
Owner's Installation and Operation Manual

Model: HN100



Home Phone Network

Available in

OneNET and TriNET Model Series

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Safety Information

As with any AC operated product, precautions should be observed during handling and use:

- 1) Follow all warnings, safety and operating instructions.
- 2) Do not expose the product to moisture or extreme temperatures.
- 3) Handle this product by its metal bracket.
- 4) Do not touch electronic components or circuit traces.
- 5) Only qualified personnel should service this product.

Packing List:

One (1) or more (depending on Avinta Model)

- HN100 PCI cards
- HN100 USB Adapters
- HN1000 USB Adapters

One (1) USB cable & two-line adapter for each HN100 USB module

One (1) Quick Start Manual

One (1) Owner's Manual

One (1) AvintaNET CD-ROM Disk

One (1) Warranty Card

1. Introduction to the Avinta HN100: Installation and Setup

If you have the TriNET model, please install the Voice Network with the VN series product first. (See the separate VN100 Owner's Manual.)

This chapter was designed to enable you to quickly and reliably operate an Avinta NETWORK. The installation program has been designed to perform most of the primary action tasks automatically, while safeguarding your computer's current configuration. In order to accomplish this, several steps may differ from those of other installation processes you may be familiar with. Because of this, you should be aware of the following:

- **Read this chapter in its entirety before beginning the installation process.**
- **You will be directed to restart your computer several times during the installation and setup process.**
- **Do not install the HN100 Adapter until directed to do so (after the first computer shut-down process.)**

A. Before Installing:

- ***Check that you have one of the following components for each computer you wish to include in your data network (see the end of this chapter for a list of included accessories).***



HN100 PCI Card



HN100 USB Module



USB1000 Module

- ***Select one computer as the "Server" (or "Gateway") for the NETWORK. Make sure that this computer has a current Internet account with an Internet Service Provider (ISP). Do not connect to the Internet until directed to do so. The software program should first be installed on the Server or Gateway computer before being installed on a Client computer.***

1.1 Installation Overview:

- Locate the original Windows CD for your computer, which may be needed during the installation. Note that some PCs may have the Windows operating system loaded on their hard disk. In this case, you may not need the Windows CD.
- Find and write down the letter of your computer's CD-ROM drive. (From the Windows Desktop, double click the “**My Computer**” icon and look for the letter assigned to the CD-ROM icon.)
- The AvintaNET CD provides onscreen instructions that outline the key points of the installation process. They are intended to guide you through critical steps in several elements of the AvintaNET components. "Default" user responses that apply to common hardware driver or software installations are not detailed in the outline.
- Depending on the resolution setting of your display monitor, the appearance of each instruction page may be different from the sample pictures shown in this manual.
- The pictures shown in this manual are from a PC running Windows 98. Depending on your computer model and operating system, some of the pictures may be different. However, the general information is the same.
- Certain installation steps are executed internally without visual indication. In general, you will be alerted of such activity by a preceding screen message. However, depending on the model of computer that you have, the processing time may vary considerably. This may cause you some worry. To be safe, if you do not see any indication of computer activity, such as a screen display change, the hard disk/CD-ROM drive being accessed or indicator lights flashing, **wait at least three (3) minutes** before attempting to enter a command with the keyboard or mouse to avoid interrupting the installation process. Please note that some "auto-scan" virus protection software may further slow down the installation process.

1.2 Beginning the Installation Process:

- With Windows running on your computer, insert the AvintaNET CD into the CD-ROM drive. The auto-run routine should start the installation program.

Note: If the program does not start by itself, click **Start > Run**, and type in **D:\Avinta**. (Where D: is the letter of the CD-ROM drive. Your CD-ROM drive may be assigned a different drive letter.) Then click **OK** to start the AvintaNET installation.

- **As you proceed, an outline of the installation instructions will appear onscreen. This onscreen outline is provided for your convenience in case you lose this manual. The paragraph numbers shown in parenthesis in this manual match those of the onscreen outline.**

- After the AvintaNET software starts, the following will appear on the screen.

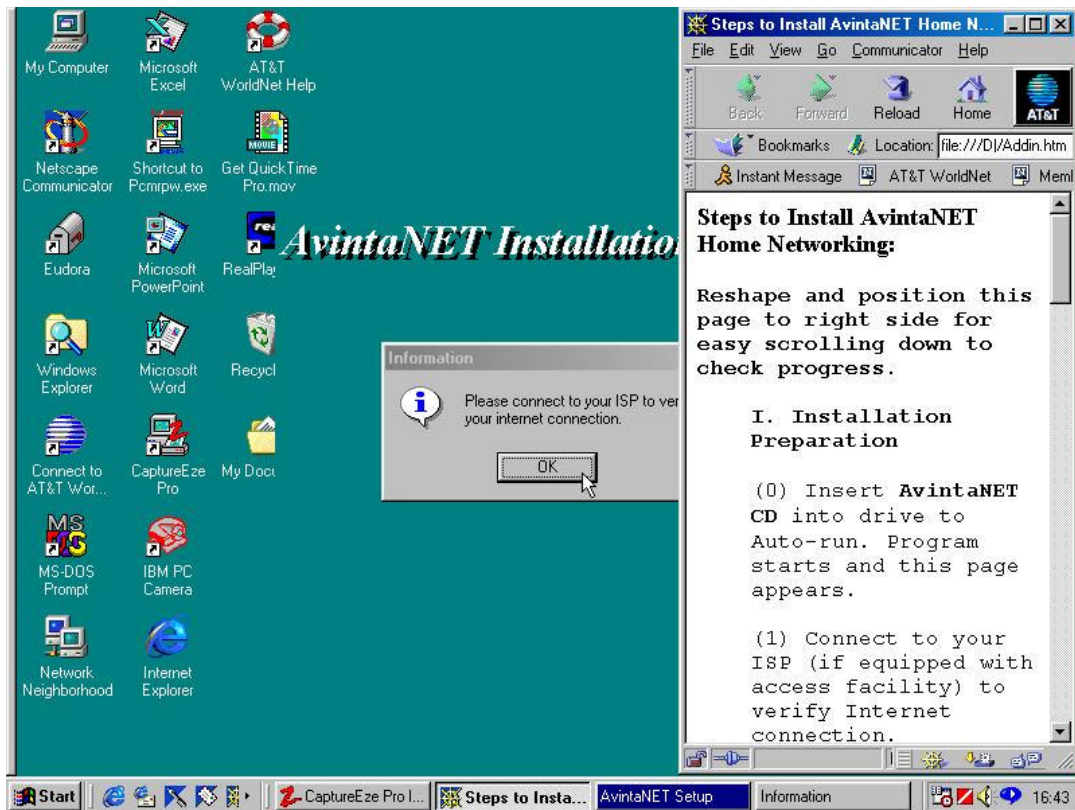


Fig. 1

- (1) Verify your Internet connection by connecting to it as you normally would. After verifying, first disconnect and then click **OK** on the "**Connect to your ISP**" prompt (**Fig. 1**).

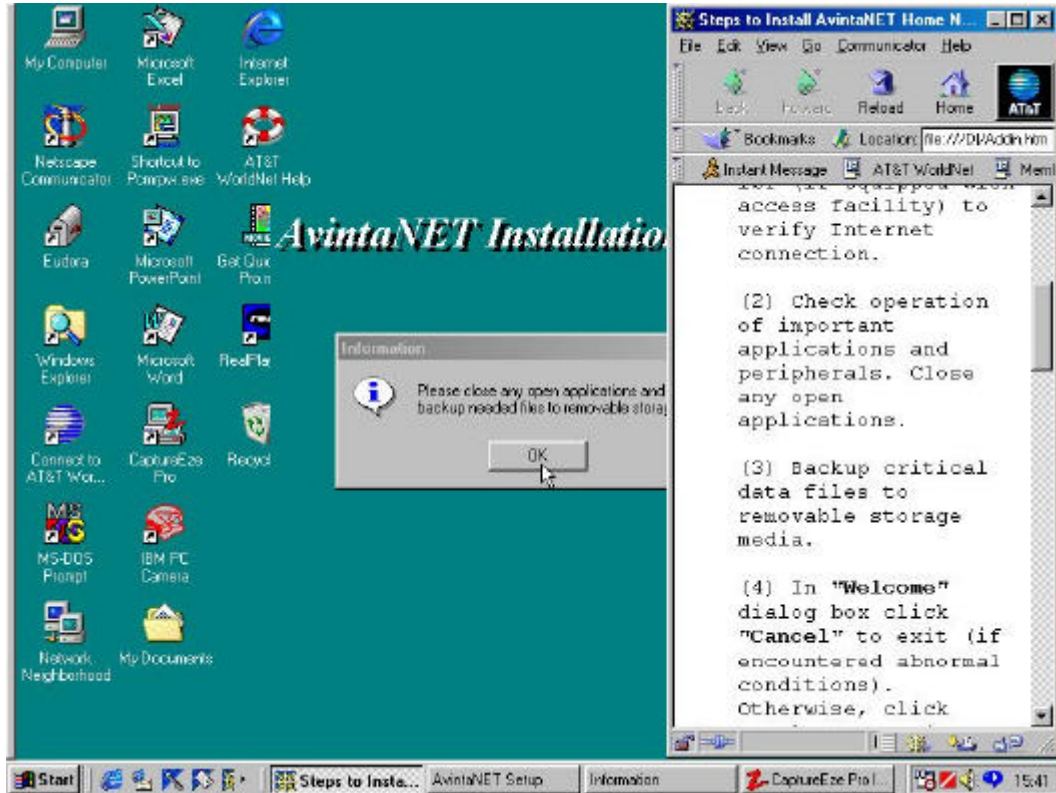


Fig. 2

- (2) Make sure all applications and peripherals are working.
- (3) Back up all critical files, preferably to a removable storage media. Then close any open applications and click **OK** in the prompt window. (**Fig. 2**)

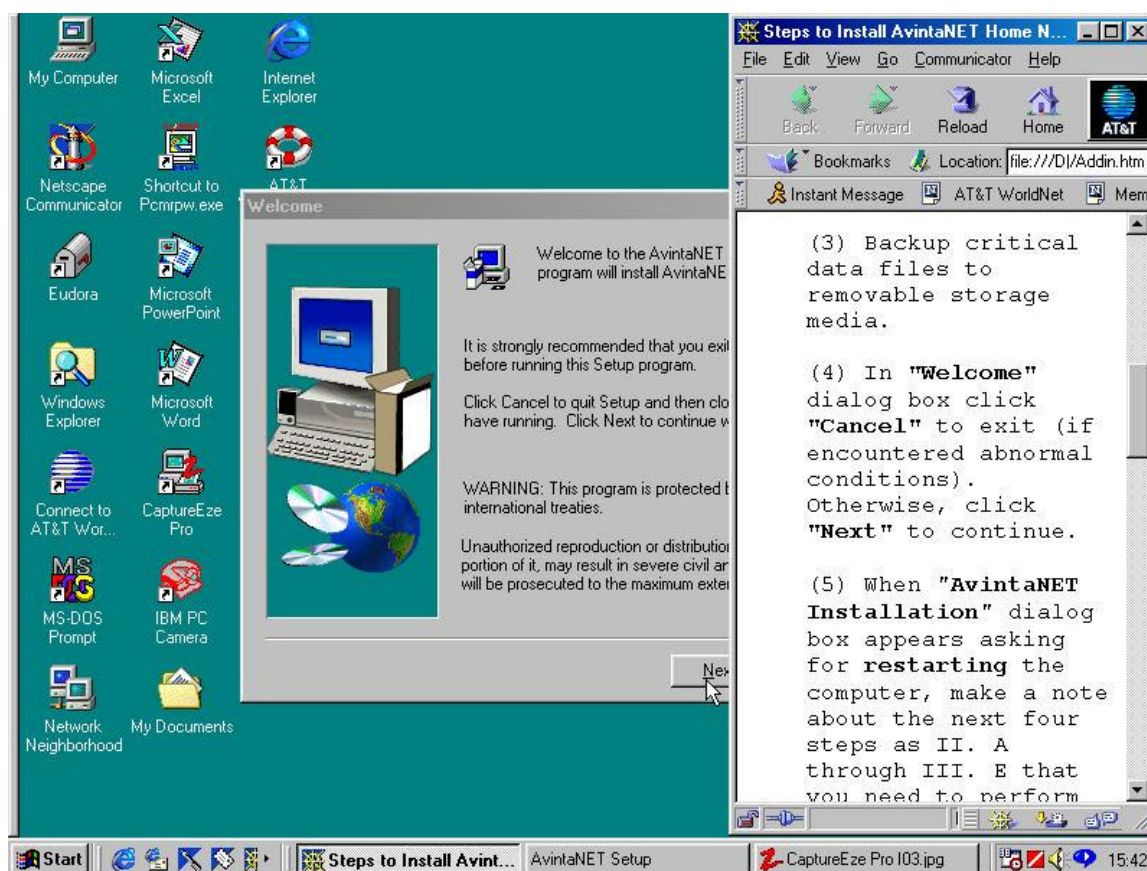


Fig. 3

(4) Welcome Dialog Box: If any abnormality has been noticed, click **"Cancel"** in the **"Welcome"** box (**Fig. 3**) to exit the AvintaNET setup program. Resolve any problems and then begin the Avinta auto-run again. If everything runs normally, click **"Next"** to continue.

Note: If you need more background information about HomePNA or adapter driver installation details, click **"Cancel"** above to exit the AvintaNET setup. You can then look for a copy of the "Home Network Adapter Users Manual" in the AvintaNET CD (**D:\manual\homenet.pdf**). Double click to open it. The AvintaNET CD also includes software that allows you to open and print this document.

(5) An "AvintaNET Installation" dialog box should now appear asking if you wish to **restart** the computer (Fig. 4). Instead of restarting, you need to **shut down** the computer (not restart), as described in Step 6. A complete shut down is needed for the installation program to verify your system's configuration.

