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1. To configure the IP address for a computer connected to LAN and to configure network parameters of a web browser for the same computer.

2. To plan IPv6 address scheme for a local area network comprising of ‘n’ terminals.

3. To develop programs for implementing / simulating routing algorithms for Adhoc networks.

4. To install any one open source packet capture software like wire shark etc.

5. To configure Wireless Local Loop

6. To plan Personal Area Network.

7. To configure WLAN.

8. To configure Adhoc networks.

9. To install and configure wireless access points.
<table>
<thead>
<tr>
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<th>Topic</th>
</tr>
</thead>
<tbody>
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</tr>
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</tr>
<tr>
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</tr>
<tr>
<td>10.</td>
<td>*How to configure ftp on server 2003</td>
</tr>
</tbody>
</table>

*Learning Beyond Syllabus How to configure ftp on server 2003
AIM: To configure the IP address for a computer connected to LAN and to configure network parameters of a web browser for the same computer.

Configure Your PC to a Local Area Network

Step 1

First and foremost, attach the RJ-45 connector to the Ethernet network port on your PC.
Step 2

Right click on ‘My Network Places’ icons located on the desktop and in the popup menu click on properties. You can also find it through the My Computer window. Alternatively, click ‘Start’ from the taskbar and right click on ‘My Network Places’ option from the popup menu. In the menu that appears select ‘Properties’

Step 3

In the new Window that appears, under the LAN or High-Speed internet, right on ‘Local Area Connection’ and select properties in the popup menu that appears.

Step 4
In the local area connection dialog box that appears under the connection box, scroll down and select ‘Internet Protocol (TCP/IP)’ and click on ‘Properties.

**Step 5**

To obtain the settings automatically, select ‘Obtain an IP Address Automatically’. However, to use this option, you will need to have a DHCP server that will function in allocating and managing IP address to ensure that there are no conflicts. To configure your PC to the network manually, follow the procedures listed below:

Click the option ‘Use the following IP Address’. Enter the IP address to use. It is important that you consult your network administrator on the IP to use so as to avoid conflicts occurring in the network, i.e. a situation where two PCs have similar IP addresses. Thereafter, enter the Subnet Mask and Default gateway. *The subnet mask is used to identify the network level you are in while the default gateway identifies the router connection.*

Thereafter, enter the Preferred DNS server and Alternate DNS server address
Click ‘OK’ to accept the changes or ‘cancel’ to exit the setup.

Check the option ‘Show icon in notification area when connected’ and click ‘OK’. This will enable you to know if the local area connection is connected or disconnected.

Configure network parameters

If you want to browse a little more anonymously, or your business requires you to connect to their server, you may be considering connecting to the internet through a proxy. In order to connect to your chosen proxy server, you will need to adjust some settings in your Firefox browser. Read this guide to find out how.
2 Open the Advanced category. It is on the right end of the category list. Click on the Network tab.

3 Click the Settings button. This will open the Connection Settings window.
4 Choose “Manual proxy configuration”. This will allow you to enter information in the fields below.

Enter your proxy information. Enter the proxy server that you are connecting to in the “HTTP Proxy” field. If you need to enter a specific port, enter it into the “Port” field.

Then press ok button.
AIM: To plan IPv6 address scheme for a local area network comprising of ‘n’ terminals.

One of the main benefits of Internet Protocol version 6 (IPv6) over previously used Internet Protocol version 4 (IPv4) is the large address-space that contains (addressing) information to route packets for the next generation Internet. IPv6 supports 128-bit address space and can potentially support 2128 or 3.4W1038 unique IP addresses (as opposed to 32-bit address space of IPv4). With this large address-space scheme, IPv6 has the capability to provide unique addresses to each and every device or node attached to the Internet.

To configure an Ethernet line description for IPv6, you must use the IPv6 Configuration wizard in iSeries Navigator. IPv6 may only be configured from iSeries Navigator, and may not be configured from the character-based interface.

The wizard requires the name of the hardware communications resource on the server on which you will configure IPv6; for example, CMN01. This must be either a 2838 or 2849 Ethernet adapter that is not currently configured for IPv4.

To use the IPv6 Configuration wizard, follow these steps:

1. In iSeries Navigator, select your server —> Network —> TCP/IP Configuration.
2. Right-click IPv6, select IPv6 Configuration, and follow the wizard’s instructions to configure an Ethernet line for IPv6.

Windows 7 enables IPv6 by default. Should your IPv6 connection not automatically work, try:
1. Right-click the Wi-Fi icon in the system tray and open Network and Sharing Center.
2. Click on the adapter you are using to get a Status window.
3. Click on Properties.
4. Select Internet Protocol Version 6 (TCP/IP) and choose Properties.
5. Choose "Obtain an IPv6 address automatically."
6. Press OK and then close out of the Properties and Network and Sharing Center.

**Microsoft Windows 7**

Windows 7 enables IPv6 by default. Should your IPv6 connection not automatically work, try:

1. Right-click the Wi-Fi icon in the system tray and open *Network and Sharing Center*.

2. Click on the adapter you are using to get a Status window.
3. Click on Properties.

5. Choose "Obtain an IPv6 address automatically."

6. Press OK and then close out of the Properties and Network and Sharing Center.
AIM: To develop programs for implementing / simulating routing algorithms for Adhoc networks.

A wireless ad hoc network is a decentralized type of wireless network. The network is ad hoc because it does not rely on a pre existing infrastructure, such as routers in wired networks or access points in managed wireless networks.

Create an Ad-Hoc Network on Windows 7

The first step in the process requires that we start at the Network and Sharing center as shown in Figure 1 below. You can access the Windows 7 Networking and Sharing Center through your control panel.

Now, from this point, there are two different ways to setup an Ad-Hoc network:

- one uses the Setup a connection or network wizard
- the other utilizes the Manage Wireless Networks control panel

The choice of which one to use depends on your preference. The setup of the Ad-Hoc network only needs to be performed on the first computer being configured.

Let’s review the steps using both of the setup methods.

Ad-Hoc Network Configuration using the Setup a Connection or Network Wizard

When using the wizard method, the first task to perform requires the selection of ‘Set up a new connection or network’ option from the main window; this is shown in Figure 1.
Creating an ad-hoc network in Windows 7 Starter,

1. Go to Start Menu
2. Click on Search - enter the word “ad-hoc”
3. Click “Set up an ad-hoc (computer-to-computer) network”
4. This brings up the window: Set up a Wireless ad-hoc network; Click Next
5. Create a name for the ad-hoc network (ex. Type Ella). This must be the same on Both computers.
6. Set security type to “No authentication (Open)”
7. Leave Security Key blank
8. Click box “Save this network”
9. Click Next. The prompt will say Setting up the Type Ella network”
10. The next screen should say “The Type Ella network is ready to use
AIM: To install any one open source packet capture software like wireshark etc.

Step 1 – Download Wireshark

http://www.wireshark.org/download.html

Run as Administrator

What's on your network? We're having a conversation.

Download Wireshark

The current stable release of Wireshark is 1.10.0. development release (1.10.0rc2) and documentation.

Stable Release (1.10.0)

Windows Installer (64-bit)

- Windows Installer (32-bit)
- Windows U3 (32-bit)
- Windows PortableApps (32-bit)
- OS X 10.6 and later Intel 64-bit .dmg
- OS X 10.5 and later Intel 32-bit .dmg
- Source Code
Step 2 - Install

Next

I Agree
Disk space needed is 112 mb

Choose if Start Menu or Desktop Icon is preferred
By default it installs into the directory `c:\ Program Files\ Wireshark`

*Install WinPcap – as Wireshark won’t work otherwise*
Wait for the files to extract….

**Step 2 – Install WinPcap**

Wireshark won’t install unless WinPcap is installed. Watch out for a second install to be launched. If you’re not looking for it, you could miss it.

Next
I Agree

Install

Automatically start the WinPcap driver at boot time
Finish

That’s it!

Wireshark will now completely install for you.

If the install hangs half way through, it’s because WinPcap has not been installed yet.

Next
Installation Complete
Setup was completed successfully.

Completed
- Extract: reordercap.exe
- Output folder: C:\Program Files\Wireshark
- Extract: capinfos.exe
- Extract: capinfos.html
- Output folder: C:\Program Files\Wireshark
- Extract: rawshark.exe
- Extract: rawshark.html
- Output folder: C:\Program Files\Wireshark
- Extract: user-guide.chm
- Completed

Nullsoft Install System v2.46

Completed the Wireshark 1.10.0 (64-bit) Setup Wizard
Wireshark 1.10.0 (64-bit) has been installed on your computer.
Click Finish to close this wizard.

