



Técnico de Informática



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Servidores de Rede



LINUX SERVIÇOS DE REDE

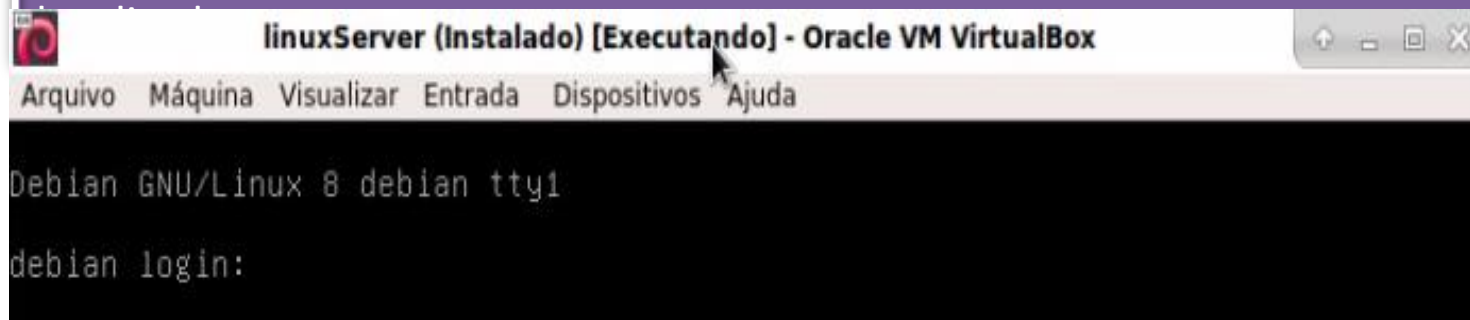
Elaborado por: Ebenezer Nepomuceno / Natália de Souza

Verificação Sources List (Lista de Repositórios)

Um arquivo muito importante para o sistema APT de Debian é **/etc/apt/sources.list**.

Neste arquivo são indicadas as fontes de onde serão obtidos os pacotes de software a serem instalados no sistema.

As linhas neste arquivo indicam não somente o endereço do repositório, mas também apontam quais versões das distribuições Debian devem ser



Podemos Logar como ROOT ou como USUÁRIO.

Root – Tem acesso total e o direito de modificar o sistema.

Deve-se ter uma atenção especial quando usá-lo.

Se fizer uma modificação errada, essa modificação será aceita e poderá danificar o sistema.

```
debian login: root
Password:
Linux debian 3.16.0-4-amd64 #1 SMP Debian 3.16.43-2 (2017-04-30) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@debian:~#
```

Saindo do **ROOT** para **USUÁRIO Instrutor**

```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@debian:~# su instrutor
instrutor@debian:/root$ _
```

Observação:

Quando vamos do **ROOT** para o **USUÁRIO** ele não pede senha.

USUÁRIO para **ROOT** ele pede.

```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@debian:~# su instrutor
instrutor@debian:/root$ su
Senha:
root@debian:~# _
```

Para questão de segurança: Administração, Sistema e Instalação **ROOT**
Diferente disso **USUÁRIO**.

Verificação Lista de Repositórios

TAB



```
root@debian:~# nano /etc/apt/sources.list_
```

```
#
# deb cdrom:[Debian GNU/Linux 8.8.0 _Jessie_ - Official amd64 DVD Binary-1 2017$
deb cdrom:[Debian GNU/Linux 8.8.0 _Jessie_ - Official amd64 DVD Binary-1 201705$
deb cdrom:[Debian GNU/Linux 8.8.0 _Jessie_ - Official amd64 DVD Binary-2 201705$
deb cdrom:[Debian GNU/Linux 8.8.0 _Jessie_ - Official amd64 DVD Binary-3 201705$
# Line commented out by installer because it failed to verify:
#deb http://security.debian.org/ jessie/updates main contrib
# Line commented out by installer because it failed to verify:
#deb-src http://security.debian.org/ jessie/updates main contrib
# jessie-updates, previously known as 'volatile'
# A network mirror was not selected during install. The following entries
# are provided as examples, but you should amend them as appropriate
# for your mirror of choice.
#
[ 22 linhas lidas ]
^G Ajuda      ^O Gravar     ^R Ler o Arq ^Y Pág Anter  ^K Recort Txt ^C Pos Atual
^X Sair       ^J Justificar ^W Onde está? ^V Próx Pág   ^U Colar Txt  ^T Para Spell
```

