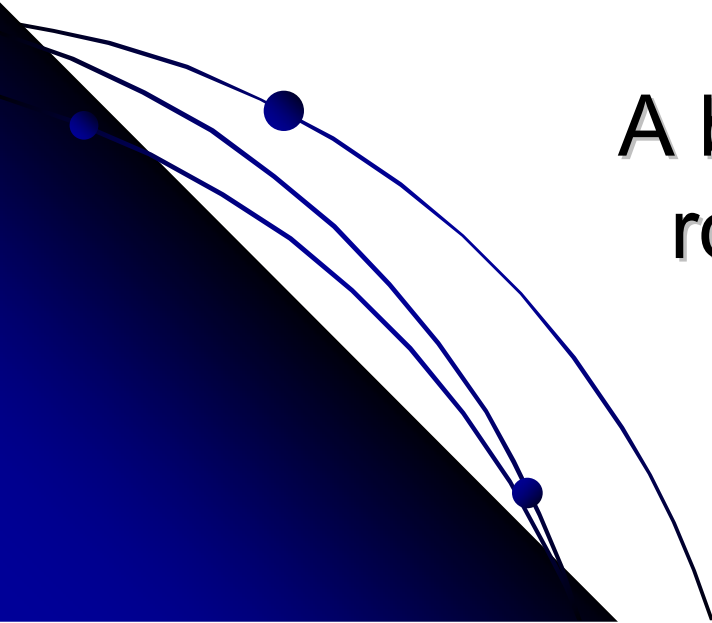


# Networking Guide

**Westell to Linksys Example**

**Port Forwarding for Nova DVR's**

**A brief discussion on modem and  
router configuration for Eclipse  
DVRs.**



# Westell Initial Connection

First setup your Westell Modem Hardware as follows

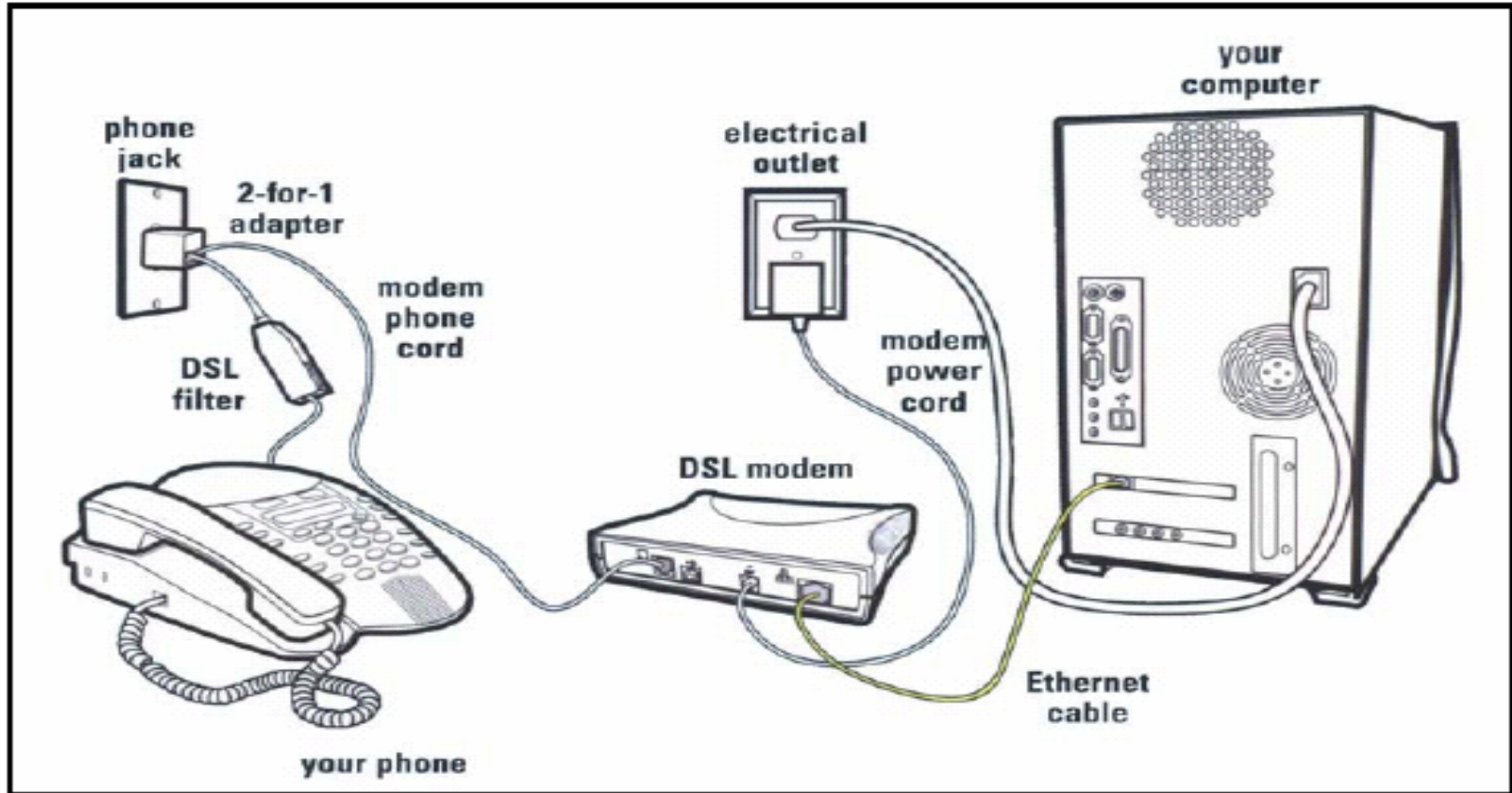
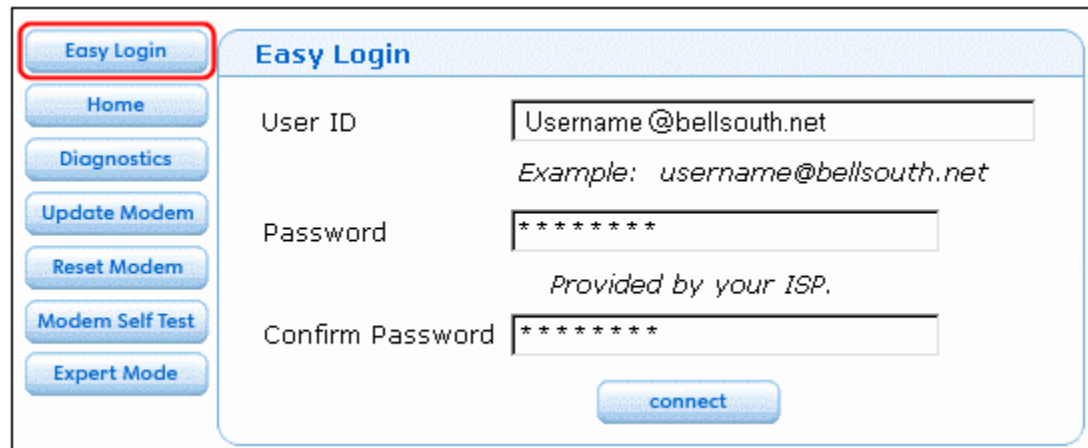