- Run Wireshark 1.10.0 (64-bit)
- Show News

Finish Cancel
Launch Wireshark

Start > All Programs > Wireshark Icon

Wireshark launches

Select your Interface (ie Wired or Wireless)

Then Capture Options

Promiscuous Mode > Start

Promiscuous mode means that it picks up packets and data for all devices on the network
That’s it – Wireshark will now listen in to all transmissions

Wireshark launches – by default it’s split into 3 panes

The top pane shows IP’s & protocols

You can filter these results by protocol and by IP, and I’ll cover that another time. For now, select the Protocol header – and your results will sort by protocol.
ANALYSE > Display Filter

HTTP

Select HTTP

OK
HTTP ONLY is now displayed

It’s File > Quit to exit.
AIM: To configure Wireless Local Loop.

Wireless local loop (WLL), is a term for the use of a wireless communications link as the "last mile" connection for delivering plain old Telephone service (POTS) and/or broadband Internet to telecommunications customers. Various Types of WLL systems and technologies exist.

- **Narrowband** – offers a replacement for existing telephony Services
- **Broadband** – provides high-speed two-way voice and data Service

Install BSNL EVDO Wll Modem in Windows 8

Before proceed to installation make sure,
1. Windows 8 is updated with all its device drivers.
2. No issues found in Device Manager.

**Step 1** Even if after a successful installation in normal way, most of the users face ‘Device Not Detected’ Problem. This happens due to unavailability of modem’s device drivers.

**Step 2** Let’s start the installation, Insert EVDO Modem into the USB port in Laptop or Computer and go to ‘My Computer’, you will find a CD Drive named ‘BSNL EVDO Data Card’. **Back up the modem** installation files and folders (required): Right click on the icon and copy paste it in any drive except C partition.
Step 3# Now go to backed up data folder or CD Drive in My Computer and click Setup file icon to start the modem installation.

Step 4# Whole installation will take few minutes or seconds to complete depending upon the Computer or Laptop configuration, Don’t worry just take a cup of Cold Coffee and wait.
**Step 5** After successful installation open BSNL EVDO Dashboard just by clicking on the Desktop’s BSNL icon, What happen ?? same ‘Device Not detected’ issue!!!

![BSNL Connection Manager](image1)

**Step 6** Ok Here is the solution for EVDO connecting issue in Windows 8.

Right click on My Computer Icon and select ‘manage’ option, it will open ‘Computer Management’ Window,

![Control Panel](image2)
Now select ‘Device Manager’ and find out the devices on right pane which have not been updated with proper driver software. It may be INTF0 or UE100 USB ETS or Win_Mux_Device_01/02 etc.

Right click on the device and select ‘Update Device Driver Software’ option. In next windows which ask to select option to search for software drivers: just select 2nd option - ‘Browse my
Now installation will ask to browse the drivers software location in your computer, Don’t worry just give the ‘Driver’ location in the backed up folder then ‘Ok’ and ‘Next’.
Now watch following Window:’ Windows has successfully updated your driver software’.
AIM: To plan Personal Area Network.

A private network is one which either does not connect to the internet, or is connected indirectly using NAT (Network Address Translation) so its addresses do not appear on the public network. However, a private network allows you to connect to other computers that are on the same physical network. This is desirable when you wish to communicate with a group of other computers or share data and internet connectivity is not necessary.

Plan your network. This is probably the hardest part of setting up a network. Draw any routers you may be using to separate major portions of your network first. Smaller private networks do not require routers, but may still use them for administrative reasons. Routers are only required if you are planning to a) Divide your network into multiple smaller networks, or b) Allow indirect internet access using NAT. Next, add any switches and hubs. For small networks, only one switch or hub may be necessary. Draw boxes to represent the computers and lines connecting the devices together. This drawing will serve as your network diagram. Although diagrams intended only for your own use may use any symbols you desire, use of industry standard symbols make this task simpler and eliminates confusion for others. Typical industry standard symbols are:

- Routers: Circle with four arrows arranged in a cross. Or just a cross if drawing a quick draft.
- Switches: Square or rectangle, with four staggered arrows, two in each direction. Represents the concept of signals being "switched" - relayed only out the port which leads to the intended user based on address.

- Hubs: Same as switch, with a single double-headed arrow. Represents the concept of all signals being blindly repeated out all ports without concern for which port leads to the intended recipient.

- Lines and squares can be used to represent connections leading to computers.

---

Create an address plan

- IPv4 (IP ver. 4) addresses are written like this: xxx.xxx.xxx.xxx (four numbers separated by three dots), in all RFC-1166 compliant countries. Each number ranges from 0 to 255. This is known as "Dotted Decimal Notation" or "Dot Notation" for short. The address is divided into two portions: the network portion and the host portion.

For "Classful" networks, the network and host portions are as follows:

("n" represents the network portion, "x" represents the host portion)

When the first number is 0 to 126 - nnn.xxx.xxx.xxx (ex. 10.xxx.xxx.xxx)
These are known as "Class A" networks.