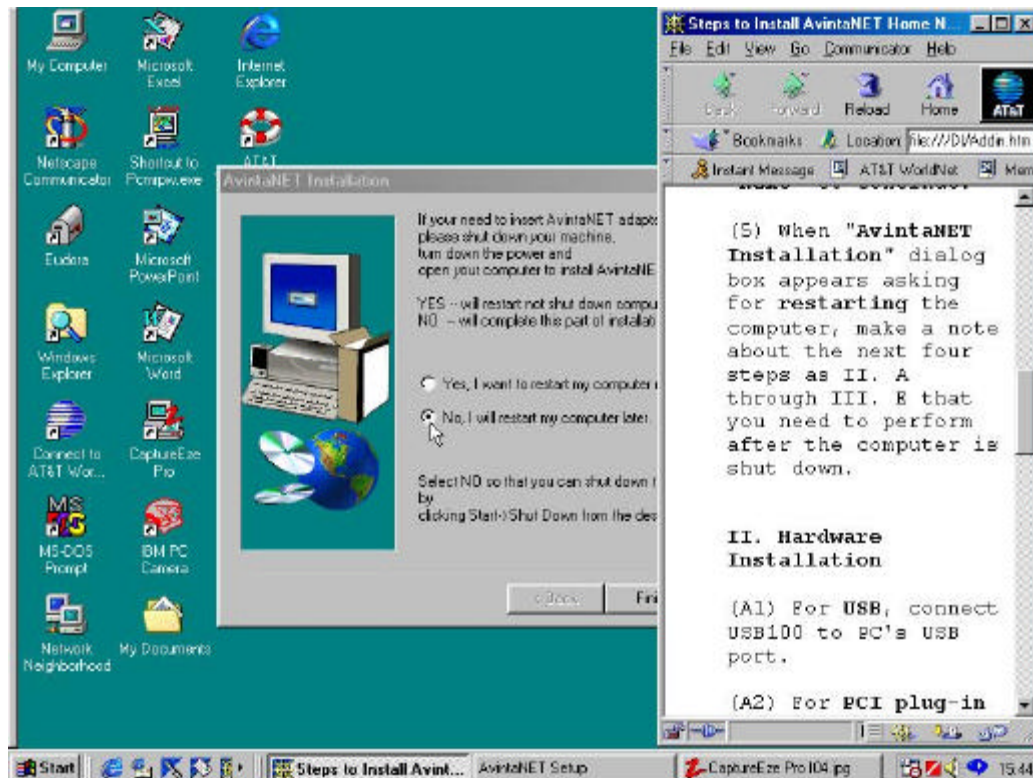


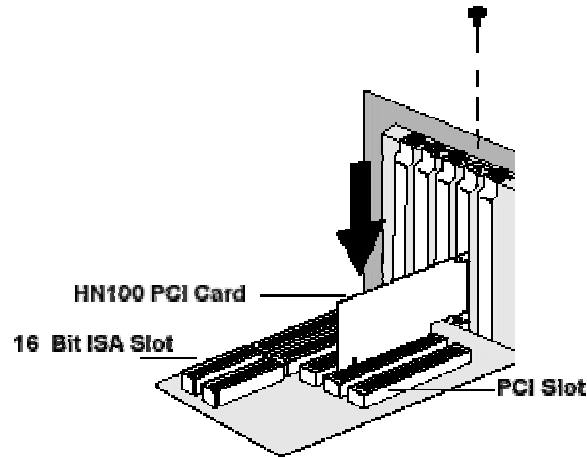
Fig. 4

(6) Select "**No, I will restart my computer later**", and then choose "**Finish**" to close the "AvintaNET Installation" box. You should also close the onscreen outline window.

- Click **Start > Shut Down > Shut down > OK** on your Windows Desktop taskbar to power down the computer.

1.3 Installing the Hardware (HN100 Adapter) to your Computer

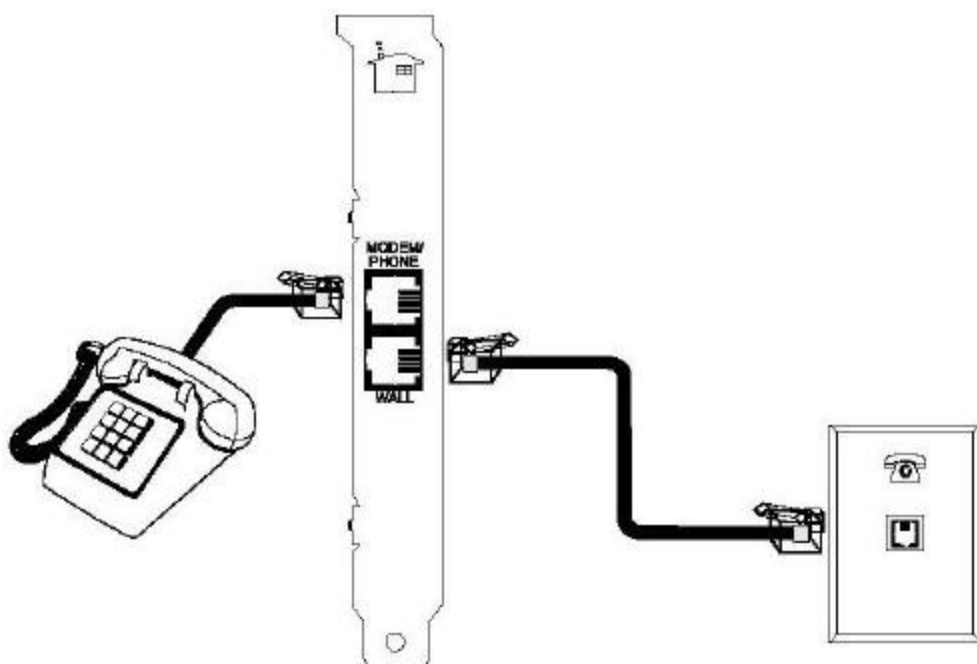
- For the **PCI plug-in card type of adapter**, open the computer cover. (For a USB type adapter, proceed to page 11.)
- Insert the AvintaNET Adapter (HN100 PCI Card) into an open PCI slot on the motherboard.



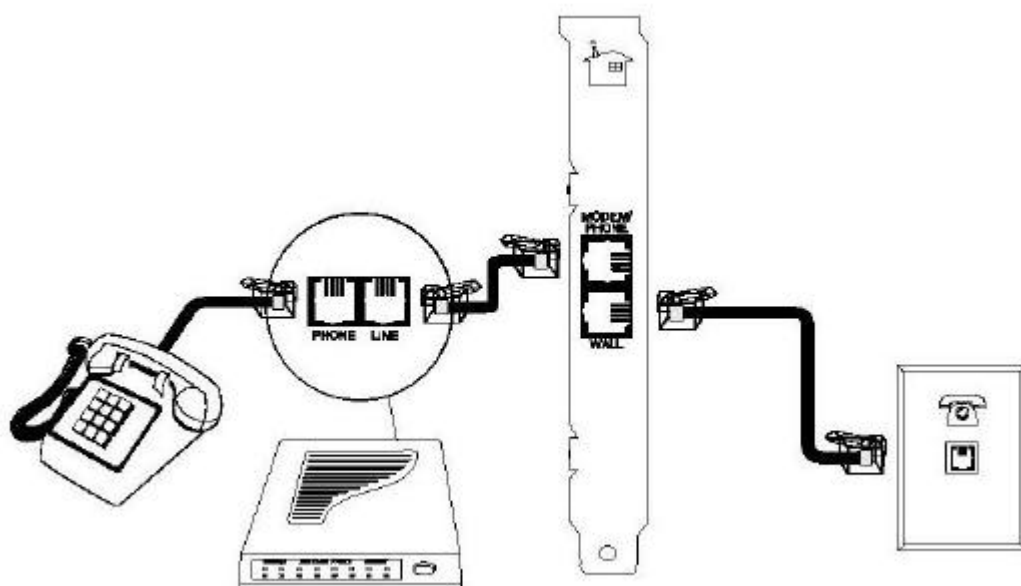
- Secure the PCI card with the screw and replace the computer cover.

A. *Make the Proper Cable Connections to the AvintaNET HN100 PCI Card*

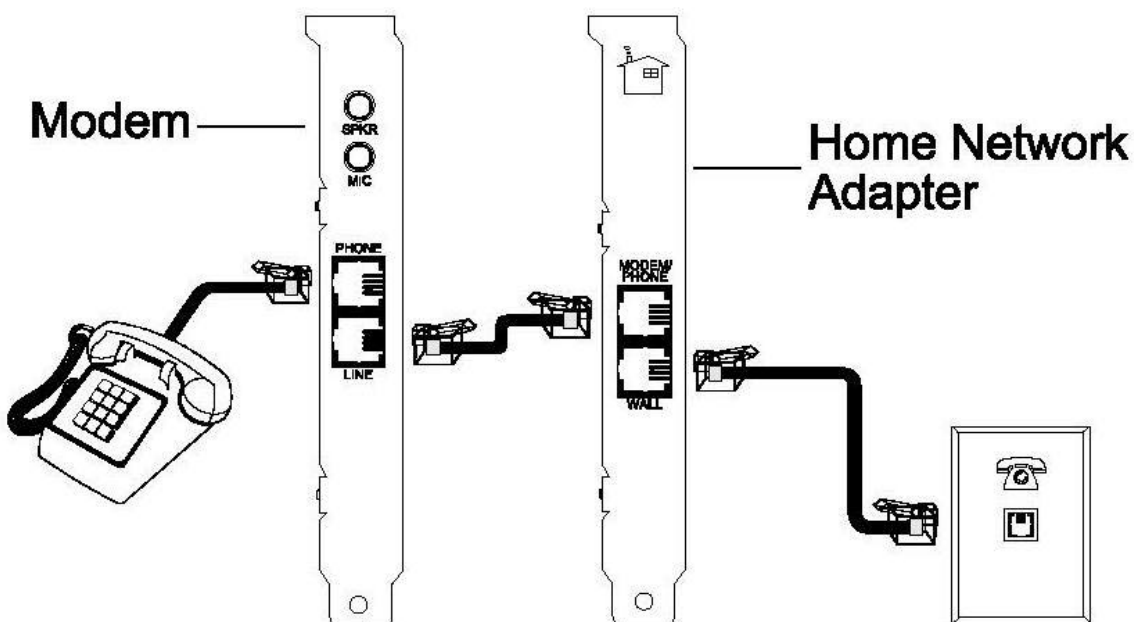
- Connect a phone line cord from the HN100's "WALL" jack to a telephone wall jack. (Note: If you have the VN100 Module of Avinta's TriVOX series Voice Networking products installed at this location, keep the setup intact. Just unplug the VN100's LINE cord from the telephone wall outlet. Treat it as the line cord of the telephone set in the following diagrams.) (See diagram on next page.)
- Connect a phone line from the HN100's "MODEM/PHONE" jack to a modem or phone, depending on your desired NETwork setup. (See diagram on next page.)



Rear View of HN100 Card



External Modem Connection



B. Internal Modem Connection

- For a **USB type module**, connect the USB-A plug on the provided USB cable to a USB port on your computer. Connect the USB-B plug on the other end of the USB cable to the USB jack on the HN100 USB module. Plug the provided two-line splitter into the remaining modular phone jack on the USB Module. Treat the “L1” & “L2” jacks on the splitter as the “WALL” & “MODEM/PHONE” jacks, respectively, on the PCI Card, and follow the above diagrams to complete the interconnections.



USB-A Plug



USB-B Plug



2-Line Splitter

- After restoring all other connections to the computer, power the computer up.

1.4 AvintaNET Adapter Driver Installation

- When your system reboots, Windows will detect the new HN100 Adapter. The Windows Hardware Wizard will then start to search for a driver for the new adapter. Click "Next" to start the Wizard. (Note: Windows NT will not automatically detect new hardware. If you have Windows NT, you will have to manually configure your computer for the Adapter.)
- Install the Adapter driver by choosing to "Search for the best driver for your device" and then clicking the CD-ROM check box and finally "Next". You may be prompted to insert your Windows CD at some point. After the driver is installed, Windows will prompt you to restart the computer.

Note: If you are installing a HomePNA compatible adapter that is not provided by Avinta, you need to instead use the driver file on the CD provided by that adapter's manufacturer.

- You will be asked to specify a name for your computer.
- If a "File and Printer Sharing Selection" dialog box should appear, do not modify it. Just click "OK" to skip it.
- You should now restart your computer.

1.5 Internet Sharing Software Installation

- The following information will then appear on the screen:

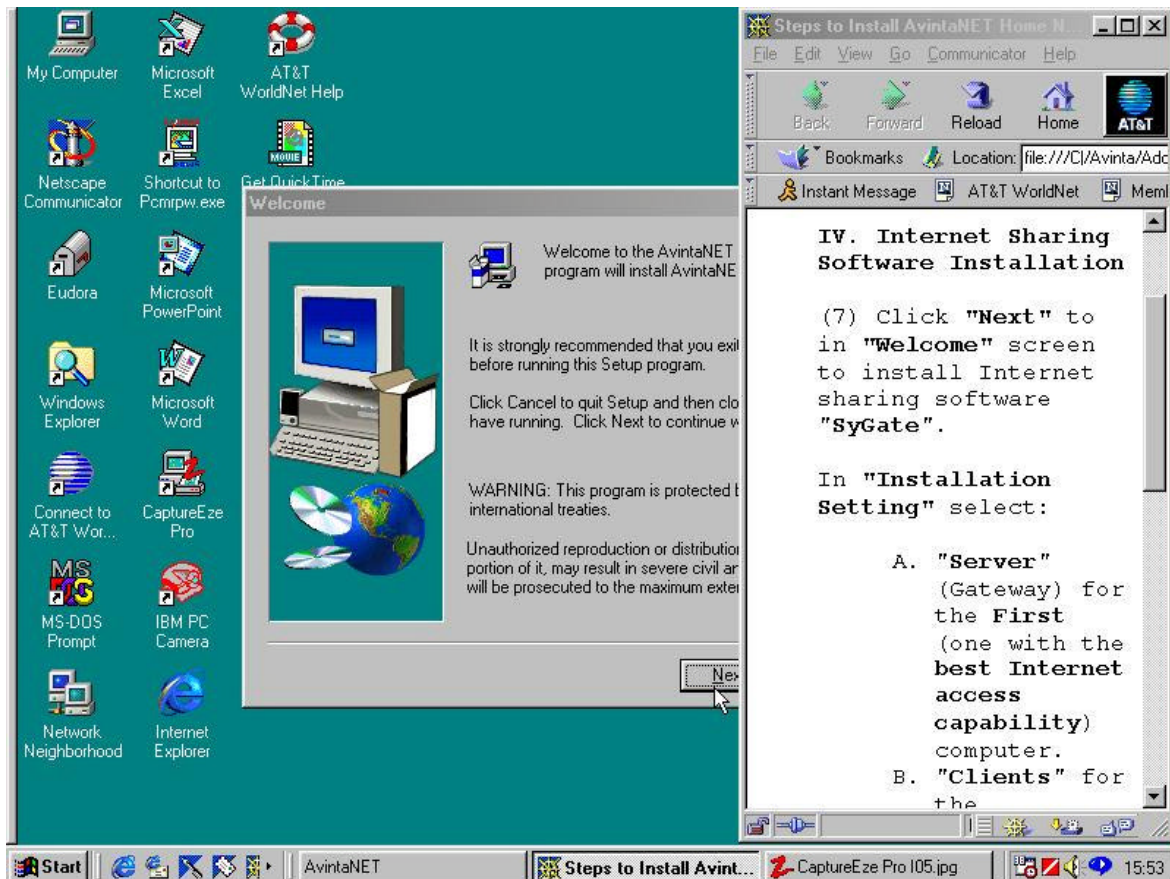


Fig. 5

- (7) Click **"Next"** (Fig. 5) to install the Internet sharing software **"SyGate"**.

