



Integrated management for the dental cabinet

Network Installation

1. Installation on a network.

In this chapter, we will describe how to shape the computers to use ArchiMED Suite® in a local network. In the brought example, we have referred to the operating system Windows 7®, which today represents the most diffused operating system.

Anyway, we recommend you to consult a specialized technician. The configuration of the network, although simple in its procedure, can introduce unforeseen event that only an experienced person can resolve.

2. First rules.

Here following we show the basic rules for the local network use.

1. Connect the computers among them by cable or by radio (wireless) via network hub.
2. Set the fixed IP address (for example: 192.168.10.X, where X is a different number on every computers of the network).
3. Verify the name of the computer.
4. Identify the computer server.
5. Share the disk of the server.
6. Connect the Client to the disk of the server.
7. Configuring **ArchiMED Suite®**.
8. Install a firewall and an antivirus.

3. Bases, acronyms and nomenclature.

For a long time, when electronic instruments are used and in particular personal computers, we use invented terminology or acronyms. An experienced person does not have any difficulty to recognize such terminology but we report a brief guide for your convenience.

Server. The server represents the most important computer of the network. It must have turned on for first and out for last. All the data of the network are stored on the disk of the server. Printers and others storage devices (pen drive usb, etc.) are usually connected to the server. The server can be dedicated or not. When the server is dedicated it points out a computer on which nobody works for the common use; it is used only as storage device. The dedicated server must be used when in the network there are a several number of computers. It is not necessary instead in a network with two or three computers. The dedicated server is recommended when there are at least four computers on the network and it works with a certain intensity on all of them.

Client. It uses data presents on the server. The computer client can be turned out or turned on and the network, in its global context, does not suffer its presence. If the server is also used as client, for the turning off and the turning on, the rules of the server are valid.

Wireless. Literally, it means without wires. It represents the possibility to connect the computers among them without cables. This solution is extremely advantageous if a network of computer is installed where the passage of the cables was not anticipated. In this case, building works are avoided reducing notably the costs. Remember however that, where it is possible, the use of the connected network by wires is recommended. When a wireless network is installed the safety of the data is very important. Activate, from the technician, the cryptography of the data. In this way, you can avoid that not authorized people can access to your data even from outside of the building.

LAN. Acronym of Local Area Network.

4. Connect computers together.

The connection of the computers can be made both via cables and via radio. This operation needs the consultation of specialized technician. It is necessary to realize electric plant, building works, etc.

If you use a network by wire, remember that it works well if, besides the efficiency of the computers, both the cables of the network and the materials are important. The installed connectors to wall are a fundamental component too. Usually, the bigger cost of them is fully justified. The fundamental rule for the laying of the cables is to call specialized technician able to certify the job: do not try to save money at any cost. If you have economized on the quality of the materials and the labour, it will inexorably means malfunctions during the use of the computers.

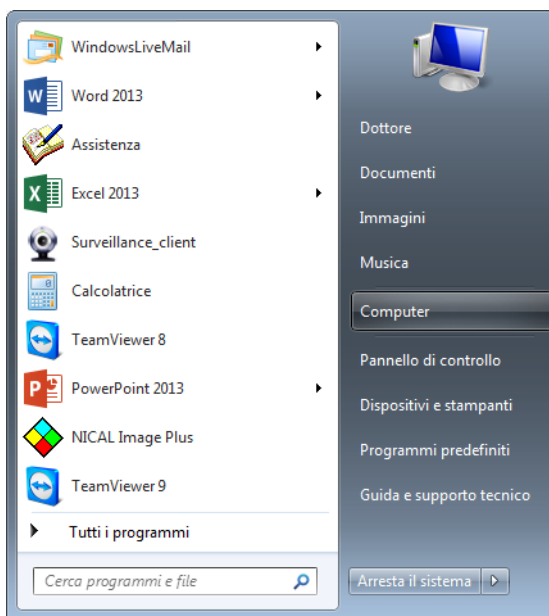
The least speed recommended of the network is 100 Mb for the network by cable and 54 Mb for the network by radio.

