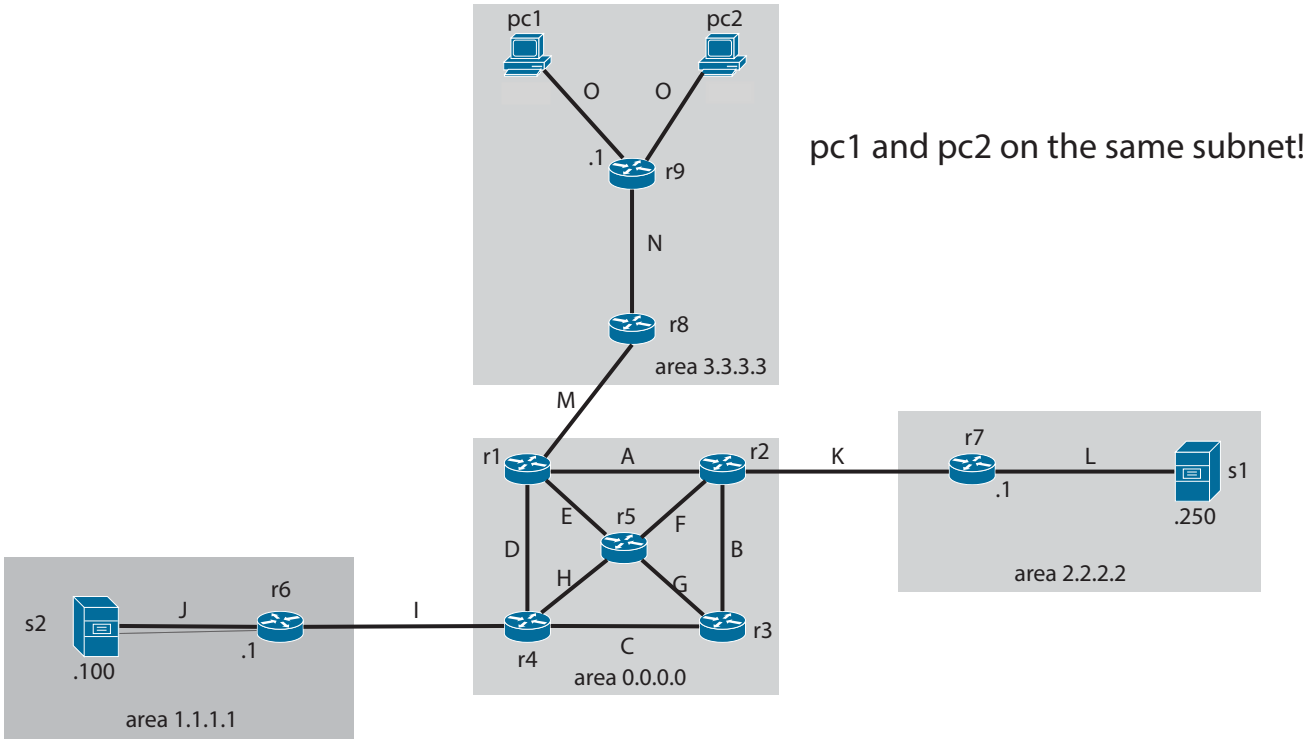
Second Homework: A topology

For MATRICOLA ending with 0-1



Collision domain	Subnet
A	1.0.1.2/31
B	1.0.1.4/31
C	1.0.1.6/31
D	1.0.1.8/31
E	1.0.1.10/31
F	1.0.1.12/31
G	1.0.1.14/31
H	1.0.1.16/31
I	1.0.1.18/31
J	10.0.0.0/24
K	1.0.1.20/31
L	192.168.1.0/24
M	20.0.1.2/31
N	20.0.1.4/31
O	10.0.1.0/24

Given the topology in figure, reproduce it in netkit. You must use the VM names and addresses specified in the figure above.
For /31 subnets, the addresses are assigned with the following rule: the lower router number takes the even address, e.g. r1 takes 1.0.1.2 with respect to r2.

The maximum points are 6+1 and are assigned as follows:

- +0.5 points: lab created with folders and lab.conf
- +0.5 points: host on J and L configured via /etc/network/interfaces
- +0.5 points: host on O configured via DHCP with r9 as DHCP server
- +0.5 points: all other subnets configured using startup scripts
- +2 points: OSPF **only** on routers in order to have dynamic routing. Respect the areas given in figure
- +1 points: Create a user called *homework_user* with password *user* on every router and allow s2 to access the routers trough ssh via asymmetric authentication. (**This must be done at startup)**
- +1 point: configure SSH local port forwarding (inside startup scripts) in order to redirect the port 9000 of pc1 to the port 8000 of s2 (test it with netcat).

Extra points:

- +1 point: Set a firewall on r6 blocking all TCP traffic for s2 except SSH. Setup SSH remote port forwarding to reach port 9000 of s2 trough the port 8000 of r4. For the remote forwarding, use the same user as the point #6. Everything must be in the startup scripts.

Restart for all the daemons is required.