After some preparation, you will be asked to choose between Server or Client mode:

- For the **First** computer you are installing to, select "**Server mode**" (Gateway)

For all additional computers, select "**Client mode**" (Fig. 6)

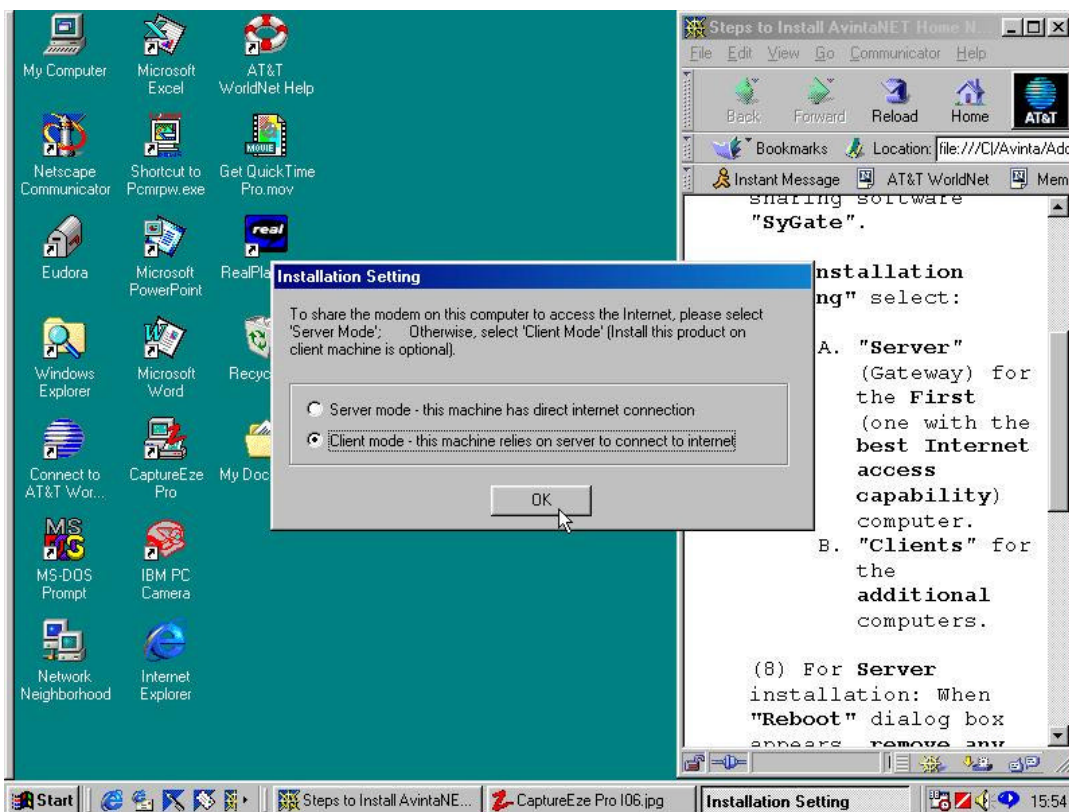


Fig. 6

- (8) For **Server** installation: You will be asked to register the software. Fill out the form adding the serial numbers from the label on the sleeve of the AvintaNET CD-ROM. When the **"Reboot"** dialog box appears, **remove all CDs or diskettes** from their drives. Close the onscreen instruction window and click **"Yes"** to restart the computer.
- (9) For **Client** installation: When the **"SyGate Manager (Client)"** (Fig. 7) window is displayed, **remove all CDs and diskettes** from their drives. (On certain computer models, the **"SyGate Network Neighborhood"** may not show any other computers at this point.) **Close the onscreen instruction window** and Click **Start > Shut Down > Restart > OK** to restart the computer.

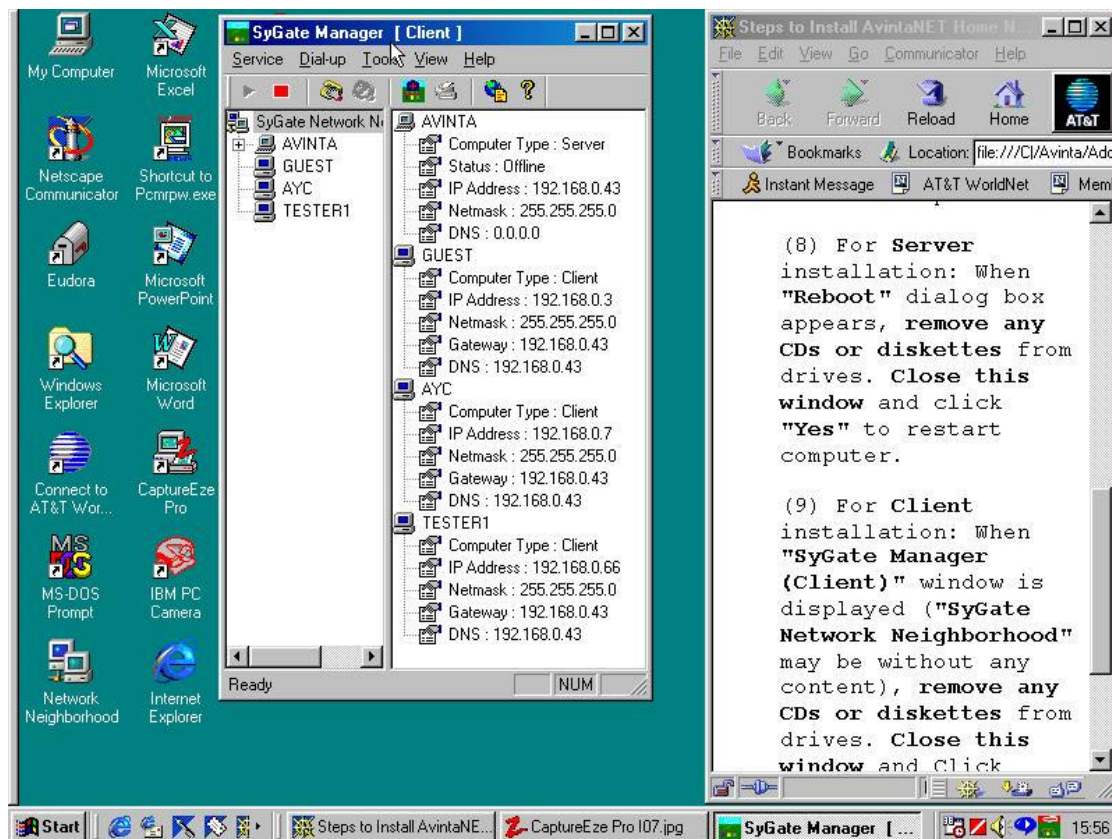


Fig. 7

After Windows boots up again,

(10) Click **"Finish"** in the **"AvintaNET Installation"** screen. (Fig. 8)

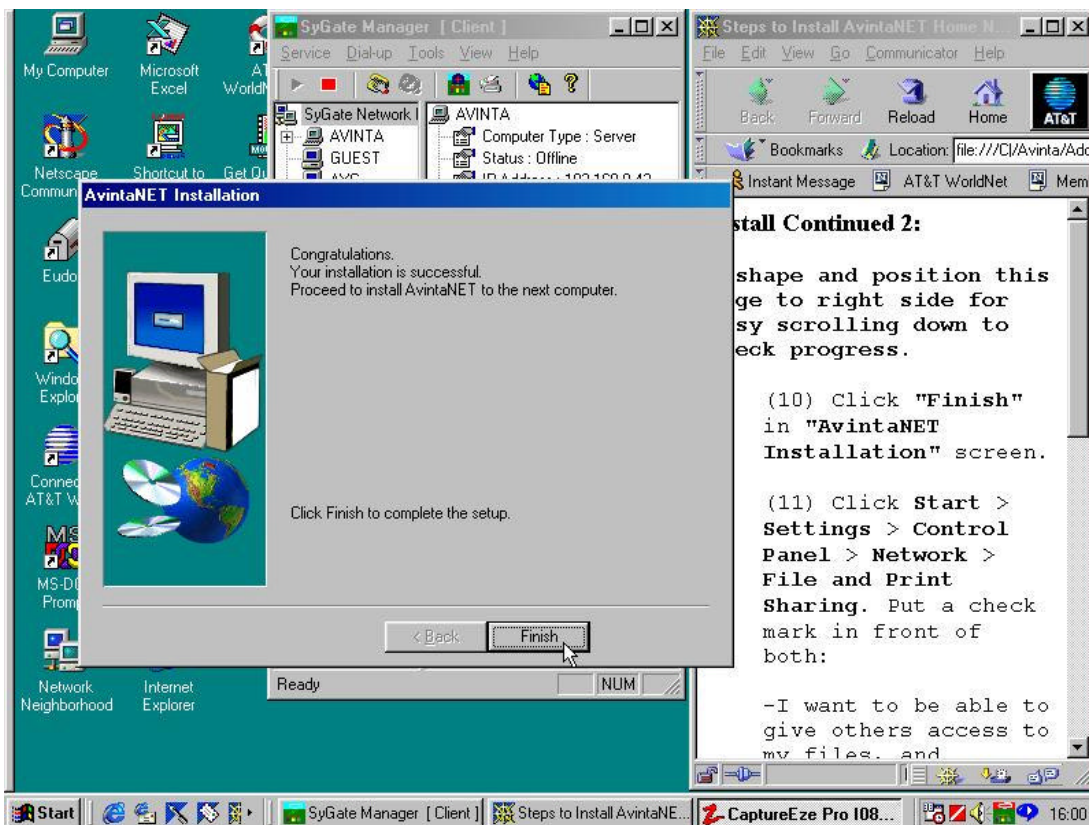


Fig. 8

1.6 File and Printer Sharing:

Note: If your computer was previously configured to operate on another network, the following may have already been setup. If you can verify this to be true, the computer does not need be rebooted.

- (11) You need to provide access to other networked computers to allow them access to the files on your computer or to print on your printer. To do so, click **Start > Settings > Control Panel > Network > File and Print Sharing**. (Fig. 9)

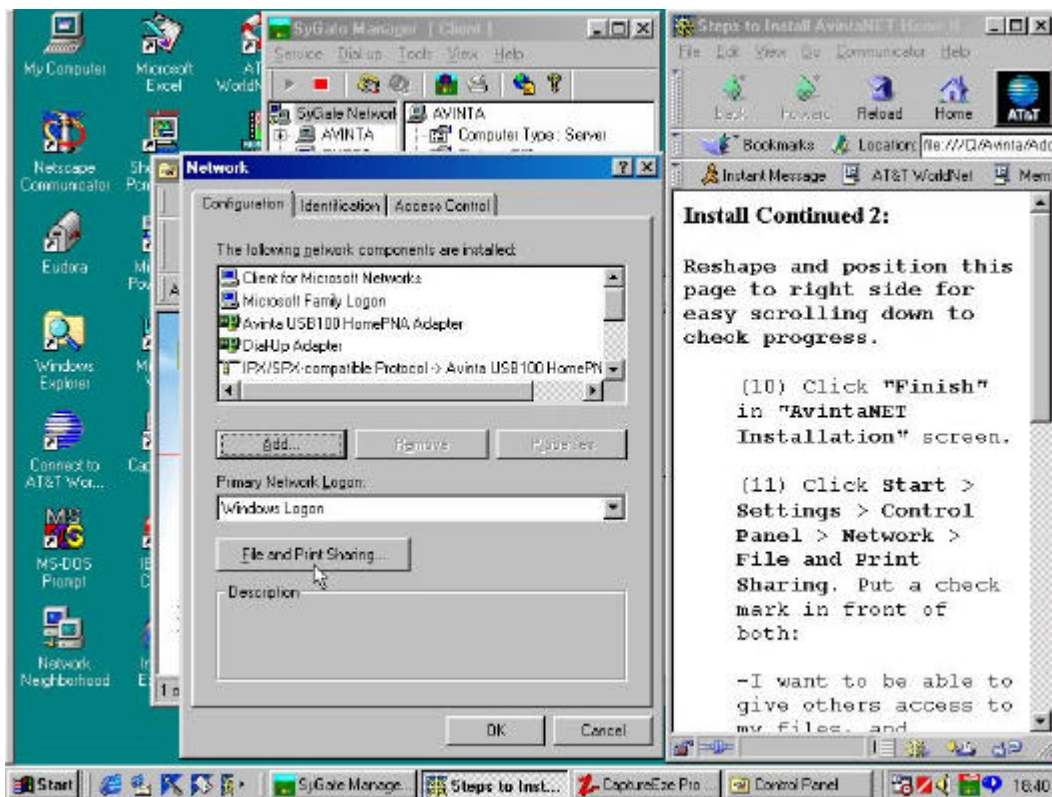


Fig. 9

Then, click both...