Feito as modificações Pressione Ctrl + O (Gravar) [Enter] e Ctrl + X (Sair)

```
root@debian:~# _
```

Configuração do Adaptador de Rede

Primeiro deve-se verificar como se encontra o adaptador de rede.
ifconfig

```
root@debian:~# ifconfig
lo        Link encap:Loopback Local
          inet end.: 127.0.0.1  Masc:255.0.0.0
          endereço inet6: ::1/128 Escopo:Máquina
          UP LOOPBACKRUNNING  MTU:65536  Métrica:1
          RX packets:53 errors:0 dropped:0 overruns:0 frame:0
          TX packets:53 errors:0 dropped:0 overruns:0 carrier:0
          colisões:0 txqueuelen:0
          RX bytes:4843 (4.7 KiB)  TX bytes:4843 (4.7 KiB)

root@debian:~#
```

Não Foi
criado na
instalação

ip addr

Interface física

```
root@debian:~# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST> mtu 1500 qdisc noop state DOWN group default qlen
    1000
    link/ether 08:00:27:2d:f4:bb brd ff:ff:ff:ff:ff:ff
root@debian:~#
```


Editor de Texto – “Nano”

nano
/etc/network/interfa
ces

```
root@debian:~# nano /etc/network/i
if-down.d/      if-pre-up.d/      interfaces
if-post-down.d/ if-up.d/          interfaces.d/
root@debian:~# nano /etc/network/interfaces
```

```
GNU nano 2.2.6      Arquivo: /etc/network/interfaces

# 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

[ 8 linhas lidas ]

^G Ajuda      ^O Gravar     ^R Ler o Arg  ^Y Pág Anter  ^K Recort Txt ^C Pos Atual
^X Sair       ^J Justificar ^W Onde está? ^V Próx Pág   ^U Colar Txt  ^T Para Spell
```

O **network interfaces** é o documento onde você vai inserir informações sobre os adaptadores de redes e fazer as configurações necessárias para o seu funcionamento.

```
#Adaptador de rede local
auto eth0
iface eth0 inet static
address 192.168.0.1
netmask 255.255.255.0
```

Nome da interface e como ele vai trabalhar

```
#Adaptador Virtual
auto eth0:1
iface eth0:1 inet static
address 192.168.1.1
netmask 255.255.255.0_
```

Se eu quiser atender varias redes deferentes e não tiver um adaptador de rede física.

Posso atender como um único adaptador.

Ex.: Um servidor em uma empresa que tenha vários segmentos de serviços separados.

Feito as modificações Pressione Ctrl + O (Gravar) [Enter] e Ctrl + X (Sair)

```
root@debian:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@debian:~#
```

