

IT Essentials 5.0

10.2.4.10 Lab - Configure Wireless Security

Introduction

Print and complete this lab.

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

Recommended Equipment

- Two computers with Windows 7 or Windows Vista or Windows XP
- An Ethernet NIC installed in computer 1
- A Wireless NIC installed in computer 2
- Linksys E2500 Wireless Router
- Ethernet patch cable

Step 1

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

Default Login Information:

User Name (if any) _____

Password _____

Basic Wireless Settings:

Network Name (SSID) _____

Network Mode: _____

Channel: _____

Important: Only use configurations assigned by the instructor.

Note: Use computer 1 for all lab instructions unless stated.

Step 2

Connect computer 1 to an **Ethernet** ports on the wireless router with an Ethernet patch cable.

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

Step 3

Open the command prompt.

Type **ipconfig**.

What is the IP address for the computer?

What is the default gateway for the computer?

Step 4

Open Internet Explorer and connect to the wireless router.

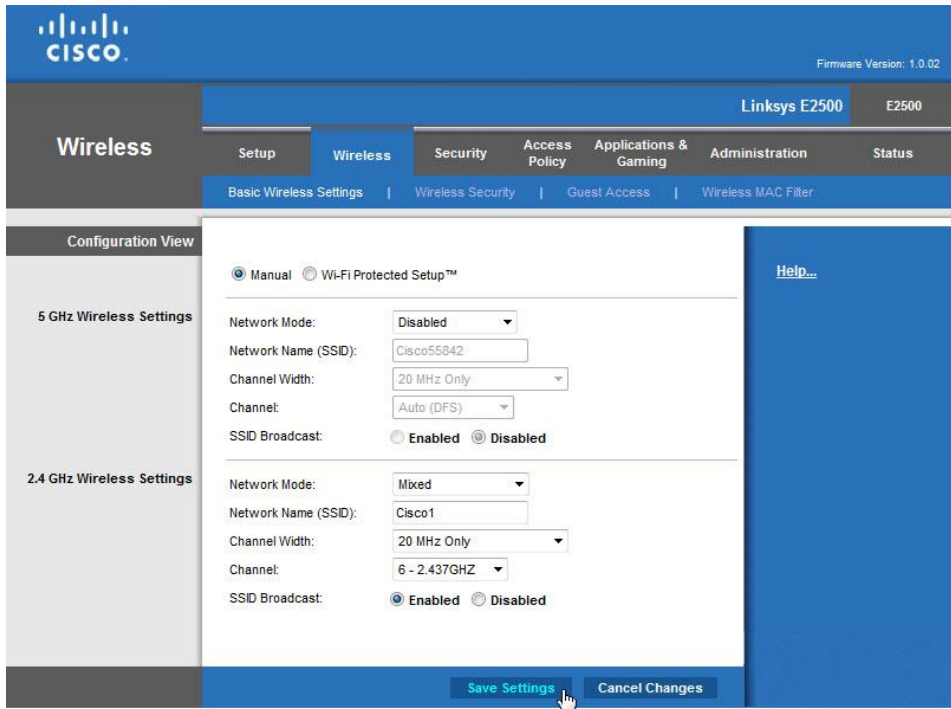
Type **admin** in the “Password:” field.

The “Setup screen” appears.

Click **Wireless** tab.

The screenshot displays the Cisco Linksys E2500 web interface. At the top, the Cisco logo is on the left, and the firmware version (1.0.02) is on the right. Below the logo, the router model 'Linksys E2500' is shown. The main navigation bar includes tabs for Setup, Wireless, Security, Access Policy, Applications & Gaming, Administration, and Status. Under the 'Wireless' tab, there are sub-tabs for Basic Wireless Settings, Wireless Security, Guest Access, and Wireless MAC Filter. The 'Basic Wireless Settings' sub-tab is selected. The configuration view shows two sections: '5 GHz Wireless Settings' and '2.4 GHz Wireless Settings'. Both sections have radio buttons for 'Manual' and 'Wi-Fi Protected Setup™'. The 'Manual' option is selected for both. For the 5 GHz section, the Network Mode is 'Disabled', Network Name (SSID) is 'Cisco55842', Channel Width is '20 MHz Only', Channel is 'Auto (DFS)', and SSID Broadcast is 'Disabled'. For the 2.4 GHz section, the Network Mode is 'Disabled', Network Name (SSID) is empty, Channel Width is '20 MHz Only', Channel is 'Auto', and SSID Broadcast is 'Disabled'. At the bottom, there are 'Save Settings' and 'Cancel Changes' buttons.

Under the Wireless tab, click **Basic Wireless Settings** if it is not selected.



