

# Linux

## Ubuntu Server

### Instalação e Configuração de 4 placas de rede no Ubuntu (14, 16 e 18) Server

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# 1.1- Instalação das quatro (4) placas de rede no Virtualbox



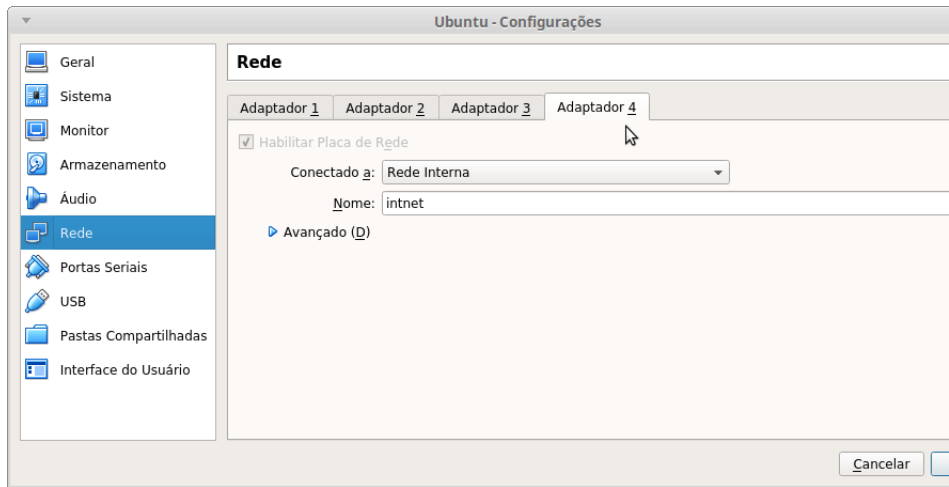
# 1.1- Instalação das quatro (4) placas de rede no Virtualbox



# 1.1- Instalação das quatro (4) placas de rede no Virtualbox



# 1.1- Instalação das quatro (4) placas de rede no Virtualbox



## 2.1- Instalação das quatro (4) placas de rede no Ubuntu 14

```
root@asoa:/home/asoa# ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:3e:a8:0b
          inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe3e:a80b/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:5 errors:0 dropped:0 overruns:0 frame:0
          TX packets:45 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1360 (1.3 KB)  TX bytes:3936 (3.9 KB)

eth1      Link encap:Ethernet  HWaddr 08:00:27:3b:f5:9f
          inet addr:192.168.13.1  Bcast:192.168.13.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe3b:f59f/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:4 errors:0 dropped:0 overruns:0 frame:0
          TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1302 (1.3 KB)  TX bytes:648 (648.0 B)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

root@asoa:/home/asoa#
```

## 2.1- Instalação das quatro (4) placas de rede no Ubuntu 14

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto eth0
iface eth0 inet dhcp

auto eth1
iface eth1 inet static
    address 192.168.13.1
    netmask 255.255.255.0

auto eth2
iface eth2 inet static
    address 10.10.10.1
    netmask 255.255.255.0

auto eth3
iface eth3 inet static
    address 172.16.1.1
    netmask 255.255.255.0
```



## 2.1- Instalação das quatro (4) placas de rede no Ubuntu 14

```
asoa@asoa:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:3e:a8:0b
          inet addr:10.0.2.15 Bcast:10.0.2.255 Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe3e:a80b/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:7 errors:0 dropped:0 overruns:0 frame:0
          TX packets:63 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1480 (1.4 KB)  TX bytes:5240 (5.2 KB)

eth1      Link encap:Ethernet  HWaddr 08:00:27:3b:f5:9f
          inet addr:192.168.13.1 Bcast:192.168.13.255 Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe3b:f59f/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:5 errors:0 dropped:0 overruns:0 frame:0
          TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1650 (1.6 KB)  TX bytes:648 (648.0 B)

eth2      Link encap:Ethernet  HWaddr 08:00:27:e6:05:ac
          inet addr:10.10.10.1 Bcast:10.10.10.255 Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fee6:5ac/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:648 (648.0 B)

eth3      Link encap:Ethernet  HWaddr 08:00:27:c4:5b:e6
          inet addr:172.16.1.1 Bcast:172.16.1.255 Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fec4:5be6/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:648 (648.0 B)
```

## 2.2- Instalação das 4 placas de rede no Ubuntu 16 e 18

