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# Getting Connected in the Residence Halls

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\*OIT offers **RADS** (Rutgers Antivirus Delivery Service) for **FREE** driven by all new antivirus and anti-spyware technology from Trend Micro. RADS automatically keeps your Trend Micro antivirus software up-to-date. Visit <http://rads.rutgers.edu> for more information. RADS 5 is compatible with all Microsoft operating systems.. Macintosh OS X users can use ClamXav. Visit <http://mssg.rutgers.edu/documentation/antivirus/> for more information. OIT does not offer antivirus support for Macintosh operating systems prior to OS X.

# 1 Check Minimum Specifications

## PC

- Microsoft Windows XP or newer
- Web browser: Internet Explorer 7 or newer, or Firefox
- Up-to-date antivirus program\*
- Integrated Ethernet or 10/100BaseT Ethernet card†

## Macintosh

- Macintosh OS X
- Web browser: Safari, Firefox, or any Web browser
- Up-to-date antivirus program\*
- Integrated Ethernet or 10/100 BaseT Ethernet card†

†OIT supports most Ethernet cards except **RealTek** and **Netgear 311 and 312**. Such cards are not guaranteed to provide consistent connectivity on the Residential Network. Network cards may be purchased from Rutgers Computer Repair (<http://computerrepair.rutgers.edu>). OIT recommends Linksys, 3Com, D-Link, Intel, or Netgear 210, 310, or 410 network cards.

# 2 Setup and Configuration

Connect your computer's Ethernet cable to the data jack.

Data jacks are usually black in color and labeled "D". Jacks labeled "V" are typically white in color and are used to connect a telephone.

Configure your computer to obtain an IP address automatically using DHCP (Dynamic Host Configuration Protocol).

Windows XP (Default/Category view).....See page 2  
 Windows XP (Classic view) and Windows 2000.....See page 3  
 Windows Vista.....See page 4  
 Macintosh OS X.....See page 5



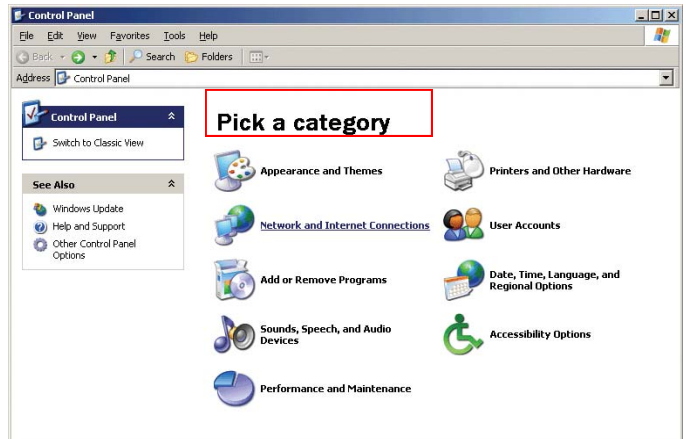
# 3 Gaining Internet Access

Register your computer for Internet access. Point a web browser to <http://resnet.rutgers.edu> and follow the instructions located on page 5.

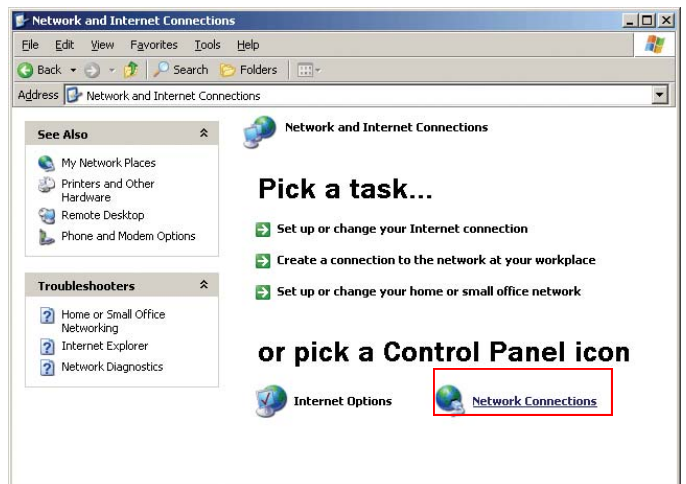
Detailed instructions are located on page 5.