Enter the following information for the 2.4 GHz wireless settings, unless stated otherwise by the instructor:

Network Mode: **Mixed**

Network Name (SSID): **Cisco#**, where # is a number assigned by the instructor

Channel: **#**, where # is a number assigned by the instructor

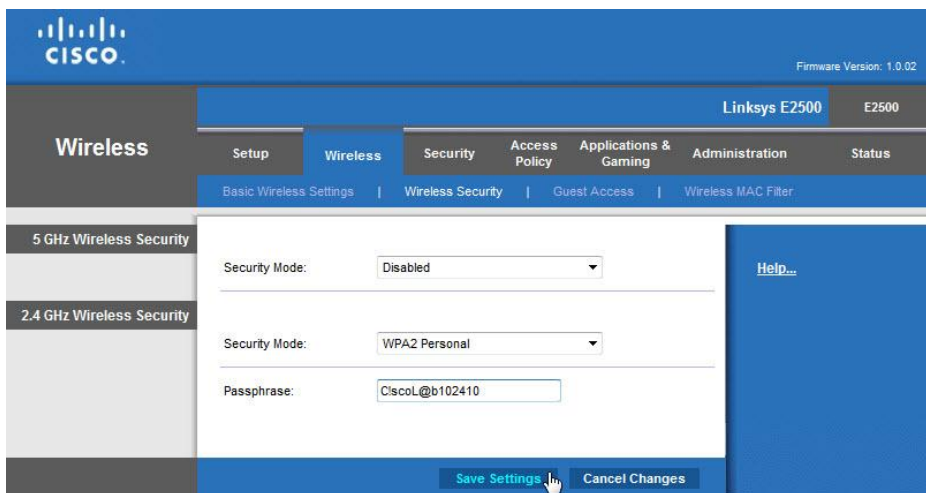
SSID Broadcast: **Enabled**

Click **Save Settings > Continue**.

Click the **Wireless Security** sub-tab.

Step 5

The “Wireless Security” screen appears.



Enter the following information for the 2.4 GHz wireless security settings, unless stated otherwise by the instructor:

Security Mode: **WPA2 Personal**.

Passphrase: **C!scoL&b102410**

Click **Save Settings > Continue**.

Keep Internet Explorer open to the Linksys router.

Step 6

Log in to computer 2, the wireless computer, as the administrator.

Connect to the wireless network. If asked for a security key or passphrase enter: **C!scoL&b102410**

Open the command prompt.

Type **ipconfig /all**.

What is the IP address of the wireless NIC?

What is the physical address of the wireless NIC?

Type **ping IPaddress**. Where **IPaddress** is the IP address of computer 1.

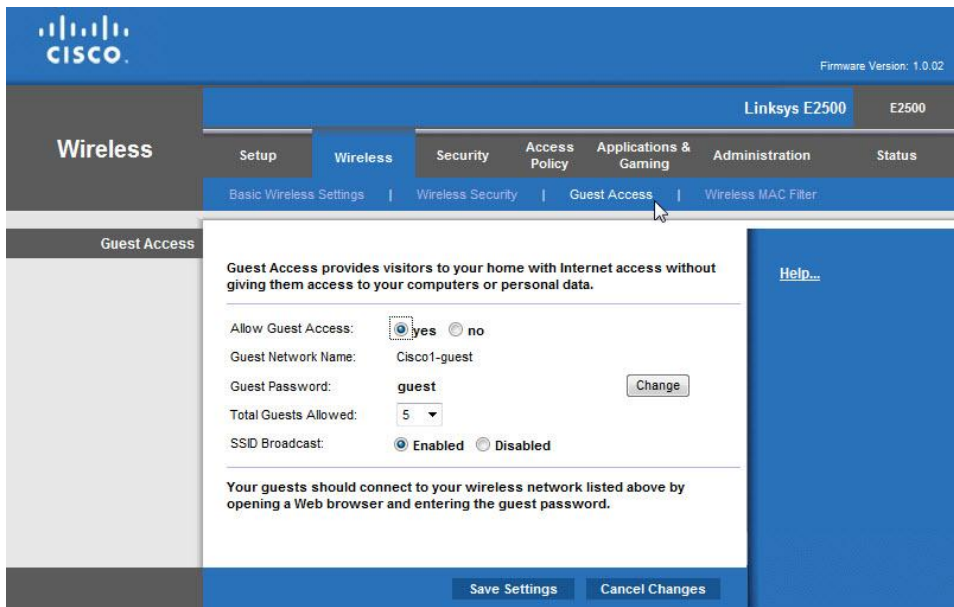
Was the ping successful?

Keep the command prompt window open.

