IT Essentials 5.0

6.8.3.9 Lab - Configure Wireless Router in Windows Vista

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 Vista
- 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.

Note: If this is the first time connecting to the lab router, complete the following. Follow these instructions to set a network location. "Set Network Location" will be explained later in the course.

The "Set Network Location" window opens.



Select Work > Continue.



Click **Close** to accept the network location Work.

Step 3

Open the command prompt.

Type ipconfig.

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 Return.



The "Connect to" window appears.

Connect to 192.168	.1.1
	GA
The server 192.168 and password. Warning: This serve password be sent in	. 1. 1 at Linksys E2500 requires a username or is requesting that your username and an insecure manner (basic authentication
User name:	section).
Password:	•••••
	Remember my password
	OK Cancel

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

Step 5

The Setup screen appears.

http://192.168 D		100000				~	A 500
	Basi	ic Setup		×		ິນປີ	2 23
File Edit View Favorites Tool	s Help		-				
🚹 🔻 🔝 👻 🚍 🗰 🔻 Page 🕶	Safety ▼ Tools ▼	⊗ + №	N				
Router Address	Address: ubnet Mask:	192 255.255	. 168	. 1 ▼	. 254		*
R	outer Name :	ITE5					
DHCP Server Setting	HCP Server:	Enable	led 🔘	Disabled	DHCP Reservation	-	
S	tart IP Address:	192.168	. 1. 25				
M	aximum Number of sers:	10					
IP	Address Range:	192 . 168	. 1. 25 to	34			
с	lient Lease Time:	0	minute	s (0 means o	ne day)		
S	tatic DNS 1:	0	. 0	. 0	. 0		
S	tatic DNS 2:	0	. 0	. 0	. 0		
S	tatic DNS 3:	0	. 0	. 0	. 0		
	/INS:	U	. 0	. 0	. 0	_	
Time Settings							
Time Zone	(GMT-08:00) Pacific Tin	ne (USA & Ca	anada)	•			E
	Automatically adjust	clock for day	light sav	ing changes.			
Reboot							
	Reboot						
			12				
			Sav	e Settings	Cancel Changes		-
•	III			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.



Click **Continue**.

Step 6

Click the Wireless tab.

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

uluilu cisco.						Circum	n Varias: 10.02
						r in iwa	e version. 1.0.02
						Linksys E2500	E2500
Wireless	Setup	Wireless	Security	Access Policy	Applications & Gaming	Administration	Status
	Basic Wireless	s Settings	Wireless Security	Gu	est Access	Wireless MAC Filter	
Configuration View	Manual Manual Network Mode Network Name Channel Width Channel: SSID Broadca	Wi-Fi Protecter e: h e (SSID): W v: v: st: @	d Setup™ lixed ▼ lixed Vireless-A Only Vireless-N Only Vireless-N Only Vireless-N Only Disabled ■ Disa	/Hz) ▼ bled		<u>Help</u>	
2.4 GHz Wireless Settings	Network Mode	e: N	/lixed •	-			

What 802.11 technologies are supported?

cisco.						Firmwa	re Version: 1.0.02
						Linksys E2500	E2500
Wireless	Setup y	Wireless	Security	Access Policy	Applications & Gaming	Administration	Status
	Basic Wireless Sett	tings	Wireless Security	Gu	iest Access	Wireless MAC Filter	
Configuration View	🖲 Manual 🔘 Wi-	-Fi Protected	lSetup™			<u>Help</u>	
5 GHz Wireless Settings	Network Mode: Network Name (SS Channel Width:	M SID): Ci	isco55842 uto (20 MHz or 40 I	MHz) 🔻			
	Channel: SSID Broadcast:	A 36 40	uto (DFS) vto (DFS) uto (DFS) 5 - 5.180GHz 0 - 5.200GHz	bled			
2.4 GHz Wireless Settings	Network Mode: Network Name (SS Channel Width: Channel:	44 48 51D): 14 15 15 16	4 - 5.220GHz 3 - 5.240GHz 49 - 5.745GHz 53 - 5.765GHz 57 - 5.785GHz 51 - 5.805GHz	•]] •			

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

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 Mixed Wireless-B/G Only Wireless-B Only Wireless-S Only Wireless-N Only Disabled That I Disabled	
		Save Settings Cancel Changes	

What 802.11 technologies are supported?

