The Wireless - Advanced Wireless Settings Tab

This screen allows you to configure the advanced settings for the Access Point. In most cases, these settings do not need to be changed.

Advanced Wireless

You can change the data transmission and output power settings for the Access Point.

CTS Protection Mode. The CTS (Clear-To-Send) Protection Mode function boosts the Access Point's ability to catch all Wireless-G transmissions but will severely decrease performance. Keep the default setting, **Auto**, so the Access Point can use this feature as needed, when the Wireless-G products are not able to transmit to the Access Point in an environment with heavy 802.11b traffic. Select **Enabled** if you want to permanently enable this feature, or select **Disabled** if you want to permanently disable this feature.

Wireless Isolation. When this feature is enabled, PCs using different SSIDs cannot see each other, so the different wireless networks are kept separate from each other. In most cases, including wireless hotspots, keep the default, **Enabled**. If you want PCs from different wireless networks to communicate, select **Disabled**.

Basic Data Rates. This setting is not actually one rate of transmission but a series of rates that are advertised to the other wireless devices in your network, so they know at which rates the Access Point can transmit. At the **Default** setting, the Access Point will advertise that it will automatically select the best rate for transmission. Other options are **1-2Mbps**, for use with older wireless technology, and **All**, when you wish to have all rates advertised. The Basic Data Rates are not the rates transmitted; the rates transmitted can be configured through the TX Rate setting on the Wireless - Basic Wireless Settings tab.

Beacon Interval. This value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the Access Point to keep the network synchronized. A beacon includes the wireless networks service area, the Access Point address, the Broadcast destination addresses, a time stamp, Delivery Traffic Indicator Maps, and the Traffic Indicator Message (TIM).

DTIM Interval. This value indicates how often the Access Point sends out a Delivery Traffic Indication Message (DTIM). Lower settings result in more efficient networking, while preventing your PC from dropping into power-saving sleep mode. Higher settings allow your PC to enter sleep mode, thus saving power, but interferes with wireless transmissions.

RTS Threshold. This setting determines how large a packet can be before the Access Point coordinates transmission and reception to ensure efficient communication. This value should remain at its default setting of **2347**. Should you encounter inconsistent data flow, only minor modifications are recommended.
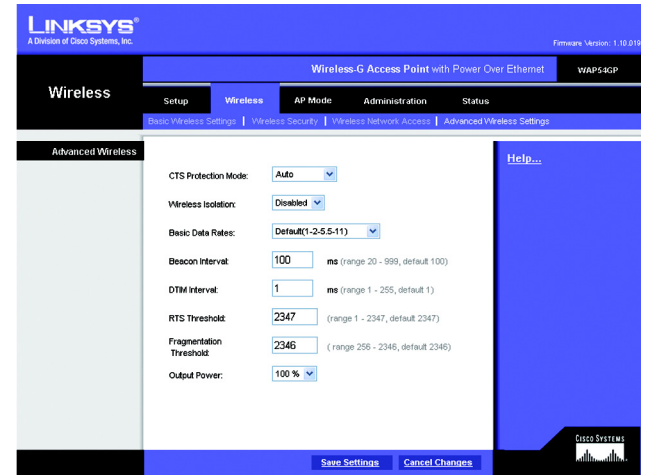

Figure 6-11: Wireless - Advanced Wireless Settings Screen

cts (clear-to-send): a signal sent by a wireless device, signifying that it is ready to receive data.

beacon internal: data transmitted on your wireless network that keeps the network synchronized.

packet: a unit of data sent over a network.

dtim (delivery traffic indication message): a message included in data packets that can increase wireless efficiency.

rts (request to send): a networking method of coordinating large packets through the RTS Threshold setting.

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The Wireless - Advanced Wireless Settings Tab

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Fragmentation Threshold. This specifies the maximum size a data packet can be before splitting and creating a new packet. It should remain at its default setting of **2346**. A smaller setting means smaller packets, which will create more packets for each transmission. If you have decreased this value and experience high packet error rates, you can increase it again, but it will likely decrease overall network performance. Only minor modifications of this value are recommended.