When the first number is 128 to 191 - nnn.nnn.xxx.xxx (ex. 172.16.xxx.xxx)
These are known as "Class B" networks.
When the first number is 192 to 223 - \texttt{nnn.nnn.nnn.xxx} (ex. 192.168.1.xxx)
These are known as "Class C" networks.

When the first number is 224 to 239 - The address is used for multi-casting.

When the first number is 240 to 255 - The address is "experimental".

Multicast & Experimental addresses are beyond the scope of this article. However, do note that because IPv4 does not treat them the same way as other addresses they should not be used.
For simplicity "non-classful networks", sub-netting, and CIDR will not be discussed in this article.

The network portion specifies a network; the host portion specifies an individual device on a network.

For any given network:

- The range of all possible host portion numbers gives the Address Range.
  (ex. 172.16.xxx.xxx the range is 172.16.0.0 to 172.16.255.255)
- The lowest possible address is the Network Address.
  (ex. 172.16.xxx.xxx the network address is 172.16.0.0)
  This address is used by devices to specify the network itself, and cannot be assigned to any device.
- The highest possible address is the Broadcast Address.
  (ex. 172.16.xxx.xxx the broadcast address is 172.16.255.255)
  This address is used when a packet is meant for all devices on a specific network, and cannot be assigned to any device.
- The remaining numbers in the range are the Host Range.
  (ex. 172.16.xxx.xxx the host range is 172.16.0.1 to 172.16.255.254)
  These are the numbers you can assign to computers, printers, and other devices.

Host Addresses are individual addresses within this range.

- Assign network(s). A network, for this purpose, is any group of connections separated by a router.

Your network may not have routers or, if accessing the Internet with NAT, have only one router between your private network and the public internet. If this is your only router, or if you have no routers, your entire private network is considered one network.

Choose a network with a host range large enough to provide an address to each device. Class C networks (ex. 192.168.0.x) allow for 254 host addresses (192.168.0.1 to 192.168.0.254), which is fine if you have no more than 254 devices. But if you have 255 or more devices, you will either need to use a Class B network (ex. 172.16.x.x) or divide your private network into smaller networks with routers.

If additional routers are used, they become "internal routers", the private network becomes a "private intranet", and each group of connections is a separate network requiring its own network address and range. This includes connections between routers, and connections directly from a router to a single device.
For simplicity, the remainder of these steps will assume you have only one network, of 254 or less devices, and uses 192.168.2.x as an example. We will also assume you are not using DHCP (Dynamic Host Control Protocol) to assign host addresses automatically.

Write "192.168.2.x" in the corner somewhere. If you have more than one network it's best to write each address near the network it belongs to.

Assign host addresses within the range of 1 to 254 to each computer. Write the host addresses next to the devices they belong to on the diagram. At first you may wish to write the entire address (ex. 192.168.2.5) next to each device. However, as you become more proficient simply writing the host portion (ex. .5) may help save time. Switches will not require addresses for the purpose discussed here. Routers will require addresses as described in the "Important Notes" section.
Write down the subnet mask near the network address. For 192.168.2.x, which is a Class C, the mask is: 255.255.255.0 The computer needs it to tell which part of the IP address is the network and which is the host. IPv4 originally used the first number (ex. 192) to determine this based on the address class, as described above. However, the advent of subnetting and nonclassful networking made it necessary to provide a mask because other ways of dividing the address into network and host portions are now possible. For Class A addresses the mask is 255.0.0.0, for Class B it's 255.255.0.0 (More information in the Important Notes section.)

Connect your network. Gather all needed materials including cables, computers, ethernet switches, and (if used) routers. Locate the Ethernet ports on the computers and other devices. Look for the 8-pin modular connector. (RJ-45 style) It looks like a standard telephone jack
except it's a bit larger because it has more conductors. Connect the cables between each device, just as in your map. If an unforeseen circumstance causes you to vary from the diagram, make notes to show any changes.

Boot all the computers connected to the network. Power on all other connected devices. (Some devices have no "power switch" and will power up simply by plugging them in.)

Configure the computers for networking. Go to internet options (this varies depending on the Operating System), and go to the dialog box that lets you change the TCP/IP protocol. Change the radio buttons from "Obtain from DHCP server automatically" to "Use the following IP address:". Type in your IP address for that computer, and the appropriate subnet mask (255.255.255.0).
If you have no routers, leave the "Default Gateway" and "DNS server" fields blank.

