

Re: 3 NIC computer

Source: <http://linux.derkeiler.com/Newsgroups/comp.os.linux.networking/2004-11/1126.html>

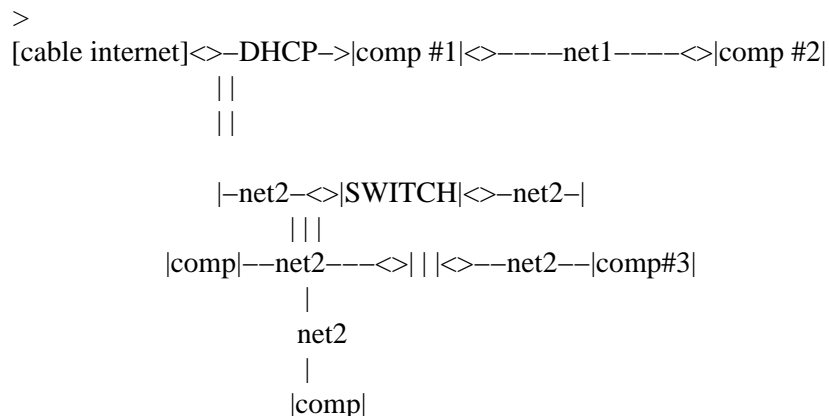
From: David M (*David_at_nomail.invalid(David)*)

Date: 11/30/04

Date: Tue, 30 Nov 2004 15:02:11 GMT

On 28 Nov 2004 00:34:34 -0800, subhas85@gmail.com (Avi) wrote:

> i currently have a network containing about 6 computers, i recently
> acquired 2 additional computers, a 450mhz and a 500mhz, my plan is to
> make data servers out of them. However, i would like to have the
> 450mhz computer operate as my router, since my microsoft router (shit)
> seems to keep dropping my connection every now and then. The other
> computer will be in charge of other high demanding processes which will
> involve data from computer #1. So what i want is a network according
> to the following diagram.



> *note that comp1 has 3 NICs; one 10/100mbps for the internet cable
> modem, one 10/100mbps to the switch for other comps to access, and one
> 10/100/1000mbps for direct connection to comp2, which i would like to
> be a gigabit connection, for data flexibility. I am running Fedora
> Core 3 on both comp1 and comp2. A problem that i see rising is,
> suppose comp1 wants to talk to a comp3, would the data path look like
> this,
>
> [comp1] ---> [comp2] ---> [switch] ---> [comp3] or like this,
> [comp1] ---> [switch] ---> [comp3] ?
>

Hi,

Just some quick notes...

Re: 3 NIC computer

comp.os.linux.networking: Re: 3 NIC computer

Comp1 <-> Comp2 first subnet say 192.168.1.64 /26 (say addresses .65, .66)
Comp1 <-> Switch second subnet say 192.168.1.128 /26 (say addresses
129,130,131,132,133 etc.) (*)

Comp1
eth0 DHCP
eth1 192.168.1.65 /26 (net1)
eth2 192.168.1.129 /26 (net2)

Comp2
eth0 192.168.1.66 /26 (net1)
eth1 192.168.1.130 /26 (net2)

Comp3
eth0 192.168.1.131 /26 (other computers 192.168.1.132 /26 to 192.168.1.190)

Comp1 needs routing enabled (ipV4 forwarding enabled)

Comp2 may need routing enabled if you wish to forward from one ethernet interface to the other. It is simplest if you don't.

If you enable routing on comp2 you may wish to manually add route(s) to comp1 for access to the second subnet via comp2 but you should adjust the metric parameter to something other than 0 – say 1 so that the directly connected interface to subnet 2 is the preferred interface. This second route may be useful if for example connection from comp1 to the switch is lost.

In the plainest case,

comp1 connecting to comp3 will normally occur via the second subnet as this is the only route to that workstation that comp1 knows about.

Comp1 to comp2 will occur according to:-

If ip addresses are used then the you have manually selected the interface.

If DNS or host tables is used then the interface used depends on which address your name service returns.

The simplest case is to ensure the name resolution order is host, DNS and enter the ip address in net1 against the name for comp2 in comp1's host file. (e.g 192.168.1.66 Comp2)

All computers in network2 have the address of Comp2 in network2 against the entry for comp2 in their host files. (e.g 192.168.1.130 Comp2)

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Regards,
David

(*) Note1 I am being difficult here - the kiss principle would be for example to use the networks 192.168.1.0/24 for net1 and 192.168.2.0/24 for net2 and allocate addresses from 1 to 254 in each. (But it is a good exercise in subnetting.)

Re: 3 NIC computer

comp.os.linux.networking: Re: 3 NIC computer

Note2 the slash notation above /24 = subnet mask 255.255.255.0, /26 = subnet mask 255.255.255.192.)

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