Polecenia w konsoli

ipconfig – polecenie służące do wyświetlania konfiguracji interfejsów sieciowych. Zwalnia i aktualizuje dzierżawy DHCP oraz wyświetla, rejestruje i usuwa nazwy DNS.

Polecenie to wywołane z parametrem:

-**/all**- wyświetla pełną informację o interfejsach sieciowych

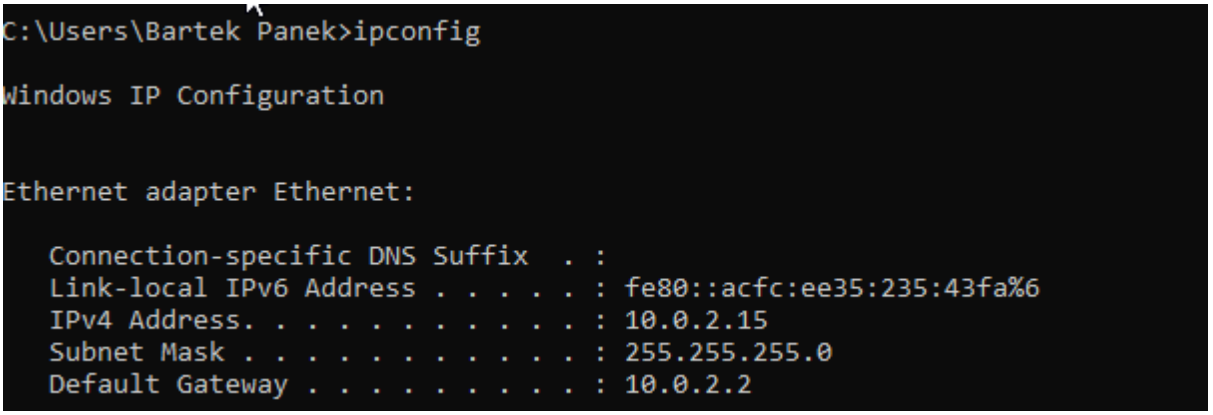
-**/renew**- odnawia wszystkie dzierżawy adresu z DHCP