startar serviço



ifconfig

```
root@debian:~# ifconfig
eth0      Link encap:Ethernet  Endereço de HW 08:00:27:2d:f4:bb
          inet end.: 192.168.0.1  Bcast:192.168.0.255  Masc:255.255.255.0
          endereço inet6: fe80::a00:27ff:fe2d:f4bb/64  Escopo:Link
          UP BROADCASTRUNNING MULTICAST  MTU:1500  Métrica:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:54 errors:0 dropped:0 overruns:0 carrier:0
          colisões:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:8411 (8.2 KiB)

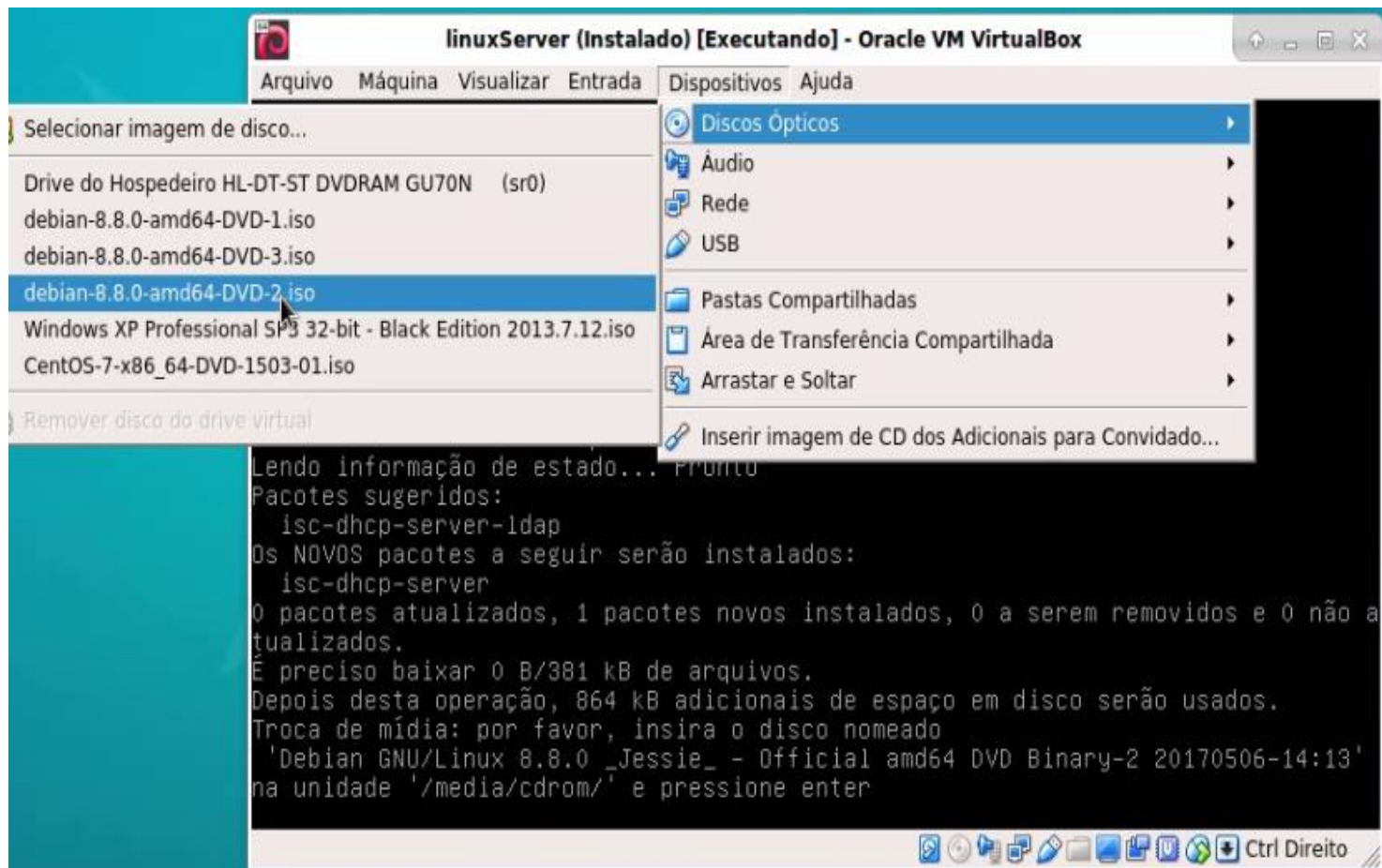
eth0:1    Link encap:Ethernet  Endereço de HW 08:00:27:2d:f4:bb
          inet end.: 192.168.1.1  Bcast:192.168.1.255  Masc:255.255.255.0
          UP BROADCASTRUNNING MULTICAST  MTU:1500  Métrica:1

lo        Link encap:Loopback Local
          inet end.: 127.0.0.1  Masc:255.0.0.0
          endereço inet6: ::1/128  Escopo:Máquina
          UP LOOPBACKRUNNING  MTU:65536  Métrica:1
          RX packets:53 errors:0 dropped:0 overruns:0 frame:0
          TX packets:53 errors:0 dropped:0 overruns:0 carrier:0
          colisões:0 txqueuelen:0
          RX bytes:4843 (4.7 KiB)  TX bytes:4843 (4.7 KiB)

root@debian:~#
```

