802.1Q VLANs and subclassed IP address ranges

Source: http://linux.derkeiler.com/Mailing−Lists/Debian/2005−01/2351.html

---

From: Christopher L. Everett (*ceverett_at_ceverett.com*)
Date: 01/18/05

```
Date: Tue, 18 Jan 2005 16:40:56 −0600
To: Debian User <debian−user@lists.debian.org>
```

Hi,

My provider can give me more IP addresses if and only if I can deal with his 802.1Q tagged VLAN network setup. For test purposes, I have a Debian laptop set up with a VLAN enabled kernel and the /etc/network/interfaces file configured along these lines:

```
# no gateway address for eth0 itself
auto eth0
iface eth0 inet static
   address w.x.y.z
   netmask 255.255.255.0

## not the real vlan id :)
auto eth0.1234
iface eth0.1234 inet static
   address 207.177.74.18
   netmask 255.255.255.0
   gateway 207.177.74.1

## not the real vlan id
auto eth0.2345
iface eth0.2345 inet static
   address 207.177.73.226
   netmask 255.255.255.240
   gateway 207.177.73.225
   metric 1

# repeat the above stanza 3 more times in its essentials to create
# 5 VLANS total.
```

It gives some weird error messages, but it basically just works, and it frees me from having to play scripting games with /sbin/vconfig (well done, whoever did the integration work; even virtual addresses work).

Once I hooked it up to the Internet feed with the new 802.1Q tagged IP address ranges coming from my provider, I could ping each VLAN interface

gateway address. also, I can browse the web from it, so long as I set the default route metric on one of the VLAN interfaces lower than the others or have only one vlan interface up.

OS I know the laptop is seeing the tagged packets. Unfortunately, if I have all the VLAN interfaces up, I can only ping IP addresses tied to the VLAN interface with the metric for the default route lower than all the others (with only one VLAN interface up, it has the lowest metric for the default route).

What must I do to make this pig fly?

My goal is to have this laptop connected to all the vlans, and to ping any IP I set up on any of the VLAN interfaces. Once I do that, I figure I can set up multiple servers to connect to the VLANS using a managed switch easily enough.

```
−−
Christopher L. Everett
Chief Technology Officer                                  www.medbanner.com
MedBanner, Inc.                                             www.physemp.com
−−
To UNSUBSCRIBE, email to debian−user−REQUEST@lists.debian.org
with a subject of "unsubscribe". Trouble? Contact listmaster@lists.debian.org
```