

Re: how to test Ethernet connection

Source: <http://linux.derkeiler.com/Mailing-Lists/Debian/2006-04/msg03935.html>

- *From:* Mike McCarty <Mike.McCarty@xxxxxxxxxxxxxx>
 - *Date:* Thu, 27 Apr 2006 11:50:45 -0500
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Jon Dowland wrote:

At 1145901154 past the epoch, Serena Cantor wrote:

You are right. Thanks! I will buy a crossover, hope it does not cost much, or I will consider buy a hub.

If you have an ethernet patch cable already and want to save some money, you could get the schematic for a crossover and rewire it rather than buying a new one. However I expect you will find one cheap enough to save you the effort.

Eh? I think not. Even a cheap crimping tool will cost about \$30 USD. Cheaper by far to buy a router or switch (I wouldn't get a hub; a router is preferable to a switch) with 4 or more ports for \$40 USD, and then be expandable.

Here are the trade-offs...

Cross-over cable

Advantages: Cheap/easy to make if you already have the tools.

Easy to install/configure.

Full duplex no collisions.

Secure.

Disadvantages: Only point-to-point, not expandable.

Easily confused with regular cable later, causing headaches debugging non-working connection.

Hub

Advantages: Cheap and easy to configure.

Expandable.

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Disadvantages: Collision prone, hence slow.
Not full duplex.
Can't mix different speeds.
Not secure.
Cannot act as a bridge.

Switch

Advantages: Relatively cheap.
Easy to configure.
Full-duplex, no collisions.
Can mix speeds.

Disadvantages: Not secure.
Cannot act as a bridge.

Router

Advantages: Full-duplex, no collisions.
Can mix speeds.
Secure if has separate WAN/LAN.
Can do NAT.
Can act as a bridge.

Disadvantages: More difficult to configure.
More expensive (but not *much* more)

Costs (\$USD):

Cross-over cable \$5-\$10
Hub \$10-\$20
Switch \$15-\$25
Router \$30-\$40 (\$20 on sale)

All decisions require trade-offs. I use ADSL at home, and I bought a router just for the NAT and security, and only have one computer connected to it. I just needed the firewall. WAN side uses DHCP from my ISP, LAN side uses fixed IP.

If security is an issue (it is with me) then I recommend against wireless routers. I got mine on sale, so I got a wireless, because that was the one on sale, but I disabled the wireless, and removed the antenna.

Mike

—

```
p="p=%c%s%c;main(){printf(p,34,p,34);}";main(){printf(p,34,p,34);}
```

This message made from 100% recycled bits.

You have found the bank of Larn.

I can explain it for you, but I can't understand it for you.

I speak only for myself, and I am unanimous in that!

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