

Re: LAN IP addresses

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On Tue, 09 Sep 2008, in the Usenet newsgroup comp.os.linux.networking, in article <ga5i36\$2otb\$1@xxxxxxxxxxxxxxxxxxxx>, Pascal Hambourg wrote:

Moe Trin a écrit :

Oh, and you may also want to notice the "<Subnet-number>" mentioned above (also mentioned in RFC1812 and the various 'Assigned Numbers' RFCs like RFC1700), and then look at RFC3330. It was common with some operating systems that the lowest and highest `_subnet_` were considered unusable.

I knew about this. Actually I tend to consider that the subnet number is deprecated since the advent of CIDR.

Not really – it depends on your perspective. If you are looking from "outside", you probably have no idea what mask may be used on the LAN, and in fact it doesn't matter anyway. Systems on the Internet merely need to know that (for example) packets for 198.18.8.0/22 and 198.18.12.0/23 should ultimately be sent to a certain router in South Whoozit that is acting as a gateway to the network that runs from 198.18.0.0 to 198.18.13.255.

On the "inside" of a LAN, the mask must reflect the size or design of the local setup. It probably has a route (or several) that encompasses the Internet values – in the case of this example, perhaps they are using /24 subnets, and a host on the "first" subnet might have a routing table that looks something like

```
198.18.8.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0
198.18.8.0 198.18.8.252 255.255.252.0 UG 0 0 0 eth0
198.18.12.0 198.18.8.252 255.255.254.0 UG 0 0 0 eth0
0.0.0.0 198.18.8.254 0.0.0.0 UG 0 0 0 eth0
```

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where 198.18.8.252 is the router to the rest of the LAN, and 198.18.8.254 is the gateway to the world.

Whether the prefix is the result of subnetting does not matter to me, and I believe it should not matter to any network equipment either.

Most operating systems I'm familiar with don't care any more. There are/were a few that prefer to (or must) use a single network mask, which might make the above routing table look like

```
198.18.8.0 0.0.0.0 255.255.255.0 U 0 0 0 eth0
198.18.9.0 198.18.8.252 255.255.255.0 UG 0 0 0 eth0
198.18.10.0 198.18.8.252 255.255.255.0 UG 0 0 0 eth0
198.18.11.0 198.18.8.252 255.255.255.0 UG 0 0 0 eth0
198.18.12.0 198.18.8.252 255.255.255.0 UG 0 0 0 eth0
198.18.13.0 198.18.8.252 255.255.255.0 UG 0 0 0 eth0
0.0.0.0 198.18.8.254 0.0.0.0 UG 0 0 0 eth0
```

but that's a problem for the admin who needs to configure things, and otherwise has no effect.

Old guy

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