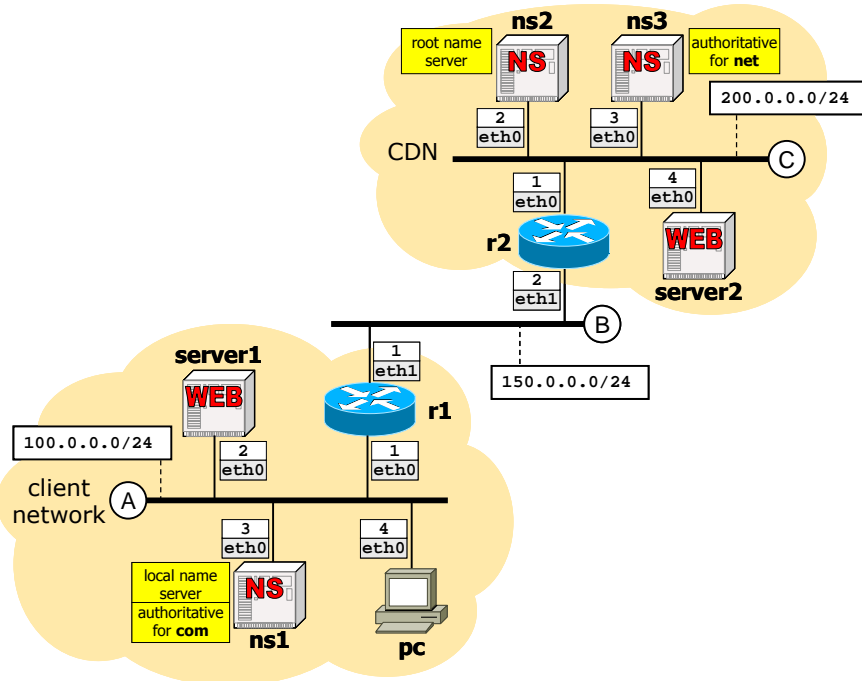**ICN – Examination date: 26-11-2012 – "Leaves"**
Available time: 120 minutes

Using Netkit, implement the network shown in the following picture and described below.

Use the provided file irc_data.tgz as explained in the following.

- Routing in this network is to be implemented statically (remember to set up a default route for all the internal nodes of each LAN).
- **ns1**, **ns2**, and **ns3** are name servers:
  - **ns1** is both authority for **com** and local name server (it offers name resolution services to hosts on **100.0.0.0/24**);
  - **ns2** is the root name server;
  - **ns3** is the authority for **net**.
- **server1** and **server2** are Web servers running Apache2:
  - **server1** is assigned the DNS name **site.com**; **server2** is assigned the DNS name **cdn.net**;
  - **server1** hosts file **index.html** contained in package irc_data.tgz, making that file available as the home page of user **guest**; **server2** hosts file **big.jpg** contained in package irc_data.tgz, making it accessible via URL **http://cdn.net/big.jpg**;
  - **server1** must be set up to perform URL rewriting, so that file **big.jpg** used in the home page of user **guest** is fetched from **server2**; to achieve this, the **rewrite** Apache module must be enabled on **server1**, and the **.htaccess** file of user **guest** must contain the following configuration:
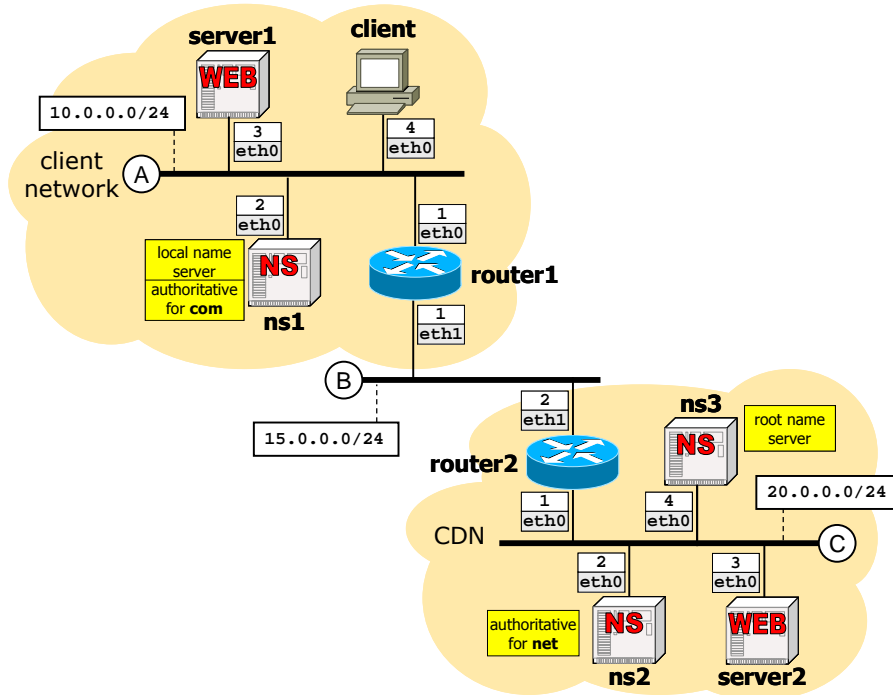   ```
    RewriteEngine On
    RewriteCond %{HTTP_HOST} site.com
    RewriteRule ^(.*\.jpg)$ http://cdn.net/$1
    ```
- **pc** accesses the web page at **site.com** using the following command: **wget -r -l 1 http://site.com/~guest/**.

**ICN – Examination date: 26-11-2012 – "Pedals"**
**Available time: 120 minutes**

Using Netkit, implement the network shown in the following picture and described below.



Use the provided file irc_data.tgz as explained in the following.

▪ Routing in this network is to be implemented statically (remember to set up a default route for all the internal nodes of each LAN).
▪ **ns1**, **ns2**, and **ns3** are name servers:
   • **ns1** is both authority for **com** and local name server (it offers name resolution services to hosts on **10.0.0.0/24**);
   • **ns2** is the authority for **net**;
   • **ns3** is the root name server.
▪ **server1** and **server2** are Web servers running Apache2:
   • **server1** is assigned the DNS name **site.com**; **server2** is assigned the DNS name **cdn.net**;
   • **server1** hosts file **index.html** contained in package irc_data.tgz, making that file available as the home page of user **guest**; **server2** hosts file **big.jpg** contained in package irc_data.tgz, making it accessible via URL **http://cdn.net/big.jpg**;
   • **server1** must be set up to perform URL rewriting, so that file **big.jpg** used in the home page of user **guest** is fetched from **server2**; to achieve this, the **rewrite** Apache module must be enabled on **server1**, and the **.htaccess** file of user **guest** must contain the following configuration:
                    **RewriteEngine On**
                    **RewriteCond %{HTTP_HOST} site.com**
                    **RewriteRule ^(.*\.jpg)$ http://cdn.net/$1**
▪ **pc** accesses the web page at **site.com** using the following command: **wget -r -l 1 http://site.com/~guest/**.