Figure 1. Connection via 10/100 Base-T Ethernet

# Westell Initial Setup

Open Internet Explorer and enter <http://192.168.1.254>

Enter the user name and password issued to customer

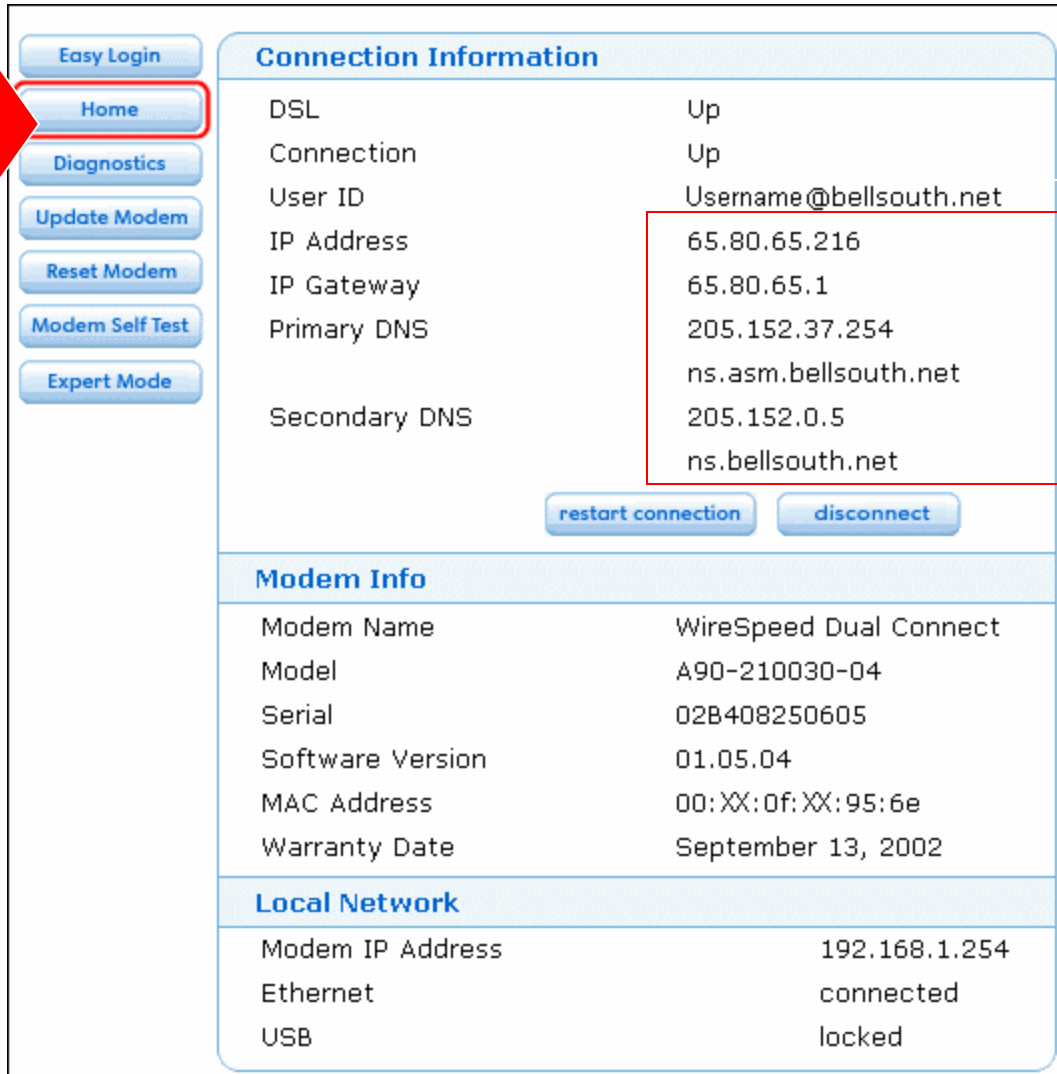


The screenshot shows the Westell Easy Login web interface. On the left, a sidebar contains several navigation buttons: 'Easy Login' (highlighted with a red box), 'Home', 'Diagnostics', 'Update Modem', 'Reset Modem', 'Modem Self Test', and 'Expert Mode'. The main content area is titled 'Easy Login' and contains the following fields:

- User ID:** A text input field containing 'Username@bellsouth.net'. Below it, an example is provided: *Example: username@bellsouth.net*.
- Password:** A text input field containing '\*\*\*\*\*'. Below it, a note states: *Provided by your ISP.*
- Confirm Password:** A text input field containing '\*\*\*\*\*'.

