

# Twinson Wi-Fi Hotspot Router User Guide



## Table of Contents

Specifications.....	2
Wi-Fi Hotspot Features.....	2
Introduction.....	2
1. Setup the Router.....	3
1.1. Change System Passwords.....	3
1.2. Change Network Settings.....	4
1.3. Set Ticket Plans.....	5
1.4. Customization.....	6
1.4.1 Using the Built-in Web Page Editor.....	6
1.4.2 Adding Image in Login Page.....	7
1.4.3 Screenshots.....	7
1.5. Walled Garden.....	9
1.6. White List.....	10
1.7. Black List.....	10
2. Operation.....	11
2.1. Manage Users.....	11
2.2. Generate Tickets and Codes.....	11
2.3. View Logged-Out Sessions.....	12
3. GPL Information.....	13
4. Technical Support.....	13
5. Warranty Statement.....	13

## Specifications

- WAN Network : 1 x 10/100 Mbps RJ-45 port supporting DHCP only
- LAN Network : 4 x 10/100 Mbps RJ-45 ports
- Wi-Fi Network : 2.4GHz Wireless 802.11b/g up to 54Mbps
- LEDs : 1 x Power; 1 x DMZ; 1 x WLAN; 1 x WAN;  
4 x Link/Activity for LAN network ports
- AC Adapter : Input AC 230V 150mA; Output DC 12 V / 1.0 A
- Antenna : 2 x Omni-directional
- Dimensions : Width 7.3 in; Depth 6.1 in; Height 1.9 in;
- Weight : 13.8 oz
- Operating : Min Operating Temperature: 32 °F  
Max Operating Temperature: 104 °F  
Humidity Range Operating: 10 – 85%

## Wi-Fi Hotspot Features

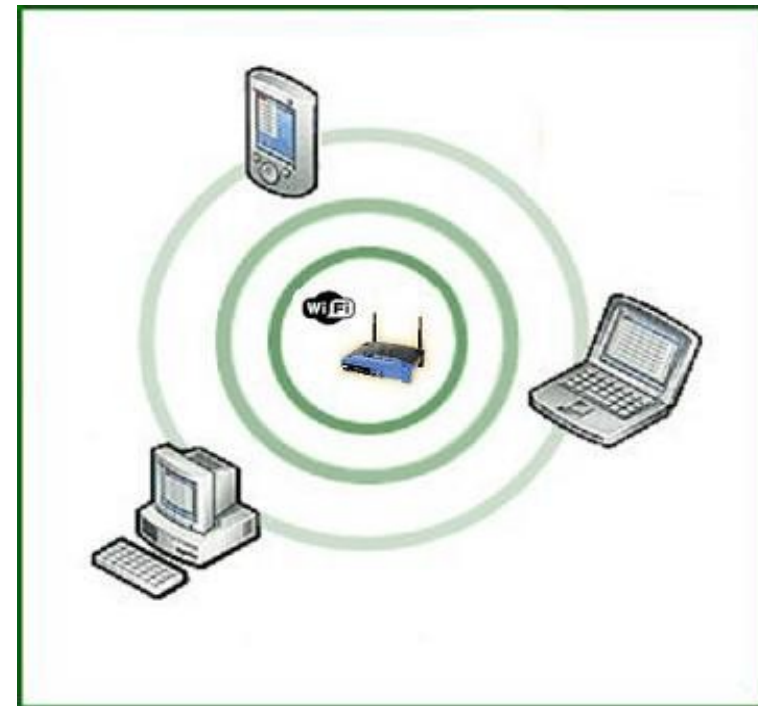
- Secure captive portal. Only registered guests can gain access to the Internet. Nevertheless, the router isolates the guests and protects your existing computer network.
- A flexible codes and tickets mechanism sells Internet access by hours or minutes.
- Customizable client login page, or upload your own designer page.
- Customizable ticket design, or upload your own design.
- Easy monitoring of current user sessions. Sessions can be terminated as required.
- Traffic volume and time spent by each user are recorded for accounting purposes
- User can check on-line usage and the time remaining of his access.
- SMTP re-direct service allows clients to send emails through your ISP SMTP server. This function can be enabled or disabled.
- Walled garden allows free access to sites providing extra advertising opportunities
- Whitelist allows privileged users free access while Blacklist completely blocks rogue users from entering the network.

## Introduction

### What is a Wi-Fi Hotspot?

A Wi-Fi hotspot is usually deployed at business places such as cafeterias, swimming pools, hotel lounges and transport hubs; it is a wireless Internet access service provided by the operator for the purpose of either generating an income or as a free service with the intention to attract customers to the premises.