5. Set the fixed IP address.

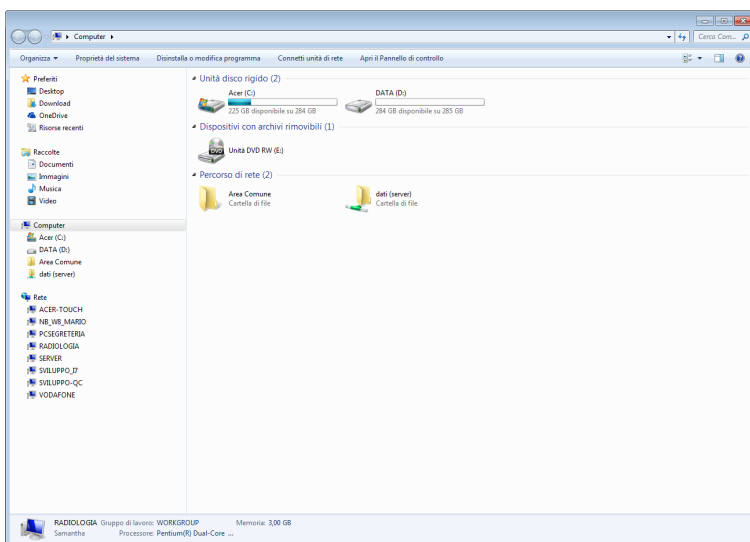
When you install the operating system and configure the local network, use a fixed IP address. The efficiency of the network will gain.

Here you are an example.

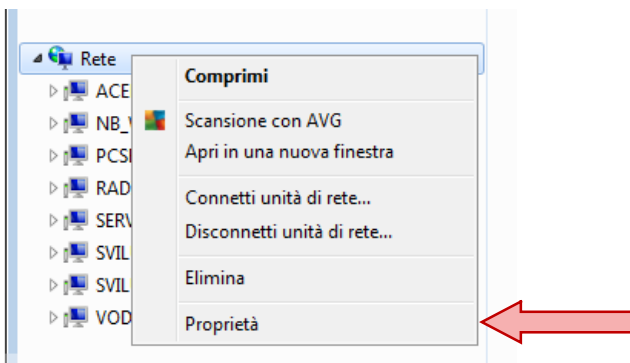
From the Start menu, click on “**Computer**”



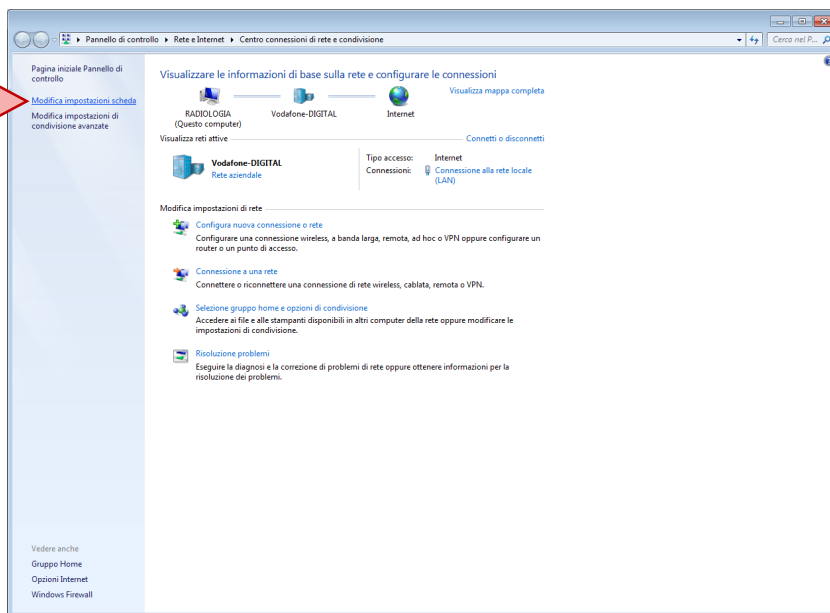
A window like the following one will open.



