# IT Essentials 5.0

# 6.8.3.10 Lab - Configure Wireless Router in Windows XP

# Introduction

Print and complete this lab.

In this lab, you will configure and test the wireless settings on the Linksys E2500.

# **Recommended Equipment**

- A computer with Windows XP
- A Wireless NIC installed
- An Ethernet NIC installed
- Linksys E2500 Wireless Router
- Ethernet patch cable

Note: All wireless settings in this lab are for a 2.4 GHz wireless connection. Follow the same steps for setting up a 5 GHz wireless connection or when setting up both 2.4 GHz and 5 GHz connections.

### Step 1

Ask the instructor for the following information that is used during the lab.

Router Address Information:

IP address	
Subnet mask	
Router name	
DHCP Server Setting Information:	
Start IP address	
Maximum number of users	
Static DNS 1 (optional)	
SSID Values: New SSID	
Channel number: Channel	
Router Access: Router Password	
Wireless Security: Passphase key	

Important: Only use configurations assigned by the instructor.

#### Step 2

Plug in the power of the wireless router. Boot the computer and log in as an administrator.

Connect the computer to one of the Ethernet ports on the wireless router with an Ethernet patch cable.

### Step 3

Open the command prompt.

#### Type ipconfig /renew.

What is the default gateway for the computer?

## Step 4

Open a browser. Type the IP address of your default gateway in the URL field, and then press Enter.



The "Connect to" window appears.

Connect to 192.1	68.1.1	? 🗙
R	G	K
and password. Warning: This server	<ol> <li>1.1 at Linksys E2500 requires is requesting that your userr an insecure manner (basic au nection).</li> </ol>	name and
User name:	2	*
Password:	••••	
	Remember my password	
	ок 🔓 🗌	Cancel

Type the password provided by the instructor in the "Password:" field then click OK.

# Step 5

The Setup screen appears.

🖉 Basic Setup - Windows Inte	ernet Explorer						
🔄 🗢 🖉 http://192.168.	1.1/	🖌 😽 🗙 🚱 Google					
File Edit View Favorites To	ools Help						
🗙 🖳 Snagit 🗮 🛃							
🖕 Favorites 🛛 🍰 🏉 Suggested Sites 👻 📶 Free Hotmail 🖉 Web Slice Gallery 👻							
🔏 Basic Setup		🐴 🔹 🔝 🔹 🖶 🔹 Page 🗸 Safety 🕶 Tools 🔹 🔞 🔹					
Network Setup							
Router Address	IP Address:	192 . 168 . 1 . 1					
	Subnet Mask:	255.255.255.0					
	Router Name :	ITE2					
DHCP Server Setting	DHCP Server:	Enabled Disabled DHCP Reservation					
	Start IP Address:	192.168.1.25					
	Maximum Number of Users:	10					
	IP Address Range:	192 . 168 . 1. 25 to 34					
	Client Lease Time:	0 minutes (0 means one day)					
	Static DNS 1:	0.0.0.0					
	Static DNS 2:	0.0.0.0					
	Static DNS 3:	0 . 0 . 0 . 0					
	WINS:	0 . 0 . 0 . 0					
Time Settings							
Time Zone	(GMT-08:00) Pacific Ti	me (USA & Canada)					
	Automatically adjust	clock for daylight saving changes.					
Reboot	$\square$						
	Reboot						
		Save Settings Cancel Changes					
<u>&lt;</u>							
Done		👩 😌 Internet 🦓 🕶 🔍 100% 🔻					

Enter the following "Router Address" and "DHCP Server Setting" information provided by the instructor (step 1): IP Address, Subnet Mask, Router Name, Start IP Address, and Maximum Number of Users.

#### Click Save Settings.

The "Your settings have been successfully saved." screen appears.

🏉 http://192.168.1.1/apply.cgi - Windows Internet Explorer 🛛 💽 🖃 🔲 🔀
🔄 🗢 🖉 http://192.168.1.1/apply.cgi 💽 🚱 🔀 Google
File Edit View Favorites Tools Help
x 🖳 Snagit 🧮 🔄
🖕 Favorites 🛛 🚖 🏉 Suggested Sites 👻 📶 Free Hotmail 🖉 Web Slice Gallery 💌
🌈 http://192.168.1.1/apply.cgi
Your settings have been successfully saved.
Continue
Done 🛛 🙀 🗸 🔍 100% 👻

#### Click Continue.

After the router reboots, you may need to log back into the router.