```
[ 4.796457] ata3: SATA link up 3.0 Gbps (SStatus 123 SControl 300)
[ 4.802299] ata3.00: ATA-6: UBOX HARDDISK, 1.0, max UDMA/133
[ 4.802935] ata3.00: 31457280 sectors, multi 128: LBA48 NCQ (depth 31/32)
[ 4.809580] ata3.00: configured for UDMA/133
[ 4.810700] scsi 2:0:0:0: Direct-Access    ATA        UBOX HARDDISK    1.0    PQ
: 0 ANSI: 5
[ 4.811997] sd 2:0:0:0: [sda] 31457280 512-byte logical blocks: (16.1 GB/15.0
GiB)
[ 4.812873] sd 2:0:0:0: [sda] Write Protect is off
[ 4.813483] sd 2:0:0:0: [sda] Write cache: enabled, read cache: enabled, does
n't support DPO or FUA
[ 4.814645] sd 2:0:0:0: Attached scsi generic sg1 type 0
[ 4.866023] sda: sda1 sda2
[ 4.867149] sd 2:0:0:0: [sda] Attached SCSI disk
[ 5.060904] e1000 0000:00:08:0 eth1: (PCI:33MHz:32-bit) 08:00:27:3a:66:35
[ 5.061684] e1000 0000:00:08:0 eth1: Intel(R) PRO/1000 Network Connection
[ 5.657268] e1000 0000:00:09:0 eth2: (PCI:33MHz:32-bit) 08:00:27:80:22:41
[ 5.657952] e1000 0000:00:09:0 eth2: Intel(R) PRO/1000 Network Connection
[ 6.180286] e1000 0000:00:0a:0 eth3: (PCI:33MHz:32-bit) 08:00:27:06:d5:6a
[ 6.180937] e1000 0000:00:0a:0 eth3: Intel(R) PRO/1000 Network Connection
[ 6.192584] e1000 0000:00:0a:0 enp0s10: renamed from eth3
[ 6.219752] e1000 0000:00:09:0 enp0s9: renamed from eth2
[ 6.238297] e1000 0000:00:03:0 enp0s3: renamed from eth0
[ 6.248082] e1000 0000:00:08:0 enp0s8: renamed from eth1
```

## 2.3- Instalação das 4 placas de rede no Ubuntu 16

```
root@ubuntu:/home/ubuntu# ifconfig
enp0s3  Link encap:Ethernet  HWaddr 08:00:27:07:da:25
        inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
        inet6 addr: fe80::a00:27ff:fe07:da25/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:4 errors:0 dropped:0 overruns:0 frame:0
        TX packets:28 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:1300 (1.3 KB)  TX bytes:2696 (2.6 KB)

enp0s8  Link encap:Ethernet  HWaddr 08:00:27:36:ed:74
        inet addr:192.168.13.1  Bcast:192.168.13.255  Mask:255.255.255.0
        inet6 addr: fe80::a00:27ff:fe36:ed74/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
        RX packets:0 errors:0 dropped:0 overruns:0 frame:0
        TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:0 (0.0 B)  TX bytes:648 (648.0 B)

lo      Link encap:Local Loopback
        inet addr:127.0.0.1  Mask:255.0.0.0
        inet6 addr: ::1/128 Scope:Host
        UP LOOPBACK RUNNING  MTU:65536  Metric:1
        RX packets:183 errors:0 dropped:0 overruns:0 frame:0
        TX packets:183 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1
        RX bytes:29477 (29.4 KB)  TX bytes:29477 (29.4 KB)

root@ubuntu:/home/ubuntu#
```

## 2.3- Instalação das 4 placas de rede no Ubuntu 16