## Configuring Windows XP for DHCP (Category View)

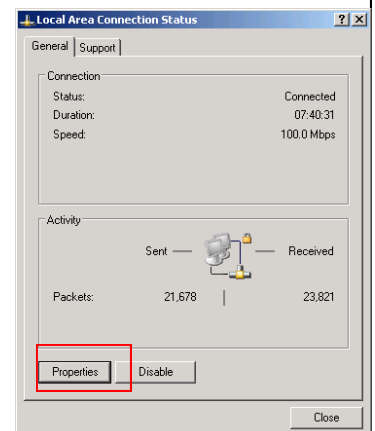
1. Click on the **Start** button and select **Control Panel**. In the resulting window, click the **Network and Internet Connections** icon.



2. Select the **Network Connections** icon.

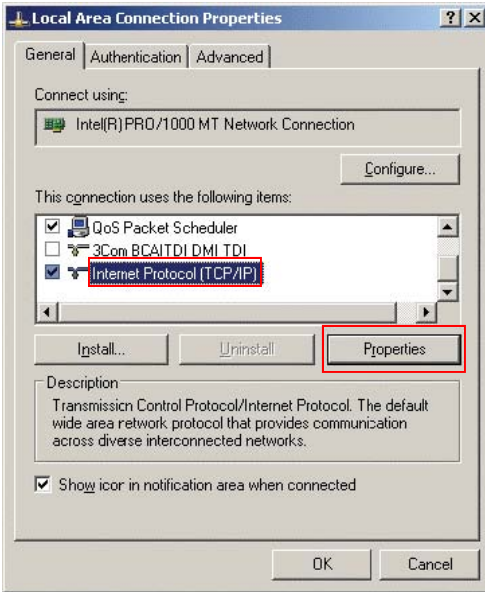


3. Double-click the **Local Area Connection** icon corresponding to your network hardware to bring up the *Local Area Connection Status* window.

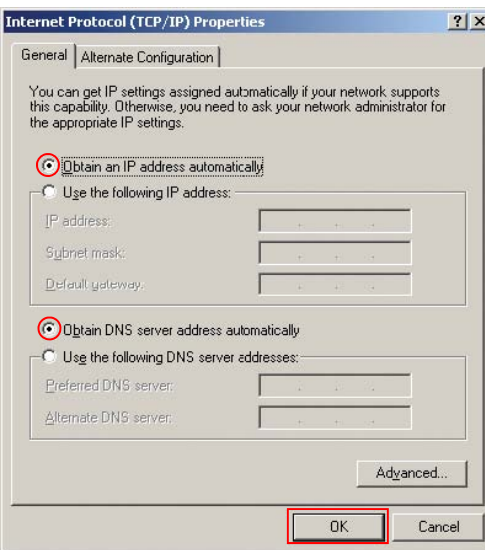


4. Click the **Properties** button.

5. In the *Local Area Connection Properties* window, locate the entry labeled **Internet Protocol (TCP/IP)**. Click to select it, then click on the **Properties** button.



