Mobile Computing Program at UNC-CH

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Introduction

The Mobile Computing Program aims to provide students, faculty, and staff with access to the campus network and Internet and email services from a variety of locations on the UNC-CH campus. Davis Library is currently being wired with data ports so that you can bring your laptop computer to the library and access network and Internet resources.

In order to participate in this program, you must register with the Mobile Computing Program. To do this, you must:

1. have a laptop computer with an Ethernet card and patch cable.
2. find your Ethernet address.
3. configure your Ethernet card.
4. register your Ethernet address with the program.

Windows NT Users

Windows NT users will not be able to register for the Mobile Computing Program at this time.

Who Does NOT Need to Register: People with Permanent IP Addresses

If you already have a registered IP/network address configured on your machine for use at UNC-CH and you can access the campus network or the Internet elsewhere on campus (for example, your office or your residence hall room), then it is likely that you do NOT need to register with the Mobile Computing Program. **If you have already registered with ResNet you do not need to register again** (for more information about ResNet, see *ResNet: Getting Started* [sv030]). Your existing network address will work in a mobile computing environment **unless** your departmental network is connected to the campus backbone with a router.

In general, router technologies make network addresses very location dependent. If your department is behind a router, your departmentally-assigned network address will not work outside of that building. There are a number of departments/locations on campus that we know are located behind a router. If you normally work in one of these locations, you will undoubtedly need to register with Mobile Computing to obtain a dynamic (DHCP) network address for use in mobile computing at UNC-CH:

*   School of Nursing / Carrington Hall
*   School of Public Health / Rosenau, McGavern-Greenberg
*   School of Law / Van Hecke-Wettach Hall
*   Facilities Management / Giles Horney Bldg
*   School of Medicine / various buildings
*   any off-campus rental property location

If you are unsure of your location, please refer to your departmental network coordinator or the IT Response Center (962-HELP).

Supported Ethernet Cards

In order to access the campus network from public data ports, you must have a laptop computer with an Ethernet card. Users with built-in Ethernet for PCs or Macs may need a 10BaseT Ethernet Transceiver. Ethernet cable (phone wire will not work!) is needed for connecting the card to the data jack. All supported PC and Mac cards and adapters are available for purchase at the RAM Shop of Student Stores.

Supported 3Com 10BaseT Ethernet Cards and Adapters for PCs:

ISA Bus (desktop system): 3Com 3C509-TP
PCI Bus (desktop system): 3Com 3C900-TPO
3Com EtherLink III LAN PC Card
USR Megahertz 33.6 Ethernet/Modem-PC
PCMCIA/PC Card (laptop system): 3Com 3C589-TP
10BaseT Built-in Ethernet: no card purchase required

Users with laptops will require a PCMCIA (PC Card) adapter which requires that your computer have a Type II PCMCIA (PC Card) slot. Check your computer's manual to see if your computer has the proper slot.

Supported Asante 10BaseT Ethernet Cards and Adapters for Macintosh:

Asante FriendlyNet PC Card
Asante NIC-PCI Ethernet Card
Global Village PC Card 56K Faxmodem Ethernet-Mac
USR Megahertz 33.6 Ethernet Modem-Mac
10BaseT Built-in Ethernet: no card purchase required
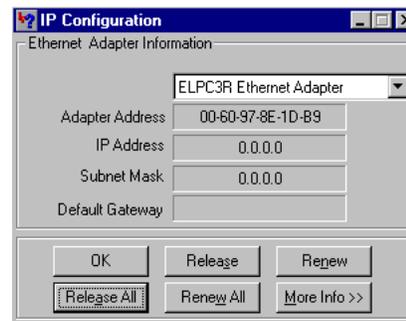
Important Note

Computer and Ethernet card configurations that do not meet the above minimum guidelines may or may not work with the Mobile Computing Program. Because of limited staff resources the program can support only the minimum configurations that are specified above or higher. A computer and/or Ethernet card not meeting the minimum configurations and/or interfering with network performance will be disconnected from the network until the problem is resolved.