# Step 6

Click the Wireless tab.

Click the Network Mode drop-down menu for the 5 GHz Wireless Settings.

cisco.							Firmwai	e Version: 1.0.0;
							Linksys E2500	E2500
Wireless	Setup W	ireless	Security	Access Policy	Application Gaming		Administration	Status
	Basic Wireless Settin	ngs	Wireless Security	G	uest Access	1	Wireless MAC Filter	
Configuration View	ම Manual ⊚ Wi-F	i Protected	ISetup™				<u>Help</u>	
5 GHz Wireless Settings	Network Mode: Network Name (SSID Channel Width: Channel: SSID Broadcast:	): M W W	ixed • ixed irreless-A Only irreless-N Only sabled uto (DF1)	/Hz) ▼				

What 802.11 technologies are supported?

Click the **Channel** drop-down menu for the 5 GHz Wireless Settings.

cisco.							Firmwar	e Version: 1.0.02
						Linksys	E2500	E2500
Wireless	Setup Wire	less	Security	Access Policy	Applications & Gaming	Administratio	'n	Status
	Basic Wireless Settings		Wireless Security	Gi	iest Access	Wireless MAC Fil	ter	
Configuration View 5 GHz Wireless Settings	Manual      Wi-Fi P     Network Mode:	I	/lixed 👻			<u>Hel</u>	<u>p</u>	
2.4 GHz Wireless Settings	Network Name (SSID): Channel Width: Channel: SSID Broadcast: Network Mode: Network Name (SSID): Channel Width: Channel:	4 4 1 1 1	6 - 5.180GHZ 0 - 5.200GHZ 4 - 5.220GHz	MHz)				

What channels are listed?

Disable Network Mode the for 5 GHz Wireless settings, unless informed otherwise by the instructor.

Click the Network Mode drop-down menu for the 2.4GHz Wireless Settings.

2.4 GHz Wireless Settings	Network Mode: Network Name (SSID): Channel Width: Channel: SSID Broadcast:	Mixed Wireless-B/G Only Wireless-B Only Wireless-G Only Wireless-N Only Disabled Chapted Disabled	
		Save Settings Cancel Changes	

What 802.11 technologies are supported?

Choose **Mixed** in the "Network Mode:" drop-down box.

2.4 GHz Wireless Settings			
2.4 GHZ WITCHESS Settings	Network Mode:	Mixed -	
	Network Name (SSID):	Cisco55842	
	Channel Width:	20 MHz Only	
	Channel:	Auto 👻	
	SSID Broadcast:	Enabled      Disabled	
			Internet and the second second
		the many providents in the second second	
		Save Settings Cancel Ch	anges

What is the default SSID for the wireless router?

Type **cisco#** in the "Network Name (SSID):" field, where # is the number assigned by the instructor.

2.4 GHz Wireless Settings	Channel Width: Channel: SSID Broadcast: Network Mode: Network Name (SSID): Channel Width: Channel: SSID Broadcast:		abled		
		Save	Settings	Cancel Changes	

Click the Channel drop-down menu for the 2.4GHz Wireless Settings.

What channels are listed?

Select the Channel number that was provided by the instructor.

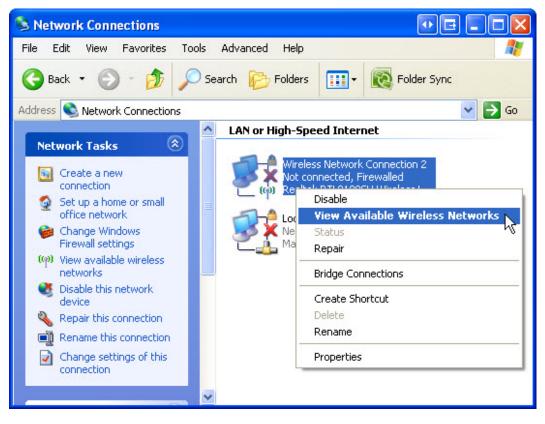
Click **Save Settings > Continue** then close the browser.

