address of each network adapter.

29. Test Port Connectivity (PowerShell)

Test-NetConnection google.com -Port 443

Purpose

Checks whether a specific TCP port is reachable.

Use

Verify access to services such as HTTPS (443), SIP over TLS (5061), or custom application ports.

30. Check Disk Health

chkdsk C:

Purpose

Scans the file system for errors.

Use

Detect and repair disk issues (repairs may require a reboot).

31. Check System Files

sfc /scannow

Purpose

Scans and repairs corrupted Windows system files.

Use

Resolve issues caused by damaged operating system files.

32. Repair Windows Image

DISM /Online /Cleanup-Image /RestoreHealth

Purpose

Repairs the Windows component store used by System File Checker.

Use

Run before or after sfc /scannow if corruption is detected.

33. Check Running Services

sc query

Purpose

Lists Windows services and their current states.

34. Start a Service

net start Spooler

Purpose

Starts a Windows service.

35. Stop a Service

net stop Spooler

Purpose

Stops a Windows service.

Daily Commands for a Windows Administrator

Command	Primary Use
ipconfig /all	Verify network configuration
ping <host>	Test connectivity
tracert <host>	Identify routing issues
nslookup <host>	Verify DNS resolution
netstat -ano	Inspect network connections and ports
tasklist	Review running processes
taskkill /PID <PID> /F	Stop a problematic process
systeminfo	Collect system information
whoami	Confirm the current user context
arp -a	View IP-to-MAC mappings
route print	Verify routing configuration
sfc /scannow	Repair Windows system files
DISM /Online /Cleanup-Image /RestoreHealth	Repair the Windows image
sc query	Check service status
chkdsk C:	Check the file system for errors