Finding your Ethernet Card Address

Before your computer will connect to the campus network through your Ethernet connection, you must register your Ethernet hardware (adapter) address through the Mobile Computing Program. To find out your Ethernet hardware address, follow the instructions below for the platform you are using.
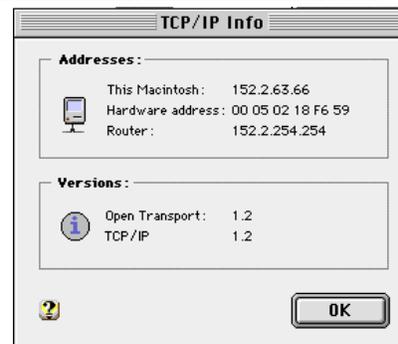
Ethernet Hardware Address: Windows 95/98

If you are using Windows 95 or Windows 98 as the operating system on your personal computer, click on the **Start** menu (lower left-hand corner of your screen). Click on **Run**. You will see a window prompting you to enter the program you want to run; type **WINIPCFG** and click on the **OK** button. You will see a window similar to the one at right. Write down the Adapter Address number (the second field) exactly as it appears. In this example, 00-60-97-8E-1D-B9 is the Ethernet Adapter Address; your Ethernet Adapter Address will be different.

Ethernet Hardware Address: Macintosh

To determine your Ethernet address on a Macintosh computer, pull down the Apple menu and choose **Control Panels**. Select **TCP/IP**. From the **File** menu choose **Get Info**. Write down the **Hardware address** number (the second set of numbers in the Addresses section) exactly as it appears. In this example, 00 05 02 18 F6 59 is the network card (Ethernet hardware adapter) address; your adapter address will be different from the one in the example. Click on **OK** to close the window.

Ethernet Card Configuration

The next step is to configure your Ethernet card so that your computer will work with the UNC-CH network; in general, this step identifies you to the network system. Follow the instructions below for the platform you are using.

Ethernet Card Configuration: Windows 95/98

You may need to use your Windows 95/98 diskettes or CD-ROM while configuring the TCPIP networking software. Be sure to have them handy!

Click on the **Start** menu (lower, left-hand corner of your screen). Highlight **Settings** and then choose **Control Panel**. In the Control Panel window, double click on the **Network** icon. In the Network window, select the **3Com** entry and click on **Add**. In the **Select Network Component Type** window, choose **Protocol** and then click on **Add**. In the next window, you will see a box labeled **Manufacturers**: and a box labeled **Network Protocols:**.

Click on **Microsoft** from the list in the Manufacturers: box. Click on **TCP/IP** from the list in the Network Protocols: box and click on **OK**.

In the Network control panel, double click on TCP/IP, and for each panel enter the values indicated:

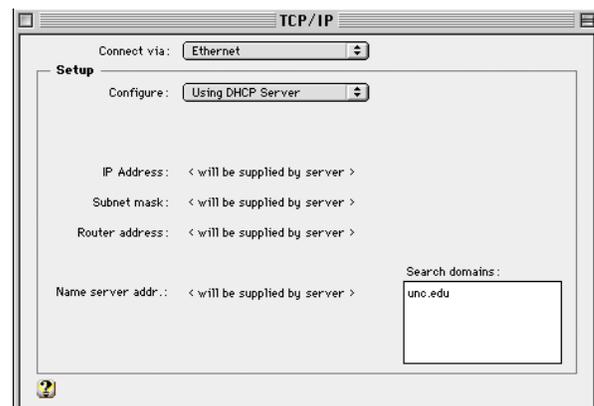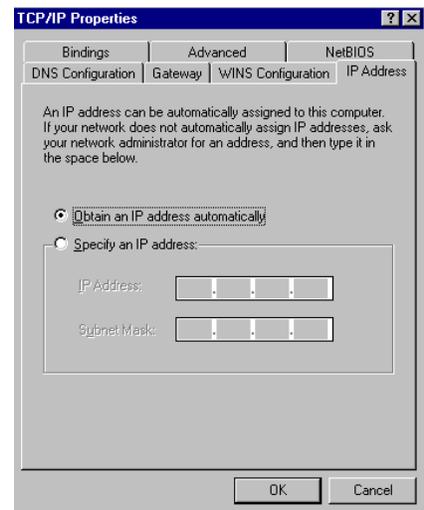| Panel Name	Select Option
IP Address	Obtain IP Address Automatically
WINS Configuration	Disable WINS Resolution
DNS Configuration	Enable DNS Type your userID for **Host** Type **unc.edu** for **Domain**