I want to be able to give others access to my files

and

I want to be able to allow others to print to my printer(s)

... Put a "check mark " in the box of each. (**Fig. 10**) Then, click "**OK**" and "**OK**" again.

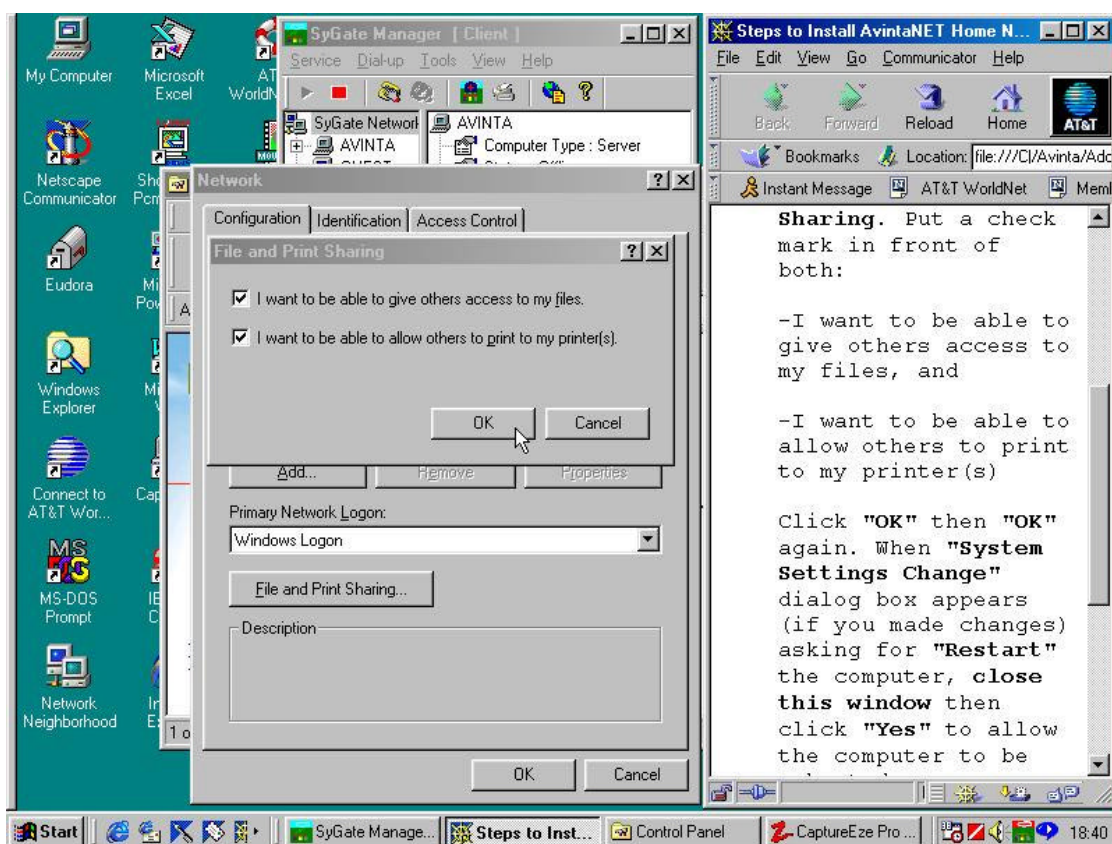


Fig. 10

When the "**System Settings Change**" dialog box appears asking you to "**Restart**" the computer, close the onscreen outline window, then click "**Yes**" to reboot the computer.

1.7 Installing AvintaNET on the Next Computer

- As each additional computer is installed with the HN100 Adapter plus the local network and Internet sharing software, it should "see" the other computers that have already been installed in the SyGate Manager (Server / Client) display. Conversely, other computers should also "see" this new addition to the network.
- As soon as the Gateway and one or more Client PCs are set up for networking, you can begin to enjoy file transfers, file sharing, printer sharing and Internet access sharing, etc. Please see the appropriate chapters in this manual for details.

1.8 Communication Problems

- If a newly added computer does not seem to be properly communicating with other computers and the cause is not obvious, unplug its telephone cord from the wall jack to temporarily isolate it from the network. Then proceed with the installation at the other locations first. After the other computers are networked,
- Connect the telephone cord of the computer having difficulty to the wall outlet. If it still does not work,
- Click **Start > Shut Down > Shut down > OK** to power down the PC, and then power it on again. If this does not clear the situation,
- Click **Start > Programs > AvintaNET > Uninstall** and follow the onscreen instructions to remove all AvintaNET software. Then follow the installation procedure to reinstall it.

Note: The AvintaNET uninstall procedure is detailed in Appendix A.5

If this procedure fails to solve problem refer to Appendix item A.1 and FAQ item #2.

1.9 IP Address Conflict

- If you are installing AvintaNET software on computers that have previously installed network software, the server may have already assigned the IP Address used by one computer to another computer. When the second computer with the same IP address is booting up, a conflict will result. Write down the IP address in conflict. Then, follow the steps in Appendix A.1. in this manual to assign an unused IP address to this last computer. Then, resume the installation.

2. Verifying Networking Parameters

After the AvintaNET software has been installed on each PC according to the recommended procedure, the **SyGate Manager (Server / Client)** display should appear on each and all networked PCs. Check to be sure that the network parameters are properly set:

2.1 TCP/IP Parameters

The following is a set of parameters that should be associated with each networked PC. (**Fig. 11**)

- Server (Gateway):

IP Address: 192.168.0.nnn
Netmask: 255.255.255.0
DNS: 0.0.0.0 (Any practical value other than 192.168.0.kkk is acceptable and can be left unchanged.)

- Client:

IP Address: 192.168.0.mmm
Netmask: 255.255.255.0
Gateway: 192.168.0.nnn
DNS: 192.168.0.nnn

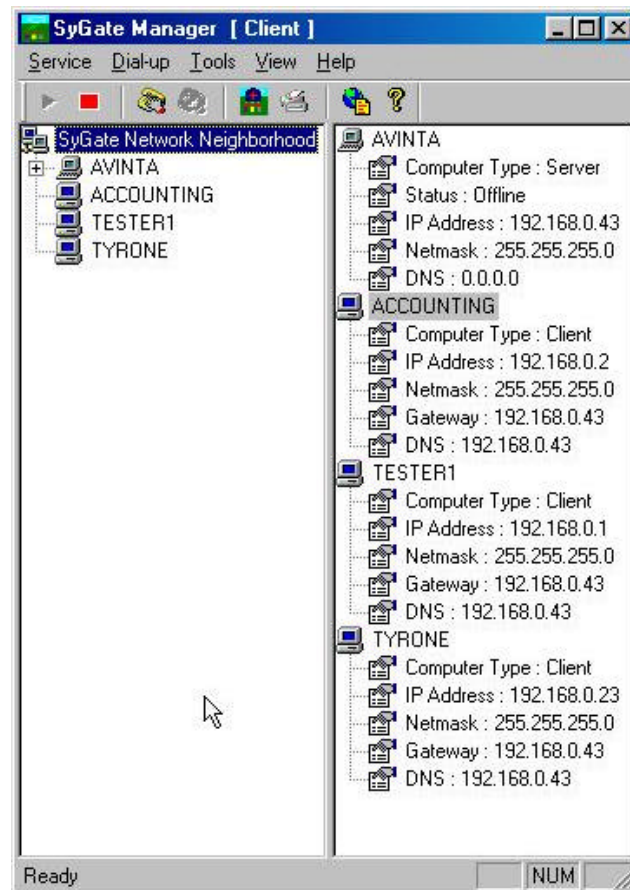


Fig. 11

- Please note that most of the numbers (Fig. 11) are “templates” meaning they are fixed. The only variables are nnn and mmm, which should be automatically assigned during the installation.
- nnn & mmm are numbers between 1 and 255 (inclusive), which should be unique among all PCs on the same local network. These are for identifying the computers among the nodes for the purpose of directing traffic within your local network.
- The fourth number (nnn = 43 in the above example) in the Gateway & DNS parameters of all Clients has to be the same as the fourth number in the Server's IP address.
- Note: “Netmask” means the same as “Subnet Mask” in the Windows Network Configuration TCP/IP Properties screen.

2.2 SyGate Networking

- The 2nd & 3rd task icons on the top of the SyGate Manager screens (a red rectangle & a yellow telephone set with a hand over it, respectively) should be active. These can also be viewed with pull down menus.
- Also, a rectangular icon on the right side of the lower task bar on the Windows Desktop should be green with the top 1/3 light blue (red means you are connected to the Internet, blue means the program is working but you are not connected to the Internet). This is a summary indication that the SyGate networking service from the Server (Gateway) is available to this computer.

2.3 Windows Network Neighborhood

- On the Windows Desktop, double click the “**Network Neighborhood**” icon on each PC. Everyone should see all PCs that are actively networked (**Fig. 12**). (Note that this may take a few minutes to appear, especially immediately after power on. If needed, try clicking **View** > **Refresh** several times as shown in the figure.)



Fig. 12

If any of the above does not look normal, follow the steps in Appendix A.1. (Configuration Considerations) to diagnose the system.

3. Operation

AvintaNET provides two types of computer resource sharing services: the local Windows Neighborhood and SyGate Internet Access Sharing. These are similar operations and much of the resources they utilize are common. It is recommended that you consult with these displays (**Fig. 13**) to get a current view of your network configuration. This is especially useful when something abnormal is suspected.

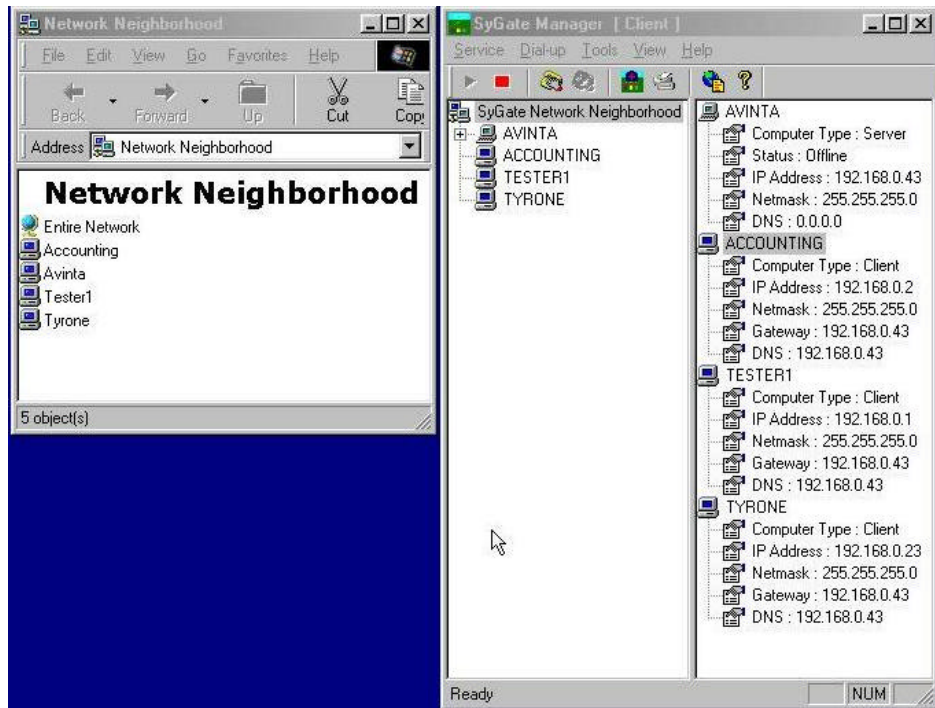


Fig. 13

3.1 Local Networking

This type of operation is possible only among those PCs that are shown as being active in both the **SyGate Manager** and the **Network Neighborhood** windows.

3.2 Peripheral Device Sharing

You will need to give authorization for each drive, printer, scanner, etc. on your computer that you want to share with other computers on the network or to allow them access. Make sure that step **(10)** in the Installation Chapter is executed, which authorizes the sharing of your drives and peripheral devices to others. To check or set specific device sharing, follow these steps.

From the Desktop, double click the **"My Computer"** icon to display all of the devices on your computer:

- A. Drive Sharing: The icon of a shared drive has a "hand" symbol under it. To share a drive, right click the drive that you wish to be shared and select **"Sharing"**. Click **"Shared As"** and type a convenient name for the **"Share Name"**. Click **"Apply"** then **"OK"**. (Fig. 14) All networked PCs are now able to access this drive via the Network Neighborhood, Windows Explorer or related procedures. Note that for safety considerations, the drives are set up as **"Read Only"** by default. You can further protect it by requiring a **"Password"** for others to access it. On the other hand, you can choose **"Full"** for the Access Type so that other PCs on your network can both read from and write to your drive. Please consult your Windows operating manual for details.

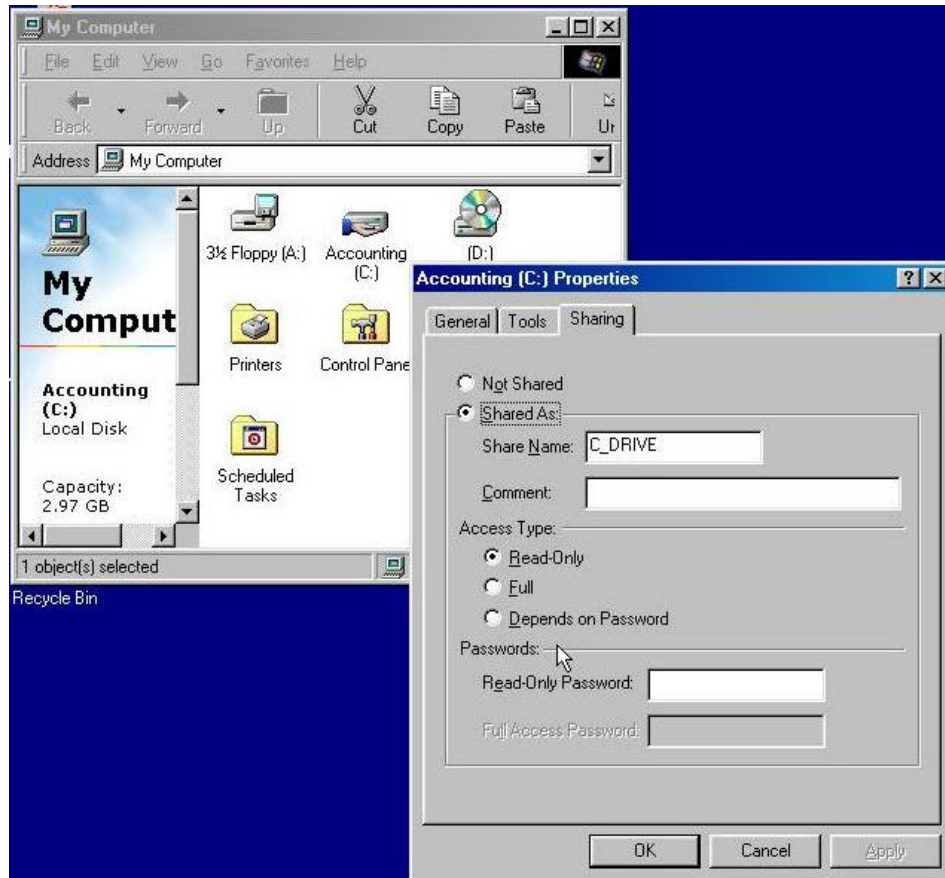


Fig. 14

- B. Printer Sharing: From the **"My Computer"** icon, double click **"Printers"** to see the list of installed printers on your computer. Right click the printer that you wish to share and select **"Sharing"**. Click **"Shared As"** and type a convenient name for the **"Share Name"**. Click **"Apply"** then **"OK"**. (Fig. 15)



Fig. 15

- In addition, at each PC that you wish to print to this printer, you need to go through the **"Add Printer"** procedure to access the shared printer. From each PC's Windows Desktop, click **Start > Settings > Control Panel > Printers > Add Printer**. Then, specify the printer that you want to install is a **"Network Printer"**. Click **Browse** to locate the desired printer on the other PC and follow the instructions to complete the installation.
- C. Additional devices such as scanners can be shared in a similar way as printers. Please follow the individual manufacturer's instructions for installation.

3.3 File Transferring

The following is a basic procedure for copying files or folders from another PC:

- Click **Start > Programs > Windows Explorer** to activate the **Windows Explorer**. Create a new folder such as C:\Buffer, if it does not exist. (Click **File > New > Folder**, then type in "**Buffer**" as the name of the new folder.)
- Scroll down on the left side of the Explorer window and click on **Network Neighborhood** to select one of the PCs on the network. (**Fig. 16**)

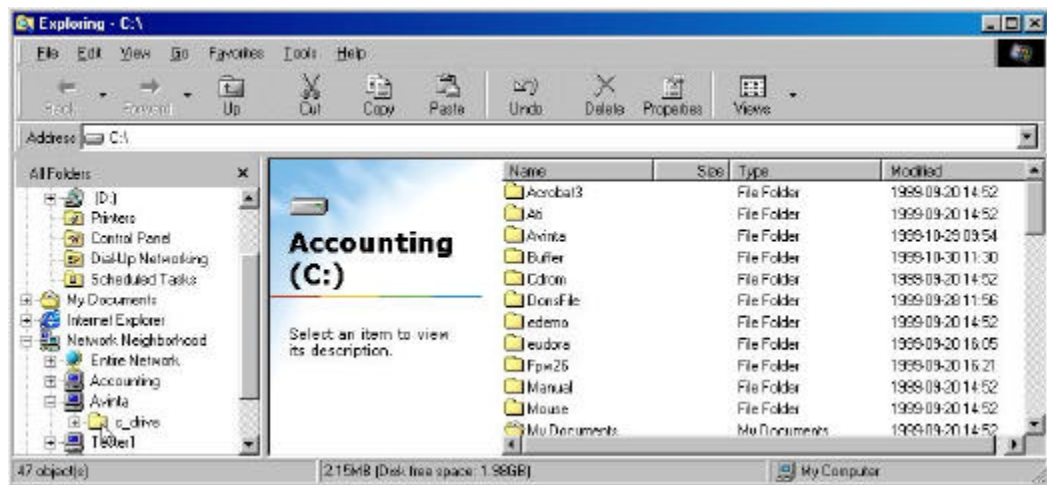


Fig.16

- Right click on a folder or file on the source PC to highlight it. Click "**Copy**" then follow the file's tree structure back to C:\Buffer and click "**Paste**" (**Fig. 17**) to make a copy of the folder / file to C:\Buffer on your own computer. This process can also be accomplished by the "**Drag & Drop**" technique.

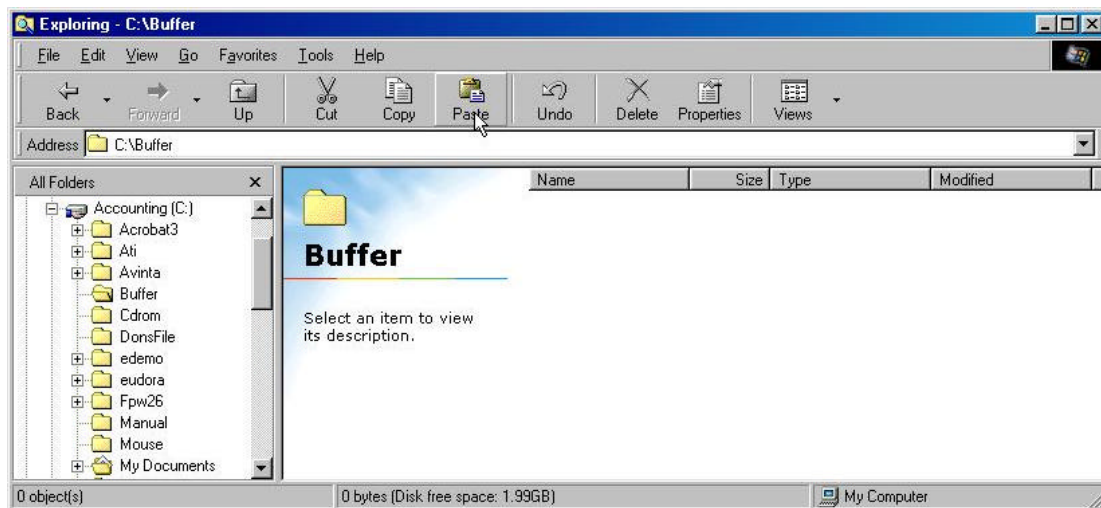


Fig.17

3.4 File Sharing

There are two basic ways to use a file residing in another networked computer:

- Start a software installation such as MS-Word. Use the **File > Open** procedure to navigate through the computer file folder's tree structure to find where the desired file is located. Double click to open it.
- Double click the **Windows Explorer** icon to activate it. Navigate through the **Network Neighborhood** to find the location of the desired file. Double click the file which should initiate the application software that is appropriate for handling the file.

Note that the whole time you are using the other computer's file in the above fashion, that file is dedicated to your application only. This is to prevent access contention between PCs, which can lead to file integrity corruption.

Keep in mind that the whole time that either of the above processes is active, information is continuously being transmitted between the two PCs involved, which impacts AvintaNET's capacity to serve other PCs. For this reason, it is advisable to copy a file over to your own local computer before working on it, unless the application involves two PCs working together simultaneously, as described below.

3.5 Software Applications

Software programs designed for use on a LAN (Local Area Network), such as Group Work Collaborations and Interactive Multi-player Games, can also be used on AvintaNET. Please follow the specific installation and operation instructions accompanying the respective software package.

3.6 Internet Access

This type of operation is possible only among the PCs shown as active in the **SyGate Manager** window.

3.61 Shared Through Server (Gateway)

AvintaNET is normally operated with the Server (Gateway) PC powered on. Make sure that the rectangular icon on the SyGate Manager's task bar is red (active) on a PC's screen before attempting to use that PC for the following session:

- Double click on an e-mail or Internet browser icon such as **Internet Explorer** or **Netscape**.
- Progress messages such as **Open Device, Verify Username and Password, Network Connected**, etc. should sequentially and momentarily appear just above the lower right task bar on all networked PC screens, while modem connection tones (if a v.90 modem is used) should be heard from the Server PC. Also, the 3rd icon (a yellow phone with a hand over it) on the task bar of all **SyGate Manager** screens should be grayed out.
- After the connection has been established, a red **NO** symbol appears over the 4th icon in the task bar of all **SyGate Manager (Server / Client)** screens.
- All networked PCs can now access the Internet simultaneously and independently.
- By installation default, the Internet connection will be automatically terminated after three minutes if there is no activity from any PC. This avoids tying up the line, which is especially to your benefit if your ISP or local Telco charges by the duration of connection time. See Appendix A.3. "Terminating Connection to ISP" for changing this setting to suit your personal preference.

3.62 Without a Server (Gateway)

When the AvintaNET's Server PC is not powered on, a Client PC may still be able to access the Internet via the same procedure of double clicking one of the icons as above, if the Client PC is equipped with its own connection capability such as V.90 modem. However, the subsequent status information and Internet sharing as described above will not be available. See Appendix A.2. "Alternate Internet Access" for considerations under such conditions.

APPENDIX

A.1 Configuration Considerations

If you encounter trouble in networking certain PCs, go through the following to resolve the situation.

1. Be sure that each PC has been **Restarted** after the AvintaNET software installation is completed.
2. All Clients should be set to the same Workgroup as the Server (Gateway). From the Windows Desktop screen, click **Start > Settings > Control Panel > Network > Identification > Workgroup** to make the necessary changes.
3. Also, select either "**Windows Logon**" or "**Microsoft Family Logon**" for the **Primary Network Logon**. This eliminates the extra step of pressing the "ENTER" key during boot-up, even though you do not have password to key in. If you do use a password, you can use '**Client for Microsoft Networks**' for the **Primary Network Logon**, which makes the boot-up process prompt you for a password entry.
4. Furthermore, to avoid confusion during operation, make sure that the **Computer Name** under the "**Network Identification**" tab is set to the same as your **Logon Name**, and the "workgroup" name should be all uppercase to minimize operation difficulties.
5. Be sure that each PC's hard drive (normally C:\) is set to "**Shared**" mode. Otherwise, other PCs on the network may have hard time "seeing" this PC. From the Windows Desktop, double left click on "**My Computer**". Right click on hard disk icon (**C:**). Select "**Sharing**". Put a dot in the button in front of "**Shared as**". Then, fill in the information to identify your hard disk.
6. The TCP/IP parameters are normally preset during installation. In some cases however, such as if your computer has some residual memory from another network that it was previously connected to, some of the parameters may not conform to AvintaNET specifications. In such cases, a manual override is necessary:

Click on **Start > Settings > Control Panel > Network**. Under the "**Configuration**" tab, scroll down near the bottom of the list and highlight "**TCP/IP -> Home Network Adapter**". Then click "**Properties**" to check the parameters. If needed, modify them to the desired values specified in the main text:

- a. Under the "**IP Address**" tab, click "**Specify an IP Address**" to type in the "**IP Address**" and "**Subnet Mask**".
- b. Under the "**Gateway**" tab, type the Gateway's IP Address to the "**New Gateway**" value and then press "**Add**". Highlight the "**Installed Gateways**" that have unacceptable values. Then, click "**Remove**".
- c. Under the "**DNS Configuration**" tab, click "**Enable DNS**", type in this PC's name in "**HOST**". Type in the Gateway's IP Address for "**DNS Server Search Order**", then press "**Add**". Highlight the ones that are not acceptable and press "**Remove**".
- d. The Gateway's DNS value by default would be 0.0.0.0. Any practical IP Address is acceptable. However, any entries with the form of "192.168.0.kkk" have to be removed. To do so, click to highlight the entry, then press "**Remove**".
- e. Check the above parameters one more time to be sure that they are correct. Then, press "**OK**". Note that if you have made any changes to these parameters, the PC has to be rebooted for the new value to take effect.

7. The Internet Sharing Software SyGate is capable of recognizing two Ethernet type adapters in the Server (Gateway) PC. The HN100 PCI is an Ethernet card for Local Area Networking (LAN) among the PCs. If your ISP access is through a modem other than a V.90 (56Kbps analog), the Server must have another Ethernet card for the Internet connection. Go to **SyGate Manager (Server)** window. Select **Tools > Configuration**. At the upper right corner, specify which adapter card is for which application. Then, click **OK**.
8. If these steps do not resolve the difficulty, check the phone cable connections. (If you have Avinta's Voice Networking product (VN100) installed on the same telephone number line, you can use its intercom capability to quickly check out the HN100 connectivity between two workstation locations in question.)
9. It is also possible that the HN100 PCI card may have been improperly seated in the PCI slot. To check this, you need to power off the PC. Disconnect the phone cable and unplug the HN100 PCI card. Re-insert the card and the phone cable before powering up the PC again.
10. Because the HN100 USB is connected to the PC via a removable USB cable, sometimes it may not be connected when the PC is powered up, e.g. a laptop PC used at a location without networking. Depending on the model of your PC, Windows may "memorize" this occasion and behave in certain ways the next time you power up your PC on a HomePNA network. It may either report that the USB adapter is not found or may try to install the driver software again. If it does not function properly after boot-up, go to the "Network" dialog box (See Appendix A.4. Step (4)) to remove the entries associated with the HN100 USB adapter. Also, check and remove any item under **My Computer (right click) > Properties > Device Manager** that is shown with a "!" or "?" mark. Then, reboot the PC and allow Windows to reinstall the drivers.
11. Some PCs do not have an IPX/SPX compatible protocol pre-installed. This would prevent local networking among PCs, such as file transferring and sharing. Check your PC's hardware manual or consult with your PC's supplier to install it.
12. Furthermore, to support certain networked software applications such as multi-player games, your PC should have the proper IPX/SPX "Frame Type" setting. The most popular one is "Ethernet 802.3". Check with your PC's hardware manual, consult with your PC's supplier, or ask your software supplier to guide you through the settings required.

