
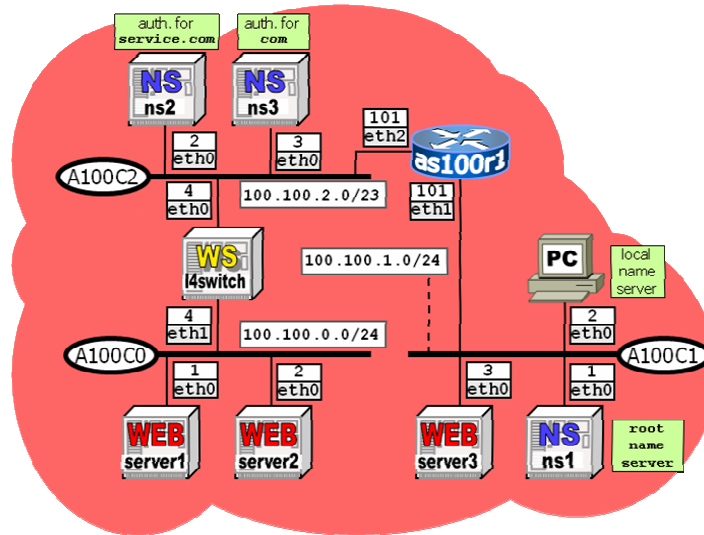


ICN – Examination date: 30-11-2011 – “Barbapapà” 

Available time: 120 minutes

Using Netkit, implement the network shown in the following picture:



- **server1**, **server2**, **server3** are Web servers running Apache2 which, when asked for **www.service.com**, show each a different html page
- **ns1**, **ns2**, **ns3**, **pc** are name servers running Bind; **pc** is a local name server; **ns1** is the root, **ns3** is the authority for **com**, **ns2** is the authority for **service.com**
- **ns2** implements a load balancing mechanism for **www.service.com**, always returning the same pair of addresses 100.100.2.4 and 100.100.1.3 (note: do not make use of location-based load balancing)
- **server1** and **server2** are behind **l4switch**, which is a layer 4 Web switch that is intended to be set up with a round robin policy using the following commands:

```
iptables --table nat --append PREROUTING --destination 100.100.2.4 --match statistic --mode nth --every 2 --jump DNAT --to-destination 100.100.0.1
iptables --table nat --append PREROUTING --destination 100.100.2.4 --jump DNAT --to-destination 100.100.0.2
```
- the lab is to be implemented with static routes
- warning: remember to set up the default route on all machines; in particular, remember to set **server1**'s and **server2**'s default route to point to **l4switch** and **l4switch**'s default route to point to **as100r1**.

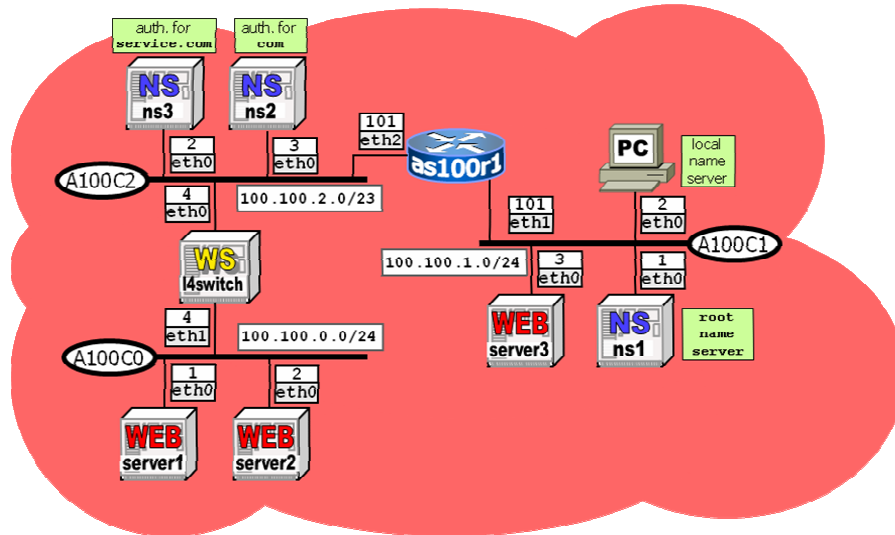
Note: we do not provide the solution for this exercise because it is very similar to the previous one



ICN – Examination date: 30-11-2011 – “dog biscuit”

Available time: 120 minutes

Using Netkit, implement the network shown in the following picture:



- **server1**, **server2**, **server3** are Web servers running Apache2 which, when asked for **www.service.com**, show each a different html page
- **ns1**, **ns2**, **ns3**, **pc** are name servers running Bind; **pc** is a local name server; **ns1** is the root, **ns2** is the authority for **com**, **ns3** is the authority for **service.com**
- **ns2** implements a load balancing mechanism for **www.service.com**, always returning the same pair of addresses 100.100.2.4 and 100.100.1.3 (note: do not make use of location-based load balancing)
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- the lab is to be implemented with static routes
- warning: remember to set up the default route on all machines; in particular, remember to set **server1**'s and **server2**'s default route to point to **l4switch** and **l4switch**'s default route to point to **as100r1**.