



Managing User Accounts

This chapter explains how to create and manage guest user accounts, describes the web authentication process, and provides instructions for customizing the web authentication login window. It contains these sections:

- [Creating Guest User Accounts, page 9-2](#)
- [Web Authentication Process, page 9-7](#)
- [Choosing the Web Authentication Login Window, page 9-9](#)

Creating Guest User Accounts

The controller can provide guest user access on WLANs. The first step in creating guest user accounts is to create a lobby administrator account, also known as a lobby ambassador account. Once this account has been created, a lobby ambassador can create and manage guest user accounts on the controller. The lobby ambassador has limited configuration privileges and access only to the web pages used to manage the guest accounts.

The lobby ambassador can specify the amount of time that the guest user accounts remain active. After the specified time elapses, the guest user accounts expire automatically.

The local user database is limited to a maximum of 2048 entries and is set to a default value of 512 entries (on the Security > General page). This database is shared by local management users (including lobby ambassadors), net users (including guest users), MAC filter entries, and disabled clients. Together these cannot exceed the configured database size.

Creating a Lobby Ambassador Account

You can create a lobby ambassador account on the controller through either the GUI or the CLI.

Using the GUI to Create a Lobby Ambassador Account

Follow these steps to create a lobby ambassador account using the controller GUI.

- Step 1** Click **Management > Local Management Users** to access the Local Management Users page (see [Figure 9-1](#)).

Figure 9-1 Local Management Users Page

The screenshot shows the Cisco Systems GUI for the Local Management Users page. The top navigation bar includes options like MONITOR, WLANs, CONTROLLER, WIRELESS, SECURITY, MANAGEMENT (highlighted), COMMANDS, and HELP. The main content area is titled 'Local Management Users' and features a 'New...' button. Below this is a table with the following data:

| User Name | User Access Mode | |
|-----------|------------------|------------------------|
| doc | ReadWrite | Remove |

The left sidebar contains a navigation menu with categories such as Summary, SNMP, HTTP, Telnet-SSH, Serial Port, Local Management Users (selected), User Sessions, Logs, Mgmt Via Wireless, and Tech Support.

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This page lists the names and access privileges of the local management users.



Note You can click **Remove** to delete any of the user accounts from the controller. However, deleting the default administrative user prohibits both GUI and CLI access to the controller. Therefore, you must create a user with administrative privileges (ReadWrite) before you remove the default user.

Step 2 To create a lobby ambassador account, click **New** under Management. The Local Management Users > New page appears (see [Figure 9-2](#)).

Figure 9-2 Management > Local Management Users > New Page

The screenshot shows the Cisco Systems configuration interface. The top navigation bar includes: MONITOR, WLANs, CONTROLLER, WIRELESS, SECURITY, MANAGEMENT (highlighted), COMMANDS, HELP. On the right of the navigation bar are links for Save Configuration, Ping, Logout, and Refresh. The main content area is titled 'Local Management Users > New' and includes '< Back' and 'Apply' buttons. On the left is a sidebar menu with categories: Management, Summary, SNMP (General, V3 Users, Communities, Trap Receivers, Trap Controls, Trap Logs), HTTP, Telnet-SSH, Serial Port, and Local Management Users. The main form fields are: User Name (text input), Password (text input), Confirm Password (text input), and User Access Mode (dropdown menu currently showing 'ReadOnly').

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Step 3 In the User Name field, enter a username for the lobby ambassador account.



Note Management usernames must be unique because they are stored in a single database.

Step 4 In the Password and Confirm Password fields, enter a password for the lobby ambassador account.



Note Passwords are case sensitive.

Step 5 Choose **LobbyAdmin** from the User Access Mode drop-down box. This option enables the lobby ambassador to create guest user accounts.



Note The **ReadOnly** option creates an account with read-only privileges, and the **ReadWrite** option creates an administrative account with both read and write privileges.

Step 6 Click **Apply** to commit your changes. The new lobby ambassador account appears in the list of local management users.

Step 7 Click **Save Configuration** to save your changes.

