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Lab – Comandos de Rede

Windows

- ipconfig

```
C:\Users\izael>ipconfig

Configuração de IP do Windows

Adaptador Ethernet Ethernet:

    Estado da mídia. . . . . : mídia desconectada
    Sufixo DNS específico de conexão. . . . . :

Adaptador Ethernet Ethernet 2:

    Sufixo DNS específico de conexão. . . . . :
    Endereço IPv6 de link local . . . . . : fe80::e5c:cf70:1194:3b5d%5
    Endereço IPv4. . . . . : 192.168.56.1
    Máscara de Sub-rede . . . . . : 255.255.255.0
    Gateway Padrão. . . . . :

Adaptador Ethernet Ethernet 3:

    Sufixo DNS específico de conexão. . . . . :
    Endereço IPv6 de link local . . . . . : fe80::8491:5b6:530f:9f90%13
    Endereço IPv4. . . . . : 192.168.210.165
    Máscara de Sub-rede . . . . . : 255.255.255.0
    Gateway Padrão. . . . . : 192.168.210.7

C:\Users\izael>
```

- ping

```
C:\Users\izael>ping 192.168.210.165

Disparando 192.168.210.165 com 32 bytes de dados:
Resposta de 192.168.210.165: bytes=32 tempo<1ms TTL=128
Resposta de 192.168.210.165: bytes=32 tempo<1ms TTL=128
Resposta de 192.168.210.165: bytes=32 tempo<1ms TTL=128
Resposta de 192.168.210.165: bytes=32 tempo<1ms TTL=128

Estatísticas do Ping para 192.168.210.165:
    Pacotes: Enviados = 4, Recebidos = 4, Perdidos = 0 (0% de
    perda),
    Aproximar um número redondo de vezes em milissegundos:
    Mínimo = 0ms, Máximo = 0ms, Média = 0ms

C:\Users\izael>
```

- tracert

```
C:\Users\izael>tracert 192.168.210.165

Rastreando a rota para DESKTOP-ET4ESIL [192.168.210.165]
com no máximo 30 saltos:

 1    <1 ms    <1 ms    <1 ms    DESKTOP-ET4ESIL [192.168.210.165]

Rastreamento concluído.

C:\Users\izael>
```

- pathping

```
C:\Users\izael>pathping 192.168.210.165

Rastreando a rota para DESKTOP-ET4ESIL [192.168.210.165]
com no máximo 30 saltos:
 0  DESKTOP-ET4ESIL [192.168.210.165]
 1  DESKTOP-ET4ESIL [192.168.210.165]

Calculando estatísticas para 25 segundos...
      Origem aqui      Este nó/Vínculo
      Perdido/Enviado  Perdido/Enviado
Salto RTT      = Pct      = Pct      Endereço
 0           0ms      0/ 100 = 0%      0/ 100 = 0%  DESKTOP-ET4ESIL [192.168.210.165]
 1           0ms      0/ 100 = 0%      0/ 100 = 0%  DESKTOP-ET4ESIL [192.168.210.165]

Rastreamento concluído.

C:\Users\izael>
```

- getmac

```
C:\Users\izael>getmac

Endereço físico      Nome de transporte
=====
18-C0-4D-F0-2F-59    Mídia desconectada
0A-00-27-00-00-05    \Device\Tcpip_{281616F8-A5E7-457C-8FDA-26238639B335}
72-52-CA-05-83-3C    \Device\Tcpip_{6AEFDF8D-B59A-4528-9792-9982DF419801}

C:\Users\izael>
```

- hostname

```
C:\Users\izael>hostname
DESKTOP-ET4ESIL

C:\Users\izael>
```

- nslookup

```
C:\Users\izael>nslookup
Servidor Padrão: UnKnown
Address: 192.168.210.7

> www.google.com
Servidor: UnKnown
Address: 192.168.210.7

Não é resposta autoritativa:
Nome: www.google.com
Addresses: 2800:3f0:4001:832::2004
          142.250.219.4

> nslookup
Servidor: UnKnown
Address: 192.168.210.7

*** UnKnown não encontrou nslookup: Non-existent domain
>
```