A 'connect' button is located at the bottom right of the form.

The Home Screen will confirm your connection is up and running



The screenshot shows a web interface for a modem. On the left is a vertical menu with buttons: Easy Login, Home (highlighted with a red box), Diagnostics, Update Modem, Reset Modem, Modem Self Test, and Expert Mode. A large red arrow points from the 'Home' button to the main content area. The main content area is divided into three sections: 'Connection Information', 'Modem Info', and 'Local Network'. The 'Connection Information' section contains a table of connection details, with a red box highlighting the IP Address, Primary DNS, and Secondary DNS values. Below this table are 'restart connection' and 'disconnect' buttons. The 'Modem Info' section contains a table of hardware and software details. The 'Local Network' section contains a table of network status for Modem IP Address, Ethernet, and USB.

Connection Information	
DSL	Up
Connection	Up
User ID	Username@bellsouth.net
IP Address	65.80.65.216
IP Gateway	65.80.65.1
Primary DNS	205.152.37.254 ns.asm.bellsouth.net
Secondary DNS	205.152.0.5 ns.bellsouth.net

[restart connection](#) [disconnect](#)

Modem Info	
Modem Name	WireSpeed Dual Connect
Model	A90-210030-04
Serial	02B408250605
Software Version	01.05.04
MAC Address	00:XX:0f:XX:95:6e
Warranty Date	September 13, 2002

Local Network	
Modem IP Address	192.168.1.254
Ethernet	connected
USB	locked

Write down this information for later



Easy Login

Home

Diagnostics

Update Modem

Reset Modem

Modem Self Test

**Expert Mode**

### Connection Information

DSL	Up
Connection	Up
User ID	Username@bellsouth.net
IP Address	65.80.65.216
IP Gateway	65.80.65.1
Primary DNS	205.152.37.254
	ns.asm.bellsouth.net
Secondary DNS	205.152.0.5
	ns.bellsouth.net

[restart connection](#) [disconnect](#)

### Modem Info

Modem Name	WireSpeed Dual Connect
Model	A90-210030-04
Serial	02B408250605
Software Version	01.05.04
MAC Address	00:XX:0f:XX:95:6e
Warranty Date	September 13, 2002

### Local Network

Modem IP Address	192.168.1.254
Ethernet	connected
USB	locked

Choose DHCP Server

Home

Configure

Connection

**DHCP Server**

IP Passthrough

NAT

Statistics

Diagnostics

Remote Access

Update Modem

Reset Modem

Modem Self Test

Basic Mode

### DHCP Server Configuration

Modem IP Address

Subnet Mask

DHCP Start Address

DHCP End Address

DHCP Lease Time  :  :  :   
*Days Hours Minutes Seconds*

DHCP Server Enable

save changes

Disable DHCP Server

**Choose Connection**

The image shows a screenshot of a modem configuration interface. On the left is a vertical sidebar with buttons: Home, Configure, Connection (highlighted with a red box), DHCP Server, IP Passthrough, NAT, Statistics, Diagnostics, Remote Access, Update Modem, Reset Modem, Modem Self Test, and Basic Mode. A red arrow points from the 'Choose Connection' text to the 'Connection' button. The main area is titled 'Connection Configuration' and contains the following fields:

- VPI: 8
- VCI: 35
- Protocol: PPPoE (dropdown menu with options: PPPoE, Bridged Ethernet). A red arrow points from the 'Choose Bridged' text to this dropdown.
- User ID: username@bellsouth.net (with example text below: Example: username@bellsouth.net)
- Password: [masked]
- Confirm Password: [masked]
- Static IP Address: 0.0.0.0
- IP Gateway: 0.0.0.0
- Primary DNS Server: 0.0.0.0
- Secondary DNS Server: 0.0.0.0
- Connection Type: Manual (dropdown menu with options: Manual, On-Demand, Always ON). A red arrow points from the 'Choose Always On' text to this dropdown.

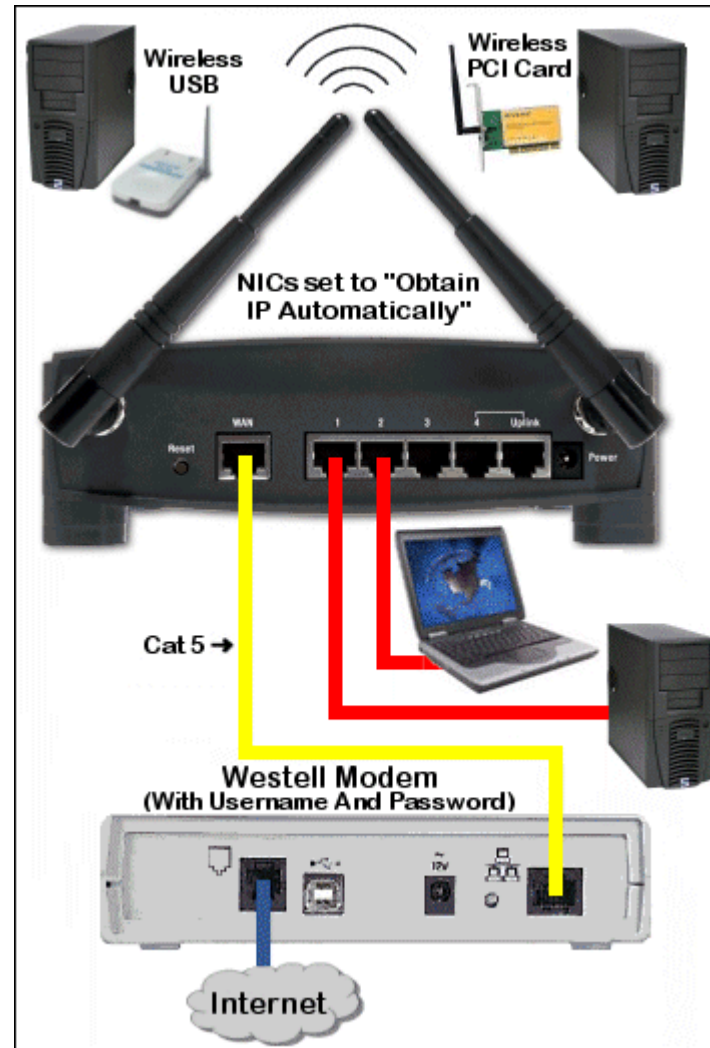
At the bottom right, there is a button labeled 'save and restart connection'. A red arrow points from the 'Save & Restart' text to this button.

