

Re: how to test Ethernet connection

Source: <http://linux.derkeiler.com/Mailing-Lists/Debian/2006-04/msg04007.html>

- *From:* Mike McCarty <Mike.McCarty@xxxxxxxxxxxxxx>
 - *Date:* Thu, 27 Apr 2006 17:55:12 -0500
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John Stumbles wrote:

Mike McCarty wrote:

John Stumbles wrote:

What do you mean "Cannot act as a bridge"?

A switch uses MAC addresses for ascertaining where to forward a message. It is unaware of IP addresses, so it cannot connect different nets.

Yup. That's bridging, defined in 802.1d
<http://www.ieee802.org/1/pages/802.1D.html>

Perhaps the terminology has changed, then. I began using networks more or less seriously in the mid to late 1980s, and by then bridge meant "bridging separate networks". What you put here, I note, is related to LAN, i.e. one network, not interconnected networks. Maybe someone else who knows more than I do can chime in here. In any case, I was not referring to a "MAC Bridge" but to a "Network Address Bridge". MACs are point-to-point. Networks are not (or at least do not have to be).

And what do you mean by 'not secure'?

No firewall. Any message sent to a given MAC is delivered to it. There is no concept of LAN side vs WAN side.

Re: how to test Ethernet connection

OK. from a different POV they _are_ secure: unlike a hub (repeater) which sends every packet to all connected ports switches only forward [1]packets to their destination ports. This is more secure as traffic cannot be sniffed by stations on other ports[2]. Which just goes to show that 'security' is not a simple quality of which one can have more or less (like money) but a set of qualities.

Putting a switch between an ADSL modem and your machine will leave it wide open.

I guess that my view is

- (1) only machines which have no physical access point are secure
- (2) any other machine has only relative security.

This may include such things as power supply lines, when one has a dedicated snooper. So, within this context of security, it is a very complex topic with many ramifications. No one insecure machine is absolutely more secure than any other, they only have relative security strengths and weaknesses. I wasn't trying to address security in an absolute sense. This would involve Faraday cages, power supplies which have no connection to the public grid and are within the cage, and other sundry physical access issues.

To put it another way, I was trying to help a newbie understand the tradeoffs which would enter into a decision of whether to use a crossover cable, a hub, a switch, or a router. I find that many don't really know the differences or even appreciate that there are differences between hubs, switches, and routers.

Mike

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```
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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