Output Power. You can adjust the output power of the Access Point to get the appropriate coverage for your wireless network. Select the level you need for your environment. If you are not sure which setting to choose, then keep the default setting, **100%**.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.

fragmentation: breaking a packet into smaller units when transmitting over a network.

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The Wireless - Advanced Wireless Settings Tab

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The AP Mode Tab

On this screen you can change the Access Point's mode of operation. In most cases, you can keep the default, **Access Point**. You may wish to do this if you want to use the Access Point as a wireless repeater to extend the range of your wireless network. You may also wish to do this if you want to use the Access Point as a wireless bridge; for example, you can use two Access Points in Wireless Bridge mode to connect two wired networks that are in two different buildings.

IMPORTANT: For Wireless Repeater and Wireless Bridge modes, the remote access point must be a second Linksys Wireless-G Access Point with Power Over Ethernet (model number: WAP54GP) or a Linksys Wireless-G Exterior Access Point with Power Over Ethernet (model number: WAP54GPE). The Access Point will not communicate with any other kind of remote access point.

AP Mode

The Access Point offers three modes of operation: Access Point, Wireless Repeater, and Wireless Bridge. For the Repeater and Bridge modes, make sure the SSID, channel, and security settings are the same for the other wireless access points/devices.

MAC Address

The MAC address of the Access Point is displayed here.

Access Point. The Mode is set to **Access Point** by default. This connects your wireless PCs to a wired network. In most cases, no change is necessary.

If you want to let the Access Point's signal be repeated, then click the checkbox next to *Allow wireless signal to be repeated by a repeater*. Enter the MAC addresses of the repeaters in the *MAC 1-3* fields. Repeaters can be another access point or the Wireless-G Range Expander (model number: WRE54G).

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.
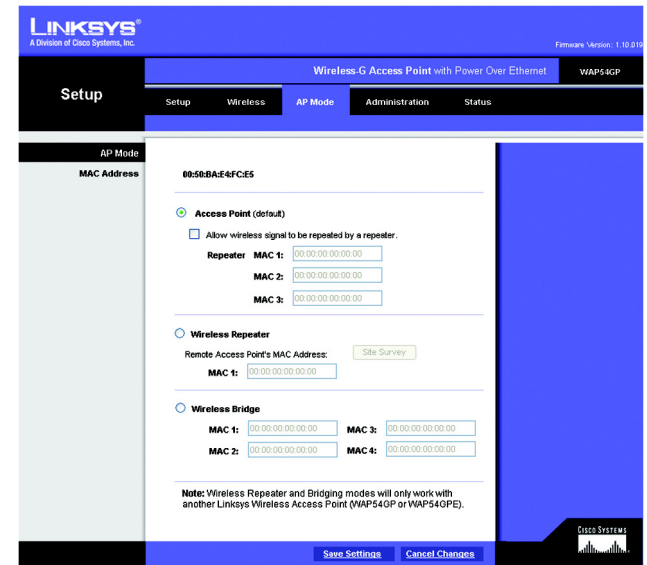

Figure 6-12: AP Mode Screen

Wireless Repeater. When set to Wireless Repeater mode, the Wireless Repeater is able to talk to up a remote access point within its range and retransmit its signal. This feature only works with the Linksys Wireless-G Exterior Access Point with Power Over Ethernet (model number: WAG54GPE) or another Wireless-G Access Point with Power Over Ethernet (model number: WAP54GP).

Figure 6-13: Wireless Repeater Diagram

To configure a Wireless Repeater environment, select **Wireless Repeater** and enter the MAC address of the remote access point in the *MAC 1* field. If you do not know the access point's MAC address, click the **Site Survey** button. Select the access point you want to use and click the **Apply** button. Then click the **Close** button to return to the *AP Mode* screen. If you do not see the access point you want, click the **Refresh** button to search for access points again.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.
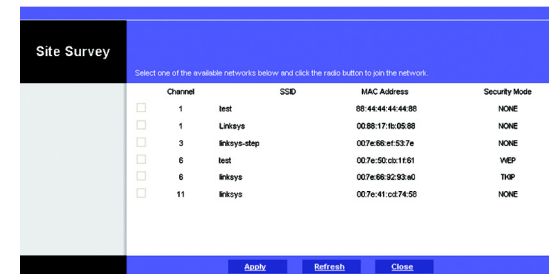

Figure 6-14: Site Survey Screen

Wireless Bridge. This mode connects two physically separated wired networks using two access points (use additional access points to connect more wired networks). This feature only works with the Linksys Wireless-G Exterior Access Point with Power Over Ethernet (model number: WAG54GPE) or another Wireless-G Access Point with Power Over Ethernet (model number: WAP54GP).