**Choose Bridged**

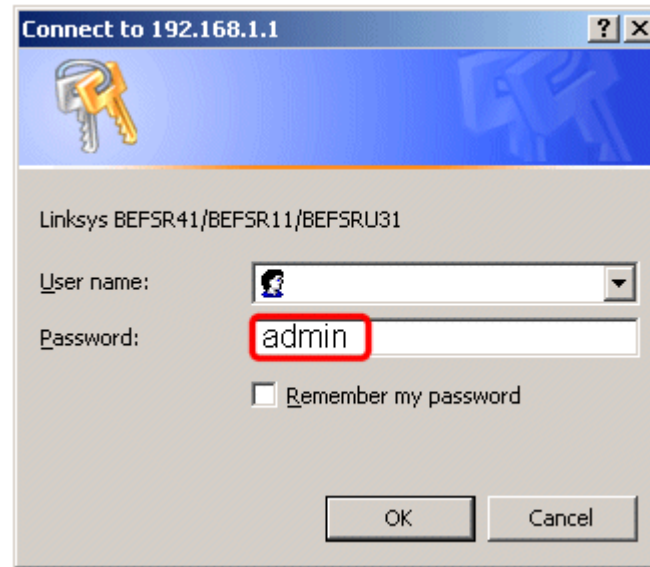
**Save & Restart**

**Choose Always On**

# Now Connect Your Linksys Router

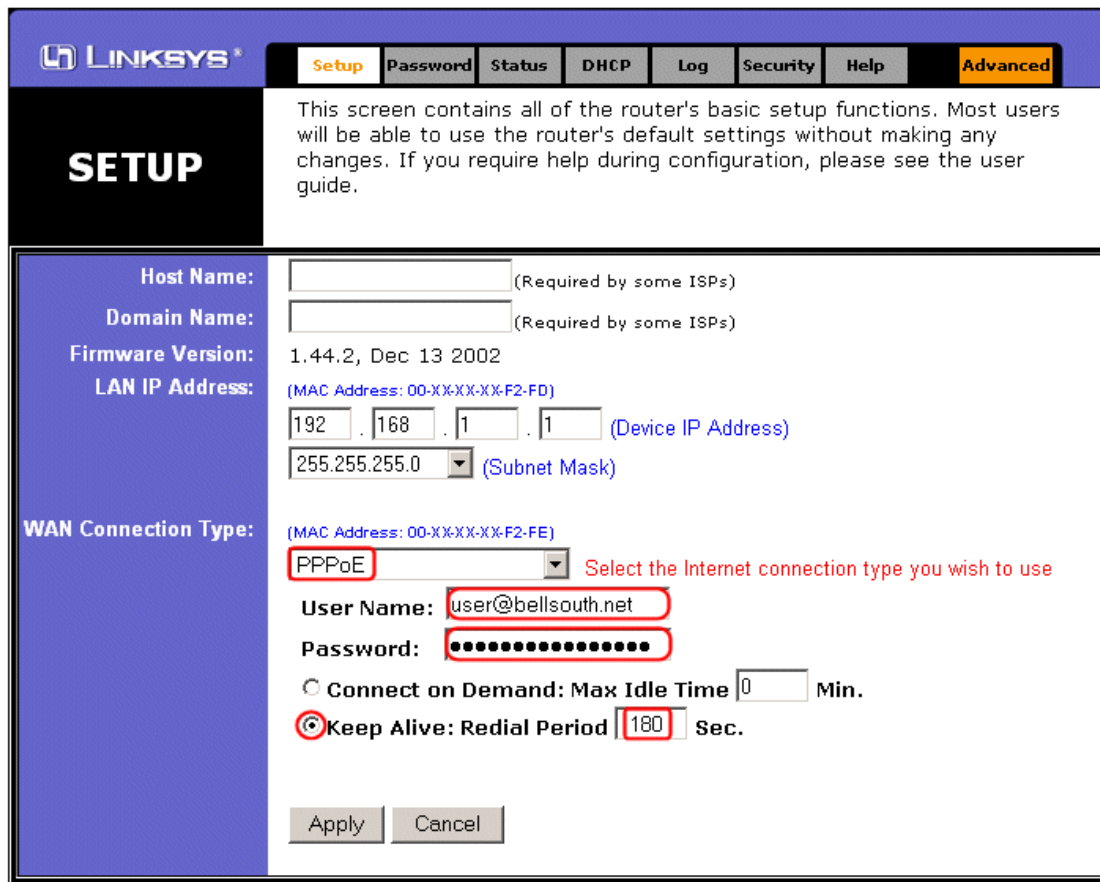


- Open a browser session and enter "192.168.1.1" in the address field to access the Linksys Interface. At the Username and Password prompt enter "admin" (without quotes) in the Password Field.



On the Linksys Setup page select **PPPoE** from the **WAN Connection Type** pull down. Enter your BellSouth Username followed by "@bellsouth.net". Enter your BellSouth Password. Select **Keep Alive** and enter **180** seconds **Redail Period** field. Finally, click on **Apply** to save the changes. You may get a "Settings are successful" message, click on **Continue** (if required)

On the Linksys Setup page select **PPPoE** from the **WAN Connection Type** pull down. Enter your BellSouth Username followed by "**@bellsouth.net**". Enter your BellSouth Password. Select **Keep Alive** and enter **180** seconds **Redial Period** field. Finally, click on **Apply** to save the changes. You may get a "Settings are successful" message, click on **Continue** (if required).



The screenshot shows the Linksys Setup page with the following fields and options:

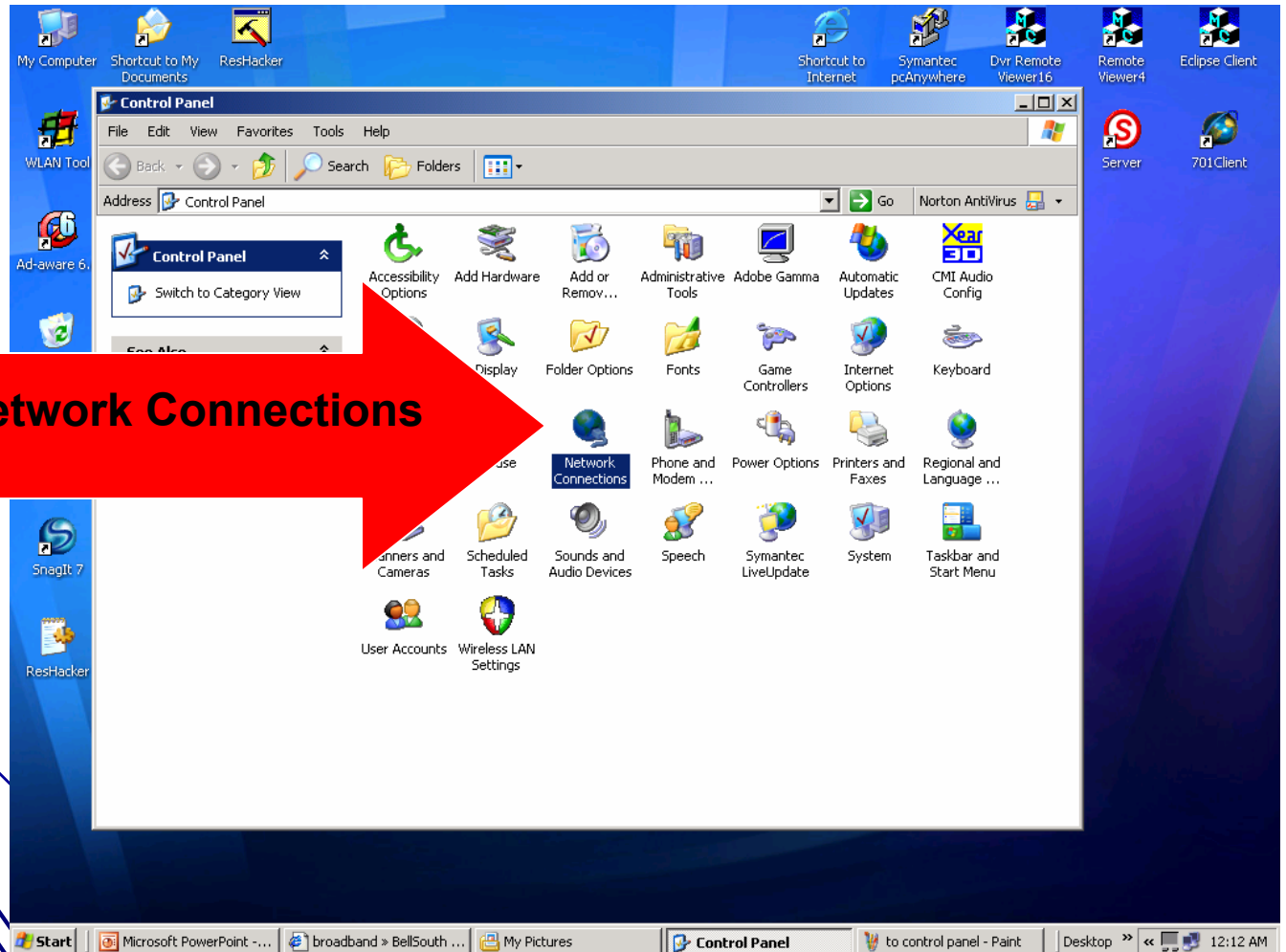
- Host Name:** [ ] (Required by some ISPs)
- Domain Name:** [ ] (Required by some ISPs)
- Firmware Version:** 1.44.2, Dec 13 2002
- LAN IP Address:** (MAC Address: 00-XX-XX-XX-F2-FD)  
[ 192 ] . [ 168 ] . [ 1 ] . [ 1 ] (Device IP Address)  
[ 255.255.255.0 ] (Subnet Mask)
- WAN Connection Type:** (MAC Address: 00-XX-XX-XX-F2-FE)  
[ PPPoE ] Select the Internet connection type you wish to use
- User Name:** [ user@bellsouth.net ]
- Password:** [ ..... ]
- Connect on Demand: Max Idle Time [ 0 ] Min.
- Keep Alive: Redial Period** [ 180 ] Sec.