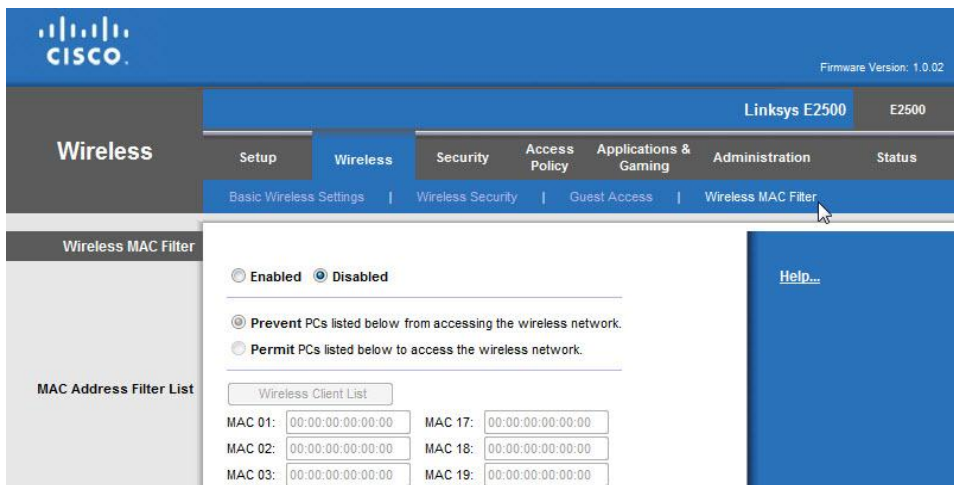
Step 7

From computer 1, make sure Internet Explorer is active.

Under the Wireless tab, click **Guest Access**.



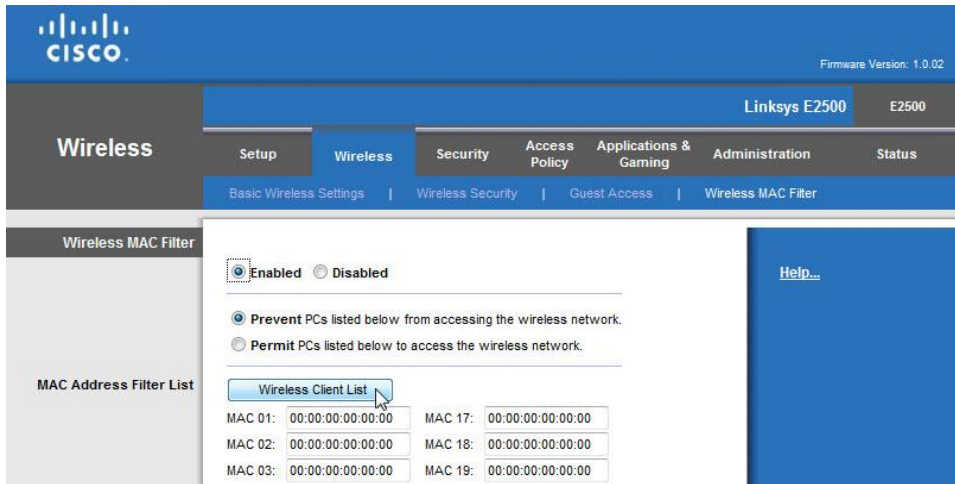
Why would you allow guest access?



Under the Wireless tab, click **Wireless MAC Filter**.

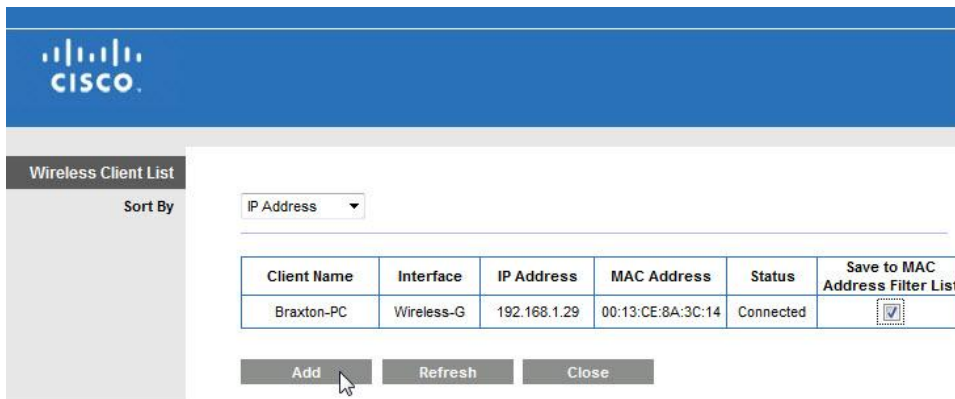
Step 8

The "Wireless MAC Filter" screen appears.