Instalação do Serviço de DHCP

Comando: `apt-get install isc-dhcp-server` [enter]



Verificar se o serviço foi instalado

```
root@debian:~# /etc/init.d/isc-dhcp-server status
```

```
A processar 'triggers' para systemd (215-17+deb8u7) ...
A processar 'triggers' para man-db (2.7.0.2-5) ...
Configurando isc-dhcp-server (4.3.1-6+deb8u2) ...
Generating /etc/default/isc-dhcp-server...
Job for isc-dhcp-server.service failed. See 'systemctl status isc-dhcp-server.service' and 'journalctl -xn' for details.
invoke-rc.d: initscript isc-dhcp-server, action "start" failed.
A processar 'triggers' para systemd (215-17+deb8u7) ...
root@debian:~# /etc/init.d/isc-dhcp-server status
• isc-dhcp-server.service - LSB: DHCP server
  Loaded: loaded (/etc/init.d/isc-dhcp-server)
  Active: failed (Result: exit-code) since Sex 2018-02-16 13:48:14 -02; 24s ago

Fev 16 13:48:12 debian dhcpd[1463]:
Fev 16 13:48:12 debian dhcpd[1463]:
Fev 16 13:48:12 debian dhcpd[1463]: Not configured to listen on any interfaces!
Fev 16 13:48:12 debian dhcpd[1463]:
Fev 16 13:48:12 debian dhcpd[1463]: If you think you have received this mes...er
Fev 16 13:48:14 debian isc-dhcp-server[1456]: Starting ISC DHCP server: dhcp...!
Fev 16 13:48:14 debian isc-dhcp-server[1456]: failed!
Fev 16 13:48:14 debian systemd[1]: isc-dhcp-server.service: control process...=1
Fev 16 13:48:14 debian systemd[1]: Failed to start LSB: DHCP server.
Fev 16 13:48:14 debian systemd[1]: Unit isc-dhcp-server.service entered fai...e.
Hint: Some lines were ellipsized, use -l to show in full.
root@debian:~#
```

Entrar na pasta do DHCP

```
root@debian:~# cd /etc/dhcp  
root@debian:/etc/dhcp# _
```

LS – Para listar o conteúdo da pasta

```
root@debian:/etc/dhcp# ls  
dhclient.conf  dhclient-enter-hooks.d  dhclient-exit-hooks.d  dhcpd.conf  
root@debian:/etc/dhcp# _
```

CP - Criar uma copia do dhcpd.conf

```
root@debian:/etc/dhcp# cp dhcpd.conf dhcpd.original_
```

Obs.: Se faz necessário uma copia do original com a finalidade protege-lo caso seja danificado.

LS – Para listar o conteúdo da pasta

```
root@debian:/etc/dhcp# ls
dhclient.conf          dhclient-exit-hooks.d  dhcpd.original
dhclient-enter-hooks.d dhcpd.conf
root@debian:/etc/dhcp#
```

MV – Para renomear o arquivo

```
root@debian:/etc/dhcp# mv dhcpd.original dhcpd.old
```

LS – Para listar o conteúdo da pasta

```
root@debian:/etc/dhcp# ls
dhclient.conf          dhclient-exit-hooks.d  dhcpd.old
dhclient-enter-hooks.d dhcpd.conf
root@debian:/etc/dhcp#
```

RM – Para remover o arquivo

```
root@debian:/etc/dhcp# rm dhcpd.conf
```

LS – Para listar o conteúdo da pasta

```
root@debian:/etc/dhcp# ls
dhclient.conf  dhclient-enter-hooks.d  dhclient-exit-hooks.d  dhcpd.old
```


