

Conexión de un cliente GNU/Linux a Internet utilizando una conexión compartida a Internet de Windows (ICS, Internet Connection Sharing)

Basado en la página <http://www.supernoobs.com/articles/ICS.php>

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ISOP403_ICS-Win-Linux.pptx

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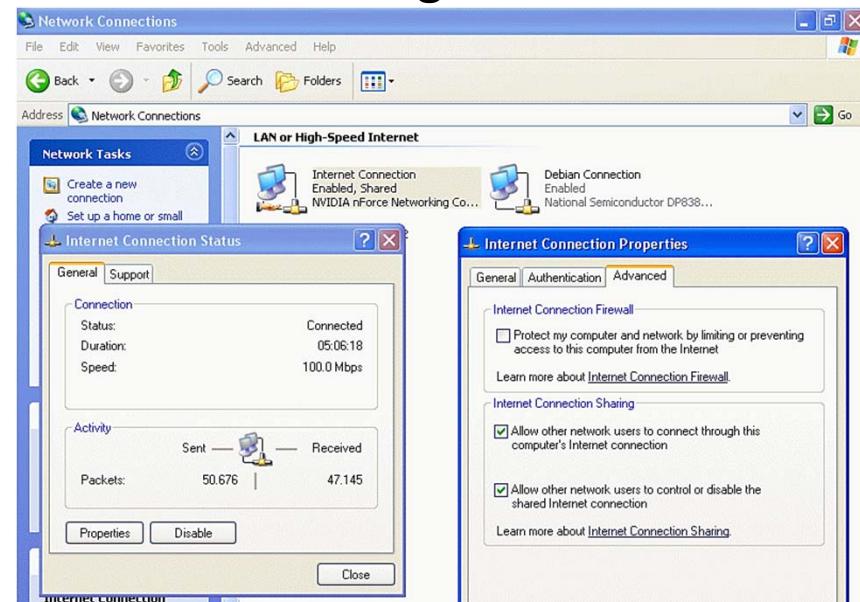
Configuración inicial

- Partimos de un sistema Windows con dos interfaces de red
 - La primera está conectada a Internet y llevará activado ICS con DHCP activado
 - La segunda conectada a la red de área local
 - Debes comprobar que Windows tiene acceso a Internet



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Configuración del ICS de Windows en la segunda NIC



Configuración de la red en GNU/Linux

```

messiah@debian: /home/messiah
File Edit View Terminal Tabs Help
IW /etc/network/interfaces
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

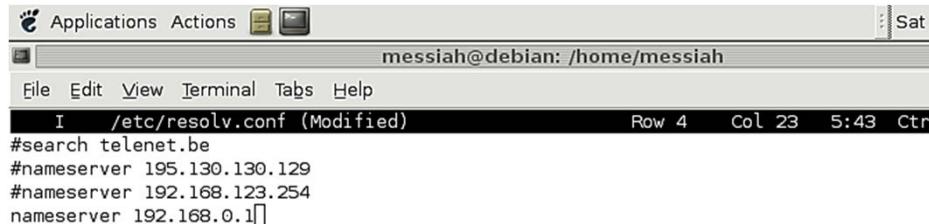
# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto eth0
iface eth0 inet static
    address 192.168.0.2
    netmask 255.255.255.0
    network 192.168.0.0
    broadcast 192.168.0.255
    gateway 192.168.0.1

```

The screenshot shows a terminal window on a Debian system. The command 'cat /etc/network/interfaces' is running, displaying the configuration for the 'eth0' interface. The interface is set to static IP 192.168.0.2 with subnet mask 255.255.255.0, network 192.168.0.0, broadcast 192.168.0.255, and gateway 192.168.0.1. The status bar at the bottom right of the terminal window shows the number '4'.

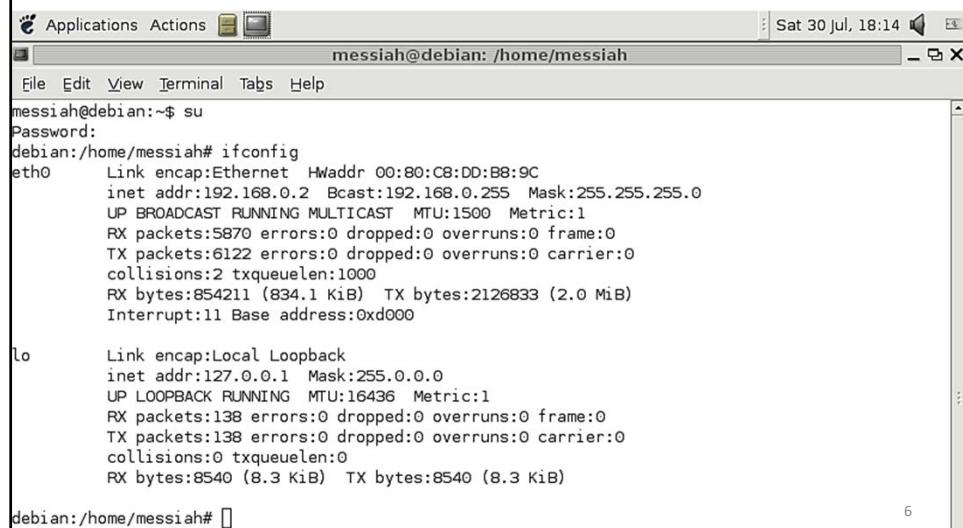
Configuramos los resovedores de nombres en /etc/resolv.conf



```
#search telenet.be
#nameserver 195.130.130.129
#nameserver 192.168.123.254
nameserver 192.168.0.1
```