Select **Enabled > Prevent > click Wireless Client List.**

The “Wireless Client List” screen appears.



Select **Save to MAC Address Filter List** check box for computer 2.

Click **Add**.

What MAC address is now listed?

Click **Save Settings > Continue**.

Step 9

From computer 2:

In the command prompt window type **ping IPAddress**. Where **IPAddress** is the IP address of computer 1.

Was the ping successful?

Step 10

From computer 1, click the **browser** so it is activated.

Click **Administration** on the main tab bar.

The “Management” screen appears.

The screenshot shows the Linksys E2500 Administration interface. The top navigation bar includes tabs for Setup, Wireless, Security, Access Policy, Applications & Gaming, Administration (selected), and Status. Below this is a secondary navigation bar with links for Management, Log, Diagnostics, Factory Defaults, and Firmware Upgrade. The main content area is titled "Management" and contains several sections:

- Router Access:** Fields for Router Password (masked with dots) and Re-Enter to Confirm (masked with dots).
- Local Management Access:** Radio buttons for Access via: HTTP, HTTPS; and Access via Wireless: Enabled, Disabled.
- Remote Management Access:** Radio buttons for Remote Management: Enabled, Disabled; Access via: HTTP, HTTPS; Remote Upgrade: Enabled, Disabled; Allowed Remote IP Address: Any IP Address; and Remote Management Port: 8080.
- Advanced features:** Radio buttons for SIP ALG: Enabled, Disabled.
- UPnP:** Radio buttons for UPnP: Enabled, Disabled; Allow Users to Configure: Enabled, Disabled; and Allow Users to Disable Internet Access: Enabled, Disabled.
- Back Up and Restore:** Buttons for Back Up Configuration and Restore Configuration.

At the bottom of the page are buttons for Save Settings and Cancel Changes (highlighted with a mouse cursor).

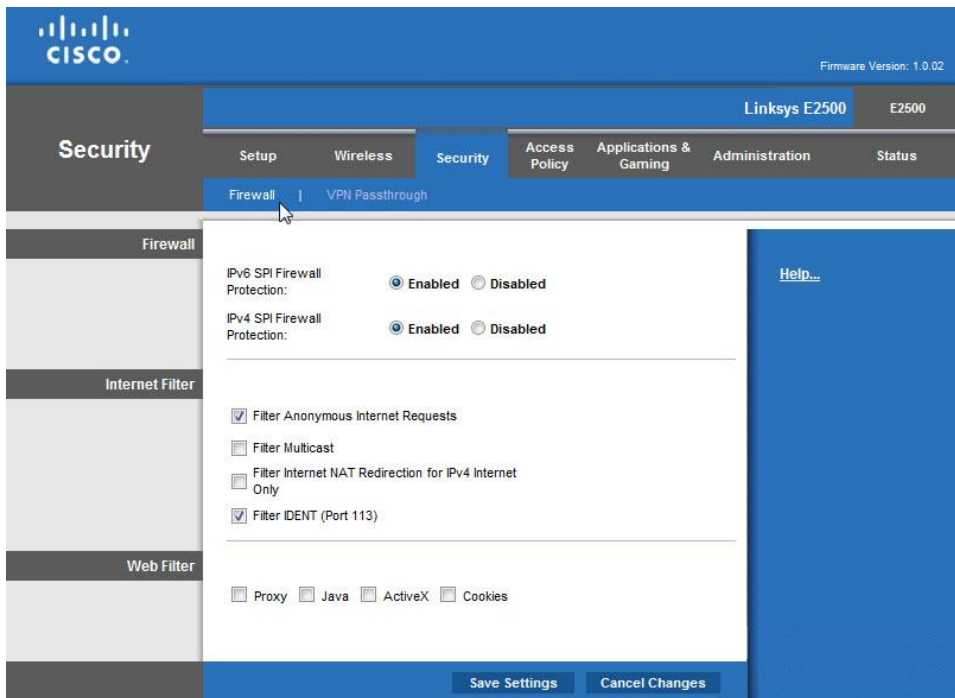
Highlight the Router Password and type **ITEv5.0**. Type the same password in Re-Enter to Confirm.

Click **Cancel Changes**. Do not save the new password.

Click **Security** on the main tab bar.

Step 11

The “Firewall” screen appears.



By default, SPI Firewall Protection is Enabled.

