

## Re: Troubleshooting connection loss (continued)

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*Source:* <http://linux.derkeiler.com/Newsgroups/comp.os.linux.networking/2007-11/msg00195.html>

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- *From:* Bit Twister <BitTwister@xxxxxxxxxxxxxxxxxxxx>
  - *Date:* Fri, 09 Nov 2007 19:47:23 GMT
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On Fri, 09 Nov 2007 16:36:24 GMT, Allen Weiner wrote:

Bit Twister wrote:

On Fri, 09 Nov 2007 04:22:10 GMT, Allen Weiner wrote:

This problem is frustrating. I firmly believe (with almost no supporting evidence) that a reboot to regain a lost Internet connection should be a last resort.

I agree.

I might have missed it, but is that first boot after winME was running?

I'm not sure what you're asking.

What I was after is the sequences of boots with regard to what was running before the boot. Example: Both systems are set dhcp.

Boot WinMe and run for awhile.  
boot fedora and some time later connection goes down  
boot fedora and no problem

If connection failure is always in that order, then my theory is the router remembers the dhcp lease assigned to doze and cannot get a renewal when you are running fedora on your first boot.

That will cause the connection drop and the router will refuse traffic connections with fedore.

I was guessing winME was not Releasing the lease on shutdown.  
You boot fedora, it gets the connection up on it's old lease contents,  
But, does not get a lease renewal from the router.

Re: Troubleshooting connection loss (continued)

Why does reboot not have the problem you ask.

When you reboot, while going down, fedora sends a lease cancel to router, comes up, and the router and fedora shake hands over lease info and have no problems thereafter.

If you are asking about the time that Fedora became unbootable, here is the history:

1. WinME ran with static IP on 11/3
2. Fedora ran OK with static IP on 11/4
3. Fedora failed to boot on 11/5.

Here I would be guessing,  
o you used the dhcp ip addresses as static  
o router still thought the ip address was DHCP  
o lease expired  
o no new lease negotiated and refused the connection to 192.168.1.47

And/Or /etc/hosts not set per my sugestions and gave you the hard time. :)

You commented that it is OK to have dual boot where Linux uses static IP and Windows uses dynamic IP. To keep things simple, this is the config I would prefer.

Yes, but we are troubleshooting here and need to reduce the suspect list and get a known working baseline with the least amount of interaction.

Assuming Verizon does not get into the mix, I see no setup problem with doing what you want. IF you use a different static ip, no localhost node name, /etc/hosts set as asked.

I kinda thought that when I configured for static IP, something was being permanently stored in flash memory in the NIC

I do not think so.

and/or modem/router.

Yes, and I am guessing the router is the problem. Why you ask. If it was fedora, the reboot should have the same problem as a normal boot.

Re: Troubleshooting connection loss (continued)

I thought that if I left Windows with dynamic IP, it would undo those flash changes I configured from Fedora.

But you left static ip same as dhcp and if the lease is not renewed, modem will drop the connection to 192.168.1.47.

```
That is why I wanted your fedora
/etc/hosts file set somewhat as follows:
$ head -3 /etc/hosts
127.0.0.1 localhost
192.168.1.140 fedora.home.invalid fedora
192.168.1.1 gateway
```

```
$ cat /etc/sysconfig/network
NETWORKING=yes
HOSTNAME=fedora.home.invalid
```

and you have set eth0 up as static for ip 192.168.1.140

I've been going over your suggested changes from both threads.

Yeah, but your piecemeal approach about putting in my suggestions is causing more problems. :(

Upside is, all the experience/knowledge you are gaining. :)

For the time being, I want to make only changes needed for troubleshooting.

So far you are fighting me on getting the job done. :-D  
What I have been after is:

Get fedora in a normal configuration (node/hosts).  
Static connection with ip address different than dhcp ip.  
Power reset modem, prove fedora boots, reboots and runs without problems.

If so, that would leave fedora's dhcp client as a suspect.  
That is ruled out because you say after reboot, fedora does not have the problem when runnig dhcp.

To cut modem's dhcp server out of the loop, set static ips and verify connection does not have problems.

## Re: Troubleshooting connection loss (continued)

With both OSs set static different ips, and booting winME/fedora does not have connection drops, you now have isolated the modem as the culprit.

Now, you boot doze, change it back to dhcp, reboot doze, boot fedora. Connection drops you know the modem is causing the problem and have a working solution to fall back on.

For now, I'm not concerned about apps which want to communicate over 127.0.0.1.

HAHAHAHHaHahahaha, cough, cough, choke. whew....

Did you remember when sendmail stalled your boot.

On normal setups/install, 127.0.0.1 localhost is in /etc/hosts.

On your system you named your node localhost and the ip address comes in from the nic. When the network fails to come up, you start seeing problems. So far you have been lucky, connection comes up, localhost ip addy resolves to 192.168.1.47 and all is well.

When node named localhost, cannot be resolved, you will see problems.

I'm concerned about making changes that will render Fedora unbootable. (I've already had a close call with the change to static IP). I don't have the experience to repair Fedora if it becomes unbootable.

I hear where you are comming from. Had /etc/hosts contained the 127.0.0.1 localhost, you would not have had the problem.

Trust me. give your node a FQDN with a name beside localhost. In a static setup, a line with ip FQDN alias in /etc/hosts with a 127.0.0.1 localhost line.

