

RESNET

Off-Campus Dial-up Guide

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Table of Contents:

1. About ResNet	1
2. Quick Facts about the Dial-Up Service	1
3. Dial-up Service Responsibilities	2
Purdue Data Network (PDN).....	2
Dial-Up Modem User	2
Regulations and Policies.....	3
A Few DO's and DON'Ts.....	3
4. Required Equipment for IBM Compatible Computers	4
5. Installation Guidelines for IBM Compatible Computers	5
Hardware Installation	5
Software Installation	7
Troubleshooting.....	12
6. Required Equipment for Macintosh Computers	14
7. Installation Guidelines for Macintosh Computers	15
Hardware Installation.....	15
Software Installation	16
Troubleshooting.....	17
8. Using Your ResNet Dial-up Connection	18
Networking Software.....	18
A few Web Sites	18
9. Getting Help	19

1. About ResNet

The Purdue University RESidence NETWORK (ResNet) service is available to members of the university community so that they can have access to Purdue University network resources from their personal residences. It provides subscribers with network capabilities compatible with and equivalent to those available in on-campus offices and laboratories.

Currently, ResNet offers four types of service:

- Direct Ethernet connections for students living in the on-campus university residences that have been wired for Ethernet service.
- xDSL service for students living in on-campus university residences that have not been wired for Ethernet access.
- A pool of dial-up modems for off-campus residents so they may access the campus network via conventional telephone lines.
- An ADSL service for off-campus residents located in an appropriate Verizon service area.

The purpose of this guide is to provide configuration information for off-campus dial-up access. Users of other ResNet services should consult the appropriate document for their service.

2. Quick Facts about the Dial-Up Service

Some important facts about the ResNet Off-Campus Dial-up Service

1. The Dial-Up service is available to students currently enrolled in Purdue University, West-Lafayette campus courses as well as to West-Lafayette campus faculty and staff.
2. The Dial-Up service will only be available from off-campus telephone exchanges. Computers dialing from 494, 495, and 496 exchanges will not be able to connect.
3. You will be limited to one ninety (90) minute dial-up session at any given time. **WARNING:** No notice will be provided prior to the modems automatically disconnecting. You are responsible for "watching" the clock. Save your work often. Once you have disconnected from the dial up service, you can connect again for another ninety-minute session. The system will also disconnect you after thirty (30) minutes of network inactivity.

4. You will be required to use your Purdue Career Account user name (login) and password (the same user name and password you use to access the PUCCL computer labs). To get your Career Account information, swipe your Purdue ID card in any PUCCL PC Computer lab or visit the PUCCL Information Center in the Math Building, Room 231.
5. Your Purdue Career Account and PUCCL Mail-Hub account (your "@purdue.edu" account) **MUST** be coordinated. This process provides a common login name for your "@purdue.edu" email account and your Purdue Career Account. If you are unsure if your accounts are coordinated, please visit the web site at: <http://www.purdue.edu/CareerAccount/> or visit the PUCCL Information Center in the Math Building, Room 231.
6. The Dial-Up Service phone number is **746-2244**.

Eligible University personnel may also connect to the dial-up service from outside the local calling area by dialing **(866) 245-4088**. This number is toll free from anywhere in the United States (including Hawaii and Alaska), but it cannot be dialed from outside the United States. You must arrange to have applicable charges billed to a University account before your career account can be enabled for this optional feature. If you have a need to use the toll-free number, contact your business office for details.

3. Dial-up Service Responsibilities

ResNet Dial-Up service is dependent upon the combined efforts of the Purdue Data Network (PDN) division of the Purdue University Computing Center, and you as the network user. A clear understanding of the responsibilities of each of these entities is essential for the operation of dial-up service.

Purdue Data Network (PDN)

The Purdue Data Network division of the Purdue University Computing Center (PDN) is responsible for operating and maintaining all aspects of the University data network. PDN maintains the authentication server that grants authorized users access to Purdue's networks and provides basic information on how to connect to the dial-up service.

PDN does not install or repair computer hardware or software located in a subscriber's residence.

Dial-Up Modem User

Dial-up service users are the most important members of the ResNet team. Users must determine whether their personal computers and software are suitable for use with ResNet dial-up service and must maintain their functionality. Subscribers must obtain and install a modem card and software needed to make their personal computer "dial-up ready". Subscribers who have never previously installed modem cards in a personal computer may need to ask their computer vendor, a family member, a friend, or a technician at a local computer store, to help install a modem card and configure any associated driver software. NOTE: many new computers already come with a modem installed (please refer to your owner's manual).