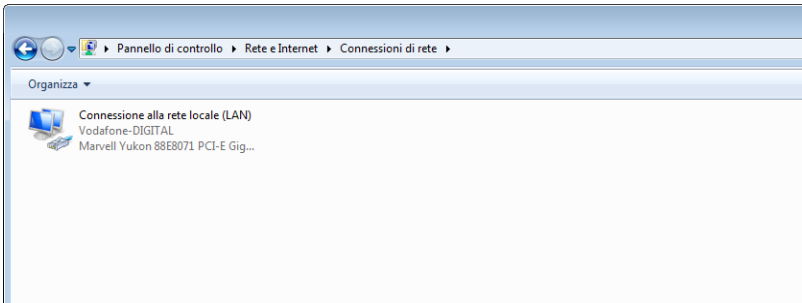
On the left side of the window, click with the right button of the mouse on **"Network"** and then select **"Properties"** from the list that will open.



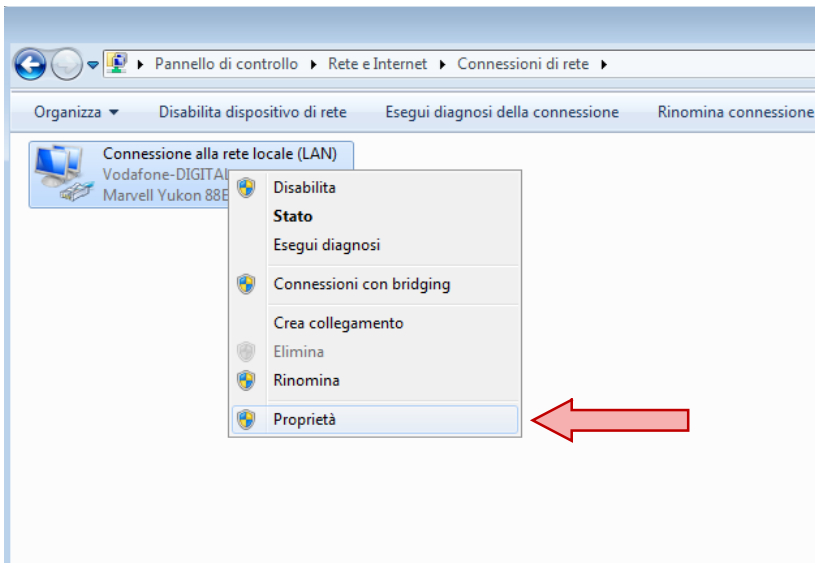
In the following window click on **"Modify card settings"**.



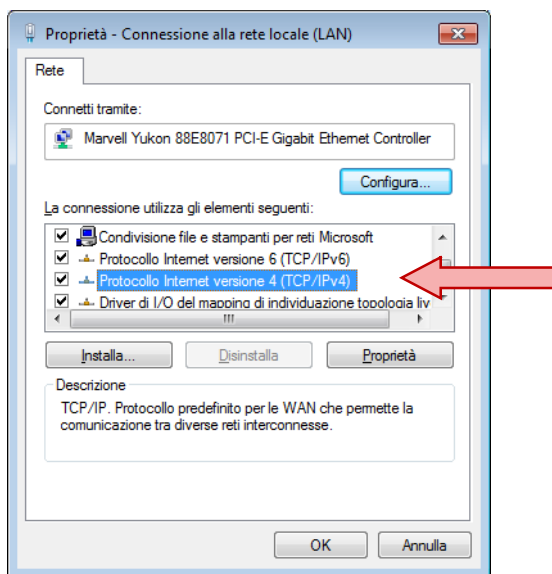
A window similar to the following one will appear.



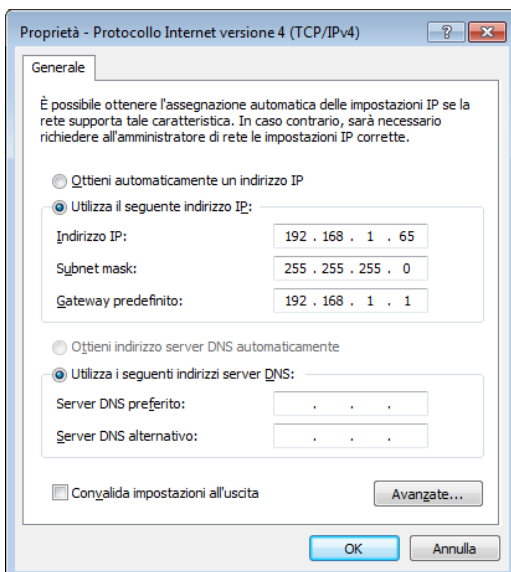
Click with the right button of the **mouse** on "Connect to local network (LAN)" and select "**Properties**".



