

Table Of Contents

Table Of Contents ..... 1

Step # 1: Enable Packet Forwarding ..... 2

Step # 2: Enable IP masquerading ..... 2

    Share internet connection ..... 2

Shell Script to Setup Basic Linux Network Sharing ..... 2

[Home](#) > [Faq](#) > [CentOS](#)

## CentOS / Redhat Linux Internet Connection Sharing

Posted by [Vivek Gite](#) <[vivek@nixcraft.com](mailto:vivek@nixcraft.com)>

**Q.** How do I configure CentOS / Redhat Linux computer to share my internet connection? How do I configure RHEL as a software router with two interfaces? How do I share my single connection with other PCs on LAN?



**A.** Linux can be easily configured to share an internet connection using iptables. All you need is two network interface cards as follows:

- a) Your internal (LAN) network connected via eth0 with static IP address 192.168.1.254
- b) Your external WAN network is connected via eth1 with static IP address 192.168.2.1

Please note that interface eth1 may have a public IP address or IP assigned by ISP. eth1 may be connected to a dedicated DSL / ADSL / WAN / Cable router.

### Step # 1: Enable Packet Forwarding

Login as the root user. Open /etc/sysctl.conf file

```
# vi /etc/sysctl.conf
```

Add the following line to enable packet forwarding for IPv4:

```
net.ipv4.conf.default.forwarding=1
```

Save and close the file. Restart networking:

```
# service network restart
```

### Step # 2: Enable IP masquerading

In Linux networking, Network Address Translation (NAT) or Network Masquerading (IP Masquerading) is a technique of transceiving network traffic through a router that involves re-writing the source and/or destination IP addresses and usually also the TCP/UDP port numbers of IP packets as they pass through. In short, IP masquerading is used to share the internet connection.

#### Share internet connection

To share network connection via eth1, enter the following rule at command prompt (following useful for ppp0 or dial up connection):

```
# service iptables stop
# iptables -t nat -A POSTROUTING -o eth1 -j MASQUERADE
# service iptables save
# service iptables restart
```

Open your Windows / Mac / Linux computer networking GUI tool and point router IP to 192.168.1.254 (eth0 Linux IP). You also need to setup DNS IP such as 208.67.222.222 and 208.67.220.220. You should now be able to ping or browse the internet:

```
c:> ping 202.54.1.20
c:> ping google.com
```

### Shell Script to Setup Basic Linux Network Sharing

This is basic connection sharing, following shell script is for more advanced user. [ Download [the script](#) <sup>[2]</sup> here and modify SHARE\_IF as per your requirements. ]

```
#!/bin/bash
# Created by nixCraft - www.cyberciti.biz
IPT="/sbin/iptables"
MOD="/sbin/modprobe"

# set wan interface such as eth1 or ppp0
SHARE_IF="eth1"

# clean old fw
echo "Clearing old firewall rules..."
iptables -F
iptables -X
iptables -t nat -F
iptables -t nat -X
iptables -t mangle -F
iptables -t mangle -X
iptables -P INPUT ACCEPT
iptables -P OUTPUT ACCEPT

# Get some kernel modules
echo "Loading kernel modules..."
$MOD ip_tables
$MOD iptable_filter
$MOD iptable_nat
$MOD ip_conntrack
$MOD ipt_MASQUERADE
$MOD ip_nat_ftp
$MOD ip_nat_irc
$MOD ip_conntrack_ftp
$MOD ip_conntrack_irc

# Clean old rules if any, rhel specific but above will take care of everything
# service iptables stop

# unlimited traffic via loopback device
$IPT -A INPUT -i lo -j ACCEPT
$IPT -A OUTPUT -o lo -j ACCEPT

echo "Setting ${SHARE_IF} as router interface..."
$IPT --table nat --append POSTROUTING --out-interface ${SHARE_IF} -j MASQUERADE

# Start other custom rules
#$IPT
# End other custom rules

echo "*** Instructions on TCP/IP On The Windows / Mac / Linux Masqueraded Client ***"
echo "1. Login to your other LAN desktop computers"
echo "2. Open network configuration GUI tool such. Under Windows XP - Click Start, click C"
echo "3. Set DNS (NS1 and NS2) to 208.67.222.222 and 208.67.220.220"
echo "4. Select the 'Gateway' tab in the TCP/IP properties dialog."
echo "5. Enter $(ifconfig ${SHARE_IF} | grep 'inet addr:' | grep -v '127.0.0.1' | cut -d: -f2)"
```

4000+ howtos and counting! Want to read more Linux / UNIX howtos, tips and tricks? Subscribe to our [daily email](#) newsletter or [weekly newsletter](#) to make sure you don't miss a single tip/tricks. Alternatively, subscribe via [RSS/XML](#) feed.

Article printed from Frequently Asked Questions About Linux / UNIX: <http://www.cyberciti.biz/faq/>

URL to article: <http://www.cyberciti.biz/faq/rhel-fedora-linux-internet-connection-sharing-howto/>

URLs in this post:

[1] Image: <http://www.cyberciti.biz/faq/faq/category/redhat-and-friends/>

[2] the script: <http://www.cyberciti.biz/files/scripts/linux-network-sharing-script.sh.txt>

---

Copyright © 2006-2010 [nixCraft](http://www.cyberciti.biz/tips/copyright). All rights reserved. This print / pdf version is for personal non-commercial use only. More details <http://www.cyberciti.biz/tips/copyright>.