

Networking-2

1. Use already created internal-network for three VMs (VM1-VM3). VM1 has NAT and internal, VM2, VM3 – internal only interfaces.

2. Install and configure DHCP server on VM1.

(3 ways: using VBoxManage, DNSMASQ and ISC-DHSPSERVER).

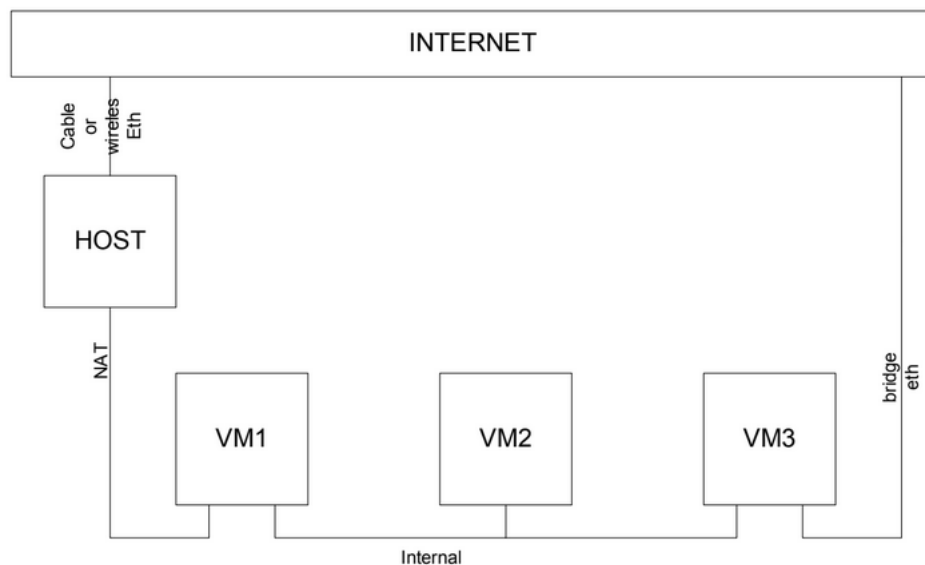
You should use at least 2 of them.

3. Check VM2 and VM3 for obtaining network addresses from DHCP server.

4. Using existed network for three VMs (from p.1) install and configure DNS server on VM1. (You can use DNSMASQ, BIND9 or something else).

5. Check VM2 and VM3 for gaining access to DNS server (naming services).

6. ***Using the scheme which follows, configure dynamic routing using OSPF protocol.



7. Check results.

Using DNSMASQ.

VM2	<pre>sdrv@CsnKhai:~\$ dig g.co ; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> g.co ;; global options: +cmd ;; Got answer: ;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 26650 ;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 4, ADDITIONAL: 8 ;; OPT PSEUDOSECTION: ; EDNS: version: 0, flags:; udp: 1232 ;; QUESTION SECTION: ;g.co. IN A ;; ANSWER SECTION: g.co. 300 IN A 142.250.180.206 ;; AUTHORITY SECTION: g.co. 899 IN NS ns2.google.com. g.co. 899 IN NS ns1.google.com. g.co. 899 IN NS ns3.google.com. g.co. 899 IN NS ns4.google.com. ;; ADDITIONAL SECTION: ns1.google.com. 76751 IN A 216.239.32.10 ns2.google.com. 172513 IN A 216.239.34.10 ns4.google.com. 172704 IN A 216.239.38.10 ns1.google.com. 80911 IN AAAA 2001:4860:4802:32::a ns2.google.com. 114853 IN AAAA 2001:4860:4802:34::a ns3.google.com. 114853 IN AAAA 2001:4860:4802:36::a ns4.google.com. 114853 IN AAAA 2001:4860:4802:38::a ;; Query time: 384 msec ;; SERVER: 10.10.10.1#53(10.10.10.1) ;; WHEN: Mon Dec 27 15:47:44 UTC 2021 ;; MSG SIZE rcvd: 291</pre>	
VM3	<pre>sdrv@CsnKhai:~\$ dig g.co ; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> g.co ;; global options: +cmd ;; Got answer: ;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 35732 ;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0 ;; QUESTION SECTION: ;g.co. IN A ;; ANSWER SECTION: g.co. 278 IN A 142.250.180.206 ;; Query time: 5 msec ;; SERVER: 10.10.10.1#53(10.10.10.1) ;; WHEN: Mon Dec 27 15:48:06 UTC 2021 ;; MSG SIZE rcvd: 38</pre>	