

PPP Lan Bridge

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/net/2005-03/0267.html>

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To: freebsd-net@freebsd.org

Greetings,

I am an experienced BSD administrator. I am currently implementing a solution to connect two campus area buildings together using 2 machines running FreeBSD 5.3 with 56K modems & PPP. I need some assistance as follows. I am trying to be verbose so as to provide a complete overview of what has been done and so this thread may be used a future guide for others.

Scenario:

- * A countryclub has a maintenance department located on the other side of the golf course, too far to have a cable run or a line-of-sight wireless connection. The purpose of this connection is to provide a TCP/IP timeclock with access to the main building's network to transmit data.
- * Maintenance Shed (client): FreeBSD 5.3 client, Serial 56K modem running ppp-user. Timeclock connected to dial-up client via CrossOver ethernet cable.
- * Clubhouse (server): FreeBSD 5.3 server, Serial 56K modem running mgetty. Server connected to LAN switch.
- * The LAN at the clubhouse consists of a CABLE Modem connection, with an OpenBSD based firewall that provides NAT/PROXY services to the internal network.

Current Setup:

(see this diagram I posted: URL =

<http://people.linisys.com/ctusa/images/diagram.jpg>)

- * main WAN router= 192.168.1.1
- * dialup Server (fxp0)= 192.168.1.230 gateway_enable="yes"
- * dialup Server (tun0)= 192.168.1.230 -> 192.168.1.232 (modem)

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- * dialup Client (tun0)= 192.168.1.232
- * dialup Client (fxp0)= 192.168.2.1 gateway_enable="yes"

Problem:

* It seems that NAT is functioning well, and the systems behind can communicate. However, the timeclock is unable to communicate with its counterpart at the clubhouse. I believe this is because they are on different subnets and routing is not taking place.

* The timeclock communicates on port 3301 – some sort of forwarding must be enabled through the ppp nat ?

* how can the 192.168.2.0 network be accessible from the 192.168.1.0 network? I know that the 192.168.1.232 (modem) / 192.168.1.230 (ethernet) server box at the main clubhouse is the gateway. How can other machines find out about this? or can the main residential gateway learn about this?

Current possible diagnosis:

* The complexity of having 2 gateways, it seems that in order for each machine to be able to see the 192.168.2.0 network at the client side (maintenance shed), a static route must be added. I would like to avoid this.

What I would like:

* To have the timeclock be on the SAME network as the rest of the clubhouse.

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