MV – Para renomear o arquivo

LS – Para listar o conteúdo da pasta

```
root@debian:/etc/dhcp# mv dhcpd.old dhcpd.conf
root@debian:/etc/dhcp# ls
dhclient.conf  dhclient-enter-hooks.d  dhclient-exit-hooks.d  dhcpd.conf
root@debian:/etc/dhcp# cp dhc
```

CP - Criar uma copia do arquivo

LS – Para listar o conteúdo da pasta

```
root@debian:/etc/dhcp# cp dhcpd.conf dhcpd.old
root@debian:/etc/dhcp# ls
dhclient.conf          dhclient-exit-hooks.d  dhcpd.old
dhclient-enter-hooks.d  dhcpd.conf
root@debian:/etc/dhcp#
```

Editor de Texto – “Nano”

```
root@debian:/etc/dhcp# nano dhcpd.conf _
```

```
# If this DHCP server is the official DHCP server for the local
# network, the authoritative directive should be uncommented.
#authoritative;
```

Authoritative: - transforma o servidor em prioritário. É dela que todas as máquinas vão pegar o DHCP.


```
# This is a very basic subnet declaration.
```

```
#subnet 10.254.239.0 netmask 255.255.255.224 {  
#   range 10.254.239.10 10.254.239.20;  
#   option routers rtr-239-0-1.example.org, rtr-239-0-2.example.org;  
#}
```

Substituir subnet - netmask

Substituir range

Substituir option

```
# This is a very basic subnet declaration.
```

```
subnet 192.168.0.0 netmask 255.255.255.0 {  
    range 192.168.0.100 192.168.0.190;  
    option routers 192.168.0.1;  
}
```

Feito as modificações Pressione Ctrl + O (Gravar)
[Enter] e Ctrl + X (Sair)

```
# This is a very basic subnet declaration.
```

```
subnet 192.168.0.0 netmask 255.255.255.0 {  
    range 192.168.0.100 192.168.0.190;  
    option routers 192.168.0.1;  
}
```

```
# This declaration allows BOOTP clients to get dynamic addresses,  
# which we don't really recommend.
```

[Escrito 107 linhas]

```
root@debian:/etc/dhcp# _
```

Restart - Reiniciar o Serviço – (Startar)

```
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server restart_
```

Obs.: você pode fazer rolagem da tela utilizando Seta para cima. 

```
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server restart
[ ok ] Restarting isc-dhcp-server (via systemctl): isc-dhcp-server.service.
root@debian:/etc/dhcp# _
```

Status - Serviço estar ativo

```
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server status
```