-**/release**- odnawia wszystkie dzierżawy adresu z DHCP

-**/?** lub **/**- wyświetla komunikat pomocy

-**/flushdns**- czyści bufor programu rozpoznającego nazwy DNS

-**/displaydns** - wyświetla zapamiętane tłumaczenia DNS na adresy IP



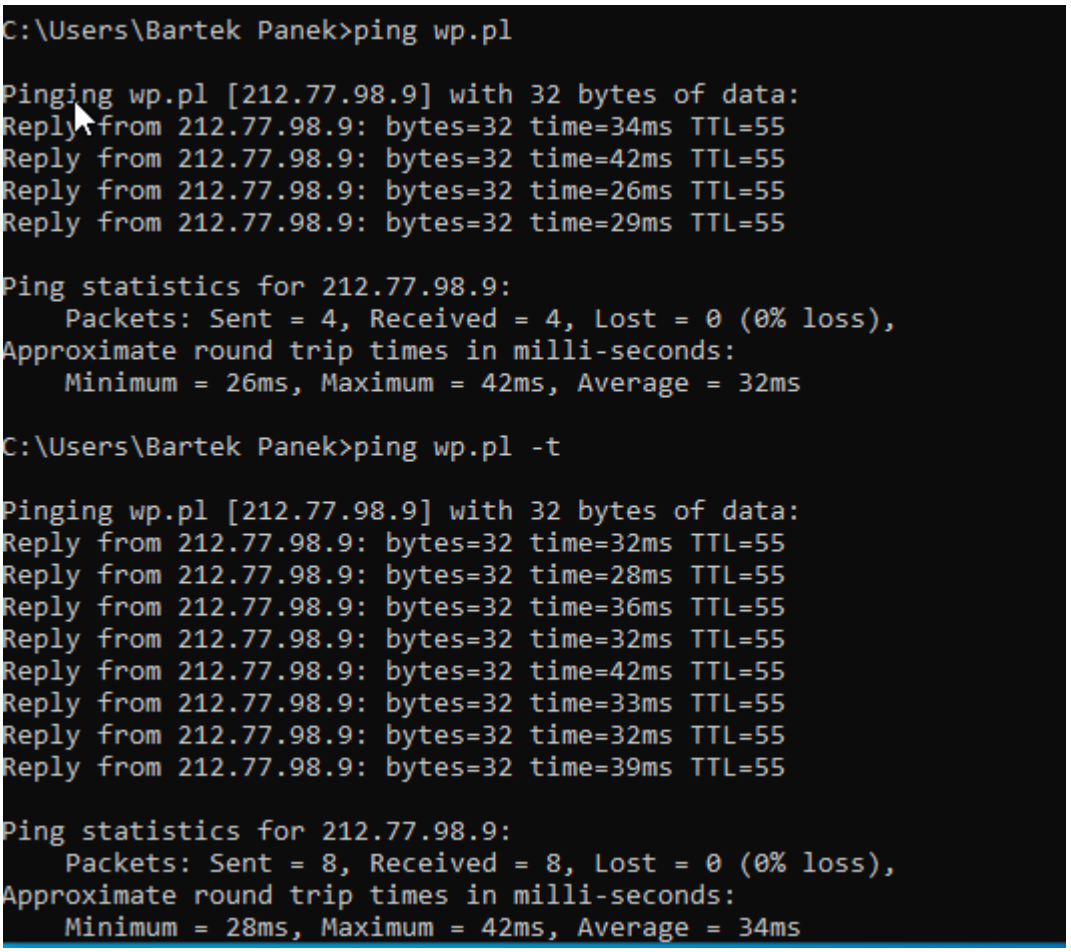
```
C:\Users\Bartek Panek>ipconfig /all

Windows IP Configuration

   Host Name . . . . . . . . . . . . : DESKTOP-J3021V3
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel(R) PRO/1000 MT Desktop Adapter
   Physical Address. . . . . . . . . : 08-00-27-8D-AB-14
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::acfc:ee35:235:43fa%6(Preferred)
   IPv4 Address. . . . . . . . . . . : 10.0.2.15(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Lease Obtained. . . . . . . . . . : wtorek, 22 lutego 2022 20:37:38
   Lease Expires . . . . . . . . . . : środa, 23 lutego 2022 20:37:40
   Default Gateway . . . . . . . . . : 10.0.2.2
   DHCP Server . . . . . . . . . . . : 10.0.2.2
   DHCPv6 IAID . . . . . . . . . . . : 101187623
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-29-A6-F3-21-08-00-27-8D-AB-14
   DNS Servers . . . . . . . . . . . : 192.168.8.1
   NetBIOS over Tcpip. . . . . . . . : Enabled
```

```
C:\Users\Bartek Panek>ipconfig /renew

Windows IP Configuration


Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::acfc:ee35:235:43fa%6
   IPv4 Address. . . . . . . . . . . : 10.0.2.15
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 10.0.2.2
```

