	Institut Antoni Ballester Sistemes Microinformàtics i Xarxes. **M7 - Serveis de Xarxa**	DHCP 3	Zulema Romero	Curs: 24-25

Copiar la estructura de sota, tantes vegades com sigui necessari

Realitza i entrega una captura de la nova configuració.

```
Oct  1 11:23:35 zeus dhcpd[1398]: PID file: /run/dhcp-server/dhcpd.pid
Oct  1 11:23:35 zeus sh[1398]: PID file: /run/dhcp-server/dhcpd.pid
Oct  1 11:23:35 zeus dhcpd[1398]: Wrote 0 deleted host decls to leases file.
Oct  1 11:23:35 zeus dhcpd[1398]: Wrote 0 new dynamic host decls to leases file.
Oct  1 11:23:35 zeus dhcpd[1398]: Wrote 0 leases to leases file.
Oct  1 11:23:35 zeus dhcpd[1398]: Multiple interfaces match the same subnet: enp0s8 enp0s9
Oct  1 11:23:35 zeus dhcpd[1398]: Multiple interfaces match the same shared network: enp0s8 enp0s9
Oct  1 11:23:35 zeus dhcpd[1398]: Multiple interfaces match the same subnet: enp0s8 enp0s9
Oct  1 11:23:35 zeus dhcpd[1398]: Multiple interfaces match the same shared network: enp0s8 enp0s9
Oct  1 11:23:35 zeus dhcpd[1398]: Multiple interfaces match the same subnet: enp0s8 enp0s9
Oct  1 11:23:35 zeus dhcpd[1398]: Multiple interfaces match the same shared network: enp0s8 enp0s9
Oct  1 11:23:35 zeus dhcpd[1398]: Listening on LPF/enp0s9/08:00:27:28:f8:ff/192.168.30.0/24
Oct  1 11:23:35 zeus dhcpd[1398]: Sending on   LPF/enp0s9/08:00:27:28:f8:ff/192.168.30.0/24
Oct  1 11:23:35 zeus dhcpd[1398]: Listening on LPF/enp0s8/08:00:27:9e:82:06/192.168.30.0/24
Oct  1 11:23:35 zeus dhcpd[1398]: Sending on   LPF/enp0s8/08:00:27:9e:82:06/192.168.30.0/24
Oct  1 11:23:35 zeus dhcpd[1398]: Sending on   Socket/fallback/fallback-net
Oct  1 11:23:35 zeus dhcpd[1398]: Server starting service.
Oct  1 11:23:40 zeus dhcpd[1398]: DHCPDISCOVER from 08:00:27:9e:82:06 via enp0s8
Oct  1 11:23:40 zeus dhcpd[1398]: DHCPDISCOVER from 08:00:27:28:f8:ff via enp0s9
Oct  1 11:23:41 zeus dhcpd[1398]: DHCPOFFER on 192.168.30.100 to 08:00:27:9e:82:06 (zeus) via enp0s8
Oct  1 11:23:41 zeus dhcpd[1398]: DHCPREQUEST for 192.168.30.100 (192.168.30.1) from 08:00:27:9e:82:
06 (zeus) via enp0s8
Oct  1 11:23:41 zeus dhcpd[1398]: DHCPACK on 192.168.30.100 to 08:00:27:9e:82:06 (zeus) via enp0s8
Oct  1 11:23:41 zeus dhcpd[1398]: DHCPOFFER on 192.168.30.101 to 08:00:27:28:f8:ff (zeus) via enp0s9
Oct  1 11:23:41 zeus dhcpd[1398]: DHCPREQUEST for 192.168.30.101 (192.168.30.2) from 08:00:27:28:f8:
ff (zeus) via enp0s9
Oct  1 11:23:41 zeus dhcpd[1398]: DHCPACK on 192.168.30.101 to 08:00:27:28:f8:ff (zeus) via enp0s9
Oct  1 11:24:06 zeus dhcpd[1398]: DHCPDISCOVER from 08:00:27:28:f8:ff (zeus) via enp0s9
Oct  1 11:24:06 zeus dhcpd[1398]: DHCPOFFER on 192.168.30.101 to 08:00:27:28:f8:ff (zeus) via enp0s9
Oct  1 11:24:11 zeus dhcpd[1398]: DHCPDISCOVER from 08:00:27:e3:7e:fa via enp0s8
Oct  1 11:24:12 zeus dhcpd[1398]: DHCPOFFER on 192.168.30.102 to 08:00:27:e3:7e:fa (ubuntuserver) vi
a enp0s8
Oct  1 11:24:12 zeus dhcpd[1398]: DHCPREQUEST for 192.168.30.102 (192.168.30.1) from 08:00:27:e3:7e:
fa (ubuntuserver) via enp0s8
Oct  1 11:24:12 zeus dhcpd[1398]: DHCPACK on 192.168.30.102 to 08:00:27:e3:7e:fa (ubuntuserver) via
enp0s8
mar oct 01 11:25:01 romeroz@zeus:/etc/dhcp$ _
```