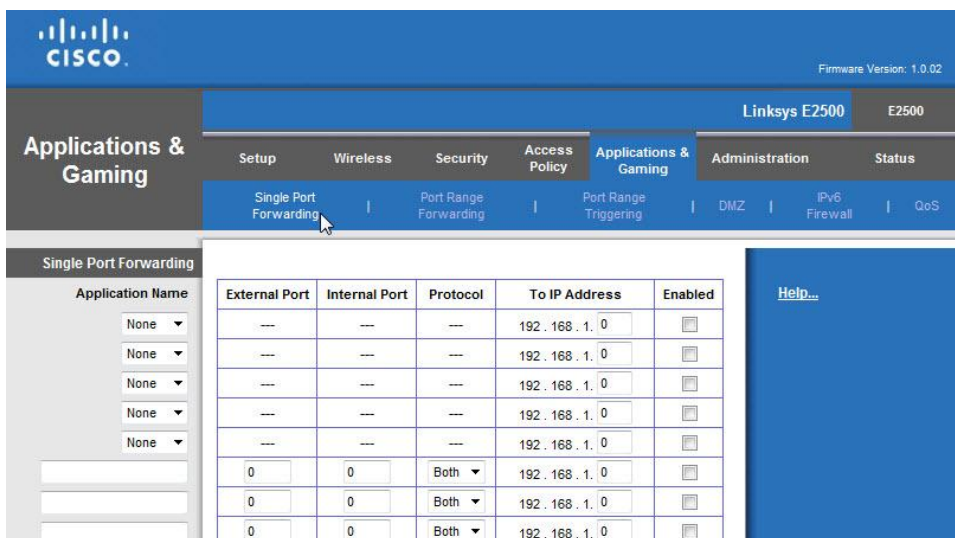
What Internet Filters are available?

What Web Filters are available?

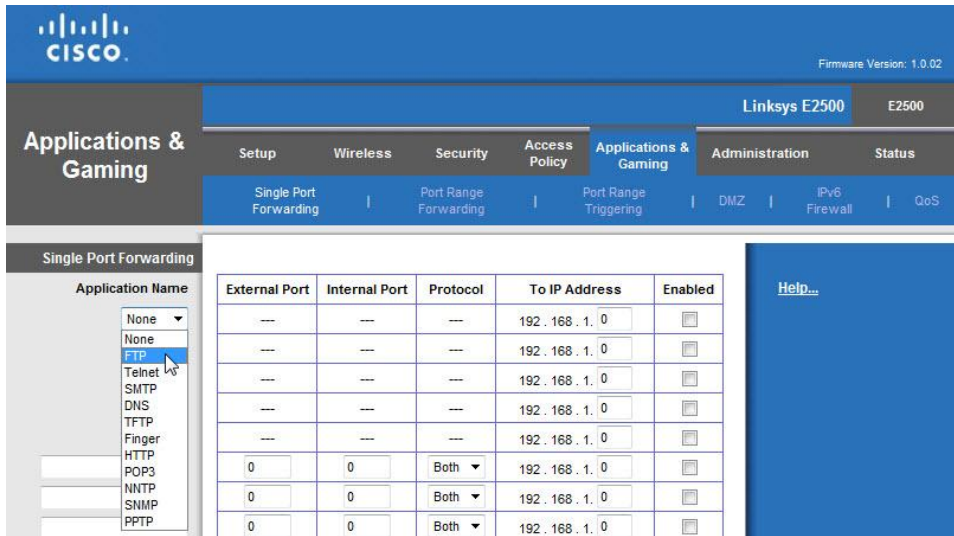
Click **Applications & Gaming** on the main tab bar.

Step 12

The “Applications & Gaming” screen appears.

