Windows Networking Commands

that you can use for troubleshooting, configuring, and monitoring network-related tasks:

    1. ipconfig

Displays and manages IP configuration of your system.

Common options:

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ipconfig /all: Shows detailed IP information.

ipconfig /release: Releases the IP address for the specified adapter.

ipconfig /renew: Renews the IP address for the specified adapter.

ipconfig /flushdns: Clears the DNS cache.
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ipconfig command tasks

    2. ping

Tests connectivity between two devices.

Common usage:

ping or ping : Sends ICMP echo requests to test the connection.

ping command tasks

    3. tracert

Traces the route packets take to reach a destination.

Usage:

tracert or tracert

tracert command tasks

    4. nslookup

Queries DNS to obtain the domain name or IP address mapping.

Usage:

nslookup : Displays IP address related to the domain.

nslookup : Displays domain related to the IP address.

nslookup command tasks

5. netstat

Displays network statistics, connections, and routing tables.

Common options:

netstat -a: Shows all active connections and listening ports.

netstat -n: Shows connections in numerical format.

netstat -r: Displays the routing table.

netstat -s: Displays statistics by protocol.

6. arp

Displays and modifies the ARP cache (Address Resolution Protocol).

Common options:

arp -a: Shows the ARP cache table.

arp -d : Deletes the ARP entry for the specified IP address.

7. route

Displays and modifies the routing table.

Common options:

route print: Displays the routing table.

route add mask : Adds a new static route.

route delete : Deletes a route.

8. netsh

A powerful tool for configuring and displaying network settings.

Common commands:

netsh interface ip show config: Displays IP configuration for all network adapters.

netsh wlan show profiles: Displays saved Wi-Fi profiles.

netsh firewall show state: Displays the current firewall state.

netsh int ip reset: Resets the TCP/IP stack.

9. telnet

Used to test TCP connections on a specific port (usually requires enabling first).

Usage:

telnet : Tries to establish a connection to a specified host on a particular port.

10. getmac

Displays the MAC address for network adapters.

Usage:

getmac: Shows MAC addresses of all active network adapters.

11. hostname

Displays the computer's hostname.

Usage:

hostname: Shows the name of the machine.

12. pathping

Combines the functionality of ping and tracert to test connectivity and analyze packet loss.

Usage:

pathping or pathping

13. net

Used for network-related tasks such as managing shared resources.

Common usage:

net use : \<share>: Maps a network drive.

net share: Displays shared resources on the computer.

net user : Manages user accounts.

14. net view

Displays a list of shared resources or computers in a network.

Usage:

net view \: Lists shared resources on the specified computer.

15. nbtstat

Displays protocol statistics and current TCP/IP connections using NetBIOS over TCP/IP.

Common options:

nbtstat -a : Shows NetBIOS table of the remote machine.

nbtstat -n: Lists NetBIOS names on the local machine.

16. ftp

Used to transfer files between a local and remote machine using the File Transfer Protocol.

Usage:

ftp : Starts an FTP session to a remote host.

17. systeminfo

Provides detailed information about the computer's network configuration, OS, and more.

Usage:

systeminfo: Displays detailed system information.

These commands can be run directly in the Command Prompt and are useful for diagnosing and managing network issues on Windows systems.