6. Choose the options for **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



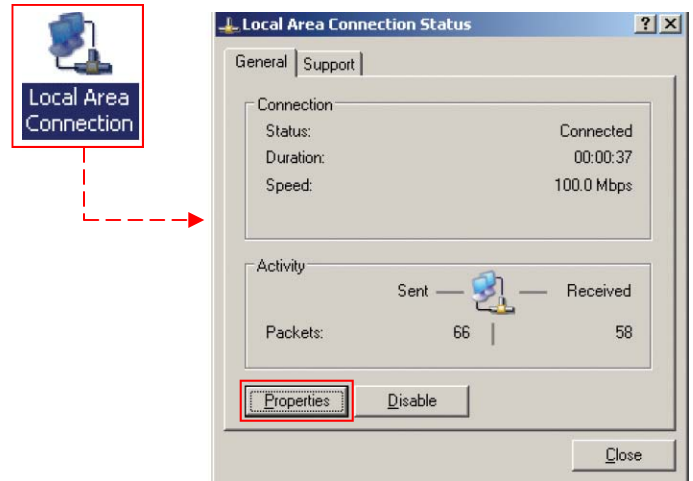
7. Click **OK** to close the window, click **OK** in the *Local Area Connection Properties* window, and click **OK** in the *Local Area Connection Status* window. Proceed to page 5 to register your computer.

### Configuring Windows XP (Classic View) or Windows 2000 for DHCP

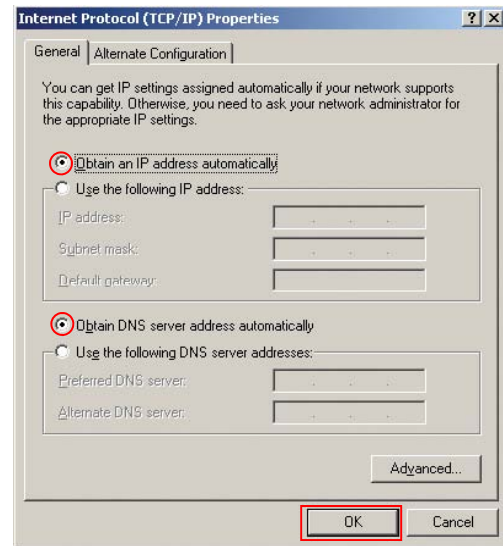
1. Click the **Start** menu and select **Settings**, then **Control Panel**. From the *Control Panel* double-click the **Network Connections** icon (**Network and Dial-up connections**) in Windows 2000.



2. Double-click on the **Local Area Connection** icon corresponding to your Ethernet card to bring up the *Local Area Connection Status* window. Click on **Properties**.



3. In the *Local Area Connection Properties* window, locate the entry labeled **Internet Protocol (TCP/IP)**. Click to select it, then click on the **Properties** button.

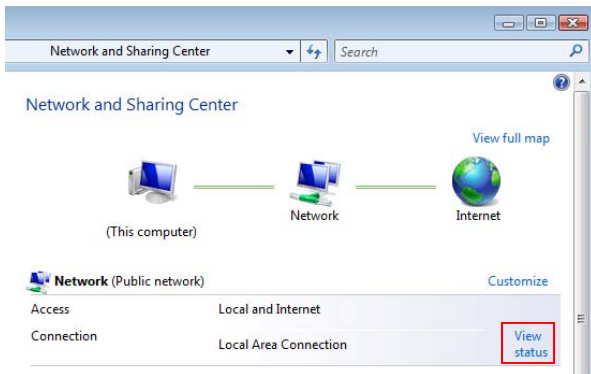


4. Choose the options for **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

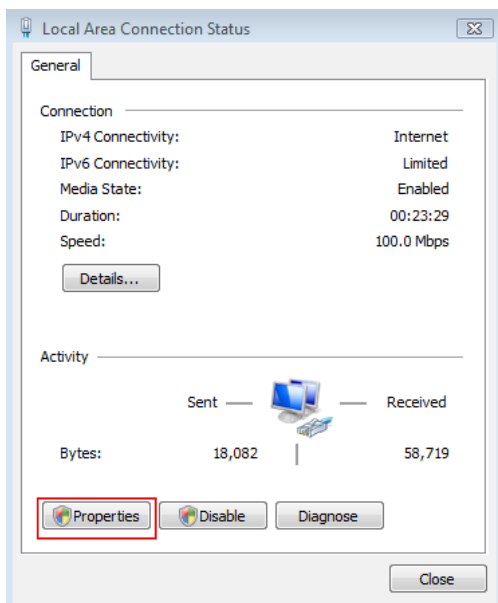
5. Click **OK** to close the window, click **OK** in the *Local Area Connection Properties* window, and click **OK** in the *Local Area Connection Status* window. Proceed to page 5 to register your computer.