Regulations and Policies

Once your ResNet connection is established, the entire World Wide Web is at your fingertips via the Internet. Your ResNet connection does, indeed, provide you worldwide communications for e-mail and information retrieval. This freedom to roam the world from your keyboard comes with equivalent responsibilities. It is your responsibility, as a member of the Purdue community, to abide by all rules and regulations associated with the use of Purdue University facilities. These include state and federal laws as well as Purdue University regulations and policies specified in the bulletin entitled University Regulations, which is available in the Dean of Students Office. You should consult the Dean of Students Office if you have any questions about the interpretation of a university regulation or policy. Also, read the PUCC document ZZ-POLICY for a description of PUCC policies. This document is available in paper form in the PUCC Information Center (MATH 231) or electronic form, via the World Wide Web, from the Computing Center's web site: <http://www.purdue.edu/PUCC/>. The proper authorities will deal with violations of these rules and regulations.

A Few DO's and DON'Ts

Here are a few DOs and DON'Ts to help you understand what constitutes acceptable and unacceptable behavior as a ResNet subscriber. This is not an exhaustive list; these are only a few examples. Read the policy documents, described above, for detailed information.

- **DO** use common sense and good judgement while communicating with others on the network.
- **DO** abide by all local, state, and federal laws as well as Purdue University regulations and policies. Violators DO get caught!
- **DO** enjoy your connectivity without infringing on other's rights to the same enjoyment. Sending threatening e-mail, excessive amounts of e-mail ("mail bombing" or "SPAM"), or other attacks designed to deprive others of their rights to use the network without interference are not permitted. Violators can be tracked.

- **DON'T** try to start an on-line business. Use of ResNet to promote any commercial or non-Purdue sanctioned activity by e-mail, web site, or any other means is not permitted.
- **DON'T** distribute copyrighted material. Copyrighted material should never be distributed without the permission of the copyright owner. Posting material in any publicly accessible location is considered "intent to distribute". It is illegal to post or make available any program, image, audio or video files containing copyrighted material without the permission of the copyright owner. This includes, but is not limited to, copies of commercial software tools, games, and MP3 files.
- **DON'T** distribute pornography or other illegal materials. Posting material in any publicly accessible location is considered "intent to distribute". Any items that you choose to distribute must conform to all local, state, and federal laws as well as Purdue University regulations and policies.
- **DON'T** download or use pirated software, games, or other illegally posted materials. Be aware that these illegal downloads often contain viruses or other "Trojan horse" software that may give a complete stranger control of your computer and access to all of your files.

4. Required Equipment for IBM Compatible Computers

Some older personal computers are not adequate for use as network clients. Therefore, the following requirements are offered as the minimum for which you may expect reasonable performance from your machine.

System Component	Minimum	Desirable
Processor	Pentium	Pentium or later
RAM	16 Mb	64 Mb or more
Hard Disk Capacity	1 GB	4 GB or more
Operating System	Windows 95	Windows 95 or later

For the greatest ease of installation, we recommend that you have a "Plug-and-Play" (PnP) compatible computer running Windows 98 (or later). Dial-up connections do not require the use of any particular brand of modem. When you purchase a modem, we recommend that you keep your receipt and packaging so that it can be returned if it is proven to be incompatible with your computer (Ask the store manager for their return policy). Although they are usually more expensive, external modems can also be

used for dial-up networking. An external modem will require the use of one of your computer's serial ports.

If you install a modem card in your machine, keep the driver diskette(s) with your machine. You will need the diskette(s) if you experience problems and need to re-install the modem card driver. In order to install the modem card driver for your modem card, you must have your Windows 98 CDROM with you at the time of installation. All modem card driver installations require access to the Windows CDROM. You must use the same CDROM from which your operating system was installed. There are several different versions of the Windows Operating System CDROM. Attempting to use someone else's CDROM for this purpose may corrupt your system files.

5. Installation Guidelines for IBM Compatible Computers

The best sources of detailed instructions for installing your equipment are the manuals that were packaged with the equipment. It is beyond the scope of this guide and not practical to provide detailed instructions for installation of modem cards and associated software drivers. Therefore, the following section below should be treated as a general guide for the process of getting your machine operational. **Your machine must be fully functional prior to attempting the installation of a modem card.** If you are aware of any hardware or software problem existing in your machine, correct the problem before proceeding with this installation!