Using the CLI to Create a Lobby Ambassador Account

Enter this command to create a lobby ambassador account using the controller CLI:

```
config mgmtuser add lobbyadmin_username lobbyadmin_pwd lobby-admin
```



Note

Replacing **lobby-admin** with **read-only** creates an account with read-only privileges. Replacing **lobby-admin** with **read-write** creates an administrative account with both read and write privileges.

Creating Guest User Accounts as a Lobby Ambassador

A lobby ambassador would follow these steps to create guest user accounts.



Note

A lobby ambassador cannot access the controller CLI interface and therefore can create guest user accounts only from the controller GUI.

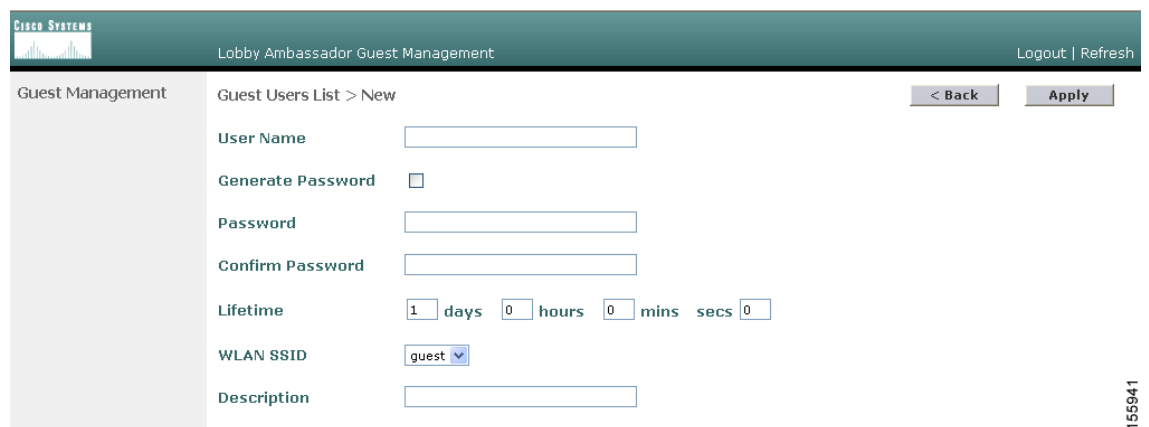
- Step 1** Log into the controller as the lobby ambassador, using the username and password specified in the “[Creating a Lobby Ambassador Account](#)” section above. The Lobby Ambassador Guest Management > Guest Users List page appears (see [Figure 9-3](#)).

Figure 9-3 Lobby Ambassador Guest Management > Guest Users List Page



- Step 2** Click **New** to create a guest user account. The Lobby Ambassador Guest Management > Guest Users List > New page appears (see [Figure 9-4](#)).

Figure 9-4 Lobby Ambassador Guest Management > Guest Users List > New Page



Step 3 In the User Name field, enter a name for the guest user. You can enter up to 24 characters.

Step 4 Perform one of the following:

- If you want to generate an automatic password for this guest user, check the **Generate Password** check box. The generated password is entered automatically in the Password and Confirm Password fields.
- If you want to create a password for this guest user, leave the **Generate Password** check box unchecked and enter a password in both the Password and Confirm Password fields.



Note Passwords can contain up to 24 characters and are case sensitive.

Step 5 From the Lifetime drop-down boxes, choose the amount of time (in days, hours, minutes, and seconds) that this guest user account is to remain active. A value of zero (0) for all four fields creates a permanent account.

Default: 1 day

Range: 5 minutes to 30 days



Note The smaller of this value or the session timeout for the guest WLAN, which is the WLAN on which the guest account is created, takes precedence. For example, if a WLAN session timeout is due to expire in 30 minutes but the guest account lifetime has 10 minutes remaining, the account is deleted in 10 minutes upon guest account expiry. Similarly, if the WLAN session timeout expires before the guest account lifetime, the client experiences a recurring session timeout that requires reauthentication.



Note You can change a guest user account with a non-zero lifetime to another lifetime value at any time while the account is active. However, to make a guest user account permanent or to change a permanent account to a guest account, you must delete the account and create it again.