The following window will appear.



Double click on “**Internet Protocol Version 4 (TCP/IPv4)**”.



In this window, click on "Use the following IP address" and insert the codes. We suggest you to use the following codes.

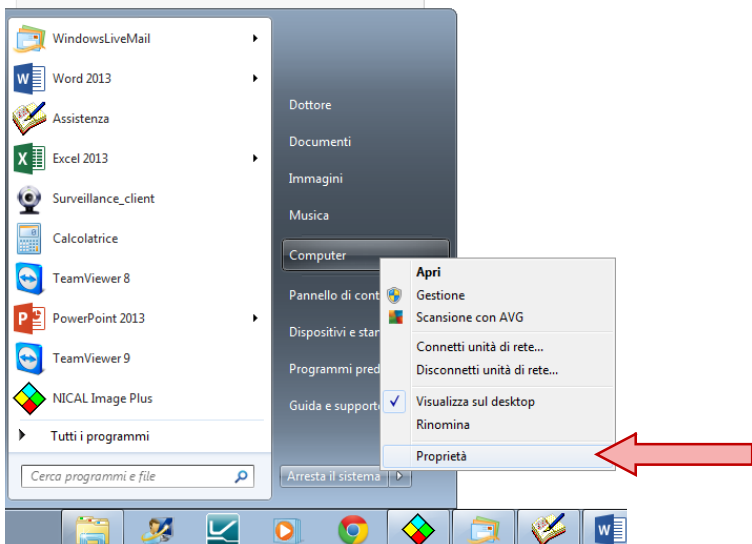
IP ADDRESS: you must use a free address that you have not used for any other computer yet. To check if the IP address you want to use is free, go to Start and write **cmd** in "**Find program or file**". Open the program and write ping with the IP address (for instance: ping 192.168.1.67). If the program does not find any data, the address is free and you can use it on the computer you are configuring. In the same network, you cannot use the same address on two computers: every IP has to be different from the other ones.

Insert the address in the properties of IPv4, press TAB from the keyboard to obtain automatically the Subnet Mask value. The number is 255.255.255.0. This number is used to understand how many IP can be enabled on the same network. At last, insert the DNS value, using the same address of the Gateway.

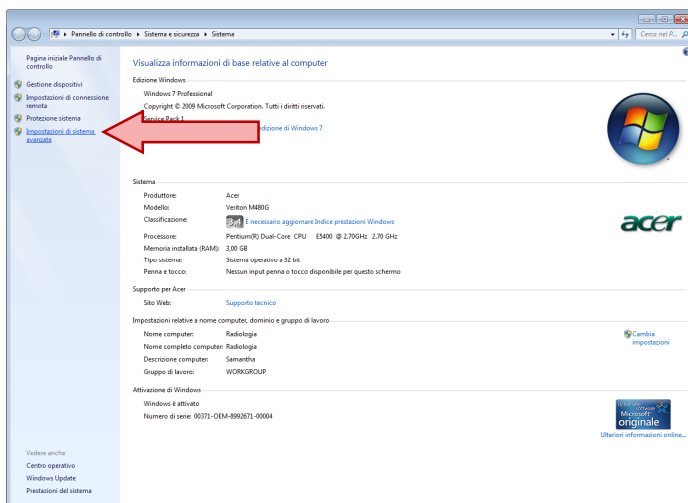
6. Verify the computer name.

Each computer of the network must have a different name from the other ones. To check it, follow these indications.

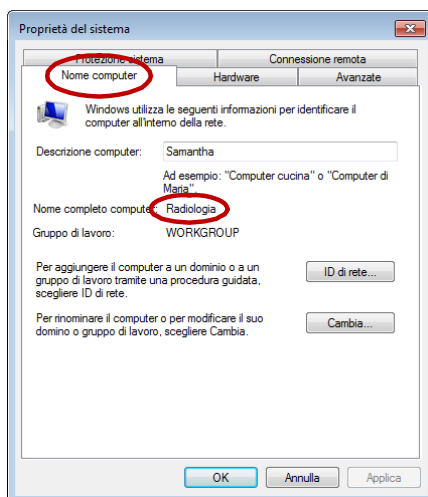
From the Start menu, click with the right button of the mouse on "Computer" and then select "Properties".