Hardware Installation

University personnel are not authorized to perform hardware installations in non-university owned computers. Therefore, if you need help with hardware installation, you will need to ask your computer vendor, an authorized service center, a family member, or friend to help you install your modem card. The telephone yellow pages can provide a listing of local computer vendors.

To install the modem card in your machine:

1. Read the documentation supplied with the card. If there is something you do not clearly understand, find someone that can assist you (see "Getting Help" below) before attempting to install the card.
2. Turn off your PC and **disconnect the power.**
3. Remove the cover from the machine.
4. Select an open expansion slot that is of the same type as the card that you are about to install. Refer to your system's manual if you are not sure which slot is the correct type. Remove the screw that secures the filler panel for that slot and remove the panel.

5. Carefully remove the modem card from its package and insert it into the empty slot. Be certain that the card is fully seated into the connector and properly aligned with the back panel. Secure the modem card into place with the screw removed from the filler panel in step 4.

NOTE: One of the most common problems that we have identified is that subscribers have not seated the card completely. When you press hard enough to seat the modem card, you should feel it go down into the socket.

6. Replace the system cover and reconnect the power cable.

Connect a phone line between the modem card and your telephone outlet.

Software Installation

Turn on your PC and let it boot. If you have a "Plug and Play" capable computer running Windows 98, the operating system should automatically detect the new card and install the drivers for it. If you are not running Windows 98, your modem is not PnP capable, or for some other reason your modem was not automatically detected, you will have to run the installation procedure provided by the manufacturer. Read your modem card manual and follow the manufacturer's instructions for installing the drivers for the modem. If you don't have a manual or installation diskette, then you will need to contact the modem card manufacturer. Once the drivers have been installed, you will need to set up the dial-up information.

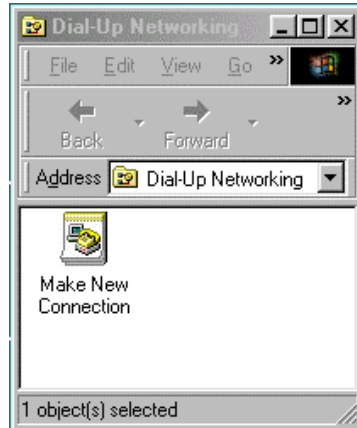
1. Double click on the "**My Computer**" icon typically located in the upper left hand corner of your screen.



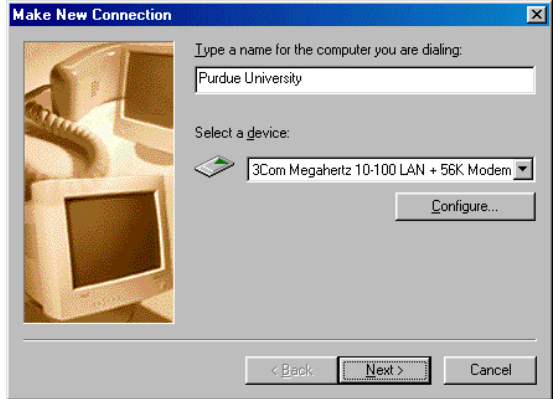
2. Double click on the "**Dial-Up Networking**" icon.



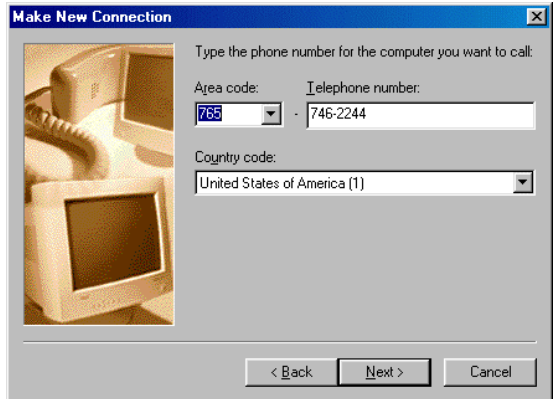
3. Double click on the "**Make New Connection**" icon.



