

LAB 1 - Aula

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1. Para a captura de pacotes em H2:

a) anexe a captura (arquivo .pcap) na entrega da tarefa

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000000	10.0.0.1	10.0.0.2	ICMP	98	Echo (ping) request id=0x3452, seq=1/256, ttl=64 (reply in 2)
2	0.000078671	10.0.0.2	10.0.0.1	ICMP	98	Echo (ping) reply id=0x3452, seq=1/256, ttl=64 (request in 1)
3	5.222909524	00:00:00:00:00:02	00:00:00:00:00:01	ARP	42	Who has 10.0.0.1? Tell 10.0.0.2
4	5.236566747	00:00:00:00:00:01	00:00:00:00:00:02	ARP	42	Who has 10.0.0.2? Tell 10.0.0.1
5	5.236598498	00:00:00:00:00:02	00:00:00:00:00:01	ARP	42	10.0.0.2 is at 00:00:00:00:00:02
6	5.263155455	00:00:00:00:00:01	00:00:00:00:00:02	ARP	42	10.0.0.1 is at 00:00:00:00:00:01

b) descreva brevemente o tráfego capturado (#pacotes, tipo de pacotes, etc.)

O host H1 enviar um ping para H2, usando o protocolo ICMP com tamanho de pacote 98. Logo abaixo, é possível ver o switch perguntando aos hosts quais são os endereços macs associados aos endereços de IP.

2. Copie a saída do ping entre h1 e h2.

```
"Node: h1"
root@leonardo-PC:~# ping -c1 10.0.0.2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
64 bytes from 10.0.0.2: icmp_seq=1 ttl=64 time=23.7 ms

--- 10.0.0.2 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 23.787/23.787/23.787/0.000 ms
root@leonardo-PC:~#
```

3. Preencha as informações de cada nó e informe os comandos usados:

H1

Endereço IP: **10.0.0.1**

Endereço MAC: **00:00:00:00:00:01**

Tabela de roteamento IP:

```

root@leonardo-PC:~# ip route
10.0.0.0/8 dev h1-eth0 proto kernel scope link src 10.0.0.1
root@leonardo-PC:~#

```

Tabela ARP:

```

root@leonardo-PC:~# arp
Endereço      TipoHW  EndereçoHW  Flags Mascara  Iface
10.0.0.2      ether   00:00:00:00:00:02  C          h1-et
h0
root@leonardo-PC:~#

```

H2

Endereço IP: **10.0.0.2**

Endereço MAC: **00:00:00:00:00:02**

Tabela de roteamento IP:

```

root@leonardo-PC:~# ip route
10.0.0.0/8 dev h2-eth0 proto kernel scope link src 10.0.0.2
root@leonardo-PC:~#

```

Tabela ARP:

```

root@leonardo-PC:~# arp
Endereço      TipoHW  EndereçoHW  Flags Mascara  Iface
10.0.0.1      ether   00:00:00:00:00:01  C          h2-et
h0
root@leonardo-PC:~#

```

S1

Endereço IP(interfaces):

```

s1-eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet6 fe80::4cf1:66ff:fea3:61d5 prefixlen 64 scopeid 0x20<link>
    ether 4e:f1:66:a3:61:d5 txqueuelen 1000 (Ethernet)
    RX packets 29 bytes 2102 (2.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 89 bytes 9476 (9.4 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

s1-eth2: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet6 fe80::6c1f:43ff:fed4:68fc prefixlen 64 scopeid 0x20<link>
    ether 6e:1f:43:d4:68:fc txqueuelen 1000 (Ethernet)
    RX packets 29 bytes 2102 (2.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 89 bytes 9476 (9.4 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

Endereço MAC:

```

enp0s31f6: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether 64:1c:67:90:5b:76 txqueuelen 1000 (Ethernet)
    RX packets 289083 bytes 371788574 (371.7 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 64854 bytes 13154438 (13.1 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
    device interrupt 16 memory 0xec100000-ec120000

```

Número após **ether**.

Tabela de roteamento IP:

Tabela ARP: