Using Netkit, implement the network shown in the following picture. Networks used to interconnect border routers must also be announced in BGP. All the networks that are internal to autonomous systems must be reachable from any other internal network.

Important notes:

1. **ns1, ns2, ns3, and ns4** are name servers; **ns1** offers name resolution services to hosts in the network 100.100.0.0/24; **ns2** is the authority for service.com; **ns3** is the authority for com; **ns4** is a root name server.
2. **server1, server2, and server3** are Web servers running Apache2 showing each a different html page when requested for www.service.com.
3. **ns2** implements a load balancing policy for www.service.com by always returning the same pair of addresses 100.200.1.4 and 100.10.0.4 (note: do not use location-based load balancing).
4. **server1** and **server2** are behind **l4switch**, which is a layer 4 Web switch with a round robin policy to be set up with the following commands:
   - `iptables --table nat --append PREROUTING --destination 100.200.1.4 --match statistic --mode nth --every 2 --jump DNAT --to-destination 100.200.0.1`
   - `iptables --table nat --append PREROUTING --destination 100.200.1.4 --jump DNAT --to-destination 100.200.0.2`
5. **AS200**’s internal routing is static.
6. **warning**: remember to set the default route for all hosts and, in particular, to set **server1**’s and **server2**’s default route towards **l4switch**, and **l4switch**’s default route towards **as200r1**.
7. no routers announce the default route 0/0.