IMPORTANT: In Wireless Bridge mode, the Access Point can ONLY be accessed by another access point in Wireless Bridge mode. In order for your other wireless devices to access the Access Point, you must reset it to Access Point mode. The two modes are mutually exclusive.

Figure 6-15: Wireless Bridge Diagram

To configure a Wireless Bridge environment, select **Wireless Bridge**, and enter the MAC addresses of the wireless bridges/access points in the *MAC 1-4* fields. You will also need to set the remote wireless bridges/ access points to Wireless Bridge mode.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.

The Administration - Management Tab

On this screen you can configure the password and SNMP settings.

AP Password

You should change the password that controls access to the Access Point's Web-based Utility.

Local AP Password

User Name. Create a User Name and enter it in the field provided.

AP Password. Create a Password for the Access Point's Web-based Utility.

Re-enter to confirm. To confirm the new Password, enter it again in this field.

Web Access

Web HTTPS Access. HTTPS (HyperText Transport Protocol Secure) uses SSL (Secured Socket Layer) to encrypt data transmitted for higher security. To secure remote access of the Access Point's Web-based Utility, select **Enabled**. Otherwise, select **Disabled**.

SNMP

SNMP is a popular network monitoring and management protocol. It provides network administrators with the ability to monitor the status of the Access Point and receive notification of any critical events as they occur on the Access Point.

To enable the SNMP support feature, select **Enabled**. Otherwise, select **Disabled**.

Identification

Contact. Enter the name of the contact person, such as a network administrator, for the Access Point.

Device Name. Enter the name you wish to give to the Access Point.

Location. Enter the location of the Access Point.

Get Community. Enter the password that allows read-only access to the Access Point's SNMP information. The default is **public**.
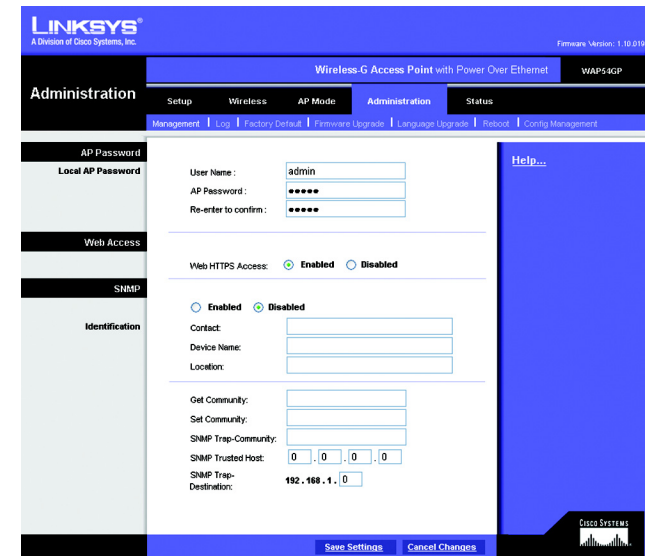

Figure 6-16: Administration - Management Screen

Set Community. Enter the password that allows read/write access to the Access Point's SNMP information. The default is **private**.

SNMP Trap-Community. Enter the password required by the remote host computer that will receive trap messages or notices sent by the Access Point.

SNMP Trusted Host. You can restrict access to the Access Point's SNMP information by IP address. Enter the IP address in the field provided. If this field is left blank, then access is permitted from any IP address.

SNMP Trap-Destination. Enter the IP address of the remote host computer that will receive the trap messages.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.

The Administration - Log Tab

On this screen you can configure the log settings, as well as options for e-mail alerts of particular events.

Log

You can have logs that keep track of the Access Point's activities.

Email Alert

E-Mail Alert. To receive e-mail alerts when certain events occur, select **Enabled**. Otherwise, select **Disabled**.