## Configuring Windows Vista for DHCP

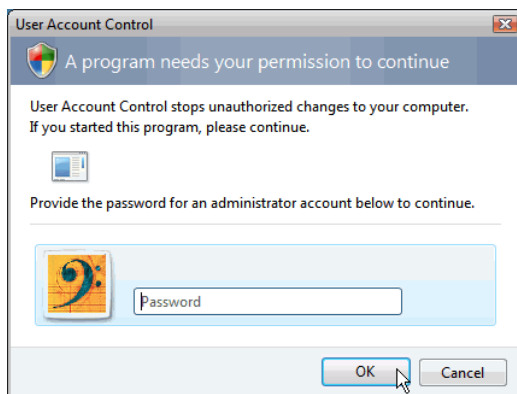
1. Click on the **Start** button and select **Network**. In the resulting window, click **Network and Sharing Center**. In the *Network and Sharing Center* window, click the **View Status** hyperlink to the right of the **Local Area Connection** corresponding to your network hardware.



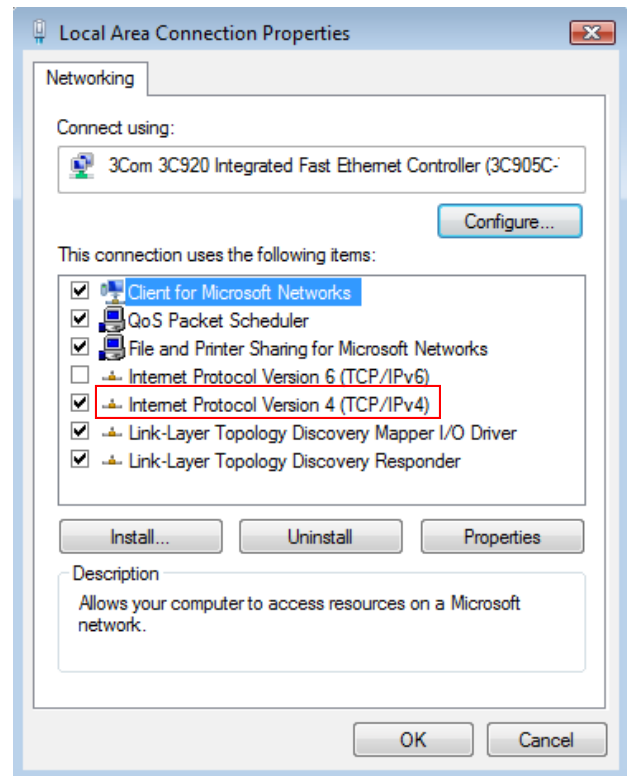
2. The *Local Area Connection Status* window will appear. Click on the **Properties** button.



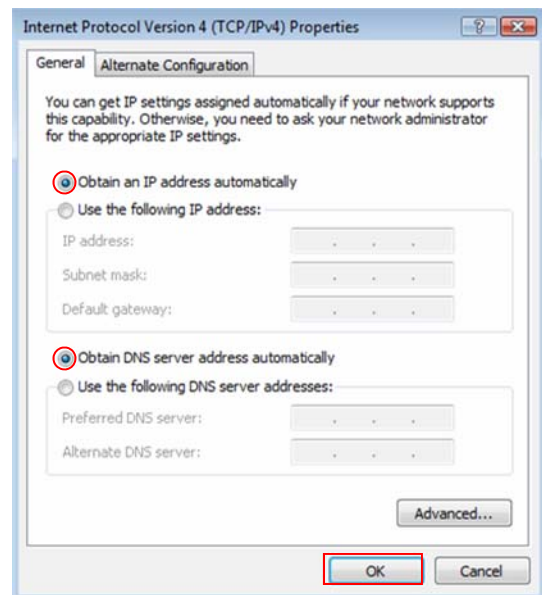
3. If Windows prompts you, enter the password for an account with administrator privileges, and click **OK**. If you are already logged in as an administrator (or administrator equivalent), simply click the **Continue** button to bring up the *Local Area Connection Properties* window.