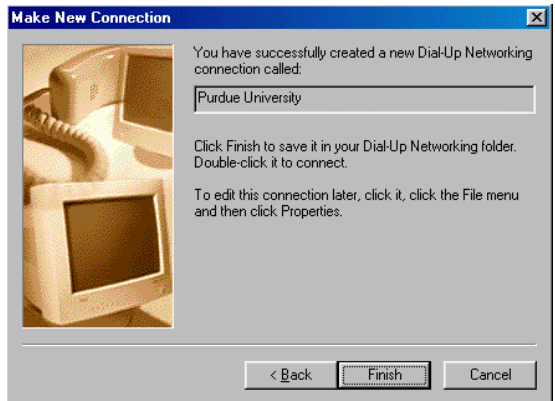
4. Enter "**Purdue University**" for the name of the computer you are dialing. Click on the "**Next**" button.



5. Enter the area code (**765**) and telephone number for the dial-up service **746-2244**. Click on the "**Next**" button.

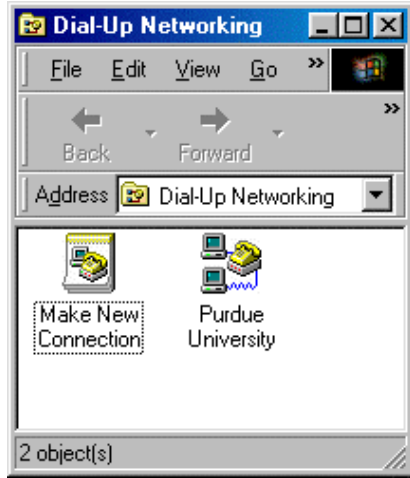


6. Click on the "**Finish**" button.



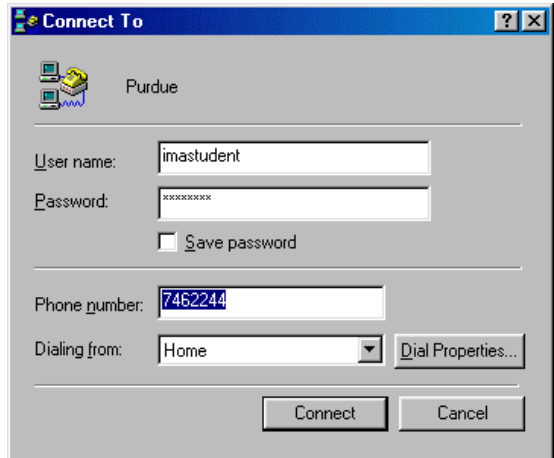
7. After clicking the "Finish" button from the previous step, a "Purdue University" icon will be created in the "Dial-Up Networking" folder.

To start a dial-up session, double click on "**Purdue University**" icon.

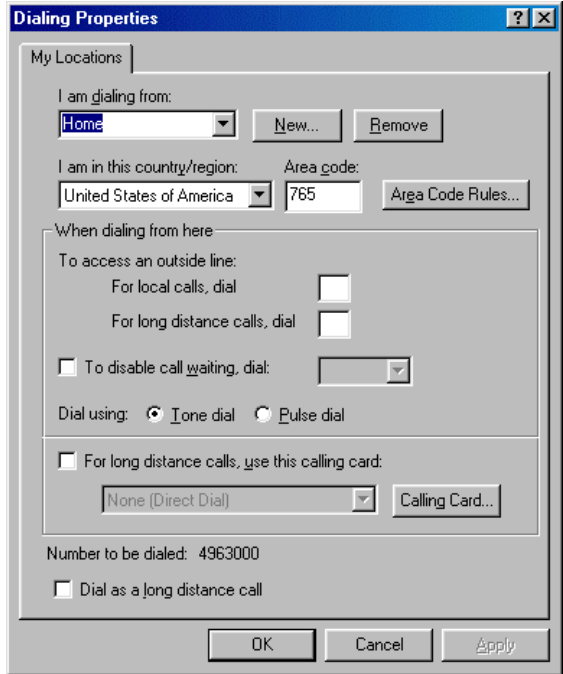


8. After double-clicking on the "Purdue University" icon, you will get the "**Connect To**" dialog box. (as shown to the right)

You should first check your "Dial Up Properties". Click on the "**Dial Up Properties**" button in the lower right portion of the dialog box.