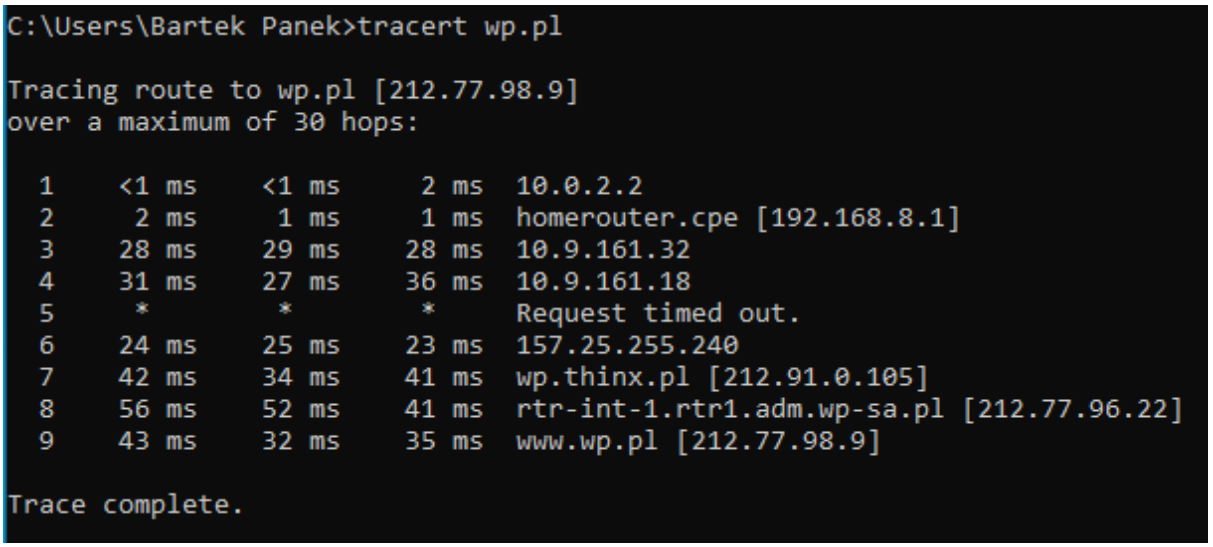
```
C:\Users\Bartek Panek>ipconfig /release

Windows IP Configuration


Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::acfc:ee35:235:43fa%6
   Default Gateway . . . . . . . . . :
```

```
C:\Users\Bartek Panek>ipconfig /?

USAGE:
    ipconfig [/allcompartments] [/? | /all |
                                 /renew [adapter] | /release [adapter] |
                                 /renew6 [adapter] | /release6 [adapter] |
                                 /flushdns | /displaydns | /registerdns |
                                 /showclassid adapter |
                                 /setclassid adapter [classid] |
                                 /showclassid6 adapter |
                                 /setclassid6 adapter [classid] ]

where
    adapter             Connection name
                       (wildcard characters * and ? allowed, see examples)

    Options:
       /?               Display this help message
       /all             Display full configuration information.
       /release         Release the IPv4 address for the specified adapter.
       /release6        Release the IPv6 address for the specified adapter.
       /renew           Renew the IPv4 address for the specified adapter.
       /renew6          Renew the IPv6 address for the specified adapter.
       /flushdns        Purges the DNS Resolver cache.
       /registerdns     Refreshes all DHCP leases and re-registers DNS names
       /displaydns      Display the contents of the DNS Resolver Cache.
       /showclassid     Displays all the dhcp class IDs allowed for adapter.
       /setclassid      Modifies the dhcp class id.
       /showclassid6    Displays all the IPv6 DHCP class IDs allowed for adapter.
       /setclassid6     Modifies the IPv6 DHCP class id.


The default is to display only the IP address, subnet mask and
default gateway for each adapter bound to TCP/IP.

For Release and Renew, if no adapter name is specified, then the IP address
leases for all adapters bound to TCP/IP will be released or renewed.

For Setclassid and Setclassid6, if no ClassId is specified, then the ClassId is removed.

Examples:
    > ipconfig                      ... Show information
```