Step 6 From the WLAN SSID drop-down box, choose the SSID that will be used by the guest user. The only WLANs that are listed are those for which Layer 3 web authentication has been configured (under WLAN Security Policies).



Note Cisco recommends that the system administrator create a specific guest WLAN to prevent any potential conflicts. If a guest account expires and it has a name conflict with an account on the RADIUS server and both are on the same WLAN, the users associated with both accounts are disassociated before the guest account is deleted.

Step 7 In the Description field, enter a description of the guest user account. You can enter up to 32 characters.

- Step 8** Click **Apply** to commit your changes. The new guest user account appears in the list of guest users on the Guest Users List page (see [Figure 9-5](#)).

Figure 9-5 Lobby Ambassador Guest Management > Guest Users List Page

| User Name | WLAN SSID | Account Remaining Time | Description |
|-----------|-----------|------------------------|---------------------|
| guest1 | guest | 23 h 54 m 43 s | Guest1 user account |

From this page, you can see all of the guest user accounts, their WLAN SSID, and their lifetime. You can also edit or remove a guest user account. When you remove a guest user account, all of the clients that are using the guest WLAN and are logged in using that account's username are deleted.

- Step 9** Repeat this procedure to create any additional guest user accounts.

Viewing Guest User Accounts

After a lobby ambassador has created guest user accounts, the system administrator can view them from the controller GUI or CLI.

Using the GUI to View Guest Accounts

To view guest user accounts using the controller GUI, click **Security** and then **Local Net Users** under AAA. The Local Net Users page appears (see [Figure 9-6](#)).

Figure 9-6 Local Net Users Page

| User Name | WLAN ID | Guest User | Description |
|-----------|---------|------------|---------------------|
| guest1 | 2 | Yes | Guest1 user account |

From this page, the system administrator can see all of the local net user accounts (including guest user accounts) and can edit or remove them as desired. When you remove a guest user account, all of the clients that are using the guest WLAN and are logged in using that account's username are deleted.

Using the CLI to View Guest Accounts

To view all of the local net user accounts (including guest user accounts) using the controller CLI, enter this command:

```
show netuser summary
```

Web Authentication Process

Web authentication is a Layer 3 security feature that causes the controller to not allow IP traffic (except DHCP-related packets) from a particular client until that client has correctly supplied a valid username and password. When you use web authentication to authenticate clients, you must define a username and password for each client. Then when the clients attempt to join the wireless LAN, their users must enter the username and password when prompted by a login window.

When web authentication is enabled (under WLAN Security Policies), users might receive a web-browser security alert the first time that they attempt to access a URL. Figure 9-7 shows a typical security alert.

Figure 9-7 Typical Web-Browser Security Alert



After the user clicks **Yes** to proceed (or if the client's browser does not display a security alert), the web authentication system redirects the client to a login window.

Figure 9-8 Default Web Authentication Login Window

The default login window contains a Cisco logo and Cisco-specific text. You can choose to have the web authentication system display one of the following:

- The default login window
- A modified version of the default login window
- A customized login window that you configure on an external web server
- A customized login window that you download to the controller

The “[Choosing the Web Authentication Login Window](#)” section on page 9-9 provides instructions for choosing how the web authentication login window appears.

When the user enters a valid username and password on the web authentication login window and clicks **Submit**, the web authentication system displays a successful login window and redirects the authenticated client to the requested URL. [Figure 9-9](#) shows a typical successful login window.

Figure 9-9 Successful Login Window

The default successful login window contains a pointer to a virtual gateway address URL: <https://1.1.1.1/logout.html>. The IP address that you set for the controller virtual interface serves as the redirect address for the login window (see Chapter 3 for more information on the virtual interface).

