**(some information about c and l in routing table + use of loop back + issue when no proper gateway in switch)**

** Mafaz Abrar Jan Chowdhury**

Why does the routing table say there are 2 subnets in each interface? I didn't do any subnetting since all subnet masks are /24

**Karina Cereceda Castellani**

That's a very good question Mafaz

Do you see the 2 subnet listed there?

one has a C next to it

the other one has an L

right?

**Mafaz Abrar Jan Chowdhury**

yeah, one has /32 as well

**Karina Cereceda Castellani**

yup

**Mafaz Abrar Jan Chowdhury**

i didn't set that though, how is it there?

**Karina Cereceda Castellani**

C routes are the directly Connected networks and that is the full /24 that's allocated to the VLAN

Now the L network is something called the "Local" network

and it refers to the single IP configured on the router interface

is a way of showing you on the routing table which one is the local router IP address

that's why is a /32... to signify a single IP (i.e. all 32 bits belong to the network portion, so is a "network" with just that one IP)

**Ekrar Uddin Mohammed Efaz**

i didn't understand

**Karina Cereceda Castellani**

@Ekrar Uddin Mohammed Efaz when you configure an IP on an active router interface, 2 routing entries are created:

1.- the C network - the directly connected network

2.- the L network - showing you the IP configured on the router interface per se

for example, if you configure 192.168.10.1 255.255.255.0 on a router interface

the following routes will come up in the routing table:

C 192.168.10.0/24

L 192.168.10.1/32

**Mafaz Abrar Jan Chowdhury**

So the L network is not really a network, it's just a single IP address (that of the port)?

**Karina Cereceda Castellani**

yes

a /32 "network" is really just a single IP

** Ekrar Uddin Mohammed Efaz**

why do we configure loopback interface

**Karina Cereceda Castellani**

there are many uses for Loopback interfaces

in this Unit, we use them to simulate a remote IP

and IP that does not belong to any of our internal VLAN networks

**Ekrar Uddin Mohammed Efaz**

should the switches be able to ping the loopback?

**Karina Cereceda Castellani**

yes

I'll give you a hint

remember that devices need to have a default gateway configured to be able to ping remote IPs

**Ekrar Uddin Mohammed Efaz**

yes

**Karina Cereceda Castellani**

so, if your switches can ping devices within the management VLAN

but can't ping an IP outside the management VLAN network

what do you think might be happening?

**Ekrar Uddin Mohammed Efaz**

gateway not assigned?

**Karina Cereceda Castellani**

yes... or.... incorrectly assigned

** Ekrar Uddin Mohammed Efaz**

into how many sub interfaces can we divide a single interface into

**Karina Cereceda Castellani**

the absolute max. would be 4096

for the 4096 VLANs that you can have

however there are some hardware limitations and the practical max. Would depend on the model router

when you purchase a router that's one of the things you might want to check

however, there isn't really a practical scenario where you would want to have that many VLANs sharing the same physical link

#### Ekrar Uddin Mohammed Efaz

Okay