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

 Network Name (SSID):	Cisco55842		
Channel Width:	20 MHz Only	*	
Channel:	Auto 👻		
SSID Broadcast:	Enabled Disabled	1	
	Save Setting	s Cancel Changes	

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.

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

2.4 GHz Wireless Settings	Channel Width: Channel: SSID Broadcast: Network Mode: Network Name (SSID): Channel Width: Channel: SSID Broadcast:	Auto 1 - 2.412GHZ 2 - 2.417GHZ 3 - 2.422GHZ 4 - 2.427GHZ 4 - 2.427GHZ 5 - 2.432GHZ 6 - 2.437GHZ 7 - 2.442GHZ 8 - 2.447GHZ 9 - 2.452GHZ 10 - 2.457GHZ 11 - 2.462GHZ Auto © Di	abled			
		Save	Settings	Cancel Changes		

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 and Sharing Center > Connect to a network.

Tasks	Network and Sharing Center	
View computers and devices		View full map
Connect to a network		10 - Law 20
Manage wireless networks	🖳 — x — 🥥	
Set up a connection or network	BRAXTON-PC Internet	
Manage network connections	(This computer)	
Diagnose and repair	Not connected	
	Wireless networks are available. Connect to a network	
Sanaka		

A list of available wireless networks is displayed.

Sh	ow Wireless	•	4 7
2	BlackBear	Security-enabled network	lltee
4	Cisco2	Unsecured network	lltee

What wireless network(s) are available?

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

The "Getting information from Cisco#" screen appears.

Connect to a network	
Getting information from Cisco2	
·	
I want to enter the network key or passphrase instead	
	Cancel

The "Cisco# is an unsecured network" screen appears.

Connect to a network	
Cisco2 is an unsecured network	
Connect Anyway Information sent over this network might be visible to others.	
Connect to a different network	
	Cancel

Click Connect Anyway.

The "Connecting to Cisco#" screen appears.

6	Connect to a network	
	Connecting to Cisco2	
	🧶 ———— 💐	
		Cancel

The "Successfully connected to Cisco#" screen appears.



Click the Save this network box and then click Close.

When the "Set Network Location" window opens, select Work > Continue > Close.

Step 8

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

The "Connect to" window appears.



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: SSID Broadcast:	Mixed Cisco1 20 MHz Only G-2.437GHZ C Disabled	
		Save Settings Cancel Changes	

Click Save Settings > Continue.

Why would you disable SSID broadcast?

Close all opened Windows: Network and Sharing Center, browser, command prompt, etc.

View wireless networks associated with the wireless adapter configured to the computer. Click Start > Control Panel > Network and Sharing Center > Manage network connections.



Right-click the wireless adapter icon and then select Connect/Disconnect.



A list of wireless connection is displayed. Click the refresh button a few times.

Connect to a network Select a network to connect Show Wireless BlackBear Unnamed Network	t to Security-enabled network Unsecured network		ري الله الله
Set up a connection or network Open Network and Sharing Center		Connect	ancel

What wireless network(s) are available?

Close the "Select a network to connect to" window.

Click Open Network and Sharing Center.

🕞 🕞 🗢 🙀 « Network and Shar	ing Center 👻 🍫 Search	Q
Tasks View computers and devices	Network and Sharing Center	e
Connect to a network <u>Manage wireless networks</u> Set up a connection or network		
Manage network connections Diagnose and repair	(This computer)	
	Wireless networks are available.	
See also Internet Options Windows Firewall		

Click Manage wireless networks.

Control Pa	nel 🕨 Manage Wireless Networks	✓ 4 Search	٩			
Manage wireless networks that use (Wireless Network Connection) Windows tries to connect to these networks in the order listed below. To change the order, drag a network up or down in the list. You can also add or remove network profiles.						
👍 Add 🛞 Adapter proper	ties & Profile types 鞋 Network a	nd Sharing Center	0			
Networks you can view and n	nodify (2)		^			
Cisco2	Security: Unsecured	Type: Any supported	Automatically con			
BlackBear	Security: WPA2-Personal	Type: Any supported	Automatically con			
2 items			A			

When the "Manage wireless networks that use (Wireless Network Connection)" window opens, double click **Cisco#**, where # is the number assigned to you.