The following window will open.



Click on "**System advanced settings**" that you will find in the left column. The following window will open.



Click on "**Computer name**": here you can find the computer name that in this case is **RADIOLOGIA**.

7. Server.

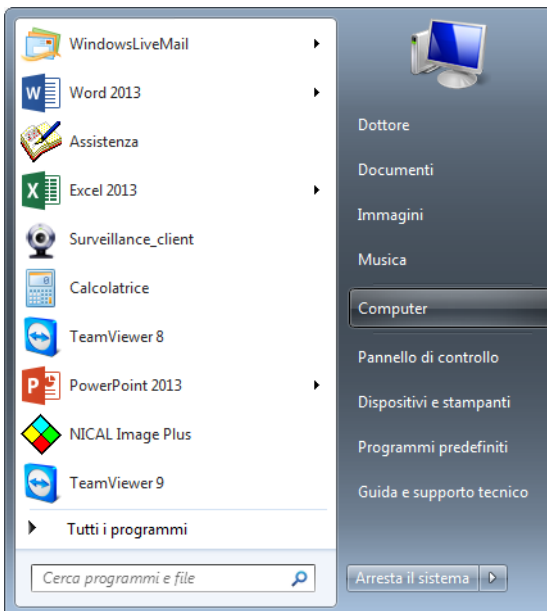
If the server is not dedicated (see paragraph 3), it has to be the fastest and the most performing one, because you will use it as a normal personal computer and as a storage device to share data with other computers of the network. The hard disk and the RAM memory have to be very capacious. We suggest you to use a disk of **60-80 GB** and to install at least **512 MB of RAM** on the server and 256 MB on the clients.

8. Share the server disk.

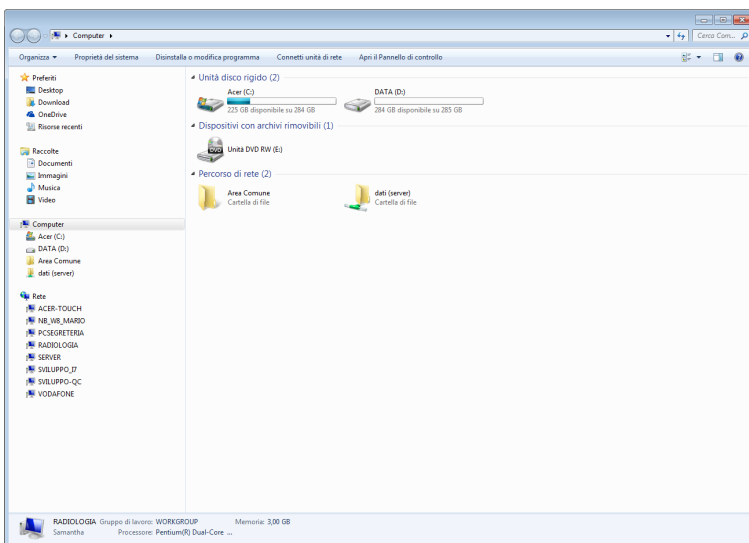
The server must share its disk or one of its folders. This area will be used from all the computers of the network to store data.

We will show you how to share the whole disk.

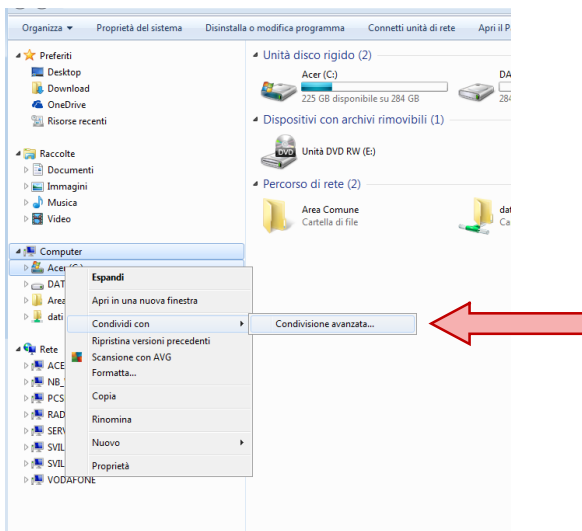
From the Start menu click on "**Computer**".