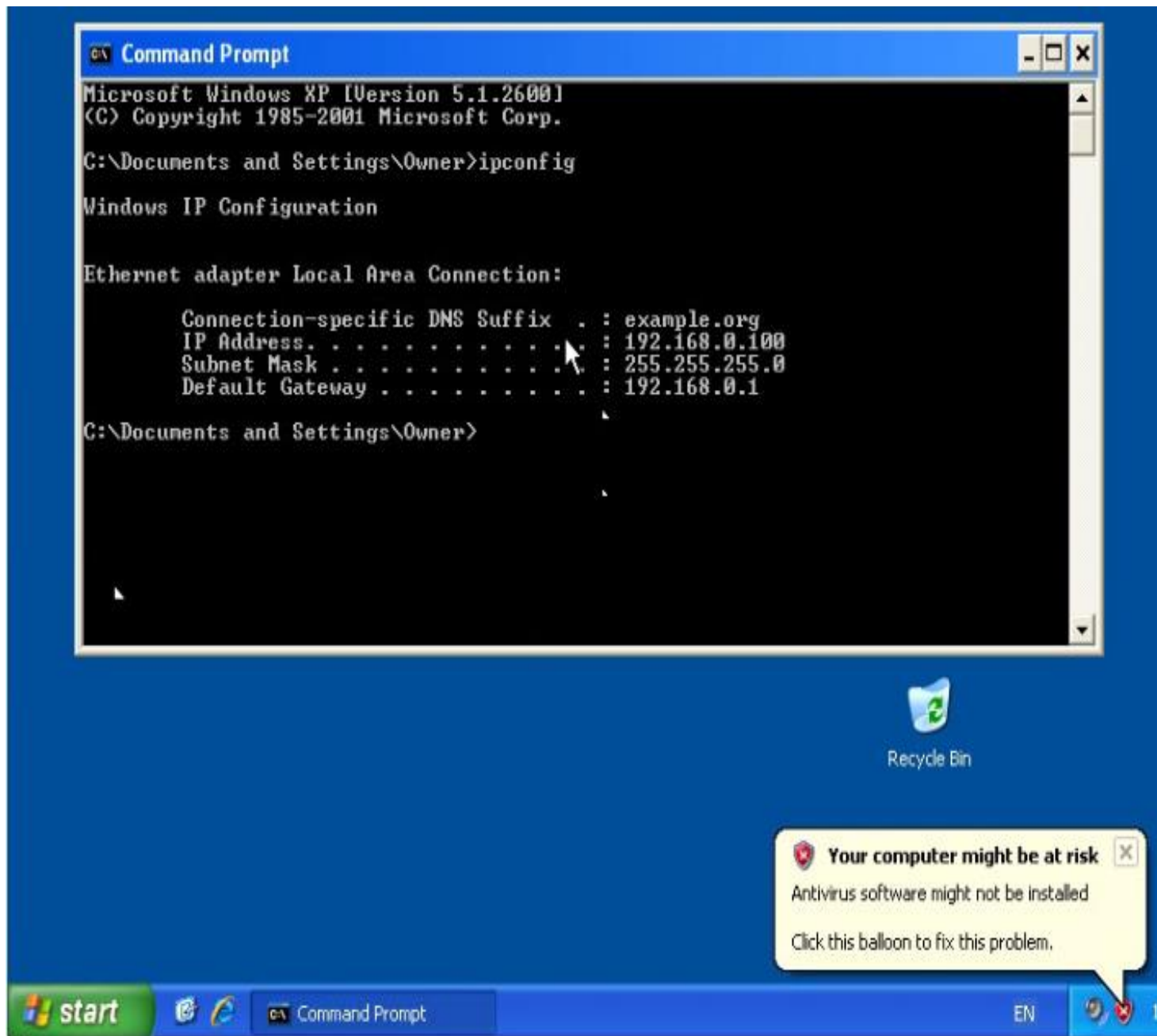
```
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server restart
[ ok ] Restarting isc-dhcp-server (via systemctl): isc-dhcp-server.service.
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server status
• isc-dhcp-server.service - LSB: DHCP server
   Loaded: loaded (/etc/init.d/isc-dhcp-server)
   Active: active (running) since Sex 2018-02-16 13:57:27 -02; 8s ago
   Process: 1515 ExecStart=/etc/init.d/isc-dhcp-server start (code=exited, status=0/SUCCESS)
   CGroup: /system.slice/isc-dhcp-server.service
           └─1523 /usr/sbin/dhcpd -q -cf /etc/dhcp/dhcpd.conf -pf /var/run/dh...

Feb 16 13:57:25 debian dhcpd[1520]: All rights reserved.
Feb 16 13:57:25 debian dhcpd[1520]: For info, please visit https://www.isc....p/
Feb 16 13:57:25 debian dhcpd[1522]: Internet Systems Consortium DHCP Server....1
Feb 16 13:57:25 debian dhcpd[1522]: Copyright 2004-2014 Internet Systems Co...m.
Feb 16 13:57:25 debian dhcpd[1522]: All rights reserved.
Feb 16 13:57:25 debian dhcpd[1522]: For info, please visit https://www.isc....p/
Feb 16 13:57:25 debian dhcpd[1522]: Wrote 0 leases to leases file.
Feb 16 13:57:25 debian dhcpd[1523]: Server starting service.
Feb 16 13:57:27 debian isc-dhcp-server[1515]: Starting ISC DHCP server: dhcpd.
Feb 16 13:57:27 debian systemd[1]: Started LSB: DHCP server.
Hint: Some lines were ellipsized, use -l to show in full.
root@debian:/etc/dhcp#
```