A.2 Alternate Internet Access

1. When the green triangle & red rectangle icons in the upper left of the SyGate Manager screen are both "grayed out", your PC is not networked with a Server (Gateway) PC. Internet service via the Gateway is then not available. If your PC is equipped with a modem, you still can access the Internet via the usual procedure, except of course that your PC will automatically utilize its own modem.
2. For using AOL with AvintaNET (HomePNA + Sygate software) note the following:
 - A. Under normal conditions, operation with AOL service is the same as with ordinary ISP's (e.g. AT&T WorldNET). That is, double-click a Browser or E-Mail icon from either the Gateway or the Client PC's Windows Desktop to begin the interactions.
 - B. When the triangular and rectangular (green and red respectively) icons in the upper left of the Sygate Manager screen on a Client PC are "grayed out", your PC is not networked with a gateway (Server) PC. Exit Sygate Manager first, and then operate in the normal manner of "A." above.

- C. Note: If step "B" is not followed (i.e. keeping the Sygate Manager screen active on the client PC's desktop), the dial-up connection to AOL may appear to proceed normally until "Step 6: Connecting to America OnLine". At that point, no more progress can be made. The PC appears to be "inactive". Using CTRL+ALT+DEL keys in combination and selecting "End Task" may free your PC from this situation, for most brands and models. However, some PC's may be totally 'frozen'. Some may even display the "Blue Screen". In the latter cases, power down and then reboot your PC. After Desktop is fully ready, exit Sygate Manager before proceeding.
3. Note that the above is for providing temporary service. It is intended for situations when there is only one PC on the entire local network that needs to access the ISP:
 - a. If the Server comes online, it will sense the Internet traffic and attempt to provide the service resulting in signal conflict.
 - b. If another PC needs to access the ISP, its modem will be in contention with the first one.
 4. In either case, disconnect the Client PC that has been connected to the ISP. Power up the Server PC. After the Server becomes fully functional, re-initiate the ISP connection again (from any networked PC) so that a normal Internet access-sharing configuration can be established.

A.3 Terminating the Connection to the ISP

1. Automatic: The Internet connection through the HN100 is preset to terminate automatically after a certain period of inactivity. Go to the **SyGate Manager (Server)** window. Pull down **Tools > Configuration**. The default time is set at the lower left corner of the "**Dialup/AOL Setting**" as "**Auto Hang-Up After 180 Idle Seconds**". This means that a connection without active traffic for three minutes will be automatically terminated to avoid tying up the line. This number may be changed by typing in a new number for a longer or a shorter time as you wish.
2. Manual: Sometimes you may wish to terminate a connection to your ISP before the above auto hang-up process takes effect. For example, you may notice that the access line to your ISP is busy and you want to initiate a new connection. Or, perhaps you want use your telephone line for a voice call. In such cases, you can do the following. From any networked PC's screen:
 - a. The process of connecting to the ISP can be interrupted by clicking on the 2nd (red rectangle) icon on the **SyGate Manager's** top task bar, which also stops the SyGate Engine. Remember to click on the 1st (green triangle) icon afterwards to restart the SyGate engine.
 - b. After a connection to the ISP has been established, clicking on the 4th task icon (the red "**NO**" symbol over a telephone) will terminate the session.

However, because your ISP access is now shared by several PCs on your network, these two capabilities should be exercised only after informing other users on the network to avoid accidentally cutting off another colleague who is also connected.

A.4 Troubleshooting

Sometimes telephone sets, FAX machines or modems on the same phone line but not configured within an AvintaNET network may disturb the operation. If this is suspected, unplug all such instruments from the line. If operation improves, you need to add isolation devices to these instruments before plugging into the phone line. Please contact Avinta for such option devices.

A.5 Uninstalling

If for any reason you need to remove either the local networking or Internet sharing software, we recommend that you follow AvintaNET's uninstall procedure to completely remove all related components from your computer. Following this procedure will allow you to operate your computer without any possible interference from the HN100 Application Software or Adapter Driver:

From the Windows Desktop, click **Start > Programs > AvintaNET > Uninstall** to begin uninstalling the program. The following display will appear onscreen. (Fig. 18)

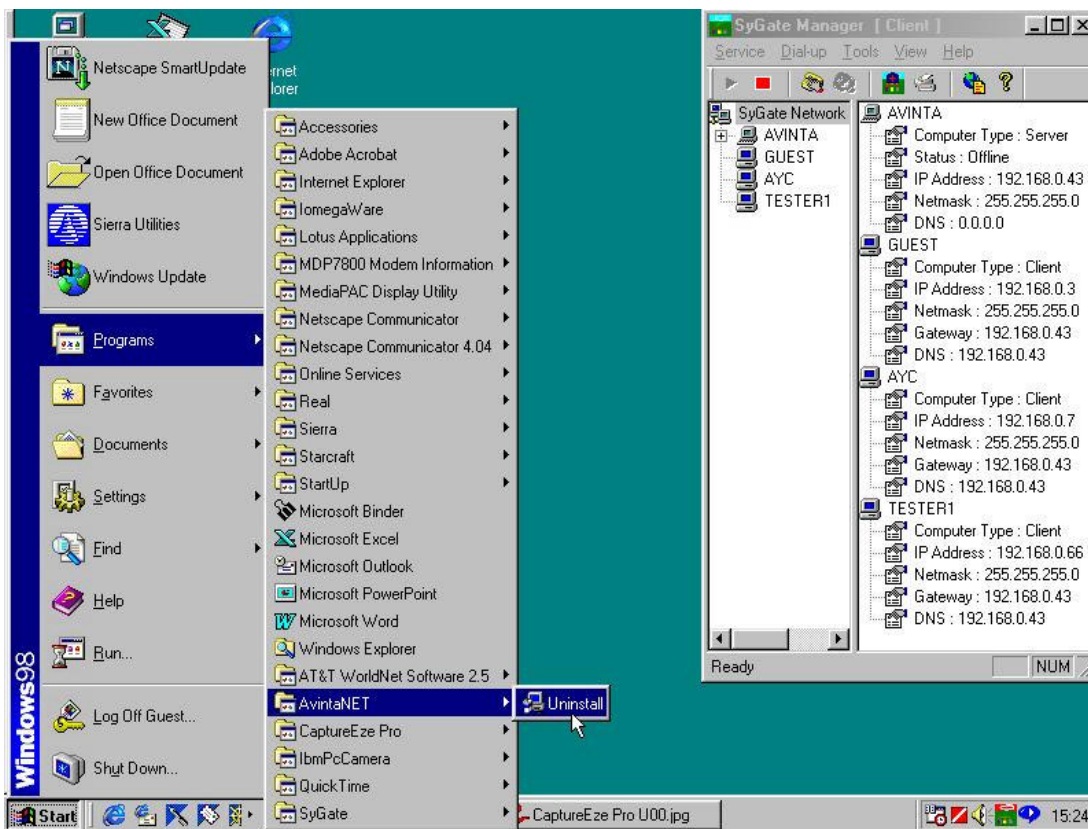


Fig. 18

As you proceed, an outline of the following instructions will appear onscreen. Screen instructions are provided for your convenience in the event you lose this Owner's Manual. The paragraph numbers in parenthesis match with those of the onscreen outline.

- (1) Right-click on the **SyGate Manager (Server / Client)**, which is the green rectangular icon on the right hand side of the lower task bar (**Fig. 19**), and then select **Exit**.

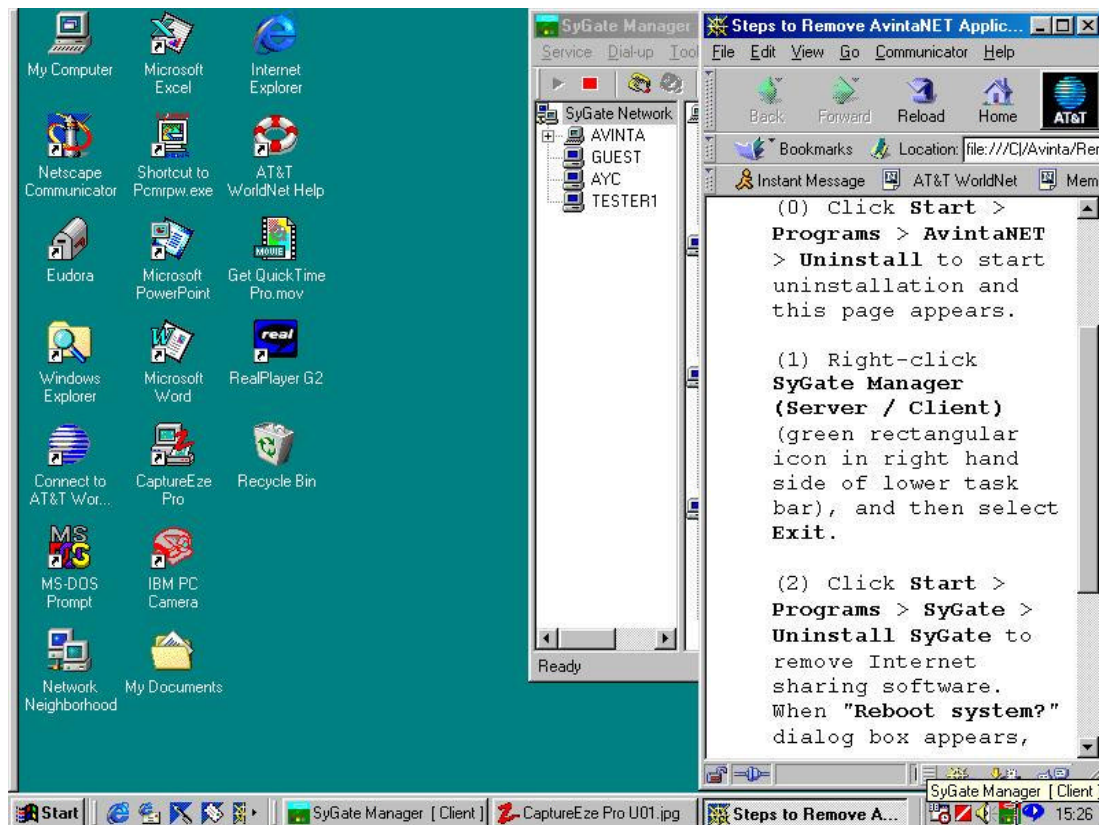


Fig. 19

- (2) Click **Start > Programs > SyGate > Uninstall SyGate (Fig. 20)** to remove the Internet sharing software. When the "Reboot system?" dialog box appears,

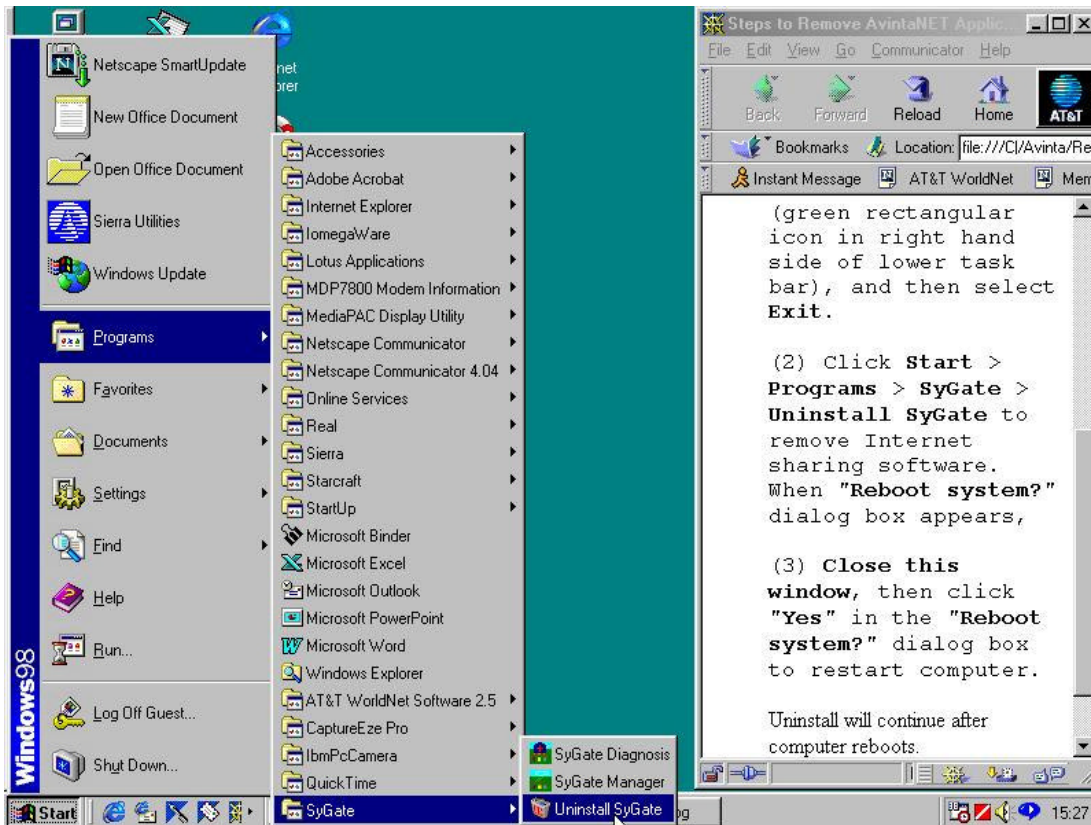


Fig. 20

(3) **Close the outline window**, then click **"Yes"** in the **"Reboot system?"** (Fig. 21) dialog box to restart the computer.