- netstat

```
C:\Users\izael>netstat

Conexões ativas

Proto Endereço local      Endereço externo    Estado
TCP    127.0.0.1:49355      DESKTOP-ET4ESIL:50231 ESTABLISHED
TCP    127.0.0.1:49670      DESKTOP-ET4ESIL:49671 ESTABLISHED
TCP    127.0.0.1:49671      DESKTOP-ET4ESIL:49670 ESTABLISHED
TCP    127.0.0.1:49672      DESKTOP-ET4ESIL:49673 ESTABLISHED
TCP    127.0.0.1:49673      DESKTOP-ET4ESIL:49672 ESTABLISHED
TCP    127.0.0.1:50227      DESKTOP-ET4ESIL:65001 ESTABLISHED
TCP    127.0.0.1:50231      DESKTOP-ET4ESIL:49355 ESTABLISHED
TCP    127.0.0.1:65001      DESKTOP-ET4ESIL:50227 ESTABLISHED
TCP    192.168.210.165:50826 30:https            ESTABLISHED
TCP    192.168.210.165:50827 172.172.255.218:https ESTABLISHED
TCP    192.168.210.165:50834 62:4070             ESTABLISHED
TCP    192.168.210.165:50856 cj-in-f188:5228      ESTABLISHED
TCP    192.168.210.165:50859 whatsapp-cdn-shv-01-gru2:https ESTABLISHED
TCP    192.168.210.165:50893 13.107.213.254:https CLOSE_WAIT
TCP    192.168.210.165:50974 30:https            ESTABLISHED
TCP    192.168.210.165:51189 24:https            ESTABLISHED
TCP    192.168.210.165:51344 9:https             ESTABLISHED
TCP    192.168.210.165:51455 20.127.250.238:https ESTABLISHED
TCP    192.168.210.165:51467 52.97.26.66:https   ESTABLISHED

^C
C:\Users\izael>
```

- systeminfo

```
C:\Users\izael>systeminfo

Nome do host: DESKTOP-ET4ESIL
Nome do sistema operacional: Microsoft Windows 10 Pro
Versão do sistema operacional: 10.0.19045 N/A compilação 19045
Fabricante do sistema operacional: Microsoft Corporation
Configuração do SO: Estação de trabalho autônoma
Tipo de compilação do sistema operacional: Multiprocessor Free
Proprietário registrado: izaeljunior007@gmail.com
Organização registrada: N/A
Identificação do produto: 00330-80000-00000-AA664
Data da instalação original: 29/06/2021, 18:57:56
Tempo de Inicialização do Sistema: 09/11/2024, 11:12:11
Fabricante do sistema: Gigabyte Technology Co., Ltd.
Modelo do sistema: H310M M.2 2.0
Tipo de sistema: x64-based PC
Processador(es): 1 processador(es) instalado(s).
```

Linux

- ip

```
sptech@sptech:~$ ip link show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN mode DEFA
ULT group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP
    mode DEFAULT group default qlen 1000
    link/ether 08:00:27:e1:f9:e2 brd ff:ff:ff:ff:ff:ff
sptech@sptech:~$
```

- traceroute

```
sptech@sptech:~$ traceroute localhost
traceroute to localhost (127.0.0.1), 30 hops max, 60 byte packets
 1 localhost (127.0.0.1)  0.014 ms  0.003 ms  0.002 ms
sptech@sptech:~$
```

- tracepath

```
sptech@sptech:~$ tracepath localhost
1?: [LOCALHOST] 0.004ms pmtu 65536
1: localhost 0.028ms reached
1: localhost 0.017ms reached
Resume: pmtu 65536 hops 1 back 1
sptech@sptech:~$
```

- ping

```
sptech@sptech:~$ ping localhost
PING localhost(localhost (:::1)) 56 data bytes
64 bytes from localhost (:::1): icmp_seq=1 ttl=64 time=0.014 ms
64 bytes from localhost (:::1): icmp_seq=2 ttl=64 time=0.020 ms
64 bytes from localhost (:::1): icmp_seq=3 ttl=64 time=0.027 ms
64 bytes from localhost (:::1): icmp_seq=4 ttl=64 time=0.024 ms
64 bytes from localhost (:::1): icmp_seq=5 ttl=64 time=0.025 ms
^C
```

- SS

```

23985
u_str          ESTAB          0          0
                * 24536                *
24535
u_str          ESTAB          0          0
                * 24437                *
24438
u_dgr          ESTAB          0          768
                * 23630                *
23629
u_str          ESTAB          0          0
                * 24401                *
24402
u_str          ESTAB          0          0
                /run/user/1000/bus 24047                *

```

- dig

```

sptech@sptech:~$ dig
; <<>> DiG 9.18.18-0ubuntu0.22.04.2-Ubuntu <<>>
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 34596
;; flags: qr rd ra; QUERY: 1, ANSWER: 13, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;.                IN      NS
;; ANSWER SECTION:
.                292010 IN      NS      a.root-servers.net.
.                292010 IN      NS      b.root-servers.net.
.                292010 IN      NS      l.root-servers.net.
.                292010 IN      NS      e.root-servers.net.
.                292010 IN      NS      m.root-servers.net.
.                292010 IN      NS      j.root-servers.net.
.                292010 IN      NS      c.root-servers.net.
.                292010 IN      NS      k.root-servers.net.
.                292010 IN      NS      i.root-servers.net.
.                292010 IN      NS      d.root-servers.net.
.                292010 IN      NS      g.root-servers.net.
.                292010 IN      NS      f.root-servers.net.
.                292010 IN      NS      h.root-servers.net.
;; Query time: 20 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Sat Nov 09 18:25:01 -03 2024

```

- host

```
sptech@sptech:~$ host localhost
localhost has address 127.0.0.1
localhost has IPv6 address ::1
sptech@sptech:~$
```

- hostname

```
sptech@sptech:~$ hostname
sptech
sptech@sptech:~$
```

- curl

```
sptech@sptech:~$ curl www.google.com
<!doctype html><html itemscope="" itemtype="http://schema.org/WebPage" lang="pt-BR"><
TF-8" http-equiv="Content-Type"><meta content="/images/branding/googleg/1x/googleg_s
><title>Google</title><script nonce="t3Ni1-Vx_B-Q_PVA8o3JsQ">(function(){var _g={kEI:
43,1141,541533,2891,79447,9708,334635,2006,8155,23350,22436,9779,62657,76209,15816,18
992673,2389389,1488,38,120,49,3,2,17,52,18,1,6,1,6,1,6,4,1,6,1,6,1,7,2,2,62797117,11820
1725,10898,15164,8182,5926,43503,1960,7275,12431,6758,1906,5,728,21240,7041,2097,4600
24070,5784,1341,13708,49,8154,3296,4135,12034,98,2245,1526,1908,8202,4363,797,16870,1
783,48,3668,1682,41,2625,3510,5746,1758,1,3896,462,772,2331,4,641,1,34,1447,938,320,8
50,508,9,5954,692,844,30,8,167,4502,255,728,386,764,1219,52,192,895,3,7,149,1534,37,2
9,2591,2,608,2570,623,4,2,120,82,1870,2,372,1334,557,211,1043,642,3,383,673,1228,1360
,536,134,161,1181,53,1734,253,2,3,2,1010,5,4,4,4,503,184,1514,909,459,517,4,324,1301,
25,2,15,550,938,289,192,42,933,316,15,3,3,2928,359,261,904,605,3,2997,21026428,380113
761,1,kPL,LF7ZG,LPBT,899784401,(function(){var _g=((window.google).google)}(this))
```

- mtr

```

My traceroute [v0.95]
2024-11-09T18:29:27-0300

sptech (::1) -> localhost (::1)
Keys: Help Display mode Restart statistics Order of fields quit

Host                                     Packets      Pings
Loss%  Snt  Last  Avg  Best  Wrst  StDev
1. localhost                             0.0%        3    0.0    0.0    0.0    0.0    0.0

```

- whois

```

sptech@sptech:~$ whois host
% IANA WHOIS server
% for more information on IANA, visit http://www.iana.org
% This query returned 1 object

domain:            HOST

organisation: Radix Technologies Inc.
address:           Services Cayman Limited, P.O. Box 10008, Willow House, Cricket Square, Grand Cayman
address:           KY1-1001
address:           Cayman Islands (the)

contact:           administrative
name:              Director
organisation: Radix Technologies Inc.
address:           Services Cayman Limited, P.O. Box 10008, Willow House, Cricket Square, Grand Cayman
address:           KY1-1001
address:           Cayman Islands (the)
phone:             +971 44487934

```

- ifplugstatus

```
sptech@sptech:~$ sudo apt install ifplugd
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
Os pacotes adicionais seguintes serão instalados:
  ifupdown
Pacotes sugeridos:
  rdnssd
Os NOVOS pacotes a seguir serão instalados:
  ifplugd ifupdown
0 pacotes atualizados, 2 pacotes novos instalados, 0 a serem removidos e 2 não atualizados.
É preciso baixar 123 kB de arquivos.
Depois desta operação, 474 kB adicionais de espaço em disco serão usados.
Você quer continuar? [S/n] n
Abortar.
sptech@sptech:~$
```

- iftop

```
sptech@sptech:~$ iftop
interface: enp0s3
IP address is: 10.0.2.15
MAC address is: 08:00:27:e1:f9:e2
pcap_open_live(enp0s3): enp0s3: You don't have permission to capture on that device (socket: Operação não permitida)
sptech@sptech:~$
```

- tcpdump

```
sptech@sptech:~$ sudo tcpdump
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on enp0s3, link-type EN10MB (Ethernet), snapshot length 262144 bytes
18:38:00.308098 IP sptech.38752 > prod-ntp-4.ntp1.ps5.canonical.com.ntp: NTPv4, Client, length 48
18:38:00.378012 IP sptech.48956 > 192.168.210.7.domain: 32012+ [1au] PTR? 57.190.125.185.in-addr.arpa. (56)
18:38:00.649239 IP prod-ntp-4.ntp1.ps5.canonical.com.ntp > sptech.38752: NTPv4, Server, length 48
18:38:00.649621 IP 192.168.210.7.domain > sptech.48956: 32012 2/0/1 PTR prod-ntp-4.ntp1.ps5.canonical.com., p4.ps5.canonical.com. (133)
18:38:00.649962 IP sptech.48004 > 192.168.210.7.domain: 22952+ [1au] PTR? 15.2.0.10.in-addr.arpa. (51)
18:38:05.391096 ARP, Request who-has _gateway tell sptech, length 28
18:38:05.391269 ARP, Reply _gateway is-at 52:54:00:12:35:02 (oui Unknown), length 46
18:38:05.651319 IP sptech.48004 > 192.168.210.7.domain: 22952+ [1au] PTR? 15.2.0.10.in-addr.arpa. (51)
18:38:05.665767 IP 192.168.210.7.domain > sptech.48004: 22952 ServFail 0/0/1 (51)
18:38:05.665848 IP sptech.48004 > 192.168.210.7.domain: 22952+ [1au] PTR? 15.2.0.10.in-addr.arpa. (51)
18:38:05.678552 IP 192.168.210.7.domain > sptech.48004: 22952 ServFail 0/0/1 (51)
18:38:05.678647 IP sptech.48004 > 192.168.210.7.domain: 22952+ PTR? 15.2.0.10.in-addr.arpa. (40)
18:38:05.691766 IP 192.168.210.7.domain > sptech.48004: 22952 ServFail 0/0/0 (40)
```

- ettool

```
sptech@sptech:~$ sudo apt install ettool
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
E: Impossível encontrar o pacote ettool
sptech@sptech:~$ ettool
```