If connecting to the internet using NAT, use the **Host Address** assigned to the router between your private network and the internet as both the DNS server and the Default Gateway. **Do not use the Network Address (192.168.2.0)** If using more than one router see the Important Notes section. If configuring a home network with a relatively new router, This section can be ignored as long as the network is connected correctly, The router will assign network addresses to everything on the network going into your network, until it hits another router.

**Verify connectivity.** The simplest way to do this is with Ping. Bring up MS-DOS or the equivalent on other OS's, (In Windows open the command prompt which is located in the Start Menu - Accessories - Command Prompt) and type in: ping 192.168.2.[insert host number here]. Do this on one host and ping to all other hosts. Remember, your router is considered a host. If you cannot reach one, read over the steps again or contact a professional.
AIM: To configure WLAN.

You can use a wireless network to share Internet access, files, printers, and more. Or you can use it to surf the Web while you’re sitting on your couch or in your yard. Plus, it’s easier to install than you think.

There are 4 steps to creating a wireless network:

1. Choose your wireless equipment
2. Connect your wireless router
3. Configure your wireless router
4. Connect your computers

Choose your wireless equipment

The first step is to make sure that you have the equipment you need. As you’re looking for products in stores or on the Internet, you might notice that you can choose equipment that supports three different wireless networking technologies: 802.11a, 802.11b, and 802.11g. We recommend 802.11g, because it offers excellent performance and is compatible with almost everything.

Shopping list

• Broadband Internet connection
• Wireless router
• A computer with built-in wireless networking support or a wireless network adapter

A wireless router

The router converts the signals coming across your Internet connection into a wireless broadcast, sort of like a cordless phone base station. Be sure to get a wireless router, and not a wireless access point.

A wireless network adapter

Network adapters wirelessly connect your computer to your wireless router. If you have a newer computer you may already have wireless capabilities built in. If this is the case, then you will not need a wireless network adapter. If you need to purchase an adapter for a desktop computer, buy a USB wireless network adapter. If you have a laptop, buy a PC card-based network adapter. Make sure that you have one adapter for every computer on your network.
Note: To make setup easy, choose a network adapter made by the same vendor that made your wireless router. For example, if you find a good price on a Linksys router, choose a Linksys network adapter to go with it. To make shopping even easier, buy a bundle, such as those available from D-Link, Netgear, Linksys, Microsoft, and Buffalo. If you have a desktop computer, make sure that you have an available USB port to plug the wireless network adapter into. If you don’t have any open USB ports, buy a hub to add additional ports.

**Connect your wireless router**

Since you’ll be temporarily disconnected from the Internet, print these instructions before you go any further.

First, locate your cable modem or DSL modem and unplug it to turn it off.

Next, connect your wireless router to your modem. Your modem should stay connected directly to the Internet. Later, after you’ve hooked everything up, your computer will wirelessly connect to your router, and the router will send communications through your modem to the Internet.

Next, connect your router to your modem:

**Note:** The instructions below apply to a Linksys wireless router. The ports on your router may be labeled differently, and the images may look different on your router. Check the documentation that came with your equipment for additional assistance.

- **If you currently have your computer connected directly to your modem:** Unplug the network cable from the back of your computer, and plug it into the port labeled Internet, WAN, or WLAN on the back of your router.
- **If you do not currently have a computer connected to the Internet:** Plug one end of a network cable (included with your router) into your modem, and plug the other end of the network cable into the Internet, WAN, or WLAN port on your wireless router.
- **If you currently have your computer connected to a router:** Unplug the network cable connected to the Internet, WAN, or WLAN port from your current router, and plug this end of
the cable into the Internet, WAN, or WLAN port on your wireless router. Then, unplug any other network cables, and plug them into the available ports on your wireless router. You no longer need your original router, because your new wireless router replaces it.

Next, plug in and turn on your cable or DSL modem. Wait a few minutes to give it time to connect to the Internet, and then plug in and turn on your wireless router. After a minute, the Internet, WAN, or WLAN light on your wireless router should light up, indicating that it has successfully connected to your modem.

Configure your wireless router

Using the network cable that came with your wireless router, you should temporarily connect your computer to one of the open network ports on your wireless router (any port that isn’t labeled Internet, WAN, or WLAN). If you need to, turn your computer on. It should automatically connect to your router.

Next, open Internet Explorer and type in the address to configure your router.

You might be prompted for a password. The address and password you use will vary depending on what type of router you have, so refer to the instructions included with your router.

As a quick reference, this table shows the default addresses, usernames, and passwords for some common router manufacturers.