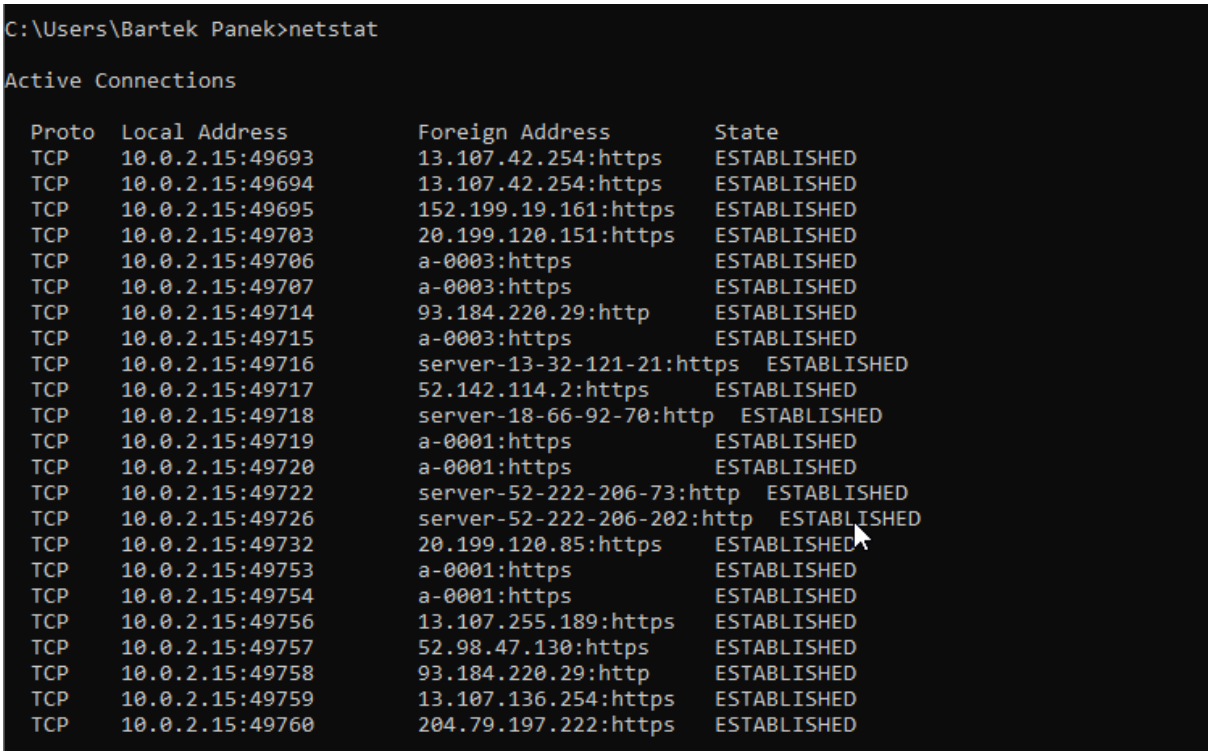
ping – polecenie używane w sieciach komputerowych TCP/IP i służące do diagnozowania połączeń sieciowych. Pozwala na sprawdzenie, czy istnieje połączenie pomiędzy hostami testującym i testowanym.Polecenie to wywołane z parametrem **-t** wysyła żądania do momentu ręcznego przerwania tego procesu za pomocą **CTRL+C**



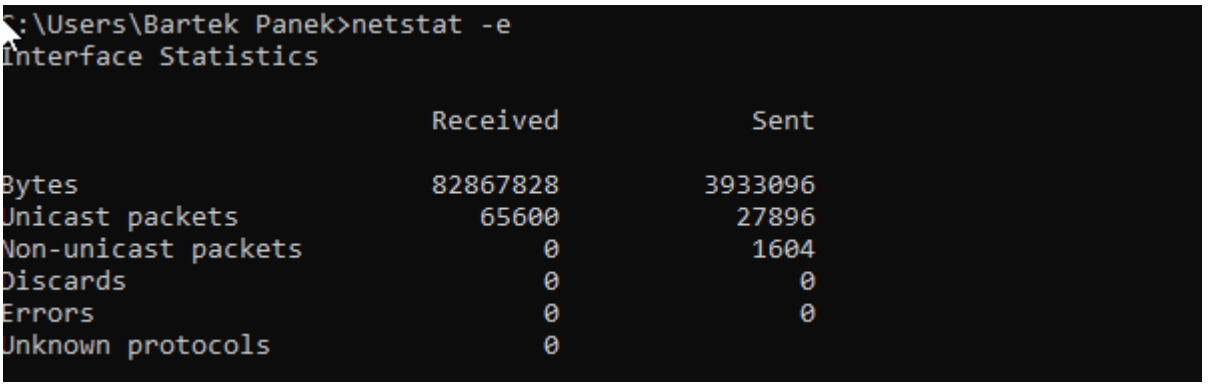
tracert – program służący do badania trasy pakietów w sieci IP. Polecenie to znajduje również zastosowanie w sprawdzeniu, czy na trasie przesyłania pakietów wszystkie routery i łącza działają prawidłowo