### A typical Wi-Fi Hotspot Scenario

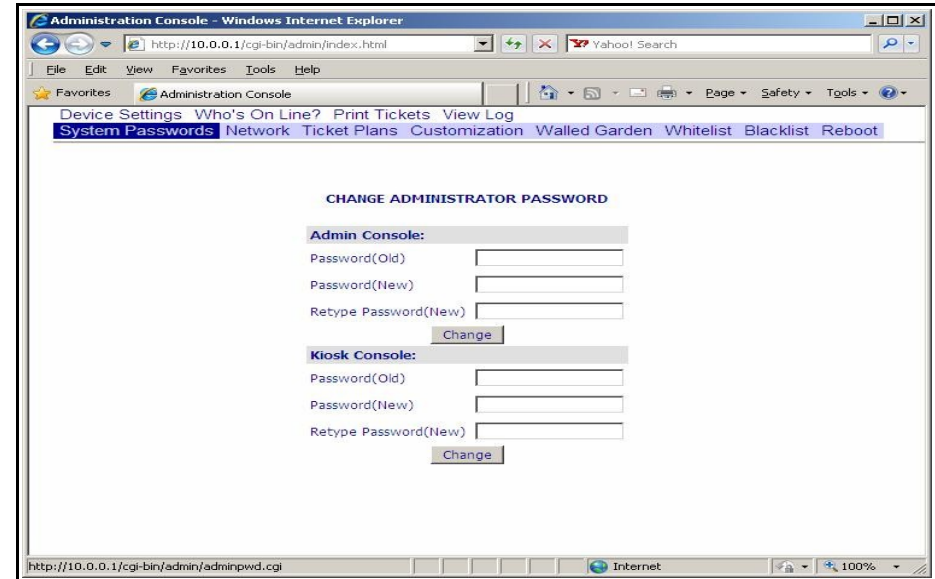


# 1. Setup the Router

- a) Connect WAN port (the one labelled 'Internet') to a spare port on your existing router, or an ADSL or cable modem with the network cable supplied.
- b) Plug the router to a power socket and switch it on. Wait for about 1 to 2 minutes for the router to fully boot-up.
- c) From a Wi-Fi enabled computer, connect to the default wireless network "FreeWiFi". Alternatively, you can connect the computer to one of the four LAN ports using a network cable if Wi-Fi is not available on the computer.
- d) Once connected open an Internet browser such as Firefox, Safari, Google Chrome or IE and logon to the Administration Console at URL <http://10.0.0.1/cgi-bin/admin/index.html>. The default username is 'admin' and password 'admin'.
- e) When the web page appears, move the mouse cursor over "Device Settings" link. A menu bar with various menu items appear and you may start setting up the hotspot gateway.

## 1.1. Change System Passwords

A password is required to access the Web Administration Console and also the Self-service Kiosk Console. Click on "System Passwords" to specify the new passwords.

