Re: subnetting (helps security)

Source: http://www.derkeiler.com/Newsgroups/alt.computer.security/2006−05/msg00270.html

- *From*: "new guy" <new guy@xxxxxxxxxxxxx>
- *Date*: Wed, 24 May 2006 03:15:16 GMT

"new guy" <new guy@xxxxxxxxxxxxx> wrote in message
news:tfucg.182438$P01.40555@xxxxxxxxxxx

> "new guy" <new guy@xxxxxxxxxxxxx> wrote in message
> news:aP2bg.173153$7a.104097@xxxxxxxxxxx
>
> I am studying subnetting and I have a few question, if you do not mind.
>
> 1. why will the network number be 0 if we borrow just 1 bit?
>
> Ok, I guess I have to expand on my questions, but if you do not have
> anything nice to say, please do not reply to my post at all.
>
> I will take as an example the network address, 192.168.1.0 The default
> subnet mask is 255.255.255.0
> The host addresses will be 192.168.1.1 up to 192.168.1. 254 where
> 192.168.1.255 is the broadcast.
>
> If I borrow 1 bit (subnet mask 255.255.128.0) the result is:
> 126 usable hosts: 192.168.1.1 to 126; and 2 subnets as follows:
> Subnetwork ID broadcast ID
> 192.168.1.0 192.168.1.127
> 192.168.1.128 192.168.1.255
>
> The ID of the first Subnetwork (0) is the same as the original network and
> the broadcast ID of the second subnetwork (1) is the same as the broadcast
> of the original network. However, I am missing something simple (as it's
> always the case:) and hoped somebody would give me at least a hint.
>
> new guy :)

Today, as I was having lunch, I figured out the answer to my first question.
Now, it's more obvious to me that such a simple question has nothing to do
with "doing my homework" as some jerk called it; it was an oversight and it

had to do with the way it's explained in my study material.... I have heard people saying that they never understood subnetting properly from Microsoft, until they studied CISCO... etc.
Many sources, for example, say: "Use the formula: 2 powered by the number of borrowed bits ... blah, blah, blah" , but do not give details about it, etc.
I would explain the freaken formula starting with the possible combinations of 0s and 1s and give examples as followes:

Example 1: Possible combinations with 4 bits

0000
0001
0010
0011
0100
0101
0110
0111
1000
1001
1010
1011
1100
1101
1110
1111

Total: 16 combinations or 2 to the power of 4

Example 2: Possible combinations with 3 bits

000
001
010
011
100
101
110
111

Total: 8 combinations or 2 to the power of 3

Example 3: Possible combinations with 2 bits

00
01
10
11

Total: 4 combinations or 2 to the power of 2

Example 4: Possible combinations with 1bit

0
1

Total: 2 combinations or 2 to the power of 1

Then, go ahead and explain why all 0s and all 1s are not used, and this way, it would be no problem understanding "why the network number will be 0 if we borrow just 1 bit".

Of course, nobody owes me any answer, but on the other hand, nobody has the right to insult me and mock me for asking questions in newsgroups. Nobody knows everything and more we learn, more we realize what ignorants we are. Why am I always happy to help people for things that I know better than them?

new guy :)

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