```
GNU nano 2.5.3           File: /etc/network/interfaces           Modified

# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
# Placa de rede 1, usada para obter as configuracoes automaticamente de um servidor DHCP
# Essa placa conecta o servidor a internet
# Algumas distribuicoes linux usam eth0 (nome da placa) outras enp0s3
auto enp0s3
iface enp0s3 inet dhcp_

auto enp0s8
iface enp0s8 inet static
    address 192.168.13.1
    netmask 255.255.255.0

auto enp0s9
iface enp0s9 inet static
    address 10.10.10.1
    netmask 255.255.255.0

auto enp0s10
iface enp0s10 inet static
    address 172.16.1.1
    netmask 255.255.255.0
```

## 2.3- Instalação das 4 placas de rede no Ubuntu 16

```
root@ubuntu:/home/ubuntu# ifup enp0s9
root@ubuntu:/home/ubuntu# ifup enp0s10
root@ubuntu:/home/ubuntu# ifconfig
enp0s3      Link encap:Ethernet  HWaddr 08:00:27:07:da:25
            inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
            inet6 addr: fe80::a00:27ff:fe07:da25/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:9 errors:0 dropped:0 overruns:0 frame:0
            TX packets:97 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:1600 (1.6 KB)  TX bytes:7768 (7.7 KB)

enp0s8      Link encap:Ethernet  HWaddr 08:00:27:36:ed:74
            inet addr:192.168.13.1  Bcast:192.168.13.255  Mask:255.255.255.0
            inet6 addr: fe80::a00:27ff:fe36:ed74/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:49 errors:0 dropped:0 overruns:0 frame:0
            TX packets:16 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:6932 (6.9 KB)  TX bytes:1738 (1.7 KB)

enp0s9      Link encap:Ethernet  HWaddr 08:00:27:89:0e:6b
            inet addr:10.10.10.1  Bcast:10.10.10.255  Mask:255.255.255.0
            inet6 addr: fe80::a00:27ff:fe89:e6b/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:9 errors:0 dropped:0 overruns:0 frame:0
            TX packets:6 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:1374 (1.3 KB)  TX bytes:508 (508.0 B)

enp0s10     Link encap:Ethernet  HWaddr 08:00:27:7f:12:97
            inet addr:172.16.1.1  Bcast:172.16.1.255  Mask:255.255.255.0
            inet6 addr: fe80::a00:27ff:fe7f:1297/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
            RX packets:3 errors:0 dropped:0 overruns:0 frame:0
            TX packets:3 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
```

## 2.4- Instalação das 4 placas de rede no Ubuntu 18

```
asoa@asoa:~$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fe80::a00:27ff:fe72:5db2 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:72:5d:b2 txqueuelen 1000 (Ethernet)
    RX packets 100716 bytes 102196406 (102.1 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 34507 bytes 2135821 (2.1 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.13.1 netmask 255.255.255.0 broadcast 192.168.13.255
    inet6 fe80::a00:27ff:fe3a:6635 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:3a:66:35 txqueuelen 1000 (Ethernet)
    RX packets 200 bytes 20938 (20.9 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 66 bytes 6592 (6.5 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 162 bytes 12582 (12.5 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 162 bytes 12582 (12.5 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

asoa@asoa:~$ _
```

## 2.4- Instalação das 4 placas de rede no Ubuntu 18

```
root@asoa:/home/asoa# nano /etc/netplan/50-cloud-init.yaml
```

## 2.4- Instalação das 4 placas de rede no Ubuntu 18

```
GNU nano 2.9.3 /etc/netplan/50-cloud-init.yaml

# This file is generated from information provided by
# the datasource.  Changes to it will not persist across an instance.
# To disable cloud-init's network configuration capabilities, write a file
# /etc/cloud/cloud.cfg.d/99-disable-network-config.cfg with the following:
# network: {config: disabled}
network:
  ethernets:
    enp0s3:
      addresses: []
      dhcp4: true
      optional: true
    enp0s8:
      addresses: [192.168.13.1/24]
      dhcp4: false
      optional: false
  version: 2
```



## 2.4- Instalação das 4 placas de rede no Ubuntu 18