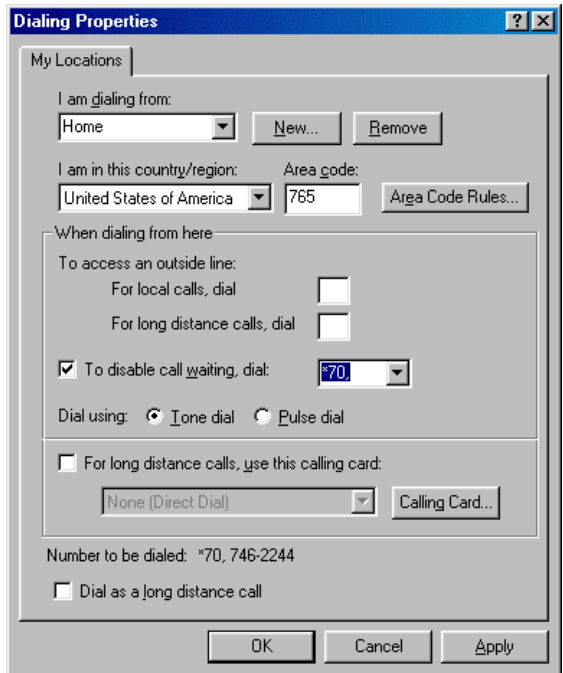
Enter a location name (such as "Home") in the **"I am dialing from:"** box. In the **"When dialing from here"** section, make sure the **"For local calls, dial"** field is empty (unless you need to dial "7" or another number to get an outside line).



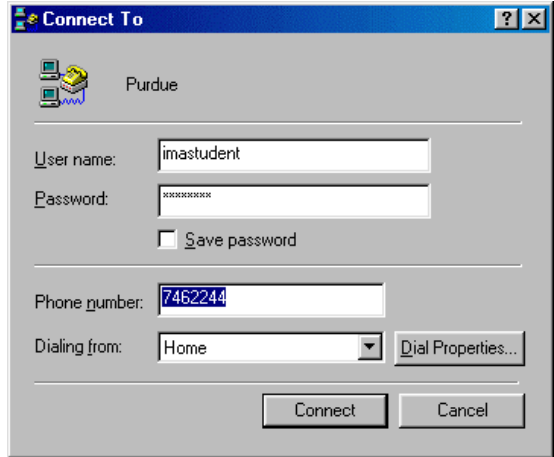
NOTE: If you have call waiting, check **"To disable call waiting, dial"** and select **"*70"**. This will disable call waiting* so your modem connection is not interrupted.

When you are finished, click on the **"OK"** button.

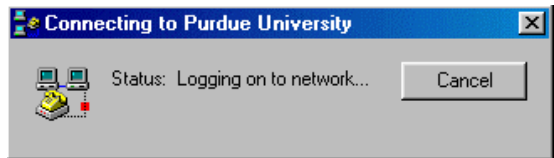
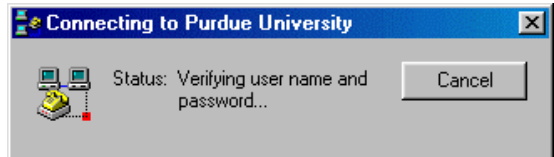
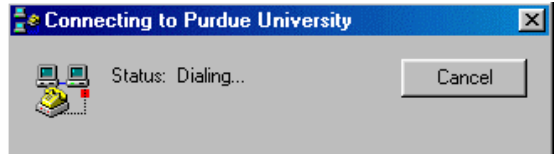
**Check with your service provider for the correct code if you live outside the Verizon service area.*



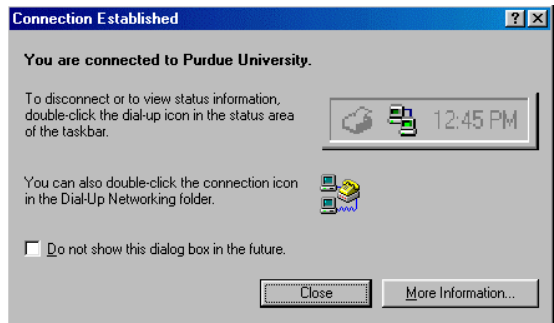
9. Enter your Purdue Career Account user name (login) and password. Then click on the **"Connect"** button.



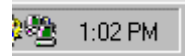
10. The computer will dial, verify user name and password, and establish the network connection.



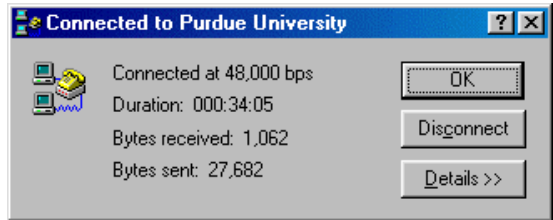
11. You will receive a "Connection Established" dialog box when your computer is connected to Purdue University. Click on the **"Close"** button.



- 12.** To disconnect or to view status information. Double-click on the "dial-up" icon in the status area of the task bar.



