

Command Prompt commands

1. `hostname`

Description: Displays the computer's hostname.

Usage: Open **Command Prompt** and type:

cmd

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`hostname`

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- **Output:** Shows the name of the computer on the network.

2. `ipconfig`

Description: Shows network configuration details for all network adapters, such as IP addresses, subnet masks, and default gateways.

Usage:

cmd

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`ipconfig`

To view detailed information, use:

cmd

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`ipconfig /all`

To release and renew the IP address (useful in DHCP environments):

cmd

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`ipconfig /release`

`ipconfig /renew`

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- **Output:** Lists information about network adapters, IP addresses, DNS servers, etc.

3. `netstat`

Description: Displays active connections, listening ports, and network statistics. Useful for troubleshooting network connections.

Usage:

cmd

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```
netstat
```

- Common options:
 - `netstat -a`: Shows all active connections and listening ports.
 - `netstat -b`: Displays the executable (program) involved in each connection (requires admin privileges).
 - `netstat -n`: Shows addresses and port numbers in numerical form.
 - `netstat -an`: Combines both to show all connections in numerical format.
- **Output**: Lists active connections, their protocol, local and remote addresses, and port numbers.

4. `tracert`

Description: Traces the route that packets take from your computer to a specified network destination, showing each hop along the way.

Usage:

cmd

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```
tracert <destination>
```

- Replace `<destination>` with a hostname or IP address (e.g., `tracert google.com`).
- **Output**: Displays each hop (router) on the path to the destination, with response times for each hop.

5. `whois`

Description: Windows does not have a built-in `whois` command, but you can use online services like whois.com or install a Windows whois tool.

- **Alternative Method:** To perform a `whois` lookup online:
 1. Go to a **Whois website** like whois.com or arin.net.
 2. Enter the domain name or IP address.

For a Command-Line Option:

- Download a third-party tool like `whois.exe` for Windows from [Sysinternals](https://www.sysinternals.com).

6. `ping`

Description: Tests connectivity to a specified IP address or hostname by sending ICMP echo requests.

Usage:

cmd

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```
ping <destination>
```

- Replace <destination> with the IP address or hostname (e.g., `ping google.com`).
- **Output:** Shows the response time for each packet sent, along with packet loss statistics. This command is useful for checking network connectivity and diagnosing latency issues.

Each of these commands is useful for network diagnostics and troubleshooting in Windows, helping you identify connectivity issues, check the route to a host, or view network adapter configurations.