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Realitza i entrega una captura on comproves la IP que reben PC1 i PC2.

```
ipmar oct 01 13:27:49 romeroz@ubuntuserver:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1
0
    link/ether 08:00:27:75:86:4b brd ff:ff:ff:ff:ff:ff
    inet 192.168.30.102/24 metric 100 brd 192.168.30.255 scope global dynamic enp0s3
       valid_lft 3575sec preferred_lft 3575sec
    inet6 fe80::a00:27ff:fe75:864b/64 scope link
       valid_lft forever preferred_lft forever
mar oct 01 13:27:50 romeroz@ubuntuserver:~$
```

```
mar oct 01 13:27:36 romeroz@ubuntuserver:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1
0
    link/ether 08:00:27:e3:7e:fa brd ff:ff:ff:ff:ff:ff
    inet 192.168.30.102/24 metric 100 brd 192.168.30.255 scope global dynamic enp0s3
       valid_lft 3394sec preferred_lft 3394sec
    inet6 fe80::a00:27ff:fee3:7efa/64 scope link
       valid_lft forever preferred_lft forever
mar oct 01 13:27:38 romeroz@ubuntuserver:~$ _
```

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Realitza una captura on mostris la instal·lació del daemon NTP a Zeus i a Artemis.

```
mar oct 01 12:11:51 romeroz@zeus:/$ ntpq -p
     remote           refid      st t when poll reach   delay   offset  jitter
==============================================================================
 0.ubuntu.pool.n .POOL.          16 p    -   64    0   0.000   +0.000   0.001
 1.ubuntu.pool.n .POOL.          16 p    -   64    0   0.000   +0.000   0.001
 2.ubuntu.pool.n .POOL.          16 p    -   64    0   0.000   +0.000   0.001
 3.ubuntu.pool.n .POOL.          16 p    -   64    0   0.000   +0.000   0.001
 ntp.ubuntu.com  .POOL.          16 p    -   64    0   0.000   +0.000   0.001
+60.pool90-68-20 193.190.230.65   2 u    3   64    3  22.935   +7.280   9.819
-time.cloudflare 10.89.8.6        3 u    7   64    3  12.502   +1.949  11.594
#82.223.203.159  5.250.191.170    3 u    9   64    3  46.832   +8.284   7.251
#tick.espanix.ne .GNSS.           1 u   12   64    3  25.708   +3.949  12.683
*tock.espanix.ne .GNSS.           1 u   13   64    3  33.641   +5.297   8.522
#178.215.228.24  189.97.54.122    2 u   15   64    3  73.210  -18.946  32.585
-cf393dbc-c70f-4 150.214.5.121    2 u   13   64    3  12.676   +2.307  11.419
-any.time.nl     30.20.35.61      2 u   10   64    3  23.558   +0.888  13.653
-ip212-227-232-4 79.143.250.33    2 u   16   64    3  46.962   +9.315   6.883
+time.cloudflare 10.89.8.6        3 u   14   64    3 131.145  +61.878  49.081
-ntp1.adora.code 17.253.108.125   2 u   12   64    3  97.946  +35.599  17.964
#sarah.vandalswe 185.248.189.10   2 u   13   64    3 104.496  +29.438  16.485
-eu-es1-new.clou 82.67.62.62      2 u   14   64    3 104.526  +34.992  18.697
 alphyn.canonica 132.163.96.1     2 u   20   64    3 312.847 -103.03 118.258
 185.125.190.56  79.243.60.50     2 u   16   64    3 153.239  +62.440  44.917
-185.198.109.227 10.69.5.35       2 u   79   64    2  35.214  +12.638   2.911
#89.140.186.3 (d 158.227.98.15    2 u   79   64    2  47.570  +18.959   1.806
mar oct 01 12:12:20 romeroz@zeus:/$ _
```

Realitza una captura on mostris els canvis a la configuració de Zeus.

```
default-lease-time 3600;
max-lease-time 7200;
failover peer "dhcp-failover";

}

subnet 192.168.40.0 netmask 225.255.255.0 {
  option domain-name-servers 192.168.40.50, 192.168.40.51;
  range 192.168.40.100 192.168.40.250;
  option domain-name "romero-alegria.test";
  option subnet-mask 255.255.255.0;
  option routers 172.30.1.1;
  default-lease-time 3600;
  max-lease-time 7200;
  failover peer "dhcp-failover";

}

failover peer "dhcp-failover" {
  primary;
  address 192.168.30.50;
  peer address 192.168.30.51;
  port 647;
  peer port 647;
  max-response-delay 60;
  max-unacked-updates 10;
  load balance max seconds 3;
  mclt 3600;
  split 128;

}
```