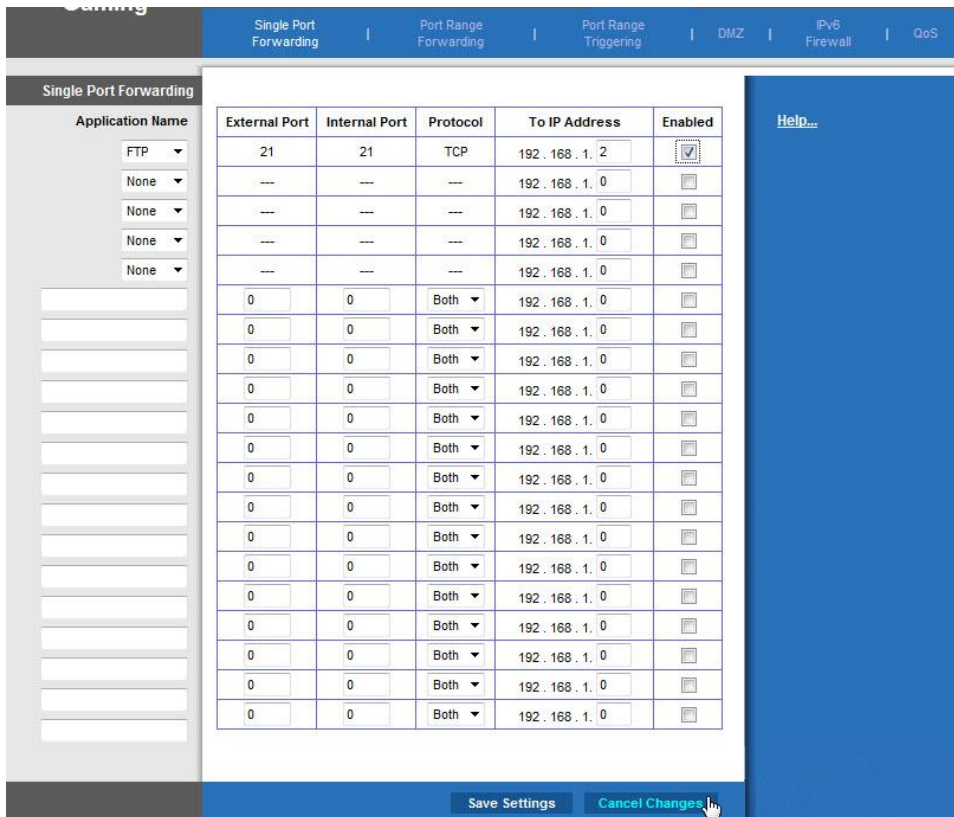


Click **Single Port Forwarding**.



To forward an otherwise blocked port to a specific computer, select **Application Name > FTP**.

Type the last octet of the IP address for the computer and then click **Enabled** checkbox.

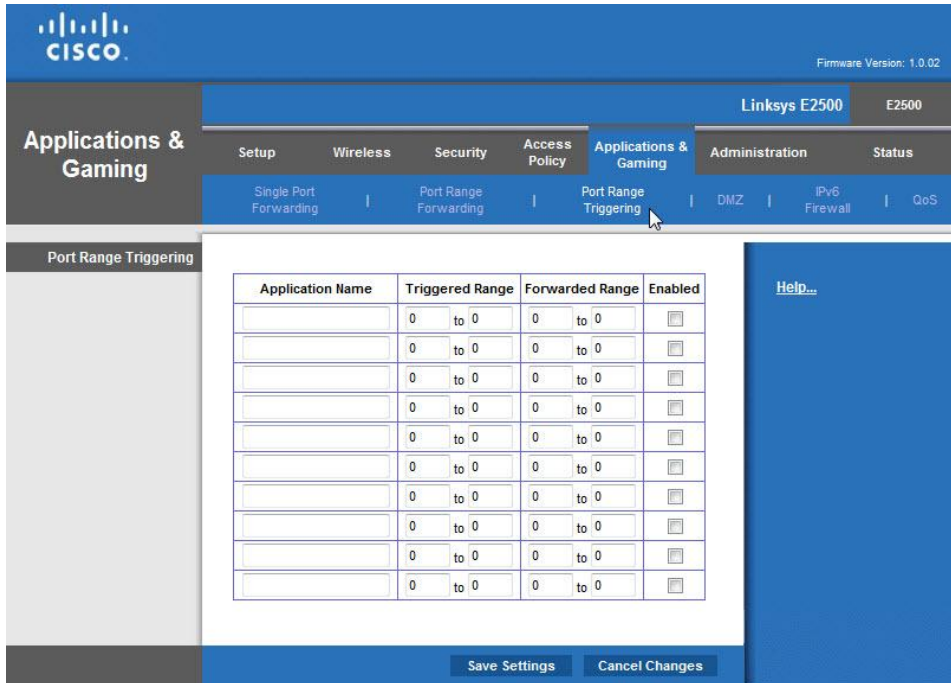


Click **Cancel Changes**. Do not save the new setting.

