

INSTITUTO POLITÉCNICO NACIONAL

ESCUELA SUPERIOR DE CÓMPUTO

ADMINISTRACIÓN DE SERVICIOS EN RED

NAT, DHCP Y DNS

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4CM11

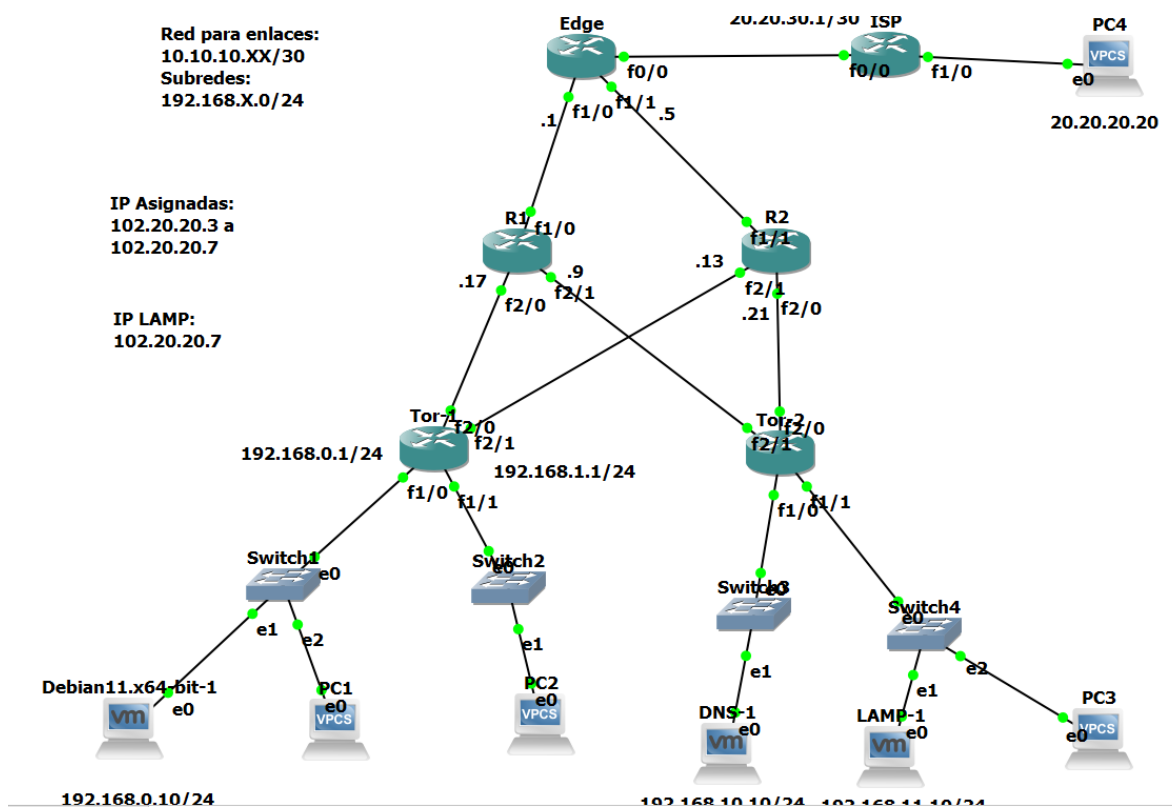


Figura 1. Topología de la red.

```
PC1> ip dhcp
DDORA IP 192.168.0.2/24 GW 192.168.0.1

PC1> show ip

NAME       : PC1[1]
IP/MASK    : 192.168.0.2/24
GATEWAY    : 192.168.0.1
DNS        : 192.168.10.10
DHCP SERVER : 192.168.0.1
DHCP LEASE  : 86391, 86400/43200/75600
MAC        : 00:50:79:66:68:00
LPORT      : 10078
RHOST:PORT  : 127.0.0.1:10079
MTU        : 1500
```

Figura 2. Asignación de IP con DHCP.