Buttons: [ Apply ] [ Cancel ]

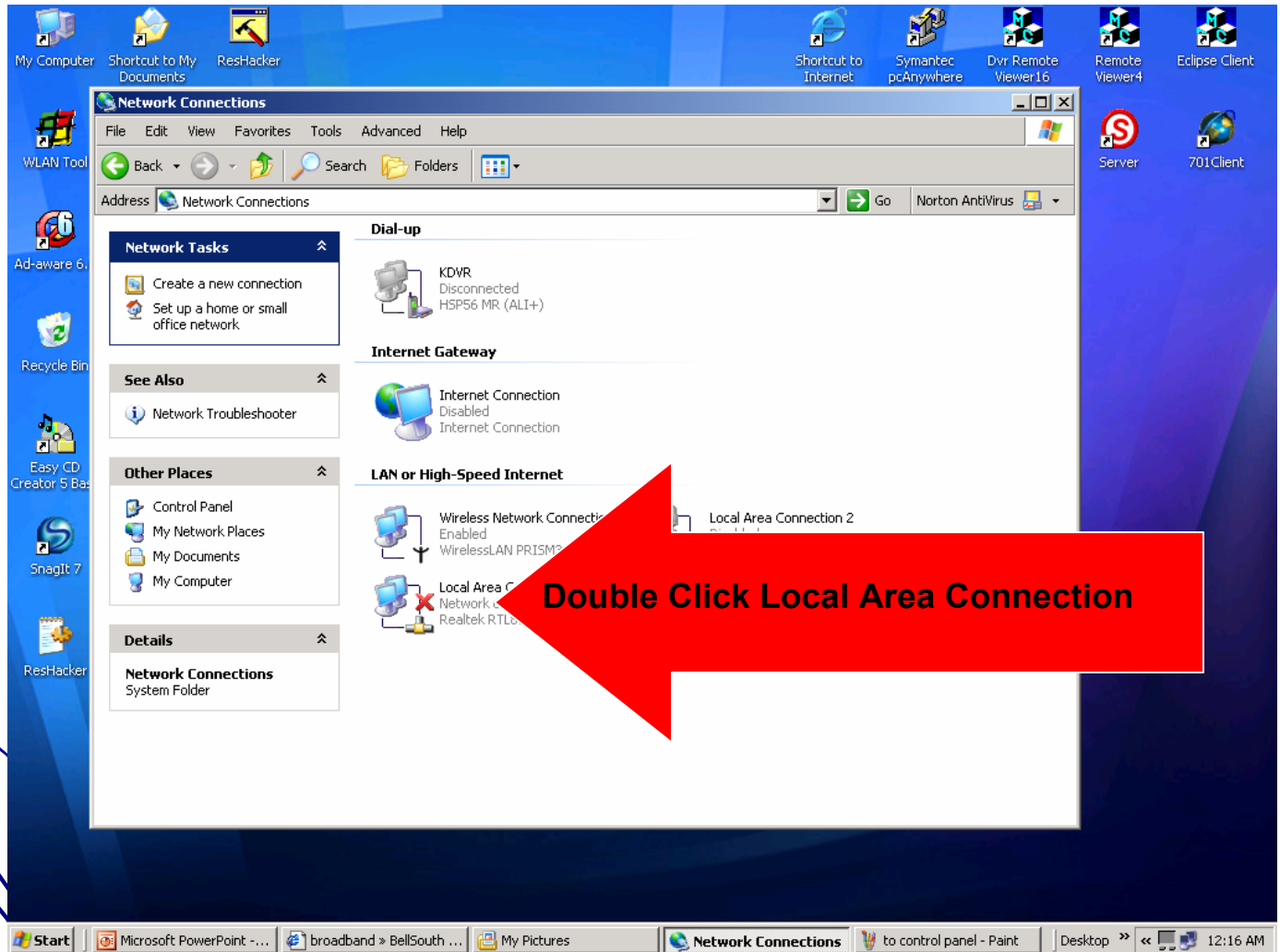
**Close Internet Explorer.**

# Now you have to set up your internal IP address for your PC Based DVR

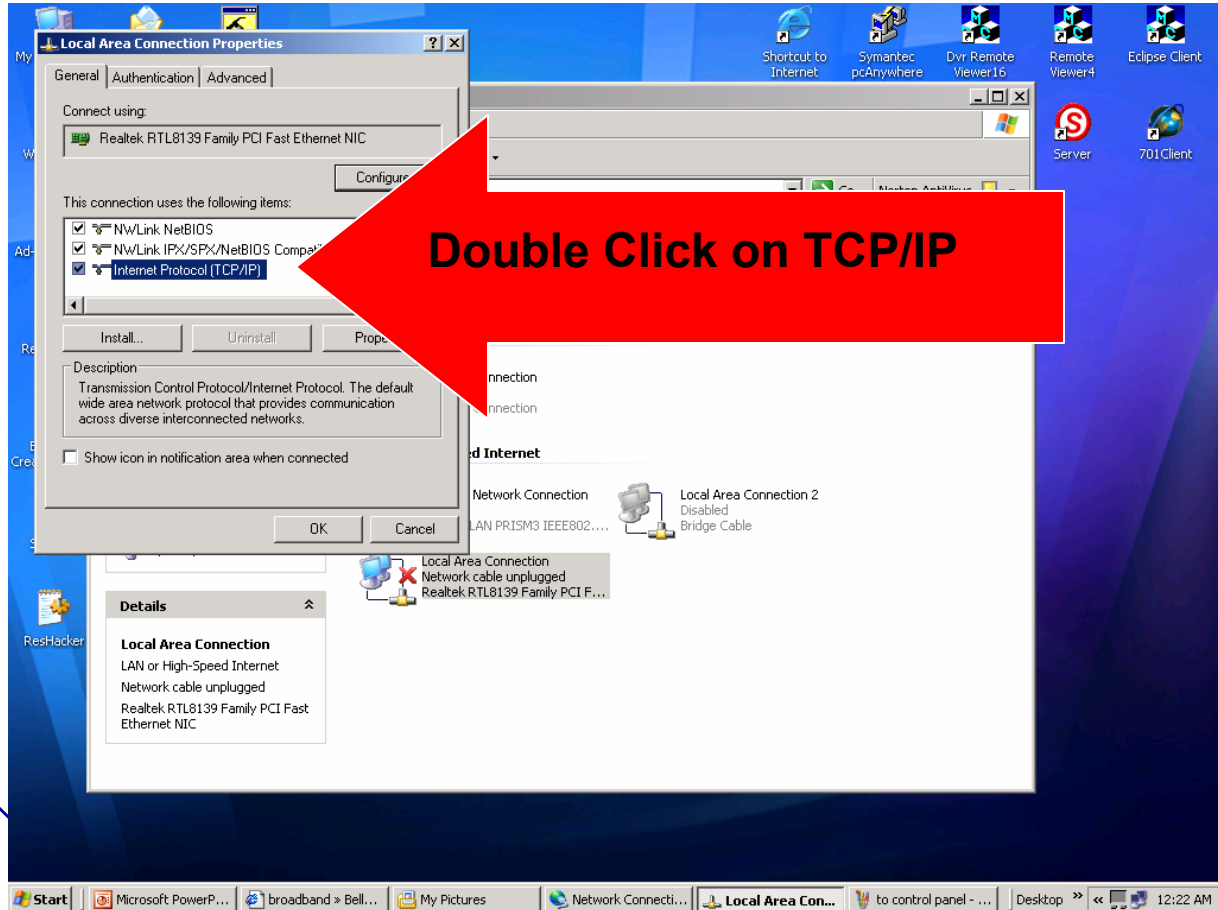


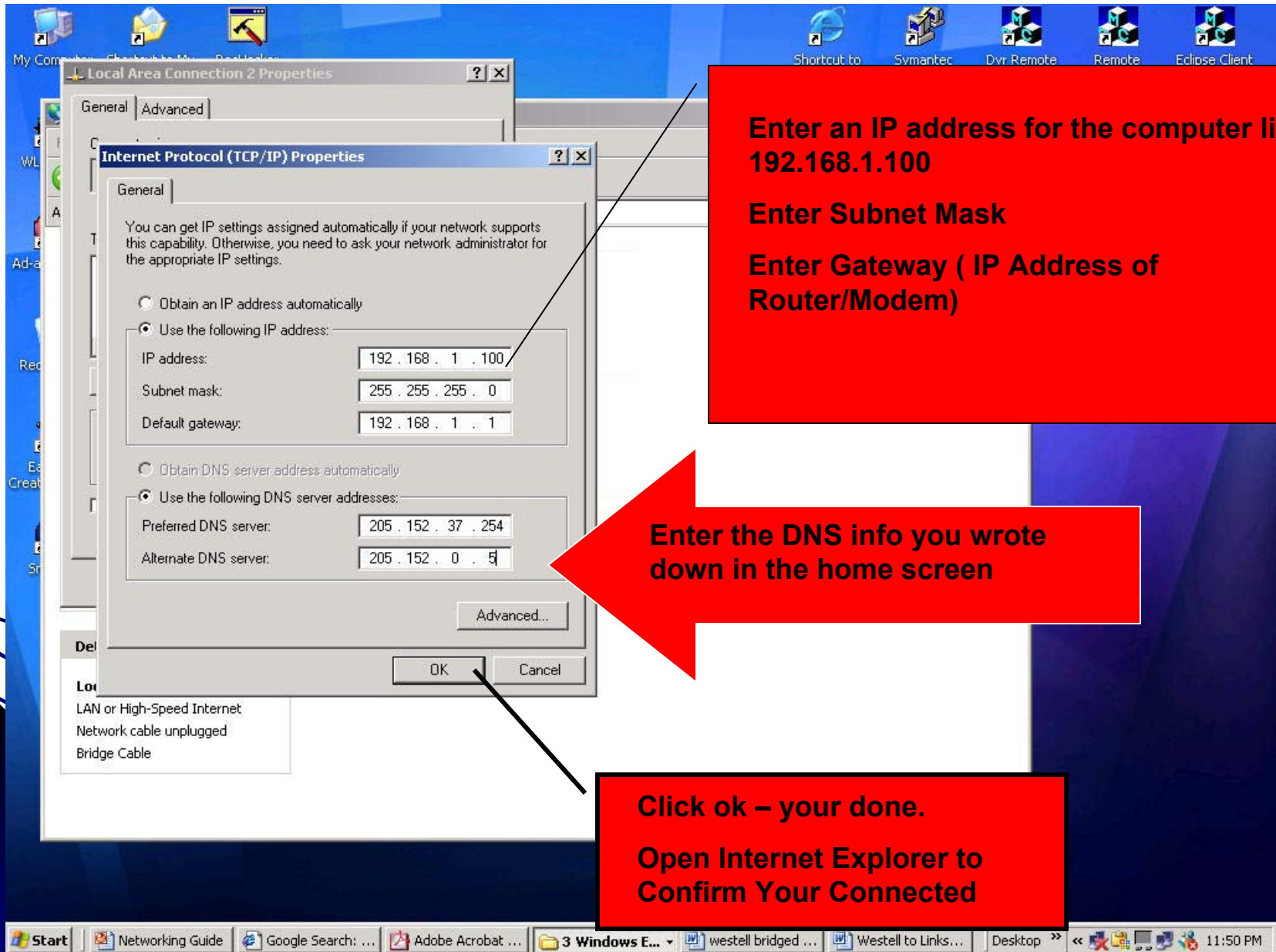


**Click Network Connections**



Double Click Local Area Connection





**Enter an IP address for the computer like 192.168.1.100**

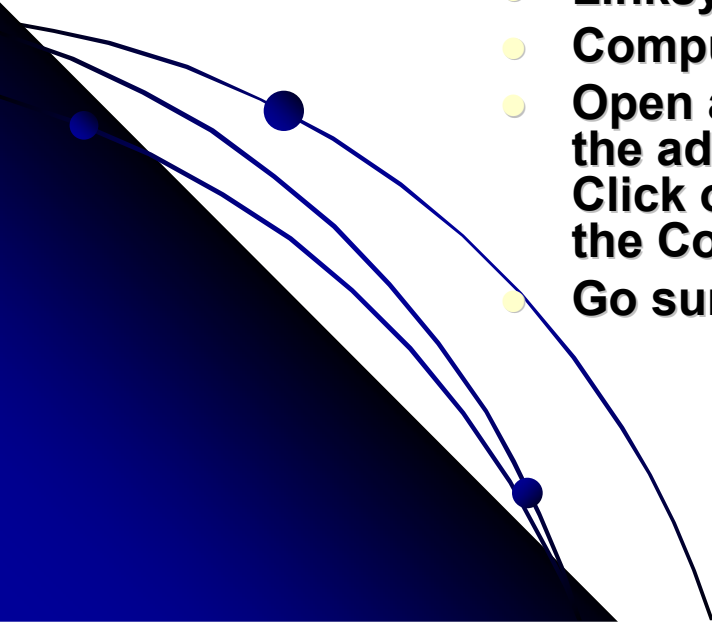
**Enter Subnet Mask**

**Enter Gateway ( IP Address of Router/Modem)**

**Enter the DNS info you wrote down in the home screen**

**Click ok – your done.**  
**Open Internet Explorer to Confirm Your Connected**

- **Now power down both the Westell Modem and Linksys Router.**
  
- **Power up the network equipment in this order:**
- **Westell Modem (wait til Ready light goes steady green)**
- **Linksys Router**
- **Computer(s)**
- **Open a browser session and enter "192.168.1.1" in the address field to access the Linksys Interface. Click on the Status tab from the menu then click on the Connect button to connect to the Internet.**