E-Mail Address for Logs. Enter the e-mail address that will receive the alert logs.

Notification Queue Length

Log Queue Length. Designate the length of the log that will be e-mailed to you. The default is **20** entries.

Log Time Threshold. Designate how often the log will be e-mailed. The default is **600** seconds (10 minutes).

Syslog Notification

Syslog is a protocol used to capture information about network activity. The Access Point supports this protocol and send its activity logs to an external server. To enable Syslog, select **Enabled**. Otherwise, select **Disabled**.

Syslog Server IP Address. Enter the IP address of the Syslog server. In addition to the standard event log, the Access Point can send a detailed log to an external Syslog server. The Access Point's Syslog captures all log activities and includes information about all data transmissions.

Log

Unauthorized Login Attempt. To receive alert logs about any unauthorized login attempts, click the checkbox.

System Error Messages. If you want to log system error messages, click the checkbox.

Authorized Login. If you want to log authorized logins, click the checkbox.

Configuration Changes. If you want to log any configuration changes, click the checkbox.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.
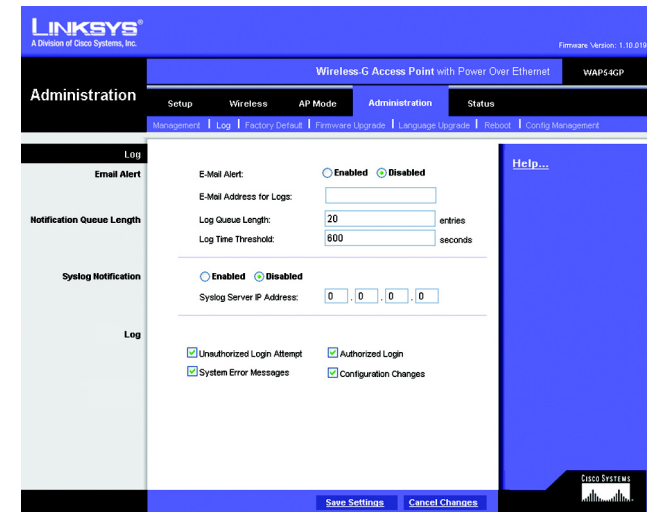

Figure 6-17: Administration - Log Screen

The Administration - Factory Default Tab

On this screen you can restore the Access Point's factory default settings.

Factory Default

Write down any custom settings before you restore the factory defaults. Once the Access Point is reset, you will have to re-enter all of your configuration settings.

Restore Factory Defaults. To restore the Access Point's factory default settings, click the **Yes** radio button. Otherwise, click the **No** radio button.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.

The Administration - Firmware Upgrade Tab

On this screen you can upgrade the Access Point's firmware. Do not upgrade the firmware unless you are experiencing problems with the Access Point or the new firmware has a feature you want to use.

Firmware Upgrade

Before you upgrade the Access Point's firmware, write down all of your custom settings. After you upgrade its firmware, you will have to re-enter all of your configuration settings. To upgrade the Access Point's firmware:

1. Download the firmware upgrade file from the Linksys website, *www.linksys.com*.

2. Extract the firmware upgrade file on your computer.

3. On the *Firmware Upgrade* screen, enter the location of the firmware upgrade file in the field provided, or click the **Browse** button to find the file.

4. Click the **Upgrade** button, and follow the on-screen instructions.
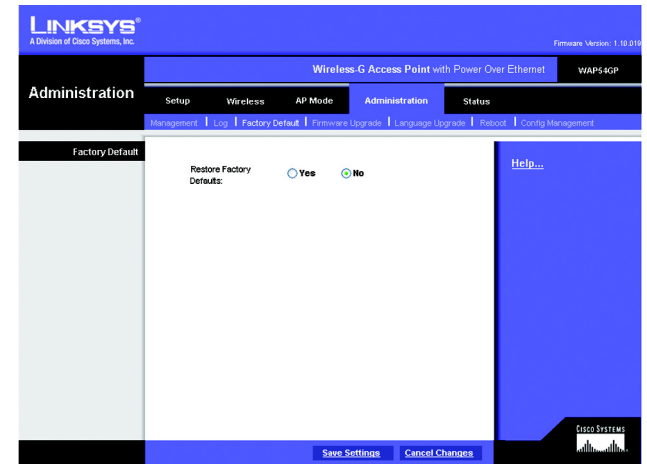
Click **Help** for more information.