```
GNU nano 2.9.3 /etc/netplan/50-cloud-init.yaml
# This file is generated from information provided by
# the datasource.  Changes to it will not persist across an instance.
# To disable cloud-init's network configuration capabilities, write a file
# /etc/cloud/cloud.cfg.d/99-disable-network-config.cfg with the following:
# network: {config: disabled}
network:
  ethernets:
    enp0s3:
      addresses: []
      dhcp4: true
      optional: true
    enp0s8:
      addresses: [192.168.13.1/24]
      dhcp4: false
      optional: false
    enp0s9:
      addresses: [10.10.10.1/24]
      dhcp4: false
      optional: false
    enp0s10:
      addresses: [172.16.1.1/24]
      dhcp4: false
      optional: false
  version: 2
```

## 2.4- Instalação das 4 placas de rede no Ubuntu 18

```
root@asoa:/home/asoa# netplan apply
```

## 2.4- Instalação das 4 placas de rede no Ubuntu 18

```
root@asoa:/home/asoa# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fe80::a00:27ff:fe72:5db2 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:72:5d:b2 txqueuelen 1000 (Ethernet)
    RX packets 17 bytes 4216 (4.2 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 145 bytes 13077 (13.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.13.1 netmask 255.255.255.0 broadcast 192.168.13.255
    inet6 fe80::a00:27ff:fe3a:6635 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:3a:66:35 txqueuelen 1000 (Ethernet)
    RX packets 8 bytes 861 (861.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 24 bytes 2068 (2.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s9: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.10.10.1 netmask 255.255.255.0 broadcast 10.10.10.255
    inet6 fe80::a00:27ff:fe80:2241 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:80:22:41 txqueuelen 1000 (Ethernet)
    RX packets 1 bytes 60 (60.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 13 bytes 1006 (1.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s10: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.1.1 netmask 255.255.255.0 broadcast 172.16.1.255
    inet6 fe80::a00:27ff:fe06:d56a prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:06:d5:6a txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 9 bytes 726 (726.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

## 3.1-Tabela de rotas no Ubuntu 14 Server

```
root@asoa:/home/asoa# netstat -r
Kernel IP routing table
Destination      Gateway          Genmask          Flags      MSS Window  irtt  Iface
default          10.0.2.2        0.0.0.0          UG          0 0        0 eth0
10.0.2.0         *               255.255.255.0    U           0 0        0 eth0
10.10.10.0        *               255.255.255.0    U           0 0        0 eth2
172.16.1.0        *               255.255.255.0    U           0 0        0 eth3
192.168.13.0     *               255.255.255.0    U           0 0        0 eth1
root@asoa:/home/asoa#
```

## 3.2-Tabela de rotas no Ubuntu 16 e 18 Server

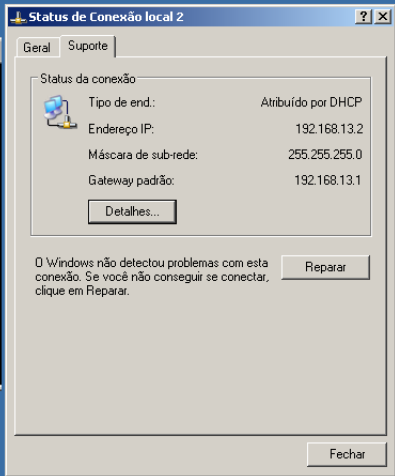
```
root@asoa:/home/asoa# netstat -r
Kernel IP routing table
Destination      Gateway         Genmask         Flags        MSS Window  irtt Iface
default          10.0.2.2       0.0.0.0         UG           0 0        0 enp0s3
10.0.2.0         0.0.0.0        255.255.255.0   U            0 0        0 enp0s3
10.0.2.2         0.0.0.0        255.255.255.255 UH           0 0        0 enp0s3
10.10.10.0       0.0.0.0        255.255.255.0   U            0 0        0 enp0s9
172.16.1.0       0.0.0.0        255.255.255.0   U            0 0        0 enp0s10
192.168.13.0     0.0.0.0        255.255.255.0   U            0 0        0 enp0s8
root@asoa:/home/asoa# _
```