- nmcli

```
sptech@sptech:~$ nmcli
enp0s3: conectado para Conexão cabeada 1
"Intel 82540EM"
  ethernet (e1000), 08:00:27:E1:F9:E2, hw, mtu 1500
  padrão ip4
  inet4 10.0.2.15/24
  route4 10.0.2.0/24 metric 100
  route4 default via 10.0.2.2 metric 100
  inet6 fe80::7b00:3593:b4e2:eb73/64
  route6 fe80::/64 metric 1024

lo: não gerenciável
"lo"
  loopback (unknown), 00:00:00:00:00:00, sw, mtu 65536

DNS configuration:
  servers: 192.168.210.7
  interface: enp0s3

Use "nmcli device show" para obter informações completas sobre dispositivos
conhecidos e "nmcli connection show" para obter uma visão geral sobre perfis
de conexão ativa.

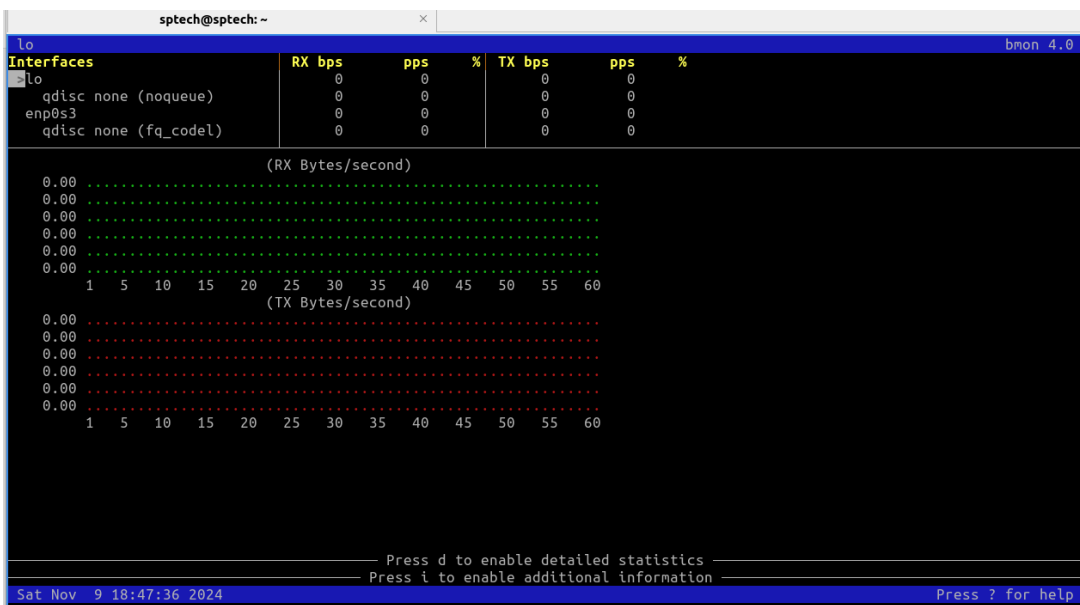
Consulte as páginas de manual nmcli(1) e nmcli-examples(7) para detalhes
completos de uso.
```

- nmap

```
sptech@sptech:~$ nmap localhost
Starting Nmap 7.80 ( https://nmap.org ) at 2024-11-09 18:46 -03
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000084s latency).
Other addresses for localhost (not scanned): ::1
Not shown: 997 closed ports
PORT      STATE SERVICE
22/tcp    open  ssh
631/tcp   open  ipp
3306/tcp  open  mysql

Nmap done: 1 IP address (1 host up) scanned in 0.07 seconds
sptech@sptech:~$
```

- bmon



- firewallld

```
sptech@sptech:~$ firewallld
Comando 'firewalld' não encontrado, mas poder ser instalado com:
sudo apt install firewalld
sptech@sptech:~$ sudo apt install firewalld
Lendo listas de pacotes... Pronto
Construindo árvore de dependências... Pronto
Lendo informação de estado... Pronto
Os seguintes pacotes foram instalados automaticamente e já não são
necessários:
E: Falhou ao buscar http://security.ubuntu.com/ubuntu/pool/main/s/setuptools/python3-setuptools_59.6.0
.deb 404 Not Found [IP: 91.189.91.81 80]
E: Impossível buscar alguns arquivos, talvez executar apt-get update ou tentar com --fix-missing?
```

- iperf

```
sptech@sptech:~$ iperf
Comando 'iperf' não encontrado, mas poder ser instalado com:
sudo apt install iperf
```

- speedtest-cli

```
sptech@sptech:~$ speedtest-cli
Retrieving speedtest.net configuration...
Testing from Claro NET (177.181.2.192)...
Retrieving speedtest.net server list...
Selecting best server based on ping...
Hosted by Easynet (Mauá) [10.60 km]: 17.754 ms
Testing download speed.....
Download: 17.16 Mbit/s
Testing upload speed.....
Upload: 16.09 Mbit/s
```

- vnstat

```
sptech@sptech:~$ vnstat
enp0s3: Not enough data available yet.
```