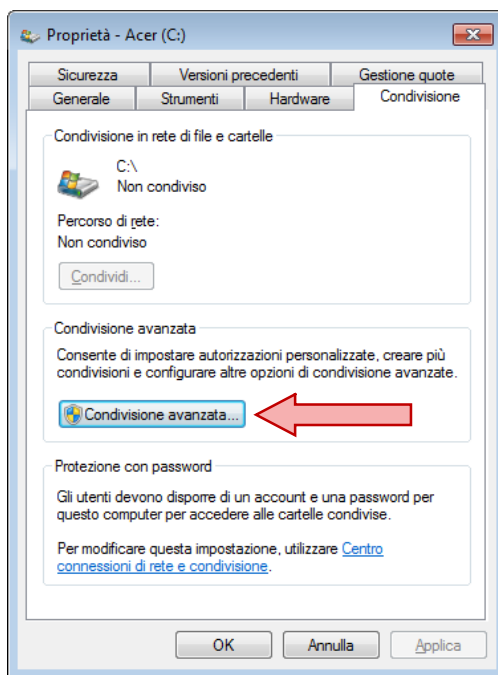
A window similar to the following one will appear.



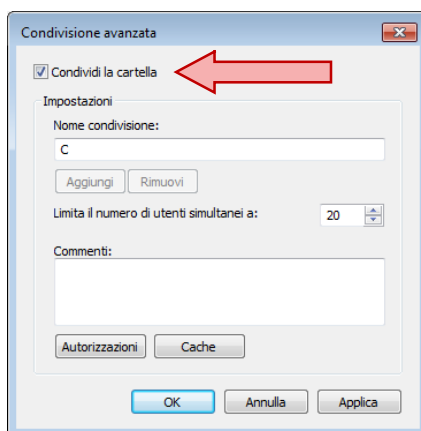
Click with the right button of the mouse on “(C:)” and select “**Share with**” and then “**Advanced sharing**”, as you can see in the following window.



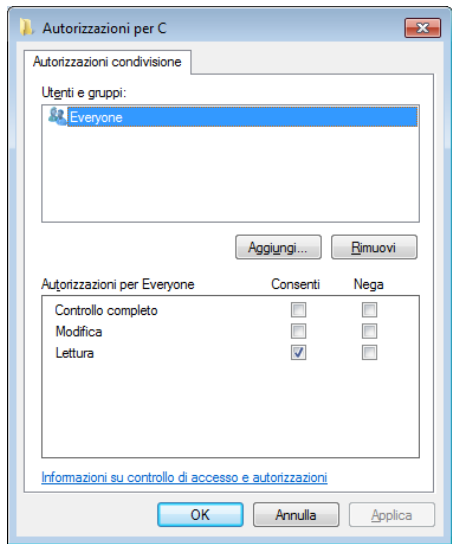
The following window will open.



Click on "**Advanced sharing**". The following window will appear and you can select the voice "**Share the folder**".



Then click on “**Permissions**”, to select users and permissions (reading, modifying or total control).