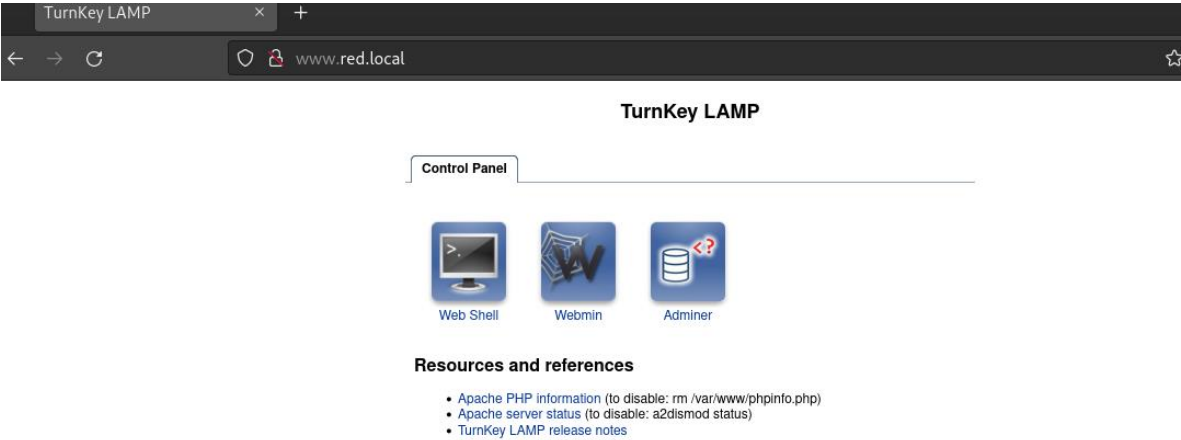


Figura 3. Funcionamiento del DNS

```
Edge#sh ip nat translations
Pro Inside global      Inside local      Outside local      Outside global
icmp 102.20.20.3:61260 192.168.0.10:61260 20.20.30.1:61260  20.20.30.1:61260
--- 102.20.20.3        192.168.0.10     ---                ---
```

Figura 4. Comando ip nat translations.

icmp						
o.	Time	Source	Destination	Protocol	Length	Info
6	19.223929	20.20.30.1	102.20.20.3	ICMP	98	Echo (ping) reply id=0x6aef, seq=1/256, ttl=255 (request in 5)
8	20.215466	102.20.20.3	20.20.30.1	ICMP	98	Echo (ping) request id=0x6aef, seq=2/512, ttl=61 (reply in 9)
9	20.240480	20.20.30.1	102.20.20.3	ICMP	98	Echo (ping) reply id=0x6aef, seq=2/512, ttl=255 (request in 8)
11	21.202407	102.20.20.3	20.20.30.1	ICMP	98	Echo (ping) request id=0x6aef, seq=3/768, ttl=61 (reply in 12)
12	21.219701	20.20.30.1	102.20.20.3	ICMP	98	Echo (ping) reply id=0x6aef, seq=3/768, ttl=255 (request in 11)
13	22.203693	102.20.20.3	20.20.30.1	ICMP	98	Echo (ping) request id=0x6aef, seq=4/1024, ttl=61 (reply in 14)
14	22.223255	20.20.30.1	102.20.20.3	ICMP	98	Echo (ping) reply id=0x6aef, seq=4/1024, ttl=255 (request in 13)
16	23.203865	102.20.20.3	20.20.30.1	ICMP	98	Echo (ping) request id=0x6aef, seq=5/1280, ttl=61 (reply in 17)
17	23.221135	20.20.30.1	102.20.20.3	ICMP	98	Echo (ping) reply id=0x6aef, seq=5/1280, ttl=255 (request in 16)
18	24.207265	102.20.20.3	20.20.30.1	ICMP	98	Echo (ping) request id=0x6aef, seq=6/1536, ttl=61 (reply in 19)
19	24.229083	20.20.30.1	102.20.20.3	ICMP	98	Echo (ping) reply id=0x6aef, seq=6/1536, ttl=255 (request in 18)

Figura 5. Ping con NAT