Choosing the Web Authentication Login Window

This section provides instructions for specifying the content and appearance of the web authentication login window. Follow the instructions in one of these sections to choose the web authentication login window using the controller GUI or CLI:

- [Choosing the Default Web Authentication Login Window, page 9-9](#)
- [Using a Customized Web Authentication Login Window from an External Web Server, page 9-13](#)
- [Downloading a Customized Web Authentication Login Window, page 9-14](#)

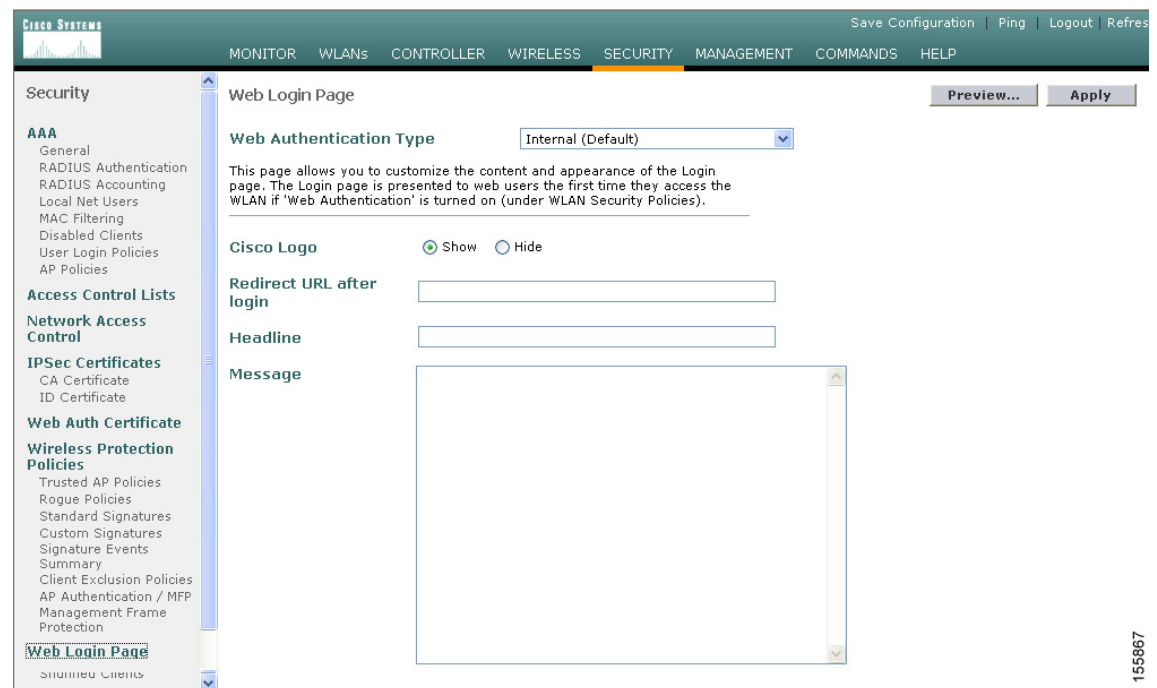
Choosing the Default Web Authentication Login Window

If you want to use the default web authentication login window as is (see [Figure 9-8](#)) or with a few modifications, follow the instructions in the GUI or CLI procedure below.

Using the GUI to Choose the Default Web Authentication Login Window

- Step 1** Click **Security > Web Login Page** to access the Web Login page (see [Figure 9-10](#)).

Figure 9-10 Web Login Page



- Step 2** From the Web Authentication Type drop-down box, choose **Internal (Default)**.
- Step 3** If you want to use the default web authentication login window as is, go to [Step 8](#). If you want to modify the default login window, go to [Step 4](#).

- Step 4** If you want to hide the Cisco logo that appears in the top right corner of the default window, choose the Cisco Logo **Hide** option. Otherwise, click the **Show** option.
- Step 5** If you want the user to be directed to a particular URL (such as the URL for your company) after login, enter the desired URL (such as `www.AcompanyBC.com`) in the Redirect URL After Login field. You can enter up to 254 characters.
- Step 6** If you want to create your own headline on the login window, enter the desired text in the Headline field. You can enter up to 127 characters. The default headline is “Welcome to the Cisco wireless network.”
- Step 7** If you want to create your own message on the login window, enter the desired text in the Message field. You can enter up to 2047 characters. The default message is “Cisco is pleased to provide the Wireless LAN infrastructure for your network. Please login and put your air space to work.”
- Step 8** Click **Apply** to commit your changes.
- Step 9** Click **Preview** to view the web authentication login window.
- Step 10** If you are satisfied with the content and appearance of the login window, click **Save Configuration** to save your changes. Otherwise, repeat any of the previous steps as necessary to achieve your desired results.
-

Using the CLI to Choose the Default Web Authentication Login Window

- Step 1** To specify the default web authentication type, enter this command:
- ```
config custom-web webauth_type internal
```
- Step 2** If you want to use the default web authentication login window as is, go to [Step 7](#). If you want to modify the default login window, go to [Step 3](#).
- Step 3** To show or hide the Cisco logo that appears in the top right corner of the default login window, enter this command:
- ```
config custom-web weblogo {enable | disable}
```
- Step 4** If you want the user to be directed to a particular URL (such as the URL for your company) after login, enter this command:
- ```
config custom-web redirecturl url
```
- You can enter up to 130 characters for the URL. To change the redirect back to the default setting, enter **clear redirecturl**.
- Step 5** If you want to create your own headline on the login window, enter this command:
- ```
config custom-web webtitle title
```
- You can enter up to 130 characters. The default headline is “Welcome to the Cisco wireless network.” To reset the headline to the default setting, enter **clear webtitle**.
- Step 6** If you want to create your own message on the login window, enter this command:
- ```
config custom-web webmessage message
```
- You can enter up to 130 characters. The default message is “Cisco is pleased to provide the Wireless LAN infrastructure for your network. Please login and put your air space to work.” To reset the message to the default setting, enter **clear webmessage**.
- Step 7** Enter **save config** to save your settings.

- Step 8** If you want to import your own logo into the web authentication login window, follow these steps:
- a. Make sure that you have a Trivial File Transfer Protocol (TFTP) server available for the file download. Keep these guidelines in mind when setting up a TFTP server:
    - If you are downloading through the service port, the TFTP server must be on the same subnet as the service port because the service port is not routable.
    - If you are downloading through the distribution system network port, the TFTP server can be on the same or a different subnet because the distribution system port is routable.
    - A third-party TFTP server cannot run on the same computer as the Cisco WCS because the WCS built-in TFTP server and the third-party TFTP server require the same communication port.
  - b. Enter **ping ip-address** to ensure that the controller can contact the TFTP server.
  - c. Copy the logo file (in .jpg, .gif, or .png format) to the default directory on your TFTP server. The maximum file size is 30 kilobits. For an optimal fit, the logo should be approximately 180 pixels wide and 360 pixels high.
  - d. To specify the download mode, enter **transfer download mode tftp**.
  - e. To specify the type of file to be downloaded, enter **transfer download datatype image**.
  - f. To specify the IP address of the TFTP server, enter **transfer download serverip tftp-server-ip-address**.




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**Note** Some TFTP servers require only a forward slash (/) as the TFTP server IP address, and the TFTP server automatically determines the path to the correct directory.

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- g. To specify the download path, enter **transfer download path absolute-tftp-server-path-to-file**.
- h. To specify the file to be downloaded, enter **transfer download filename {filename.jpg | filename.gif | filename.png}**.
- i. Enter **transfer download start** to view your updated settings and answer **y** to the prompt to confirm the current download settings and start the download. Information similar to the following appears:

```
Mode..... TFTP
Data Type..... Login Image
TFTP Server IP..... xxx.xxx.xxx.xxx
TFTP Path..... <directory path>
TFTP Filename..... <filename.jpg|.gif|.png>
This may take some time.
Are you sure you want to start? (y/n) y
TFTP Image transfer starting.
Image installed.
```

- j. Enter **save config** to save your settings.




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**Note** If you ever want to remove this logo from the web authentication login window, enter **clear webimage**.

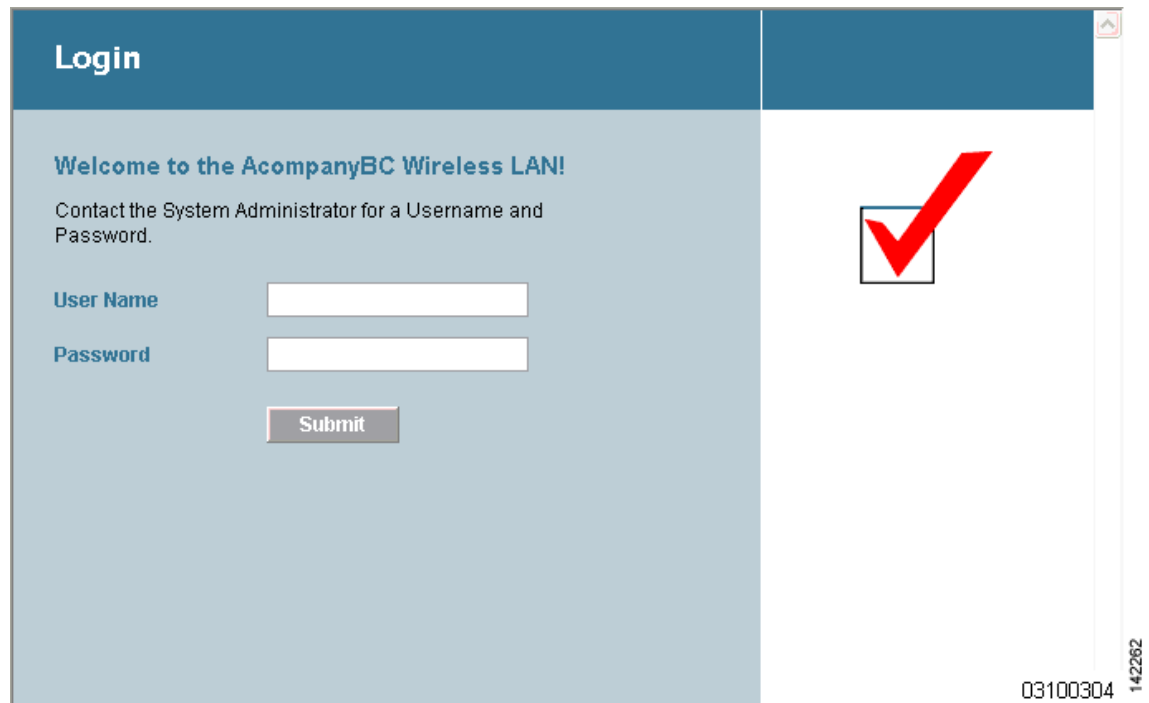
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- Step 9** Follow the instructions in the “Using the CLI to Verify the Web Authentication Login Window Settings” section on page 9-17 to verify your settings.
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## Modified Default Web Authentication Login Window Example

Figure 9-11 shows an example of a modified default web authentication login window.

**Figure 9-11** Modified Default Web Authentication Login Window Example



These are the CLI commands used to create this login window:

```
config custom-web weblogo disable
```

```
config custom-web webtitle Welcome to the AcompanyBC Wireless LAN!
```

```
config custom-web webmessage Contact the System Administrator for a Username and Password.
```

```
transfer download start
```

```
Mode..... TFTP
Data Type..... Login Image
TFTP Server IP..... xxx.xxx.xxx.xxx
TFTP Path..... /
TFTP Filename..... Logo.gif
This may take some time.
Are you sure you want to start? (y/n) y
TFTP Image transfer starting.
Image installed.
```

```
config custom-web redirecturl http://www.AcompanyBC.com
```

```
show custom-web
```

```
Cisco Logo..... Disabled
CustomLogo..... 00_logo.gif
Custom Title..... Welcome to the AcompanyBC Wireless LAN!
Custom Message Contact the System Administrator for a Username and Password.
```

```

Custom Redirect URL..... http://www.AcompanyBC.com
Web Authentication Mode..... Disabled
Web Authentication URL..... Disabled

```

## Using a Customized Web Authentication Login Window from an External Web Server

If you want to use a customized web authentication login window that you configured on an external web server, follow the instructions in the GUI or CLI procedure below. When you enable this feature, the user is directed to your customized login window on the external web server.