### Step 7

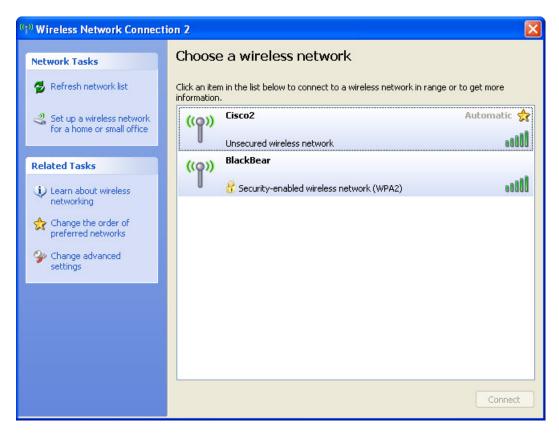
Unplug the Ethernet cable from the computer.

View wireless networks associated with the wireless adapter configured for the computer.

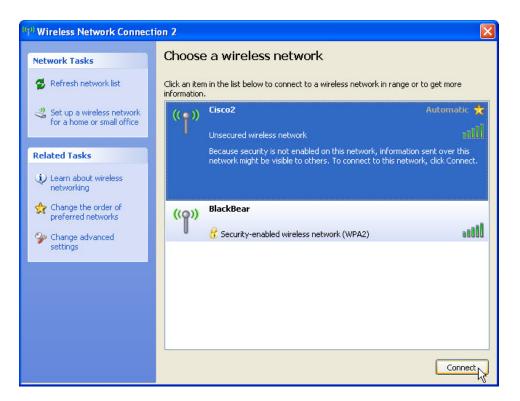
Click Start > Control Panel > Network Connections > right-click the wireless adapter and select View Available Wireless Networks.



A list of available wireless networks is displayed.



What wireless network(s) are available?



Choose **cisco#**, where # is the number assigned by the instructor, and then click the **Connect** button.

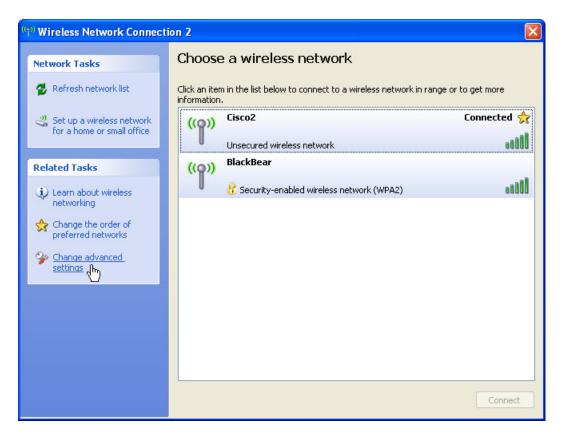
The "Please wait while Windows connects to 'Cisco#' network" screen appears.

Wireless Network Connection
Please wait while Windows connects to the 'Cisco2' network.
Waiting for the network
Cancel

The "Choose a wireless network" opens and shows you are connected to Cisco#.

0	( <sup>3)</sup> Wireless Network Connection 2							
	Network Tasks	Choose	e a wireless network					
	😴 Refresh network list	Click an iter information	m in the list below to connect to a wireless network in range	or to get more				
	Set up a wireless network for a home or small office	((ອູ))	Cisco2	Connected 👷				
		U	Unsecured wireless network					
	Related Tasks	((ဓူ))	BlackBear					
	Learn about wireless networking	U	😚 Security-enabled wireless network (WPA2)	0000				
	Change the order of preferred networks							
	Schange advanced settings							
877 1								
				Disconnect				

Click Change advanced settings.



The "Wireless Network Connection Properties" window opens.

🕹 Wireless Network Connection 2 Properties 👘 🛜 🔀							
General Wireless Networks	Advanced						
Use Windows to configur	e my wireless network settings						
- Available networks:							
To connect to, disconnect from, or find out more information about wireless networks in range, click the button below.							
	View Wireless Networks						
Automatically connect to a below:	Move up						
Add Remo Learn about <u>setting up wire</u> <u>configuration.</u>							
	OK Cancel						

Click Wireless Networks tab > Cisco# (Automatic) > Properties.

Cisco2 properties	? 🛛
Association Authenticatio	n Connection
Network name (SSID):	Cisco2
Wireless network key—	network is not broadcasting
This network requires a Network Authentication	
Data encryption:	Disabled 💙
Network key:	•••••
Confirm network key:	•••••
Key index (advanced):	1 )
This is a computer-to-c access points are not o	computer (ad hoc) network; wireless used
	OK Cancel

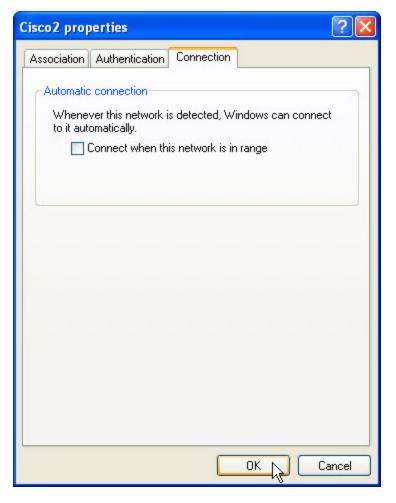
When "Cisco# properties" window opens, un-check the box **Connect even if this network in not broadcasting > OK**.

Cisco2 prop	perties	? 🛛
Association	Authentication	Connection
Network na	ame (SSID):	Cisco2
and the first second	ect even if this n network key	etwork is not broadcasting
This netv	vork requires a ke	ey for the following:
Network	Authentication:	Open 💌
Data end	cryption:	Disabled 💌
Network	key:	•••••
Confirm n	network key:	••••••
	x (advanced): .ey is provided fo	1 🛟
	a computer-to-cor points are not us	nputer (ad hoc) network; wireless ed
		OK Cancel

When the warring message appears, click Continue Anyway.



Select **Connection** tab > un-check the box **Connect when this network is in range > OK**.



When the warring message appears, click Continue Anyway.

Click **OK** to close the "Wireless Network Connection Properties" window.

#### Step 8

Open a browser. Type the IP address of your default gateway in the URL field, and then press Enter.

The "Connect to" window appears.

Connect to 192.1	68.1.1 🤶 🔀
	GE
and password. Warning: This server	<ol> <li>1.1 at Linksys E2500 requires a username is requesting that your username and an insecure manner (basic authentication nection).</li> </ol>
User name:	2
Password:	••••
	Remember my password
	OK Cancel

Type the password provided by the instructor in the "Password:" field.

The Setup screen appears.

Navigate to "Basic Wireless Settings". Select **Disable** for the 2.4 GHz SSID broadcast.

2.4 GHz Wireless Settings	Network Mode: Network Name (SSID): Channel Width: Channel:	Mixed  Cisco1 20 MHz Only 6 - 2.437GHZ	
	SSID Broadcast:	© Enabled      O Disabled	
		Save Settings Cancel Changes	

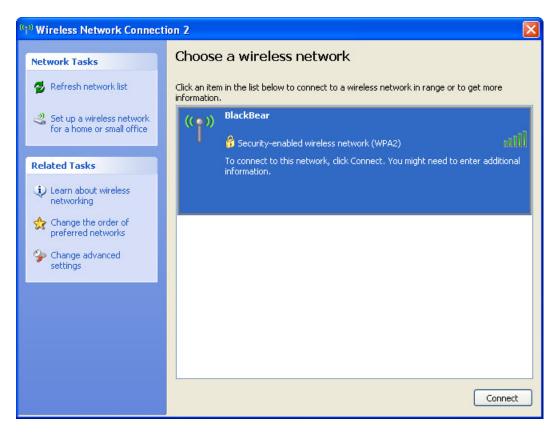
Click Save Settings > Continue.

Why would you disable SSID broadcast?

View wireless networks associated with the wireless adapter configured to the computer.