<table>
<thead>
<tr>
<th>Router</th>
<th>Address</th>
<th>Username</th>
<th>Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>3Com</td>
<td><a href="http://192.168.1.1">http://192.168.1.1</a></td>
<td>admin</td>
<td>admin</td>
</tr>
<tr>
<td>D-Link</td>
<td><a href="http://192.168.0.1">http://192.168.0.1</a></td>
<td>admin</td>
<td></td>
</tr>
<tr>
<td>Linksys</td>
<td><a href="http://192.168.1.1">http://192.168.1.1</a></td>
<td>admin</td>
<td>admin</td>
</tr>
<tr>
<td>Microsoft</td>
<td><a href="http://192.168.2.1">http://192.168.2.1</a></td>
<td>admin</td>
<td>admin</td>
</tr>
<tr>
<td>Netgear</td>
<td><a href="http://192.168.0.1">http://192.168.0.1</a></td>
<td>admin</td>
<td>password</td>
</tr>
</tbody>
</table>

Internet Explorer will show your router’s configuration page. Most of the default settings should be fine, but you should configure three things:

1. **Your wireless network name, known as the SSID.** This name identifies your network. You should choose something unique that none of your neighbors will be using.

2. **Wireless encryption (WEP) or Wi-Fi Protected Access (WPA), which help protect your wireless network.** For most routers, you will provide a passphrase that your router uses to generate several keys. Make sure your passphrase is unique and long (you don’t need to memorize it).
3. **Your administrative password, which controls your wireless network.** Just like any other password, it should not be a word that you can find in the dictionary, and it should be a combination of letters, numbers, and symbols. Be sure you can remember this password, because you’ll need it if you ever have to change your router’s settings.

The exact steps you follow to configure these settings will vary depending on the type of router you have. After each configuration setting, be sure to click **Save Settings, Apply,** or **OK** to save your changes.

Now, you should disconnect the network cable from your computer.

**Connect your computers**

If your computer does not have wireless network support built in, plug your network adapter into your USB port, and place the antenna on top of your computer (in the case of a desktop computer), or insert the network adapter into an empty PC card slot (in the case of a laptop). Windows XP will automatically detect the new adapter, and may prompt you to insert the CD that came with your adapter. The on-screen instructions will guide you through the configuration process.

Windows XP should show an icon with a notification that says it has found a wireless network.

![Wireless Network Connection is now connected](image)

Follow these steps to connect your computer to your wireless network:

1. **Right-click the wireless network icon in the lower-right corner of your screen, and then click View Available Wireless Networks.** If you run into any problems, consult the documentation that came with your network adapter. Don’t be afraid to call their tech support.

2. **The Wireless Network Connection window should appear and you should see your wireless network listed with the network name you chose.** If you don’t see your network, click **Refresh network list** in the upper-left corner. Click your network, and then click **Connect** in the lower-right corner.
3. Windows XP prompts you to enter a key. Type the encryption key that you wrote down earlier in both the **Network key and Confirm network key** boxes, and then click **Connect**.

4. Windows XP will show its progress as it connects to your network. After you’re connected, you can now close the Wireless Network Connection window. You’re done.
AIM: To configure Adhoc networks.

How to Setup an Ad Hoc Wireless Network with Windows Built-in Utility (Windows XP)

The Ad Hoc mode, also called peer to peer mode, allows nodes to communicate directly (point-to-point) without the need for an AP, as in the following Figure. There is no fixed infrastructure. Nodes need to be in range with each other in order to communicate.

An Ad Hoc WiFi network should at least consist of 2 clients. In this tutorial, we also take just two computers for instance: computer A and computer B.

Part 1: Create an Ad Hoc network profile on computer A

Step 1
Go to Control Panel -> Network Connections and find Wireless Network Connection. Right click Wireless Network Connection and select Properties.
Step 2
On **Wireless Networks** tab, click **Add** button.

Step 3
On **Association** tab of **Wireless network properties** window, please type a phrase for **Network Name [SSID]**. In our scenario, we take `adhoctest` for example. Then go to the bottom and tick **This is a computer-to-computer [ad hoc] network; wireless access points are not used.** Then click **OK**.
Step 4
After Step 3, there should be a profile named `adhoctest` in Preferred Networks. Click OK to save all the settings.
Part 2: Manually configure an IP address on computer A

Step 5
Right click **Wireless Network Connection** and select **Properties**.

Step 6
On **General** tab, please double click **Internet Protocol (TCP/IP)**.
Step 7
Tick **Use the following IP address**, and input the **IP address** and **Subnet mask**. Then click **OK**.

![Internet Protocol (TCP/IP) Properties window](image1)

Step 8
Click **OK** on **Wireless Network Connection Properties** window.