IMPORTANT: Once you have established a connection, you have only ninety (90) minutes to complete your work per dial-up session. **No warning will be given. Please save your work frequently.**



Troubleshooting

If you believe that you have correctly installed your modem card and software drivers, but your network connection still does not function, verify that all of the installation steps were performed correctly. Once you are certain that everything is correct, reboot and try the connection again. If your system still refuses to function properly, see "Getting Help" below.

If you are having difficulties connecting to the dial-up service, here are a few things to try:

- 1. Checking the Phone and Modem Connections:** Check the phone line being used by the modem. Plug a phone into the line and check for a dial tone. Also, if your modem card has two "phone" jacks, make sure that the telephone line from the wall to your computer is plugged into the "Line" jack. Plug a phone into the "Phone" jack and check for a dial tone.
- 2. Checking the Software Settings:**
 - From the Windows desktop, click on the **Start** menu, point to **Settings**, and click on **Control Panel**.
 - In the Control Panel window, double click on **Modems**. Click on the **Diagnostics** tab. Windows will list the modems detected for that computer. Select the **Port** in which your modem is listed and click on the **More Info** button. This will run a set of diagnostic tests between your computer and modem. If your

modem is not indicated or if the diagnostic tests fail, you will need to check the modem installation.

- In the Control Panel window, double click on **Network**.
- In the Network window, three components must be properly configured: a client, an adapter, and a protocol.
- The Client: Look to see if **Client for Microsoft Networks** is listed under "The following network components are installed." If your "**Client for Microsoft Networks**" entry is missing:
 - Click on the "**Add**" button in the "**Configuration**" tab of the "Network" window.
 - In the "Select Network Component Type" window, select "**Client**" and click on the **Add** button.
 - In the "Select Network Client" window, select "**Microsoft**" on the left-hand side and "**Client for Microsoft Networks**" on the right-hand side, and then click on the **OK** button.
 - Click on the **CANCEL** button in the "Select Network Component Type" window.
- The Adaptor: Look to see if **Dial-Up Adapter** is listed under "The following network components are installed." If your "**Dial-Up Adapter**" entry is missing:
 - Click on the "**Add**" button in the "**Configuration**" tab of the "Network" window.
 - In the "Select Network Component Type" window, select "**Adapter**" and click on the **Add** button.
 - In the "Select Network Adapters" window, select "**Microsoft**" under Manufacturers and then click on "**Dialup Adapter**" under Network Adapters, and then click on the **OK** button.
 - Click on the **CANCEL** button in the "Select Network Component Type" window.
- The Protocol: Look to see if "**TCP/IP**" or "**TCP/IP -> Dial-Up Adapter**" is listed under Installed Network Components. If your "TCP/IP" entry is missing:
 - Click on the **Add** button in the "**Configuration**" tab of the "Network" window.
 - In the "Select Network Component Type" window, select "**Protocol**" and click on the **Add** button.
 - In the "Select Network Protocol" window, select "**Microsoft**" on the left-hand side and "**TCP/IP**" on the right-hand side, and then click on the **OK** button.
 - Click on the **CANCEL** button in the "Select Network Component Type" window.

- Having other protocols (such as NETBUI and IPX) installed on your machine may cause long delays during network logon when you are dialing up. Remove any unnecessary protocol.
 - If you are satisfied that all three components are now present, click on **OK** in the "Network" window. You will need to reboot if you made any changes.
3. **File and Printer Sharing Problems:** If your "File and printer sharing for Microsoft Networks" is installed, but does not work: You **MUST** enter your login and password when prompted during Windows startup. Do not click on Cancel; otherwise "File and printer sharing for Microsoft Networks" will be disabled.
 4. **Your Password:** If you have not changed your career account password for an extended period of time, the dial-up authentication server may not have your password in its files. You may need to change your password in order to force an update to be sent to the authentication server. Also, the authentication server does not recognize passwords that are longer than eight characters. If your career account password is longer than eight characters, only use the first eight when attempting to dial-up.

6. Required Equipment for Macintosh Computers

Many older models of Mac's are not adequate for use as network clients. Therefore, the following requirements are offered as the minimum for which you may expect reasonable performance from your machine.

System Component	Minimum	Desirable
Processor	68040	Power PC or later
RAM	16 Mb	32 Mb or more
Hard Disk Capacity	200 Mb	1 GB or more
Operating System	System 7.1.2	System 7.5.3 or later

Due to the improved network features of "Open Transport", it is recommended that anyone using a MacOS earlier than System 7.5.3 upgrade to 7.5.3 or later.