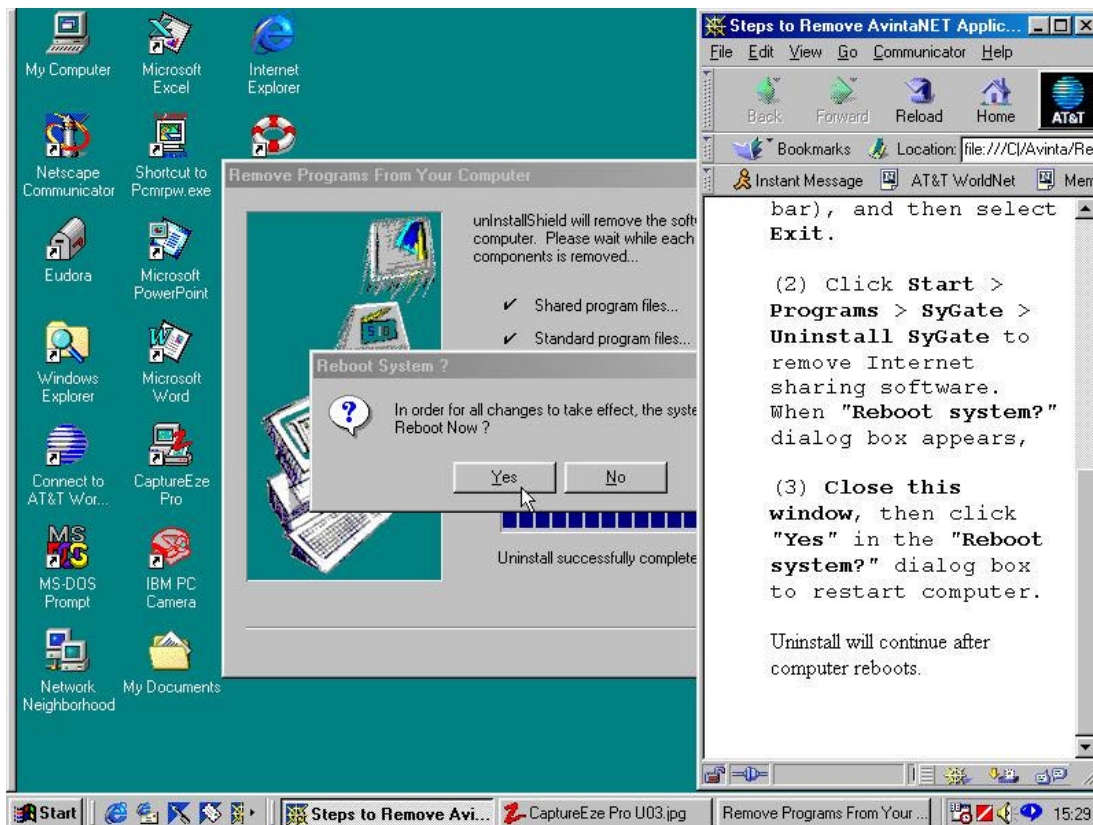


Fig. 21

After the computer reboots click the "X" in the upper right corner of the "Finished-Uninstall" MS-DOS Window to close it (if it was not done automatically by your computer). (Fig. 22). This allows the Auto-Run process to continue.

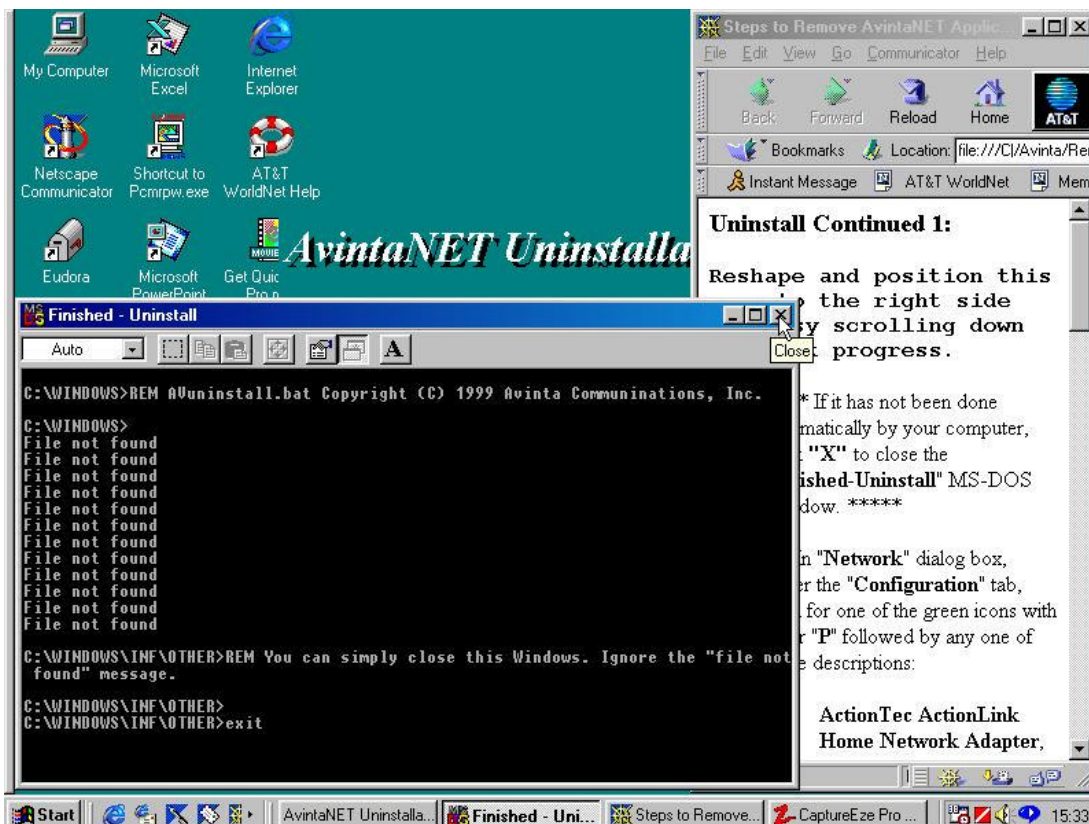


Fig. 22

- (4) In the "Network" dialog box under the "Configuration" tab, look for one of the green icons with the letter "P" (Fig. 23) followed by any one of these descriptions:

ActionTec ActionLink Home Network Adapter
Avinta USB100 HomePNA Adapter

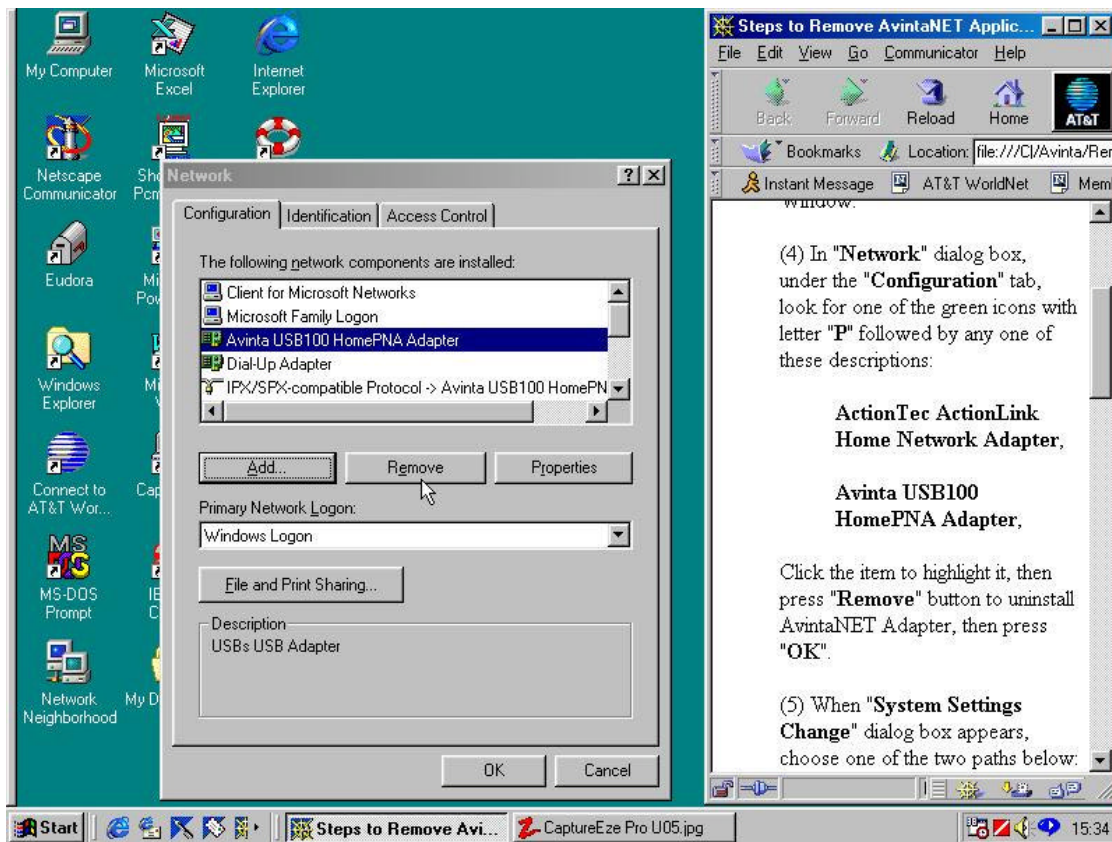


Fig. 23

Click the item to highlight it, then press the **"Remove"** button to uninstall the AvintaNET Adapter, followed by pressing **"OK"**. (Fig. 24)

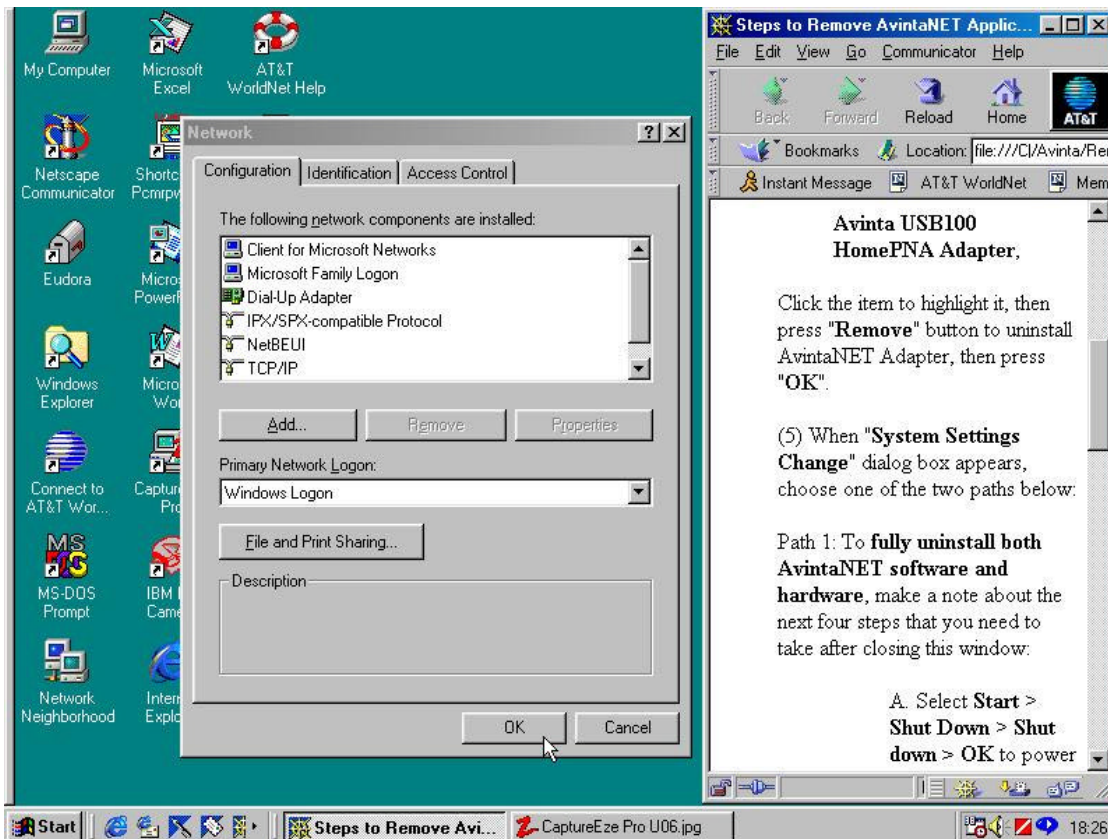


Fig. 24

(5) When the "**System Settings Change**" (Fig. 25) dialog box appears, choose one of the two options below:

Path 1: To fully uninstall both AvintaNET software and hardware, close the onscreen outline Window, select "No" to "Do you want to restart your computer?" Then,

- A. Select **Start > Shut Down > Shut down > OK** to power down the computer.
- B1. For the USB Module, unplug its cable from the computer.
- B2. For the PCI Card, open the computer cover and remove the **AvintaNET Adapter card**. Replace the cover.
- C. Reconnect the remaining cables.
- D. Power the computer up and check for normal operations.

Path 2: To reinstall or upgrade to another version of AvintaNET software, close the onscreen outline window, then select "Yes" to "Do you want to restart your computer?" Then,

- A. When the "**Add New Hardware Wizard**" dialog box appears, press "**Cancel**" to terminate the process.
- B. After the Windows Desktop screen is fully displayed, insert the **AvintaNET Auto-Run CD** into the drive and follow the onscreen checklist to install the **AvintaNET Home Networking** software.