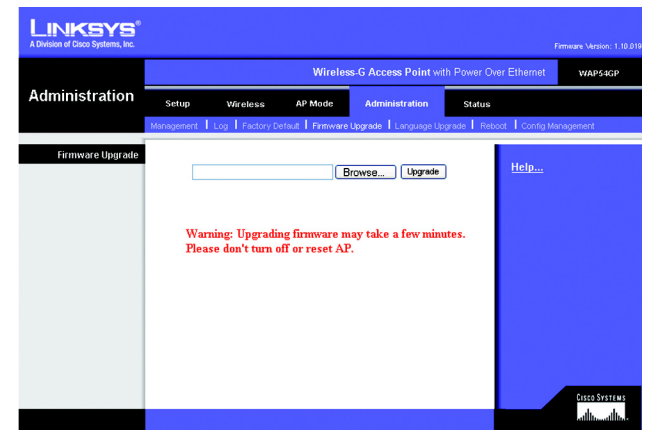**Figure 6-18: Administration - Factory Default Screen**

Figure 6-19: Administration - Firmware Upgrade Screen

upgrade: to replace existing software or firmware with a newer version

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The Administration - Factory Default Tab

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The Administration - Language Upgrade Tab

On this screen you can do a language upgrade to change the language used by the Access Point's Web-based Utility.

Language Upgrade

If you do want to change the language currently used by the Web-based Utility, then you can download a language upgrade file and update the Access Point.

To change the Access Point's language:

1. Download the language upgrade file from the Linksys website, *www.linksys.com*.

2. Extract the language upgrade file on your computer.

3. On the *Language Upgrade* screen, enter the location of the language upgrade file in the field provided, or click the **Browse** button to find the file.

4. Click the **Upgrade** button, and follow the on-screen instructions.

Click **Help** for more information.

The Administration - Reboot Tab

On this screen you can reboot the Access Point.

Reboot

This feature is useful when you need to remotely reboot the Access Point.

Device Reboot. To reboot the Access Point, click the **Yes** radio button. Otherwise, click the **No** radio button.

Change these settings as described here and click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes. Click **Help** for more information.
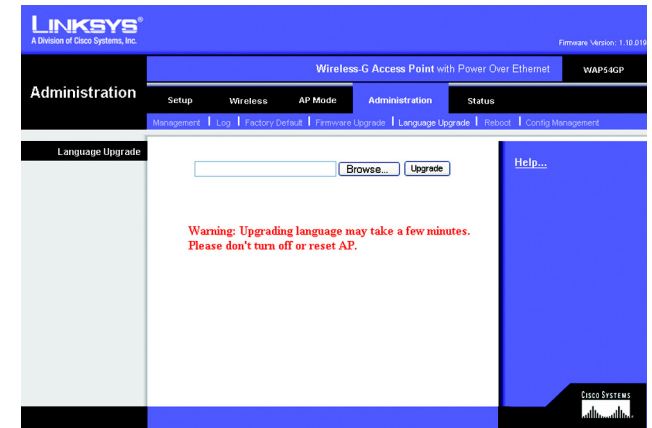

Figure 6-20: Administration - Language Upgrade Screen

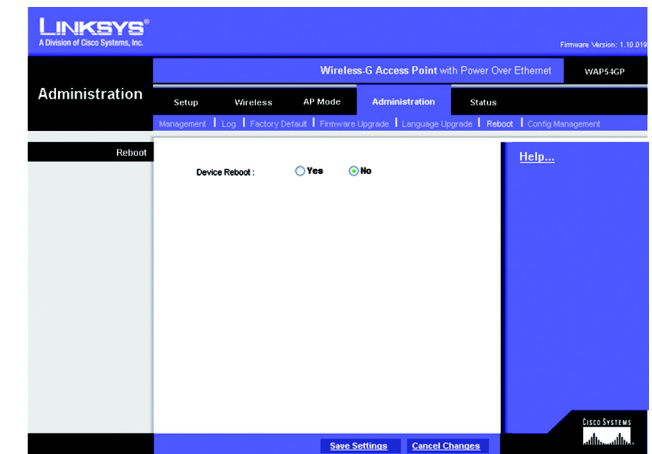**NOTE:** Not all languages are available. Check the Linksys website for available language upgrade files.