### Note

You must configure a preauthentication access control list (ACL) on the WLAN for the external web server and then choose this ACL as the WLAN preauthentication ACL under Security Policies > Web Policy on the WLANs > Edit page. See [Chapter 5, “Configuring Access Control Lists”](#) for more information on ACLs.

## Using the GUI to Choose a Customized Web Authentication Login Window from an External Web Server

**Step 1** Click **Security > Web Login Page** to access the Web Login page (see [Figure 9-12](#)).

**Figure 9-12 Web Login Page**

The screenshot shows the Cisco Systems GUI for the Web Login Page configuration. The top navigation bar includes 'MONITOR', 'WLANs', 'CONTROLLER', 'WIRELESS', 'SECURITY', 'MANAGEMENT', 'COMMANDS', and 'HELP'. The 'SECURITY' tab is active. The left sidebar shows a tree view with 'Security' selected, containing sub-items like 'AAA', 'Access Control Lists', 'IPSec Certificates', and 'Web Auth Certificate'. The main content area is titled 'Web Login Page' and contains the following fields:

- Web Authentication Type:** A drop-down menu set to 'External (Redirect to external server)'.
- URL:** An empty text input field.
- External Web Servers:** A section with an empty list and an 'Add Web Server' button.
- Web Server IP Address:** An empty text input field.

Buttons for 'Preview...' and 'Apply' are located at the top right of the configuration area. A vertical ID number '155959' is visible on the right side of the screenshot.

- Step 2** From the Web Authentication Type drop-down box, choose **External (Redirect to external server)**.
- Step 3** In the URL field, enter the URL of the customized web authentication login window on your web server. You can enter up to 252 characters.
- Step 4** In the Web Server IP Address field, enter the IP address of your web server. Your web server should be on a different network from the controller service port network.

- Step 5** Click **Add Web Server**. This server now appears in the list of external web servers.
- Step 6** Click **Apply** to commit your changes.
- Step 7** If you are satisfied with the content and appearance of the login window, click **Save Configuration** to save your changes.
- 

## Using the CLI to Choose a Customized Web Authentication Login Window from an External Web Server

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- Step 1** To specify the web authentication type, enter this command:  
**config custom-web webauth\_type external.**
- Step 2** To specify the URL of the customized web authentication login window on your web server, enter this command:  
**config custom-web ext-webauth-url url**  
 You can enter up to 252 characters for the URL.
- Step 3** To specify the IP address of your web server, enter this command:  
**config custom-web ext-webserver {add | delete} server\_IP\_address**
- Step 4** Enter **save config** to save your settings.
- Step 5** Follow the instructions in the [“Using the CLI to Verify the Web Authentication Login Window Settings” section on page 9-17](#) to verify your settings.
- 

## Downloading a Customized Web Authentication Login Window

You can compress the page and image files used for displaying a web authentication login window into a tar file for download to a controller. These files are known as the *webauth bundle*. The maximum allowed size of the files in their uncompressed state is 1 MB. When the .tar file is downloaded from a local TFTP server, it enters the controller’s file system as an untarred file.

Follow these guidelines when preparing the customized login window:

- Name the login page “login.html.” The controller prepares the web authentication URL based on this name. If the does not find this file after the webauth bundle has been untarred, the bundle is discarded, and an error message appears.
- Include input fields for both a username and password.
- Retain the redirect URL as a hidden input item after extracting from the original URL.
- Extract and set the action URL in the page from the original URL.
- Include scripts to decode the return status code.
- Make sure that all paths used in the main page (to refer to images, for example) are of relative type.

You can download a sample login page from Cisco WCS and use it as a starting point for your customized login page. Refer to the “Downloading a Customized Web Auth Page” section in the Using Templates chapter of the *Cisco Wireless Control System Configuration Guide, Release 4.0* for instructions.

If you want to download a customized web authentication login window to the controller, follow the instructions in the GUI or CLI procedure below.