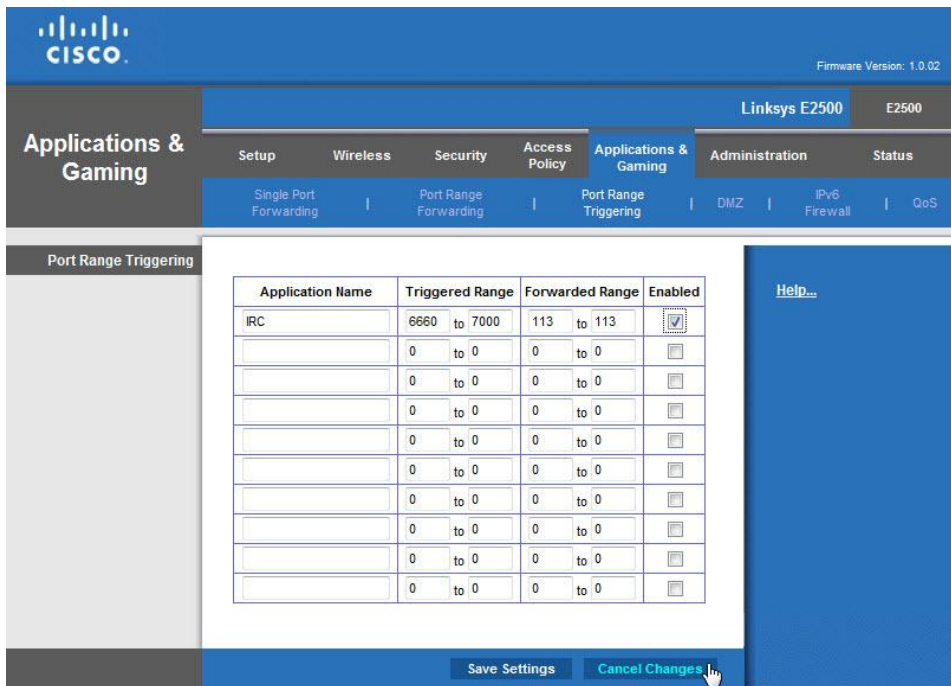
Click **Port Range Triggering**.

Step 13

The “Port Range Triggering” screen appears.



To open an otherwise blocked port, type in the application name **IRC**. Then type the Triggered Range **6660 to 7000**, Forwarded Range **113 to 113** and then click **Enabled** checkbox.

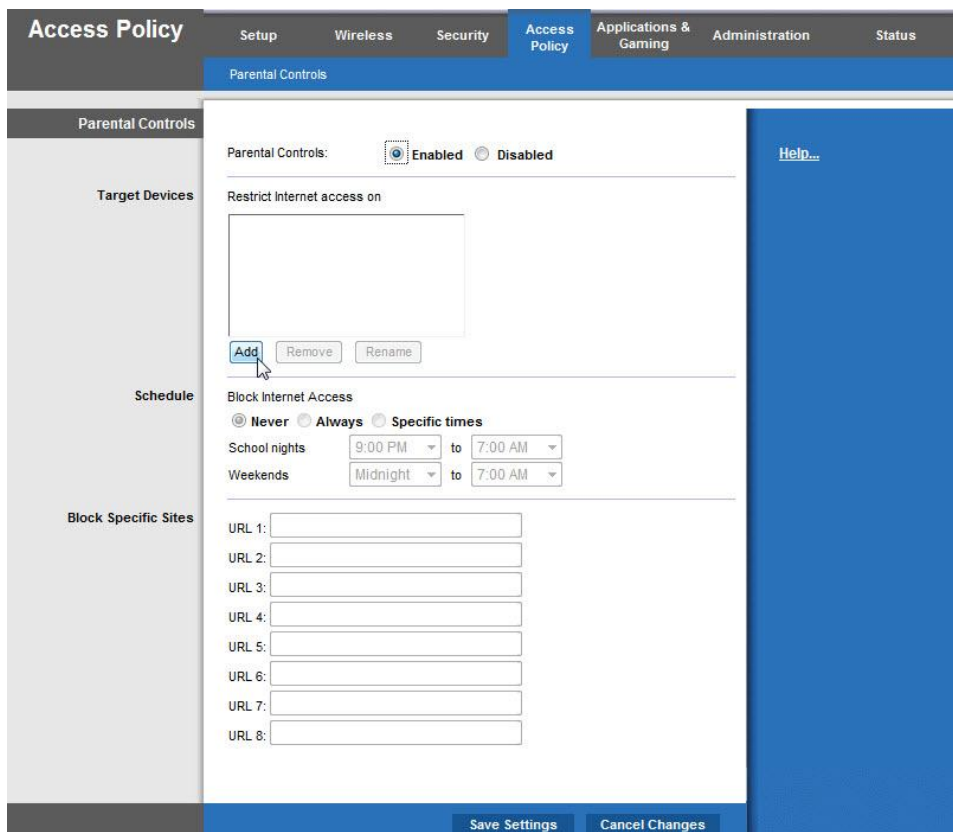


Click **Cancel Changes**. Do not save the new setting.

Click **Access Policy**.