Figure 6-21: Administration - Reboot Screen

Chapter 6: Configuring the Wireless-G Access Point with Power Over Ethernet
The Administration - Language Upgrade Tab

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The Administration - Config Management Tab

On this screen you can create a backup configuration file or save a configuration file to the Access Point.

Config Management

Use this screen to upload or download configuration files for the Access Point.

Download AP Config. To save a backup configuration file on a computer, click the **Download AP Configuration File** button and follow the on-screen instructions.

Upload AP Config. To upload a configuration file to the Access Point, enter the location of the configuration file in the field provided, or click the **Browse** button to find the file. Then click the **Load** button.

Click **Help** for more information.
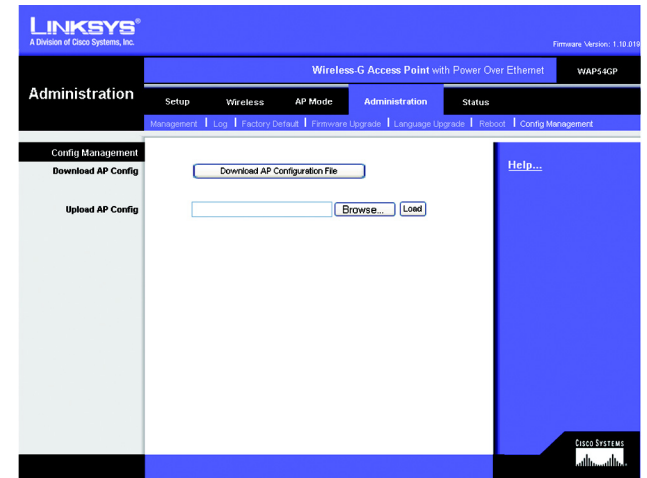
Figure 6-22: Administration - Config Management Screen

The Status - Local Network Tab

The *Local Network* screen displays the Access Point's current status information for the local network.

Information

Hardware Version. This is the version of the Access Point's current hardware.

Software Version. This is the version of the Access Point's current software.

Local MAC Address. The MAC address of the Access Point's Local Area Network (LAN) interface is displayed here.

System Up Time. This is the length of time the Access Point has been running.

Local Network

IP Address. This shows the Access Point's IP Address, as it appears on your local network.

Subnet Mask. This shows the Access Point's Subnet Mask.

Default Gateway. Displayed here is the IP address of the Access Point's Default Gateway.

Primary and Secondary DNS. DNS addresses used by the Access Point are displayed here.

To update the status information, click the **Refresh** button. Click **Help** for more information.
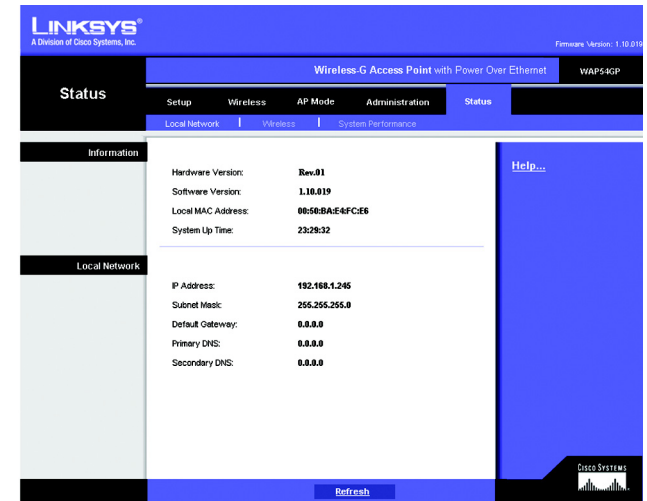
Figure 6-23: Status - Local Network Screen

The Status - Wireless Tab

The *Wireless* screen displays the Access Point's current status information for the wireless network(s).

