Network Troubleshooting CLI Commands

Windows	macOS/*nix	Description & Options
ping	ping	Test the network connection with a remote IP address `ping -t [IP or host]` `ping -l 1024 [IP or host]` The `-t` option to ping continuously until Ctrl-C is pressed. If you specify the `-t` option you can always get statistics without interrupting pings by pressing `Ctrl + Break`
tracert	traceroute	Displays all intermediate IP addresses through which a packet passes through, between the local machine and the specified IP address. `tracert [@IP or host]` `tracert -d [@IP or host]` This command is useful if the ping command does return any data, to determine at what level the connection failed. `-T` Use TCP SYN for probes `-I` Use ICMP ECHO for probes `-F` Do not fragment probe packets. `-n` Do not try to map IP addresses to host names when displaying `-p n` For UDP tracing, specifies the destination port base traceroute will use (the destination port number will be incremented by each probe). For ICMP tracing, specifies the initial icmp sequence value (incremented by each probe too). For TCP specifies just the (constant) destination port to connect. `-t tos` For IPv4, set the Type of Service (TOS) and Precedence value. Useful values are 16 (low delay) and 8 (high throughput). Note that in order to use some TOS precendence values, you have to be super user. For IPv6, set the Traffic Control value. `-w waittime` Set the time (in seconds) to wait for a response to a probe (default 5.0 sec). `-q nqueries` Sets the number of probe packets per hop. Default is 3 `-A` Perform AS path lookups in routing registries and print results directly after the corresponding addresses. `-M method` Use specified method for traceroute operations. Default traditional udp method has name default, icmp (-I) and tcp (-T) have names icmp and tcp respectively. Method-specific options can be passed by -O . Most methods have their simple shortcuts, (-I means -M icmp, etc). `--mtu` Discover MTU along the path being traced. Implies -F -N 1. New mtu is printed once in a form of F=NUM at the first probe of a hop which requires such mtu to be reached.