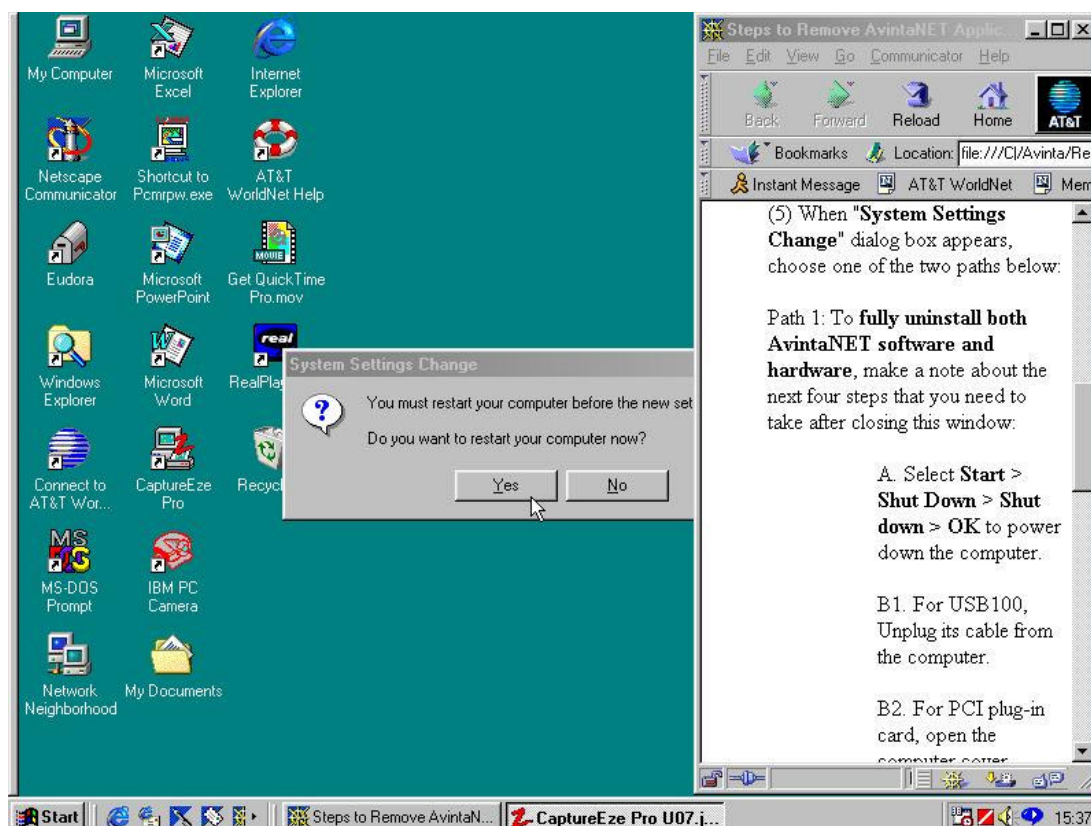


Fig. 25

A.6 FAQs

1. Q: My computer does not detect the Home Network Adapter upon power on during installation. What should I do?

A: Your system's PCI Interrupt BIOS (IRQ) settings may assign any IRQs to the Home Network Adapter's PCI slot.

- The PCI slot that you are using may be not working. Try another slot.
- Check for IRQ's that may be reserved for functions that you do not use any more. They could be freed up for the HomePNA PCI card.
- Move a known working PCI card (such as a Video Card) to a different slot first. (You may need the Video Card's driver disk to re-install it.) Then, try installing the Home Network Adapter in the Video Card's original PCI slot.

2. Q: After installation, my computer does not seem to network properly and I have checked it with the Verification procedure outlined in Section 2. What should I do?

A: You may have an Interrupt (IRQ) conflict:

- From the Windows Desktop, right click on "**My Computer**". Then, left click "**Properties**" > "**Device Manager**" > "**Network Adapters**". Highlight the **Home Network Adapter** that you are using, then, click on "**Properties**". In the "**Device status**" box, you should see a "**This device is working properly**" message and a "check" mark next to "**Exists in all hardware profiles**". If not, your adapter is not installed properly. You need to proceed with the following:
- Check for available Interrupts (IRQ 11, 5, 10, 3 or 9 is the search sequence for the HN100 card).
- Free the unused interrupts that are occupied by previously installed applications that are no longer used.
- On the other hand, if a conflict is found between an existing application and the new HN100 card, the IRQ resource may be marked "unavailable" in the CMOS BIOS prior to installing the HN100 card to prevent it from competing for the same IRQ.

The procedures for the above may vary slightly among different PCs. Please follow your PC hardware manual to perform this procedure. If you are not familiar with the procedure, it is advisable to have your PC hardware supplier clarify it for you.

3. Q: Why does the transfer speed slow down when I have several PCs on the network?

A: The total file transfer time depends on the size of the files selected and the number of simultaneous file transfer tasks that are being performed between other PCs. The combined transfer speed should be approximately 1Mbps (one million bits per second) or 100KBps (one hundred thousand bytes per second).

4. Q: Can I be a "Trial User" of SyGate software instead of registering?

A: Yes, you can skip the registration and the Internet sharing service still will operate. However, you will be reminded every time the Server (Gateway) is being booted up. You can operate this way for a total of up to 100 MB of data transfers among the PCs. At that point, you must register or the system will not operate properly.

5. **Q: The AvintaNET Uninstall process was interrupted before my computer could complete it. Can the computer still run other applications problem-free?**

A: Under such conditions, your computer may still contain traces of the AvintaNET software. Normally, this should not interfere with other applications. However, to minimize distraction or confusion during the re-installation of AvintaNET, please follow the steps below to fully uninstall the AvintaNET software:

Note that:

- a. Parts of the unexecuted AvintaNET uninstall process may pop up during the manual uninstall process. Just follow through with it and then come back to repeat this manual procedure through in its entirety.
- b. Some of the uninstall procedures may have been executed during the disrupted session. Do not be concerned if you cannot find anything to remove in certain steps. Just proceed to the next step.

- (1) Right-click on the **SyGate Manager (Server / Client)** (the green rectangular icon on the right hand side of the lower task bar), and then select **Exit**. Both the SyGate Manager icon and the display should be removed from the Windows Desktop.
- (2) Click **Start > Programs > SyGate > Uninstall SyGate** to remove the Internet sharing software. When the "Reboot system?" dialog box appears, click "No", then "OK". (If you selected "Yes" to reboot, just continue to Step (3) after the computer has rebooted.)
- (3) Click **Start > Settings > Control Panel > "Network"**. Under the "Configuration" tab, look for one of the green icons with letter "P" followed by any one of these descriptions:
ActionTec ActionLink Home Network Adapter
Avinta USB100 HomePNA Adapter

Click the item to highlight it, then press the "Remove" button to uninstall the driver for the Home Network Adapter, followed by pressing "OK".

- (4) When the "System Settings Change" dialog box appears, choose "No". (If you selected "Yes" to reboot, just continue to Step (5) after the computer has rebooted.)
- (5) Click **Start > Programs > MS-DOS Prompt** to get into the **MS-DOS** environment, which should have a screen prompt with something like **C:\WINDOWS>**
- (6) Type "**cd\temp\avinta**" then press "Enter". The screen prompt should change to **C:\TEMP\AVINTA>**
- (7) Type "**AVUninstall**" then press "Enter". Lines of messages will quickly run through the screen and the MS-DOS Window should close by itself. The computer should then return to the Windows Desktop.
- (8) Click **Start > Shut Down > Shut down > OK** to power down the computer.
- (9) Remove the AvintaNET Adapter if desired. Restore all cabling. Finally, power up the computer to check for normal operation.

6. **Q: Is it possible to integrate HomePNA adapters from other manufacturers into AvintaNET?**

A: AvintaNET software is designed to be interoperable with compatible HomePNA adapters. Besides those models distributed by Avinta that can be directly installed by using the AvintaNET Auto-Run CD-ROM, other brands such as Diamond Multimedia PCI and USB adapters can also be integrated into the same network using the following procedure:

- Be sure the product that you intend to integrate is working properly beforehand.
- Perform a full uninstall of the software, leaving the hardware connected.
- Restart your computer. When Windows boots up, it should discover the HomePNA hardware adapter that you have left on the computer. Click "Cancel" in the "Add New Hardware Wizard" dialog box.

- After the Windows Desktop screen is fully displayed, insert the **AvintaNET Auto-Run CD** into the drive and follow the onscreen instructions as usual.
- During driver installation, Windows may be not able to find a suitable driver from the **AvintaNET CD-ROM** for the compatible adapter. In this case, substitute the CD that came with your adapter to allow the "**Add New Hardware Wizard**" to search for the driver. The rest of installation should be the same as outlined in the first chapter of this manual.

7. Q: Can an Intel AnyPoint parallel port adapter be integrated into AvintaNET?

A: Because the Windows "**Add New Hardware Wizard**" cannot detect the existence of this adapter, the procedure to integrate it is slightly different:

- Fully install the AnyPoint hardware and software to be sure that it works on your computer.
- Uninstall only the "Internet Sharing" portion of the AnyPoint software.
- Insert the AvintaNET CD-ROM into the drive and proceed as usual. After the PC boots up the first time, you will not see the "**New Hardware Found**" message. Other than that, the rest of installation procedure is the same.
- To remove the network software from your PC, run the Avinta uninstall as usual. Then, remember to run AnyPoint's uninstall process to remove the "Essential Networking Software".

8. Q: My network seems to operate slower than it used to and sometimes the performance of my network appears to be degraded. What should I do?

A: Unless the hardware on your system (AvintaNET adapters, modems, interconnecting cables, etc.) has an obvious problem, the cause could be the limitation of the software resources in your computers. Try the following "non-invasive" procedure first. If it does not fix the problem, then you may want to check the hardware components:

- First, save all data files and properly close all applications.
- Power down all the computers on your network by clicking **Start > Shut Down > Shut down > OK. (Do not simply Restart Windows.)**
- Power up your Server first.** After it has become fully operational, begin to power up the **Client computers.**
- Resume normal operations, beginning with only the necessary applications.

Note: Under less severe disruption conditions, it is possible to restore the network's performance by actions that are less "intrusive" than the above. For example, you could simply

- Close any unnecessary applications that may be occupying Windows' resources
- Re-initiate the networking software, or
- Restart Windows on specific computers, etc.

Although these may be "speedier" remedies than powering down the entire network, they tend to result in a system that is less than optimal and could leave certain lingering issues that may be quite misleading or confusing.

9. Q: Where can I read more about Home Networking components and possibilities?

A: In the "Manual" file older on the AvintaNET CD-ROM, you will find several documents that go into some detail on the subject. Some advanced topics and applications are discussed in these documents as well.

10. Q: Does AvintaNET keep an operation history log to help me diagnose my network?

A: In the **SyGate Manager (Server)** window, click on **"Help"** in the pull-down menu and select **"Troubleshooting"**. A log of your network operation is available for review. Pressing **"Copy above to clipboard"** will save a copy of the log to the Windows Desktop clipboard. Then, create a new MS-Word document and **"Paste"** the clipboard contents to review the information. This information would also be very useful if you need to contact **Technical Support**.

A.7 FCC Registration & Radio Interference Information

Registration: This equipment is registered with the Federal Communications Commission and is in compliance with Parts 15J and 68 FCC Rules and Regulation. 1) UPON REQUEST ONLY, you must provide the following data to your telephone utility company (Telco): (a) *The Ringer Equivalence Number, (R.E.N.) on the device label. Note that if several devices are connected to the same line, the R.E.N.s must not add up to more than 5 (A or B). This R.E.N. figure is important to your Telco. (b) *The (USOC) jack type to be provided by the Telco. Typically these are the RJ11C/W for single lines. *The *-flagged items above are noted on the equipment's FCC Compliance label. 2) This device may not be used on Telco-operated coin phone lines. Party lines and privately owned coin phones are subject to local state regulatory policies, and possible additional state special requirements. 3) The Telco has the right to make changes to their network that may affect the operation of your equipment, provided you are given adequate advance written notice to permit correct operation. 4) In case of operational problems, disconnect your unit by removing the modular or multi-conductor plug from the Telco jack. If your regular phone (or other devices or system) still works properly, your unit has a problem and must remain disconnected officially and serviced or returned for repairs. 5) Unless otherwise noted in the User's Manual (e.g., fuses, etc.), user may not under any circumstances (in or out of warranty) attempt any service, adjustments or repair on this unit. It must be returned to the factory or authorized U.S. service agency for all such work. Locations (or phone numbers) of factory or authorized U.S. service points are listed in this manual. 6) Special FCC rules apply to equipment connected behind a PBX or KTS. 7) Attached accessories: If you connect any equipment such as a FAX, answering machine, telephone or computer modem to the Unit, please make sure that they are registered in accordance to FCC Rules Part 68. Please check the manufacturer or dealer of the equipment if you are not sure.

Radio Interference: This equipment has been type-tested and found to comply with the limits for a Class B Computing Device in accordance with the specification in Subpart J of Part 15 FCC Rules. These Rules are designed to provide reasonable protection against radio and television interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this unit does cause interference to radio or television reception (which you can determine by turning the equipment off and on), try to correct the interference by one or more of the following measures. (1) Reorient the receiving antenna (that is, the antenna for radio or television that is receiving the interference). (2) Change the position of the unit with respect to the radio or television that is receiving the interference. (3) Move the unit away from the equipment receiving interference. (4) Plug the unit into a different wall outlet so that the unit and the equipment receiving interference are on different branch circuits. If these measures do not eliminate the interference, please consult your dealer or an experienced radio/television technician for additional suggestions. Also, the FCC has prepared a helpful booklet, "How To Identify and Resolve Radio/TV Interference Problems". It is available from the U.S. Government Printing Office, Washington, DC. 20402. Please specify stock number 004-000-00345-4 when ordering copies.

A.8 Limited Warranty

This product is warranted to be free of manufacturing defects for a 1-year period after the original date of consumer purchase. Opening of the product enclosure will void this warranty. This warranty does not include damage to the product resulting from an accident, misuse, improper installation or operation, or unauthorized repair or alteration. If the product should become defective within the warranty period, Manufacturer will, at its option, repair or replace it at no charge. The defective product should be sent to a designated service center, freight prepaid by the customer. The replacement product supplied under this warranty, may at our option, be new or rebuilt. If the defective product is found to be out of warranty, Manufacturer will repair it upon prepayment by the customer for any service and return freight charge. The consumer's sole remedy shall be such repair or replacement as is expressly provided above, and Manufacturer shall in no event be liable for any incidental or consequential damages arising out of the use or inability to use this product for any purpose whatsoever. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights. You may also have other rights that vary from state to state. For product purchased outside the United States, see your dealer for warranty.

A.9 Service

Only a trained technician should service this product. Contact Avinta Communications for service. Be sure to include your name and address, daytime phone number, proof of purchase including purchase date, and a short description of the problem. Attach your sales receipt to this booklet for future reference. This information will be valuable if service should be required during the warranty period. According to some state laws, and in the event service should be required, you may need both Model and Serial Numbers. Please record them below for your records. Keep this Manual in a secure location for future reference:

Model No. _____ Serial No. _____

Purchased from _____ Purchase Date _____

Avinta Communications, Inc.

756 San Aleso Avenue
Sunnyvale, CA 94085-1445 USA

TEL: (408) 734-5295
FAX: (408) 734-5296

WebSite: www.Avinta.com
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Part number: MSC00007-03
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