Serviço estar
funcionando

INSTALANDO PARA EXECUÇÃO DE TESTES DE IP

Elaborado por: Ebenezer Nepomuceno / Natália de Souza



Elaborado por: Ebenezer Nepomuceno / Natália de Souza

Ar (Instalado) [Executando] - Oracle VM Vir

Arna Visualizar Entrada Dispositivos Ajuda

```
to send dhcp log messages to a different
ack syslog.conf to complete the redirect
y local7;

e will be given on this subnet, but declar
er to understand the network topology.

152.187.0 netmask 255.255.255.0 {

very basic subnet declaration.

168.0.0 netmask 255.255.255.0 {
168.0.10 192.168.0.190;
uters 192.168.0.1;

aration allows BOOTP clients to get dynar
don't really recommend.

quivo para Gravar: dhcpd.conf_
M-D Formato DOS M-A Anexar
M-M Formato Mac M-P Pre-ane
```

Range 192.168.0.10
192.168.0.190

modificações Pressione Ctrl + O
[Enter] e Ctrl + X (Sair)

Obs.: O serviço necessita ser
reiniciado

Restart - Reiniciar o Serviço – (Startar)

```
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server restart_
```

Status - Serviço estar ativo

```
root@debian:/etc/dhcp# /etc/init.d/isc-dhcp-server status
```

```
ting isc-dhcp-server (via systemctl): isc-dhcp-server
etc/dhcp# /etc/init.d/isc-dhcp-server status
rver.service - LSB: DHCP server
aded (/etc/init.d/isc-dhcp-server)
tive (running) since Sex 2018-02-16 14:00:43 -02; 5s
20 ExecStop=/etc/init.d/isc-dhcp-server stop (code=
27 ExecStart=/etc/init.d/isc-dhcp-server start (code
ystem.slice/isc-dhcp-server.service
1636 /usr/sbin/dhcpd -q -cf /etc/dhcp/dhcpd.conf -p
41 debian dhcpd[1633]: All rights reserved.
41 debian dhcpd[1633]: For info, please visit https
41 debian dhcpd[1635]: Internet Systems Consortium D
41 debian dhcpd[1635]: Copyright 2004-2014 Internet
41 debian dhcpd[1635]: All rights reserved.
41 debian dhcpd[1635]: For info, please visit https
41 debian dhcpd[1635]: Wrote 0 leases to leases file
41 debian dhcpd[1636]: Server starting service.
43 debian isc-dhcp-server[1627]: Starting ISC DHCP s
43 debian systemd[1]: Started LSB: DHCP server.
nes were ellipsized, use -l to show in full.
etc/dhcp#
```

Windows XP
ipconfig /renew

```
C:\Documents and Settings\Owner>ipconfig /renew

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : example.org
    IP Address. . . . . : 192.168.0.100
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.1

C:\Documents and Settings\Owner>
```



```
C:\Documents and Settings\Owner>ipconfig /release
```

Windows IP Configuration

Ethernet adapter Local Area Connection:

```
Connection-specific DNS Suffix . :  
IP Address . . . . . : 0.0.0.0  
Subnet Mask . . . . . : 0.0.0.0  
Default Gateway . . . . . :
```

```
C:\Documents and Settings\Owner>
```

Ira desconectar



Local Area Connection

This connection has limited or no connectivity. You might not be able to access the Internet or some network resources. For more information, click this message.

start



Command Prompt

EN

```
C:\Documents and Settings\Owner>ipconfig /renew
```

Windows IP Configuration

Ethernet adapter Local Area Connection:

```
Connection-specific DNS Suffix . : example.org  
IP Address . . . . . : 192.168.0.100  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : 192.168.0.1
```

```
C:\Documents and Settings\Owner>
```

Ira conectar



start



Command Prompt

EN

```
C:\Documents and Settings\Owner>ping 192.168.0.1
Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\Owner>
C:\Documents and Settings\Owner>
```

Pingando
para o
Servidor

Serviço Concluído