netstat - służy do wyświetlania aktywnych połączeń sieciowych TCP a także: portów, na których komputer nasłuchuje, tabeli trasowania protokołu IP, statystyki sieci Ethernet, statystyki protokołu IPv4 (dla protokołów IP, ICMP, TCP i UDP), statystyki protokołu IPv6 (dla protokołów IPv6, ICMPv6, TCP przez IPv6 i UDP przez IPv6) oraz połączeń NAT i komunikatów netlinkowych. Polecenie netstat użyte bez parametrów powoduje wyświetlenie aktywnych połączeń protokołu TCP. Polecenie to wykonane z parametrem **-e** wyświetla statystyki wysyłanych i odebranych pakietów, bardziej szczegółowe dane można pozyskać z parametrem **-s**. Można tym poleceniem również pozyskać tablicę routingu wykonując polecenie z parametrem **-r**



```
C:\Users\Bartek Panek>netstat

Active Connections

  Proto  Local Address          Foreign Address        State
  TCP    10.0.2.15:49693        13.107.42.254:https    ESTABLISHED
  TCP    10.0.2.15:49694        13.107.42.254:https    ESTABLISHED
  TCP    10.0.2.15:49695        152.199.19.161:https   ESTABLISHED
  TCP    10.0.2.15:49703        20.199.120.151:https   ESTABLISHED
  TCP    10.0.2.15:49706        a-0003:https           ESTABLISHED
  TCP    10.0.2.15:49707        a-0003:https           ESTABLISHED
  TCP    10.0.2.15:49714        93.184.220.29:http     ESTABLISHED
  TCP    10.0.2.15:49715        a-0003:https           ESTABLISHED
  TCP    10.0.2.15:49716        server-13-32-121-21:https  ESTABLISHED
  TCP    10.0.2.15:49717        52.142.114.2:https     ESTABLISHED
  TCP    10.0.2.15:49718        server-18-66-92-70:http  ESTABLISHED
  TCP    10.0.2.15:49719        a-0001:https           ESTABLISHED
  TCP    10.0.2.15:49720        a-0001:https           ESTABLISHED
  TCP    10.0.2.15:49722        server-52-222-206-73:http  ESTABLISHED
  TCP    10.0.2.15:49726        server-52-222-206-202:http  ESTABLISHED
  TCP    10.0.2.15:49732        20.199.120.85:https    ESTABLISHED
  TCP    10.0.2.15:49753        a-0001:https           ESTABLISHED
  TCP    10.0.2.15:49754        a-0001:https           ESTABLISHED
  TCP    10.0.2.15:49756        13.107.255.189:https   ESTABLISHED
  TCP    10.0.2.15:49757        52.98.47.130:https     ESTABLISHED
  TCP    10.0.2.15:49758        93.184.220.29:http     ESTABLISHED
  TCP    10.0.2.15:49759        13.107.136.254:https   ESTABLISHED
  TCP    10.0.2.15:49760        204.79.197.222:https   ESTABLISHED
```



```
C:\Users\Bartek Panek>netstat -e
Interface Statistics

                           Received            Sent

Bytes                      82867828         3933096
Unicast packets               65600           27896
Non-unicast packets               0            1604
Discards                          0               0
Errors                            0               0
Unknown protocols                 0
```

```
C:\Users\Bartek Panek>netstat -s

IPv4 Statistics

  Packets Received                   = 16388
  Received Header Errors             = 0
  Received Address Errors            = 0
  Datagrams Forwarded                = 0
  Unknown Protocols Received         = 0
  Received Packets Discarded         = 6
  Received Packets Delivered         = 16776
  Output Requests                    = 7420
  Routing Discards                   = 0
  Discarded Output Packets           = 0
  Output Packet No Route             = 3
  Reassembly Required                = 0
  Reassembly Successful              = 0
  Reassembly Failures                = 0
  Datagrams Successfully Fragmented  = 0
  Datagrams Failing Fragmentation    = 0
  Fragments Created                  = 0

IPv6 Statistics

  Packets Received                   = 0
  Received Header Errors             = 0