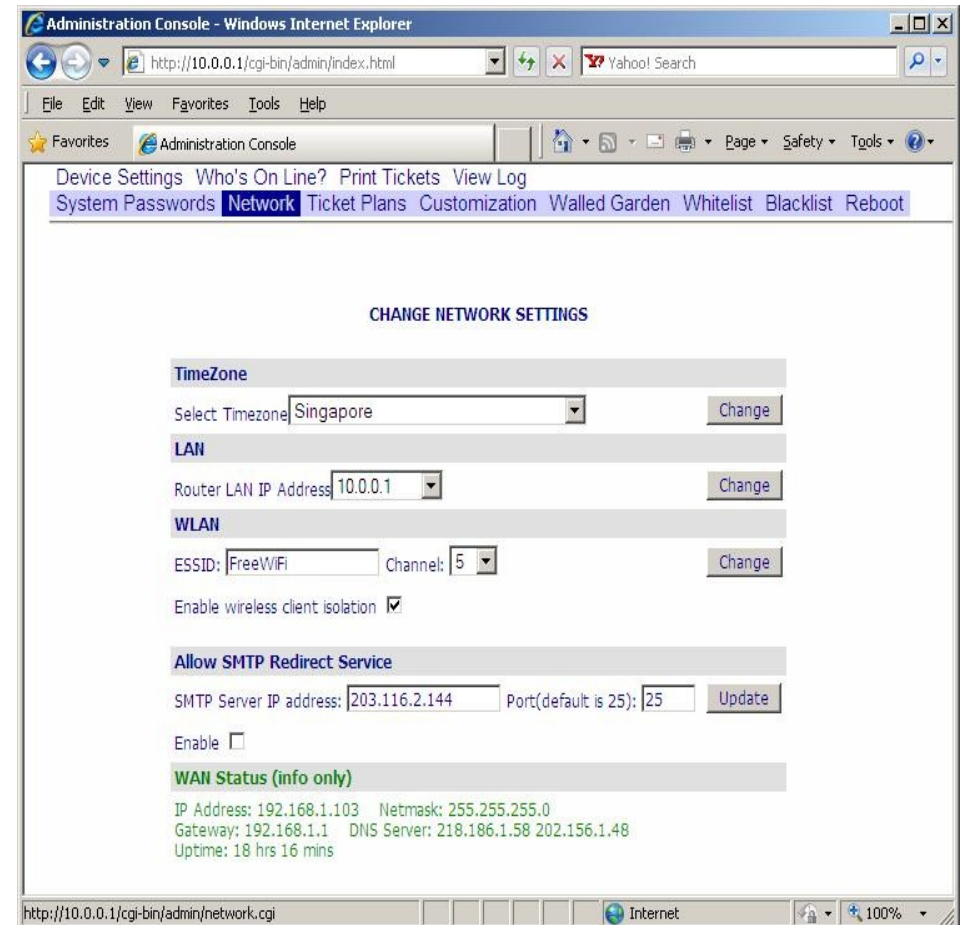


## 1.2. Change Network Settings

Click on "Network" to change the time zone and basic network settings.

For additional client's privacy and security, enable the function of wireless client isolation.

Some users may have problems sending out emails through their configured email servers as they are blocked by their corporate firewalls. Enabling the SMTP redirect service allows them to use your SMTP server instead to send out emails.



### 1.3. Set Ticket Plans

Click on “Ticket Plans” link to modify the ticket types and durations.

The hotspot gateway supports 6 ticket plans:

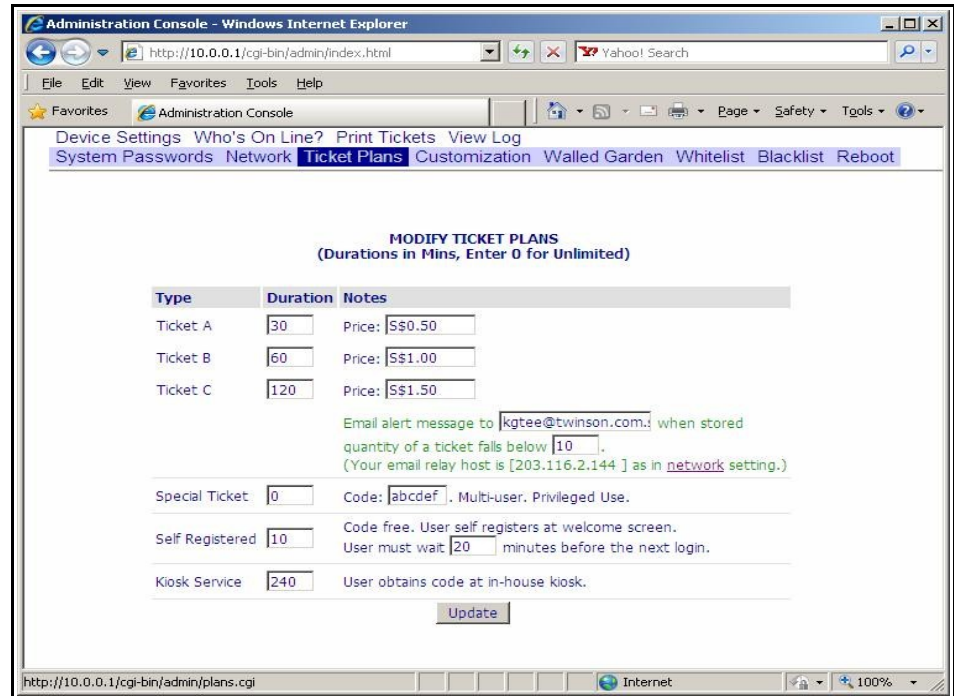
**Ticket A, B and C:** These are single use tickets of predefined durations. You can set different price plans for these tickets.

Tickets are generated at the “Print Tickets” console. As more and more users log in, the stored ticket codes diminishes. You can set a low level alarm that email an alert message to the administrator.

**Special Ticket:** This is a multiple use ticket usually equipped with a special privilege. The same code can be used by multiple users, e.g. company staffs or room-mates. A physical ticket is normally not required. The user can access Internet many times. The system will keep and accumulate every single usage and time until the user decides to log out or is terminated by the administrator.

**Self-registered (Code-free):** When a customer click the “I Agree” button on the login page, he is given free access for a predefined time. A physical ticket is not required. To prevent self-registered users from continuously using this free service, you may “ban” or “jail” the user for a set “jail time” before he can log in again.

**Kiosk Service:** This requires the setup of a terminal or a basic pc preferably with a touchscreen type of display inside the business premises. In-house guests can obtain a pass code by a simple touch on the welcome screen. The welcome screen can be customized to include advertising graphics, greetings or menus etc., an extra tool to promote business.