4. Uncheck **Internet Protocol Version 6 (TCP/IPv6)**. Double-click on **Internet Protocol Version 4 (TCP/IPv4)**.



5. In the *Internet Protocol Version 4 (TCP/IPv4) Properties* window, select the radio buttons for **Obtain an IP address automatically** and **Obtain DNS server address automatically**.



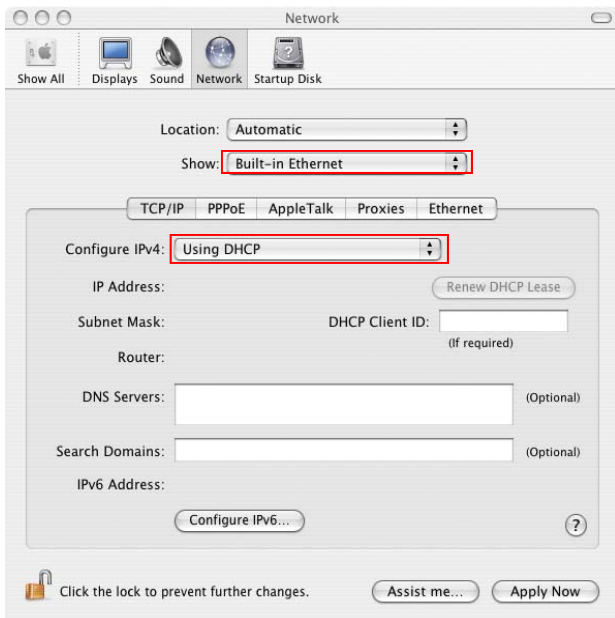
6. Click **OK** to close the window, click **OK** to close the *Properties* window, and click **Close** in the *Local Area Connection Status* window. Proceed to page 5 to register your computer.

## Configuring Macintosh OS X for DHCP

1. Click on the **Apple** menu and select **System Preferences**. In the *System Preferences* window, select the **Network** icon from the *Internet and Network* category.



2. The *Network* window will appear. From the **Show** dropdown menu, choose **Built-in Ethernet**. From the **TCP/IP** tab, set the **Configure** dropdown menu to **Using DHCP**. Register your computer using the instructions in the following section.



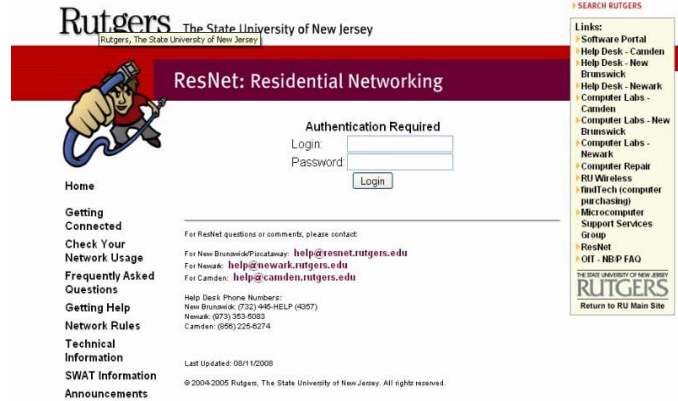
## 4 Registration Details

1. Point a web browser to <http://resnet.rutgers.edu>. Click on the **Register Your Computer Now** link and follow the instructions. In order to complete this process, you **MUST**:

- Register from your own dorm room. Attempting to register from a friend's room or a lounge may cause a problem.
- Connect your computer to the room's data jack with a Cat 5 Ethernet cable.
- Have your wireless turned off.



2. Enter your Rutgers NetID and password and click **Login**.



3. The system will ask you to enter your current email and telephone number. Please verify that this information is entered accurately.