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Reiniciamos la red y comprobamos



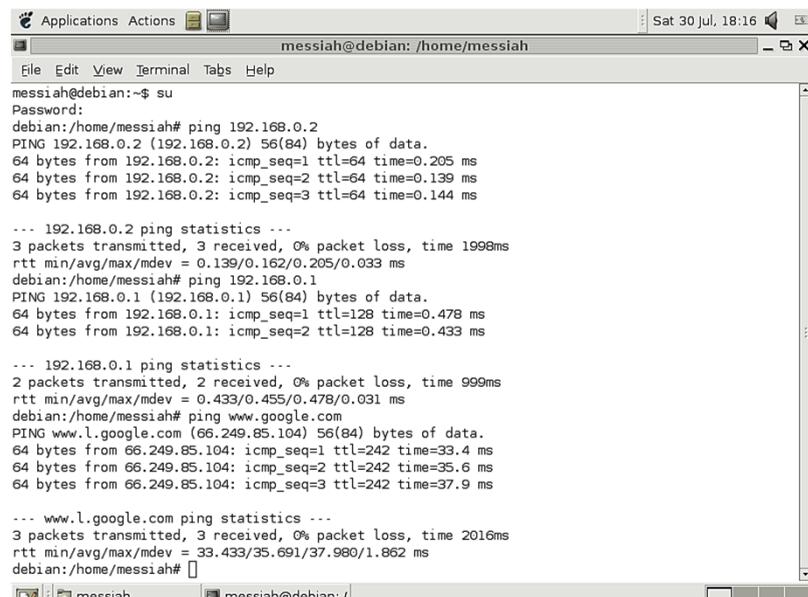
```
messiah@debian:~$ su
Password:
messiah@debian:~/home/messiah# ifconfig
eth0      Link encap:Ethernet HWaddr 00:80:C8:DD:B8:9C
          inet addr:192.168.0.2 Bcast:192.168.0.255 Mask:255.255.255.0
                  UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                  RX packets:5870 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:6122 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:2 txqueuelen:1000
                  RX bytes:854211 (834.1 KiB) TX bytes:2126833 (2.0 MiB)
                  Interrupt:11 Base address:0xd000

lo       Link encap:Local Loopback
          inet addr:127.0.0.1 Mask:255.0.0.0
                  UP LOOPBACK RUNNING MTU:16436 Metric:1
                  RX packets:138 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:138 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:0
                  RX bytes:8540 (8.3 KiB) TX bytes:8540 (8.3 KiB)

debian:/home/messiah#
```

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Hacemos ping



A screenshot of a terminal window titled "messiah@debian: /home/messiah". The window shows the command "ping" being used to test connectivity to various hosts. The output includes statistics for each host, such as packet loss and round-trip times (RTT). The terminal window has a standard Xfce-style interface with a menu bar and a scroll bar.

```
messiah@debian:~$ su
Password:
debian:/home/messiah# ping 192.168.0.2
PING 192.168.0.2 (192.168.0.2) 56(84) bytes of data.
64 bytes from 192.168.0.2: icmp_seq=1 ttl=64 time=0.205 ms
64 bytes from 192.168.0.2: icmp_seq=2 ttl=64 time=0.139 ms
64 bytes from 192.168.0.2: icmp_seq=3 ttl=64 time=0.144 ms

... 192.168.0.2 ping statistics ...
3 packets transmitted, 3 received, 0% packet loss, time 1990ms
rtt min/avg/max/mdev = 0.139/0.162/0.205/0.033 ms
debian:/home/messiah# ping 192.168.0.1
PING 192.168.0.1 (192.168.0.1) 56(84) bytes of data.
64 bytes from 192.168.0.1: icmp_seq=1 ttl=128 time=0.478 ms
64 bytes from 192.168.0.1: icmp_seq=2 ttl=128 time=0.433 ms

... 192.168.0.1 ping statistics ...
2 packets transmitted, 2 received, 0% packet loss, time 999ms
rtt min/avg/max/mdev = 0.433/0.455/0.478/0.031 ms
debian:/home/messiah# ping www.google.com
PING www.l.google.com (66.249.85.104) 56(84) bytes of data.
64 bytes from 66.249.85.104: icmp_seq=1 ttl=242 time=33.4 ms
64 bytes from 66.249.85.104: icmp_seq=2 ttl=242 time=35.6 ms
64 bytes from 66.249.85.104: icmp_seq=3 ttl=242 time=37.9 ms

... www.l.google.com ping statistics ...
3 packets transmitted, 3 received, 0% packet loss, time 2016ms
rtt min/avg/max/mdev = 33.433/35.691/37.980/1.862 ms
debian:/home/messiah#
```

Para entregar

- Una vez finalizada la práctica deberás entregar:
 - El informe de práctica con los detalles de ejecución según la plantilla de prácticas
 - Las pantallas más significativas que demuestren la ejecución
- Nomenclatura identificativa de práctica:
 - **ISOP403_ICS-Win-Linux**