

IP Forwarding

1 Forwarding packets

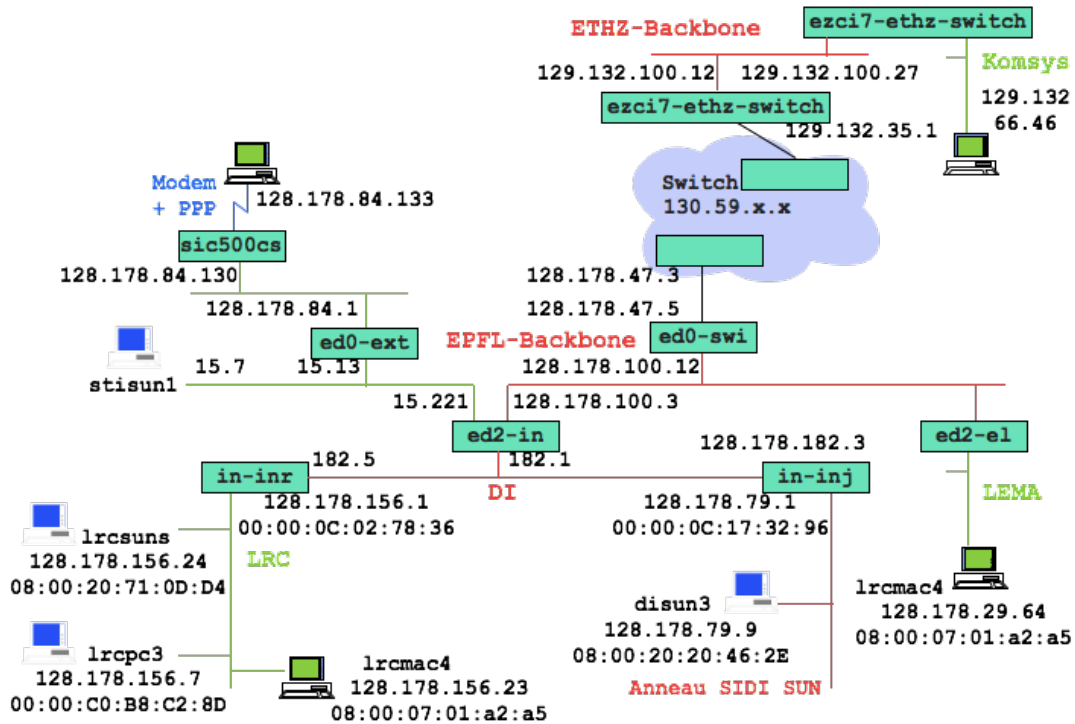


Figure 1: Example network



Fill in the routing table for the following cases:

- IP packet sent from lrcsuns ;
- IP packet sent from in-inj.

Give the case of the forwarding algorithm.

Command to get the info: `netstat -rnf inet`.

destination	next hop (lrcsuns)	case No.	next hop (in-inj)	case No.
128.178.79.9				
128.178.156.7				
127.0.0.1				
128.178.84.133				
129.132.1.45				

2 Forwarding packets

A router has the following routing table and interfaces:

#	Destination	NetMask	Next hop
1	128.178.112.0	255.255.240.0	129.88.123.1
2	128.178.96.0	255.255.224.0	129.88.124.1
3	128.178.0.0	255.255.0.0	129.88.123.2
4	128.178.160.0	255.255.224.0	129.88.124.2
5	0.0.0.0	0.0.0.0	129.88.123.3

Interface	Address	Mask
eth0	129.88.123.4	255.255.255.0
eth1	129.88.124.4	255.255.255.0

It receives packets sent to the following destination IP addresses:

- 128.178.163.13
- 129.88.123.10 from eth0
- 128.178.113.32
- 131.175.123.244
- 129.88.124.42 from eth0
- 255.255.255.255
- 129.88.123.255 depuis eth1



Give the operation of the router for each packet:

- which case?
- which *next hop*?
- which line matched?

destination	next hop	cas n°	n°ligne table
128.178.163.13			
129.88.123.10 (depuis eth0)			
128.178.113.32			
131.175.123.244			
129.88.124.42 depuis eth0			
255.255.255.255			
129.88.123.255 depuis eth1			