4. After receiving notification that registration was successful, you will receive full access to the Internet in 2 to 4 hours. If you receive an **Error** message, the system provides a brief description of the problem and a ticket number. If you need assistance in solving the problem, record your ticket number and contact your local computing help desk. See page 6 for contact phone numbers.

## 5 Understanding Bandwidth Limits

Each dorm resident is permitted to **download 4096MB** and **upload 2048MB** to the Internet (outside Rutgers) in any given seven-day sliding window period. **Downloading or uploading in excess of either limit will automatically suspend your computer's connection to the Internet.** You will retain access to the university's internal network and its resources ([http://\\*.rutgers.edu](http://*.rutgers.edu)) regardless of this restriction.

Traffic to and from sites within the Rutgers network ([http://\\*.rutgers.edu](http://*.rutgers.edu)) does **not** count toward the upload or download limits.

Each day following enforcement of the restriction, the system will reevaluate your traffic for the previous seven days. When your total traffic drops below the upload and download bandwidth quotas, the restriction will be lifted, and your computer will regain full access to the Internet, including sites outside the Rutgers network.

Each resident is responsible for all traffic occurring on his or her IP address. Utilizing bandwidth-intensive applications such as file-sharing clients (e.g. Kazaa, Limewire, AOL Instant Messenger's file transfer, etc), webcams, audio and video streams, voice over IP (e.g. Skype), may cause you to exceed your bandwidth quota. The only way to guarantee you will not exceed the bandwidth quota is to remove such applications from your computer. Please note that the bandwidth enforcement process is automated. As per the Acceptable Use Policy, to which all residents must agree during registration, **ResNet is unable to make exceptions to the bandwidth policy.**

# 6

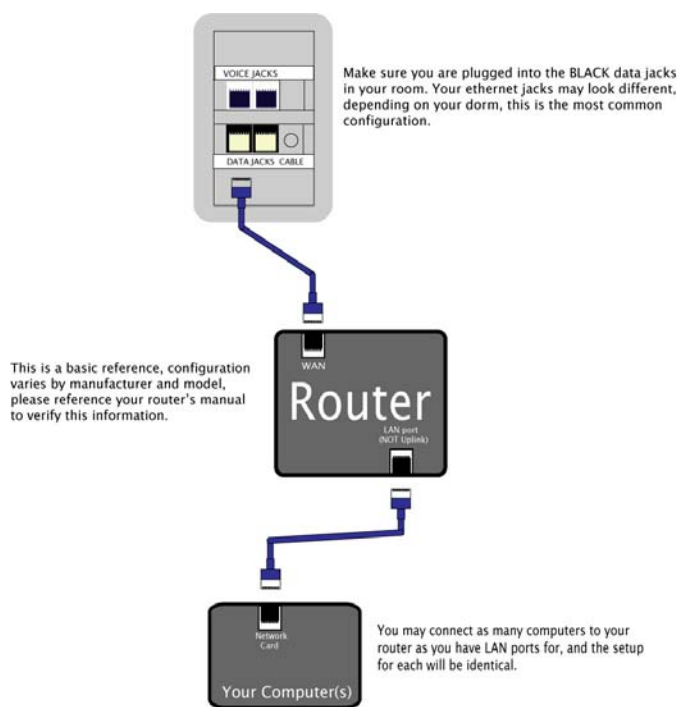
## Router Policy

ResNet provides one IP address to each resident, which is sufficient to register one device, e.g. a desktop computer, laptop computer, or video game system. To utilize more than one network device, residents must supply and utilize a router. Because of the variety of hardware available, **the Help Desk provides limited support for personal routers.** We will assist you in basic setup and security of your router, and ensuring that you do not interfere with RNWireless. For more advanced troubleshooting, please consult the manufacturer's documentation.

If you choose to use a router, each device connected to it (wired or wireless) will contribute to the overall upload and download limits of the student who registered the router. **You are responsible for all network traffic associated with your IP address.** (For bandwidth limitations, see the Bandwidth Policy on page 5.)