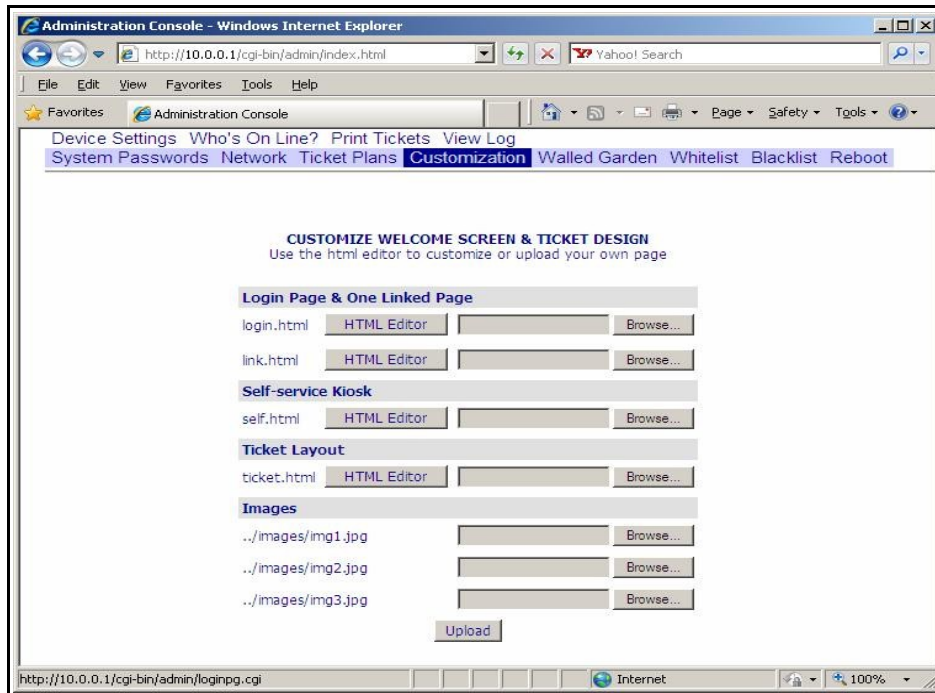


## 1.4. Customization

The login page is the initial page that new customers are redirected to before they can go anywhere else on the Internet.

You may upload and customize your own login page, secondary supporting page, self-service kiosk page and the ticket layout as you wish. These four files will be renamed to "login.html", "link.html", "self.html" and "ticket.html" in the system after uploading. Up to 3 accompanying images in .jpg format may be uploaded. They will also be renamed to "img1.jpg", "img2.jpg", "img3.jpg" by the system.

Each file size is limited to 20Kbytes.



### 1.4.1 Using the Built-in Web Page Editor

Clicking on the "HTML Editor" button invokes the built-in WYSIWYG web page editor as shown below.



Note that the default login page includes the "I Agree" button and "Submit" button. The "I Agree" button is for users who do not need any code but only an agreement with your terms of service to gain access to the Internet. The associated html codes for "I Agree" button are:

```
<form style="text-align: center;" action="/cgi-bin/register.sh" method="post">
<input name="submit" type="submit" value="I Agree"></form>
```

*Note: Alternative to "I Agree", you may use "ACCEPT"*


This button can be deleted if you do not want to provide code-free access. On the other hand the "Submit" button requires the input of a valid ticket code.

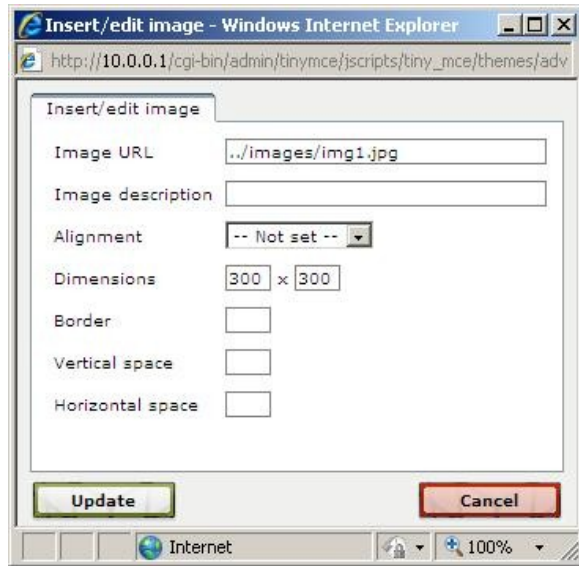
```
<form style="text-align: center;" action="/cgi-bin/register.sh" method="post">
Ticket Code : <input name="code" size="6" type="text"> <input name="submit"
type="submit" value="SUBMIT"></form>
```

*Note: Alternative to "SUBMIT", you may use "GO" or "ENTER"*

When finished click "Submit" to save it. Clicking "Default" will put back the original default page shipped with the router.

### 1.4.2 Adding Image in Login Page

The images uploaded can be inserted into the html page by clicking on the "Insert/Edit Image" button .



### 1.4.3 Screenshots

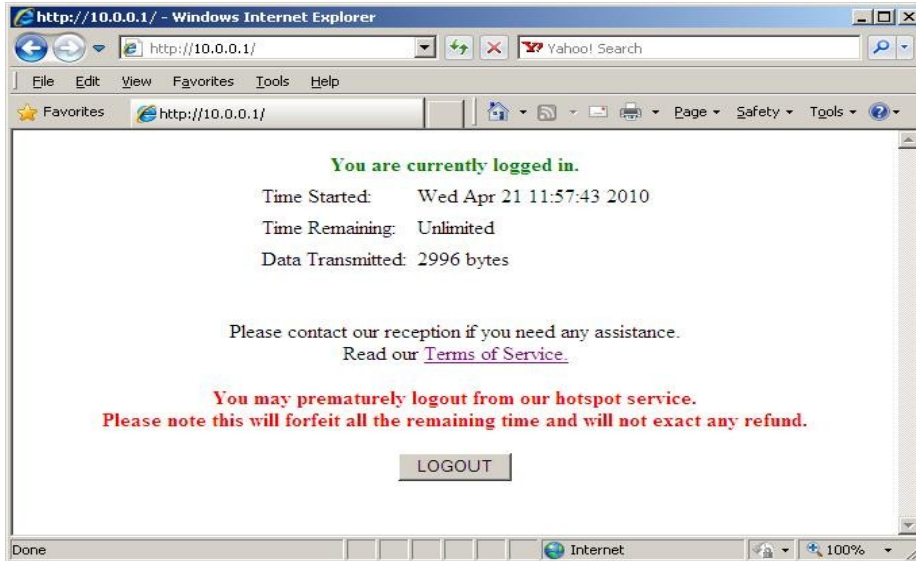
#### Default Login Page



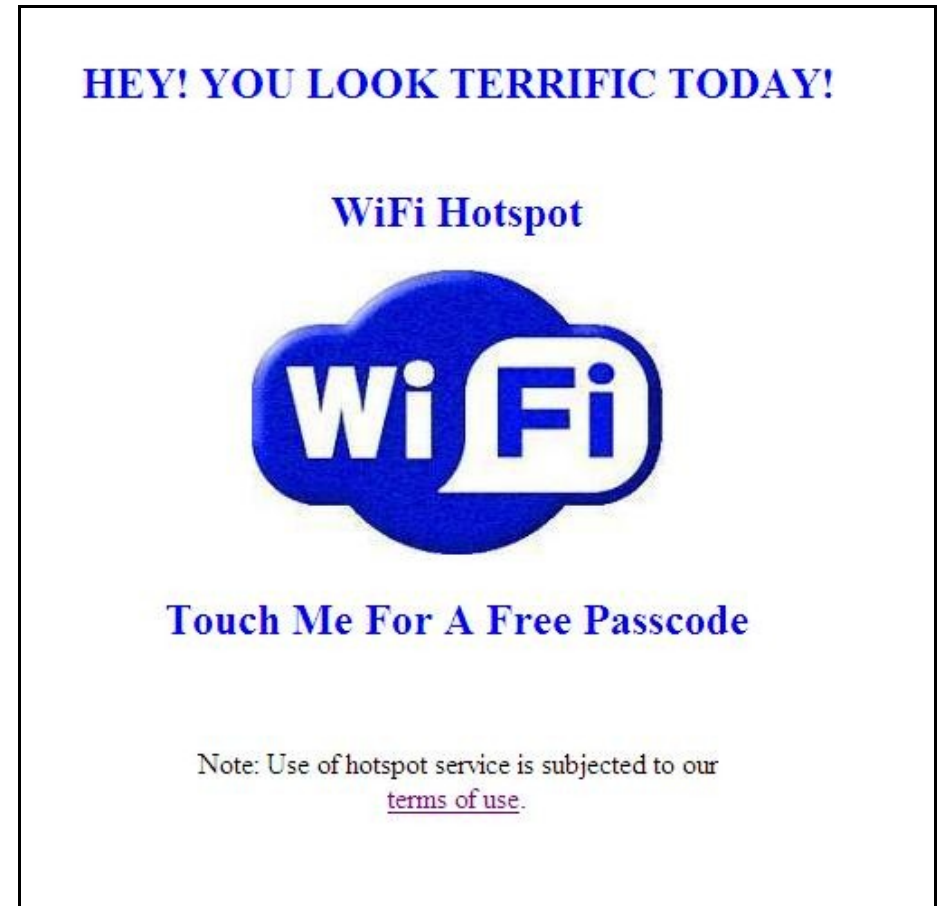
## Successful Login Screen As Seen by Client



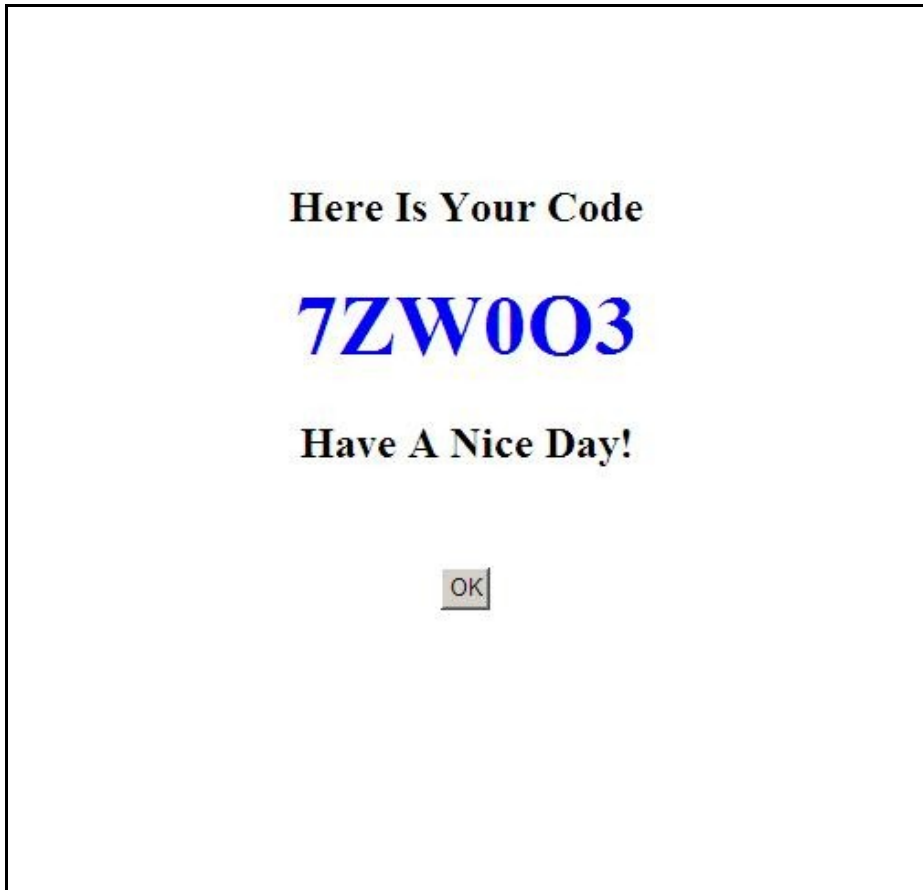
## Client Can View Access Statistics and Check Time Remaining



## Self-service Kiosk Greeting Page (customizable)



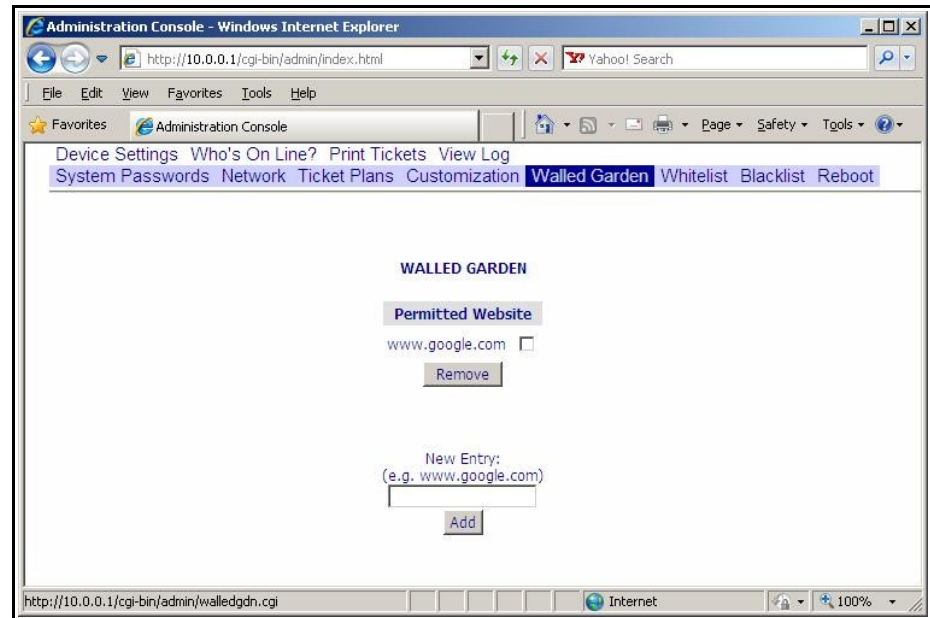
## Self-service Kiosk Response Upon Touch



