

Re: single host netmask (255.255.255.255)

Source:

<http://www.tech-archive.net/Archive/Win2000/microsoft.public.win2000.networking/2005-09/msg00081.html>

- *From:* Petr Laznovsky <nobody@xxxxxxxxxxx>
 - *Date:* Tue, 06 Sep 2005 02:22:06 +0200
-

David D wrote:

I know. but Netengs post you referred to was also talking about broadcast address.

Please, read Neteng`s post carefully, we are talking about HOST ROUTING.

I can't imagine why you would want to assign a 255.255.255.255 mask to an ethernet interface as you then can't talk to someone (se my drevious post)

It is simple: Imagine, you have router with three interfaces, you are use dynamic routing OSPF protocol. The routes from three interfaces, propagate via OSPF to the rest of network.... You wanna to manage this router remotely, in case the some interface(s) are down.... One way is to remember IP addresses assigned to each interfaces, but more smart solution is to assign to this machine one EXTERNAL LOOPBACK address (single IP with mask 255.255.255.255, in other words SINGLE HOST assigned to Microsoft loopback adapter), and propagate this address (in other words: SINGLE HOST NETWORK) to OSPF. Than you can access this machine by this one IP address, does not care which interfaces are up or down. In the UNIX word, usual thing.....

P.L.

BTW: sorry for my horrible english, but I think yo can understand what I mean....

/D

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Petr Laznovsky wrote:

David,

we are talking about `__MASK__ 255.255.255.255`, not the broadcast address!!!

P.L.

David D wrote:

From RFC919

<snip>

The address 255.255.255.255 denotes a broadcast on a local hardware network, which must not be forwarded. This address may be used, for example, by hosts that do not know their network number and are asking some server for it.

Thus, a host on net 36, for example, may:

- broadcast to all of its immediate neighbors by using 255.255.255.255

- broadcast to all of net 36 by using 36.255.255.255

(Note that unless the network has been broken up into subnets, these two methods have identical effects.)

If the use of "all ones" in a field of an IP address means "broadcast", using "all zeros" could be viewed as meaning "unspecified". There is probably no reason for such addresses to

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appear anywhere but as the source address of an ICMP Information Request datagram. However, as a notational convention, we refer to networks (as opposed to hosts) by using addresses with zero fields. For example, 36.0.0.0 means "network number 36" while 36.255.255.255 means "all hosts on network number 36".

</snip>

Petr Laznovsky wrote:

Is
single
host
netmask
allowed
on
ethernet
interface
in
Windows
2000? I
need to
assign
IP
10.1.1.1
with
netmask
255.255.255.255
to ETH
interface,
but i`v
got
following
error
message:
"Invalid
IP or
subnet
mask
address".
As I
remember,
dial-up

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DHCP
requested
address
come
normally
with
this
mask.....
Wha is
wrong???????

L.

I think you remember wrong, fresch up your you basic tcp/ip know

The smallest usable
net consists of 4
adresses (netmask
255.255.255.252)

First adress (host
part all zero) is
the net address.
Then come two
addresses for
hosts, you use on
for your host and
one for the default
gateway (you want
to talk to someone
aren't you ?)
Last address is the
broadcast address.

/David

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David, please read Neteng`s answer to my question.

P.L.