### Basic Router Setup

1. Ensure the Router is connected as per the diagram below. Connecting a port other than the one labeled 'WAN' to the data jack will prevent you from getting connected.



2. Connect to your Router as per the manufacturer's documentation. Most manufacturers will require that you connect the router with an Ethernet cable before it can be used wirelessly, and some require you to use software included with the router.

3. If you have not yet registered a computer, follow the steps on page 5 from a computer connected to the router. If you have already registered, contact the Help Desk at 973-353-5083 and we will assist you in updating your registration. To ensure prompt service, please consult the manufacturer's documentation and obtain the router's MAC address before calling.

4. Ensure that your router does not interfere with RNWireless. Do not set your SSID to 'RNWireless' or anything close to this. In addition, if you are using an 802.11g router, set your wireless radio to channel 1.

### Tips on Securing Your Wireless Router

Along with the convenience afforded by wireless networking comes a host of risks, many of which can be eliminated by properly securing your wireless equipment. Consider the following suggestions when setting up your wireless router:

#### 1. Change the system ID.

Wireless devices ship with a network name called the SSID or ESSID (Extended Service Set Identifier). Change this ID from its default setting to something unique. Avoid IDs that are easy for others to guess such as your name, NetID, or residence hall room information.

#### 2. Disable SSID broadcasting.

Having your access point broadcast its presence is an invitation for hackers. Refer to your hardware manual to learn how to disable the broadcasting feature.

#### 3. Enable MAC address filtering.

Each wireless network card contains a unique identifier called a MAC or Hardware Address. Most routers can be configured to accept connections from computers broadcasting a particular MAC address. In this manner, you may specify which computers may gain access to the router (e.g., yours and a roommate's).

#### 4. Enable encryption.

It is possible for malicious users to intercept private communications over a wireless network. Most new wireless devices are equipped with WPA (Wifi Protected Access), which "scrambles" these transmissions, making the data useless to anyone other than the intended recipient. Older wireless devices may utilize WEP (Wired Equivalent Privacy) to encrypt communications. While safer than no encryption, WEP contains certain flaws that limit its efficacy. Utilize WPA if your equipment supports it.

#### 5. Change default usernames and passwords.

Most routers require a username and password to configure. Like the SSID, most equipment ships with a default username and password. Change this information from the default settings to something unique. Avoid passwords that are easy for others to guess such as your name, NetID, or residence hall room information.

**For more information on routers and wireless, please visit:** <http://resnet.rutgers.edu> and click on **Technical Information.**

# 7

## RNWireless

Most residence hall lounges are now equipped with RNWireless (Rutgers Newark Wireless) access points. You may be able to access the service from your room, depending on how far you are from an access point.

To connect to RN Wireless, set your wireless card to connect to the network with SSID 'NCS-WLAN'. Open a browser, and attempt to navigate to any page. You will be redirected to the RNWireless login page. If you are not redirected contact the Help Desk at 973-353-5083.

Rutgers University Wireless LAN



Rutgers University - Newark Computing Services

# 8

## Getting Help

### Help Desk Locations and Contact Information

**Please note: You must be in your room and at your computer at the time of your call in order to troubleshoot Residential Network problems.**

**Newark:**

Hill Hall, Room 109  
Phone: (973) 353-5083  
Email: help@newark.rutgers.edu

**New Brunswick:**

Hill Center, Room 013, Busch Campus  
Phone: (732) 445-HELP (4357)  
Email: help@resnet.rutgers.edu

**Camden:**

Business & Science Building, Room 132 or 109  
Phone: (856) 225-6274  
Email: help@camden.rutgers.edu

**Don't lose your Internet connectivity by going over your bandwidth!**

**Check your network utilization at:**

[http://www.td.rutgers.edu/tools/Network\\_Utilization/index.php](http://www.td.rutgers.edu/tools/Network_Utilization/index.php)

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