  Received Address Errors            = 0
  Datagrams Forwarded                = 0
  Unknown Protocols Received         = 0
  Received Packets Discarded         = 0
  Received Packets Delivered         = 121
  Output Requests                    = 232
  Routing Discards                   = 0
```

```
C:\Users\Bartek Panek>netstat -r
===========================================================================
Interface List
 12...08 00 27 8d ab 14 ......Intel(R) PRO/1000 MT Desktop Adapter
 16...08 00 27 4b 70 8c ......Intel(R) PRO/1000 MT Desktop Adapter #2
  1...........................Software Loopback Interface 1
===========================================================================

IPv4 Route Table
===========================================================================
Active Routes:
Network Destination        Netmask          Gateway       Interface  Metric
          0.0.0.0          0.0.0.0        10.0.2.2        10.0.2.15     25
         10.0.2.0    255.255.255.0        On-link         10.0.2.15    281
        10.0.2.15  255.255.255.255        On-link         10.0.2.15    281
       10.0.2.255  255.255.255.255        On-link         10.0.2.15    281
        127.0.0.0        255.0.0.0        On-link         127.0.0.1    331
        127.0.0.1  255.255.255.255        On-link         127.0.0.1    331
  127.255.255.255  255.255.255.255        On-link         127.0.0.1    331
      169.254.0.0      255.255.0.0        On-link    169.254.41.127    281
   169.254.41.127  255.255.255.255        On-link    169.254.41.127    281
  169.254.255.255  255.255.255.255        On-link    169.254.41.127    281
        224.0.0.0        240.0.0.0        On-link         127.0.0.1    331
        224.0.0.0        240.0.0.0        On-link         10.0.2.15    281
        224.0.0.0        240.0.0.0        On-link    169.254.41.127    281
  255.255.255.255  255.255.255.255        On-link         127.0.0.1    331
  255.255.255.255  255.255.255.255        On-link         10.0.2.15    281
  255.255.255.255  255.255.255.255        On-link    169.254.41.127    281
===========================================================================
Persistent Routes:
  None

IPv6 Route Table
===========================================================================
Active Routes:
 If Metric Network Destination      Gateway
  1    331 ::1/128                  On-link
 12    281 fe80::/64                On-link
 16    281 fe80::/64                On-link
```

netsh - umożliwia lokalną lub zdalną konfigurację urządzeń sieciowych, takich jak interfejs. Program ten jest uruchamiany poleceniem **netsh**. Interfejsy sieciowe można wyświetlić poleceniem **interface show interface**

Zmiana nazwy interfejsu

```
C:\Users\Bartek Panek>netsh
netsh>interface show interface

Admin State    State          Type             Interface Name
-------------------------------------------------------------------------
Enabled        Connected      Dedicated        Ethernet
Enabled        Connected      Dedicated        Ethernet 2

netsh>interface set interface name="VirtualBox" newname="VBOX"
Brak dalszych danych.


netsh>interface set interface name="VirtualBox" newname="VBOX"
Brak dalszych danych.


netsh>interface set interface name="Ethernet" newname="VBOX"

netsh>interface shwo interface
The following command was not found: interface shwo interface.
netsh>interface show interface

Admin State    State          Type             Interface Name
-------------------------------------------------------------------------
Enabled        Connected      Dedicated        VBOX
Enabled        Connected      Dedicated        Ethernet 2
```