Realitza una captura on mostris que el servidor DHCP s'està executant a Artemis.

```
mar oct 01 12:37:41 romeroz@zeus:~$ sudo systemctl status isc-dhcp-server
● isc-dhcp-server.service - ISC DHCP IPv4 server
     Loaded: loaded (/lib/systemd/system/isc-dhcp-server.service; enabled; vendor preset: enabled)
     Active: active (running) since Tue 2024-10-01 12:37:41 UTC; 5s ago
       Docs: man:dhcpd(8)
   Main PID: 976 (dhcpd)
      Tasks: 4 (limit: 2219)
     Memory: 4.8M
        CPU: 6ms
     CGroup: /system.slice/isc-dhcp-server.service
             └─976 dhcpd -user dhcpd -group dhcpd -f -4 -pf /run/dhcp-server/dhcpd.pid -cf /etc/dhc
```

Realitza una captura on mostris la configuració de failover a Zeus.

```
# A slightly different configuration for an internal subnet.
failover peer "dhcp-failover" {
    primary;
    address 192.168.30.50;
    port 647;
    peer address 192.168.30.51;
    peer port 647;
    max-unacked-updates 10;
    max-response-delay 30;
    mclt 1800;
    split 128;
}

shared-network "red-compartida" {
    subnet 192.168.30.0 netmask 255.255.255.0 {
        option broadcast-address 192.168.30.255;
        option routers 172.30.1.1;
        option domain-name-servers 192.168.30.50, 192.168.30.51;
        pool {
            failover peer "dhcp-failover";
            max-lease-time 3600;
            range 192.168.30.100 192.168.30.250;
        }
    }
    subnet 192.168.40.0 netmask 255.255.255.0 {
        option broadcast-address 192.168.40.255;
        option routers 172.30.1.1;
        option domain-name-servers 192.168.40.50, 192.168.40.51;
        pool {
            failover peer "dhcp-failover";
            max-lease-time 3600;
            range 192.168.40.100 192.168.40.51;
        }
    }
}
mar oct 01 15:57:42 romeroz@zeus:/etc/dhcp$
```

Realitza una captura on mostris la configuració de failover a Artemis.

```
# A slightly different configuration for an internal subnet.
failover peer "dhcp-failover" {
    secondary;
    address 192.168.30.51;
    port 647;
    peer address 192.168.30.50;
    peer port 647;
    max-unacked-updates 10;
    max-response-delay 30;
}

shared-network "red-compartida" {
    subnet 192.168.30.0 netmask 255.255.255.0 {
        option broadcast-address 192.168.30.255;
        option routers 172.30.1.1;
        option domain-name-servers 192.168.30.50, 192.168.30.51;
        pool {
            failover peer "dhcp-failover";
            max-lease-time 3600;
            range 192.168.30.100 192.168.30.250;
        }
    }

    subnet 192.168.40.0 netmask 255.255.255.0 {
        option broadcast-address 192.168.40.255;
        option routers 172.30.1.1;
        option domain-name-servers 192.168.40.50, 192.168.40.51;
        pool {
            failover peer "dhcp-failover";
            max-lease-time 3600;
            range 192.168.40.100 192.168.40.250;
        }
    }
}

mar oct 01 16:00:40 romeroz@zeus:/etc/dhcp$
```

Realitza una captura on mostris que el failover funciona.

```
  cltt 2 2024/10/01 11:23:41;
  binding state free;
  hardware ethernet 08:00:27:9e:82:06;
}
lease 192.168.30.102 {
  starts 2 2024/10/01 12:26:34;
  ends 2 2024/10/01 13:26:34;
  tstp 2 2024/10/01 13:26:34;
  cltt 2 2024/10/01 12:26:34;
  binding state free;
  hardware ethernet 08:00:27:75:86:4b;
  uid "\377\3424?>\000\002\000\000\253\021\011\356\036B\212v\021X";
}
lease 192.168.30.101 {
  starts 2 2024/10/01 11:25:10;
  ends 3 2024/10/02 11:25:10;
  tstp 3 2024/10/02 11:25:10;
  cltt 2 2024/10/01 11:25:10;
  binding state abandoned;
  next binding state free;
  rewind binding state free;
}

failover peer "dhcp-failover" state {
  my state recover at 2 2024/10/01 15:57:08;
  partner state unknown-state at 2 2024/10/01 15:57:08;
  mclt 0;
}
server-duid "\000\001\000\001.\205\200\200\010\000 '\236\202\006";

failover peer "dhcp-failover" state {
  my state recover at 2 2024/10/01 15:57:08;
  partner state unknown-state at 2 2024/10/01 15:57:08;
  mclt 0;
}
mar oct 01 16:08:40 romeroz@zeus:/etc/dhcp$ _
```