Here is my suggestion:

Get into the network gui, set it static 192.168.1.150 with a node/domain name as fedora.home.invalid, 192.168.1.1 as your DNS server. Close the gui.

cat these files and verify contents.  
If not the same, use an editor and fix them

```
# cat /etc/sysconfig/network
NETWORKING=yes
HOSTNAME=fedora.home.invalid
```

## Re: Troubleshooting connection loss (continued)

```
# cat /etc/hosts
127.0.0.1 localhost
192.168.1.150 fedora.home.invalid fw
192.168.1.1 gateway
```

Power down modem. Wait 30 seconds by watch/clock.  
Power up modem, wait for leds to settle  
Reboot Fedora to prove fedora works.

As far as "render Fedora unbootable" that is the problem with using gui to modify config files. Knowing which config files to backup, and edit from a command line in failsafe/rescue cd helps.

I recommend that you play with vi in a terminal and write these very basic commands down and put them in a binder where you can find them. :)

```
vi fn_here
i <===== puts you into the insert mode
```

Now you can use arrow keys and whatnot.  
When ready to get out,

```
Esc <===== (escape key) gets you into the command mode
:wq <==== save changes and quit
:q! <===== quit without saving.
```

With Mandriva linux, it provides a rosetta stone file which has what values in what file does what. (/usr/share/doc/initialscripts/sysconfig.txt)

If you can not find docs about config files, what you could do is install aide.

That would let you baseline the system.

Use your gui to make changes, run an aide check and the report would give you all the files that changed. :)

Other option, read source code. :(

Before making changes, I'm going to do some googling into /etc/hosts and FQDN to try to raise my confidence level. Also, I'd feel much more comfortable if I understood what went wrong with my change to static IP.

My guess, with node name = localhost, no 127.0.0.1 and hostname/ip in /etc/hosts; that is what helped you into the ditch.

By the way, I remembered that I have a Ubuntu 6.06 CD. I've got many gigs of free HDD space, and available logical partitions. But that is

Re: Troubleshooting connection loss (continued)

too much of a detour to fix this problem.

Well, you started out with, why is fedora having these problems. If running ubuntu and have the same problem, what would your guess be. :)

Hey, create a 10 gig logical partition. install ubuntu and pick Manual during partition phase, set new partition as / and click format box, and you will have a multi-boot system. Let it run dhcp and if the connection drops out, you know that fedora is not the problem.

Another solution/option you may want to consider, have a hot backup/fallback install of fedora.

That is what I do for my install. Anytime I think I might put the system in the ditch, I boot the hot backup and play there.

Create/format a logical 10 gig partition with mount point as /hotbu.

e2label /dev/XdYZ hotbu <===== creates a label for booting  
You solve for X [h,s], Y [a,b,c...] & Z [1,2,3..]

```
mkdir /fc7 <===== create mount point for original install  
to be used in hotbu's /etc/fstab  
cd /etc  
cp fstab fstab_works  
cp fstab fstab_hotbu
```

Edit fstab\_hotbu and change the label for / and change the hotbu line to whatever label the original / had and the mount point to /fc7. See the following:

```
# cat /hotbu/etc/fstab  
LABEL=hotbu / ext3 defaults 1 1  
LABEL=fedora /fc7 ext3 defaults 1 2  
LABEL=accounts /accounts ext3 defaults 1 2  
tmpfs /dev/shm tmpfs defaults 0 0  
devpts /dev/pts devpts gid=5,mode=620 0 0  
sysfs /sys sysfs defaults 0 0  
proc /proc proc defaults 0 0  
LABEL=2008_0 /2008_0 ext3 user,noauto,defaults 1 2  
LABEL=2007_0 /2007_0 ext3 user,noauto,defaults 1 2  
LABEL=bk_up /bk_up ext3 user,noauto,defaults 1 2  
LABEL=2007_1 /2007_1 ext3 user,noauto,defaults 1 2  
LABEL=local /local ext3 defaults 1 2  
LABEL=kubu7 /kubu7 ext3 user,noauto,defaults 1 2  
/dev/sda6 swap swap defaults 0 0
```

## Re: Troubleshooting connection loss (continued)

Next you can edit /boot/grub/menu.lst, duplicate the fedora stanza, change the label to hotbu, save exit.

Next you need to note which partition have what. Assuming two drives

```
blkid /dev/Xda*
```

```
blkid /dev/Xdb*
```

If you have a printer, I would get a hardcopy.

Now you boot a rescue cd

```
mkdir /old
```

```
mkdir /new
```

```
mount -t auto /dev/XdYZ /old
```

```
mount -t auto /dev/XdYZ /new
```

Double/triple check /dev/XdYZ /old is current fedora and /dev/XdYZ /new is the newly formatted partition.

# Copy fedora partition contents into new partition.

```
cd /old
```

```
cp -a . /new
```

# fix new copy's fstab to use new partition a /

```
cd /new/etc
```

```
cp fstab_hotbu fstab
```

# all done close the partitions, and get out of rescue cd.

```
cd
```

```
umount /old /new
```

```
shutdown -r
```

Eject rescue cd, pick hotbu from grub menu and you should be running in your hotbu partition.

Another option is run a virtual machine. <http://www.vmware.com> has a free player where you should be able to find an fc7 install to play in.

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The warranty and liability expired as you read this message.

If the above breaks your system, it's yours and you keep both pieces.

Practice safe computing. Backup the file before you change it.

Do a, man command\_here or cat command\_here, before using it.

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