Click Start > Control Panel > Network Connections > right-click the wireless adapter and select View Available Wireless Networks.

Note: You may need to refresh the list every 30 seconds until the Cisco# connection is no longer listed.



What wireless network(s) are available?

Click Start > Control Panel > Network Connections > right-click the wireless adapter > Properties > View Networks tab > select Cisco# (On Demand) > Properties.

🕹 Wireless Network Conr	nection 2 Properties 🛛 🛛 🔀
General Wireless Networks	Advanced
Use Windows to configure	e my wireless network settings
- Available networks:	
	from, or find out more information range, click the button below.
	View Wireless Networks
Preferred networks: Automatically connect to av below:	vailable networks in the order listed Move up Move down
Add Remov Learn about <u>setting up wirel</u>	
	OK Cancel

When the "Cisco# properties" window opens, place a check mark in the box next to **Connect even if this network in not broadcasting > OK**.

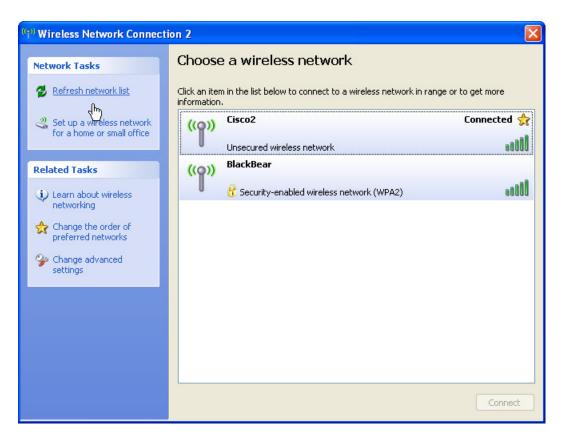
Select Connection tab > place a check mark in the box next to Connect when this network is in range > OK > OK.

Cisco2 properties		? 🗙
Association Authentica	tion Connection	
Network name (SSID):	Cisco2	
✓ Connect even if t Wireless network key	his network is not broadcasting	
This network requires	a key for the following:	
Network Authenticat	ion: Open	~
Data encryption:	Disabled	~
Network key:	•••••	
Confirm network key:	******	
Key index (advanced	): 1	
This is a computer-t access points are n	o-computer (ad hoc) network; w ot used	vireless
	ОКЪ	Cancel

When the "Network Connections" window opens, click View available wireless networks.

S Network Connections	•• E = D 🗙
File Edit View Favorites Tools Advanced Help	A
G Back - O - D Search Polders III - R Folder Sync	
Address 🔕 Network Connections	💌 🄁 Go
<ul> <li>Create a new connection</li> <li>Set up a home or small office network</li> <li>Change Windows Firewallsettings</li> <li>View available wireless network device</li> <li>Repair this connection</li> <li>Rename this connection</li> <li>Change settings of this connection</li> </ul>	a Connection 4 :able unplugged, Fire Jkon 88E8001/8003/

Press Refresh network list until Cisco# appears in the list.



What wireless network(s) are available?

### Step 9

Connect to **cisco#**, where # is the number assigned by the instructor and log into the router.

Use a browser to logon to the router.

Click the Wireless tab and then select Wireless Security.

nttp://192.168	8 오 - 🖻 Ċ X 🏼 🏉 W	/ireless Security	×			☆ 🕁
Edit View Favorites	s Tools Help					
• 🗟 • 🖃 🖶 •	Page ▼ Safety ▼ Tools	• 🕢 • 🔊 🕽	9			
ahaha						
CISCO.					Firmwai	re Version: 1.0.02
					Linksys E2500	E2500
Wireless	Setup Wire	eless Sec	urity Acce Polic			Status
		Wireles	s Security			
5 GHz Wireless Security						
5 GHZ WITEless Security						
5 GHZ WITEless Security	Security Mode:	Disabled		•	<u>Help</u>	
		Disabled		•	<u>Help</u>	
4 GHz Wireless Security	Security Mode:				<u>Help</u>	
		Disabled	Miyed Mode	•	<u>Help</u>	
	Security Mode:	Disabled WPA2/WPA WPA2 Person	Mixed Mode		Help	
	Security Mode:	Disabled WPA2/WPA WPA2 Person WPA Person	onal 📐	• •	<u>Help</u>	
	Security Mode:	Disabled WPA2/WPA WPA2 Perso WPA Perso WPA2/WPA WPA2 Enter	onal nal C Enterprise Mixed prise	• •	Help	
	Security Mode:	Disabled WPA2/WPA WPA2 Perso WPA Perso WPA2 Enter WPA2 Enterp	onal nal C Enterprise Mixed prise	• •		
	Security Mode:	Disabled WPA2/WPA WPA2 Perso WPA Perso WPA2/WPA WPA2 Enter	onal nal C Enterprise Mixed prise	▼ Mode		

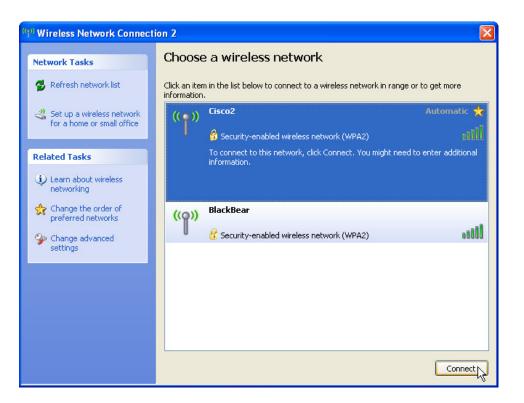
In the Security Mode drop-down box, for the "2.4GHz Wireless Security", select WPA2 Personal.

(-) (-) (-) (-) (-) (-) (-) (-) (-) (-)	P-⊠C×	遵 Wireless Se	ecurity	×			☆ ☆
File Edit View Favorites							
🏠 🔻 🖾 👻 🚍 🖶 🔻 Pa	ge 🔻 Safety 🔻 T	ools 🔻 🔞 🔻	<b>N N</b>				
							<u> </u>
uluilu cisco							
craco.						Firmwar	re Version: 1.0.02
						Linksys E2500	E2500
Wireless	Setup	Wireless	Security	Access Policy	Applications & Gaming	Administration	Status
			Wireless Security				
5 GHz Wireless Security							=
5 Onz Wilciess Scenty	Security Mode:	Dis	abled		•	Help	
2.4 GHz Wireless Security		_					
	Security Mode:	WF	A2 Personal		-		
	Passphrase:	ITE	v5.0!				
			Save Se	ttings	Cancel Change	s	
•			III				•
javascript:to_submit(document.fo	rms[0])						🔍 100% 🔻 💡

Type ITEv5.0! for the Passphrase and click Save Settings > Continue.

# Step 10

View wireless networks associated with the wireless adapter configured to the computer.



Choose **cisco#**, where # is the number assigned by the instructor, and then click the **Connect** button.

Wireless Network Con	nection 🔀
	es a network key (also called a WEP key or WPA key). A network n intruders from connecting to this network. k Connect.
Network key:	•••••
Confirm network key:	•••••
	Connect Cancel

When the security screen appears, type **ITEv5.0!** for the "Network key", confirm the key and then click **Connect**.

Wireless Network Connection
• 📑
Please wait while Windows connects to the 'Cisco2' network.
Waiting for network to be ready
Cancel

The "Please wait while Windows connects to the "Cisco#" network." screen appears.

When the screen closes, use a browser to logon to the router

If you cannot access the GUI of the router, contact the instructor.

## Step 11

Return configurations to the following settings, unless stated otherwise by the instructor.

Connect the computer to one of the **Ethernet** ports on the wireless router with an Ethernet patch cable.

Router Address Information: IP address 192.168.1.1
Subnet mask 255.255.255.0
Router name Linksys
DHCP Server Setting Information: Start IP address 192.168.1.100
Maximum number of users 50
Static DNS 1 (optional) blank
SSID Values: Network Name (SSID) Linksys
SSID Broadcast Disabled
Channel number: Channel Auto
Router Access: Router Password admin
Wireless Security: Security Mode Disable

Close the browser and logoff the computer.