Cisco2 Wireless Networ	k properties
Connection Security	
Name:	Cisco2
SSID:	Cisco2
Network Type:	Access point
Network Availability:	All users
1.00	
Connect automati	cally when this network is in range
Connect to a more	e preferred network if available
Connect even if the	ne network is not broadcasting
	OK Cancel

Select the check box Connect even if the network in not broadcasting, then click OK.

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

SI	how Wireless	•	49
	BlackBear	Security-enabled network	liter
.	Cisco2	Unsecured network	llter

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.

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արտիս						
CISCO.					Firmwar	e Version: 1.0.02
					Linksys E2500	E2500
Winelson.	_	_	A	plications 9		
wireless	Setup Wire	less Security	Policy	Gaming Ad	Iministration	Status
		Wireless Secur	i ty Guest A			
5 GHz Wireless Security				-	00000	
	Security Mode:	Disabled	•		Help	
2.4 GHz Wireless Security						
	Security Mode:	Disabled	•	7		
	109	WPA2/WPA Mixed N	lode		-	
		WPA2 Personal	à			
		WPA2/WPA Enterprise	ise Mixed Mode			
		WPA Enterprise		ncel Changes		
		RADIUS				-
•		Disabled				•
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In the Security Mode drop-down box, for the "2.4GHz Wireless Security", select WPA2 Personal.

	2 Data				
A http://192.168	D + 🛛 C X 🦉 Wirele	ss Security ×			³³ とう
File Edit View Favorites	Tools Help				
🏠 🔻 🖾 👻 🖶 🕈 Pa	ge 🔻 Safety 🔻 Tools 👻 🌘	9 - № №			
					<u>^</u>
CISCO.				Firmware Ve	ersion: 1.0.02
				Linksys E2500	E2500
Wireless	Setup Wireles	s Security Access Policy	Applications & Adm Gaming Adm	inistration !	Status
		Wireless Security Gu			
5 GHz Wireless Security					E
	Security Mode:	Disabled	•	Help	
2.4 GHZ WIREless Security					
	Security Mode:	WPA2 Personal	•		
	Passphrase:	[TEv5.0]			
		save Settings	Cancel Changes		-
•					•
javascript:to_submit(document.for	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.

Open "Network and Sharing Center" then click **Connect to a network**.

Connect to a network		
Select a network to conner Show Wireless Cisco2	The settings saved on this computer for the network do not match the requirements of the network	×
BlackBear	Security-enabled network	llte
Set up a connection or network Open Network and Sharing Center	r	
	Connect	Cance

Why can you not connect to Cisco#?

Click Cancel.

When the "Network and Sharing Center" windows opens, click **Manage Wireless Networks**, right-click **Cisco# > Properties**.

Manage wirel Windows tries to o can also add or re	ntrol Panel Manage Wirele ess networks that use connect to these networks in t move network profiles.	ess Networks (Wireless Network) he order listed b		vork up or down in the list. You
🛟 Add 📼 Remove	e 👆 Move down 🛞 Ada	pter properties	🤱 Profile types 🛛 🙀 Network and S	Sharing Center 💿
Networks you can view	tworks you can view and modify (2)		Type: Any supported	Automatically con
	Properties		Type My supported	Patomatcany comm
BlackBeau	Remove network Rename Move down	-Personal	Type: Any supported	Automatically con
Cisco2	Profile name: Cisco2 Security type: Unsecured Radio type: Any supported	Mode	: Automatically connect	A

The "Cisco# Wireless Network properties" window opens.

0	Cisco2 Wireless Network	c properties	23
	Connection Security		
	Security type:	WPA2-Personal	
	Encryption type:	AES	
	Network security key	ITEv5.0!	
		Show characters	
	L		

Select the Security tab and then set the "Security type:" to **WPA2** –**Personal**, type in **ITEv5.0!** for the "Network security key", and then click **OK**.

When the "Set Network Location" window opens, select Work > Continue > Close.

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.