Restart your computer so the changes will take effect.
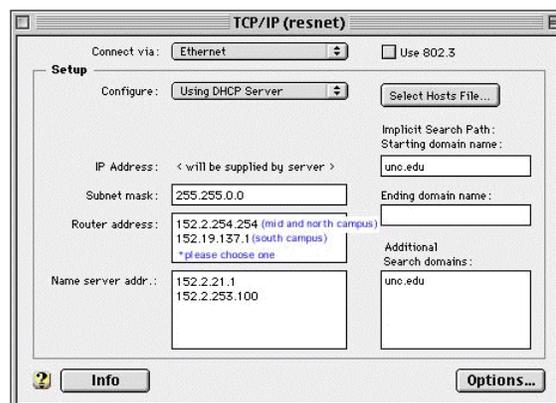
Ethernet Card Configuration: Macintosh

• On your Macintosh, pull down the **Apple** menu.
• Highlight **Control Panels**.
• Highlight **TCP/IP** and release your mouse button.
• The TCP/IP window will appear.
• Pull down the **Edit** menu, and select **User Mode**.
• In the User Mode window, select **Advanced**, then click on **OK**.

Your TCP/IP window will now look like the one on page four. Only it won't have "resnet" in parentheses, unless you've created a new TCP/IP configuration entitled, "resent."

• In the **Connect Via:** section, pull down the menu and select **Ethernet**.
• In the **Configure:** section, pull down the menu and select **Using DHCP Server**.
• In the **Subnet Mask:** section, enter 255.255.0.0

- In the **Router Address:** section, you will need to choose ONE of the following addresses, depending on where you live:
  1. South Campus Residence Halls (Ehaus, Hinton James, Craige, Morrison) 152.19.137.1
  2. All other Halls 152.2.254.254
- In the **Name Server Addr:** section, enter both 152.2.21.1 AND 152.2.253.100
- In the **Implicit Search Path:** section, under **Starting Domain Name:**, enter **unc.edu**
- In the **Additional Search Domains:** section, enter **unc.edu**
- Click on the **Options...** button.
- In the TCP/IP Options window, make sure that **Active** is selected, and that **Load only when needed** is NOT selected.
- Click on the **OK** button.

You will then be returned to the TCP/IP window.

- Click once in the **Close** box (top left-hand corner of the window).
- You'll be prompted if you want to save the changes. Click once on the **Save** button.
- Restart your Macintosh so that the configuration changes will take effect.

Registering with Mobile Computing

After you have configured your Ethernet card, you will need to register your computer with the Mobile Computing Program. Go to the Web page **https://bes.isis.unc.edu/cgi-bin/atn_id/mocopu.pl** and fill out the required information.

Software

Once you are connected to the campus network, you might want to have software like Netscape Navigator, Internet Explorer, Telnet, or Siren Mail to browse the Web and send email. You can get these programs from the IT Response Center in Suite 300 of Wilson Library.

Using Laptops in Davis Library

Laptops are now available for checkout for student, faculty, and staff use within Davis Library. Checkout time is limited to two hours. The laptops are for use only within the Library. Applications include Netscape, Office 97, and Virus Scan.

To find out about the location of data connections in the library and information on the laptop checkout program, see the URL

http://www.lib.unc.edu/circ/networking.html