## Using the GUI to Download a Customized Web Authentication Login Window

- Step 1** Make sure that you have a TFTP server available for the file download. See the guidelines for setting up a TFTP server in [Step 8](#) of the “Using the CLI to Choose the Default Web Authentication Login Window” section on page 9-10.
- Step 2** Copy the .tar file containing your login page to the default directory on your TFTP server.
- Step 3** Click **Commands > Download File** to access the Download File to Controller page (see [Figure 9-13](#)).

**Figure 9-13** Download File to Controller Page

- Step 4** From the File Type drop-down box, choose **Webauth Bundle**.
- Step 5** In the IP Address field, enter the IP address of the TFTP server.
- Step 6** In the Maximum Retries field, enter the maximum number of times the controller should attempt to download the .tar file.  
**Range:** 1 to 254  
**Default:** 10
- Step 7** In the Timeout field, enter the amount of time in seconds before the controller times out while attempting to download the \*.tar file.  
**Range:** 1 to 254 seconds  
**Default:** 6 seconds
- Step 8** In the File Path field, enter the path of the .tar file to be downloaded. The default value is “/.”
- Step 9** In the File Name field, enter the name of the .tar file to be downloaded.
- Step 10** Click **Download** to download the .tar file to the controller.
- Step 11** Click **Security > Web Login Page** to access the Web Login page.
- Step 12** From the Web Authentication Type drop-down box, choose **Customized (Downloaded)**.

- Step 13** Click **Apply** to commit your changes.
- Step 14** Click **Preview** to view your customized web authentication login window.
- Step 15** If you are satisfied with the content and appearance of the login window, click **Save Configuration** to save your changes.
- 

## Using the CLI to Download a Customized Web Authentication Login Window

- Step 1** Make sure that you have a TFTP server available for the file download. See the guidelines for setting up a TFTP server in [Step 8](#) of the “[Using the CLI to Choose the Default Web Authentication Login Window](#)” section on page 9-10.
- Step 2** Copy the .tar file containing your login page to the default directory on your TFTP server.
- Step 3** To specify the download mode, enter **transfer download mode tftp**.
- Step 4** To specify the type of file to be downloaded, enter **transfer download datatype webauthbundle**.
- Step 5** To specify the IP address of the TFTP server, enter **transfer download serverip *tftp-server-ip-address***.



**Note** Some TFTP servers require only a forward slash (/) as the TFTP server IP address, and the TFTP server automatically determines the path to the correct directory.

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- Step 6** To specify the download path, enter **transfer download path *absolute-tftp-server-path-to-file***.
- Step 7** To specify the file to be downloaded, enter **transfer download filename *filename.tar***.
- Step 8** Enter **transfer download start** to view your updated settings and answer **y** to the prompt to confirm the current download settings and start the download.
- Step 9** To specify the web authentication type, enter **config custom-web webauth\_type customized**.
- Step 10** Enter **save config** to save your settings.
- Step 11** Follow the instructions in the “[Using the CLI to Verify the Web Authentication Login Window Settings](#)” section on page 9-17 to verify your settings.
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## Customized Web Authentication Login Window Example

Figure 9-14 shows an example of a customized web authentication login window.

**Figure 9-14** Customized Web Authentication Login Window Example

## Using the CLI to Verify the Web Authentication Login Window Settings

Enter **show custom-web** to verify your changes to the web authentication login window. This example shows the information that appears when the configuration settings are set to default values:

```
Cisco Logo..... Enabled
CustomLogo..... Disabled
Custom Title..... Disabled
Custom Message..... Disabled
Custom Redirect URL..... Disabled
Web Authentication Mode..... Disabled
Web Authentication URL..... Disabled
```

This example shows the information that appears when the configuration settings have been modified:

```
Cisco Logo..... Disabled
CustomLogo..... 00_logo.gif
Custom Title..... Welcome to the AcompanyBC Wireless LAN!
Custom Message..... Contact the System Administrator for a
 Username and Password.
Custom Redirect URL..... http://www.AcompanyBC.com
Web Authentication Mode..... Internal
Web Authentication URL..... Disabled
```



## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>