## 4.1- Testes de Conectividade - Rede interna 1

```

Resposta de 192.168.13.1: bytes=32 tempo=6ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64

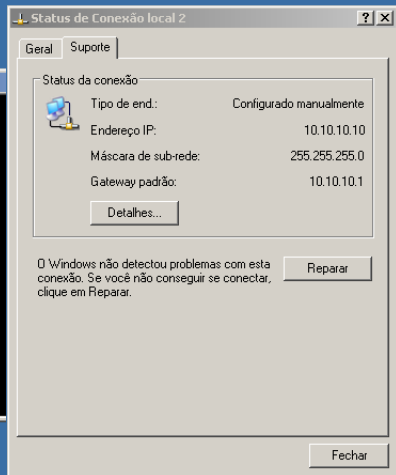
```



## 4.1 - Testes de Conectividade - Rede interna 2

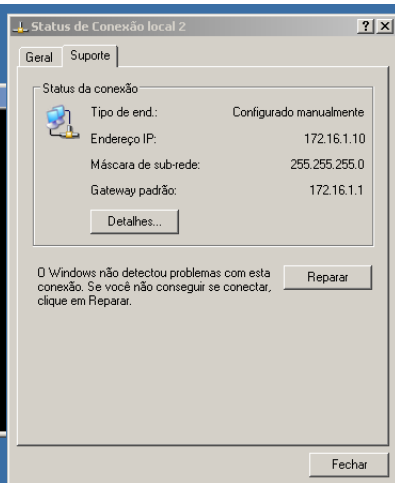
C:\WINDOWS\system32\cmd.exe - ping 10.10.10.1 -t

```
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=2ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=4ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=2ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=3ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=2ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=2ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=2ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=8ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=5ms TTL=64
```



# 4.1 - Testes de Conectividade - Rede interna 3

```
C:\WINDOWS\system32\cmd.exe - ping 172.16.1.1 -t
Resposta de 172.16.1.1: bytes=32 tempo=2ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=3ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=2ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=3ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=2ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=3ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=2ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo=3ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
Resposta de 172.16.1.1: bytes=32 tempo<1ms TTL=64
```

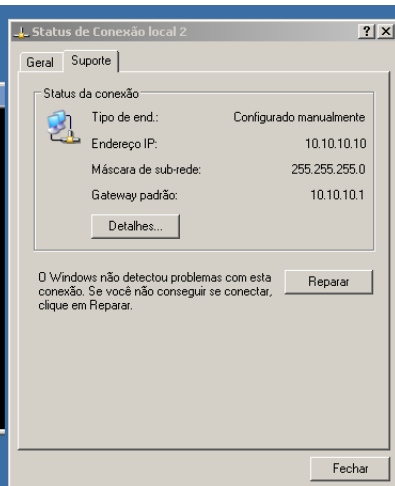




# 4.1 - Testes de Conectividade - Redes 2 e 1

```
C:\WINDOWS\system32\cmd.exe - ping 192.168.13.1 -t
```

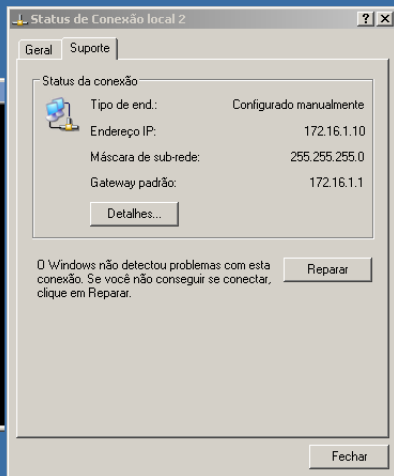
```
Resposta de 192.168.13.1: bytes=32 tempo=3ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=4ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=5ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=5ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=3ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=3ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=5ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=3ms TTL=64
```