- **Go surfing!**



- Now reopen internet explorer and enter <http://192.168.1.1> to re-enter the router. Enter the following



The image shows a Windows-style dialog box titled "Connect to 192.168.1.1". The dialog has a blue header bar with a key icon on the left and a help/question mark icon on the right. Below the header, the text "Linksys BEFSR41/BEFSR11/BEFSRU31" is displayed. There are two input fields: "User name:" with a dropdown menu showing a user icon, and "Password:" with the text "admin" entered. A red rectangle highlights the "admin" text in the password field. Below the password field is a checkbox labeled "Remember my password" which is currently unchecked. At the bottom of the dialog are two buttons: "OK" and "Cancel".

# Port Forwarding

Choose the advanced tab then choose forwarding tab. Enter the information as below and save settings. (this will open the ports for communication to the dvr from the internet)

Depending on the DVR system you are using the ports may be different. Please refer to your systems user manual

Forward - Microsoft Internet Explorer  
http://192.168.1.2/Forward.asp

Linksys  
A Division of Cisco Systems, Inc. Firmware Version: v2.02.7

Wireless-G Broadband Router WRT54G

Applications & Gaming | Setup | Wireless | Security | Access Restrictions | Applications & Gaming | Administration | Status

Port Range Forward | DMZ

Port Range Forward

Port Range					
Application	Start	End	Protocol	IP Address	Enable
webserv	80	to 80	Both	192.168.1.100	<input checked="" type="checkbox"/>
client	2000	to 2000	Both	192.168.1.100	<input checked="" type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>
	0	to 0	Both	192.168.1.0	<input type="checkbox"/>

Save Settings | Cancel Changes

CISCO SYSTEMS

Done | Start | Networking Guide | Forward - Microsoft I... | Adobe Acrobat - [Net... | 3 Windows Explorer | Linksys OPENING NET... | Desktop | Internet | 12:16 AM

**Close Internet Explorer  
and open our DVR program.**

**You are now done and the customer will have access to  
remote viewing.**