Dial-up connections do not require the use of any particular brand of modem. When you purchase a modem, we recommend that you keep your receipt and packaging so that it can be returned if it proves to be incompatible with

your computer. (Ask the store manager for their return policy). Although they are usually more expensive, external modems can also be used for dial-up networking. An external modem will require the use of one of your computer's serial ports.

7. Installation Guidelines for Macintosh Computers

The best sources of detailed instructions for installing your equipment are the manuals that were packaged with the equipment. It is beyond the scope of this guide and not practical to provide detailed instructions for installation of modem cards and associated software drivers. Therefore, the following section below should be treated as a general guide for the process of getting your machine operational. **Your machine must be fully functional prior to attempting the installation of a modem card.** If you are aware of any hardware or software problem existing in your machine, correct the problem before proceeding with this installation!

Hardware Installation

University personnel are not authorized to perform hardware installations in non-university owned computers. Therefore, if you need help with hardware installation, you will need to ask your computer vendor, an authorized service center, a family member, or friend to help you install your modem card. The telephone yellow pages can provide a listing of local computer vendors. To install a modem card in your machine:

1. Read the documentation supplied with the card. If there is something you do not clearly understand, find someone that can assist you (see "Getting Help" below) before attempting to install the card.
2. Turn off your PC and **disconnect the power.**
3. Remove the cover from the machine.
4. Select an open expansion slot that is of the same type as the card that you are about to install. Refer to your system's manual if you are not sure which slot is the correct type. Remove the screw that secures the filler panel for that slot and remove the panel.
5. Carefully remove the modem card from its package and insert it into the empty slot. Be certain that the card is fully seated into the connector and properly aligned with the back panel. Secure the modem card into place with the screw removed from the filler panel in step 4.

NOTE: One of the most common problems that we have identified is that subscribers have not seated the card completely. When you press hard enough to seat the modem card, you should feel it go down into the socket.

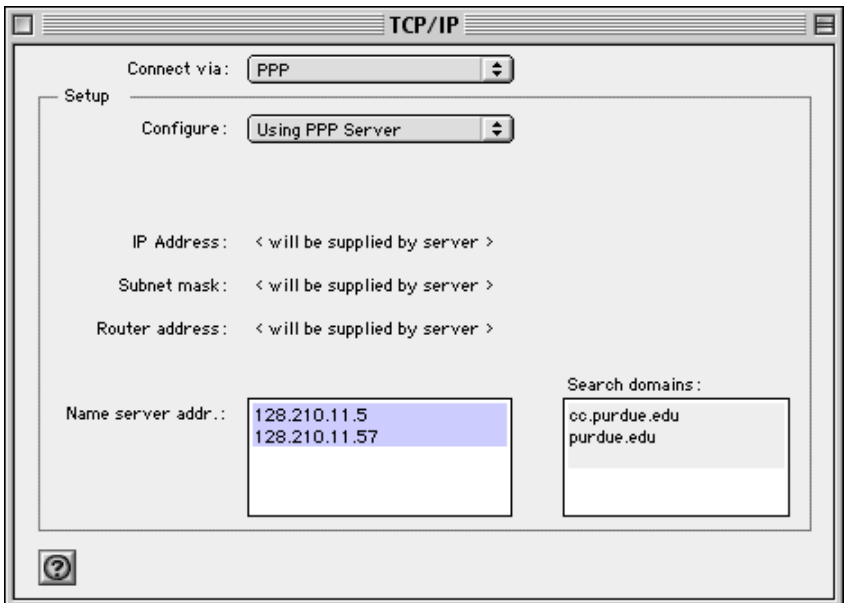
6. Replace the system cover and reconnect the power cable.
7. Connect a phone line between the modem card and your phone outlet.

Software Installation

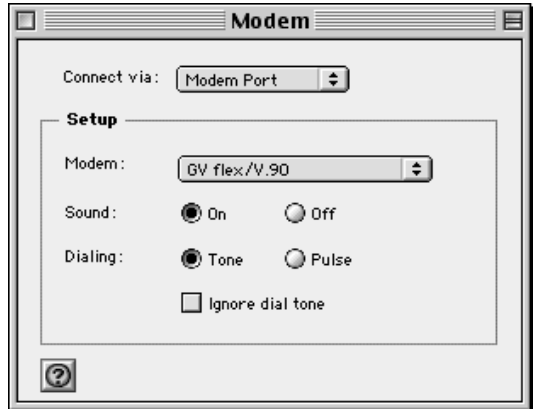
If you installed a modem card in your machine, you may have to install drivers for it as well. Follow the installation instructions provided with the modem card to do this. Machines with an onboard modem will already have drivers installed.