Wireless Network

MAC Address. The MAC Address of the Access Point's wireless interface is displayed here.

Mode. The Access Point's mode is displayed here.

SSID. The Access Point's main SSID is displayed here.

Virtual SSID1-7. The Access Point's virtual SSIDs are displayed here.

Channel. The Access Point's Channel setting for wireless broadcast is shown here.

VLAN Trunk. The status of the Access Point's VLAN feature is shown here.

Priority Setting. The VLAN Priority Setting for the main SSID is shown here.

SSID Encryption Function. The wireless security setting for the main SSID is displayed here.

SSID Priority. The VLAN Priority setting for the main SSID is displayed here.

Virtual SSID1-7 Encryption Function. The wireless security settings for the virtual SSIDs are displayed here.

Virtual SSID1-7 Priority. The VLAN Priority settings for the virtual SSIDs are displayed here.

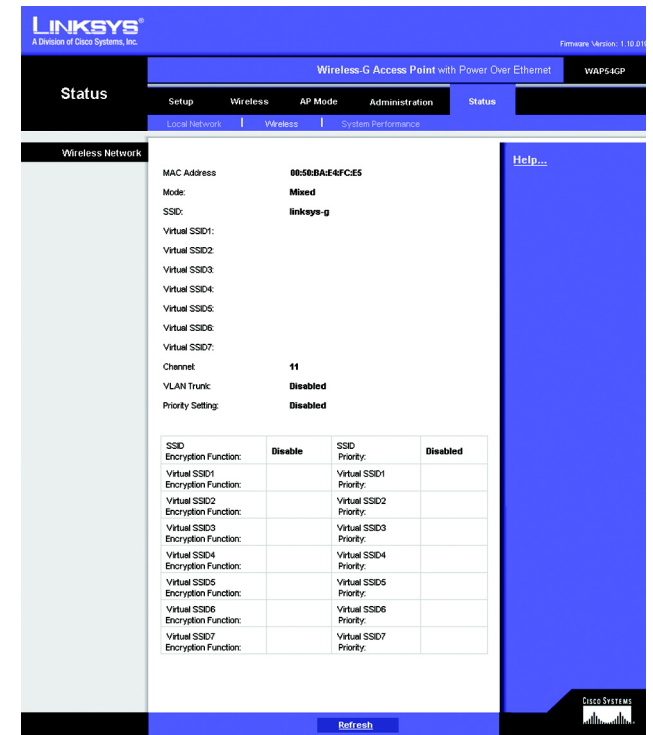To update the status information, click the **Refresh** button. Click **Help** for more information.

Figure 6-24: Status - Wireless Screen

The Status - System Performance Tab

The *System Performance* screen displays the Access Point's status information for its current settings and data transmissions.

System Performance

Wired

Name. This indicates that the statistics are for the wired network, the LAN.

IP Address. The Access Point's local IP address is displayed here.

MAC Address. This shows the MAC Address of the Access Point's wired interface.

Connection. This shows the status of the Access Point's connection for the wired network.

Packets Received. This shows the number of packets received.

Packets Sent. This shows the number of packets sent.

Bytes Received. This shows the number of bytes received.

Bytes Sent. This shows the number of bytes sent.

Error Packets Received. This shows the number of error packets received.

Dropped Packets Received. This shows the number of dropped packets received.

Wireless

Name. This indicates which wireless network/SSID to which the statistics refer.

IP Address. The Access Point's local IP address is displayed here.

MAC Address. This shows the MAC Address of the Access Point's wireless interface.

Connection. This shows the status of the Access Point's connection for each wireless network.

Packets Received. This shows the number of packets received for each wireless network.

Packets Sent. This shows the number of packets sent for each wireless network.

Figure 6-25: Status - System Performance Screen

Bytes Received. This shows the number of bytes received for each wireless network.

Bytes Sent. This shows the number of bytes sent for each wireless network.

Error Packets Received. This shows the number of error packets received for each wireless network.

Dropped Packets Received. This shows the number of dropped packets received for each wireless network.

To update the status information, click the **Refresh** button. Click **Help** for more information.