### 1.5. Walled Garden

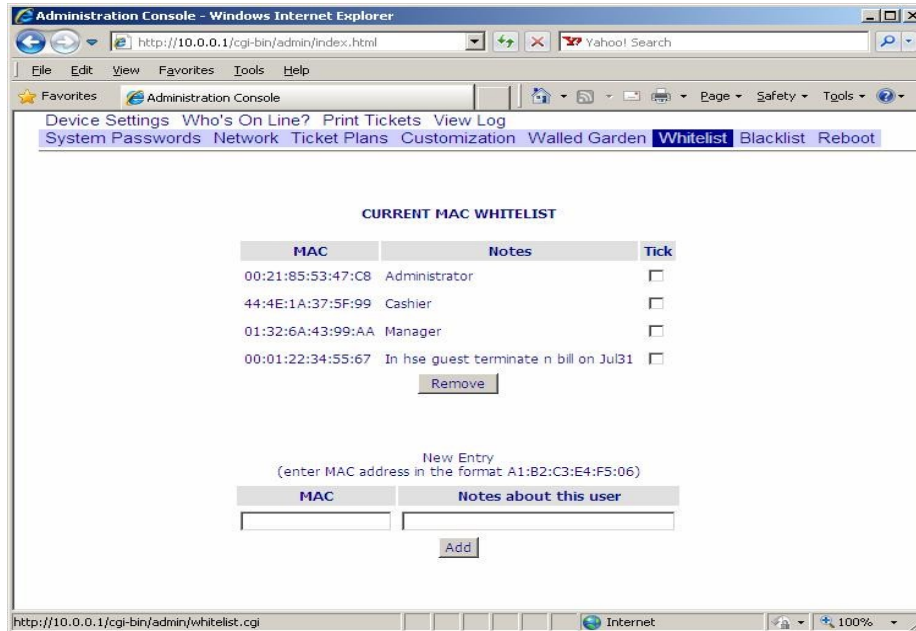
Walled Garden consists of a number of websites which are accessible by users even without entering any code. For example you can enter the URL of your business so that clients may browse before purchasing code.

Click on the "Walled Garden" to add or remove websites.



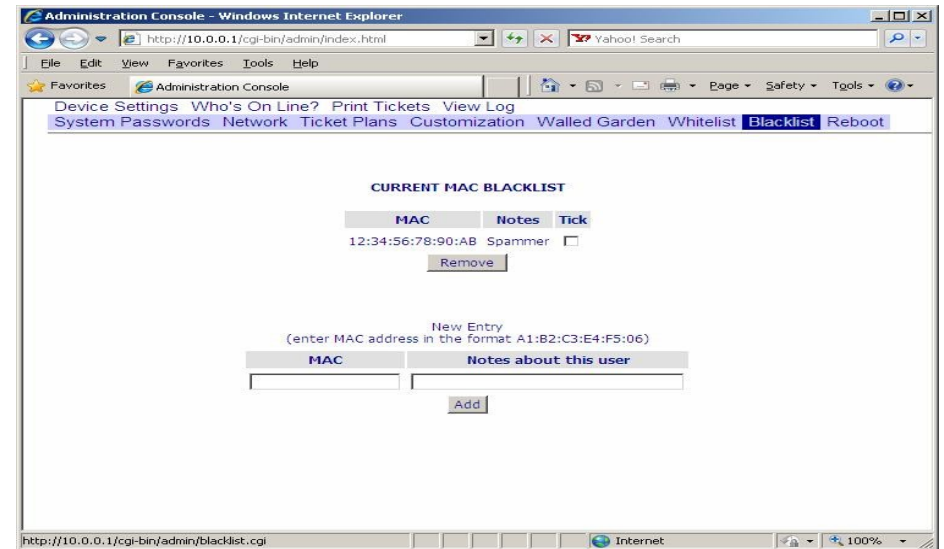
## 1.6. White List

White listing a user means remove all the restrictions for the users. The user's usage is also not monitored. If you wish to monitor the user's usage then inform the user to use the special code created in section 1.3 instead.



## 1.7. Black List

On the contrary, the black list prevents the user completely from entering your network. The user will not even obtain a DHCP response from the server and hence will not use any services provided by the system.



## 2. Operation

After having setup the hotspot gateway, you can start operate your hotspot business. In operation mode, you basically perform three tasks; 1) manage current users, 2) generate codes and tickets, 3) look at the historical records of those logged-out sessions.

### 2.1. Manage Users

Click the "Who's On Line?" link to display the current sessions. The MAC address, IP address and name of the connecting computer, the code used, time started and time remaining, and amount of usage are displayed. It's possible to prematurely terminate the session by clicking the kill box next to the session and clicking submit.

The screenshot shows the 'Who's On Line?' page of the Administration Console. It features a table titled 'CURRENT USERS' with the following columns: MAC, IP ADDR, Name, Start Time, Code, Time Remaining, Usage(kbytes), and Kill. There are three rows of data, all with 'Unlimited' time remaining. A 'Submit' button is located below the table.

MAC	IP ADDR	Name	Start Time	Code	Time Remaining	Usage(kbytes)	Kill
00:21:85:7B:81:5A	10.0.0.2	AMI-MSIWIN	Sat Aug 21 15:58:53 2010	*****	Unlimited	9455	<input type="checkbox"/>
00:21:85:7B:81:5A	10.0.0.2	AMI-MSIWIN	Sat Aug 21 15:58:53 2010	*****	Unlimited	9455	<input type="checkbox"/>
00:21:85:7B:81:5A	10.0.0.2	AMI-MSIWIN	Sat Aug 21 15:58:53 2010	*****	Unlimited	9455	<input type="checkbox"/>

### 2.2. Generate Tickets and Codes

Click on the "Print Tickets" link. You can generate one or more tickets by entering the quantity and clicking on one of the 3 buttons Ticket A, Ticket B and Ticket C.

Each ticket type corresponds to the duration setup in the ticket plans. The tickets can be printed and be given to the customers.

If you have pre-printed tickets with pre-defined codes, the codes corresponding to each type of ticket can be uploaded to the system.

Clicking the "View" button will show all the un-used codes stored in the system. Clicking the "Flush" button will delete all unused codes from the system. This will not effect existing sessions.

The screenshot shows the 'MANAGE TICKETS' page of the Administration Console. It includes a 'Code Generator' section with a text input for the number of codes to generate (set to 1) and three buttons: 'Ticket A', 'Ticket B', and 'Ticket C'. Below this, it displays 'codes for 30mins' and a large code '282898' with a 'Print Ticket' button. There is also an 'Upload Codes' section with a text area for entering codes and three buttons: 'Upload A', 'Upload B', and 'Upload C'. At the bottom, the 'Code Inventory' section shows 'Un-used codes remaining = (17)' with 'View' and 'Flush' buttons.

More tickets...

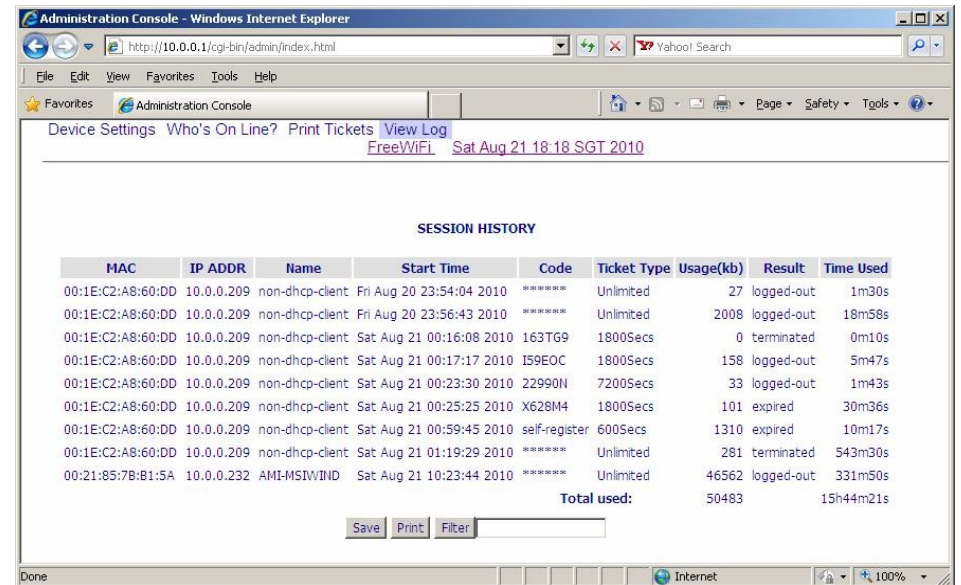


## 2.3. View Logged-Out Sessions

Clicking the "View Log" will show all the past logged-out sessions.

The "Show" button filters the records to show only those you are interested to see, for example, records for a known MAC or IP address, or a particular ticket code, so you can check the total usage for that user.

The "Print" button prints the records to your printer so that you may show it to your customer for billing purposes.



*Note: This historical data is cached in the dynamic random access memory of the router and will be erased from the system when the router is restarted. If it is necessary to backup the shown data, download it and save it as a csv file in your computer.*

### **3. GPL Information**

The hotspot gateway comprises mainly web CGI scripts written in sh shell. It is built on the OpenWrt platform, an open source router software which includes open-source codes developed and owned by OpenWrt developers under the GPL and LGPL terms of agreements. All the packages related to the making of this hotspot router are available for download at <http://www.openwrt.org>.

### **4. Technical Support**

For any technical query and support, please email Twinson Computer Services at [support@twinson.com.sg](mailto:support@twinson.com.sg) or call +65 63393818.

### **5. Warranty Statement**

Twinson warrants that the hardware supplied is free from manufacture defect and will remain functional for one year. Twinson may replace or repair a malfunction unit when necessary. However, Twinson's warranty does not cover tear and wear, abuse of the product in any form as a result of the action of the user. User's access to the original software in the router and modification of the product in any form such as flashing with third party firmware and changing the program originally pre-installed in the router shall automatically render the warranty void.