

# Re: Need help with DHCP Client & Name servers

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- *From:* John Santos <[john@xxxxxxx](mailto:john@xxxxxxx)>
  - *Date:* Fri, 22 Dec 2006 08:16:50 GMT
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JF Mezei wrote:

Ken.and.Ann@xxxxxxxxxx wrote:

Very similar to the thread "DHCP client – Help configuring.", from

The short answer:

–make your VMS machine a fixed IP machine. And forget about DHCP. That simple.

step:

```
DELETE/CONFIRM SYS$SYSTEM:TCPIP$*.DAT
```

It should delete the following files: (some of those may not exist on your system yet:

Directory SYS\$COMMON:[SYSEXE]

```
TCPIP$CONFIGURATION.DAT;1 TCPIP$HOST.DAT;1 TCPIP$NETWORK.DAT;1  
TCPIP$PROXY.DAT;1 TCPIP$ROUTE.DAT;1 TCPIP$SERVICE.DAT;1
```

This zaps your TCPIP configuration completely.

Choose a private IP subnet for your LAN.

Your choices are in:

```
10.0.0.0/8 (aka: 10.*.*.* with only first 8 bits significant)  
172.16.0.0/12  
192.168.0.0/16
```

I have the same model Linksys (actually, there were multiple hardware versions, and at some point, I think the firmware was no longer compatible, but all the BEFSR41s are pretty similar) and Verizon DSL, and all my VAXes work okay through it, so the problems should

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be solvable.

The Linksys router defaults to 192.168.1.1 (IIRC, or maybe 192.168.0.1). If you hard-code some other address into your Alpha in that subnet, the Linksys should route for it, and the DHCP server in the Linksys should notice that something on the LAN is using whatever address you chose for your Alpha, and not try to serve it to another client. (At least, that's the impression I got one time when I had bollixed it up, and it continued to work better than I could explain otherwise. Other evidence: I have my LAN set to run on 192.168.5.0 for various reasons, but a couple of times when updating the firmware, the LINKSYS reset itself to the factory defaults and I had to reconfigure it. This meant it was back to 192.168.1 (0?).1 and DHCP-serving the whole subnet, and I couldn't get into it to change things back, but by resetting the IP address on one of my computers to another address in that LAN, I could browse to the Linksys and fix it. It was happy to talk to the browser despite the fact it hadn't served the address the browser was using.)

One way to determine the address being used by the Linksys is to ping 192.168.0.0 and 192.168.1.0 and see if anything responds. The Linksys router should respond with the .1 address on one of these subnets. (Most hosts will respond to a broadcast ping, and the ping program will display all the responses, so its an easy way of inventorying a LAN. You can't tell what the hosts are, but you can tell how many of them and what addresses they are using.)

(I think there are a couple others but those are the main IP blocks reserved for private use within a LAN).

The last one seems to be the most common for consumer routers's defaults IPs.

Your router's documentation should provide you with the default IP of your router. Lets assume for a minute that it is 192.168.0.1 for safe of discussion. a 16 bit subnet means a 255.255.0.0 network mask. (first 16 bits set to 1).

The Linksys uses 255.255.255.0 (/24). I think it's 192.168.1.1, but I'm not certain.

With this in mind, let say you choose 192.168.0.23 for your VMS host's primary IP interface.

You already know 2 IPs for your ISP's DNS service.

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> Servers: 220.233.0.4, 220.233.0.3

With this information, you are reading to go into @SYSS\$MANAGER:TCPIP\$CONFIG

Before zapping all the config files, and re-running TCPIP\$CONFIG, did you already run it the first time? Lots of TCPIP configuration problems seem to be from people installing it and then diving into the various configuration stuff without first running through TCPIP\$CONFIG, which seems to set up some things that there is no other way of initializing. In particular, I think it creates the config files JF mentions above. It also creates various VMS accounts used by some (but not all) of the TCPIP clients and servers. I don't think the DNS client (resolver) needs a special VMS account, but the DNS server definitely does.

Anyway, the error message about insufficient date to enable BIND (which is the DNS server) leads me to think it hasn't been set up with TCPIP\$CONFIG, so I would walk through it and make sure all the needed server and client components have been configured. If your not sure about something, you can enable it (which also creates the accounts, directories, etc. when done for the first time), and then disable it (which leaves around the accounts and directories in case they are needed later.) Particularly the DNS client and the DNS server.

and then configure your core environment:  
domain: chocolate.com (or anything you want that makes sense)

Configure your primary interface to have  
IP: 192.168.0.23 with a /16 CIRD network or 255.255.0.0 network mask )

I'm 99.99% sure this should be 255.255.255.0 for the Linksys, only about 65% sure it's 192.168.1.\*

It may also prompt you for a host name. For instance "pastry". (which will be pastry.chocolate.com as fully qualified host name) inside your LAN)

For routing, choose NO for ROUTED or GATED routing. You can then enter a default route (gateway in PC parlance), and give the ip address of your router. (192.168.0.1 in this example).

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Check.

You then define the bind resolver. You can then enter the two IPs from your ISP as bind servers. It may prompt you for host names (which get defined in the hosts database to point to those IP addresses).

Don't remember if it asks for host names. It might, but they are definitely not needed for name resolution. In fact, it *has* to use the IP addresses, because if it only knew the host names, it couldn't resolve them to locate the name servers :-)

You should then have enough configured to have a working TCPIP stack.

Once the start has started:

@SYSS\$MANAGER:TCPIP\$DEFINE\_COMMAND defines a whole bunch of "unix" commands.

ifconfig -a (lists your IP interfaces (IP addresses)).  
ping <ip address>  
tracert <ip address or host name>

Some additional things you could do:

TCPIP SET HOST ROUTER/ADDRESS=192.168.0.1

This way, you can "telnet ROUTER" or "telnet router.chocolate.com" and you connect to that router.

My Linksys doesn't talk telnet, just HTTP as far as I can tell.

BTW, when you become able to talk to the Linksys, be sure to change its password and disable remote administration. (I think they changed the default from "enabled" to "disabled", but make sure!)

NOTE that in all of the above, you have not configured a BIND *\*SERVER\**, only a bind resolver. The TCPIP SET NAME command can be confusing because some qualifiers apply to a configured bind server while most apply to the bind resolver.

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Do you have one of the newer, "smart" DSL modems? The old ones, like the Westell I have, didn't do PPTP so I had to set that up in the Linksys, but it sounds like your past that point. The newer ones (Actiontec, which has a built-in wireless router, and the newer small non-wireless one my mom has (which may also be a Westell, or maybe a different brand, I can't remember), can be configured to act like the older Westells (where it just forwards its LAN-side ethernet to the DSL, so the PPTP authentication has to be done by a host or router on the LAN), or can be configured to function both as a DSL modem and as a single-port router, and does the PPTP for you. When I set up my mom's DSL, she had only a Mac, which the Verizon-supplied CD doesn't support, so I called the installation help 800 number, and they walked me through connecting to the DSL modem/router and switching it to the right mode, and setting up the PPTP username and password. Took just a minute. I don't know why they don't just include the instructions in the paperwork, it was easy enough.

(One of the two modes I describe above it called bridge mode, the first one, I think, which should be a useful term for Googling...)

Anyway, if you are using one of the newer "smart" modems, the Linksys should work fine (it will acquire its WAN IP address from the modem's DHCP server), and will properly forward packets both ways, but you won't be able to get to the modem for managing it, especially if it chose the same 192.168.\*.0 subnet that the Linksys uses by default. To fix this, probably the best thing is to connect to the Linksys (once you've got it working), and change its LAN address to a different subnet. This will break your connection to it, and you will need to reset the address on your Alpha to something in the new subnet. Connect back to the Linksys and enable forwarding to the modem's subnet. Since it is also a 192.168.\*.0 subnet, forwarding to it is disabled by default, along with all the other private subnets. I don't recall the procedure to enable forwarding, maybe all you need to do is explicitly define a static route to it on the WAN interface in the Linksys.

Then you should be able telnet or http to the modem as well as to the router. (The modem should still block 192.168.\*.\* packets from getting past it and out onto the Internet.)

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