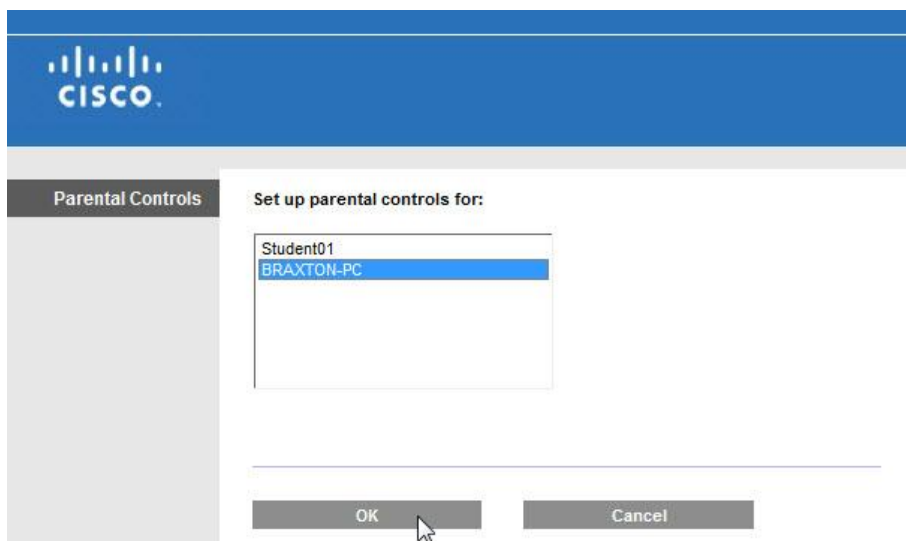
Step 14

The “Parental Controls” screen appears.



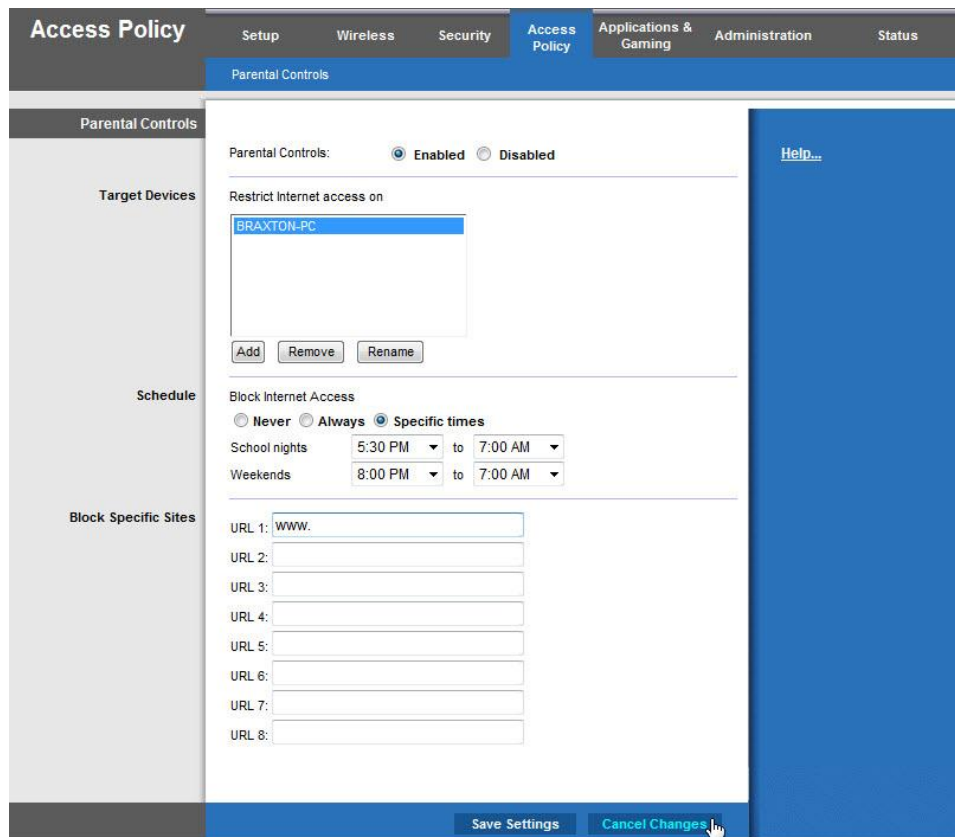
Select **Enable > Add**.

The “Set up parental control for:” window opens.



Select a computer name, **Computer2 > OK**.

The “Parental Controls” screen re-appears.



Set a schedule to block Internet access.

Select **Specific times**.

School nights: **5:30 PM to 7:00AM**

Weekends: **8:00 PM to 7:00 AM**

Block specific sites: type in the website URL.

Click **Cancel Changes**.

Step 15

From computer 1, click **Wireless** tab.

Click **Wireless MAC Filter > Disable > Save Settings > Continue**.

Click **Wireless Security > Disable > Save Settings > Continue**.

Click **Basic Wireless Settings > Disable > Save Settings > Continue**.