

Re: Subnetmask Issues

Source:

<http://www.tech-archive.net/Archive/Windows/microsoft.public.windows.server.networking/2005-09/msg00097.html>

- *From:* Poppen <Poppen@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 6 Sep 2005 09:27:16 -0700
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Thank you Bill

This has helped me to clear a lot of grey areas related to subnetting and routing of packets

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make the change

"Bill Grant" wrote:

> It depends on where the machines are. If a client sends a packet to a
> another machine which is in the same IP subnet, the router is not involved
> at all. The packet is delivered directly (ie "on the wire" using the
> machine's hardware or MAC address). If the target machine is not in the
> same IP subnet as the sender, the packet will be sent to the router which
> can deliver the packet directly (because the router has an interface in the
> "other" subnet).
>
> Poppen wrote:
>> Hi
>> Thank you for the information. I learn that for two networks all i
>> need to do is configure the two networks as 171.107.1.0 /24 and
>> 171.107.2.0 /24 at the two network interfaces. I do not have to worry
>> about the subnetmasks. The router would by default select the
>> subnetmask, which will be the same for both the networks of /24
>> subnets. That being the case (router would by default select the
>> subnetmask) .
>> How would the router identify the specific network in which the client
>> resides.
>> For example, i send a packet to 171.107.1.1 client . How would a
>> router interpret this packet. Will it take all the three octets
>> 171,107,1 and route the packet or is there anything to do with
>> subnet mask here.
>>
>>
>>> Getting close, but not quite right yet. The subnet mask defines
>>> how much of the address defines the network. So with a 24-bit subnet

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>>> mask, the first 24 bits are network definition and the remaining 8
>>> define the host. So all addresses beginning with 171.107.1 are in
>>> the same subnet, and you can have 254 of them from 1 to 254. Zero
>>> and 255 are reserved. Zero is used to define the subnet itself and
>>> 255 is a broadcast address.
>>>
>>> To have two subnets of 254 hosts starting with 171.107, the
>>> third octet would need to be different. For example you could use 1
>>> and 2. Subnet one would be the subnet 171.107.1 0/24 containing the
>>> host addresses 171.107.1.1 through 171.107.1.254. The second subnet
>>> would be 171.107.2.0/24, containing 171.107.2.1 to 171.107.2.254.
>>>
>>> Poppen wrote:
>>>> HI
>>>> I have an academic question related to subnet masking. I
>>>> understand that the individual subnets are differentiated with the
>>>> aid of subnet masks. So when you do a subnetting of 171.107.1.0 /24
>>>>. The networks are 171.107.1.0, 171.107.1.1 till 171.107.1.255.
>>>> The subnet mask for these n/w will be 255.255.255.0.
>>>> I want to configure 2 subnets, let's say 171.107.1.1 and
>>>> 171.107.1.2. I am not sure how will I give the subnetmasks at the
>>>> router for these networks.
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• *References:*

- ◆ *Subnetmask Issues*
 - ◇ *From:* Poppen
 - ◆ *Re: Subnetmask Issues*
 - ◇ *From:* Bill Grant
 - ◆ *Re: Subnetmask Issues*
 - ◇ *From:* Poppen
 - ◆ *Re: Subnetmask Issues*
 - ◇ *From:* Bill Grant
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