# 4.1 - Testes de Conectividade - Redes 3 e 1

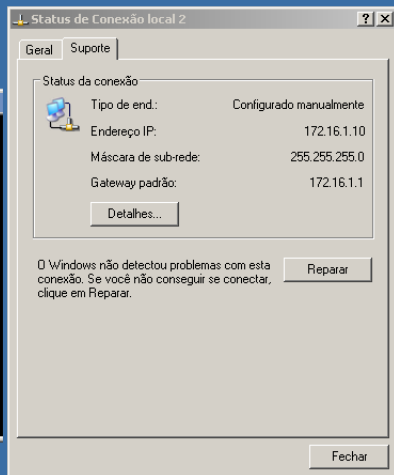
```
ex C:\WINDOWS\system32\cmd.exe - ping 192.168.13.1 -t
```

```
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=2ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo=1ms TTL=64
Resposta de 192.168.13.1: bytes=32 tempo<1ms TTL=64
```

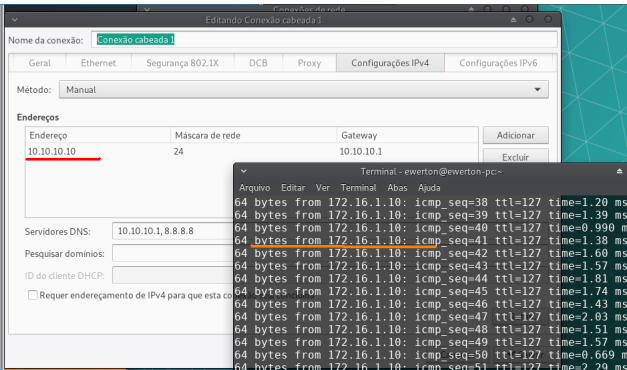
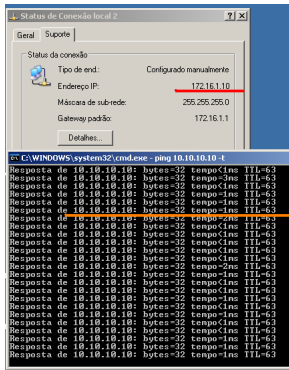


# 4.1 - Testes de Conectividade - Redes 3 e 2

```
C:\WINDOWS\system32\cmd.exe - ping 10.10.10.1 -t
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=4ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=2ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=3ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo=1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
Resposta de 10.10.10.1: bytes=32 tempo<1ms TTL=64
```



## 4.1- Testes de Conectividade - Maquinas



## 4.1- Testes de Conectividade - Internet

The image shows a screenshot of the Google Brasil homepage as seen through a Windows Internet Explorer browser. The browser's address bar contains a URL starting with 's.com.br/?gfe\_rd=cr&ei=8Ne9V4KONKPL8gemjI3gDg&qws\_rd=ssl'. The browser's menu bar includes 'Arquivo', 'Editar', 'Exibir', 'Favoritos', 'Ferramentas', and 'Ajuda'. Below this is a toolbar with 'Favoritos', 'Sites Sugeridos', and 'Galeria do Web Slice'. The Google logo is prominently displayed in the center, with 'Brasil' written below it. A search bar is located below the logo, with a keyboard icon to its right. To the right of the search bar are links for 'Pesquisa avançada' and 'Ferramentas de idioma'. Below the search bar are two buttons: 'Pesquisa Google' and 'Estou com sorte'. At the bottom of the page, there is a message: 'Agora o Google Tradutor é offline. Instale no Android ou iOS'. The footer contains links for 'Soluções de publicidade', 'Soluções empresariais', '+Google', 'Sobre o Google', and 'Google.com'. The browser's status bar at the bottom shows 'Éwerton Rômulo', '29/30', and 'Agosto/2018 29 / 30'.

Google - Windows Internet Explorer

Arquivo Editar Exibir Favoritos Ferramentas Ajuda

Favoritos Sites Sugeridos Galeria do Web Slice

Google

Google+ Pesquisa Imagens Maps Play YouTube Notícias Gmail Mais Fazer login

Google Brasil

Pesquisa Google Estou com sorte

Agora o Google Tradutor é offline. Instale no Android ou iOS

Soluções de publicidade Soluções empresariais +Google Sobre o Google Google.com

Éwerton Rômulo 29/30 Agosto/2018 29 / 30

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