The following directions assume that you have MacOS System 7.5.3 or later. The steps for earlier versions of MacOS are similar, but use control panels called "Network" and "MacTCP" instead of "AppleTalk" and "TCP/IP".

1. From the **Apple Menu**, select **Control Panels** then **TCP/IP**. Set the "Connect via:" to PPP.



- From the **Apple Menu**, select **Control Panels** then **Modem**. Be sure to select the correct modem type, and whether or not you want sound.



- From the **Apple Menu**, select **Control Panels** then **Remote Access**. Under Setup, choose "Registered User" and type your Purdue Career Account user name and password in the "Name" and "Password" fields. For the "Number", type **"746-2244"**.

*If you have call waiting, you will need to enter "*70, 7462244" for the phone number. (The *70 disables call waiting if you live in the Verizon service area. If not, consult your service provider for the correct code).*



- To connect to Purdue, simply click on **"Connect"**. For future connections, you may use the application "Remote Access Status" or use the control strip module called "Remote Access" to connect and disconnect.

Troubleshooting

If you believe that you have correctly installed your modem card and software drivers, but your network connection still does not function, verify that all of the installation steps were performed correctly. Once you are certain that everything is correct, reboot and try the connection again. If your system still refuses to function properly, see "Getting Help" below.

If you are having difficulties connecting to the dial-up service, you may want to try:

1. **Checking the Phone and Modem Connections:** Check the phone line being used by the modem. Plug a phone into the line and check for a dial tone. Also, if your modem card has two "phone" jacks, make sure the phone line from the wall to your computer is plugged into the "Line" jack. Plug a phone into the "Phone" jack and check for a dial tone.
2. **Your Password:** If you have not changed your career account password for an extended period of time, the dial-up authentication server may not have your password in its files. You may need to change your password in order to force an update to be sent to the authentication server. Also, the authentication server does not recognize passwords that are longer than eight characters. If your career account password is longer than eight characters, only use the first eight when attempting to dial-up.

8. Using Your ResNet Dial-up Connection

Your use of the ResNet Connection is subject to local, state, and federal laws as well as Purdue University policies. Please refer to "Dial-up Service Responsibilities" for details.

Networking Software

There are a few programs that most people find useful for taking advantage of their network connection. Two popular tools for TCP/IP networking are Telnet and FTP. Many versions of these programs can be found on Internet web servers and FTP sites. Windows 95/98 includes basic versions of both of these programs that can be found in the "\\WINDOWS" folder.

The other tool that most people find useful is a web browser. The two most popular web browsers are Netscape Navigator and Internet Explorer from Netscape and Microsoft respectively. These programs are readily available in most computer outlets or they can be downloaded from their web sites. Links to these sites are included in the list of web sites below.

A few Web Sites

A short list of web sites, to help you begin exploring the World Wide Web on the Internet, can be found at

<http://www.purdue.edu/PUCC/resnet/Links.html>. If you do not have a web browser installed on your PC, you will have to install one in order to follow the links in this list. Web browsers are typically several megabytes in size; therefore, it will be helpful to use either a CD-ROM or Zip disk to install your browser. It is also possible to download a browser from an FTP site on the Internet. Obviously, you will not be able to access any of these sites from your own machine until you have your ResNet connection installed and operating.

9. Getting Help

If you encounter problems while installing your modem or setting up your machine for use with ResNet Dial-up service, there are several ways for you to obtain assistance:

1. Often, the fastest, easiest way is to ask a friend, who has already succeeded with his or her own machine, to help you with yours. He/she may be able to spot something that you have overlooked.
2. Go to an on-campus instructional lab and consult the off-campus ResNet web site at <http://www.purdue.edu/resnet/off-campus/>.
3. After trying all of the above, you may call PUCC Information Center at **49-49944** and leave your name, number, and the best time to reach you. A ResNet Consultant will return your call and try to assist you by phone.

If the ResNet Consultant cannot help you resolve your problem by phone, you will need to hire a local computer vendor to assist you. Consult the yellow pages of the telephone book for a list of local computer vendors.