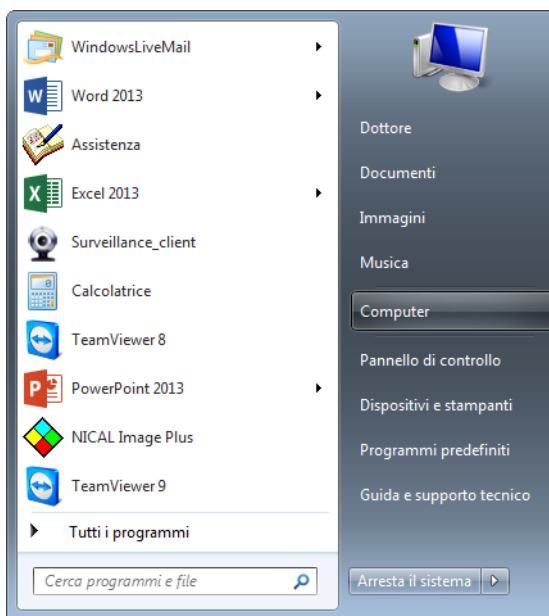


9. Connect the Clients to the server disk.

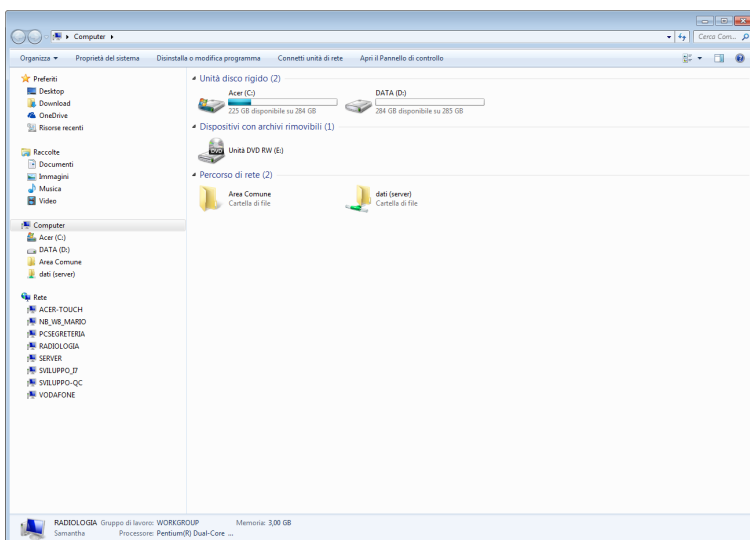
To connect the Clients to the server disk, follow these steps. You have to repeat this procedure on the computer server, if it is used as a client also.

First of all, you have to know the name of the server. To check it, see the paragraph 6.

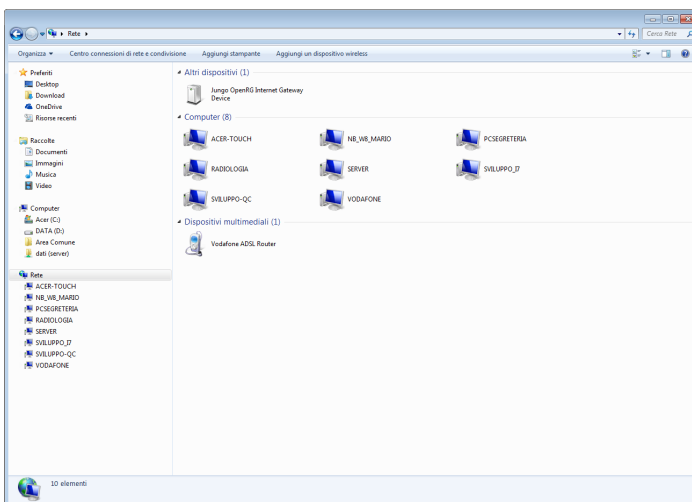
From the Start menu click on “**Computer**”.



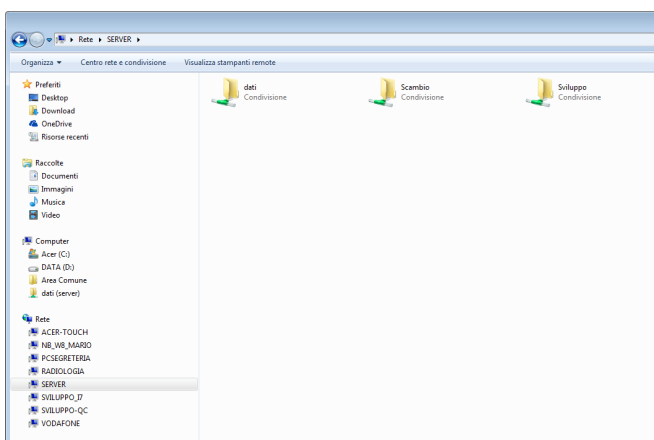
A window similar to the following one will appear.