![Wireless Network Connection Properties window](image2)
Part 3: Scan for Ad Hoc network on computer B

Step 9
Right click Wireless Network Connection, select View available wireless networks

Step 10
Find adhoctest (which is set up on computer A) network in the scan window. Then double click it and click connect Anyway?
Part 4: Manually configure an IP address on computer B
The steps are the same as which were done on computer A (Step 5 to Step 8). The point is that we need assign a different IP address for computer B, and it must be in the same subnet with computer A. In our scenario, we can take 192.168.1.20/255.255.255.0.

Here until, all the basic settings for building an Ad Hoc network have been finished. If we open the network scan window again, we can see the adhoctest network says Connected.
AIM: Wireless Access Point Setup Instructions

Here we are providing an example of how to configure a wireless access point (a DLink access point, in this case). These instructions are provided for illustrative purposes, and do not represent an endorsement of the DLink access point over other competing products.

Please take the following steps:

1. Change the default admin password.
2. Change the default SSID to something of your choosing.
3. Enable encryption.
4. Disable the DHCP Server function, if your access point has this feature.
5. Register the hardware (MAC) address of your wireless card.

With these steps taken, you should have no problem connecting securely to your wireless access point.

Following the instructions for the Dlink G700AP, power it up and connect the network cable from it the computer. You should then be able to use a web browser and connect to it and login.

Once you have logged in, click on the Run Wizard button
Click on Next

Give your Access Point a new SSID. This is the name that will be broadcast and that anybody will be able to see, so preferably, give it a name that does not reveal your identity or location, just a best practices kind of thing. Most Access points default to channel 6. If, like the access point, has an Auto setting, use that. The default should be fine in most cases. If you experience problems with signal interference, you will want to log back into your access point and try a different channel.
Select either WPA-PSK or WPA2-PSK. These are the newer security protocols that replaced WEP. (WEP has known security vulnerabilities and should only be used if your wireless card does not support the newer WPA protocols.)

Go ahead and click on the **Restart** button.
You should see this message indicating success

Going back to the start page for the access point, click on the DHCP button.
Set the DHCP Server to **Disabled** and click on the **Apply** button. You should then see the success message. Congrats! You are done configuring the access point.
The last step is to register the hardware address (AKA MAC or Physical address) of your wireless card. On windows systems, open a command window and run the `ipconfig /all` command. Then find the listing that mentions “Wireless Network Connection”. Go to computingaccounts.ucdavis.edu and follow the same steps to register this Ethernet card, that you did when you first setup your system for Resnet using your wired Ethernet connection.

That should do it! You should now be able to connect to your access point and be given a valid campus Network address and away you go.

If you have any questions or want help setting up your wireless access point, the Residential Computing Support staff members are available in the Segundo Computer Center from 6-9pm Monday through Thursday to assist.
How to configure ftp on server 2003

Begin by opening Add or Remove Programs in Control Panel and selecting Add/Remove Windows Components. Then select the checkbox for Application Server:

Click Details and select the checkbox for Internet Information Services (IIS):
Click Details and select the checkbox for File Transfer Protocol (FTP) Services.

Click OK twice and then Next to install the FTP service. During installation you'll need to insert your Windows Server 2003 product CD or browse to a network distribution point where the Windows Server 2003 setup files are located. Click Finish when the wizard is done.

**Creating an FTP Site**

As with web sites, the simplest approach to identifying each FTP site on your machine is to assign each of them a separate IP address, so let's say that our server has three IP addresses (172.16.11.210, 172.16.11.211 and 172.16.11.212) assigned to it. Our first task will be to create a new FTP site for the Human Resources department, but before we do that let's first examine the Default FTP Site that was created when we installed the FTP service on our machine. Open IIS Manager in Administrative Tools, select FTP Sites in the console tree, and right-click on Default FTP Site and select Properties:
Just like the Default Web Site, the IP address for the Default FTP Site is set to All Unassigned. This means any IP address not specifically assigned to another FTP site on the machine opens the Default FTP Site instead, so right now opening either ftp://172.16.11.210, ftp://172.16.11.211 or ftp://172.16.11.212 in Internet Explorer will display the contents of the Default FTP Site.

Let's assign the IP address 172.16.11.210 for the Human Resources FTP site and make D:\HR the folder where its content is located. To create the new FTP site, right-click on the FTP Sites node and select New --> FTP Site. This starts the FTP Site Creation Wizard. Click Next and type a description for the site:

![FTP Site Creation Wizard](image)

Creating and Configuring FTP Sites in Windows Server 2003

In this article we'll walk you through the steps of creating FTP sites in Windows Server 2003 using both Internet Services Manager and scripts. The tutorial will also will explain how to perform common administration tasks involving FTP sites and also how to implement FTP User Isolation, a new feature of Windows Server 2003 enables users to have their own separate FTP home directories.

