Subject: Using Socket to read wireless LAN router info page
Posted by Andrew Cool on Mon, 01 Jan 2007 05:09:08 GMT
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Hi Folks,

Happy New Year!! ;-)

Santa was good to me and put in wireless broadband link at home, which beats
the old 31kb dialup line by the proverbial country mile.

But I'm only getting 40% of the 2Mb bandwidth plan that I signed up for, so I'm trying to gather the Signal, Noise and SNR values from the router every minute, and plot some graphs to wave under the noses of the Techs at my ISP. It would just be much nicer to do the reading and plotting in IDL.)

I'm using a Linksysy Wireless-G 2.4GHz Broadband router that provides info on
signal strength and noise on an IP address of 198.168.1.1

Now my Firefox browser can download & display that page of XHTML info, as can a program that I wrote in Basic that uses Windows API calls to download a URL page direct to a file.

But, I can't get IDL's Socket command to access that IP :-(

Perhaps it just can't??

I've tried a loop like:-

```
for port = 1,8080 do begin
  socket,lun,'198.168.1.1',port,/get
end
```

but just can't make contact.

Is there some special syntax or port number that should be used to contact such a beastie?

Many Thanks,

Andrew Cool
Adelaide, Australia

PS : To anyone who knows about such things, the Signal strength is consistently about 20-22 dB
above the Noise. Is that good/bad/indifferent for 2.4GHz wireless broadband?

Subject: Re: Using Socket to read wireless LAN router info page
Posted by Braedley on Tue, 09 Jan 2007 03:36:20 GMT
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No idea wrt your socket problems, (although at first glance, port 80 would seem to be the logical choice,) but concerning your question about the signal to noise ratio (SNR), 20dB is either sufficient, or more than enough, depending on if it's a voltage ratio or a power ratio. If your SNR is given as a voltage ratio, then 20dB corresponds to a voltage ratio of 10:1 signal:noise, which is enough for digital systems (it would be very noticeable if the signal was analog audio, for instance). If it's a power ratio, things only get better as that corresponds to a voltage ratio of 100:1 signal:noise. According to the wiki, the instantaneous dynamic range of the human ear is about 30dB (power), so if this signal were analog audio, the noise would be detectable, but wouldn't be overly noticeable.
That, ladies and gentlemen, concludes our electrical engineering lesson for the day.

Braedley

andrew.cool@dsto.defence.gov.au wrote:
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>
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>
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> Adelaide, Australia
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> wireless broadband?

Subject: Re: Using Socket to read wireless LAN router info page
Posted by Carsten Lechte on Tue, 09 Jan 2007 10:43:14 GMT
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Braedley wrote:
> about the signal to noise ratio (SNR), 20dB is either sufficient, or
> more than enough, depending on if it's a voltage ratio or a power
> ratio.

A minor point: dB ratings for a certain process do not depend
on what quantity (amplitude or power) is being measured.
A 20 dB amplifier has an amplification factor of 100 in power
and an amplification factor of 10 in amplitude:

dB = 10 log10(power1/power0) or
dB = 20 log10(amplitude1/amplitude0)

This can be confusing at first.
See http://en.wikipedia.org/wiki/Decibel#Definition

chl

Subject: Re: Using Socket to read wireless LAN router info page
Posted by Allan Whiteford on Thu, 11 Jan 2007 16:20:49 GMT
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Andrew,

It will be port 80 if your browser can see it unless you're giving an
explicit port number in the URL in your browser.

Something like this will just about work but is a bit sloppy:

```
socket,lun,'198.168.1.1',80,/get_lun
printf,lun,'GET /'
a=''
while not eof(lun) do begin
 readf,lun,a
        print,a
end
```

However, most standard routers use 192.168.1.1 rather than 198.168.1.1,
maybe worth checking. This could be your problem.

Note the key line "printf,lun,'GET /'" is what selects the webpage,
please see RFC2616 for really boring details:

http://www.w3.org/Protocols/rfc2616/rfc2616.html

A more properly formed command might be something like:

GET http://198.168.1.1/directory/file.html HTTP/1.0

but most things will tell you what you want to know via simply "GET /"
or "GET /page.html". HTTP/1.1 seems to be more complicated and I've
never really bothered with it.

Thanks,

Allan

andrew.cool@dsto.defence.gov.au wrote:

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> PS : To anyone who knows about such things, the Signal strength is
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Subject: Re: Using Socket to read wireless LAN router info page
Posted by Braedley on Thu, 18 Jan 2007 00:12:10 GMT
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Haha, you're right. I must not have been thinking. Boy do I suddenly
feel stupid.

Braedley

PS: In any case, 20dB should still be good enough for digital
transmissions.

On Jan 9, 6:43 am, Carsten Lechte <c...@toppoint.de> wrote:
> Braedley wrote:
>> about the signal to noise ratio (SNR), 20dB is either sufficient, or
>> more than enough, depending on if it's a voltage ratio or a power
>> ratio. A minor point: dB ratings for a certain process do not depend
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