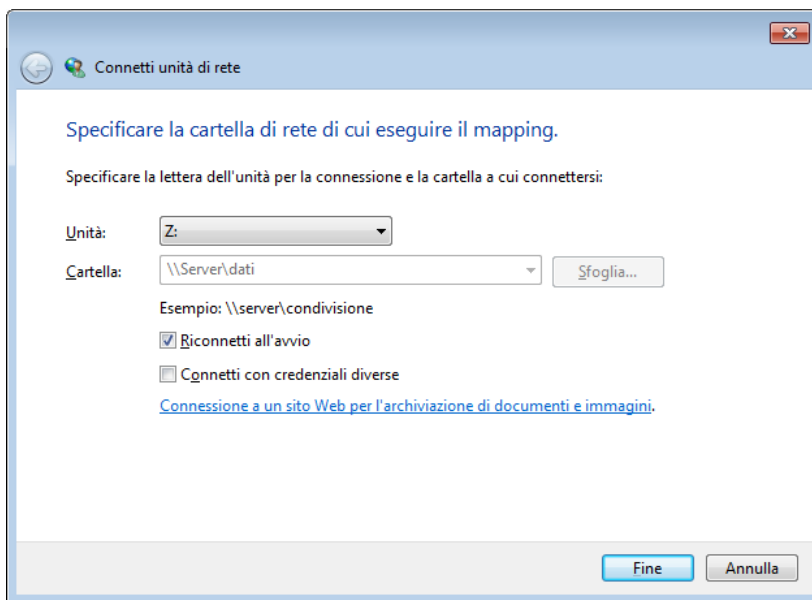
In the left side of the window, click on **"Network"**. A window similar to the following one will appear. There are all the name of the computers of the same network.



Double click on the server icon. In the following window, you will see all the disks and the devices shared by the server.



Click with the right button of the mouse on the icon “C” and select **“Connect network unit”**.



In this window, select as “**Unit**” the letter “S” (**S**erver), click on “**Connect when Start**” and then on “**End**”.

You have just created a new virtual disk named S.

10. Configuring ArchiMED Suite.

To use the disk you have shared, you have to configure ArchiMED Suite®. Start ArchiMED Suite®.

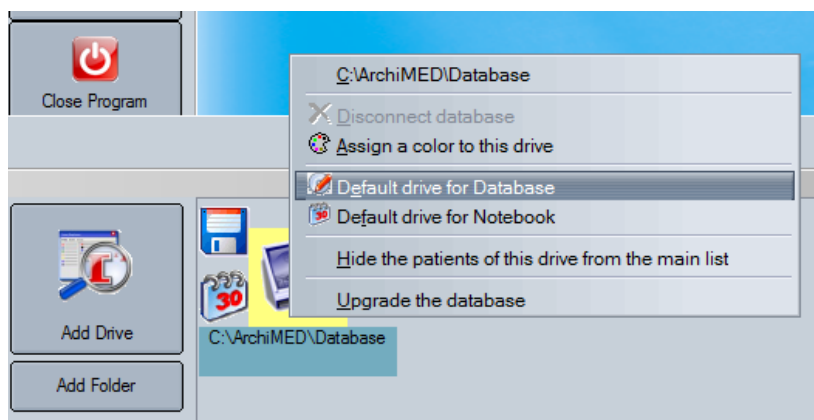
Click below, on **"Display or select the database to use"**.

Display or Select the Database to use

Click, on the left, on **"Add drive"** and select the shared disk.



When you add the drive, if you have never used that disk with this software, ArchiMED Suite® will ask you to create the database. After that, you can click with the right button of the mouse on the icon of the disk you have just added and set it as **"Default drive for Notebook"** and **"Default drive for Database"**. In this way, all the clients will be able to use simultaneously the same Database you have just created.



11. Installing a firewall and an antivirus.

If anyone of your network's computer has an internet connection, please install a firewall. It is necessary to avoid or reduce intrusion from people who do not have the permission to enter. To use a firewall, please contact your technician.

You always have to install an antivirus. Even if you do not use internet, it is important to install an antivirus and to update it every 15 days. Computer viruses spread through multiple ways. Nowadays, they spread also through the cameras' memories. For example, if you connect your camera to an infected computer, it will infect the memory of your camera. Then, if you link this camera to a computer without antivirus, it would spread the informatic virus.