In a previous article we saw that Internet Information Services 6 (IIS 6) is a powerful platform for building and hosting web sites for both the Internet and corporate intranets. IIS 6 is also equally useful for setting up FTP sites for either public or corporate use, and in this article we'll walk through the process of creating and configuring FTP sites using both the GUI (IIS Manager) and scripts included in Windows Server 2003. The specific tasks we'll walk through in this article are:

- Creating an FTP Site
- Controlling Access to an FTP Site
- Configuring FTP Site Logging
- Stopping and Starting FTP Sites
- Implementing FTP User Isolation
For sake of interest, we'll again explain these tasks in the context of a fictitious company called TestCorp as it deploys FTP sites for both its corporate intranet and for anonymous users on the Internet.

**Preliminary Steps**

As mentioned in the previous article, IIS is not installed by default during a standard installation of Windows Server 2003, and if you installed IIS using Manage Your Server as described in the previous article this installs the WWW service but not the FTP service. So before we can create FTP sites we first have to install the FTP service on our IIS machine. To do this, we need to add an additional component to the Application Server role we assigned our machine when we used Manage Your Server to install IIS.

Begin by opening Add or Remove Programs in Control Panel and selecting Add/Remove Windows Components. Then select the checkbox for Application Server:

![Windows Components Wizard](image)

Click Details and select the checkbox for Internet Information Services (IIS):
Click Details and select the checkbox for File Transfer Protocol (FTP) Services.

Click OK twice and then Next to install the FTP service. During installation you’ll need to insert your Windows Server 2003 product CD or browse to a network distribution point where the Windows Server 2003 setup files are located. Click Finish when the wizard is done.

Creating an FTP Site

As with web sites, the simplest approach to identifying each FTP site on your machine is to assign each of them a separate IP address, so let’s say that our server has three IP addresses
(172.16.11.210, 172.16.11.211 and 172.16.11.212) assigned to it. Our first task will be to create a new FTP site for the Human Resources department, but before we do that let's first examine the Default FTP Site that was created when we installed the FTP service on our machine. Open IIS Manager in Administrative Tools, select FTP Sites in the console tree, and right-click on Default FTP Site and select Properties:

Just like the Default Web Site, the IP address for the Default FTP Site is set to All Unassigned. This means any IP address not specifically assigned to another FTP site on the machine opens the Default FTP Site instead, so right now opening either ftp://172.16.11.210, ftp://172.16.11.211 or ftp://172.16.11.212 in Internet Explorer will display the contents of the Default FTP Site.

Let's assign the IP address 172.16.11.210 for the Human Resources FTP site and make D:\HR the folder where its content is located. To create the new FTP site, right-click on the FTP Sites node and select New --> FTP Site. This starts the FTP Site Creation Wizard. Click Next and type a description for the site:
Click Next and specify 172.16.11.210 as the IP address for the new site:
Click Next and select *Do not isolate users*, since this will be a site that anyone (including guest users) will be free to access:

![FTP Site Creation Wizard](image)

**FTP Site Creation Wizard**

**FTP User Isolation**

Restrict FTP users to their own FTP home directory.

FTP user isolation prevents users from accessing the FTP home directory of another user on this FTP site.

Important: Because you cannot change the user isolation option after creating this FTP site, you should read about FTP user isolation in the IIS product documentation before choosing an isolation option.

- **Do not isolate users**
  [Users can access the FTP home directory of other users.]

- **Isolate users**
  [Users must be assigned an FTP home directory within the root of this FTP site.]

- **Isolate users using Active Directory**
  [Users must be assigned an FTP home directory that is configured using their Active Directory user account.]

Click Next and specify C:\HR as the location of the root directory for the site:

![FTP Site Creation Wizard](image)

**FTP Site Creation Wizard**

**FTP Site Home Directory**

The home directory is the root of your FTP content subdirectories.

Enter the path to your home directory.

**Path:**

C:\HR

[Browser button]
Click Next and leave the access permissions set at Read only as this site will only be used for downloading forms for present and prospective employees:

Click Next and then Finish to complete the wizard. The new Human Resources FTP site can now be seen in IIS Manager under the FTP Sites node:
To view the contents of this site, go to a Windows XP desktop on the same network and open the URL ftp://172.16.11.210 using Internet Explorer: