Air Live®
Powered by OvisLink Corp.

WIAS-3200N

802.11n Internet Access Server

User's Manual

www.airlive.com

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FCC Statement

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Table of Contents

1 Before You Start

1.1 Preface

This manual is for WLAN service providers or network administrators to set up a network environment using the WIAS-3200N system. It contains step-by-step procedures and graphic examples to guide MIS staff or individuals with slight network system knowledge to complete the installation.

1.2 Document Conventions

Caution:	Represents essential steps, actions, or messages that should not be ignored.
Note:	Contains related information that corresponds to a topic.
	Indicates that clicking this button will return to the homepage of this section.
	Indicates that clicking this button will exit the system.
	Indicates that clicking this button will apply all of your settings.
	Indicates that clicking this button will clear what you have set before these settings are applied.

1.3 Package Checklist

The standard package of WIAS-3200N includes:

- WIAS-3200N x 1
- CD-ROM (with User's Manual and QIG) x 1
- Quick Installation Guide (QIG) x 1
- Console Cable x 1

- Ethernet Cable x 1
- Power Adapter (DC 12V) x 1
- Rubber Antenna x 2
- Mounting Kit x 1
- Ground Cable x 1

Caution:

It is highly recommended to use all the supplies in the package instead of substituting any components by other suppliers to guarantee best performance.

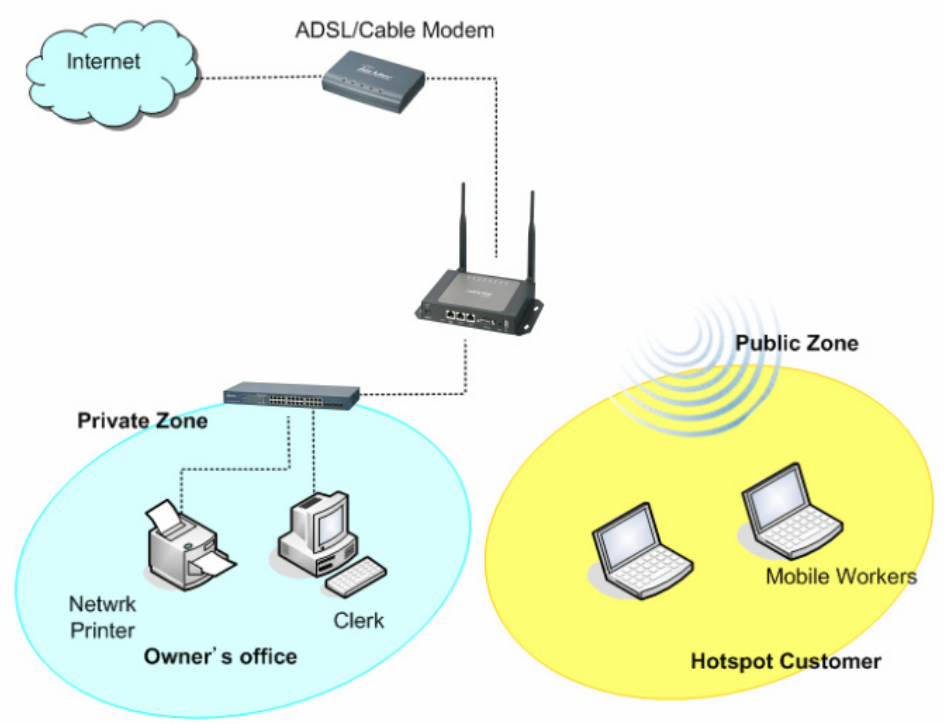
2 System Overview and Getting Started

2.1 Introduction of WIAS-3200N

The **WIAS-3200N** is the most economical and feature rich **Wireless Hotspot Gateway**, targeting mini-size stores that want to provide small, single-point wireless Internet access service. WIAS-3200N is a perfect choice for beginners to run hotspot businesses. It does not cost much compared to buying a pile of equipments, nor does it take the skills of an expert to glue multiple applications out of multiple freeware. Feature-packed for hotspot operation, WIAS-3200N comes with **built-in 802.11 n/b/g MIMO access point, web server and web pages for clients to login, easy logo-loading for branding a hotspot store, simple user/visitor account management tool, payment plans, multiple credit card gateways, traffic logs, IP sharing** and etc. WIAS-3200N also brings in an extra advantage - the wall-mountable, dust-proof (IP50) metal housing.

2.2 System Concept

WIAS-3200N is capable of managing user authentication, authorization and accounting. The user account information is stored in the local database or a specified external RADIUS database server. Featured with user authentication and integrated with external payment gateway, WIAS-3200N allows users to easily pay the fee and enjoy the Internet service using credit cards through a variety of payment gateways including Authorize.Net, PayPal, SecurePay, and WorldPay. Furthermore, WIAS-3200N introduces the concept of Zones – Private Zone and Public Zone, each with its own definable access control profiles. Private Zone means clients are not required to be authenticated before using the network service. On the other hand, clients in Public Zone are required to get authentication before using the network service. This is very useful for hotspot owners seeking to deploy wireless network service for clients and manage the network as well. The following diagram is an example of WIAS-3200N set to manage the Internet and network access services at a hotspot venue.



2.3 Hardware Descriptions

Front Panel

1	**USB**	For future usage only.
2	**WES**	Press to start running WES (WDS Easy Setup) process.
3	**Console**	Attach the RS-232 console cable here, for management use only.
4	**LAN1/LAN2**	Attach Ethernet cables here for connecting to the wired local network. LAN1 maps to Private Zone and requires no user authentication, LAN2 maps to Public Zone and by default requires user authentication.

5	**WAN (PoE)**	Attach the wired external network here. This port supports Power over Ethernet (PoE) for flexible installation.
6	**Reset**	This is hardware reset button. Press once to restart the system.
7	**Power Socket (12VDC/1A)**	For connecting to external power supply via the power adapter.

Rear Panel

Antenna Connector	Attach antennas here. WIAS-3200N supports 1 RF interface with 2 SMA connectors.

Top LED Panel

<table>
<tr><td>1</td><td>  </td><td>LED ON indicates power on; OFF indicates power off.</td></tr>
<tr><td>2</td><td>  </td><td>LED ON indicates WAN connection; OFF indicates no connection; BLINKING indicates transmitting data.</td></tr>
<tr><td>3</td><td>  </td><td>LED ON indicates LAN1/LAN2 connection; OFF indicates no connection; BLINKING indicates transmitting data.</td></tr>
<tr><td>4</td><td>  </td><td>LED ON indicates wireless ready.</td></tr>
<tr><td>5</td><td>  </td><td>LED ON indicates WAN port is connected to the internet.</td></tr>
<tr><td>6</td><td>  </td><td>For indicating WES status during WES setup:
<table>
<tr><th></th><th>Master</th><th>Slave</th></tr>
<tr><td>WES Start</td><td>LED BLINKING SLOWLY</td><td>LED BLINKING QUICKLY</td></tr>
<tr><td>WES Negotiate</td><td>LED BLINKING SLOWLY</td><td>LED BLINKING QUICKLY</td></tr>
<tr><td>WES Fail (Negotiate Timeout)</td><td>LED OFF</td><td>LED OFF</td></tr>
<tr><td>WES Success</td><td>LED ON for over 5 seconds</td><td>LED ON for over 5 seconds (after Master displays WES Success)</td></tr>
</table></td></tr>
<tr><td>7</td><td>  </td><td>For future usage only.</td></tr>
</table>

2.4 System Requirement

- Standard 10/100BaseT including network cables with RJ-45 connectors
- All PCs need to install the TCP/IP network protocol

2.5 Installation Steps

Please follow the steps below to install WIAS-3200N:

Please follow the steps mentioned below to install the hardware of WIAS-3200N:

1. **Place the WIAS-3200N at a best location.**
   The best location for WIAS-3200N is usually at the center of your wireless network.
2. **Connect WIAS-3200N to your outbound network device.**
   Connect one end of the **Ethernet cable** to the WAN port of WIAS-3200N on the front panel. Depending on the type of internet service provided by your ISP, connect the other end of the cable to the ATU-Router of an ADSL, a cable modem, a switch or a hub. The WAN LED indicator should be ON to indicate a proper connection.
3. **Connect WIAS-3200N to your network device.**
   Connect one end of the **Ethernet cable** to the LAN1 port of WIAS-3200N on the front panel. Connect the other end of the cable to a PC for configuring the system. The LAN1 LED indicator should be ON to indicate a proper connection.

   Note:

   WIAS-3200N has two virtual zones Private and Public which are mapped to LAN1(192.168.1.254) and LAN2(192.168.11.254) respectively.

4. **There are two ways to supply power over to WIAS-3200N.**
   (a) Connect the **DC power adapter** to the WIAS-3200N power socket on the front panel.
   (b) WIAS-3200N is capable of transmitting DC current via its WAN PoE port. Connect an IEEE 802.3af-compliant PSE device, e.g. a PoE-switch, to the WAN port of WIAS-3200N with the Ethernet cable.
5. **Now, the hardware installation is completed.**

6. **Caution:**
   Please only use the power adapter supplied with the WIAS-3200N package. Using a different power adapter may damage this system.

7. **Caution:**
   To double verify the wired connection between WIAS-3200N and your switch/router/hub, please check the LED status indication of these network devices.

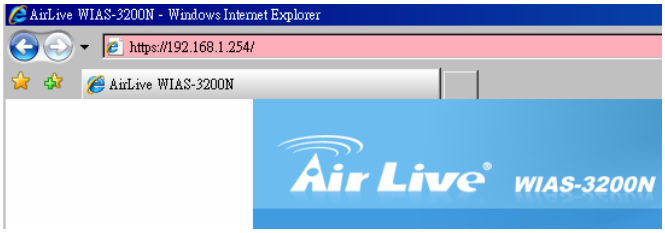
2.6 Access Web Management Interface

WIAS-3200N supports Web Management Interface (WMI) configuration. Upon the completion of hardware installation, WIAS-3200N can be configured via web browsers with JavaScript enabled such as Internet Explorer version 6.0 and above or Firefox.
Default LAN interface IP address:

- LAN1 (192.168.1.254) is mapped to Private Zone with no authentication is required for users.
- LAN2 (192.168.11.254) is mapped to Public Zone, by default authentication is required for users.

Note: The instructions below are illustrated with the administrator PC connected to LAN1.

To access the web management interface, connect a PC to the LAN Port, and then launch a browse. Make sure you have set DHCP in TCP/IP of your PC to get an IP address dynamically. The default gateway IP address is the default gateway IP address of Private Zone: “192.168.1.254”.
Next, enter the gateway IP address of WIAS-3200N at the address field. The default gateway IP address from LAN Port is“https://192.168.1.254” (“https” is used for a secured connection).



The administrator login page will appear. Enter “admin”, the default username, and “airlive”, the default password, in the User Name and Password fields. Click LOGIN to log in.

After a successful login, a “Home” page with four main buttons will appear on the screen.

For the first time, if WIAS-3200N is not using a trusted SSL certificate, there will be a “Certificate Error”, because the browser treats WIAS-3200N as an illegal website. Please press “Continue to this website” to continue.

Caution:

If you can’t get the login screen, the reasons may be: (1) The PC is set incorrectly so that the PC can’t obtain the IP address automatically from the LAN port; (2) The IP address and the default gateway are not under the same network segment. Please set your PC with a static IP address such as 192.168.1.xx in your network and then try it again. For the configuration on PC, please refer to Appendix A. Network Configuration on PC.

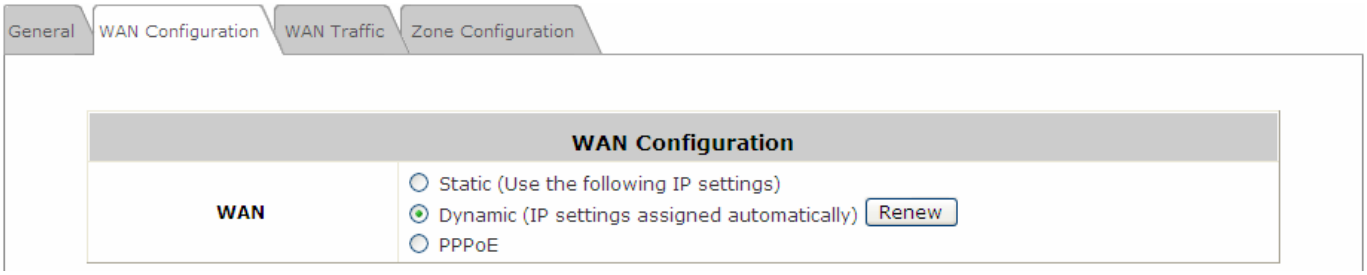
3 Combine WIAS-3200N to the Network

3.1 Network Requirement

In the general network environment, the main role of WIAS-3200N is a gateway that manages all the network access from internal network to Internet. Thus, the first step is to prepare an Internet connection from your ISP (Internet Service Provider) and connect it to the WAN port of WIAS-3200N.

3.2 Configure WAN Port

There are 3 connection types for the WAN Port: Static, Dynamic and PPPoE. These connection types are enough to support most ISP.
Now, let us discuss how to configure WAN port. Go to: **Main Menu >> System >> WAN Configuration**.

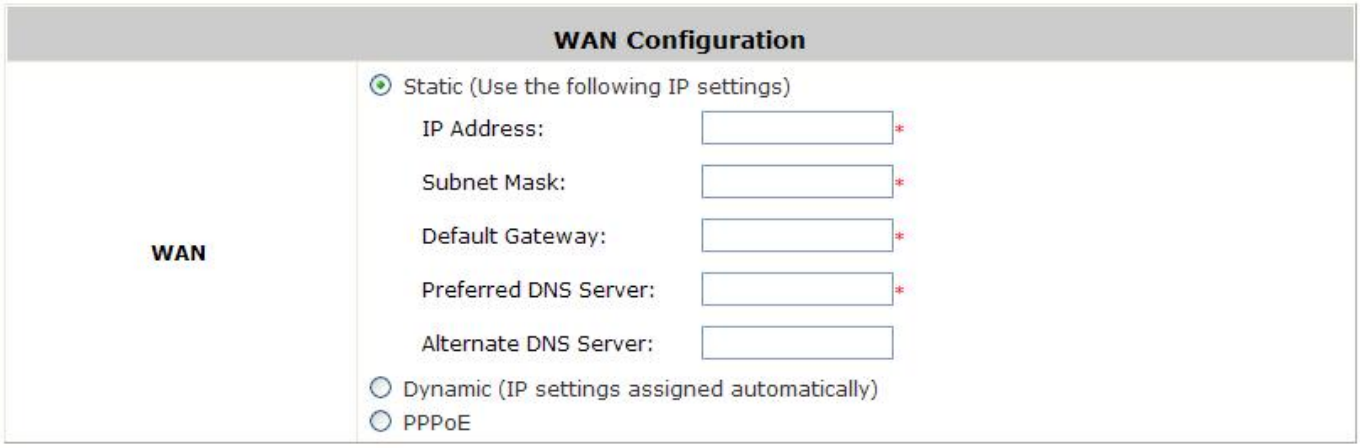


The parameters related to each connection method are described in the following section:

3.2.1 Static IP

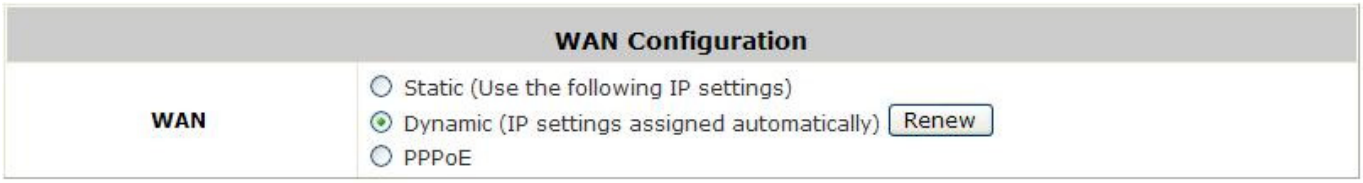
Static: Manually specifying the IP address of the WAN Port. The fields with red asterisks are mandatory.

- **IP Address:** The IP address of the WAN port.
- **Subnet Mask:** The subnet mask of the WAN port.
- **Default Gateway:** The gateway of the WAN port.
- **Preferred DNS Server:** The primary DNS Server of the system.
- **Alternate DNS Server:** The substitute DNS Server of the system. This is an optional field.



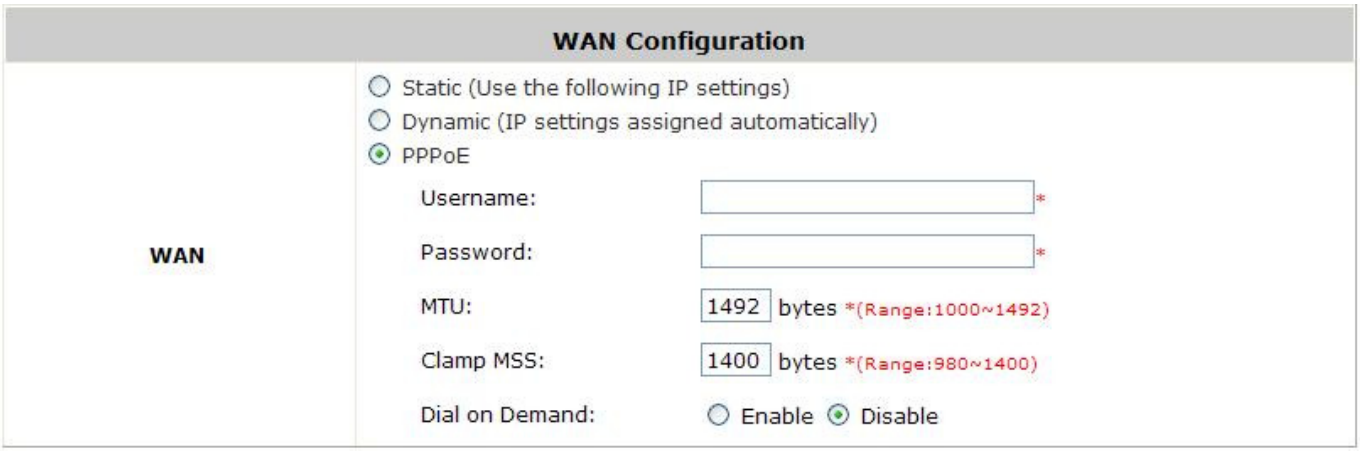
3.2.2 Dynamic

Dynamic: It is only applicable for the network environment where the DHCP server is available upstream of the system. Click the ***Renew*** button to get an IP address automatically.



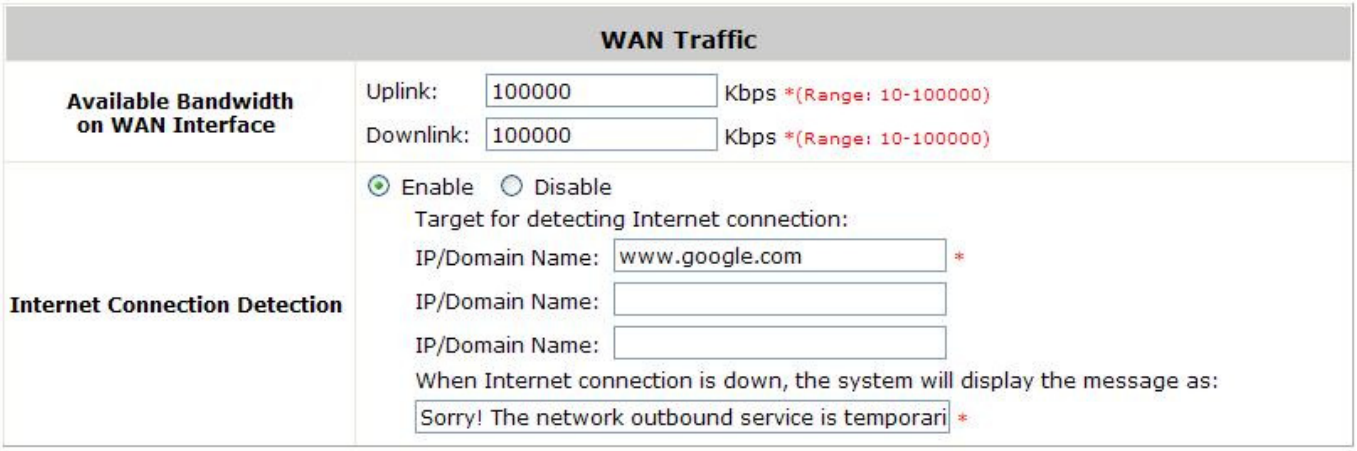
3.2.3 PPPoE

PPPoE: When selecting PPPoE to connect to the network, please set the **"User Name"**, **"Password"**, **"MTU"** and **"Clamp MSS"**. There is a **Dial on demand** function under PPPoE. If this function is enabled, a **Maximum Idle Time** will be available for input a value. When the idle time is reached, the system will automatically disconnect itself.



3.3 Internet Connection Detection

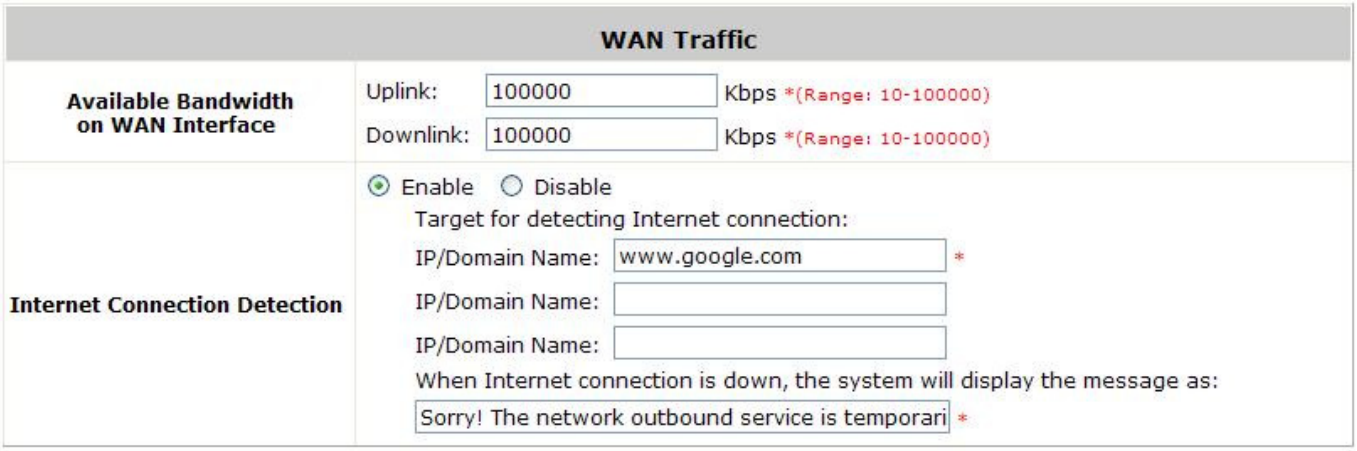
Configure Internet Connection Detection, go to: **Main Menu >> System >> WAN Traffic**.



Internet Connection Detection: When enabled, system will try to access these IP/Domain addresses, if system can reach these IP/Domain address, it means that the outbound Internet connection is in normal state. On the other hand, there is a text box available for the administrator to enter a reminding message. This reminding message will appear on clients' screens when Internet connection is down.

3.4 WAN Bandwidth Control

Configure WAN Bandwidth Control, go to: ***System >> WAN Traffic***.



The feature gives administrators control over the entire system's traffic though the WAN interface. These parameters set here should not exceed the real bandwidth coming from your ISP. For example, if your xDSL is 8Mbs/640kbs, you may input these two values here.

Available Bandwidth on WAN Interface:

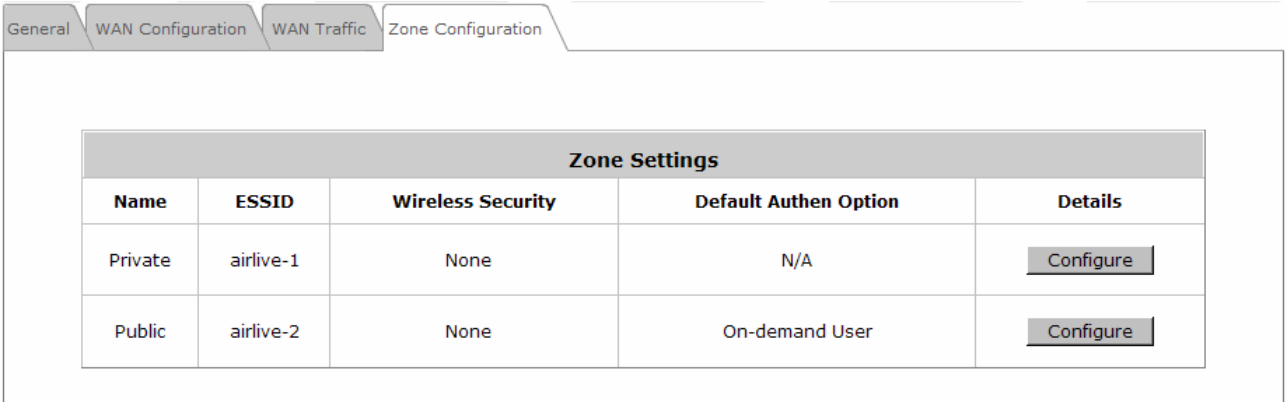
- **Uplink:** It specifies the maximum uplink bandwidth that can be shared by clients of the system.
- **Downlink:** It specifies the maximum downlink bandwidth that can be shared by clients of the system.

3.5 What is Zone

Configure Zone, go to: **Main Menu >> System >> Zone Configuration**.

A *Zone* is a logical network area that covers wired or wireless networks, or both of them. By associating to a unique ESSID of a Zone, wireless network is divided into different logical zones. Clients attempting to access the resources within a Zone will be controlled based on the access control profile of that Zone, such as authentication, security feature, wireless encryption method, traffic control, and etc.

There are two Zones that can be utilized by WIAS-3200N – Private Zone and Public Zone, as shown in the table below. Private Zone means clients are not required to be authenticated before using the network service. On the other hand, clients in Public Zone are required to get authentication before using the network service.



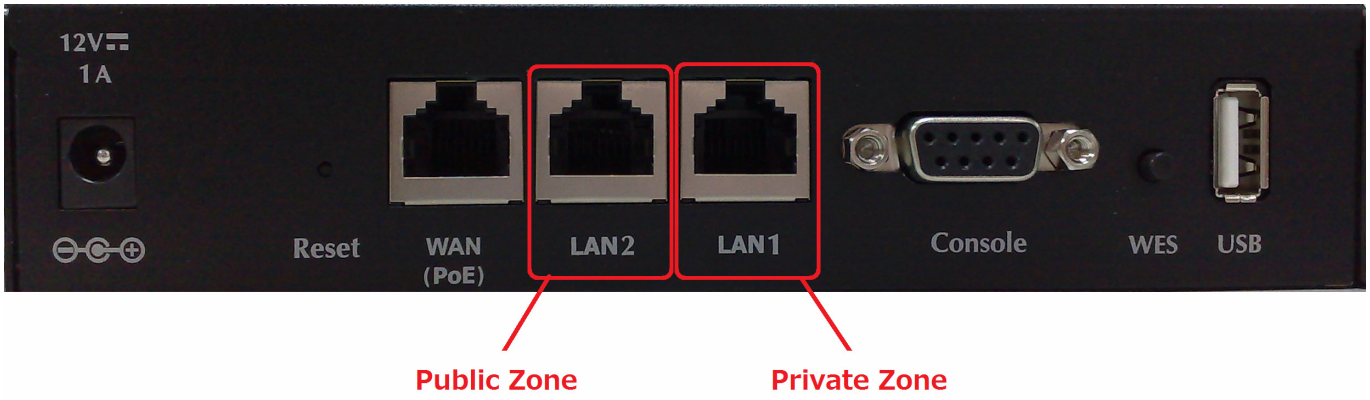
- **Name:** Mnemonic name of the Zone.
- **ESSID:** The SSID that is associated with the Zone.
- **Wireless Security:** Data encryption method for wireless networks within the Zone.
- **Default Authen Option:** Default authentication method/server that is used within the Zone.
- **Details:** Configurable, detailed settings for each Zone.

Click **Configure** button to configure each Zone: **Basic Settings**, **Authentication Settings (Public Zone only)**, **Wireless Settings**, and **WDS Settings (Public Zone only)**.

3.5.1 Port Role Assignment

WIAS-3200N supports two zones, Private and Public. In the Private Zone, authentication is not required to access the network via wired and wireless. In the Public Zone, by default, Authentication Required is enabled by default, so clients are

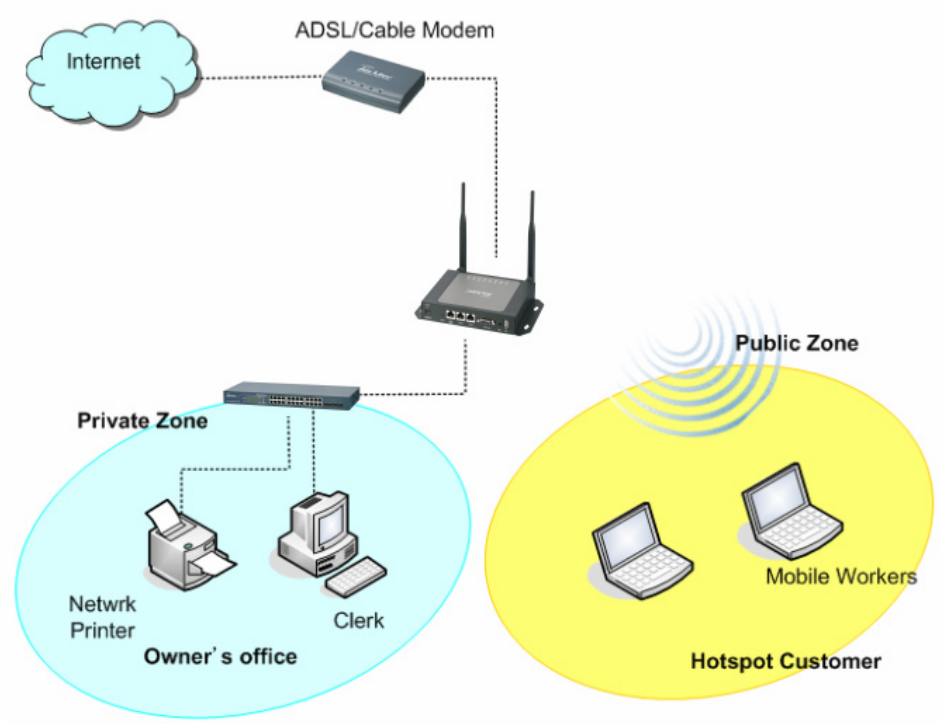
required to get authenticated successfully before surfing the Internet.
The Zone and Port mappings are shown below, LAN1 and LAN2 maps to Private Zone and Public Zone respectively.



Note:
System's WMI can also be accesses via WAN port as long as the administrator uses an IP address listed in Management IP Address List setting. If both WAN and LAN ports are unable to reach WMI, please use console interface to solve this issue.

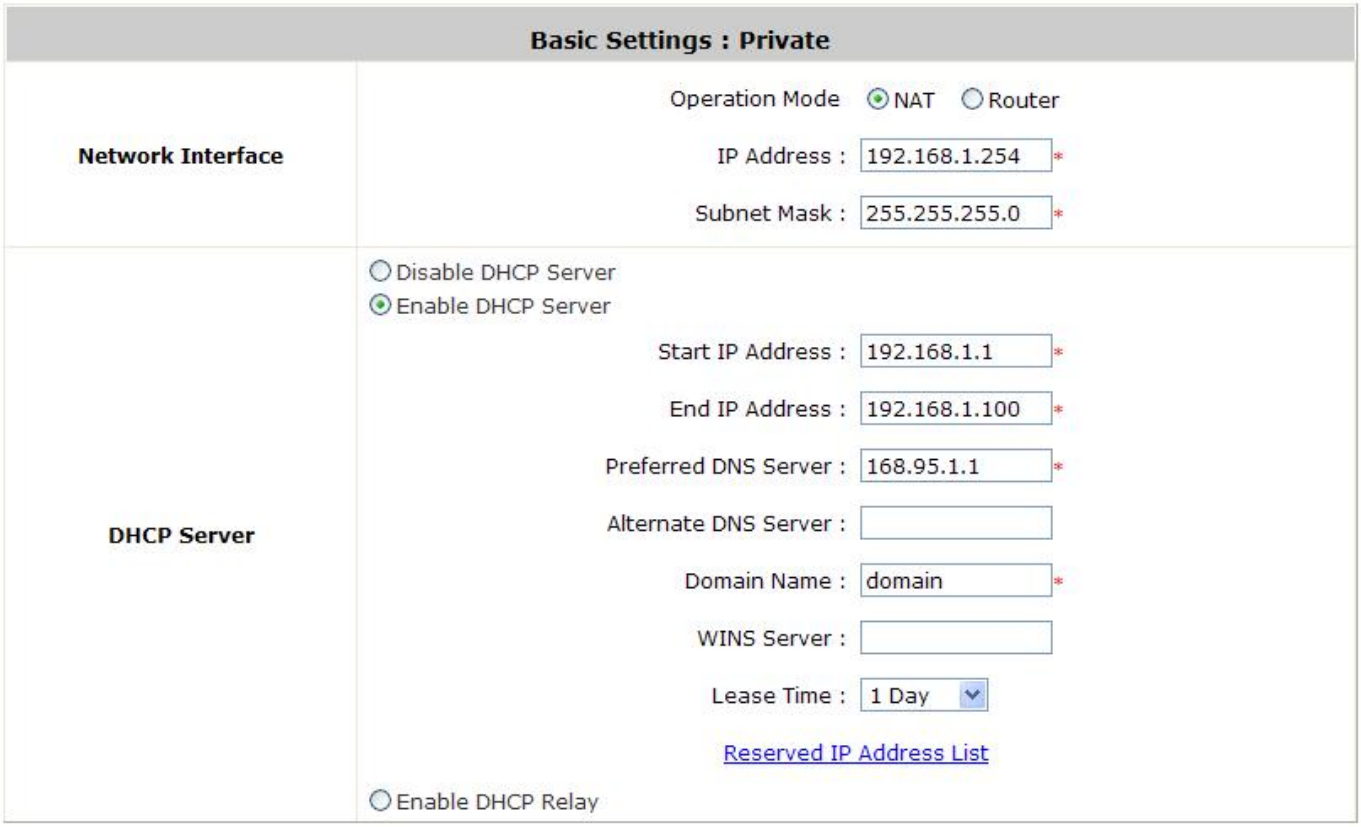
3.5.2 Planning Your Internet Network

Administrator can access the Web Management Interface (WMI) of WIAS-3200N through the wired LAN port. Waiters or waitresses can send orders back to the electrical menu system via wireless hand set devices.



3.5.3 Configure Zone Network

Configure Zone network; go to: **Menu >> System >> Zone Configuration**. Click the button **Configure** of Private zone for further configuration. The parameter descriptions of Basic Settings for Private Zone and Public Zone are the same. The wireless settings under each zone will be covered in the next section.



- **Network Interface:**
  - **Operation Mode:** Contains **NAT** mode and **Router** mode. When NAT mode is chosen, the service zone runs in NAT mode. When Router mode is chosen, this zone runs in Router mode.
  - **IP Address:** The IP Address of this zone.
  - **Subnet Mask:** The subnet Mask of this zone.

- **DHCP Server:** Related information needed on setting up the DHCP Server is listed here. Please note that when "*Enable DHCP Relay"* is enabled, the IP address of clients will be assigned by an external DHCP server. The system will only relay DHCP information from the external DHCP server to downstream clients of this zone.
  - **Start IP Address / End IP Address:** A range of IP addresses that the built-in DHCP server will assign to clients.
    Note: please change the Management IP Address List accordingly (at *System >> General >> Management IP Address List*) to permit the administrator to access the WIAS-3200N admin page after the default IP address of the network interface is changed.
  - **Preferred DNS Server:** The primary DNS server that is used by this Zone.
  - **Alternate DNS Server:** The substitute DNS server that is used by this Zone.

- **Domain Name:** Enter the domain name for this zone.
- **WINS Server: The IP address of the WINS (Windows Internet Naming Service) server if WINS server is applicable to this zone.**
- **Lease Time: This is the time period that the IP addresses issued from the DHCP server are valid and available.**
- **Reserved IP Address List:** Each zone can reserve up to 40 IP addresses from predefined DHCP range to prevent the system from issuing these IP addresses to downstream clients. The administrator can reserve a specific IP address for a special device with certain MAC address.

4 Let Your Network to Be a Wireless Network

4.1 System Wireless General Settings

Configure System's Wireless General Settings, go to: **Main Menu >> System >> Zone Configuration**.

Wireless General Settings	
Band	802.11g+802.11n
Short Preamble	Enable / Disable
Short Guard Interval	Enable / Disable
Channel Width	20 MHz
Channel	1
Max Transmit Rate	Auto
Transmit Power	Lowest
DTIM Period	1 (1-255ms)
ACK Timeout	100 (0-255ms)

Wireless General Settings:

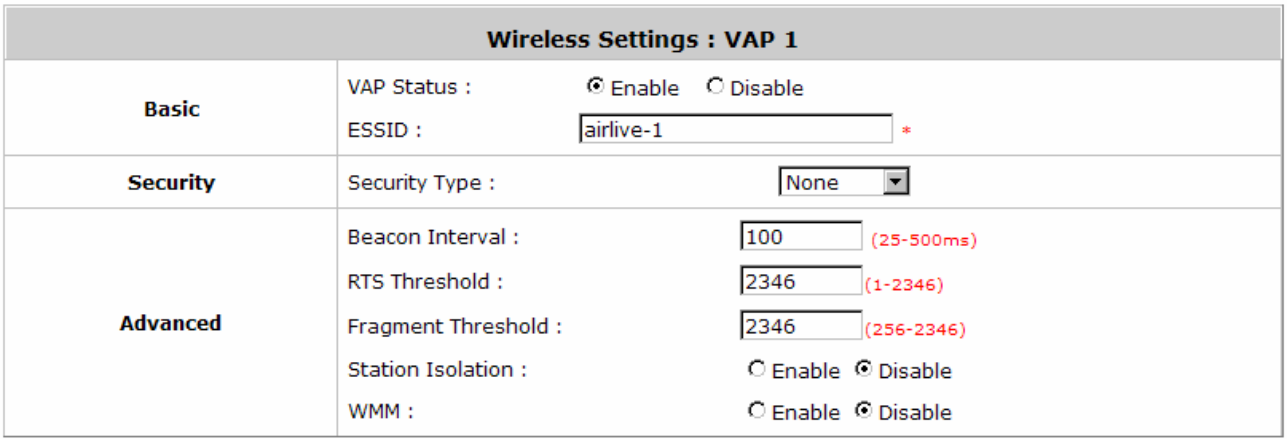
- **Band:** There are 4 modes to select, **802.11b** (2.4G, 1~11Mbps), **802.11g** (2.4G, 54Mbps), **802.11b+g**, and **802.11g+n**.
- **Short Preamble:** The length of the CRC (Cyclic Redundancy Check) block for communication between the Access Point and roaming wireless adapters. Select **Enable** for **Short Preamble** or **Disable** for **Long Preamble**.
- **Short Guard Interval (802.11g+n only):** The guard interval is the space between symbols (characters) being transmitted to eliminate inter-symbol interference. With 802.11n, short guard interval is half of what it is used to be to increase throughput. Select **Enable** to use Short Guard Interval or **Disable** to use normal Guard Interval.
- **Channel Width (802.11g+n only):** For 802.11n, double channel bandwidth to 40 MHz is supported to enhance throughput.
- **Channel:** Select the appropriate channel from the drop-down menu to correspond with your network settings, for example, Channel 1-11 is available in North American and Channel 1-13 in Europe, or choose the default **Auto**.

- **Max Transmit Rate:** The default is **Auto**. Available range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of the wireless network. Select from a range of transmission speed or keep the default setting, **Auto**, to make the Access Point automatically use the fastest rate possible.
- **Transmit Power:** Select from the range, or keep the default setting or to make the Access Point use different transmit power as you wish.
- **DTIM Period:** Input the DTIM Interval that is generated within the periodic beacon at a specified frequency. Higher DTIM will let the wireless client save energy more, but the throughput will be growing worse.
- **ACK Timeout:** The time interval for waiting the “ACKnowledgement frame”. If the ACK is not received within that timeout period then the packet will be re-transmitted. Higher ACK Timeout will decrease the packet lost, but the throughput will be growing worse.

4.2 Zone Wireless Settings

Each zone has its own VAP and corresponds to one SSID. In Private zone, it’s VAP1 and the SSID is hidden, so public users cannot scan this SSID in the air, for privilege users who already know this SSID, they can manually associate to the SSID of Private zone. On the other hand, the SSID of VAP2 under Public zone by default is enabled with SSID Broadcast feature, allowing public users to scan this SSID in the air.

After wireless general settings are done, use the parameters in Wireless Settings under zone configuration to fine tune the wireless network under Private and Public Zone.
To configure Private Zone‘s Wireless Settings, go to: **Main Menu >> System >> Zone Configuration**, click **Configure** of Private zone



- **Wireless Settings: VAP1 (Wireless Settings Private Zone)**
  - **Basic:** Enable the VAP Status if you wish to provide wireless service under this zone. Assign an ESSID for VAP1 under Private Zone or use default "**airlive-1**", the ESSID of Private Zone will not be broadcasted and internal staff will need to associate to Private Zone's VAP1 manually.
  - **Security:** Configure the wireless network under Private Zone with security encryption to prevent unauthorized wireless association if necessary. The encryption standards supported are WEP and WPA-PSK.
  - **Advanced:** The parameters in advanced are wireless settings that allow customization of data transmission, enhanced security and wireless roaming.
  - **Beacon Interval:** The entered amount of time indicates how often the beacon signal will be sent from the VAP.
  - **RTS Threshold:** Enter a value between 1 and 2346. RTS (Request to Send) Threshold determines the packet size at which the system issues a request to send (RTS) before sending the frame to prevent the hidden node problem. The RTS mechanism will be activated if the data size exceeds the value provided.
  - **Fragment Threshold:** Enter a value between 256 and 2346. The default is 2346. A packet size larger than this threshold will be fragmented (sent with several pieces instead of one chunk) before transmission. A smaller value results in smaller frames but allows a larger number of frames in transmission. A lower Fragment Threshold setting can be useful in areas where communication is poor or disturbed by a serious amount of radio interference.
  - **Station Isolation:** By enabling this function, all stations wirelessly associated to this zone are isolated from each other and can only communicate with the system.
  - **WMM:** The default is **Disable**. Wi-Fi Multimedia (WMM) is a Quality of Service (QoS) feature that prioritizes wireless data packets based on four access categories: voice, video, best effort, and background. Applications without WMM and applications that do not require QoS are assigned to the best-effort category, which receives a lower priority than that of voice and video. Therefore, WMM decides which data streams are more important and assigns them a higher traffic priority. This option works with WMM-capable clients only.

Normally we use VAP2, the VAP under Public Zone to provide wireless service to public clients in a hotspot environment. To configure Public Zone's Wireless Settings, go to: **Main Menu >>System >> Zone Configuration**, click **Configure** of Public zone

Wireless Settings : VAP 2		
Basic	VAP Status :	Enable Disable
	ESSID :	airlive-2 *
Security	Security Type :	None
Advanced	Beacon Interval :	100 (25-500ms)
	RTS Threshold :	2346 (1-2346)
	Fragment Threshold :	2346 (256-2346)
	Broadcast SSID :	Enable Disable
	Station Isolation :	Enable Disable
	WMM :	Enable Disable

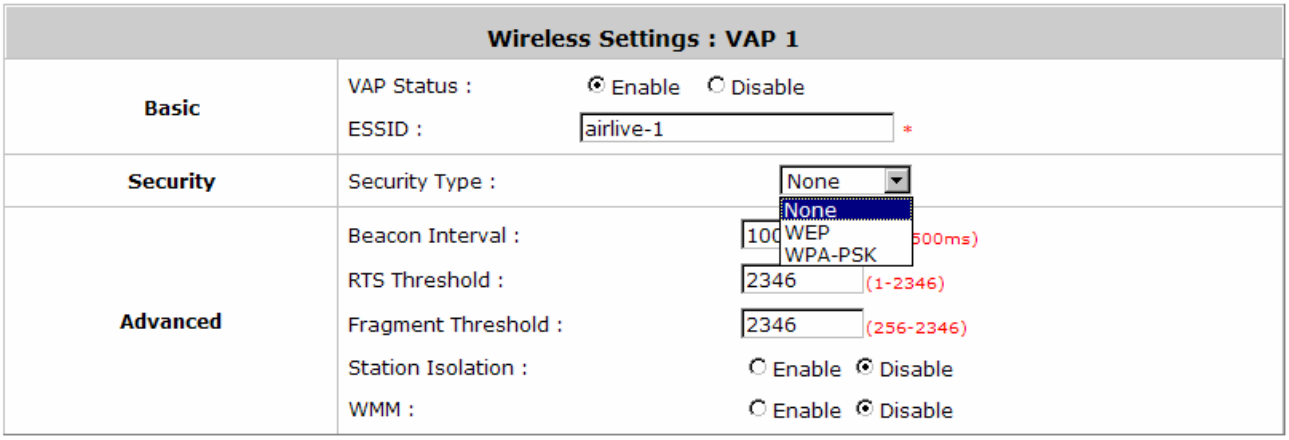
- **Wireless Settings: VAP2 (Wireless Settings for Public Zone)**
  - **Basic:** Enable the VAP Status if you wish to provide wireless service under this zone. Assign an ESSID for VAP2 under Private Zone or use default “airlive-2”, the ESSID of Private Zone will be broadcasted in default settings to allow it to be scanned in the air.
  - **Security:** Configure the wireless network under Public Zone with security encryption to prevent unauthorized wireless association if necessary. The encryption standards supported are WEP, 802.1X, WPA-PSK and WPA-RADIUS.
  - **Advanced:** The parameters in advanced are wireless settings that allow customization of data transmission, enhanced security and wireless roaming.
  - Beacon Interval: The entered amount of time indicates how often the beacon signal will be sent from the VAP.
  - **RTS Threshold:** Enter a value between 1 and 2346. RTS (Request to Send) Threshold determines the packet size at which the system issues a request to send (RTS) before sending the frame to prevent the hidden node problem. The RTS mechanism will be activated if the data size exceeds the value provided. A lower RTS Threshold setting can be useful in areas where many client devices are associating with EAP200 or in areas where the clients are far apart and can detect only EAP200 but not each other.
  - **Fragment Threshold:** Enter a value between 256 and 2346. The default is 2346. A packet size larger than this threshold will be fragmented (sent with several pieces instead of one chunk) before transmission. A smaller value results in smaller frames but allows a larger number of frames in transmission. A lower Fragment Threshold setting can be useful in areas where communication is poor or disturbed by a serious amount of radio interference.

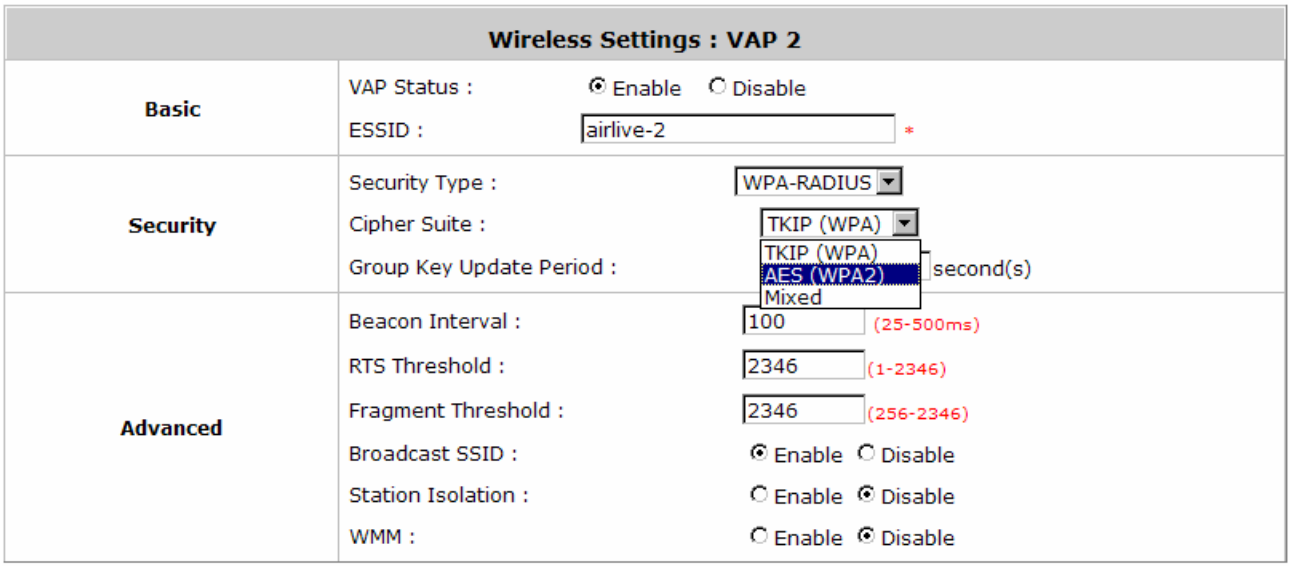
- **Broadcast SSID:** Enable to broadcast VAP2's SSID in the air, Disable to hide VAP's SSID so that it cannot be scanned.
- **Station Isolation:** By enabling this function, all stations wirelessly associated to this zone are isolated from each other and can only communicate with the system.
- **WMM:** The default is **Disable**. Wi-Fi Multimedia (WMM) is a Quality of Service (QoS) feature that prioritizes wireless data packets based on four access categories: voice, video, best effort, and background. Applications without WMM and applications that do not require QoS are assigned to the best-effort category, which receives a lower priority than that of voice and video. Therefore, WMM decides which data streams are more important and assigns them a higher traffic priority. This option works with WMM-capable clients only.

4.3 Zone Wireless Security

Configure Zone Wireless Security, go to: **Main Menu >> System >> Zone Configuration**, click ***Configure*** of Private zone or click ***Configure*** of Public zone.

After the above configurations are finished, setup the wireless security is very important to protect your wireless network.





Security:

For each zones, administrators can set up the wireless security profile, it include **WEP**, **802.1x** (for **Public Zone** only), **WPA-PSK** or **WPA-RADIUS** (for **Public Zone** only).

- **WEP:**
  - **802.11 Authentication:** Select from **Open System** or **Shared Key**.
  - **WEP Key Length:** Select from **64-bit**, **128-bit**, **152-bit** key length.
  - **WEP Key Format:** Select from **ASCII** or **Hex** format for the WEP key.
  - **WEP Key Index:** Select a key index from **1~4**. The WEP key index is a number that specifies which WEP key will be used for the encryption of wireless frames during data transmission.
  - **WEP Keys:** Provide the pre-defined WEP key value; the system supports up to 4 sets of WEP keys.
- **802.1X:**
  - **Dynamic WEP:** For 802.1X security type, Dynamic WEP is always enabled to automatically generate WEP keys for encryption.
  - **WEP Key Length:** Select from **64-bit** or **128-bit** key length.
  - **Re-keying Period:** The time interval for the dynamic WEP key to be updated; the time unit is in second.
- **WPA-PSK:**
  - **Cipher Suite:** Select an encryption method from **TKIP (WPA)**, **AES (WPA)**, **TKIP (WAP2)**, **AES (WAP2)**, or **Mixed**.
  - **Pre-shared Key / Passphrase:** Enter the key value for the pre-shared key or passphrase.
  - **Group Key Update Period:** The time interval for the Group Key to be renewed; the time unit is in seconds.

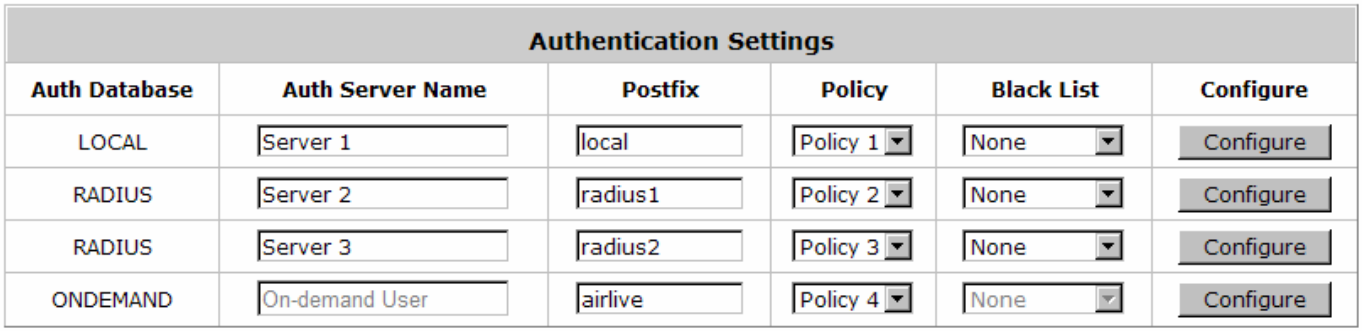
- **WPA-RADIUS:** Same as **802.1X**, when it is selected, it is combined with *TKIP*, *AES* or *Mixed* mode.
  - **Cipher Suite:** Select an encryption method from *TKIP (WPA)*, *AES (WPA)*, *TKIP(WAP2)*, *AES (WAP2)*, or *Mixed*.
  - **Group Key Update Period:** The time interval for the Group Key to be renewed; the time unit is in seconds.

5 Who Can Access the Network

5.1 Type of Users

Configure Users, go to: **Main Menu >> Users >> Authentication**.

This section is for administrators to pre-configure authentication servers for the entire system. Concurrently up to three servers can be selected and pre-configured for static user authentication, one server uses built-in LOCAL database while the other two servers uses external RADIUS database. In addition, another server called On-demand can be configured for temporary user authentication.



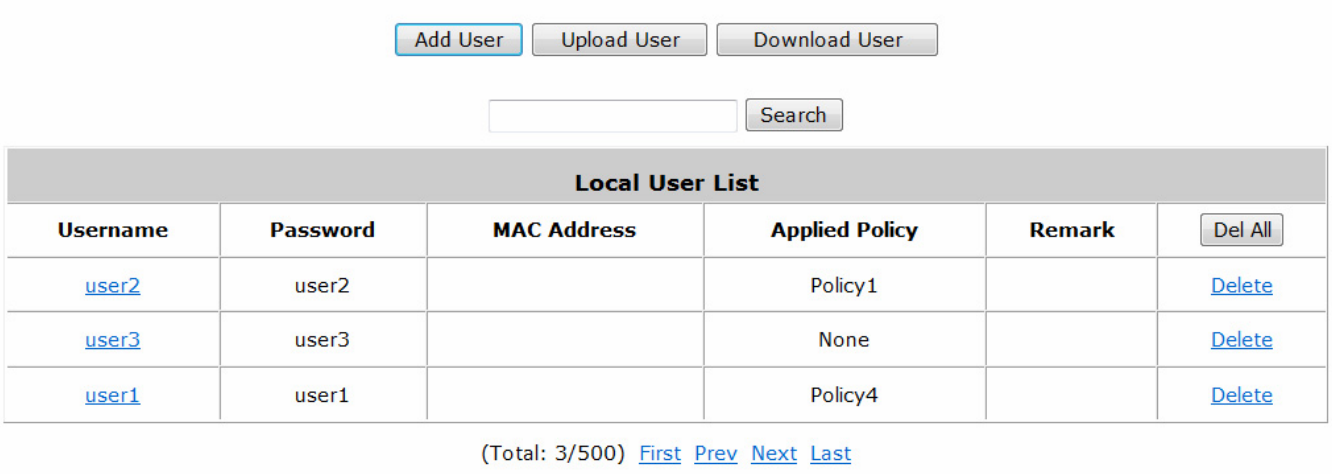
- **Auth Database:** There are four different authentication options in WIAS-3200N that uses databases: **LOCAL**, **RADIUS1**, **RADIUS2** and **ONDEMAND**.
- **Auth Server Name:** Set a name for the authentication databases by using numbers (0~9), alphabets (a~z or A ~Z), dash (-), underline (_), space and dot (.) only. This name is used for the administrator to identify the authentication options easily such as HQ-RADIUS.
- **Postfix:** A postfix represents the authentication server in a complete username. For example, **user1@local** means that this user (user1) will be authenticated against the LOCAL authentication database.
- **Policy:** Select one Policy from the drop-down list box for this specific authentication option.
- **Black List:** There are 5 sets of black lists provided by the system. A user account listed in the black list is not allowed to log into the system, the client's access will be denied. The administrator may select one (or None) black list from the drop-down menu and this black list will be applied to this specific authentication option.

- **Configure:** Click **Configure** button to enter the specific authentication page. For example, if you want to edit the **Local** authentication database, please click **Configure** button of **Local**.

5.1.1 Local

Click the button **Configure** of **Local** for further configuration.

- **Local User List:** It let the administrator to view, add or delete local user account. The **Upload User** button is for importing a list of user account from a text file. The **Download User** button is for exporting all local user accounts into a text file. Clicking on each user account leads to a page for configuring the individual local account.

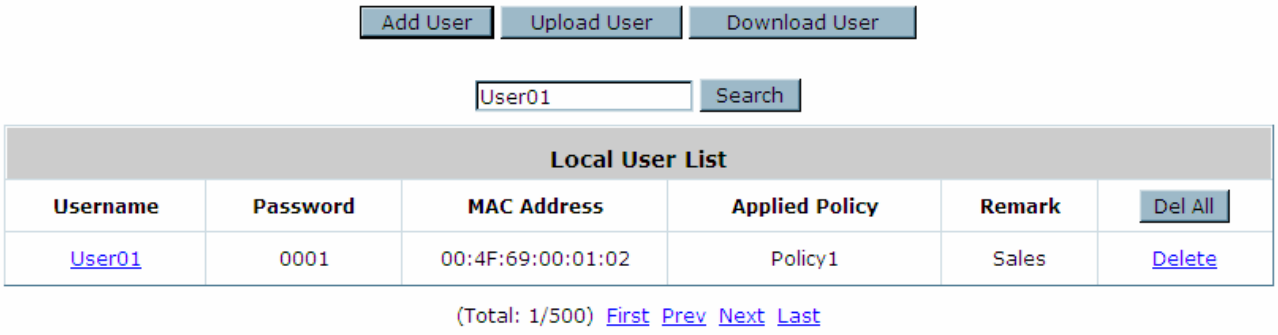


- **Add User:** Click this button to enter into the **Adding User(s) to the List** interface. Fill in the necessary information such as "**Username**", "**Password**", "**MAC Address**", and "**Remark**". Select a desired **Policy** to classify local users. Click **Apply** to complete adding the user(s). MAC address of a networking device can be bound with a local user as well. It means this user must login to system with a networking device (PC) that has the corresponding MAC address, so this user can not login with other networking devices.

Adding User(s) to the List					
No.	Username*	Password*	MAC Address (XX:XX:XX:XX:XX:XX)	Policy	Remark
1				None	
2				None	
3				None	
4				None	
5				None	
6				None	
7				None	
8				None	
9				None	
10				None	

(Total: 0/500)

- **Search:** Enter a keyword of a username or remark to be searched in the text filed and click this button to perform the search. All usernames matching the keyword will be listed.



- **Del All:** Click on this button to delete all the users at once or click on Delete hyperlink to delete a specific the user individually.
- **Edit User:** If editing the content of individual user account is needed, click the username of the desired user account in **Local User List** to enter the **User Profile** Interface for that particular user, and then modify or add any desired information such as **Username, Password**, **MAC Address** (optional), **Applied Policy** (optional) and **Remark** (optional). Click **Apply** to complete the modification.

Editing Existing User Data	
Username	user01 *
Password	user01 *
MAC Address	
Applied Policy	Policy 1
Remark	

5.1.2 RADIUS

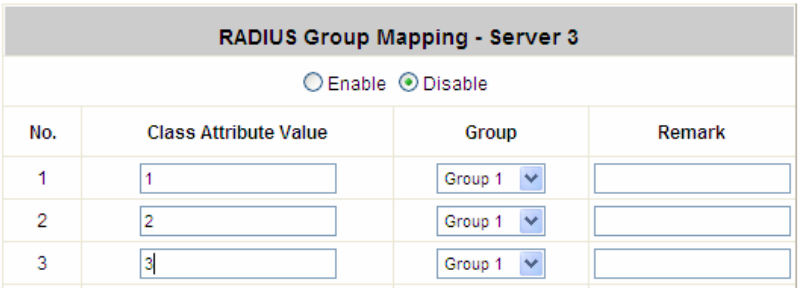
There are two RADIUS authentication database for configuration. Click the button **Configure** of any one of **RADIUS** servers for further configuration. The RADIUS server sets the external authentication for user accounts. Enter the information for the primary server and/or the secondary server (the secondary server is not mandatory). The fields with red asterisk are necessary information. These settings will become effective immediately after clicking the **Apply** button.

External RADIUS Server Related Settings	
802.1X Authentication	○ Enable ◉ Disable
Username Format	○ Complete (e.g. user1@companyname.com) ◉ Only ID (e.g. user1)
NAS Identifier	
NAS Port Type	19 *(Default 19, Range: 0~35)
Class-Group Mapping	Edit Class-Group Mapping
Primary RADIUS Server	
Server	*(Domain Name/IP Address)
Authentication Port	*(Default: 1812)
Accounting Port	*(Default: 1813)
Secret Key	*
Accounting Service	◉ Enable ○ Disable
Authentication Protocol	PAP
Secondary RADIUS Server	
Server	(Domain Name/IP Address)
Authentication Port	
Accounting Port	
Secret Key	
Accounting Service	◉ Enable ○ Disable
Authentication Protocol	CHAP

- **External RADIUS Related Settings**
  - **802.1X Authentication:** Enable /Disable 802.1X authentications for users authenticating through this Server.
  - **Username Format:** Select the format which the user login information is sent to the external RADIUS Server. You may choose to send username in Complete (userID + Postfix), Only ID or Leave Unmodified. Please note that if Leave Unmodified option is selected, the system will send the username to

Default Auth Server set in 802.1X configuration page for authentication.

- **NAS Identifier:** This attribute is the string identifying the NAS originating the access request. System will send this value to the external RADIUS server, if the external RADIUS server needs this.
- **NAS Port Type:** Indicates the type of physical port the network access server is using to authenticate the user. System will send this value to the external RADIUS server, if the external RADIUS server needs this.
- **Class-Group Mapping:** This function is to assign a Group to a RADIUS class attribute sent from the RADIUS server. When the clients classified by RADIUS class attributes logs into the system via the RADIUS server, each client will be mapped to an assigned Group.



➢ **Primary / Secondary RADIUS Server**

- **Server:** Enter the domain name or IP address of your RADIUS Server.
- **Authentication Port:** Enter the Port number used for authentication.
- **Accounting Port:** Enter the Port number used for accounting.
- **Secret Key:** Secret Key used for authentication.
- **Accounting Service:** Enable / Disable RADIUS accounting.
- **Authentication Protocol:** Select Challenge-Handshake Authentication Protocol (CHAP) or Password Authentication Protocol (PAP).

5.1.3 On-Demand Users

On-demand User Server Configuration: The administrator can configure this authentication method to create on-demand user accounts. This function is designed for hotspot owners to provide temporary users with free or paid wireless Internet access in the hotspot environment. Major functions include accounts creation, users monitoring list, billing plan and external payment gateway support.

Authentication Server - On-demand User		
General Settings	WLAN ESSID	W1110-2
	Wireless Key	
	Currency	None / $ USD / £ GBP / € EUR; (Input other desired currency, e.g. AU)
	Remaining Reminder	time: Enable / Disable; Volume: Enable / Disable
	Sync Interval	10min(s) / 15min(s) / 20min(s)
Ticket Customization		Configure
Billing Plans		Configure
External Payment Gateway		Configure
Terminal Server		Configure
On-demand Account Creation		Create
On-demand Account Batch Creation		Create
On-demand Account List		View

1) **General Settings**

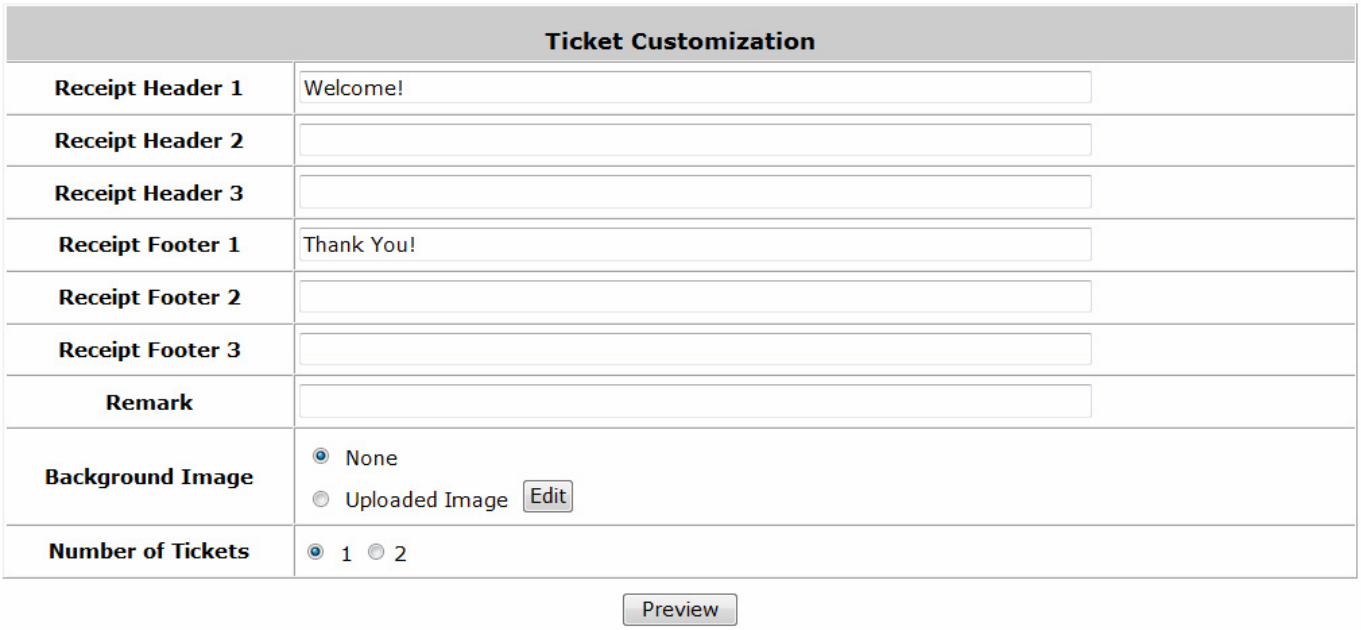
This is the common setting for the On-demand User authentication option.

- **WLAN ESSID:** It will show the ESSID of Public Zone.
- **Wireless Key:** It will show the wireless key that was configured in Public Zone settings.
- **Currency:** Select the desired currency unit for charged internet access.
- **Remaining Reminder:** Enable it and input the count-down minute, system will remind users that their quota will run out soon when their quota reaches this time. The remaining message will not show up if the Remaining Reminder time is configured longer than the quota of billing plans.
- **Sync Interval:** Select the desired interval for on-demand user quota update. The quota information, i.e. remaining time or remaining quota displayed on the on-demand user login success page will be refreshed according to the time interval

configured here.

2) Ticket Customization

On-demand account ticket can be customized here and previewed on the screen.



- **Receipt Header:** There are 3 receipt headers supported by the system. The entered content will be printed on the receipt. These headers are optional.
- **Receipt Footer:** There are 3 receipt footers supported by the system. The entered content will be printed on the receipt. These footers are optional.
- **Remark:** Enter any additional information that will appear at the bottom of the receipt.
- **Background Image:** You can choose to customize the ticket by uploading your own background image for the ticket, or choose none. Click **Edit** to select the image file and then click **Upload**. The background image file size limit is 100 Kbytes. No limit for the dimensions of the image is set, but a 460x480 image is recommended.
- **Number of Tickets:** Enable this function to print duplicate receipts. Another Remark field will appear when the Number of Ticket is selected to 2 and the content will appear at the bottom of the 2nd duplicate receipt.
- **Preview:** Click **Preview** button, the ticket will be shown including the information of username and password with the selected background. You can also print the ticket here.

3) Billing Plans

Administrators can configure several billing plans. Click **Edit** button to enter the page of **Editing Billing Plan**. Configure billing plans with desired account type, expiration date,

price, etc. Click **Apply** to save the plan. Go back to the screen of **Billing Plans**, check the **Enable** checkbox or click **Select all** button, and then click **Apply**, the plan(s) will be activated.

Billing Plans

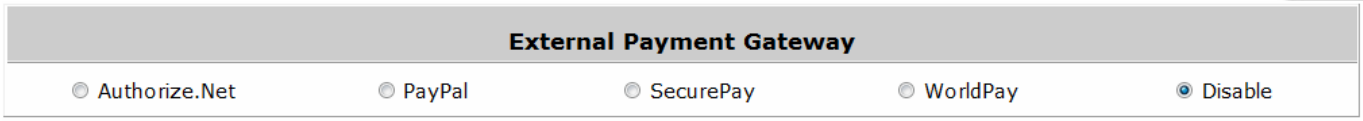
Plan	Account Type	Quota	Price	Enable	Function
1	Usage-time	15 min(s) connection time quota with expiration	10.91	☑	Edit
2	Usage-time	11 min(s) connection time quota	1	☑	Edit
3	Hotel Cut-off-time	Valid until 12:00 the following day	5	☑	Edit
4	Duration-time	Valid from 2010/07/14 12:00:00 till 2010/07/14 23:59:00	1	☑	Edit
5	N/A			☐	Edit
6	N/A			☐	Edit
7	N/A			☐	Edit
8	N/A			☐	Edit
9	N/A			☐	Edit
0	N/A			☐	Edit

- **Plan:** The number of the specific plan.
- **Type:** This is the type of the plan, based on which it defines how the account can be used including Usage-time, Volume, Hotel Cut-off and Duration-time.
- **Quota:** The limit on how On-demand users are allowed to access the network.
- **Price:** The unit price charged for buying an account from this billing plan.
- **Enable:** Check the checkbox to activate the plan.
- **Function:** Click the button **Edit** to add one billing plan. For detailed information regarding on-demand accounts and billing plan configuration, please refer to **Appendix E, On-demand Account types & Billing Plan**.

4) External Payment Gateway

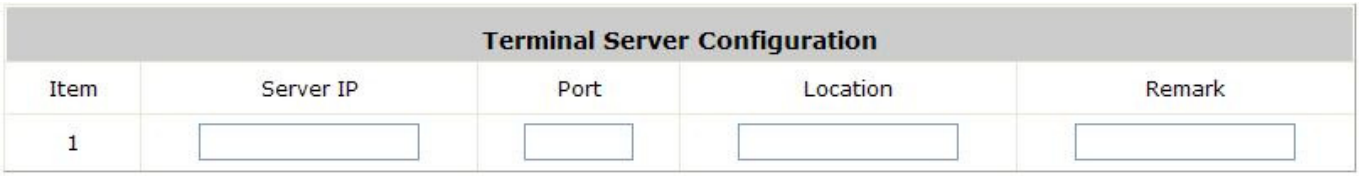
This section is for merchants to set up an external payment gateway to accept payments in order to provide wireless access service to end customers who wish to pay for the service on-line.

The options are **Authorize.Net**, **PayPal**, **SecurePay**, **WorldPay** or **Disable**. For detailed parameter descriptions please refer to **Appendix F, External Payment Gateways.**



5) **Terminal Server**

Terminal Server Configuration is a list of serial-to-Ethernet devices that communicate with the system only; never get online and no need to go through authentication process. Enter the device IP into server IP field.



6) **On-demand Account Creation**

After at least one billing plan is enabled, the administrator can generate single on-demand user accounts here. Click this to enter the **On-demand Account Creation** page. Click on the **Create** button of the desired plan to create an on-demand account. The username and password of to be created on-demand account is configurable. Select **Manual created** in Username/Password Creation and then administrator can enter desired username and password for the on-demand account. In addition, an External ID such as student's school ID can be entered together with account creation. After the account is created, you can click **Printout** to print a receipt which will contain the on-demand user's information, including the username and password to a network printer. Moreover, you can click **Send to POS** to print a receipt by a POS device.

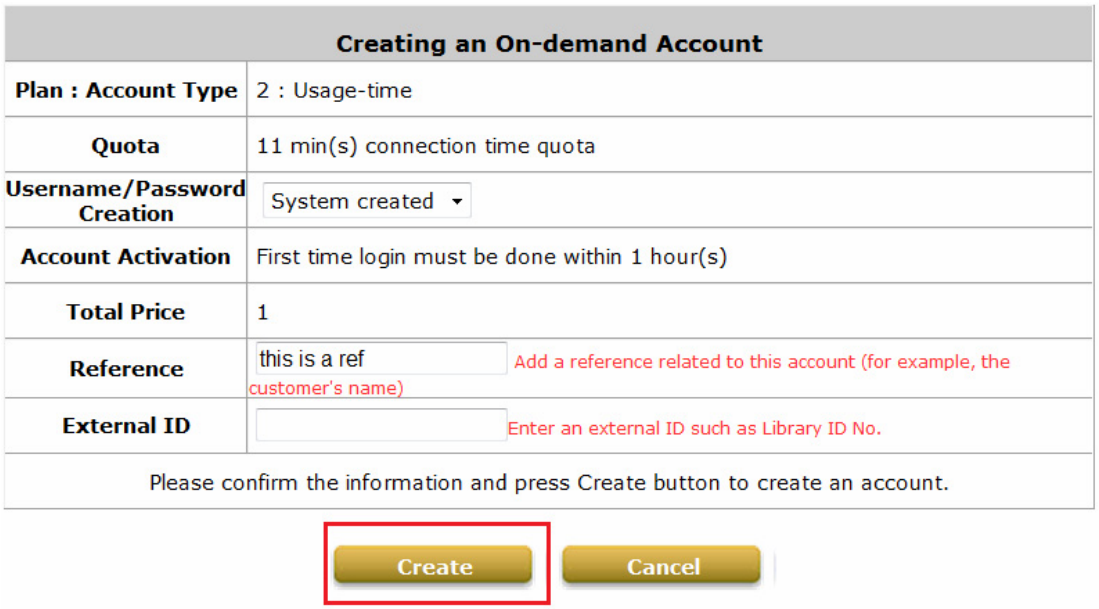
Note:

If no Billing plan is enabled, accounts cannot be created by clicking **Create** button. Please goes back to Billing Plans to activate at least one Billing plan by clicking **Edit** button and **Apply** the setting to activate the plan. The printer used by **Print** is a pre-configured printer connected to the administrator's computer.

On-demand Account Creation					
Plan	**Account Type**	**Quota**	**Price**	**Status**	**Function**
1	Usage-time	15 min(s) connection time quota with expiration	10.91	Enabled	Create
2	Usage-time	11 min(s) connection time quota	1	Enabled	Create
3	Hotel Cut-off-time	Valid until 12:00 the following day	5	Enabled	Create
4	Duration-time	Valid from 2010/07/14 12:00:00 till 2010/07/14 23:59:00	1	Enabled	Create
5	N/A	N/A	N/A	Disabled	Create
6	N/A	N/A	N/A	Disabled	Create
7	N/A	N/A	N/A	Disabled	Create
8	N/A	N/A	N/A	Disabled	Create
9	N/A	N/A	N/A	Disabled	Create
0	N/A	N/A	N/A	Disabled	Create

- **Plan:** The number of a specific plan.
- **Account Type:** Show account type of the plan in Usage-time. Duration-time or Hotel Cut-off.
- **Quota:** The total time amount or period on how On-demand users are allowed to access the network. For Time users, it is the total time. For Volume users, it is the total amount of traffic.
- **Price:** For each plan, this is the unit price charged for an account.
- **Status:** Show the status in enabled or disabled.
- **Function:** Press **Create** button for the desired plan and **Creating an On-demand Account** page will appear for creation.

On-demand Account Creation					
Plan	**Account Type**	**Quota**	**Price**	**Status**	**Function**
1	Usage-time	15 min(s) connection time quota with expiration	10.91	Enabled	Create
2	Usage-time	11 min(s) connection time quota	1	Enabled	Create
3	Hotel Cut-off-time	Valid until 12:00 the following day	5	Enabled	Create
4	Duration-time	Valid from 2010/07/14 12:00:00 till 2010/07/14 23:59:00	1	Enabled	Create



7) **On-demand Account Batch Creation**

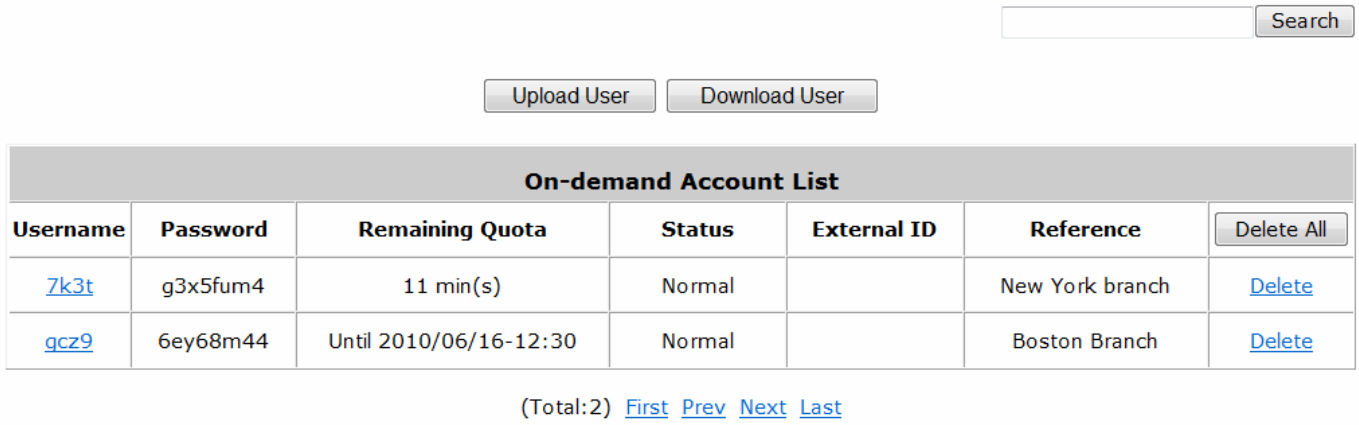
After at least one billing plan is enabled, the administrator can generate multiple on-demand user accounts at once with batch creation. Click **Create** button to enter the On-demand Account Batch Creation. Enter the desired number of accounts of enabled plans to create a batch of on-demand accounts together. The Number of Accounts field of disabled plans will not be able to enter any number. The sum of all Number of Accounts will be constrained and will not accept a number over the available account limits in database. Click **Create** button to start batch creation. Next page will show Success or Failed message to indicate the batch creation status. Once creation is successful, all created accounts can be exported to a text file for extended usage. Moreover, you can click **Send to POS** to print a receipt to a POS device via Serial or Ethernet network. Please notice that it takes time if you create lots of on-demand accounts by batch creation.

On-demand Account Batch Creation				
Plan	**Account Type**	**Quota**	**Price**	**Number of Accounts**
1	Usage-time	15 min(s) connection time quota with expiration	10.91	
2	Usage-time	11 min(s) connection time quota	1	
3	Hotel Cut-off	Valid until 12:00 the following day	5	
4	Duration-time	Valid from 2010/07/14 12:00:00 till 2010/07/14 23:59:00	1	
5	N/A			
6	N/A			
7	N/A			
8	N/A			
9	N/A			
0	N/A			

- **Plan:** The number of a specific plan.
- **Account Type:** Show account type of the plan in Usage-time, Duration-time or Hotel Cut-off.
- **Quota:** The total time amount, interval or traffic volume on how On-demand users are allowed to access the network.
- **Price:** For each plan, this is the unit price charged for an account.
- **Number of Accounts:** The desired number of accounts to be created from the plan.

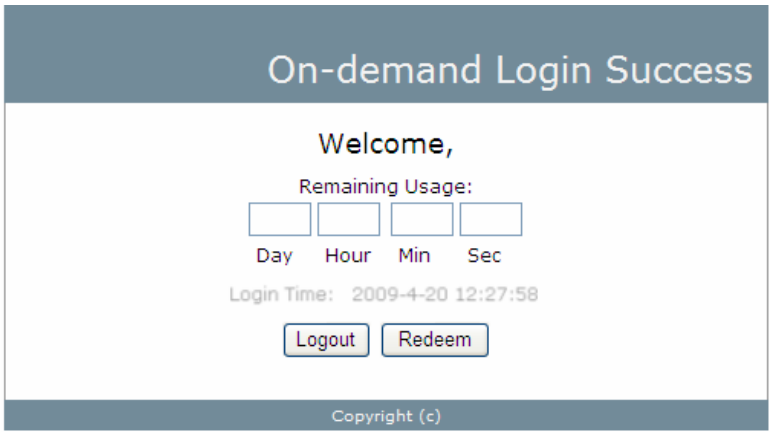
8) On-demand Account List

All created On-demand accounts are listed and related information on is also provided.



- **Search:** Enter a keyword of a username, External ID, or reference, to be searched in the text filed and click this button to perform the search. All usernames, External ID, or reference, matching the keyword will be listed.
- **Username:** The login name of the account.
- **Password:** The login password of the account.
- **Remaining Quota:** The remaining time or volume, or the cut-off time that the account can continue to use to access the network.
- **Status:** The status of the account.
  - **Normal:** the account is not currently in use and has not exceeded the quota limit.
  - **Online:** the account is currently in use.
  - **Expired:** the account is not valid any more, even if there is remaining quota left.
  - **Out of Quota:** the account has exceeded the quota limit.
  - **Redeemed:** the account has been applied for account renewal.
- **External ID:** This is an additional information field for combined with a unique account only, for example the customer's name or social security number etc.
- **Reference:** Any other additional information, for example venue where the account is generated etc.
- **Delete All:** This will delete all the users at once.
- **Delete:** This will delete the users individually.

9) Redeem On-demand Accounts



For Usage-time accounts, when the remaining quota is insufficient or if they are almost out of quota, they can use redeem function to extend their quota. After the user has got, or bought a new account, they just need to click the **Redeem** button in the login success page to enter Redeem Page, input the new account **Username** and **Password** and then click **Submit**. This new account's quota will be extended to the original account. However, Redeem function can only be used to with same billing type accounts only, i.e. Volume accounts can only be redeemed with another Volume account and so on.

Note:

The maximum quota is 365dys 23hrs 59mins 59secs" even after redeem. If the redeem amount exceeds this number, the system will automatically reject the redeem process.

Note:

Duration-time and Hotel Cut-off type do not support redeem function.

5.2 User Login

5.2.1 Default Authentication

There are different types of authentication database (LOCAL, RADIUS and ONDEMAND) that are supported by the system. Only Public Zone can set authentication.
A postfix is used to inform the system which authentication option to be used for authenticating an account (e.g. Bob@local or Tim@radius1 etc.) when multiple options are concurrently in use. One of the authentication options can be assigned as default. For authentication assigned as default, the postfix can be omitted. For example, if "local" is the postfix of the default option, then user with username Bob can login as "Bob" without having to type in "Bob@local".

Authentication Settings					
Authentication Required For the Zone	Enable Disable				
Authentication Options	Auth Server	Auth Database	Postfix	Default	Enabled
	Server 1	LOCAL	local	◉	☑
	Server 2	RADIUS	radius1	○	☑
	Server 3	RADIUS	radius2	○	☑
	On-demand User	ONDEMAND	ondemand	○	☑

5.2.2 Login with Postfix

For each authentication option, set a postfix that is easy to distinguish (e.g. Local) user login with which authentication server. The acceptable characters are numbers (0~9), alphabets (a~z or A~Z), dash (-), underline (_) and dot (.) within a maximum of 40 characters. All other characters are not allowed.

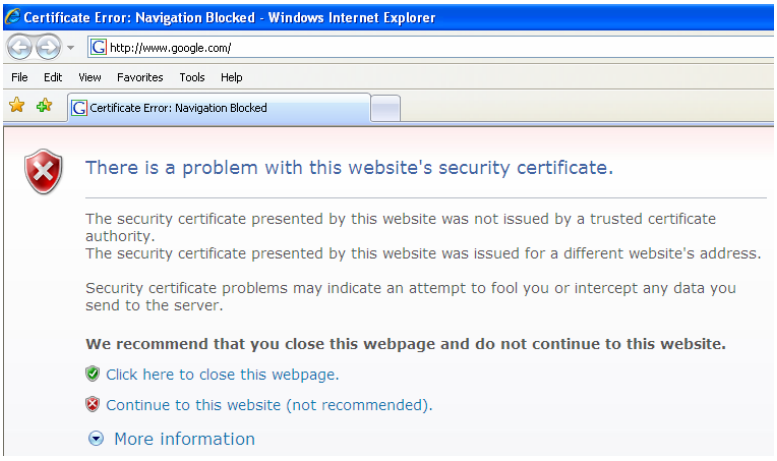
Beside the Default Authentication, all other authentication server users logging into to system, the username must contain the postfix to identify the authentication option this user belongs to.

Authentication Settings					
Auth Database	Auth Server Name	Postfix	Policy	Black List	Configure
LOCAL	Server 1	local	Policy 1	None	Configure
RADIUS	Server 2	radius1	Policy 2	None	Configure
RADIUS	Server 3	radius2	Policy 3	None	Configure
ONDEMAND	On-demand User	ondemand	Policy 4	None	Configure

5.2.3 An Example of User Login

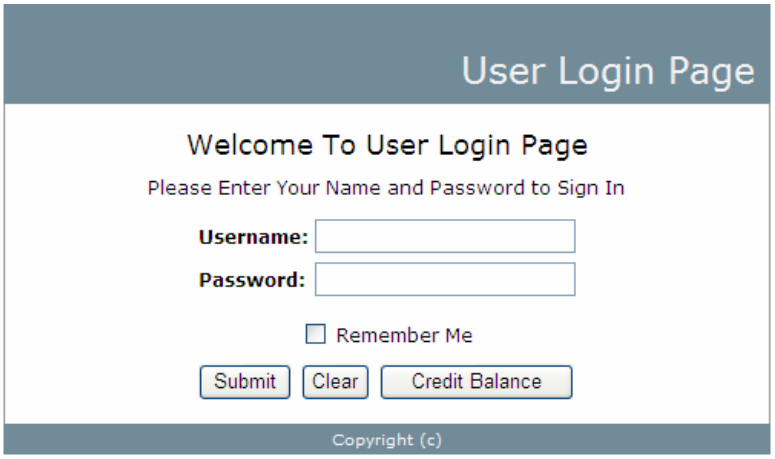
Normally, users will be authenticated before they get network access through WIAS-3200N. This section presents the basic authentication flow for end users. Please make sure that the WIAS-3200N is configured properly and network related settings are done.

1. Open an Internet browser and try to connect to any website (in this example, we try to connect to www.google.com).
   a) For the first time, if the WIAS-3200N is not using a trusted SSL certificate, there will be a “Certificate Error”, because the browser treats WIAS-3200N as an illegal website.

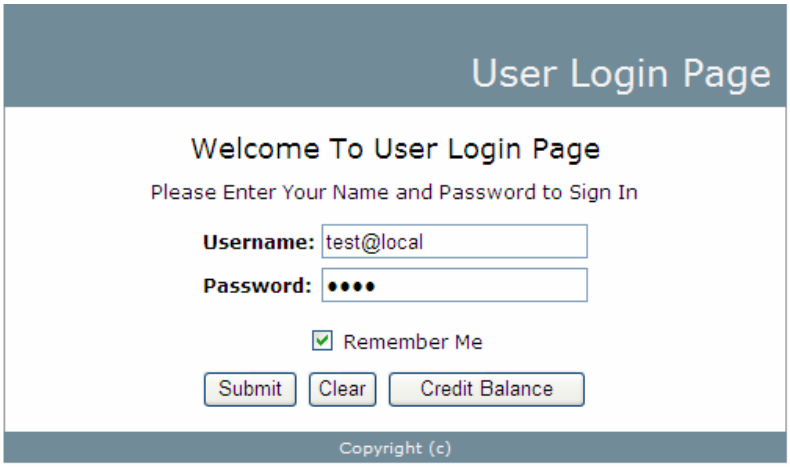


b) Please press “Continue to this website” to continue.

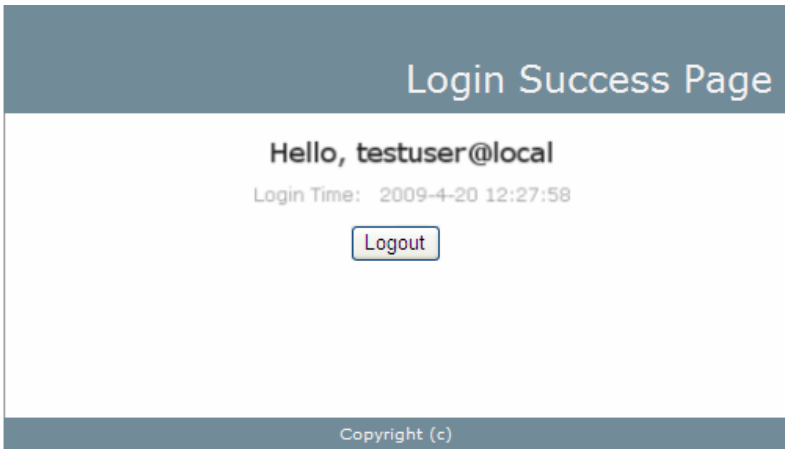
c) The default user login page will appear in the browser.



2. Enter the username and password (for example, we use a local user account: **test@local** here) and then click **Submit** button. If the **Remember Me** check box is checked, the browser will store the username and password on the current computer in order to automatically login to the system at the next login. Then, click the **Submit** button.
   The **Credit Balance** button on the **User Login Page** is for on-demand users only, where they can check their Remaining quota.



3. Successful! The **Login Success Page** means you are connected to the network and Internet now!

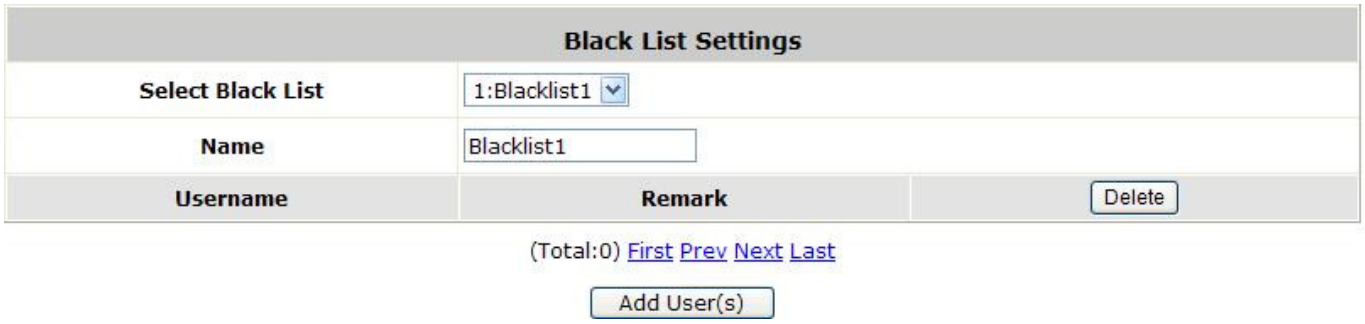


6 Restrain the Users

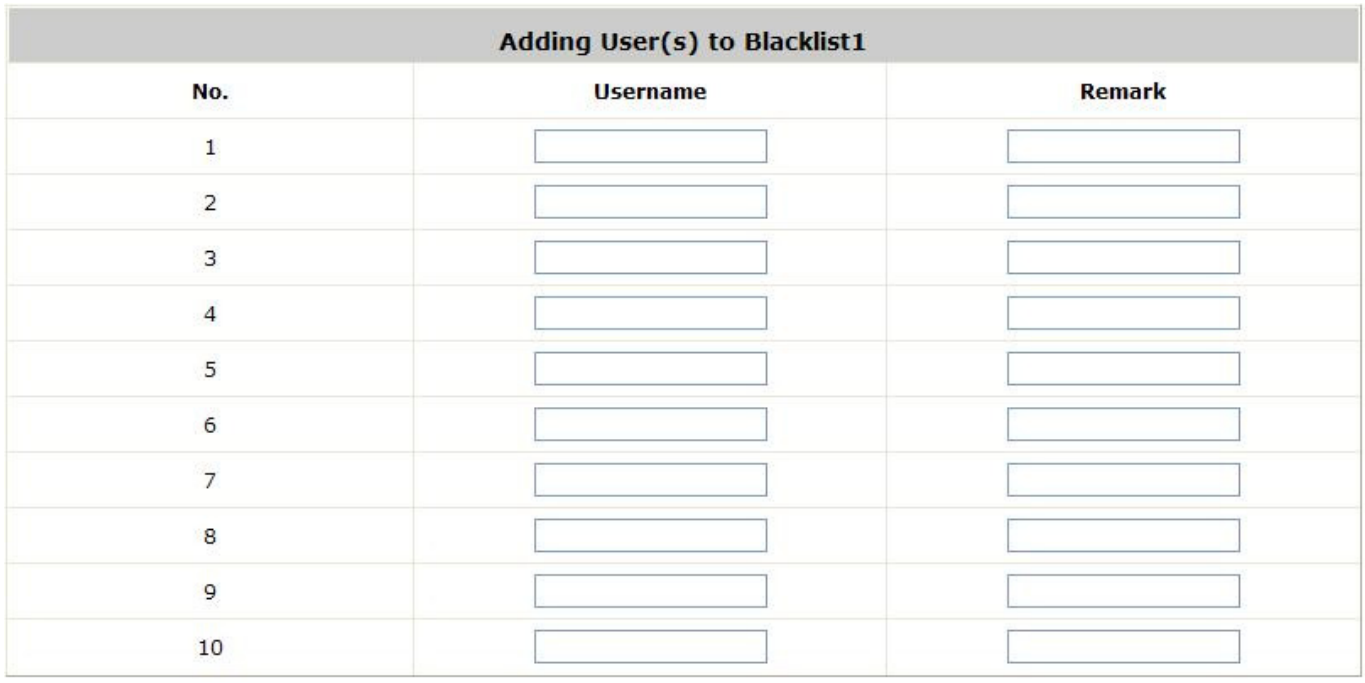
6.1 Black List

Configure Black List, go to: **Main Menu >> Users >> Black List**.

The administrator can add, delete, or edit the black list for user access control. Users' accounts that appear in the black list will be denied of network access. The administrator can use the pull-down menu to select the desired black list.

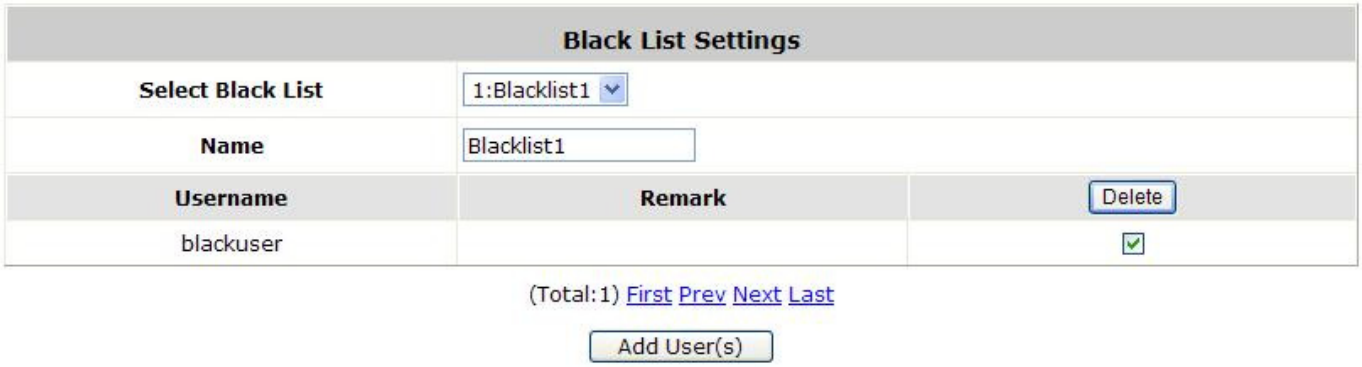


- **Select Black List:** There are 5 black list profiles available for utilization.
- **Name:** Set the black list name and it will show on the pull-down menu above.
- **Add User(s):** Click the Add User(s) button to add users to the selected black list.

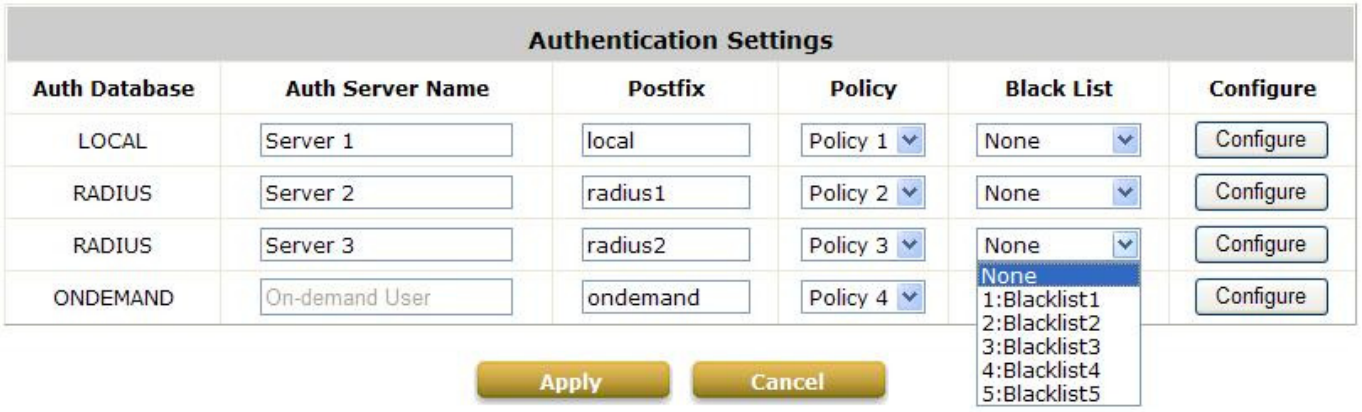


After entering the usernames in the **"Username"** field and the related information in the **"Remark"** blank (not required), click **Apply** to add the users.

If removing a user from the black list is desired, select the user's **"Delete"** check box and then click the **Delete** button to remove that user from the black list.

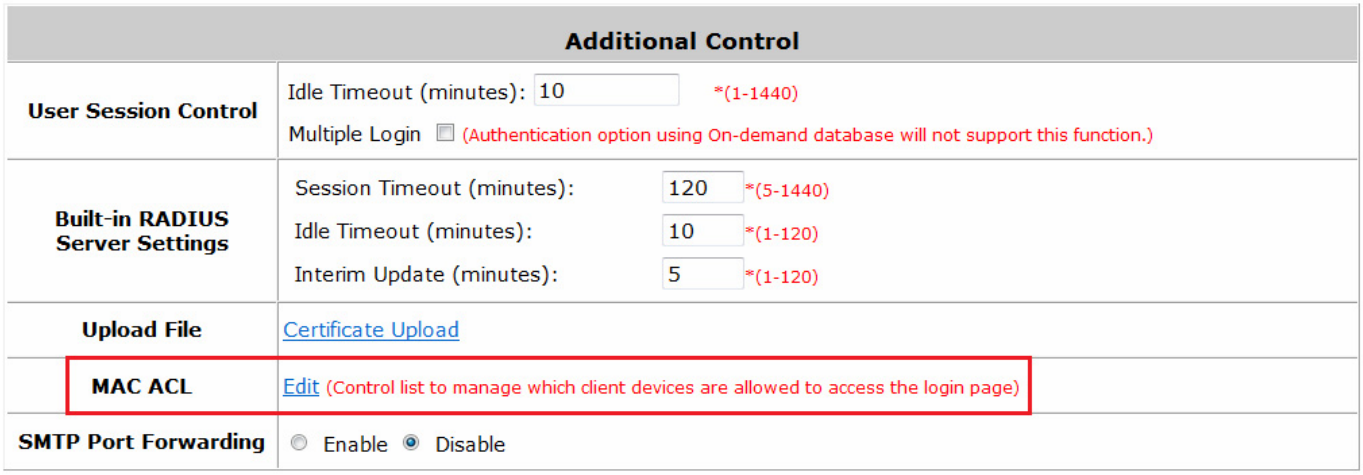


After the Black List editing is completed. You can select the Black List in each Authentication Server to let it to become effective.

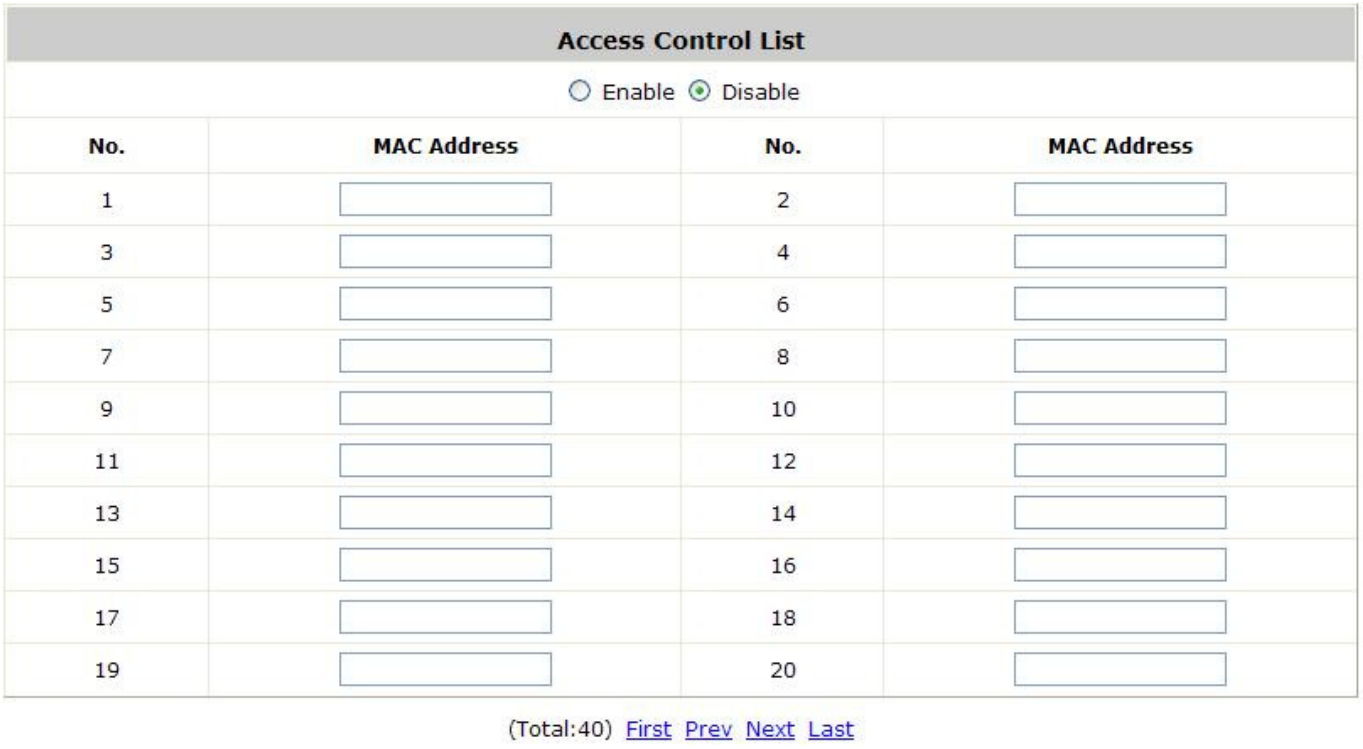


6.2 MAC Address Control

Configure MAC Address Control, go to: **Users >> Additional Control**.



MAC ACL: With this function, only the users with their MAC addresses in this list can login to WIAS-3200N. There are 40 users maximum allowed in this MAC address list. User authentication is still required for these users. Click **Edit** to enter the **MAC Address Control** list. Fill in these MAC addresses, select **Enable**, and then click **Apply**.



Caution:

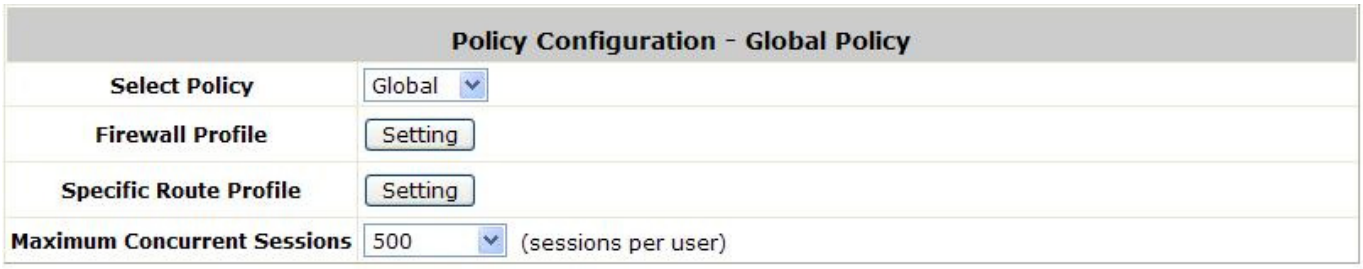
The format of the MAC address is: xx:xx:xx:xx:xx:xx or xx-xx-xx-xx-xx-xx.

6.3 Policy

Configure Policy, go to: **Users >> Policy**.

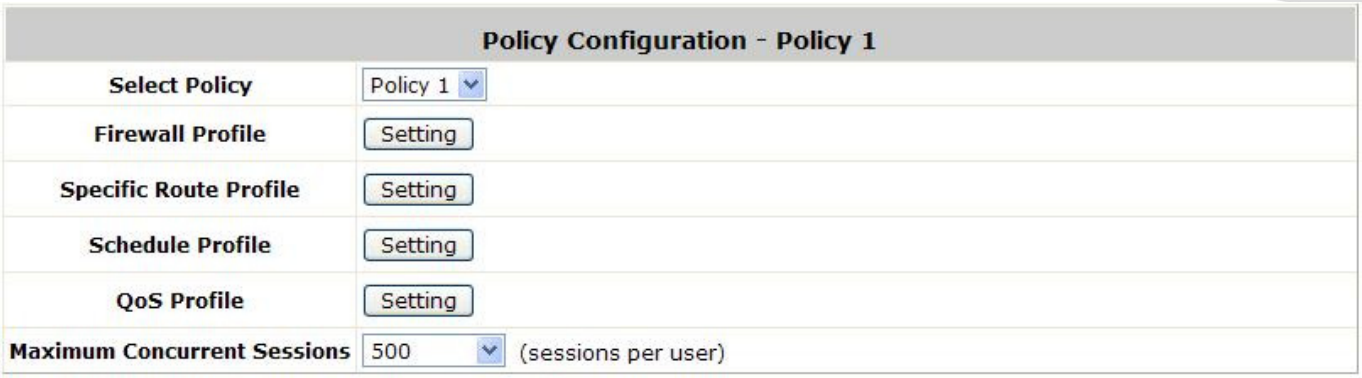
WIAS-3200N supports multiple Policies, including one **Global Policy** and 5 individual **Policy**.
Global Policy is the system's universal policy and applied to all clients unless they are bounded by another policy. Individual Policy can be defined and applied to different authentication server. The client login with this authentication server will be bound by the corresponding Policy, if for a authentication server no policy is applied, its users will be governed by the Global Policy.
When the type of authentication database is **RADIUS**, the **Class-Policy Mapping** function will be available to allow the administrator to assign a Policy for a RADIUS class attribute; therefore, a Policy will be mapped to a user of a RADIUS class attribute.

Global Policy
Global policy is the system's universal policy containing **Firewall Rules**, **Specific Routes Profile** and **Maximum Concurrent Sessions** which will be applied to all users unless the user has been regulated and applied with another individual Policy.



- **Select Policy:** Select the desired policy profile to configure.
- **Firewall Profile:** Global policy and policy 1 ~ 5 all have a firewall service list and a set of firewall profile which is composed of firewall rules.
- **Specific Route Profile:** When Specific Routes are configured here, all clients applied with this policy will access the specific destination through these gateway settings.
- **Maximum Concurrent Sessions:** Set the maximum concurrent sessions for each client belonging to this group.

Policy 1 ~ Policy 5
Beside **Global Policy**, **Policy1** to **Policy5**, each consists of access control profiles that can be configured respectively and applied to a certain authentication server or user.



Policy Configuration - Policy 1	
Select Policy	Policy 1
Firewall Profile	Setting
Specific Route Profile	Setting
Schedule Profile	Setting
QoS Profile	Setting
Maximum Concurrent Sessions	500 (sessions per user)

- **Select Policy:** Select the desired policy profile to configure.
- **Firewall Profile:** Each Policy has a firewall service list and a set of firewall profile consisting of firewall rules.
- **Specific Route Profile:** The default gateway of a desired IP address can be defined in a policy. When Specific Routes are configured here, all clients applied with this policy will access the specific destination through these gateway settings.
- **Schedule Profile:** The Schedule table in a 7X24 format is used to control the clients' login time. When Schedule is enabled, clients applied with this policy are only allowed to login the system at the time which is checked in Schedule profile settings.
- **QoS Profile:** QoS profile defines the traffic class for the users governed by this Policy.
- **Maximum Concurrent Sessions:** Set the maximum concurrent sessions for each client belonging to this group.

6.3.1 Firewall

Firewall Profile: Click **Setting** for **Firewall Profile**. The Firewall Configuration will appear. Click **Predefined and Custom Service Protocols** to edit the protocol list. Click **Firewall Rules** to edit the rules.

Policy 1 - Firewall Configuration
Predefined and Custom Service Protocols
Firewall Rules

1) Predefined Protocols

Predefined and Custom Service Protocols: There are predefined service protocols available for firewall rules editing.

Policy 1 - Service Protocols List			
No.	Name	Description	Select All
1	ALL	ALL	☐
2	ALL TCP	TCP; Source Port: 0~65535, Destination Port: 0~65535	☐
3	ALL UDP	UDP; Source Port: 0~65535, Destination Port: 0~65535	☐
4	ALL ICMP	ICMP; Type: Any, Code: Any	☐
5	FTP	TCP/UDP; Destination Port: 20;21	☐
6	HTTP	TCP/UDP; Destination Port: 80	☐
7	HTTPS	TCP/UDP; Destination Port: 443	☐
8	POP3	TCP; Destination Port: 110	☐
9	SMTP	TCP; Destination Port: 25	☐
10	DHCP	UDP; Destination Port: 67;68	☐

Add Delete

(Total: 27) First Prev Next Last

The administrator is able to add new custom service protocols by clicking **Add**, and delete the added protocols individually or with **Select All** followed by **Delete** operation.

Caution:

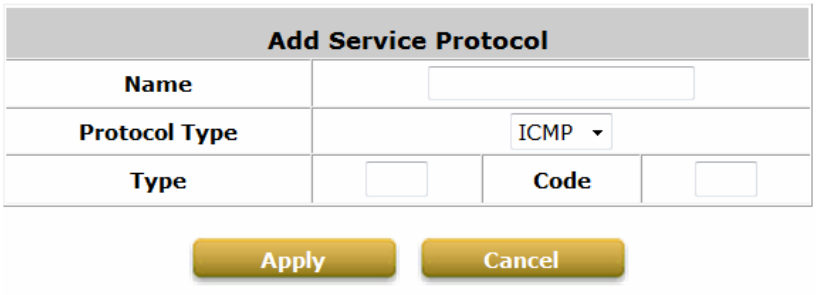
The Predefined Service Protocols can not be deleted.

Click **Add** to add a custom service protocol. The **Protocol Type** can be defined from a list of service by protocols (TCP/UDP/ICMP/IP); and then define the **Source Port** (range) and **Destination Port** (range); click **Apply** to save this protocol.

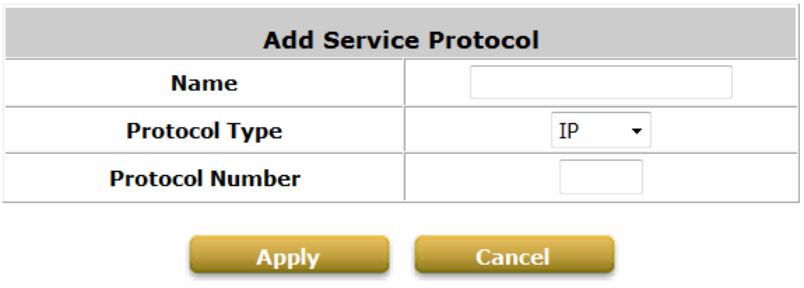
Add Service Protocol	
Name	
Protocol Type	TCP
Source Port	1 ~ 65535
Destination Port	1 ~ 65535

Apply Cancel

If the **Protocol Type** is **ICMP**, it will need to define **Type** and **Code**.



If the **Protocol Type** is **IP**, it will need to define **Protocol Number**.



2) Firewall Rules

After the custom protocol is defined or just use the **Predefined Service Protocols**, you will need to enable the **Firewall Rule** to apply these protocols.

- **Firewall Rules:** Click the number of filter **Rule No.** to edit individual rules and click **Apply** to save the settings. The rule status will show on the list. Check **"Active"** checkbox and click **Apply** to enable that rule.
  Rule No.1 has the highest priority; Rule No.2 has the second priority and so on.
  Each firewall rule is defined by Source, Destination and Pass/Block action.
  Optionally, a Firewall Rule Schedule can be set to specify when the firewall rule is enforced. It can be set to **Always**, **Recurring** or **One Time**.

Policy 1 - Firewall Rules						
No.	Active	Action	Rule Name	Source / Destination	Service	Schedule
1	☐	Block		ANY / ANY	ALL	Always
2	☐	Block		ANY / ANY	ALL	Always

Selecting the Filter Rule Number 1 as an example:

Policy 1 - Edit Filter Rule			
Rule Number	1		
Rule Name			
Source		Destination	
Interface/Zone	ALL	Interface/Zone	ALL
IP Address	0.0.0.0	IP Address	0.0.0.0
Subnet Mask	0.0.0.0 (/0)	Subnet Mask	0.0.0.0 (/0)
MAC Address			
Service Protocol	ALL		
Schedule	Always Recurring One Time		
Action for Matched Packets	Block Pass		

- **Rule Number:** This is the rule selected "1". Rule No. 1 has the highest priority; rule No. 2 has the second priority, and so on.
- **Rule Name:** The rule name can be changed here.
- **Source/Destination – Interface/Zone:** There are choices of **ALL, WAN**, **Public** and **Private** to be applied for the traffic interface.
- **Source/Destination – IP Address/Domain Name:** Enter the source and destination IP addresses. Domain Name filtering is supported but Domain Host filtering is not.
- **Source/Destination – Subnet Mask:** Select the source and destination subnet masks.
- **Source- MAC Address:** The MAC Address of the source IP address. This is for specific MAC address filter.
- **Service Protocol:** These are defined protocols in the **service protocols list** to be selected.
- **Schedule:** When schedule is selected, clients assigned with this policy are applied the firewall rule only within the time checked. There are three options, **Always**, **Recurring** and **One Time. Recurring** is set with the hours within a week.
- **Action for Matched Packets:** There are two options, **Block** and **Pass**. **Block** is to prevent packets from passing and **Pass** is to permit packets passing.

6.3.2 Routing

Specific Route Profile: Click the button of **Setting** for **Specific Route Profile**, the Specific Route Profile list will appear.

1) Specific Route

- **Specific Route Profile:** The Specific Default Route is use to control clients to access some specific IP segment by the specified gateway.

Global Policy - Specific Routes			
Route No.	Destination		Gateway
	IP Address	Subnet Netmask	IP Address
1		255.255.255.255 (/32)	
2		255.255.255.255 (/32)	
3		255.255.255.255 (/32)	
4		255.255.255.255 (/32)	

Policy 1 - Specific Default Route			
Enable ☐ IP Address:			
Policy 1 - Specific Routes			
Route No.	Destination		Gateway
	IP Address	Subnet Netmask	IP Address
1		255.255.255.255 (/32)	
2		255.255.255.255 (/32)	
3		255.255.255.255 (/32)	
4		255.255.255.255 (/32)	

- **Destination / IP Address:** The destination network address or IP address of the destination host. Please note that, if applicable, the system will calculate and display the appropriate value based on the combination of Network/IP Address and Subnet Mask that have just been entered and applied.
- **Destination / Subnet Netmask:** The subnet mask of the destination network. Select 255.255.255.255(/32) if the destination is a single host.
- **Gateway / IP Address:** The IP address of the gateway or next router to the destination.

2) Default Gateway

- **Default Gateway:** The default gateway of a desired IP address can be defined in each Policy except **Global Policy**. When Specific Default Route is enabled, all clients applied with this Policy will access the Internet through this default gateway.

Policy 1 - Specific Default Route	
Enable ☐	IP Address:

- **Enable:** Check **Enable** box to activate this function or uncheck to inactivate it.
- **Default Gateway IP Address**: You may need to fill the IP address of the default gateway.

6.3.3 Schedule

Schedule Profile: Click **Setting** of Schedule Profile to enter the configuration page. Select **Enable** to show the **Permitted Login Hours** list. This function is used to limit the time when clients can log in. Check the desired time slots checkbox and click **Apply** to save the settings. These settings will become effective immediately after clicking **Apply**.

◉ Enable ○ Disable

Policy 1 - Permitted Login Hours							
HOUR	SUN	MON	TUE	WED	THU	FRI	SAT
00:00~00:59	☑	☑	☑	☑	☑	☑	☑
01:00~01:59	☑	☑	☑	☑	☑	☑	☑
02:00~02:59	☑	☑	☑	☑	☑	☑	☑
03:00~03:59	☑	☑	☑	☑	☑	☑	☑
04:00~04:59	☑	☑	☑	☑	☑	☑	☑

6.3.4 QoS Profile

For certain applications or users that need stable bandwidth or traffic priority, Policy 1 to 5 allows defining the QoS profile for the users governed by this Policy.

Policy 1 - Traffic Configuration	
Traffic Class	Best Effort
Total Downlink	Unlimited
Individual Maximum Downlink	Unlimited
Individual Request Downlink	None
Total Uplink	Unlimited
Individual Maximum Uplink	Unlimited
Individual Request Uplink	None

- **Traffic Class:** A Traffic Class can be chosen for a Group of users. There are four traffic classes: **Voice, Video, Best-Effort and Background**. **Voice** and **Video** traffic will be placed in the high priority queue. When **Best-Effort** or **Background** is selected, more bandwidth management options such as Downlink and Uplink Bandwidth will appear.
- **Total Downlink:** Defines the maximum bandwidth allowed to be shared by clients.
- **Individual Maximum Downlink:** Defines the maximum downlink bandwidth allowed for an individual client. The Individual Maximum Downlink cannot exceed the value of Total Downlink.
- **Individual Request Downlink:** Defines the guaranteed minimum downlink bandwidth allowed for an individual client. The Individual Request Downlink cannot exceed the value of Total Downlink and Individual Maximum Downlink.
- **Total Uplink:** Defines the maximum uplink bandwidth allowed to be shared by clients.
- **Individual Maximum Uplink:** Defines the maximum uplink bandwidth allowed for an individual client. The Individual Maximum Uplink cannot exceed the value of Total Uplink.
- **Individual Request Uplink:** Defines the guaranteed minimum bandwidth allowed for an individual client. The Individual Request Uplink cannot exceed the value of Total Uplink and Individual Maximum Uplink.

6.3.5 Session Limit

To prevent ill-behaved clients or malicious software from taking up the system's connection resources, the administrator can restrict the number of concurrent sessions that a user can establish.

Policy Configuration - Policy 1	
Select Policy	Policy 1
Firewall Profile	Setting
Specific Route Profile	Setting
Schedule Profile	Setting
QoS Profile	Setting
Maximum Concurrent Sessions	500 (sessions per user)

- The maximum number of concurrent sessions including TCP and UDP for each user can be specified in the Global policy, which applies to authenticated users, users on a non-authenticated port, privileged users, and clients in DMZ zones. Also this can be specified in the other policies to apply to the authenticated users.

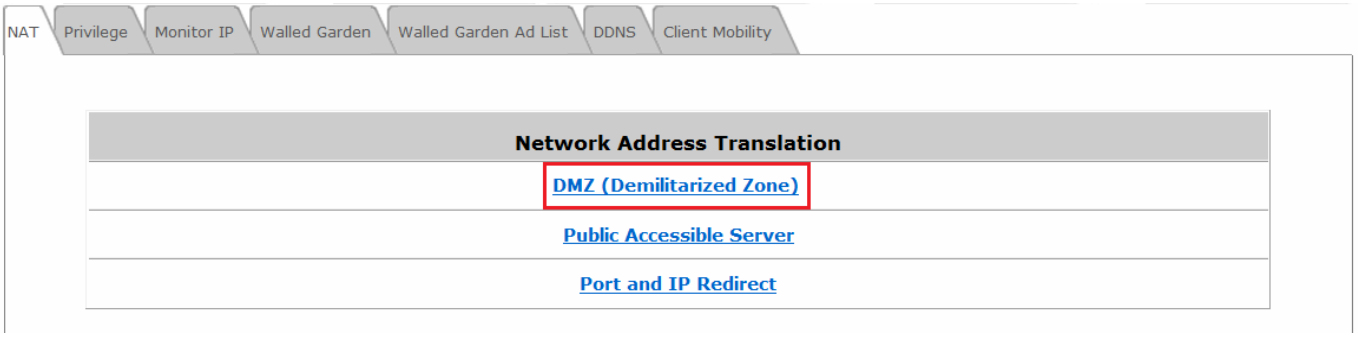
- When the number of a user's sessions reaches the session limit (a choice of Unlimited, 10, 25, 50, 100, 200, 350 and 500), the user will be implicitly suspended upon receipt of any new connection request. In this case, a record will be logged to a SYSLOG server.

Since this basic protection mechanism may not be able to protect the system from all malicious DoS attacks, it is strongly recommended to build some immune capabilities (such as IDS or IPS solutions) in network deployment to maintain network operation.

7 Access Network without Authentication

7.1 DMZ

Configure DMZ, go to: **Network >> Network Address Translation >> DMZ (Demilitarized Zone)**.



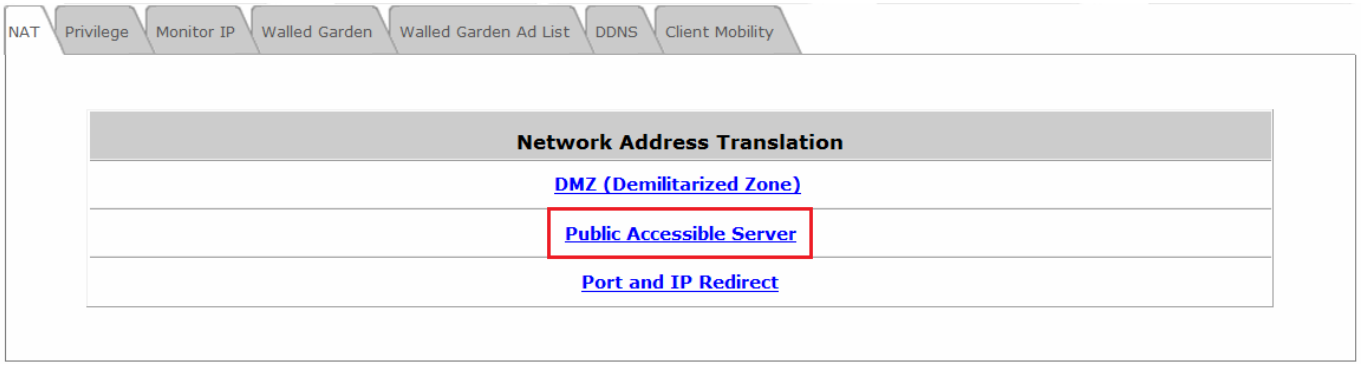
There are 20 sets of static Internal IP Address and External IP Address available. Enter **Internal** and **External** IP Address as a set. After the setup, accessing the External IP address listed in DMZ will be mapped to accessing the corresponding Internal IP Address. These settings will become effective immediately after clicking the **Apply** button. The External IP Address of the Automatic WAN IP Assignment is the IP address of External Interface (WAN) that will change dynamically if WAN Interface is Dynamic. When **Automatic WAN IP Assignments** is enabled, the entered Internal IP Address of Automatic WAN IP Assignment will be bound with WAN interface.

Automatic WAN IP Assignment		
Enable	External IP Address	Internal IP Address
☐	10.2.3.70	

DMZ (Demilitarized Zone)		
Item	External IP Address	Internal IP Address
1		
2		
3		
4		
5		

7.2 Virtual Server

Configure Virtual Server, go to: **Network >> Network Address Translation >> Public Accessible Server**.



This function allows the administrator to set 20 virtual servers at most, so that client devices outside the managed network can access these servers within the managed network. Different virtual servers can be configured for different sets of physical services, such as TCP and UDP services in general. Enter the **"External Service Port"**, **"Local Server IP Address"** and **"Local Server Port"**. Select **"TCP"** or **"UDP"** for the service's type. In the **Enable** column, check the desired server to enable. These settings will become effective immediately after clicking the **Apply** button.

Public Accessible Server

No.	External Service Port	Local Server IP Address	Local Server Port	Type	Enable
1				TCP UDP	
2				TCP UDP	
3				TCP UDP	
4				TCP UDP	
5				TCP UDP	
6				TCP UDP	
7				TCP UDP	
8				TCP UDP	
9				TCP UDP	
10				TCP UDP	

(Total:20) First Prev Next Last

7.3 Privilege List

Configure Privilege List, go to: **Network >> Privilege**

Setup the **Privilege IP Address List** and **Privilege MAC Address List**. The clients accessing the internet via IP addresses and/or networking devices in the list can access the network without any authentication.

Privilege List
IP Address List
MAC Address List

7.3.1 Privilege IP

Privilege IP Address List

Configure Privilege IP Address List, go to: **Network Configuration >> Privilege >> IP Address List**.

If there are workstations inside the managed network that need to access the network without authentication, enter the IP addresses of these workstations in the **"Granted Access by IP Address"**. The **"Remark"** field is not necessary but is useful to keep track. WIAS-3200N allows 100 privilege IP addresses at most. These settings will become effective immediately after clicking **Apply**.

Granted Access by IP Address		
No.	IP Address	Remark
1		
2		
3		
3		
4		
5		
8		
9		
10		

(Total: 100) First Prev Next Last

Caution:
Permitting specific IP addresses to have network access rights without going through standard authentication process under Public zone may cause security problems.

7.3.2 Privilege MAC

Privilege MAC Address List

In addition to the Privilege IP List, MAC address List allows the MAC address of the workstations that need to access the network without authentication to be set in the **"Granted Access by MAC Address"**. WIAS-3200N allows 100 privilege MAC addresses at most. When manually creating the list, enter the MAC address (the format is xx:xx:xx:xx:xx:xx) as well as the remark (not necessary). These settings will become effective immediately after clicking **Apply**.

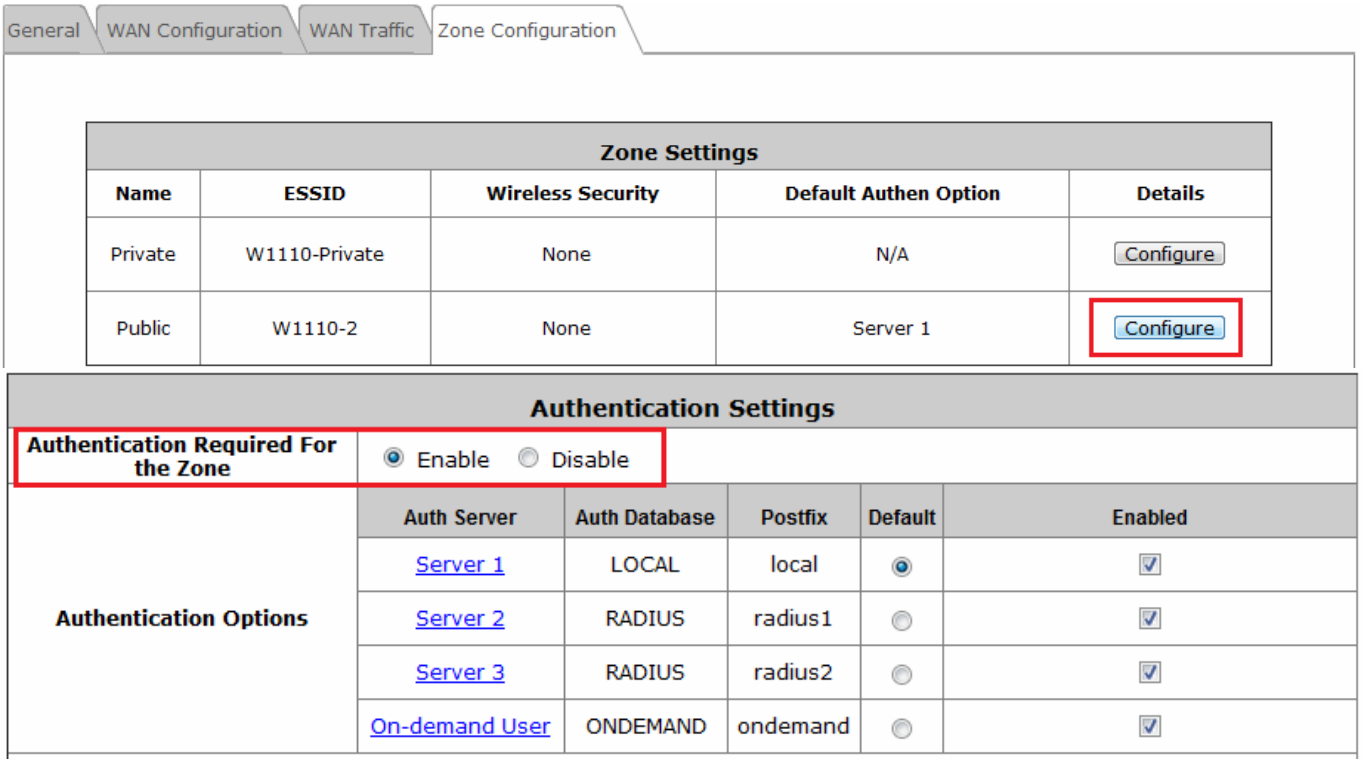
Granted Access by MAC Address		
No.	**MAC Address**	**Remark**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

(Total: 100) First Prev Next Last

Caution:
Permitting specific MAC addresses to have network access rights without going through standard authentication process under Public zone may cause security problems

7.4 Disable Authentication in Public Zone

Configure Disable Authentication in Public Zone, go to: **System >> Zones Configuration,** click **Configure** in **Public Zone**.



- **Authentication Required For the Zone:** When it is disabled, users will not need to authenticate before they get access to the network within Public Zone.

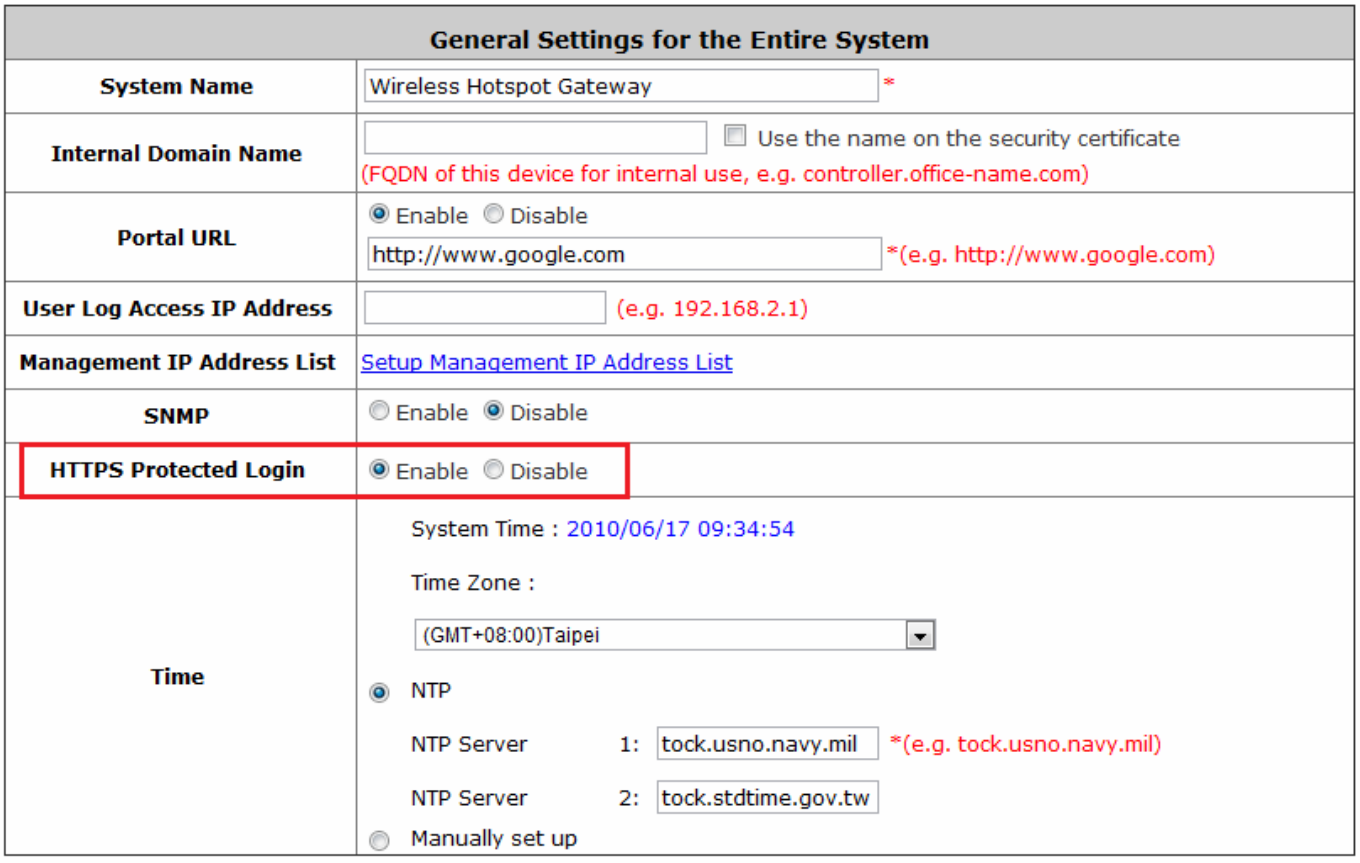
8 User Login and Logout

8.1. Before User Login

8.1.1 Login with SSL

Configure HTTPS, go to: **System >> General**.

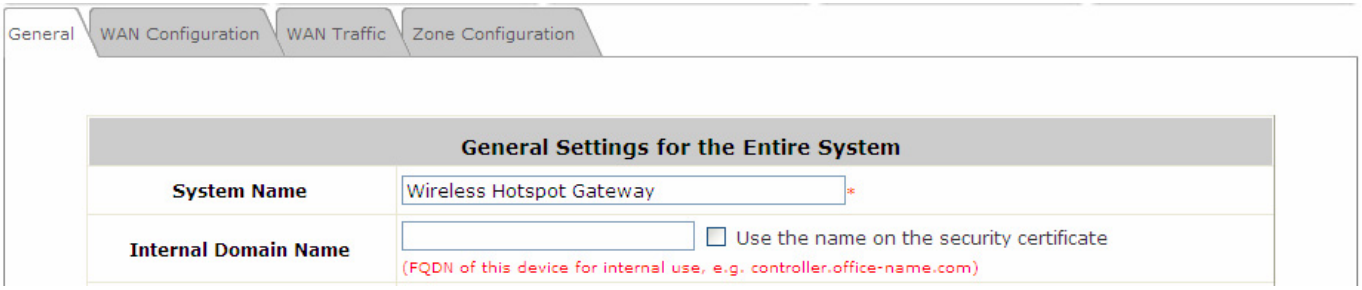
HTTPS (HTTP over SSL or HTTP Secure) is the use of Secure Socket Layer (SSL) or Transport Layer Security (TLS) as a sub-layer under regular HTTP application layering. HTTPS encrypts and decrypts user page requests as well as the pages that are returned by the Web server.
HTTP Protected Login function will let the client's login with https for more security. Enable to activate https (encryption) or disable to activate http (non encryption) login page.



8.1.2 Internal Domain Name with Certificate

Configure Internal Domain Name, go to: **System >> General**.

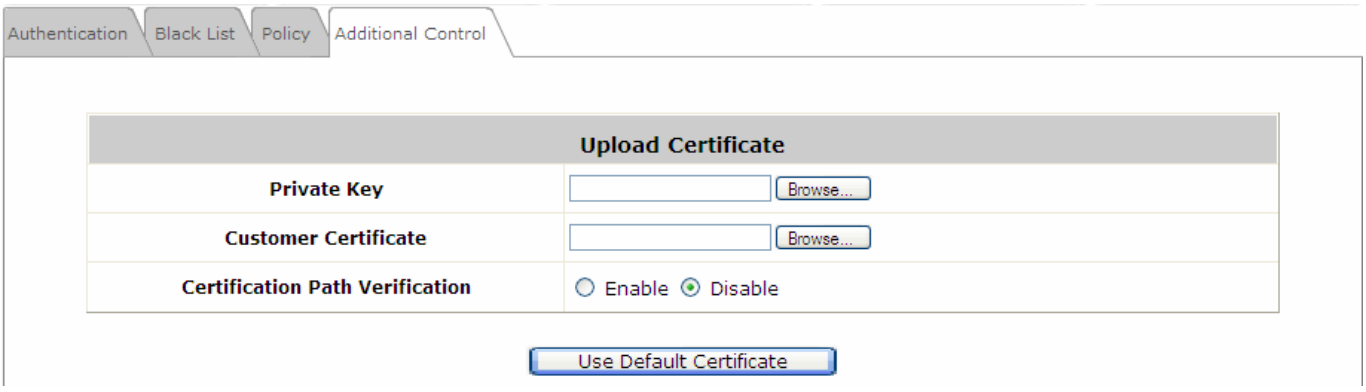
Internal Domain Name is the domain name of the WIAS-3200N as seen on client machines connected under zone. It must conform to FQDN (Fully-Qualified Domain Name) standard. A user on client machine can use this domain name to access WIAS-3200N instead of its IP address.
In addition, when "**Use the name on the security certificate**" option is checked, the system will use the CN (Common Name) value of the uploaded SSL certificate as the domain name.



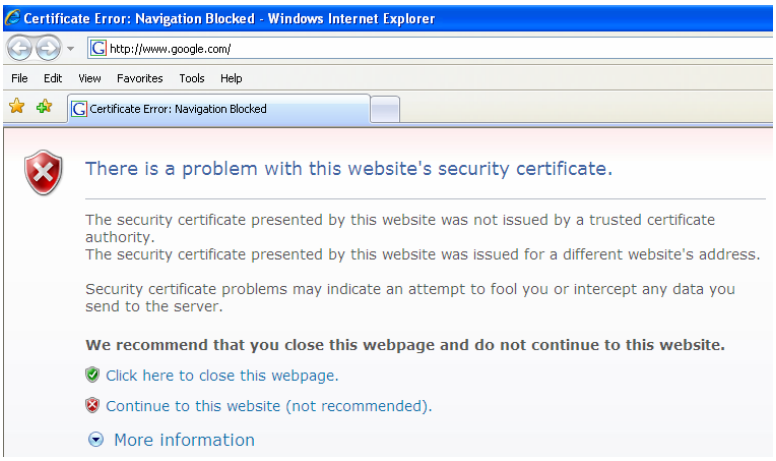
To Configure Certificate, go to: **Users >> Additional Control >> Upload File**.

Certificate: A data record used for authenticating network entities such as a server or a client. A certificate contains X.509 information pieces about its owner (called the subject) and the signing Certificate Authority (called the issuer), plus the owner's public key and the signature made by the CA. Network entities verify these signatures using CA certificates. You can apply for a SSL certificate at CAs such as VeriSign.

If you already have a SSL Certificate, please Click Browse to select the file and upload it. Click **Apply** to complete the upload process. If you do not have a valid SSL Certificate, use the system default certificate.

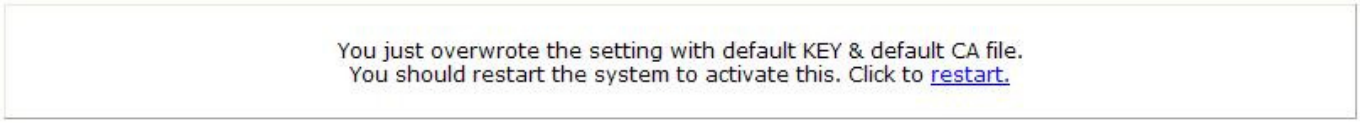


Without a valid certificate, users may encounter the following problem in IE7 when they try to open the login page.



Click "Continue to this website" to access the user login page.

Use Default Certificate: Click **Use Default Certificate** to use the default certificate and key. Click **restart** to validate the changes.



8.1.3 Walled Garden

Configure Walled Garden, go to: **Network >> Walled Garden**.

This function provides certain free services for users to access the websites listed here before login and authentication. Up to 20 addresses or domain names of the websites can be defined in this list. Users without the network access right can still have a chance to experience the actual network service free of charge. Enter the website **IP Address** or **Domain Name** in the list and click **Apply** to save the settings.

Walled Garden List			
No.	Domain Name/IP Address	No.	Domain Name/IP Address
1		2	
3		4	
5		6	
7		8	
9		10	
11		12	
13		14	
15		16	
17		18	
19		20	

8.1.4 Walled Garden AD List

Configure Walled Garden AD List, go to: **Network >> Walled Garden AD List**.

This function provides advertisement links to web pages for users to access free of charge before login and authentication. Advertisement hyperlinks are displayed on the user's login page. Clients who click on it will be redirected to the listed advertisement websites.

Walled Garden Ad List				
Item	URL	Topic	Description	Display
1				☐
2				☐
3				☐
4				☐
5				☐
6				☐
7				☐
8				☐
9				☐
10				☐

- Enter all items or make changes, click **Apply**, the items will be added and shown in the list.
- **URL:** Enter the URL of the advertisement website.
- **Topic:** Enter the content of the hyperlink, for instance if you enter Google in this field, on the user login page a hyperlink Google will be displayed.
- **Description:** Any additional message for administrator's reference.
- **Display:** Choose Display to display advertisement hyperlinks on the login pages.

8.2. After User Login

8.2.1 Portal URL after successful login

Configure Portal URL after a successful user login, go to: **System >> General**.

When this function is enabled, enter the URL of a Web server as the Portal page. Once logged in successfully, users will be directed to this URL, such as http://www.google.com, regardless of the original homepage set in their browsers.

When this function is disabled, after users logged in successfully, users will be directed to the original homepage set in their browsers.

8.2.2 Idle Timer

Configure Idle Timer, go to: **Users >> Additional Control**.

If a user has idled with no network activities, the system will automatically kick out the user. The logout timer can be set between 1~1440 minutes, and the default idle time is 10 minutes.

Additional Control	
User Session Control	Idle Timeout (minutes): 10 *(1-1440) Multiple Login ☐ (Authentication option using On-demand database will not support this function.)

8.2.3 Multiple Login

Configure Multiple Login, go to: **Users >> Additional Control**.

When enabled, a user can log in from different computers with the same account. (This function doesn't support On-demand users and RADIUS authentication.)

Additional Control	
User Session Control	Idle Timeout (minutes): 10 *(1-1440) Multiple Login ☑ (Authentication option using On-demand database will not support this function.)

9 Networking Features of a Gateway

9.1 IP Plug and Play

Configure IP Plug and Play, go to: **Network >> Client Mobility**.

WIAS-3200N supports IP PNP function. User can login and access network with any IP address setting.
This function is disabled in default settings.

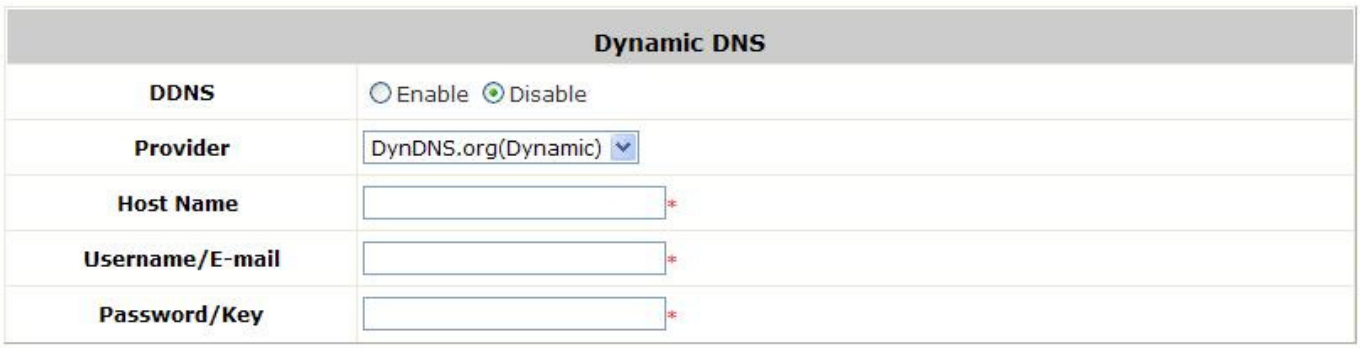
Client Mobility	
IP PNP	○ Enable ◉ Disable

When **IP PNP** is enabled, at the user end, a static IP address can be used to connect to the system. Regardless of what the IP address at the user end is using, authentication can still be performed through WIAS-3200N.

9.2 Dynamic Domain Name Service (DDNS)

Configure Dynamic Domain Name Service, go to: **Network >> DDNS**.

Before activating this function, you must have your Dynamic DNS hostname registered with a Dynamic DNS provider. WIAS-3200N supports DNS function to alias the dynamic IP address for the WAN port to a static domain name, allowing the administrator to easily access WIAS-3200N's WAN. If the dynamic DHCP is activated at the WAN port, it will update the IP address of the DNS server periodically. These settings will become effective immediately after clicking **Apply**.



- **DDNS:** Enable or disable this function.
- **Provider:** Select the DNS provider.
- **Host name:** The IP address/domain name of the WAN port.
- **Username/E-mail:** The register ID (username or e-mail) for the DNS provider.
- **Password/Key:** The register password for the DNS provider.

Note:
To apply for free Dynamic DNS service, you may go to http://www.dyndns.com/services/dns/dyndns/howto.html.

9.3 Port and IP Redirect

Configure Port and IP Redirect, go to: **Network >> NAT >> Port and IP Redirect**.

This function allows the administrator to set 40 sets of the IP addresses at most for redirection purpose. When the user attempts to connect to a destination IP address listed here, the connection packet will be converted and redirected to the corresponding destination. Please enter the **"IP Address"** and **"Port"** of **Destination**, and the **"IP Address"** and **"Port"** of **Translated to Destination**. Select **"TCP"** or **"UDP"** for the service's type. These settings will become effective immediately after clicking **Apply**.

Port and IP Redirect					
No.	Destination		Translated to Destination		Type
	IP Address	Port	IP Address	Port	
1					TCP UDP
2					TCP UDP
3					TCP UDP
4					TCP UDP
5					TCP UDP
6					TCP UDP
7					TCP UDP
8					TCP UDP
9					TCP UDP
10					TCP UDP

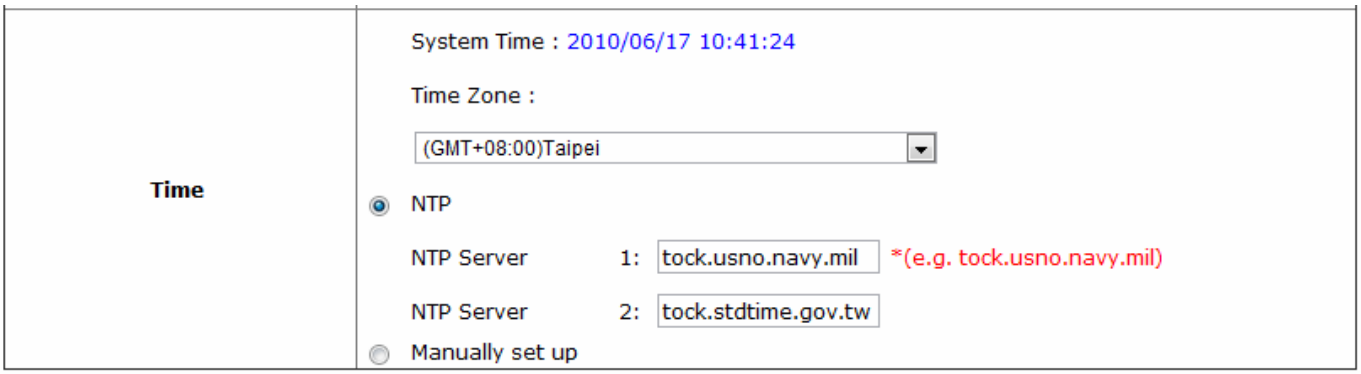
(Total:40) First Prev Next Last

10 System Management and Utilities

10.1 System Time

Configure System Time, go to: **System >> General**.

NTP (Network Time Protocol) communication protocol can be used to synchronize the system time with remote time server. Please specify the local time zone and the IP address of at least one NTP server for adjusting the time automatically (Universal Time is Greenwich Mean Time, GMT).
Manually set up is another option to setup system time, if you choose to setup system time manually, please enter the Year, Month, Day, the current time and click Apply to activate the changes.



Note:
When system can not sync the time with NTP server, all clients will not allow to login to system.
Also on-demand accounts cannot be created.

10.2 Management IP

Configure Management IP, go to: **System >> General**.

General Settings for the Entire System	
System Name	Wireless Hotspot Gateway *
Internal Domain Name	Use the name on the security certificate (FQDN of this device for internal use, e.g. controller.office-name.com)
Portal URL	Enable Disable http://www.google.com *(e.g. http://www.google.com)
User Log Access IP Address	(e.g. 192.168.2.1)
Management IP Address List	Setup Management IP Address List
SNMP	Enable Disable

Only PCs within the Management IP range on the list are allowed to access the system's web management interface. For example, 10.2.3.0/24 means that as long as an administrator is using a computer with the IP address range of 10.2.3.0/24, he or she can access the web management page. Another example is 10.0.0.3: if an administrator is using a computer with the IP address of 10.0.0.3, he or she can access the web management page.

Management IP Address List			
No.	IP Address/Segment	No.	IP Address/Segment
1	0.0.0.0/0.0.0.0	2	
3		4	
5		6	
7		8	
9		10	
11		12	
13		14	
15		16	
17		18	
19		20	

The default value is “0.0.0.0/0.0.0.0”. It means that the WIAS-3200N can be accessed by any IP address, for security consideration; please change this value before the system provides service.

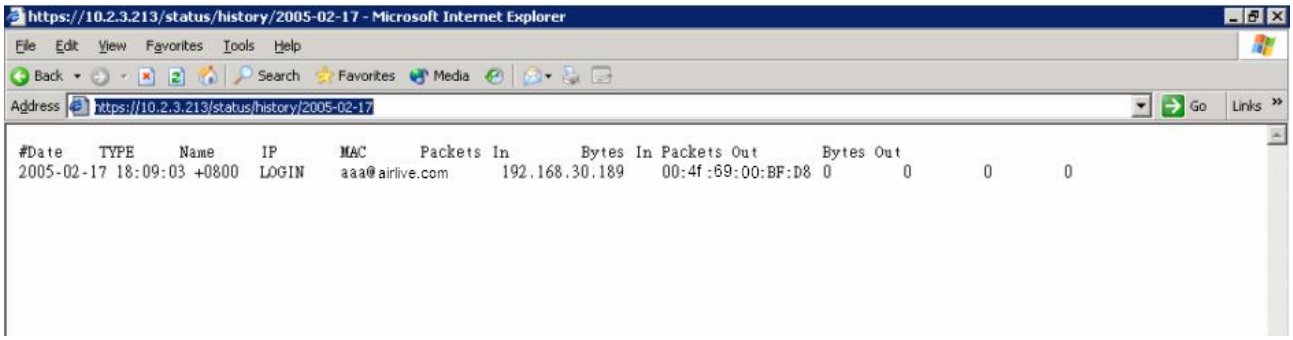
10.3 User Log Access IP Address

Configure User Log Access IP History, go to: **System >> General**.

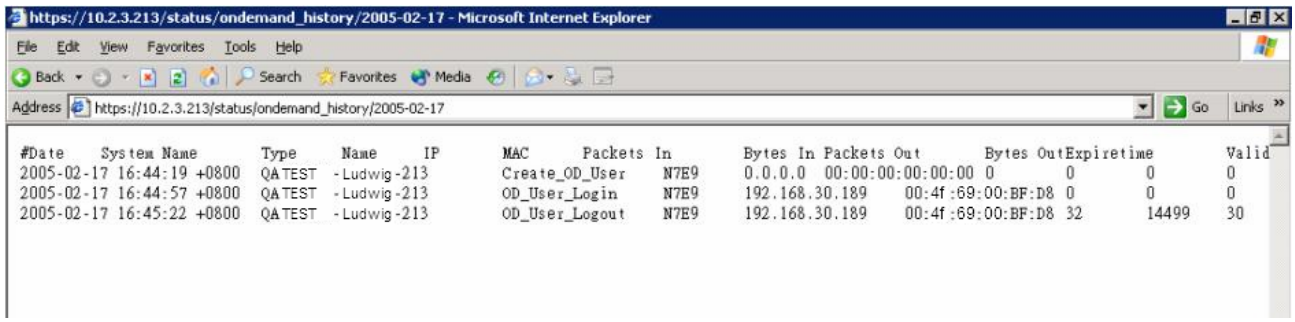
General Settings for the Entire System	
System Name	Wireless Hotspot Gateway *
Internal Domain Name	Use the name on the security certificate (FQDN of this device for internal use, e.g. controller.office-name.com)
Portal URL	Enable Disable http://www.google.com *(e.g. http://www.google.com)
User Log Access IP Address	(e.g. 192.168.2.1)
Management IP Address List	Setup Management IP Address List

Specify an IP address of the administrator's computer or a billing system to get billing history information of WIAS-3200N with the predefined URLs. The file name format is "yyyy-mm-dd". An example is provided as follows:

Traffic History：*https://10.2.3.213/status/history/2005-02-17*



On-demand History：*https://10.2.3.213/status/ondemand_history/2005-02-17*



10.4 SNMP

Configure SNMP, go to: **System >> General**. WIAS-3200N supports SNMP v1/v2c. If this function is enabled, the SNMP Management IP and the Community string can be assigned for SNMP access to the system.

General Settings for the Entire System	
System Name	Wireless Hotspot Gateway *
Internal Domain Name	Use the name on the security certificate (FQDN of this device for internal use, e.g. controller.office-name.com)
Portal URL	Enable Disable http://www.google.com *(e.g. http://www.google.com)
User Log Access IP Address	(e.g. 192.168.2.1)
Management IP Address List	Setup Management IP Address List
SNMP	Enable Disable Manager IP Address: * Community: *

10.5 Three-Level Administration

WIAS-3200N supports three kinds of account interface. You can log in as **admin**, **manager** or **operator**. The default usernames and passwords show as follows:

Admin: The administrator can access all configuration pages of WIAS-3200N.

Username: **admin**

Password: **airlive**

After a successful login to WIAS-3200N, a web management interface with a Home manual will appear.

Manager: The manager can only access the configuration pages under **User Authentication** to manage the user accounts.

User Name: **manager**

Password: **manager**

Authentication Settings					
Auth Database	**Auth Server Name**	**Postfix**	**Policy**	**Black List**	**Configure**
LOCAL	Server 1	local	Policy 1	None	Configure
RADIUS	Server 2	radius1	Policy 2	None	Configure
RADIUS	Server 3	radius2	Policy 3	None	Configure
ONDEMAND	On-demand User	ondemand	Policy 4	None	Configure

Operator: The operator can only access the configuration page of **Create On-demand User** to create new on-demand user accounts and print out the on-demand user account receipts.

User Name: **operator**

Password: **operator**

On-demand Account Creation					
Plan	**Type**	**Quota**	**Price**	**Status**	**Function**
1	Usage-time	15 min(s) connection time quota with expiration	10.91	Enabled	Create
2	Usage-time	11 min(s) connection time quota	1	Enabled	Create
3	Cut-off	Valid until 12:00 the following day	5	Enabled	Create
4	Duration-time	Valid from 2010/07/14 12:00:00 till 2010/07/14 23:59:00	1	Enabled	Create

Note:
To logout, simply click the **Logout** icon on the upper right corner of the interface to return to the login screen.

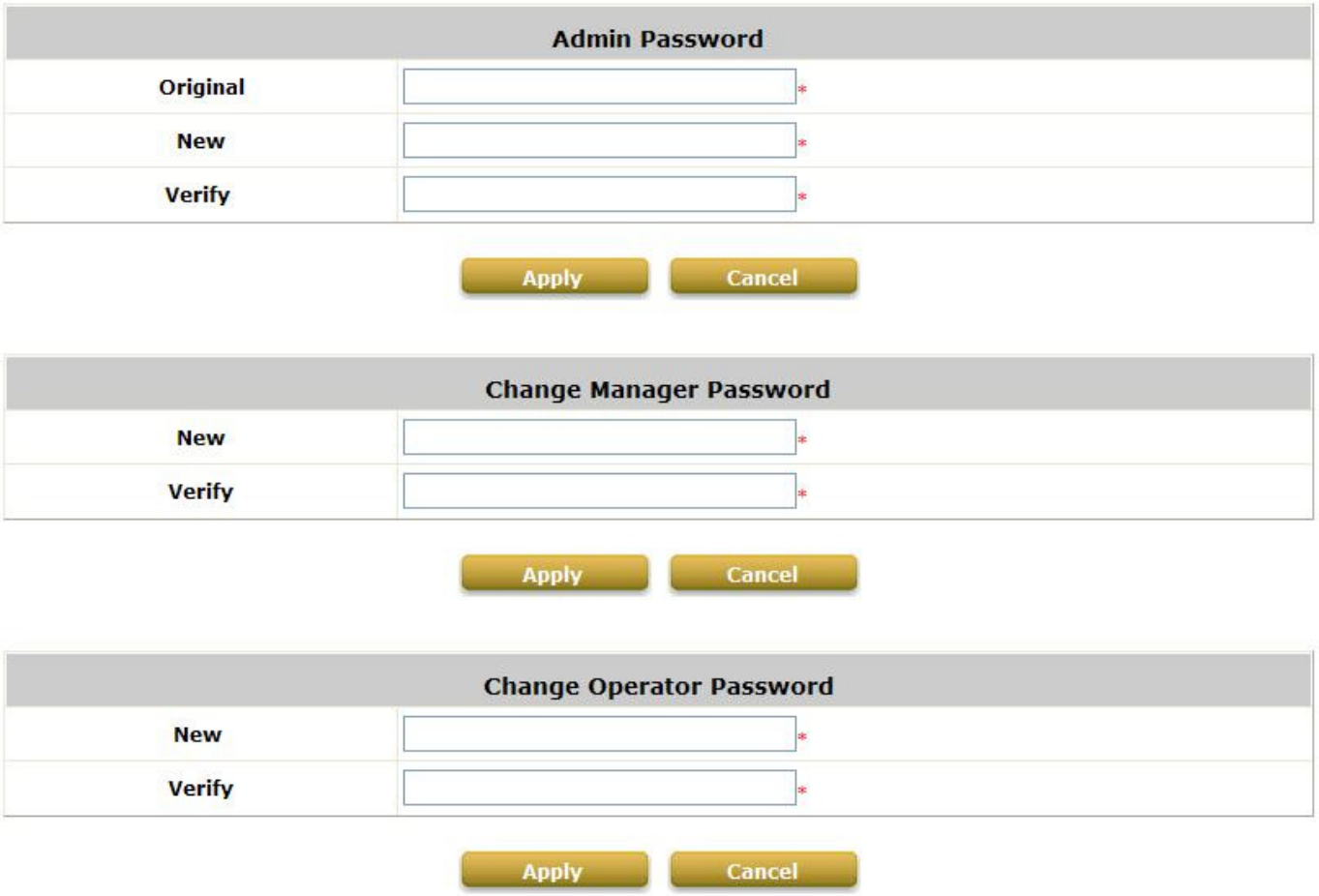
10.6 Change Password

Configure Change Password, go to: **Utilities >> Password Change**.

There are three levels of authorities: **admin**, **manager** or **operator**. The default usernames and passwords are as follows:
Admin: The administrator can access all configuration pages of WIAS-3200N.
User Name: **admin**
Password: **airlive**
Manager: The manager can only access the configuration pages under **User Authentication** to manage the user accounts.
User Name: **manager**
Password: **manager**
Operator: The operator can only access the configuration page of **Create On-demand User** to create new on-demand user accounts and print out the on-demand user account receipts.
User Name: **operator**
Password: **operator**

The administrator can change the passwords here. Click **Apply** to activate this new password.

Note:
Only login with **admin** can change password.

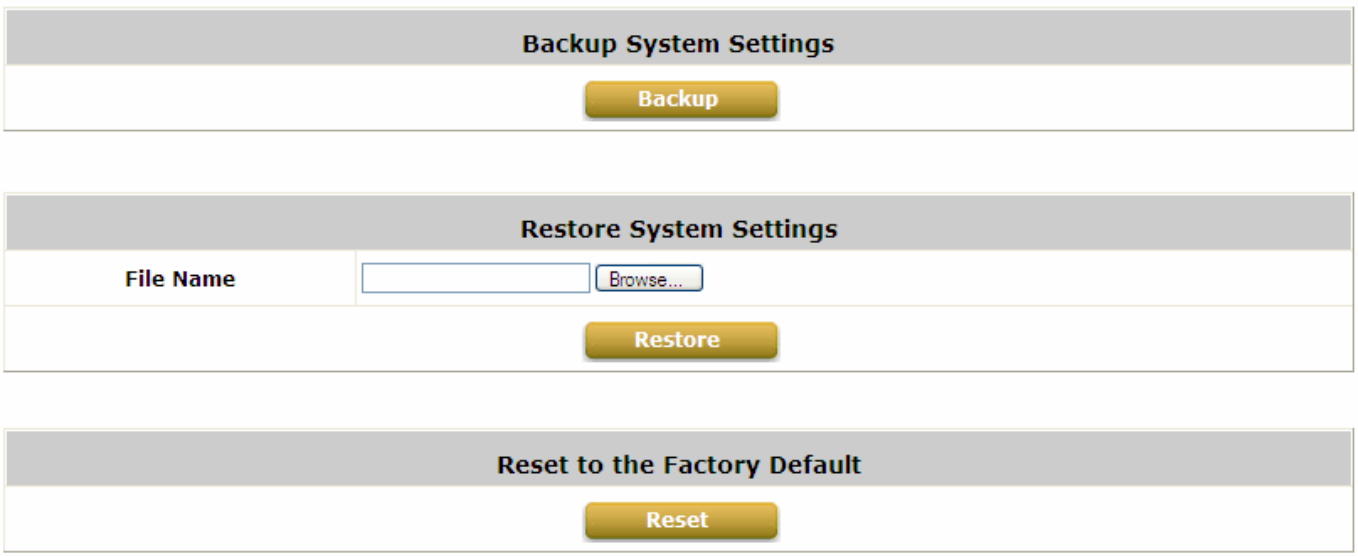


Caution:
If the administrator's password is lost, the administrator's password still can be changed through the text mode management interface via the serial console port.

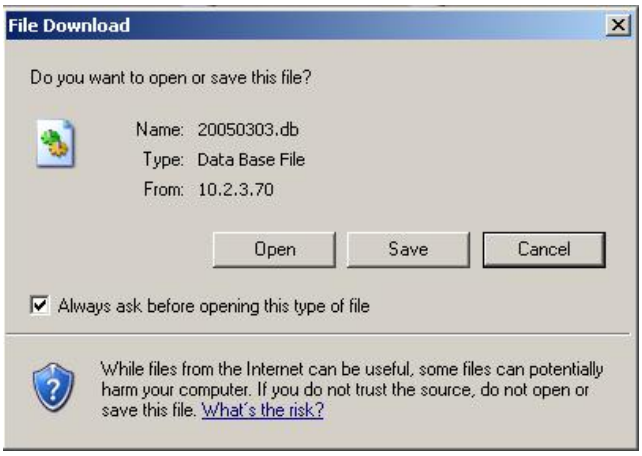
10.7 Backup / Restore and Reset to Factory

Configure Backup / Restore and Reset to Factory Default, go to: **Utilities >> Backup & Restore**.

This function is used to backup/restore the WIAS-3200N settings. Also, WIAS-3200N can be restored to the factory default settings here.



- **Backup System Settings:** Click **Backup** to create a .db database backup file and save it on disk.
-

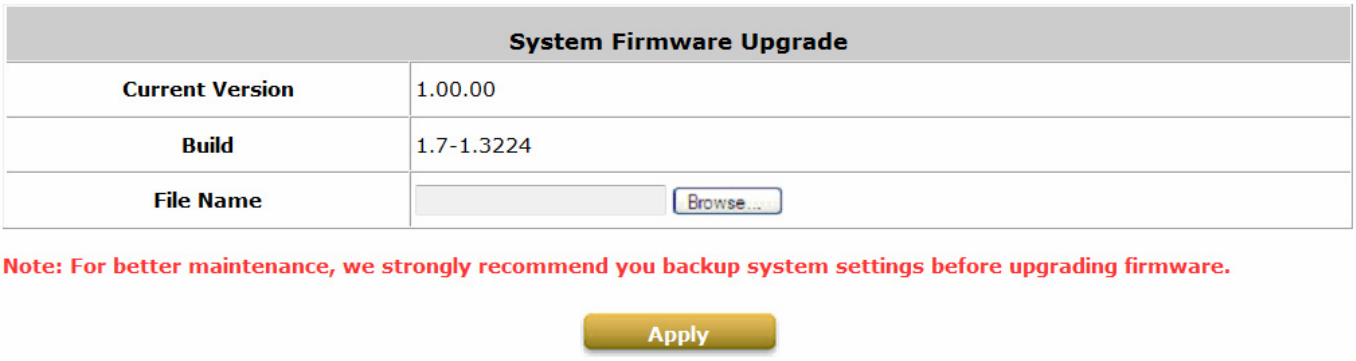


- **Restore System Settings:** Click **Browse** to search for a .db database backup file created by WIAS-3200N and click **Restore** to restore to the same settings at the time when the backup file was saved.
- **Reset to Factory Default:** Click Reset to load the factory default settings of WIAS-3200N.

10.8 Firmware Upgrade

Configure Firmware Upgrade, go to: **Utilities** >> **System Upgrade**.

The administrator can download the latest firmware from website and upgrade the system here. Select the latest firmware and **Browse** button, and then click **Apply**, the system will upload the file and restart to perform the upgrade process. It might take a few minutes before the upgrade process completes.



Note:

After clicking **Apply**, the system will begin uploading the chosen firmware into the system. Once the upload process is complete system will restart to activate the new firmware. The entire process may take a few minutes until the new firmware WMI appears. When restart is complete, system will not lease IP. So, please use static IP PC to upgrade system firmware.

Caution:

1. Firmware upgrade may cause the loss of some data. You may need to manually backup user account information, please refer to the release notes for the limitation before upgrading.
2. Do not power on/off the system during the upgrade or restart process. It may damage the system and cause malfunction.

10.9 Restart

To perform system restart, go to: **Utilities >> Restart**.

This function allows the administrator to safely restart WIAS-3200N, and the process takes approximately three minutes. Click **YES** to restart WIAS-3200N; click **NO** to go back to the previous screen. Do NOT power off the power during system restart as this might damage the system. If the power needs to be turned off, it is highly recommended to restart WIAS-3200N first and then turn off the power after completing the restart process.

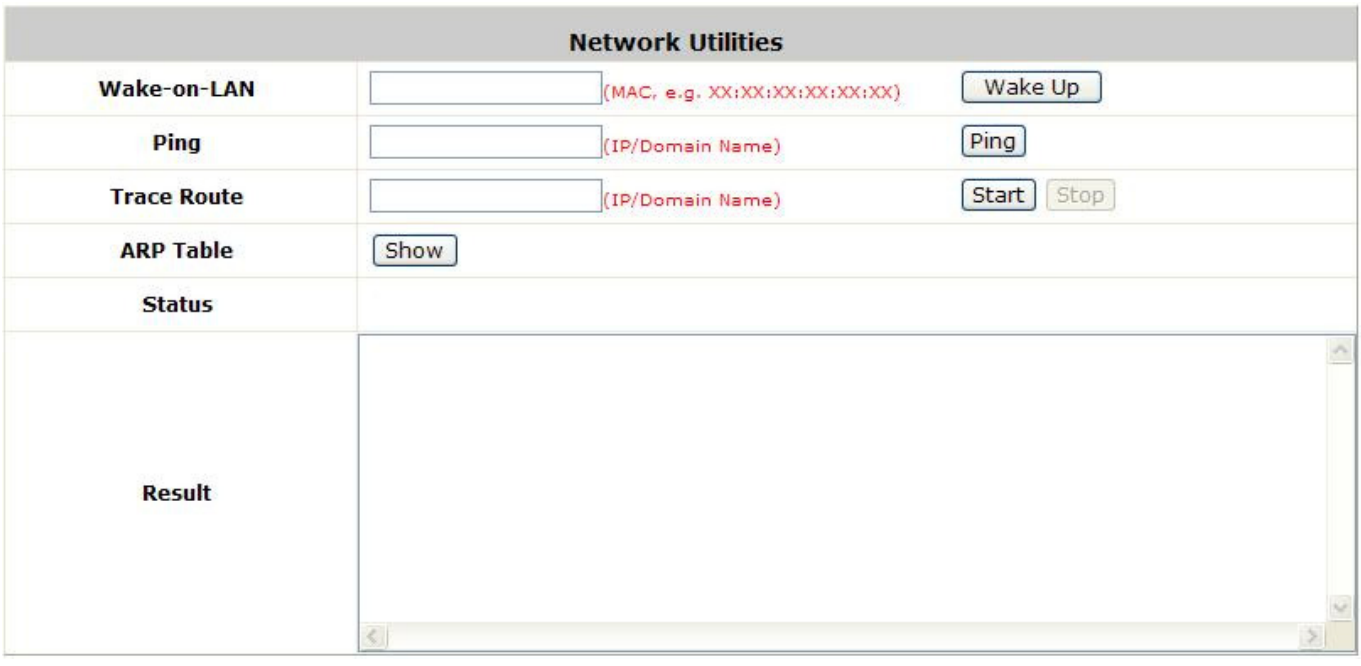
Caution:
The connection of all online users to the system will be disconnected when system is in the process of restarting.

10.10 Network Utility

Configure Network Utility, go to: **Utilities >> Network Utilities**.

WIAS-3200N provides some network utilities to allow administrators to use.

- **Wake-on-LAN:** is for waking up remote devices that supports Wake-on-LAN feature by entering the MAC address of the target device and then press Wake Up button.
- **Ping:** is to see whether a destination host is reachable and alive by entering the destination host's domain name or IP address and then press Ping button.
- **Trace Route:** display the actual route taken to reach the destination host by entering the destination host's domain name or IP address and then press Start button.
- **ARP Table:** for displaying ARP information stored on the system.



10.10.1 Wake-on-LAN

It allows the system to remotely boot up a power-down computer with Wake-On-LAN feature enabled in its BIOS and it is connect to LAN port. Enter the MAC Address of the desired device and click **Wake Up** button to execute this function.

10.10.2 Ping

It allows administrator to detect a device using IP address or Host domain name to see if it is alive or not.

10.10.3 Trace Route

It allows administrator to find out the real path of packets from the gateway to a destination using IP address or Host domain name.

10.10.4 Show ARP Table

It allows administrator to view the IP-to-Physical address translation tables used by address resolution protocol (ARP).

10.11 Monitor IP Link

Configure Monitor IP Link, go to: **Network** >> **Monitor IP**.

WIAS-3200N will send out a packet periodically to monitor the connection status of the IP addresses on the list. On each monitored item with a WEB server running, administrators may add a link for the easy access by entering the IP, select the **Protocol** to http or https and then click **Create**. After clicking **Create** button, the IP address will become a hyperlink, and administrators can easily access the host by clicking the hyperlink remotely. Click the **Delete** button to remove the hyperlink if desired.

Monitor IP List				
No.	Protocol	IP Address	Hyperlink	Remark
1	http		Create	
2	http		Create	
3	http		Create	
4	http		Create	
5	http		Create	
6	http		Create	
7	http		Create	
8	http		Create	
9	http		Create	
10	http		Create	

(Total: 40) First Prev Next Last

10.12 Console Interface

Via the console port, administrators can enter the console interface for handling problems and situations occurred during operation.

1. In order to connect to the console port of WIAS-3200N, a console, modem cable and a terminal simulation program, such as the Hyper Terminal are needed.
2. If a Hyper Terminal is used, please set the parameters as **9600, 8, None, 1, None.**

Caution:

The main console is a menu-driven text interface with dialog boxes. Please use arrow keys on the keyboard to browse the menu and press the **Enter** key to make selection or confirm what you enter.

3. Once the console port of WIAS-3200N is connected properly, the console main screen will appear automatically. If the screen does not appear in the terminal simulation program automatically, please try to press the arrow keys, so that the terminal simulation program will send some messages to the system, and the welcome screen or main menu should appear. If the welcome screen or main menu of the console still does not pop up, please check the connection of the cables and the settings of the terminal simulation program.

```
Wireless Hotspot Gateway Basic Configuration
1. Utilities for network debugging
2. Change admin password
3. Reload factory default
4. Restart Wireless Hotspot Gateway
Please enter your choice:
```

- **Utilities for network debugging**
  The console interface provides several utilities to assist the Administrator to check the system conditions and to debug any problems. The utilities are described as follows:

```
Wireless Hotspot Gateway Configuration Utility
1. Ping host(IP)
2. Trace routing path
3. Display interface settings
4. Display routing table
5. Display ARP table
6. Display system up time
7. Check service status
8. Set device into 'safe mode'
9. Synchronize clock with NTP server
10. Print the kernel ring buffer
11. Main menu
Please enter your choice:
```

  - Ping host (IP): By sending ICMP echo request to a specified host and wait for the response to test the network status.
  - Trace routing path: Trace and inquire the routing path to a specific target.
  - Display interface settings: It displays the information of each network interface setting including the MAC address, IP address, and Netmask.
  - Display the routing table: The internal routing table of the system is displayed, which may help to confirm the Static Route settings.
  - Display ARP table: The internal ARP table of the system is displayed.
  - Display system up time: The system live time (time for system being turn on) is displayed.
  - Check service status: Check and display the status of the system.
  - Set device into “safe mode”: If the administrator is unable to use Web Management Interface via browser for the system failed inexplicitly. The administrator can choose this utility and set it into safe mode, which enables him to manage this device with browser again.
  - Synchronize clock with NTP server: Immediately synchronize the clock through the NTP protocol and the specified network time server. Since this interface does not support manual setup for its internal clock, therefore we

must reset the internal clock through the NTP.

- Print the kernel ring buffer: It is used to examine or control the kernel ring buffer. The program helps users to print out their boot-up messages instead of copying the messages by hand.
- Main menu: Go back to the main menu.

- **Change admin password**
  Besides supporting the use of console management interface through the connection of null modem, the system also supports the SSH online connection for the setup. When using a null modem to connect to the system console, we do not need to enter administrator's password to enter the console management interface. But connecting the system by SSH, we have to enter the username and password.

  The username is "admin" and the default password is "airlive", which is the same as for the web management interface. Password can also be changed here. If administrators forget the password and are unable to log in the management interface from the web or the remote end of the SSH, they can still use the null modem to connect the console management interface and set the administrator's password again.

Caution:
Although it does not require a username and password for the connection via the serial port, the same management interface can be accessed via SSH. Therefore, we recommend you to immediately change the WIAS-3200N Admin username and password after logging in the system for the first time.

- **Reload factory default**
  Choosing this option will reset the system configuration to the factory defaults.

- **Restart WIAS-3200N**
  Choosing this option will restart WIAS-3200N.

11 System Status and Reports

11.1 View the Status

This section includes **System**, **Interface**, **Routing Table**, **Online Users**, **User Log** and **E-mail & SYSLOG** to provide system status information and online user status.

11.1.1 System Status

View System Status, go to: **Status >> System**.

This section provides an overview of the system for the administrator.

System Setting Overview		
Firmware Version		1.00.00
Build		1.4-1.3453
Site		EN-E
System Name		AirLive WIAS-3200N
Portal URL		http://www.airlive.com/
SYSLOG Server - System Log		N/A:N/A
SYSLOG Server - On-demand User Log		N/A:N/A
Warning of Internet Disconnection		Fail
User Log	Retained Days	3 days
	Receiver E-mail Address(es)	N/A
System Time	NTP Server	The server is unreachable.
	Time	2010/08/05 01:48:21 +0800
User Session Control	Idle Time Out	10 Min(s)
	Multiple Login	Disabled
DNS	Preferred DNS Server	168.95.1.1
	Alternate DNS Server	N/A

The description of the above-mentioned table is as follows:

Item		Description
Firmware Version		The present firmware version of WIAS-3200N
System Name		The system name. The default is AirLive WIAS-3200N
Portal URL		The page the users are directed to after initial login success.
SYSLOG server- System Log		The IP address and port number of the external SYSLOG Server. **N/A** means that it is not configured.
SYSLOG server- On-demand Users Log		The IP address and port number of the external SYSLOG Server. **N/A** means that it is not configured.
Warning of Internet Disconnection		Show the status for the connection at WAN is normal or abnormal (**Internet Connection Detection**) and all online users are allowed/disallowed to log in the network.
User Log	**Retained Days**	The maximum number of days for the system to retain the users' information.
	Receiver Email Address (es)	The email address to which the user log information will be set.
System Time	**NTP Server**	The network time server that the system is set to align.
	Time	The system time is shown as the local time.
User Session Control	**Idle Time Out**	The minutes allowed for the users to be inactive before their account expires automatically.
	Multiple Login	Enabled/disabled stands for the current setting to allow/disallow multiple login from the same local account.
DNS	**Preferred DNS Server**	IP address of the preferred DNS Server.
	Alternate DNS Server	IP address of the alternate DNS Server.

11.1.2 Interface Status

View Interface Status, go to: **Status >> Interface**.

This section provides an overview of the interface for the administrator including **WAN**, **Zone Wireless General Settings**, **Zone - Private** and **Zone - Public**.

WAN		
General	MAC Address	00:4F:69:07:09:20
	IP Address	
	Subnet Mask	
	Packets Out	0
	Bytes Out	0
	Packets In	0
	Bytes In	0
	Number of Sessions	28

Zone Wireless General Settings		
General	MAC Address	00:4F:69:07:09:22
	Band	11ng
	Channel	1
	Transmit Power	2 dBm

Zone - Private		
General	Mode	NAT
	MAC Address	00:4F:69:07:09:21
	IP Address	192.168.1.254
	Subnet Mask	255.255.255.0
DHCP Server	Status	Enabled
	WINS IP Address	N/A
	Start IP Address	192.168.1.1
	End IP Address	192.168.1.100
	Lease Time	1440 Min(s)
VAP 1	BSSID	00:4F:69:07:09:22
	ESSID	airlive-1
	Security Type	None
	Associated Clients	0

Zone - Public		
General	Mode	NAT
	MAC Address	00:4F:69:07:09:21
	IP Address	192.168.11.254
	Subnet Mask	255.255.255.0
DHCP Server	Status	Enabled
	WINS IP Address	N/A
	Start IP Address	192.168.11.1
	End IP Address	192.168.11.100
	Lease Time	1440 Min(s)
VAP 2	BSSID	00:4F:69:07:09:22
	ESSID	airlive-2
	Security Type	None
	Associated Clients	0

The description of the above-mentioned table is as follows:

Item		Description
WAN	MAC Address	The MAC address of the WAN port.
	IP Address	The IP address of the WAN port.
	Subnet Mask	The Subnet Mask of the WAN port.
	Packets Out/In	The total accumulated packets in/out through this WAN port since the gateway boots up. The delta shows the difference between the numbers from last time this Interface Status page is visited.
	Bytes Out/In	The total accumulated bytes in/out through this WAN port since the gateway boots up. The delta shows the difference between the numbers from last time this Interface Status page is visited.
	Number of Sessions	The sessions of WAN port.
Zone Wireless General Settings	MAC Address	The MAC address of the Wireless.
	Band	The current Band setting of Wireless.
	Channel	The current Channel setting of Wireless.
	Transmit Power	The current Transmit Power setting of Wireless.
Zone - General	Mode	The operation mode of the zone.
	MAC Address	The MAC address of the zone.
	IP Address	The IP address of the zone.
	Subnet Mask	The Subnet Mask of the zone.
Zone - DHCP	Status	Enable/disable stands for status of the DHCP server in this zone
	WINS IP Address	The WINS server IP on DHCP server. **N/A** means that it is not configured.
	Start IP Address	The start IP address of the DHCP IP range.
	End IP address	The end IP address of the DHCP IP range.
	Lease Time	Minutes of the lease time of the IP address.
Zone - VAP	BSSID	The BSSID of this zone.
	ESSID	The ESSID of this zone.
	Security Type	The current security type of this zone.
	Associated Clients	The number of associated clients in this zone.

11.1.3 Routing Table

View System Status, go to: **Status >> Routing Table**.

All the **Policy** Route rules and **Global Policy** Route rules will be listed here. Also it will show the **System** Route rules specified by each interface.

Policy 1			
Destination	Subnet Mask	Gateway	Interface

Policy 2			
Destination	Subnet Mask	Gateway	Interface

Policy 3			
Destination	Subnet Mask	Gateway	Interface

Policy 4			
Destination	Subnet Mask	Gateway	Interface

Policy 5			
Destination	Subnet Mask	Gateway	Interface

Global Policy			
Destination	Subnet Mask	Gateway	Interface

System			
Destination	Subnet Mask	Gateway	Interface
192.168.1.0	255.255.255.0	0.0.0.0	Private
192.168.11.0	255.255.255.0	0.0.0.0	Public
10.22.0.0	255.255.0.0	0.0.0.0	WAN
0.0.0.0	0.0.0.0	10.22.0.1	WAN

- **Policy 1~5:** Shows the information of the individual Policy from 1 to 5.
- **Global Policy:** Shows the information of the Global Policy.
- **System:** Shows the information of the system administration.
  - **Destination:** The Destination IP address.
  - **Subnet Mask:** The Subnet Mask of the IP address range.
  - **Gateway**: The Gateway IP address of the interface.
  - **Interface:** Including **WAN**, **Private** and **Public**.

11.1.4 Current Users

View Current Users, go to: **Status >> Online Users**.

In this page, each online user's information including **Username**, **IP Address**, **MAC Address**, **Pkts In**, **Bytes In**, **Pkts Out**, **Bytes Out**, **Idle** and **Kick Out** will be shown.

Administrators can force out a specific online user by clicking the hyperlink of **Kick Out**. Click **Refresh** to update the current users list.

Online Users List						
No.	Username		Pkts In	Bytes In	Idle (Sec.)	Kick Out
	IP Address	MAC Address	Pkts Out	Bytes Out		

Refresh

11.1.5 User Log

View User Log, go to: **Status >> User Log**.

This page is used to check the traffic history of WIAS-3200N. The history of each day will be saved separately in the DRAM for at least 3 days (72 full hours). The system also keeps a cumulated record of the traffic data generated by each user in the last 2 calendar months.

User Log	
Date	Size (Byte)
2009-04-22	65
2009-04-23	65

On-demand User Log	
Date	Size (Byte)
2009-04-22	105
2009-04-23	254

Roaming Out User Log	
Date	Size (Byte)
2009-04-22	106
2009-04-23	106

Roaming In User Log	
Date	Size (Byte)
2009-04-22	112
2009-04-23	112

Monthly Network Usage of Local User		
Month	No. of Entries	Usage Data
2009-04	1	Download

Caution:

Since the history is saved in the DRAM, if you need to restart the system, and at the same time, keep the history, please manually copy and save the traffic history information before restarting.

If the **Receiver E-mail Address(es)** has been entered under the **E-mail & SYSLOG** page, the system will automatically send out these history information to that specified email address.

- **Primary User Log**
  All user activities occur on the system within the nearest 72 hours excluding other user logs such as on-demand user log are recorded; in date and time order. Each line is a traffic history record consisting of 9 fields, **Date**, **Type, Name**, **IP**, **MAC**, **Pkts In**, **Bytes In**, **Pkts Out** and **Bytes Out** of the user activities.

- **On-demand User Log**
  Each line is a on-demand user log record consisting of 14 fields, **Date**, **System Name**, **Type**, **Name**, **IP**, **MAC**, **Pkts In**, **Bytes In**, **Pkts Out, Bytes Out, Activation Time, 1st Login Expiration Time**, and **Remark**, of on-demand user activities.

- **Roaming Out User Log**
  Each line is a roaming out traffic history record consisting of 14 fields, **Date**, **Type, Name**, **NSID**, **NASIP**, **NASPort**, **UserMAC**, **SessionID**, **SessionTime**, **Bytes in**, **Bytes Out**, **Pkts In**, **Pkts Out** and **Message**, of user activities.

- **Roaming In User Log**
  Each line is a roaming in traffic history record consisting of 15 fields, **Date**, **Type, Name**, **NSID**, **NASIP**, **NASPort**, **UserMAC**, **UserIP**, **SessionID**, **SessionTime**, **Bytes in**, **Bytes Out**, **Pkts In**, **Pkts Out** and **Message**, of user activities.

11.1.6 Local User Monthly Network

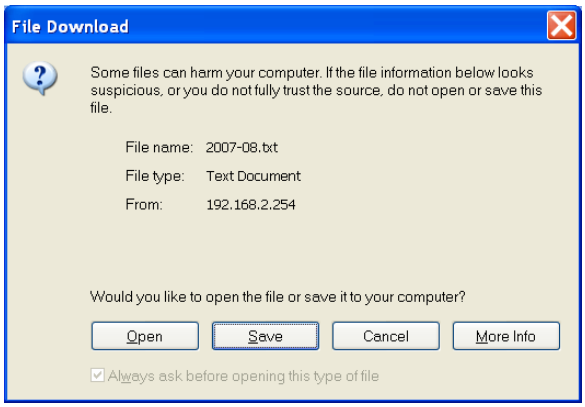
View Local User Monthly Network Usage, go to: **Status >> User Log**.

- **Monthly Network Usage of Local User**
  The system keeps a cumulated record of the traffic data generated by each Local user in the latest 2 calendar months. Each line in a monthly network usage of local user record consists of 6 fields, **Username**, **Connection Time Usage**, **Packets In**, **Bytes In**, **Packets Out** and **Bytes Out** of user activities.
    - **Username:** Username of the local user account.
    - **Connection Time Usage:** The total time used by the user.
    - **Pkts In/ Pkts Out:** The total number of packets received and sent by the user.
    - **Bytes In/ Bytes Out:** The total number of bytes received and sent by the user.

- **Download Monthly Network Usage of Local User:** Click on the **Download** button for outputting the report manually to a local database.

Monthly Network Usage of Local User		
Month	No. of Entries	Usage Data
2009-04	1	Download

A warning message will then appear. Click **Save** to download the record into .txt format.



11.2 Notification

Configure Notification, go to: **Status >> E-mail & SYSLOG**.

WIAS-3200N can automatically send the notification of **Monitor IP Report**, **Users Log** and **Session Log** to up to 3 particular e-mail addresses. A trial email is provided by the system for validation.
Secondly, the system supports recording of **System Log**, **On-demand Users Log** and **Session Log** via external SYSLOG servers and sending Session Log to an external FTP server. In addition, system Event Log of clients associated and disassociated messages appear on WMI as well.

Notification E-mail Settings				
Receiver E-mail Address(es)	Monitor IP Report	User Log	On-demand User Log	Session Log
Interval	1 Hour	1 Hour	1 Hour	1 Hour
SMTP Setting Test	Send	Send	Send	Send
Sender E-mail Address				
SMTP Server				
SMTP Auth Method	None			

SYSLOG Server Settings		
System Log	IP Address:	Port :
On-demand User Log	IP Address:	Port :
Session Log	IP Address:	Port :

FTP Server Settings	
Session Log	IP Address: Port : Server Folder: ex: dir1/dir2 Send Log every 1 Hour (*Note: same as "Interval of Session Log" in the Notification E-mail Settings) Anonymous: Yes No FTP Setting Test: Send Test Log

11.2.1 E-Mail

Configure Notification, go to: **Status >> E-mail & SYSLOG**.

- **Notification E-mail Settings:**
  - **Receiver Email Address (es):** Up to 3 e-mail address can be set up to receive the notification. These are the receiver's e-mail addresses. There are four kinds of notification to selection -- Monitor IP Report, Users Log, On-demand Users Log and Session Log, and check which type of notification to be sent.
  - **Interval:** The time interval to send the e-mail report.
  - **SMTP Setting Test:** To test the settings immediately.
  - **Sender Email Address:** The e-mail address of the administrator in charge of the monitoring. This will show up as the sender's e-mail.
  - **SMTP Server:** The IP address of the sender's SMTP server.

- **SMTP Auth Method:** The system provides four authentication methods, **Plain**, **Login**, **CRAM-MD5** and **NTLMv1**, or **"None"** to use none of the above. Depending on which authentication method selected, enter the **Account Name**, **Password** and **Domain**.
  - **NTLMv1** is not currently available for general use.
  - **Plain** and **CRAM-MD5** are standardized authentication mechanisms while **Login** and **NTLMv1** are Microsoft proprietary mechanisms. Only **Plain** and **Login** can use the UNIX login password. Netscape uses **Plain**. Outlook and Outlook express use **Login** as default, although they can be set to use **NTLMv1**.
  - Pegasus uses **CRAM-MD5** or **Login** but which method to be used can not be configured.

11.2.2 SYSLOG

- **SYSLOG Server Settings:** There are 3 types of SYSLOG supported: **System Log**, **On-demand User Log**, and **Session Log**. Enter the IP address and Port number to specify which and from where the report should be sent to.

SYSLOG Server Settings				
System Log	IP Address:		Port :	
On-demand User Log	IP Address:		Port :	
Session Log	IP Address:		Port :	

Note:

When the number of a user's session (TCP and UDP) reaches the session limit specified in the policy, a record will be logged to this SYSLOG server.

11.2.3 FTP

- **FTP Server Settings:**

FTP Server Settings		
Session Log	IP Address:	Port :
	Server Folder:	ex: dir1/dir2
	Send Log every 1 Hour (*Note: same as "Interval of Session Log" in the Notification E-mail Settings)	
	Anonymous:	Yes / No
	FTP Setting Test:	Send Test Log

- **FTP Server Settings**

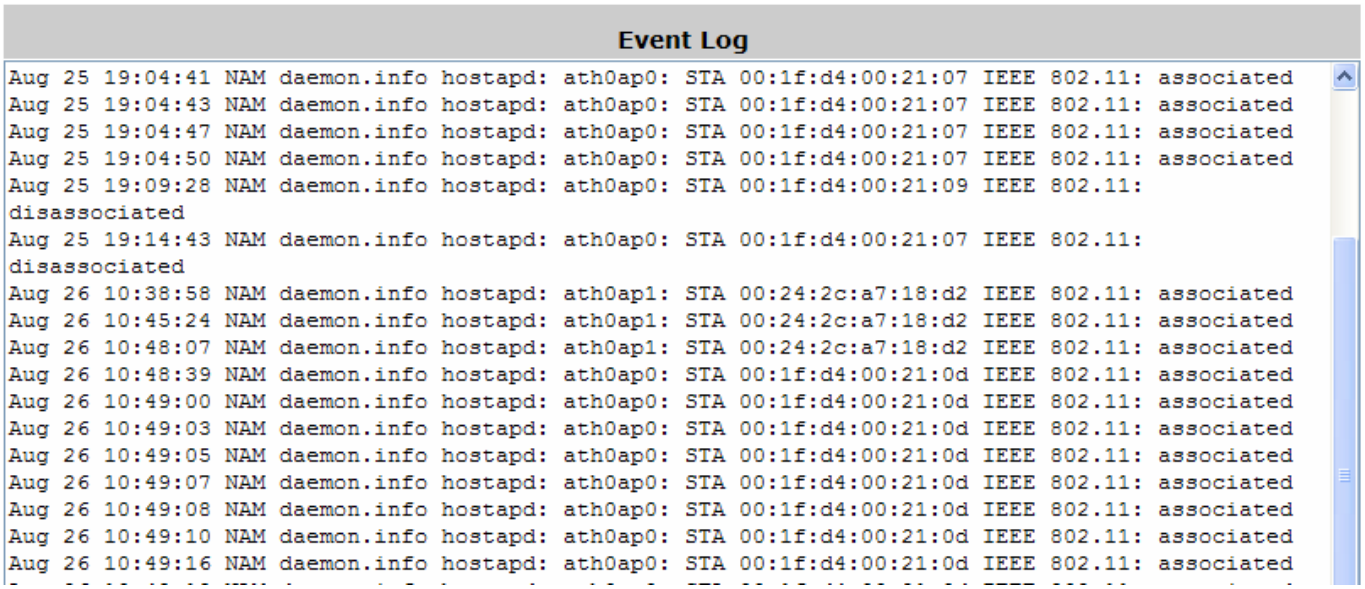
Session Log: Log each connection created by users and track the source IP/Port and

destination IP/Port. Session Log will be sent to the FTP server automatically during every defined interval in Session Log email notification. The maximum log file size is 128K. In addition, the log file also will be sent to the FTP server once the file size reaches its maximum limit.

- **IP Address/Port:** IP address and port number of FTP server.
- **Server Folder:** The folder/directory on FTP server for upload.
- **Send Log every hour:** The time interval for sending the log report.
- **Anonymous:** Enter the Username and Password for accessing your FTP Server if required.
- **FTP Setting Test:** The system will send test log to verify the FTP settings.

11.2.4 Event Log

Event Log: The Event Log provides the system activities records. The administrator can monitor the system status by checking this log.



In the log, normally, each line represents an event record which includes these fields:

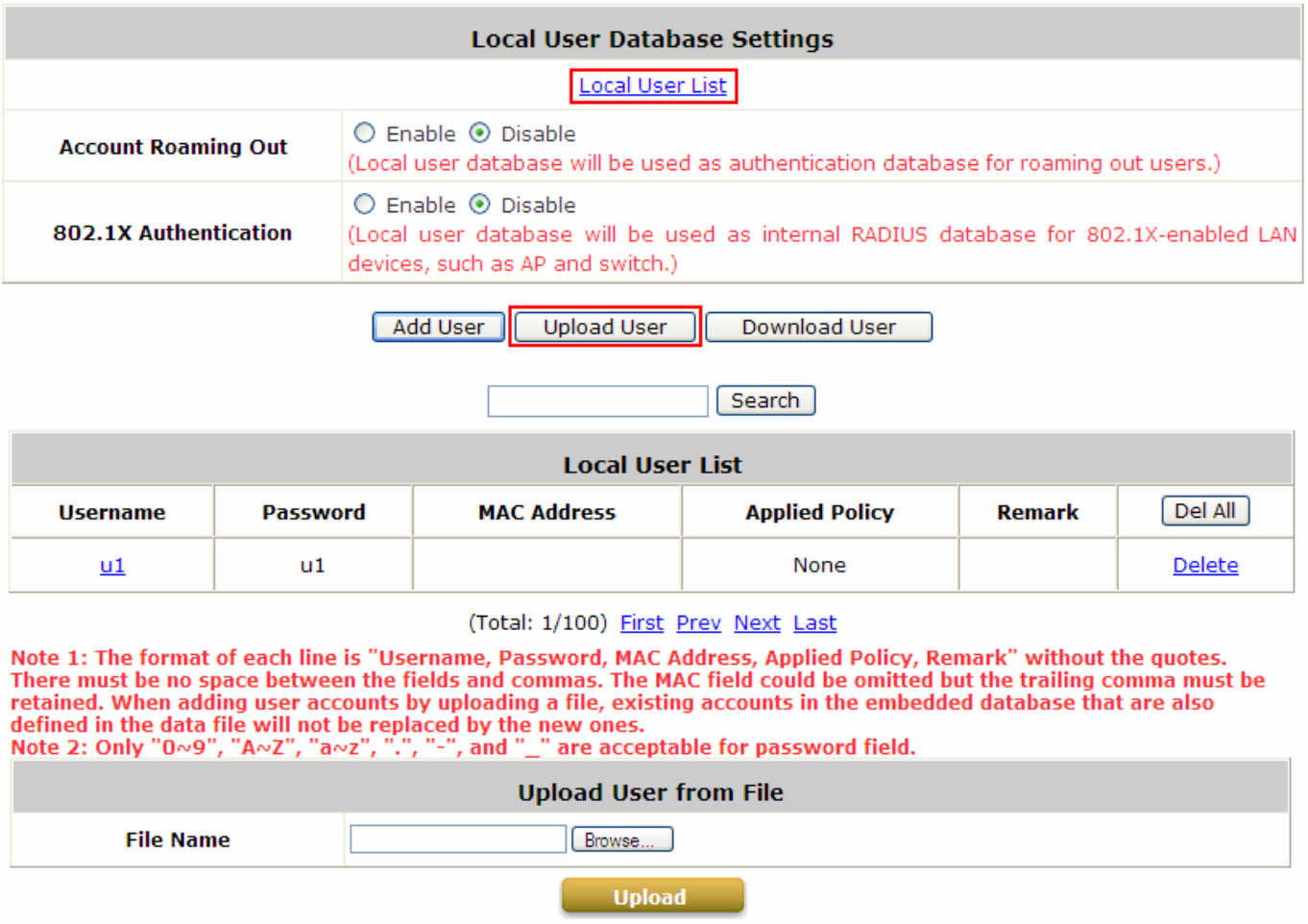
- **Date/Time:** The time & date when the event happened
- **Hostname:** Indicate which host records this event. Note that all events in this page are local event, so the hostname in this field are all the same.
- **Process name:** Indicate the event generated by the running instance.
- **Description:** Description of this event.

12 Advanced Applications

12.1 Upload/Download Local Users Accounts

To Upload / Download Local Users Accounts, go to: **Users >> Authentication,** click **Configure** button of **Local**. Or click **Quick Links >> Local User Management** from system Home page.

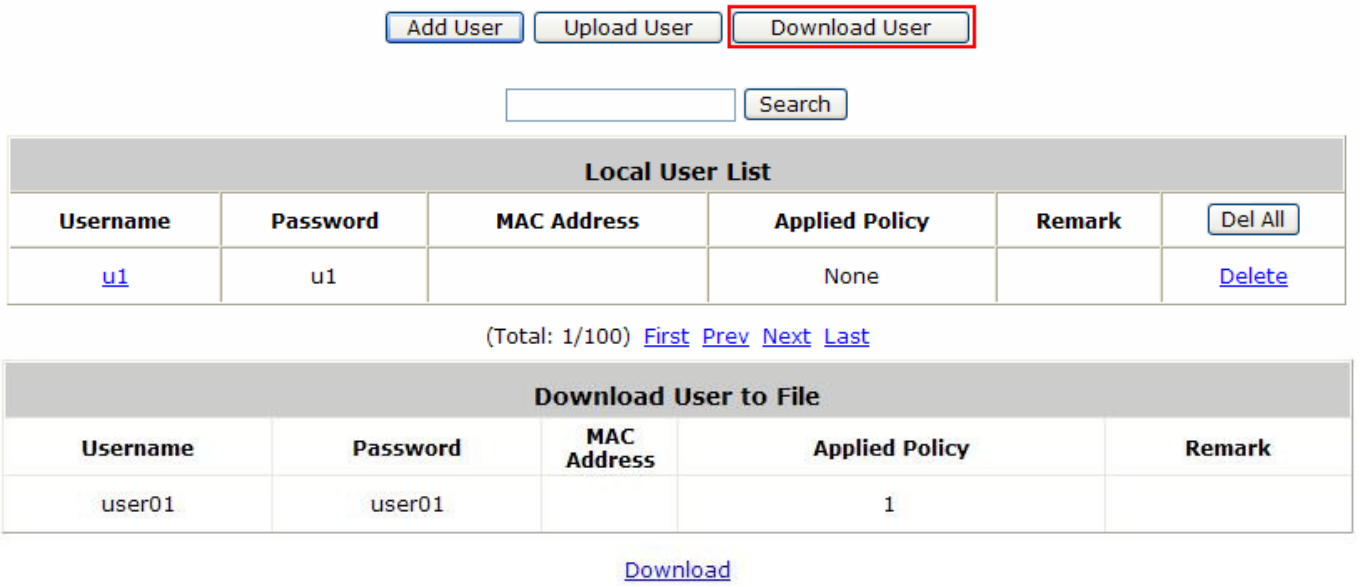
- **Upload User:** Click **Upload User** to enter the **Upload User from File** interface. Click the **Browse** button to select the text file for uploading user accounts, then click **Upload** to complete the upload process.



When uploading a file, any format error or duplicated username will terminate the uploading process and no account will be uploaded. Please correct the format in the

uploading file or delete the duplicated user account in the database, and then, try again.

- **Download User:** Use this function to create a .txt file with all **Local** user account information and then save it on disk.



12.2 RADIUS Advanced Settings

Configure RADIUS Advanced Settings, go to: **Users >> Authentication**. Click **Configure** of **RADIUS**.

➢ **Complete vs. Only ID**

For RADIUS authentication, there is an option to send the complete username with postfix or username only.

Username Format: When **Complete** option is checked, both the username and postfix will be transferred to the RADIUS server for authentication. On the other hand, when **Only ID** option is checked, only the username will be transferred to the external RADIUS server for authentication.

➢ **NAS Identifier**

System will send this value to the external RADIUS server, if the external RADIUS server needs this.

➢ **NAS Port Type**

System will send this value to the external RADIUS server, if the external RADIUS server needs this.

➢ **Class-Policy Mapping**

This function is to assign a Policy to a RADIUS class attribute sent from the RADIUS server. When the clients classified by RADIUS class attributes log into the system via the RADIUS server, each client will be mapped to its assigned Policy.

RADIUS Policy Mapping - Server 2

○ Enable ◉ Disable

No.	Class Attribute Value	policyName	Remark
1		Policy 1	
2		Policy 1	
3		Policy 1	
4		Policy 1	
5		Policy 1	

12.3 Roaming Out

Configure local user Roaming Out, go to: **Users >> Authentication,** click **configure** of **Local**.

Under certain configurations, WIAS-3200N can act as a RADIUS server for Roaming Out local user logged from other system. The Local User database will act as the RADIUS user database.

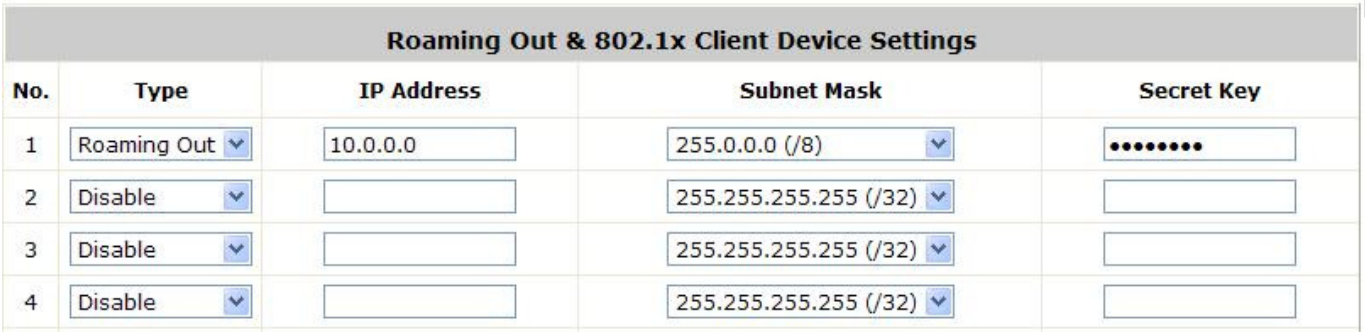
- **Account Roaming Out & 802.1X Authentication:** When Account Roaming Out is enabled; the link of Roaming Out & 802.1X Client Device Settings will be available to define the client device authorized to roam by entering the IP address, Subnet Mask, and Secret Key.

Local User Database Settings

Local User List

Account Roaming Out	◉ Enable ○ Disable (Local user database will be used as authentication database for roaming out users.)
802.1X Authentication	○ Enable ◉ Disable (Local user database will be used as internal RADIUS database for 802.1X-enabled LAN devices, such as AP and switch.)

Roaming Out & 802.1X Client Device Settings



Roaming Out & 802.1x Client Device Settings				
No.	Type	IP Address	Subnet Mask	Secret Key
1	Roaming Out	10.0.0.0	255.0.0.0 (/8)	••••••••
2	Disable		255.255.255.255 (/32)	
3	Disable		255.255.255.255 (/32)	
4	Disable		255.255.255.255 (/32)	

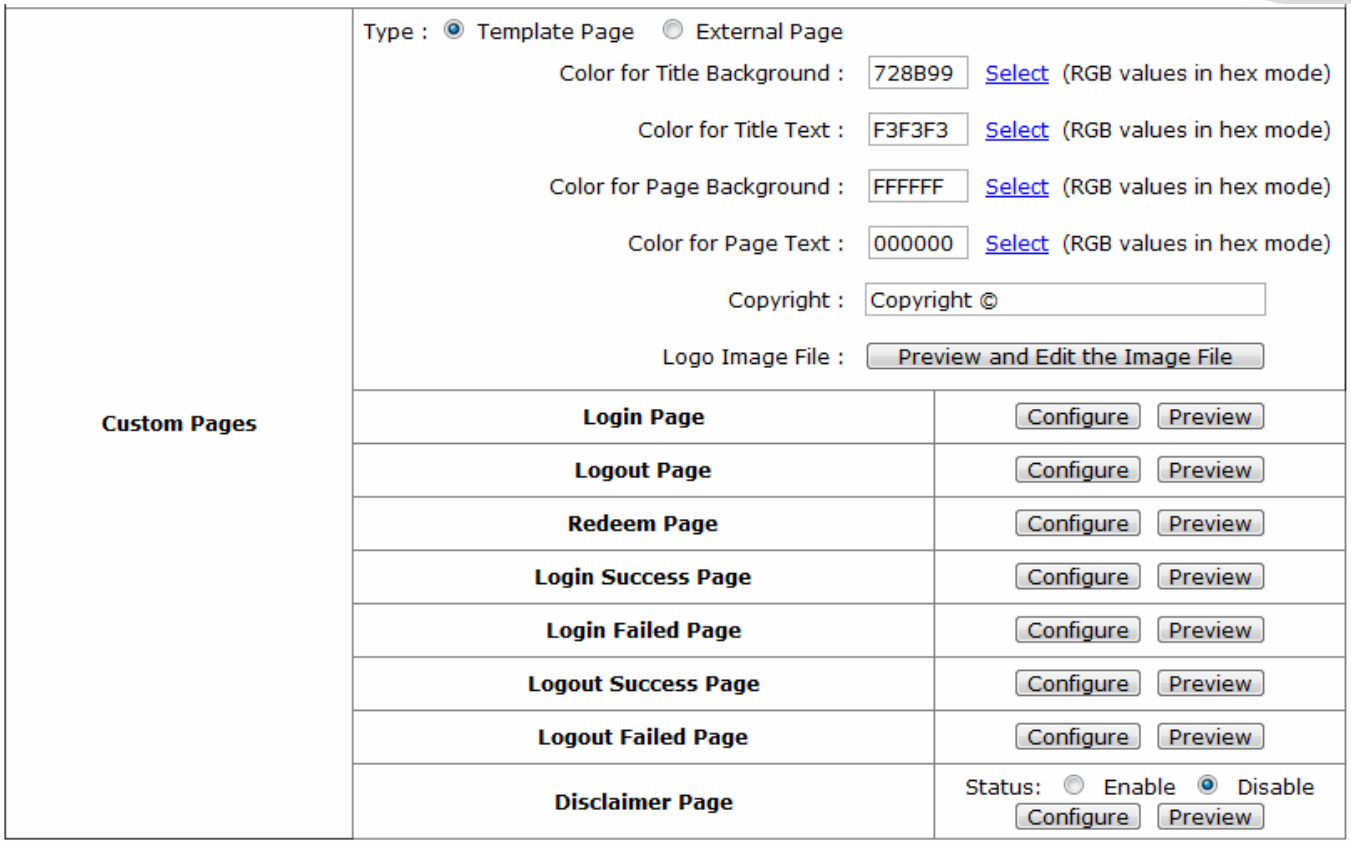
Click the hyperlink **Roaming Out & 802.1x Client Device Settings** to enter the **Roaming Out & 802.1X Client Device Settings** interface. Choose **Roaming Out** and key in the Roaming Out client's IP address and network mask and then click **Apply** to complete the settings.

In the other system, such as another WIAS-3200N, setup it's RADIUS server to this WIAS-3200N with same postfix, then the local user in this WIAS-3200N can login success from another WIAS-3200N by RADIUS authentication.

12.4 Customizable Pages

Configure Custom Pages, go to: **System >> Zone Configuration,** click **Configure** in **Public** zone.

There are several user login and logout pages that can be customized by the administrator. You can select **Template Page** or **External Page**.



- **Template Page:**
  To utilize the template user pages stored locally in the system, choose **Template Page** and configure the necessary settings as follows. Click **Select** hyperlink to pick up a color for each item and then fill in your copyright message. You can also upload a Logo image file for your template with the **Preview and Edit the Image File** button. Click the button of **Configure**, the setup page will appear for the corresponding page where you can change the text displayed as you wish. After finishing the setting, click **Preview** to see the result. If you are happy with the customized pages, click **Apply** to activated the changes made.

- **Disclaimer Page**:
- The **Disclaimer Page** is for the hotspot owner or MIS staff who want to display 'terms of use" or announcement information before the user login page. Click the button of **Configure**, the setup page will appear. An unauthorized client will receive a disclaimer page once opening the web browser. If a client select "I agree" and clicks "Next," then he or she will proceed to the User Login Page for client to login with username and password.

- **External Page:**
  Choose the **External Page** option if you wish to use user pages located on a

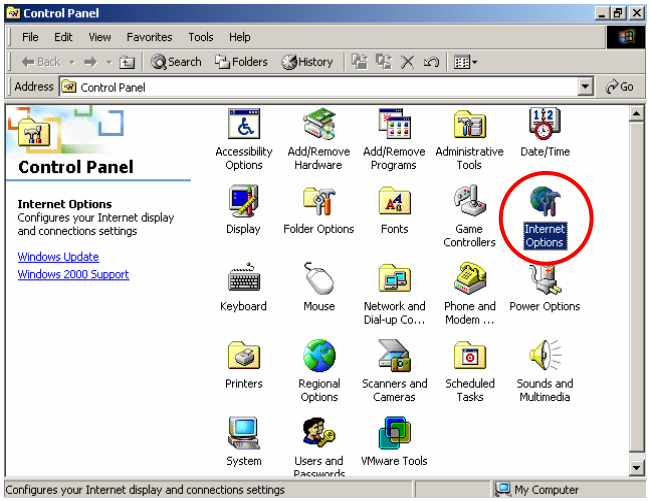
designated website. Click the button of **Configure** for each custom pages and enter the URL of its' corresponding external login page and then click **Apply**.
After applying the setting, the new login page can be previewed by clicking Preview button.

A Appendix A. Network Configuration on PC & User Login

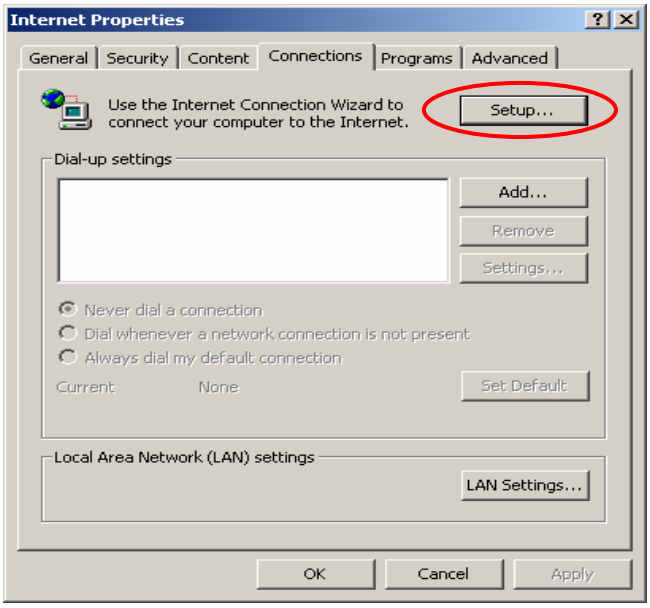
- **Network Configuration on PC**

After WIAS-3200N is installed, the following configurations must be set up on the PC: **Internet Connection Setup** and **TCP/IP Network Setup**.

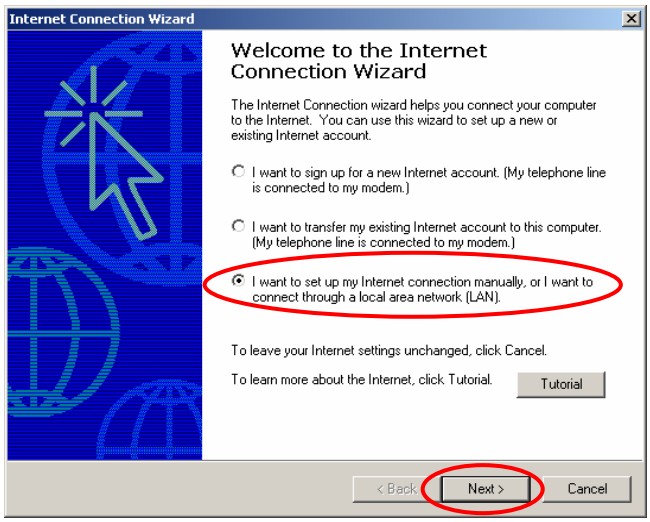
- **Internet Connection Setup**
  - **Windows 9x/2000**
    1) Choose **Start** >> **Control Panel** >> **Internet Options**.



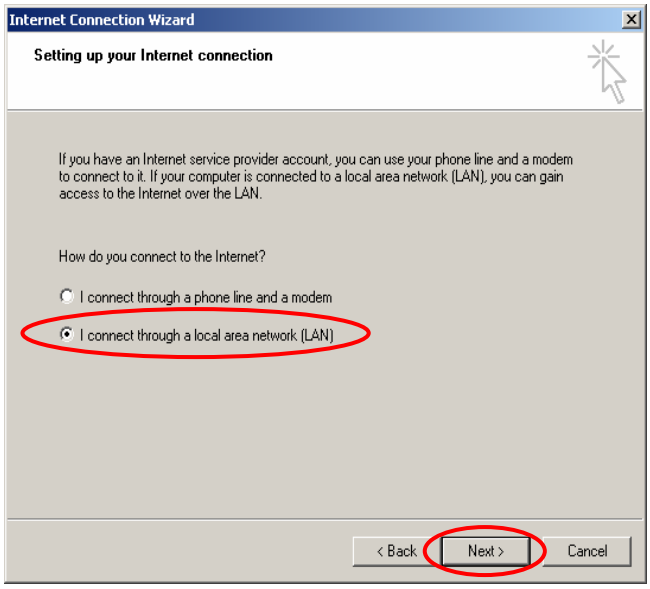
    2) Choose the **Connections** tab, and then click **Setup**.



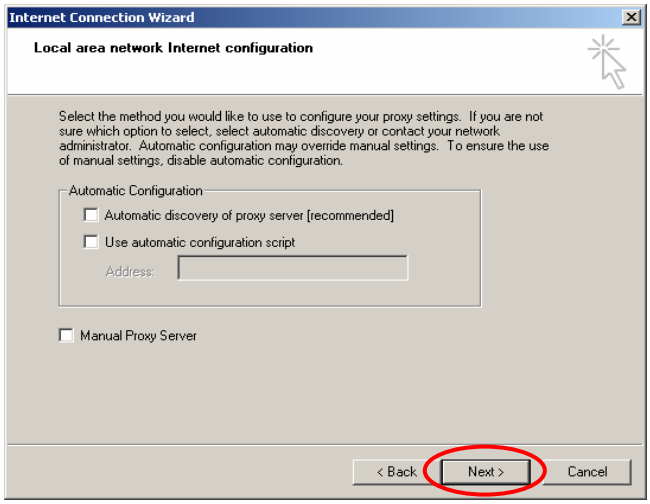
3) Choose **"I want to set up my Internet connection manually, or I want to connect through a local Area network (LAN)"**, and then click **Next**.



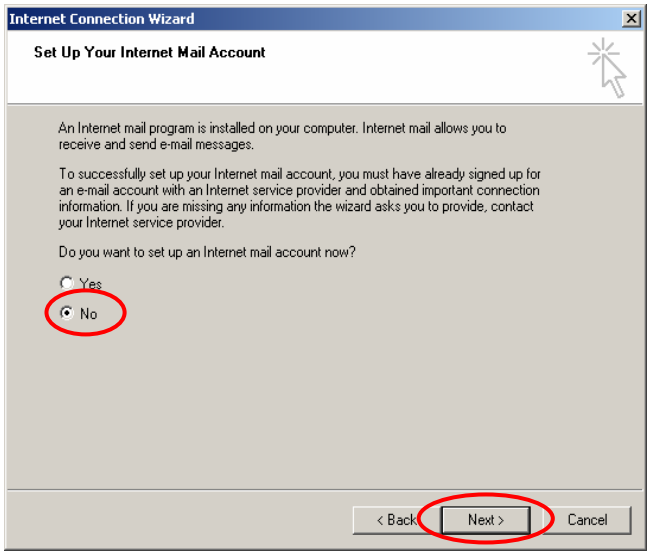
4) Choose **"I connect through a local area network (LAN)"** and then click **Next**.



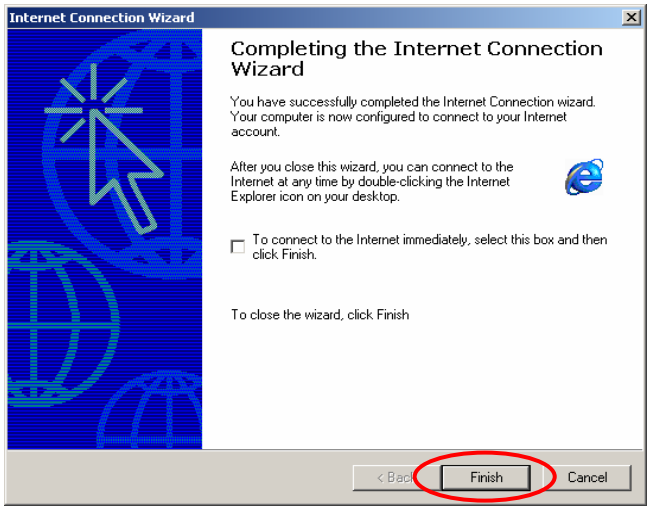
5) **DO NOT** choose any option in the following LAN window for Internet configuration, and just click **Next**.



6) Choose **"No"** and then click **Next**.

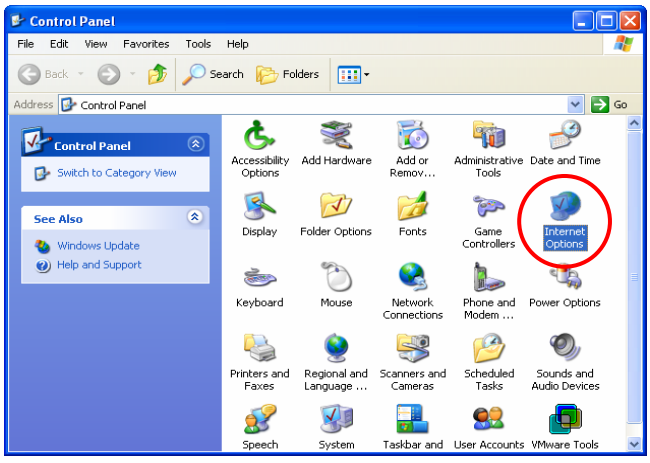


7) Finally, click **Finish** to exit the **Internet Connection Wizard**. Now, the set up is completed.

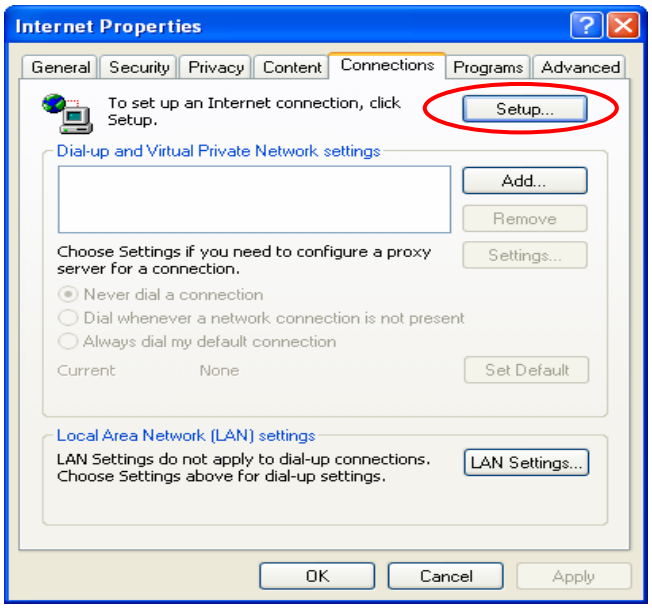


- **Windows XP**

1) Choose **Start** >> **Control Panel** >> **Internet Option**.

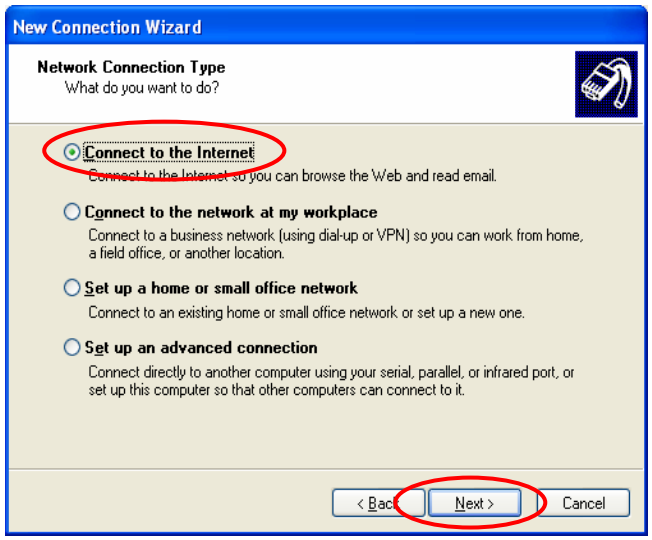


2) Choose the **Connections** tab, and then click **Setup**.

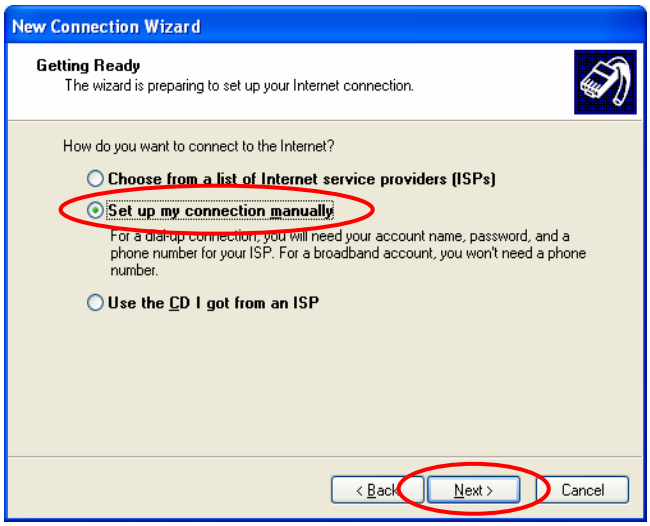


3) When the **Welcome to the New Connection Wizard** window appears, click **Next**.

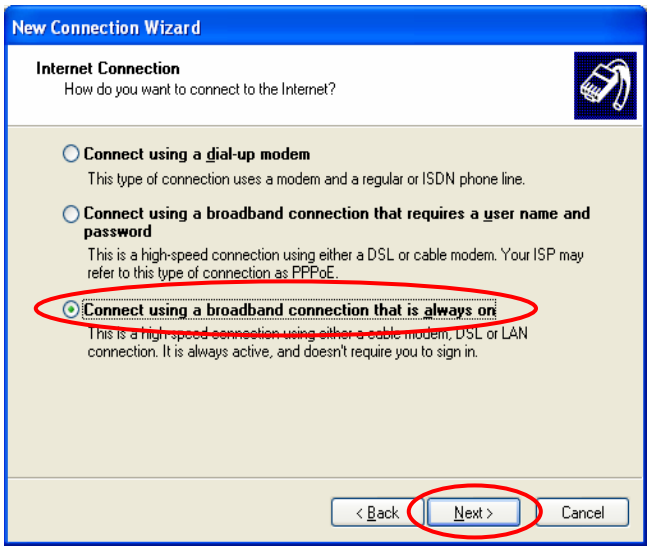
4) Choose **"Connect to the Internet"** and then click **Next**.



5) Choose **"Set up my connection manually"** and then click ***Next***.



6) Choose **"Connect using a broadband connection that is always on"** and then click ***Next***.



7) Finally, click ***Finish*** to exit the **Connection Wizard**. Now, the setup is completed.

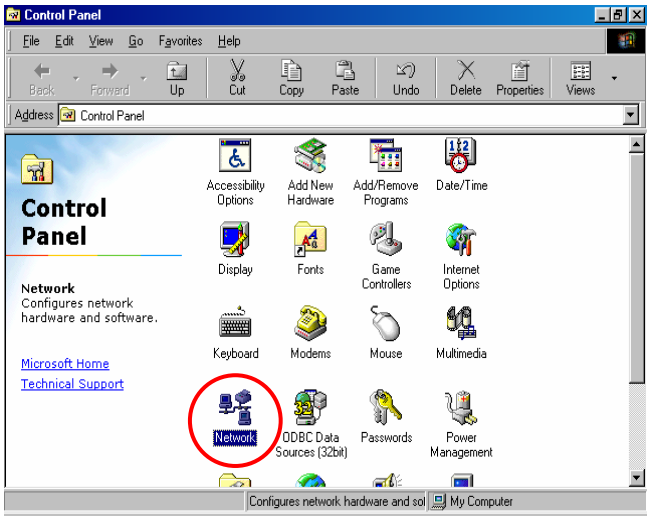
- **TCP/IP Network Setup**

If the operating system of the PC in use is Windows 95/98/ME/2000/XP, keep the default settings without any changes to directly start/restart the system. With the factory default settings, during the process of starting the system, WIAS-3200N with DHCP function will automatically assign an appropriate IP address and related information for each PC. If the Windows operating system is not a server version, the default settings of the TCP/IP will regard the PC as a DHCP client, and this function is called **"Obtain an IP address automatically"**.

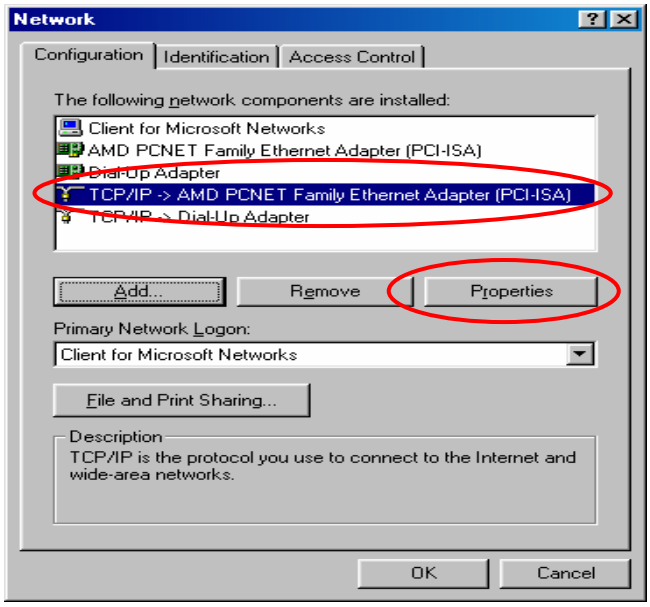
If checking the TCP/IP setup or using the static IP in the LAN1/LAN2 or LAN3/LAN4 section is desired, please follow these steps:

- **Check the TCP/IP Setup of Window 9x/ME**

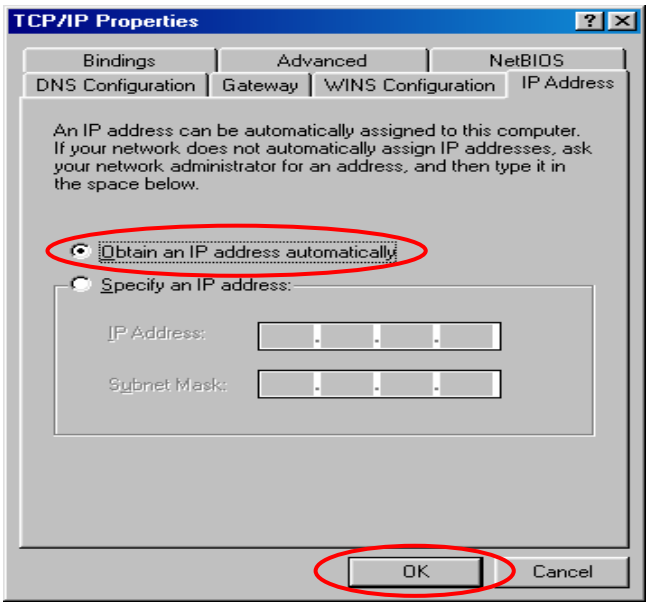
1) Choose **Start** >> **Control Panel** >> **Network**.



2) Click on the **Configuration** tab and select **"TCP/IP >> AMD PCNET Family Ethernet Adapter (PCI-ISA)"**, and then click ***Properties***. Now, you can choose to use DHCP or a specific IP address.



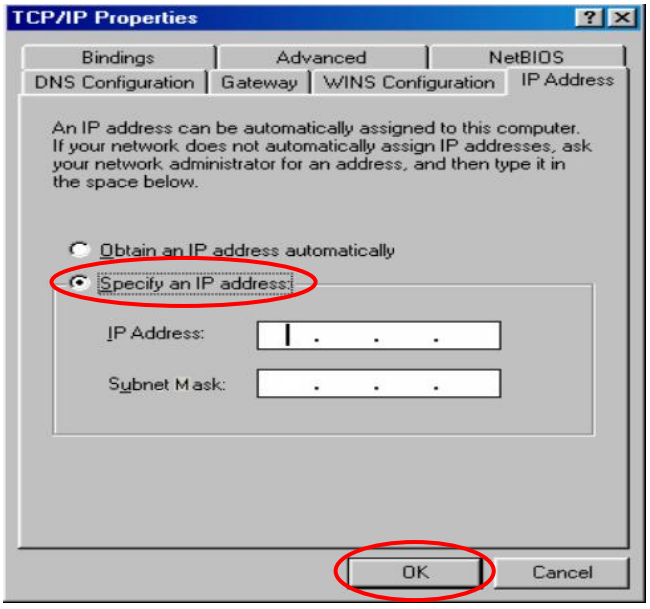
3) **Using DHCP:** If you want to use DHCP, click on the **IP Address** tab and choose **"Obtain an IP address automatically"**, and then click **OK**. This is also the default setting of Windows. Then, reboot the PC to make sure an IP address is obtained from WIAS-3200N.



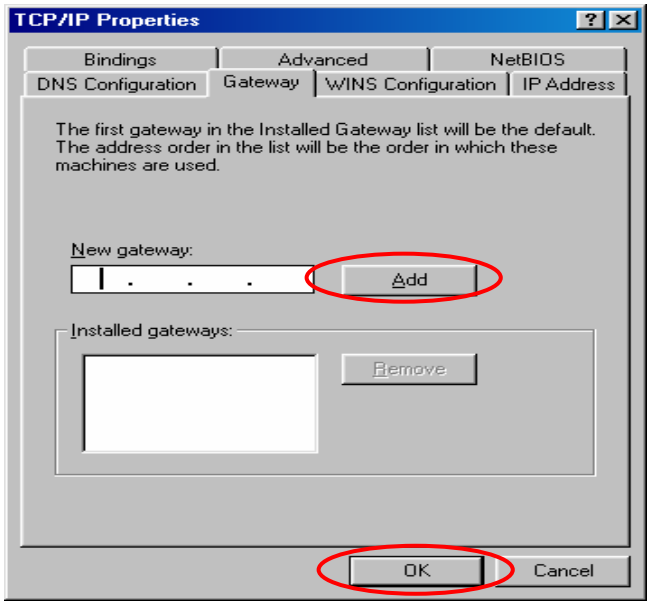
4) **Using Specific IP Address:** If you want to use a specific IP address, acquire the following information from the network administrator: the IP Address, Subnet Mask and DNS Server address provided by your ISP and the Gateway address of WIAS-3200N.

Caution:
If your PC has been set up completely, please inform the network administrator before proceeding to the following steps.

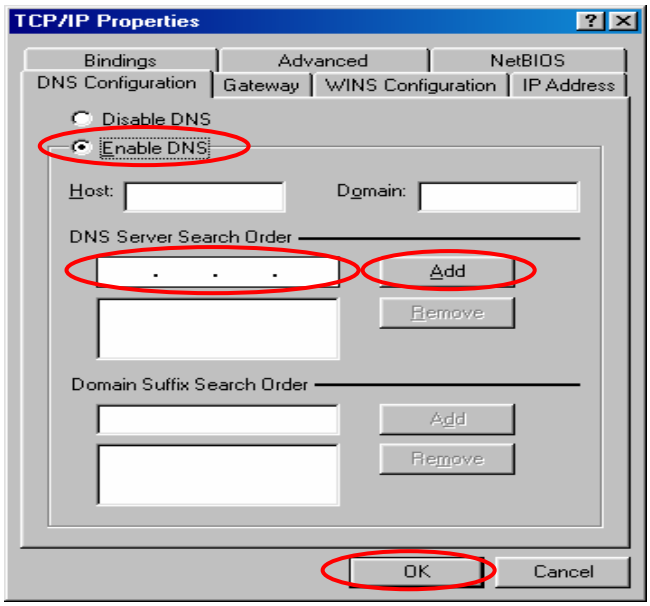
4.1) Click on the **IP Address** tab and choose **"Specify an IP address"**. Enter the IP Address, Subnet Mask and then click **OK**.



4.2) Click on the **Gateway** tab. Enter the gateway address of WIAS-3200N in the **"New gateway"** field and click **Add**. Then, click **OK**.

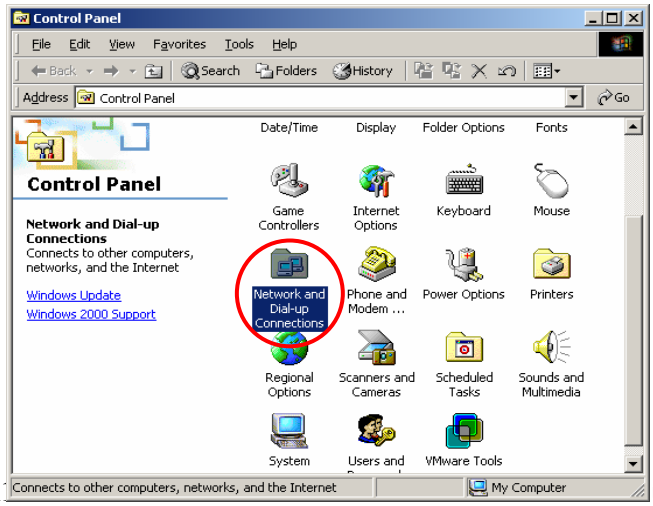


4.3) Click on **DNS Configuration** tab. If the DNS Server field is empty, select **"Enable DNS"** and enter DNS Server address. Click **Add**, and then click **OK** to complete the configuration.

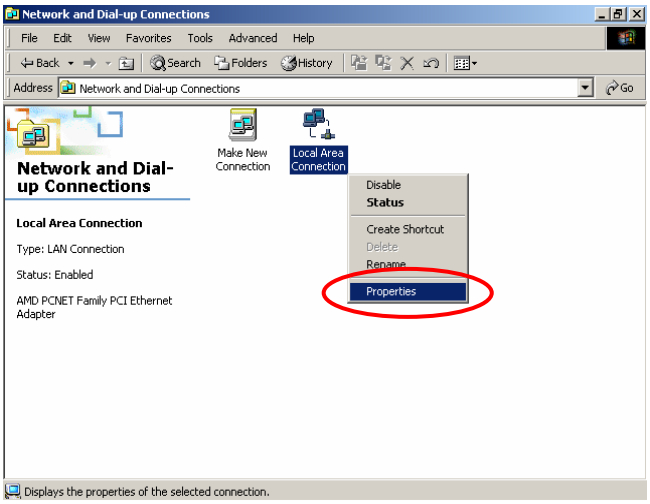


- **Check the TCP/IP Setup of Window 2000**

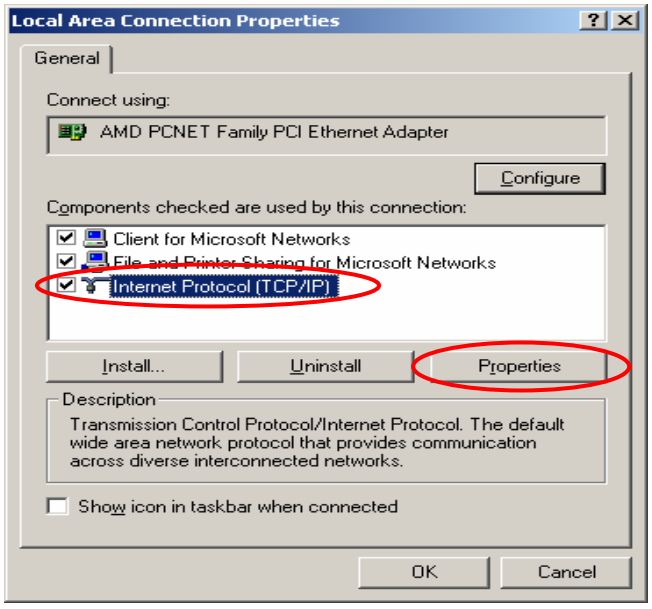
1) Select **Start** >> **Control Panel** >> **Network and Dial-up Connections**.



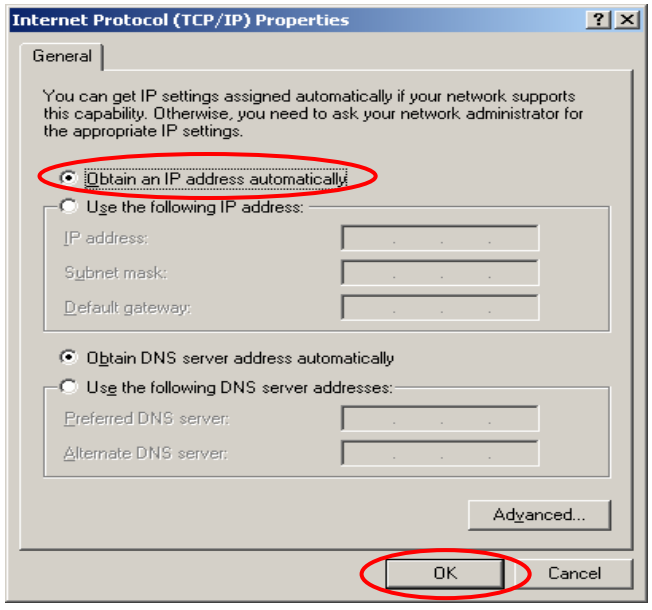
2) Right click on the **Local Area Connection** icon and select **"Properties"**.



3) Select **"Internet Protocol (TCP/IP)"** and then click **Properties**. Now, you can choose to use DHCP or a specific IP address.



4) **Using DHCP:** If you want to use DHCP, choose **"Obtain an IP address automatically"**, and then click **OK**. This is also the default setting of Windows. Then, reboot the PC to make sure an IP address is obtained from WIAS-3200N.

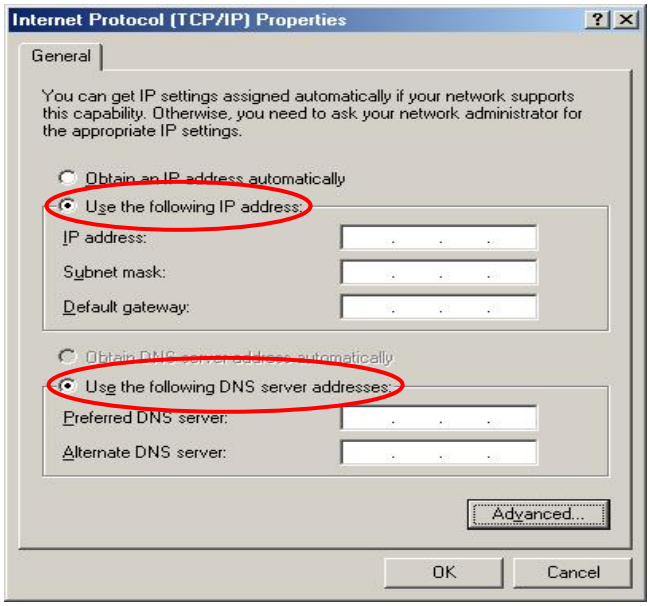


5) **Using Specific IP Address:** If you want to use a specific IP address, acquire the following information from the network administrator: the IP Address, Subnet Mask and DNS Server address provided by your ISP and the Gateway address of WIAS-3200N.

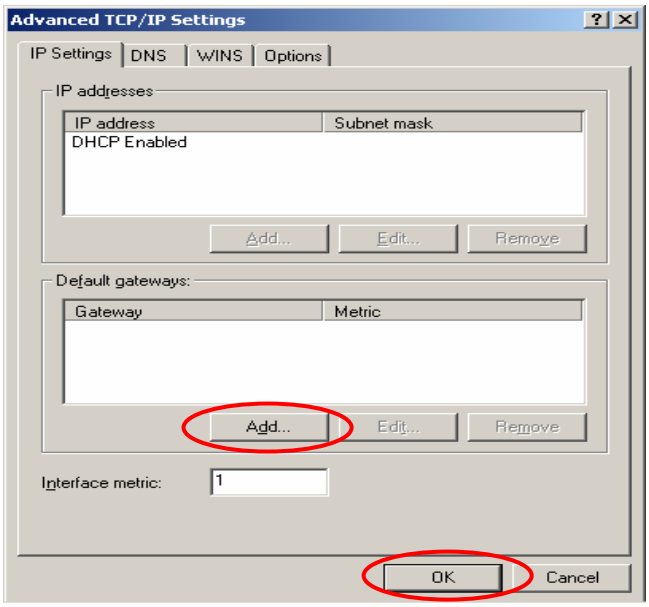
Caution:
If your PC has been set up completely, please inform the network administrator before proceeding to the following steps.

5.1) Choose **"Use the following IP address"** and enter the IP address, Subnet mask. If the DNS Server field is empty, select **"Using the following DNS server addresses"** and enter the DNS Server address. Then, click **OK**.

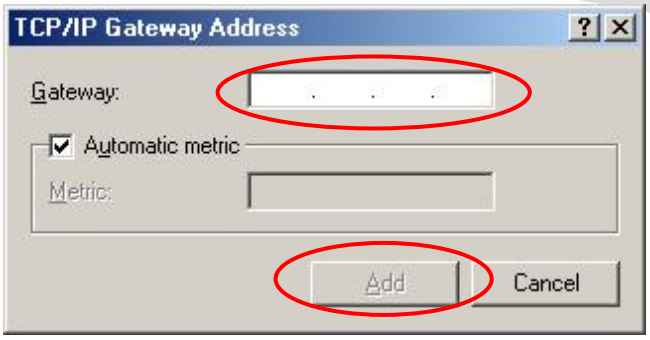
5.2) Click **Advanced** to enter the **Advanced TCP/IP Settings** window.



5.3) Click on the **IP Settings** tab and click **Add** below the **"Default gateways"** column and the **TCP/IP Gateway Address** window will appear.

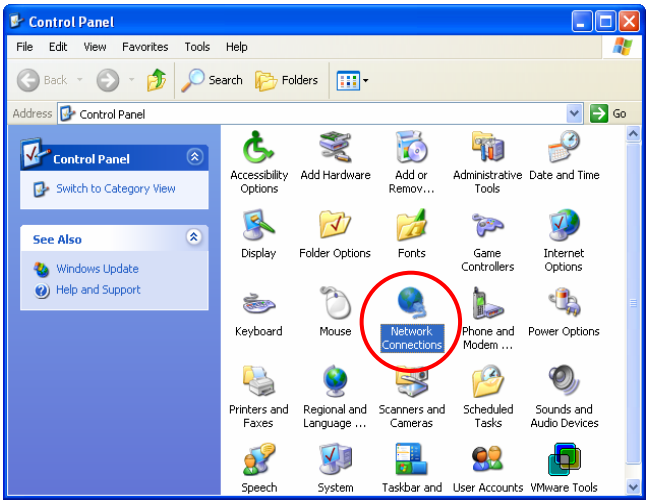


Enter the gateway address of WIAS-3200N in the **"Gateway"** field, and then click **Add**. After back to the **IP Settings** tab, click **OK** to complete the configuration.

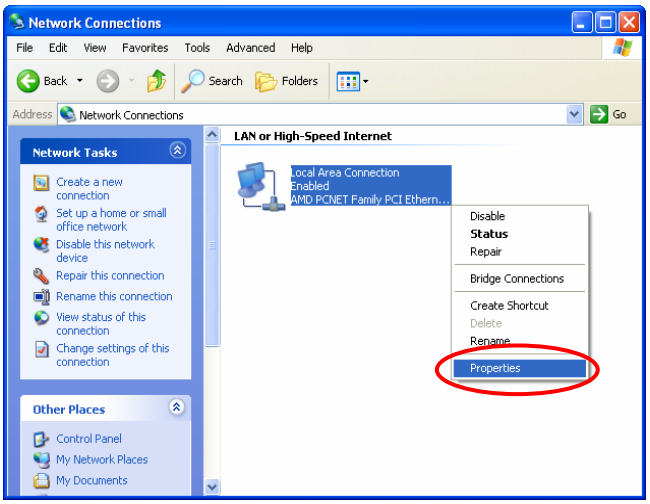


- **Check the TCP/IP Setup of Window XP**

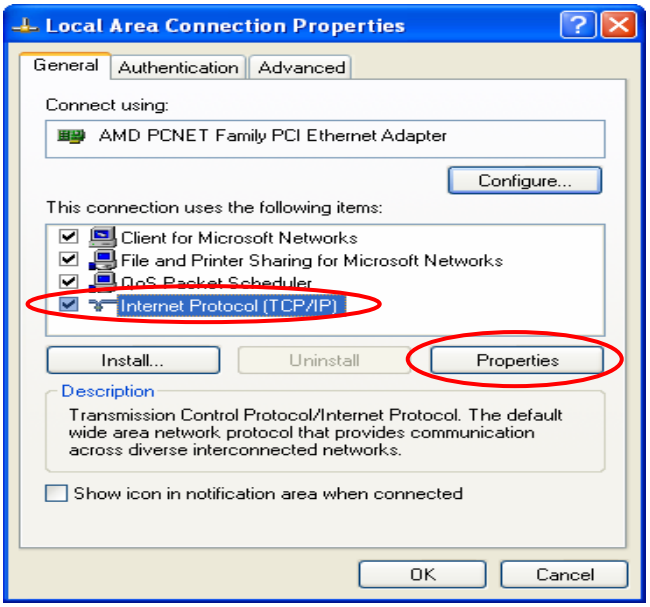
1) Select **Start** >> **Control Panel** >> **Network Connection**.



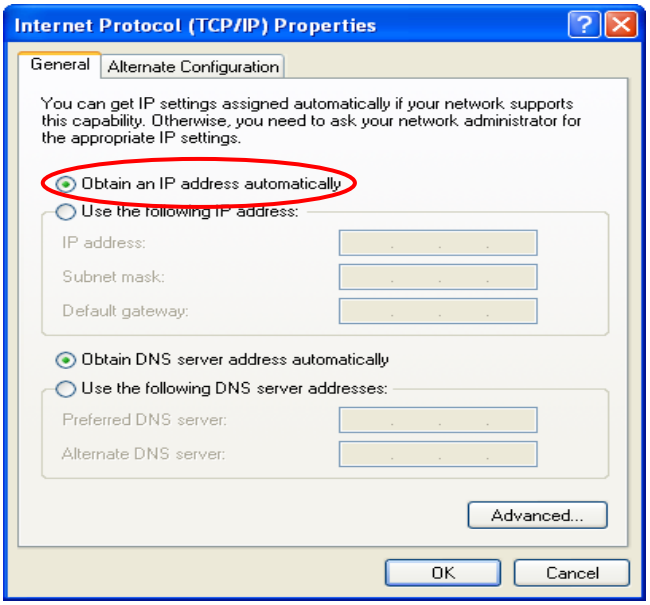
2) Right click on the **Local Area Connection** icon and select **"Properties"**.



3) Click on the **General** tab and choose **"Internet Protocol (TCP/IP)"**, and then click **Properties**. Now, you can choose to use DHCP or a specific IP address.



4) **Using DHCP:** If you want to use DHCP, choose **"Obtain an IP address automatically"** and click **OK**. This is also the default setting of Windows. Then, reboot the PC to make sure an IP address is obtained from WIAS-3200N.



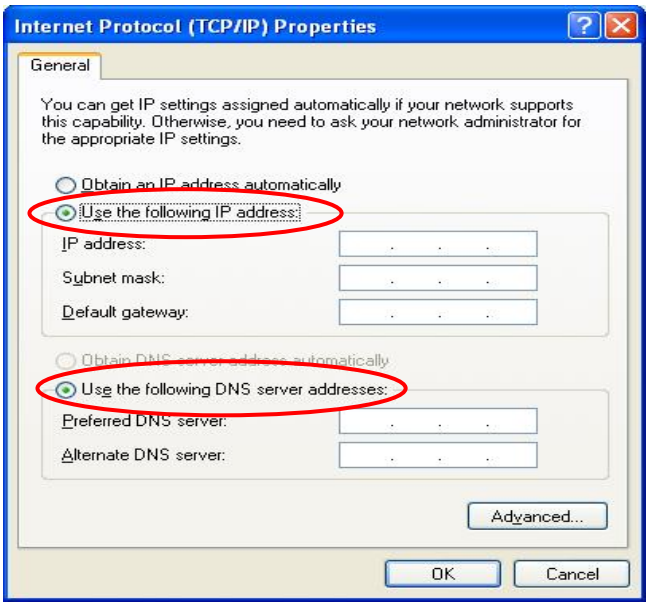
5) **Using Specific IP Address:** If you want to use a specific IP address, acquire the following information from the network administrator: the IP Address, Subnet Mask and DNS Server address provided by your ISP and the Gateway address of WIAS-3200N.

Caution:

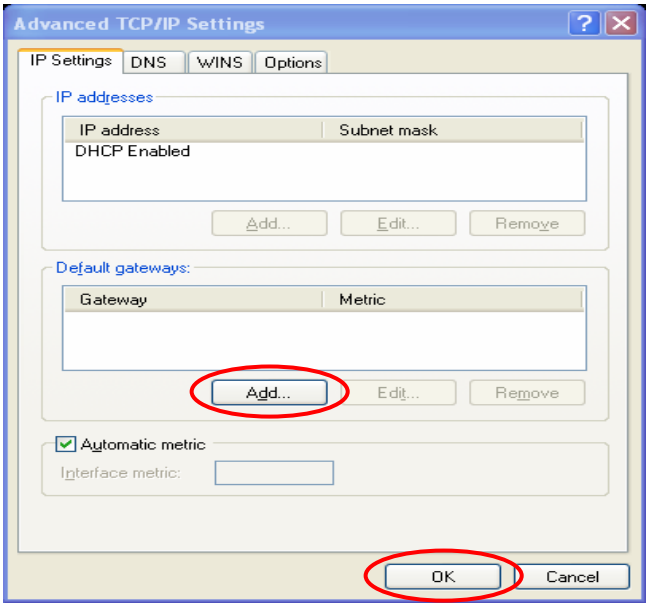
If your PC has been set up completely, please inform the network administrator before proceeding to the following steps.

5.1)Choose **"Use the following IP address"** and enter the IP address, Subnet mask. If the DNS Server field is empty, select **"Using the following DNS server addresses"** and enter the DNS Server address. Then, click **OK**.

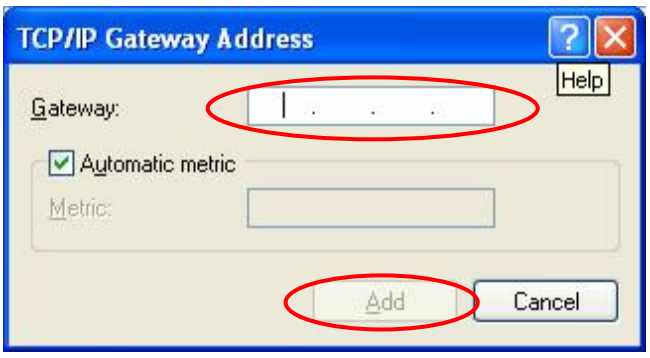
5.2)Click **Advanced** to enter the **Advanced TCP/IP Settings** window.



5.3)Click on the **IP Settings** tab and click **Add** below the **"Default gateways"** column and the **TCP/IP Gateway Address** window will appear.



5.4)Enter the gateway address of WIAS-3200N in the **"Gateway"** field, and then click **Add**. After back to the **IP Settings** tab, click **OK** to finish the configuration.



B Appendix B. Policy Priority

- **Global Policy, Authentication Policy and User Policy**

WIAS-3200N supports multiple Policies, including one **Global Policy** and 5 individual **Policy** can be assign to different **Authentication Server**. **Global Policy** is the system's universal policy and applied to all clients, while other individual Policy can be selected and defined to be applied to any Authentication Server. For some authentication, such as Local and RADIUS, user can be assigned to different Policy individually. So one user may be applied different policy at the same time. Which policy is actually applied to this user?

The Policy Priority are enforced as follows:

User Policy >> Authentication Policy >> Global Policy

Now, let us discus different user policy type:

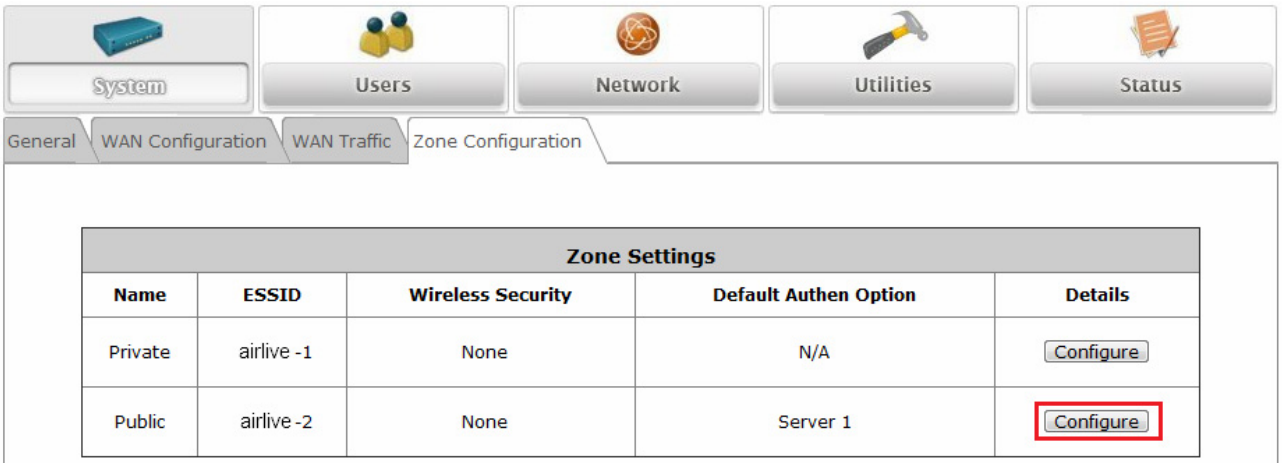
- For Local and RADIUS, the users can be assigned to different Policy individually. For example, a Local user, user01, is assigned to Policy1 and the Local Authentication is assigned to Policy2. Then user01 login to Public Zone will get Policy1. This is a common case for users that can assign Policy individually.
- For Local and RADIUS, if these users are not assigned any User Policy individually, they will be the same as other users within the same authentication server. For example, a Local user, user01, the Local Authentication is assigned to Policy3. Then user01 login to Public Zone will get Policy3. This is another common case for users that is assigned Policy by the authentication server.
- If User is not assigned a Policy individually and the authentication server is also not assigned a Policy, then the users will be applied the Global Policy. For example, a Local user, user01, is assigned to None Policy and the Local Authentication is also assigned to None Policy in User list. Then user01 logging to Public Zone will be applied with the Global Policy.

As a conclusion, the Global Policy has the lowest policy priority; on the other hand, the User Policy has the highest one.

C Appendix C. WDS Management

The Public Zone of WIAS-3200N supports up to 2 WDS links. WDS (Wireless Distribution System) is a function used to connect APs (Access Points) wirelessly to extend wireless coverage. The WDS management function of the system can help administrators to setup two WDS links.

Configure WDS, go to: **System >> Zone Configuration,** click **Configure** in **Public** zone.



WDS (Wireless Distribution System) is a function used to connect **AP**s (Access Points) wirelessly. The WDS management function of the system can help administrators to setup two WDS links.

WDS1 Settings : Public		
Basic	WDS Status :	Enable Disable
	MAC Address of Remote AP :	
Security	Security Type :	None

WDS2 Settings : Public		
Basic	WDS Status :	Enable Disable
	MAC Address of Remote AP :	
Security	Security Type :	None

- **WDS Status:** Select **Enable** to active this WDS link.
- **MAC Address of Remote AP:** Enter the MAC of the remote AP that create WDS link with WIAS-3200N.
- **Security Type:**
  - **WEP: WEP Key Length** may be 64 bits, 128 bits or 152 bits; and **WEP Key Format** can be ASCII or HEX. Lastly, enter the **WEP Key**.

  WPA-PSK: Select the preferred ciphering method, TKIP or AES and enter the **PSK / Pass-phrase**.

D Appendix D. On-demand Account Types & Billing Plan

This section explains the parameters as well as the different account types provided when editing billing plans in On-demand authentication.

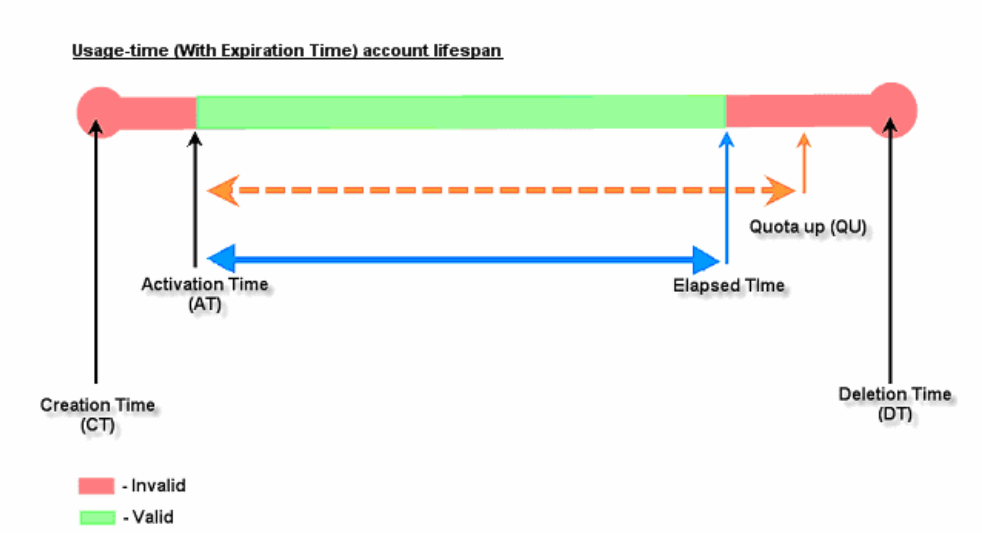
- **Usage-time with Expiration Time:** Can access internet as long as account valid with remaining quota (usable time). Need to activate the purchased account within a given time period by logging in for the first time. Ideal for short term usage. For example in coffee shops, airport terminals etc. Only deducts quota while using, however the count down to Expiration Time is continuous regardless of logging in or out. Account expires when **Valid Period** has been used up or quota depleted.
  - **Quota** is the total period of time (xx days yy hrs zz mins), during which On-demand users are allowed to access the network. The total maximum quota is “364Days 23hrs 59mins 59secs” even after redeeming.
  - **Account Activation** is the time period for which the user must execute a first login. Failure to do so in the time period set in Account Activation, the account will expire.
  - **Valid Period** is the valid time period for using. After this time period, even with remaining quota the account will still expire.
  - **Price** is the unit price of this plan.
  - **Group** will be the applied Group to users created from this plan.
  - **Reference** field allows administrator to input additional information.

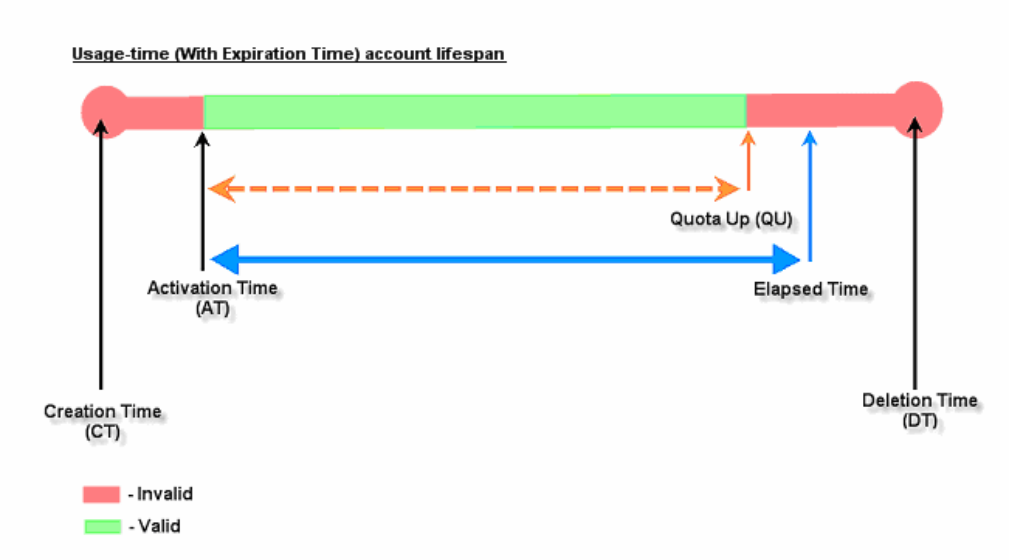
Editing Billing Plan

Plan	2
Account Type	Usage-time
Expiration Time	With Expiration Time / No Expiration Time
Quota	1 day(s) 2 hr(s) 3 min(s) *(Range of day(s) : 0 ~ 364; Range of hour(s) : 0 ~ 23; Range of min(s) : 0 ~ 59; they cannot all be zero)
Account Activation	First time login must be done within 4 day(s) 5 hour(s) *(Range of hour(s) : 0 ~ 23; they cannot both be zero)
Valid Period	After activation, account will be expired in 6 day(s) *(Must be larger than 0)
Price	7 ($) *(Range : 0 ~ 100000, including two digits after decimal point; e.g. 1.99)
Group	Group 1
Reference	

TIP:
If the Account Type is "Usage Time", Customer can access internet as long as the account is valid with remaining quota (connection time) and within the valid period.
Customer alse needs to activate the issued account within a given time period by logging in for the first time.

Apply Cancel





- **Usage-time with No Expiration Time:** Can access internet as long as account has remaining quota (usable time). Need to activate the purchased account within a given time period by logging in for the first time. Ideal for short term usage. For example in coffee shops, airport terminals etc. Only deducts quota while using. Account expires only when quota depleted.
  - **Quota** is the total period of time (xx days yy hrs zz mins), during which On-demand users are allowed to access the network. The total maximum quota is “364Days 23hrs 59mins 59secs” even after redeem.
  - **Account Activation** is the time period for which the user must execute a first login. Failure to do so in the time period set in Account Activation, the account will expire.
  - **Price** is the unit price of this plan.
  - **Group** will be the applied Group to users created from this plan.
  - **Reference field** allows administrator to input additional information.

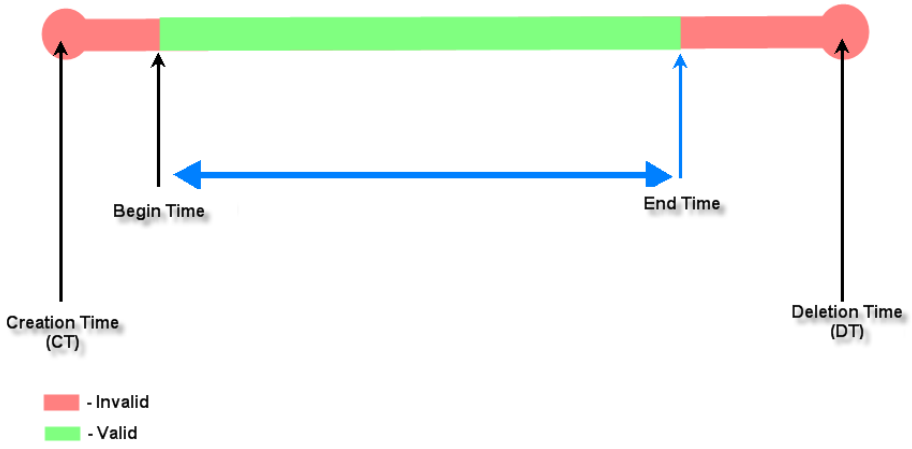
Editing Billing Plan

Plan	6
Account Type	Duration-time
Counting Method	Elapsed Time / Begin-and-end Time / Cut-off Time
Begin Time	00 : 01 , Jan 01 2010
End Time	03 : 03 , Jun 10 2014
Price	7000 ($) *(Range : 0 ~ 100000, including two digits after decimal point; e.g. 1.99)
Group	Group 1
Reference	

TIP:
When the Account Type is Duration-time, three Counting Methods may be used to decide when the account expires.
1. "Elapsed Time" specifies the time duration from account creation for which the account is valid.
2. "Cut-off Time" specifies the next cut-off time point for which the account becomes invalid.
3. "Begin and End Date Time" specifies that the account is valid between the two time points.

Apply Cancel

Duration-time (Begin-and-end Time) account lifespan



E Appendix E. External Payment Gateways

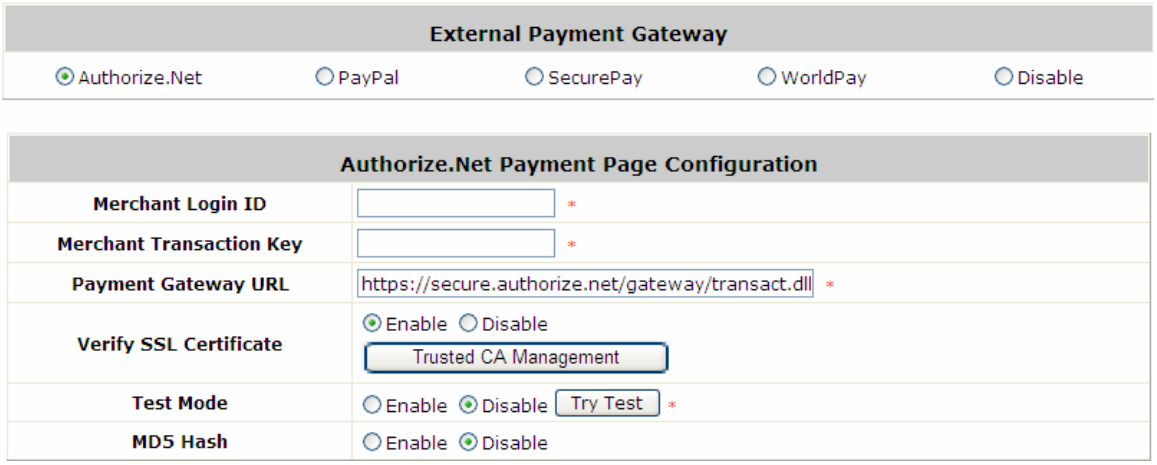
This section is to show independent Hotspot owners how to configure related settings in order to accept payments via Authorize.net, PayPal, SecurePay or WorlPay, making the Hotspot an e-commerce environment for end users to pay for and obtain Internet access with credit cards.

1. Payments via Authorize.Net

Configure Payments via Authorize.Net, go to:
Users >> Authentication >> On-demand User >> External Payment Gateway >> Authorize.Net.

Before setting up “Authorize.Net”, it is required that the merchant owners have a valid Authorize.Net account.

- **Authorize.Net Payment Page Configuration**



Merchant ID: This is the “Login ID” that comes with the Authorize.Net account
Merchant Transaction Key: The merchant transaction key is similar to a password and is used by Authorize.Net to authenticate transactions.
Payment Gateway URL: This is the default website address to post all transaction data.
Verify SSL Certificate: This is to help protect the system from accessing a website

other than Authorize.Net.

Test Mode: In this mode, merchants can post **test** transactions **for free** to check if the payment function works properly.

MD5 Hash: If transaction responses need to be encrypted by the Payment Gateway, enter and confirm a MD5 Hash Value and select a reactive mode. The MD5 Hash security feature enables merchants to verify that the results of a transaction, or transaction response, received by their server were actually sent from the Authorize.Net.

- **Service Disclaimer Content/ Choose Billing Plan for Authorize.Net Payment Page/Client's Purchasing Record**

Service Disclaimer Content

We may collect and store the following personal information:
email address, physical contact information, credit card numbers and transactional information based on your activities on the Internet service provided by us. *

Choose Billing Plan for Authorize.Net Payment Page

Plan	Enable/Disable	Quota	Price
1	○ Enable ◉ Disable	5 hr(s) 5 min(s)	0
2	○ Enable ◉ Disable		
3	○ Enable ◉ Disable	10 hr(s) 6 min(s)	9000
4	○ Enable ◉ Disable		
5	○ Enable ◉ Disable	Until 18:30	88
6	○ Enable ◉ Disable		
7	○ Enable ◉ Disable	20.73 Mbyte(s)	0.59
8	○ Enable ◉ Disable		
9	○ Enable ◉ Disable		
10	○ Enable ◉ Disable	600 Mbyte(s)	6.99

Client's Purchasing Record

Starting Invoice Number	Hotspot - 00000001 * ☐ Change the Number
Description (Item Name)	Internet Access *
E-mail Header	Enjoy Online! *

Service Disclaimer Content

View service agreements and fees for the standard payment gateway services here as well as adding new or editing services disclaimer.

Choose Billing Plan for Authorize.Net Payment Page

These 10 plans are the plans configured in **Billing Plans** page, and all previously enabled plans can be further enabled or disabled here, as

needed.

Client's Purchasing Record

- **Starting Invoice Number:** An invoice number may be provided as additional information with a transaction. The number will be incremented automatically for each following transaction. Click the "Change the Number" checkbox to change it.
- **Description (Item Name):** This is the item information to describe the product (for example, Internet Access).
- **Email Header:** Enter the information that should appear in the header of the invoice.

➢ **Authorize.Net Payment Page Fields Configuration/ Authorize.Net Payment Page Remark Content**

Authorize.Net Payment Page Fields Configuration

Item	Displayed Text	Required
☑ Credit Card Number	Credit Card Number *	☑
☑ Credit Card Expiration Date	Credit Card Expiration Date *	☑
☑ First Name	First Name *	☑
☑ Last Name	Last Name *	☑
☑ Card Type	Card Type * ☑ Visa ☑ American Express ☑ Master Card ☑ Discover	☑
☑ Card Code	Card Code *	☑
☑ E-mail	E-mail *	☐
☐ Customer ID	Room Number *	☐
☑ Company	Company *	☐
☑ Address	Address *	☐
☑ City	City *	☐
☑ State	State *	☐
☑ Zip	Zip *	☐
☑ Country	Country *	☐
☑ Phone	Phone *	☐
☑ Fax	Fax *	☐

*Displayed text fileds must be filled.

Authorizie.Net Payment Page Remark Content

```
You must fill in the correct credit card number and
expiration date. Card code is the last 3 digits of the
security code located on the back of your credit card. If
```

Authorize.Net Payment Page Fields Configuration

- **Item:** Check the box to show this item on the customer's payment interface.
- **Displayed Text:** Enter what needs to be shown for this field.

- **Required:** Check the box to indicate this item as a required field.
- **Credit Card Number:** Credit card number of the customer. The Payment Gateway will only accept card numbers that correspond to the listed card types.
- **Credit Card Expiration Date:** Expiration date of the credit card. This should be entered in the format of MMYY. For example, an expiration date of July September 2009 should be entered as 0709.
- **Card Type:** This value indicates the level of match between the Card Code entered on a transaction and the value that is on file with a customer's credit card company. A code and narrative description are provided indicating the results returned by the processor.
- **Card Code:** The three- or four-digit code assigned to a customer's credit card number (at the end of the credit card number found either on the front of the card or on the back of the card).
- **E-mail:** An email address may be provided along with the billing information of a transaction. This is the customer's email address and should contain an @ symbol.
- **Customer ID:** This is an internal identifier for a customer that may be associated with the billing information of a transaction. This field may contain any format of information.
- **First Name:** The first name of a customer associated with the billing or shipping address of a transaction. In the case when John Doe places an order, enter John in the First Name field indicating this customer's name.
- **Last Name:** The last name of a customer associated with the billing or shipping address of a transaction. In the case when John Doe places an order, enter Doe in the Last Name field indicating this customer's name.
- **Company:** The name of the company associated with the billing or shipping information entered on a given transaction.
- **Address:** The address entered either in the billing or shipping information of a given transaction.
- **City:** The city is associated with either the billing address or shipping address of a transaction.
- **State:** A state is associated with both the billing and shipping address of a transaction. This may be entered as either a two-character abbreviation or the full text name of the state.
- **Zip:** The ZIP code represents the five or nine digit postal code associated with the billing or shipping address of a transaction. This may be entered as five digits, nine digits, or five digits and four digits.
- **Country:** The country is associated with both the billing and shipping address of a transaction. This may be entered as either an abbreviation or full name.

- **Phone:** A phone number is associated with both a billing and shipping address of a transaction. Phone number information may be entered as all number or it may include parentheses or dashes to separate the area code and number.
- **Fax:** A fax number may be associated with the billing information of a transaction. This number may be entered as all number or contain parentheses and dashes to separate the area code and number.

Authorizie.Net Payment Page Remark Content

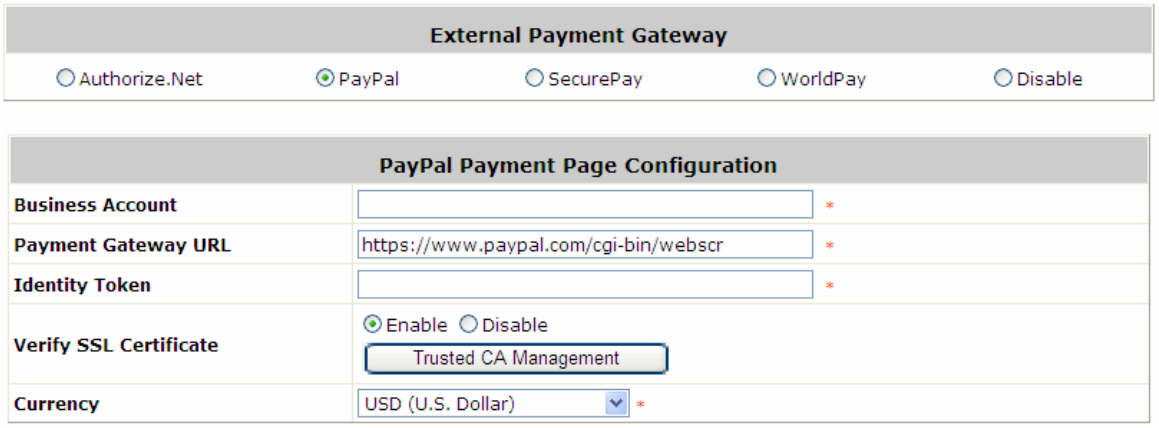
- Enter additional details for the transaction such as Tax, Freight and Duty Amounts, Tax Exempt status, and a Purchase Order Number, if applicable.

2. Payments via PayPal

Configure Payments via PayPal, go to:
User >> Authentication >> On-demand User >> External Payment Gateway >> PayPal.

Before setting up “PayPal”, it is required that the hotspot owners have a valid PayPal “Business Account”.
After opening a PayPal Business Account, the hotspot owners should find the **“Identity Token”** of this PayPal account to continue “PayPal Payment Page Configuration”.

➢ **External Payment Gateway / PayPal Payment Page Configuration**



- **Business Account:** The “Login ID” (an email address) that is associated with the PayPal Business Account.
- **Payment Gateway URL:** The default website address to post all transaction data.
- **Identity Token:** This is the key used by PayPal to validate all the transactions.
- **Verify SSL Certificate:** This is to help protect the system from accessing a

website other than PayPal

- **Currency:** The currency to be used for the payment transactions.

➢ **Service Disclaimer Content / Choose Billing Plan for PayPal Payment Page**

Service Disclaimer Content

```
We may collect and store the following personal
information:
email address, physical contact information, credit card
numbers and transactional information based on your
activities on the Internet service provided by us.
If the information you provide cannot be verified, we may
```

Choose Billing Plan for PayPal Payment Page

Plan	Enable/Disable	Quota	Price
1	Enable Disable	5 hr(s) 5 min(s)	0
2	Enable Disable		
3	Enable Disable	10 hr(s) 6 min(s)	9000
4	Enable Disable		
5	Enable Disable	Until 18:30	88
6	Enable Disable		
7	Enable Disable	20.73 Mbyte(s)	0.59
8	Enable Disable		
9	Enable Disable		
10	Enable Disable	600 Mbyte(s)	6.99

- **Service Disclaimer Content:** View the service agreement and fees for the standard payment gateway services as well as add or edit the service disclaimer content here.
- **Choose Billing Plan for PayPal Payment Page:** These 10 plans are the plans in **Billing Configuration**, and the desired plan(s) can be enabled.

➢ **Client's Purchasing Record / PayPal Payment Page Remark Content**

Client's Purchasing Record

Starting Invoice Number	Hotspot 00000001 * Change the Number
Description (Item Name)	Internet Access *
Title for Message to Seller	Special Note to Seller *

PayPal Payment Page Remark Content

```
( A )Payment is accepted via PayPal. PayPal enables you to
send payments securely online using PayPal account, a
credit card or bank account. Clicking on "Buy Now" button,
```

Client's Purchasing Record:

- **Starting Invoice Number:** An invoice number may be provided as additional information against a transaction. This is a reference field that may contain any kind of information.
- **Description:** Enter the product/service description (e.g. wireless access service).
- **Title for Message to Seller:** Enter the information that will appear in the header

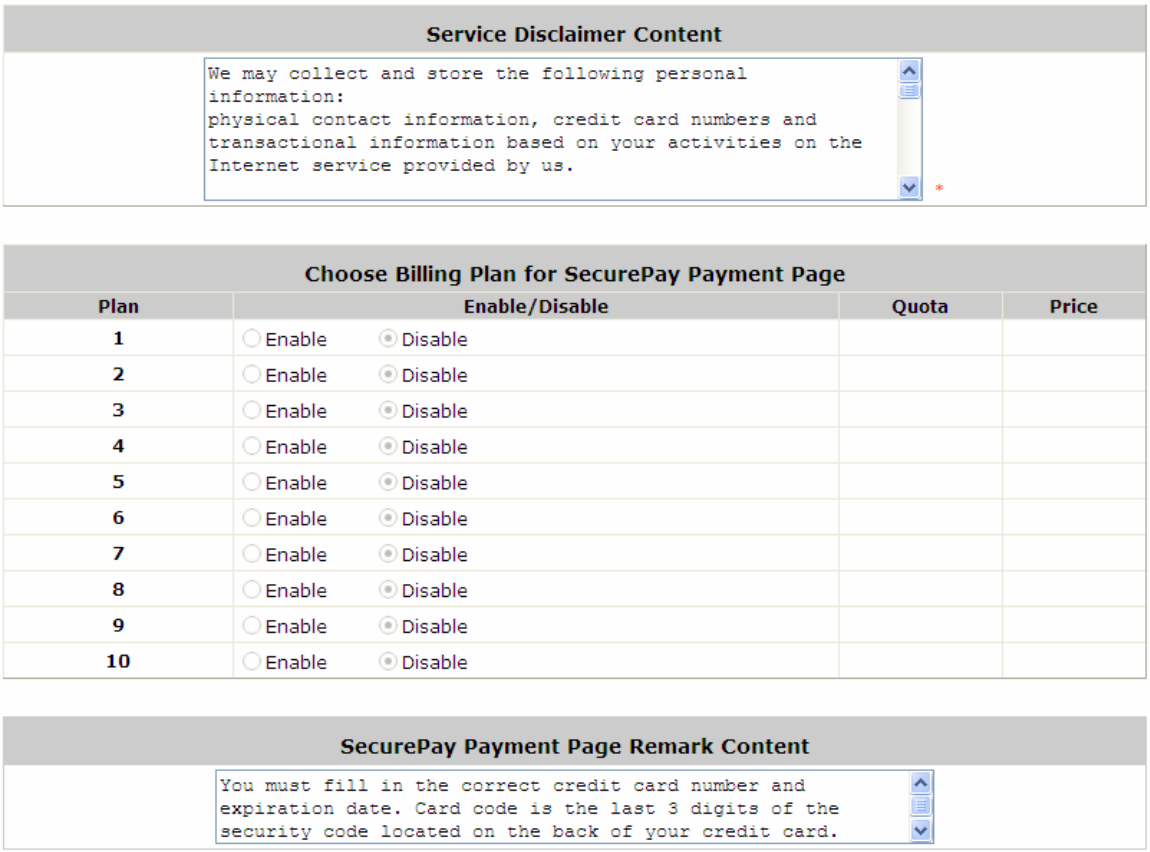
of the PayPal payment page.

PayPal Payment Page Remark Content: The message content will be displayed as a special notice to end customers in the page of “Rate Plan”. For example, it can describe the cautions for making a payment via PayPal.

3. Payments via SecurePay

Configure Payments via SecurePay, go to: **Users >> Authentication >> On-demand User>> External Payment Gateway >> SecurePay**.

Before setting up “SecurePay”, it is required that the hotspot owners have a valid SecurePay “Merchant Account” from its official website.



Service Disclaimer Content

We may collect and store the following personal information:
physical contact information, credit card numbers and transactional information based on your activities on the Internet service provided by us.

Choose Billing Plan for SecurePay Payment Page

Plan	Enable/Disable	Quota	Price
1	Enable Disable		
2	Enable Disable		
3	Enable Disable		
4	Enable Disable		
5	Enable Disable		
6	Enable Disable		
7	Enable Disable		
8	Enable Disable		
9	Enable Disable		
10	Enable Disable		

SecurePay Payment Page Remark Content

You must fill in the correct credit card number and expiration date. Card code is the last 3 digits of the security code located on the back of your credit card.

- **SecurePay Page Configuration**

  Merchant ID: The ID that is associated with the Merchant Account.

  Merchant Password: This is the key used by Secure Pay to validate all the transactions.

  Payment Gateway URL: The default website address to post all transaction data.

  Verify SSL Certificate: This is to help protect the system from accessing a website other than Secure Pay.

  Currency: The currency to be used for the payment transactions.

- **Service Disclaimer Content**

  View the service agreement and fees for the standard payment gateway services as well as add or edit the service disclaimer content here.

- **Choose Billing Plan for SecurePay Payment Page**

  These 10 plans are the plans in **Billing Configuration**, and the desired plan(s) can be enabled.

- **SecurePay Payment Page Remark Content**

  The message content will be displayed as a special notice to end customers.

4. Payments via World Pay

Configure Payments via WorldPay, go to:
Users >> Authentication >> On-demand User >> External Payment Gateway >> WorldPay.

WorldPayPaymentConfiguration	
WorldPayInstallationID	*
Payment Gateway URL	https://select.wp3.rbsworldpay.com/wcc/purchase *
Currency	GBP (Pound Sterling) *

Service Disclaimer Content
We may collect and store the following personal information: physical contact information, credit card numbers and transactional information based on your activities on the Internet service provided by us. *

WorldPayBillingConfiguration			
Plan	Enable/Disable	Quota	Price
1	Enable Disable	15 min(s) connection time quota with expiration	10.91
2	Enable Disable	11 min(s) connection time quota	1
3	Enable Disable	Valid until 12:00 the following day	5
4	Enable Disable	Valid from 2010/07/14 12:00:00 till 2010/07/14 23:59:00	1
5	Enable Disable		
6	Enable Disable		
7	Enable Disable		
8	Enable Disable		
9	Enable Disable		
10	Enable Disable		

WorldPayNoteContent
You must fill in the correct credit card number and expiration date. Card code is the last 3 digits of the security code located on the back of your credit card.

- **WorldPay Payment Configuration**
  WorldPayInstallation ID: The ID of the associated Merchant Account.
  Payment Gateway URL: The default website of posting all transaction data.
  Currency: The currency to be used for the payment transactions.
- **Service Disclaimer Content**
  View the service agreement and fees for the standard payment gateway services as well as add or edit the service disclaimer content here.
- **WorldPay Billing Configuration**
  These 10 plans are the plans in **Billing Configuration**, and the desired plan(s) can be enabled.

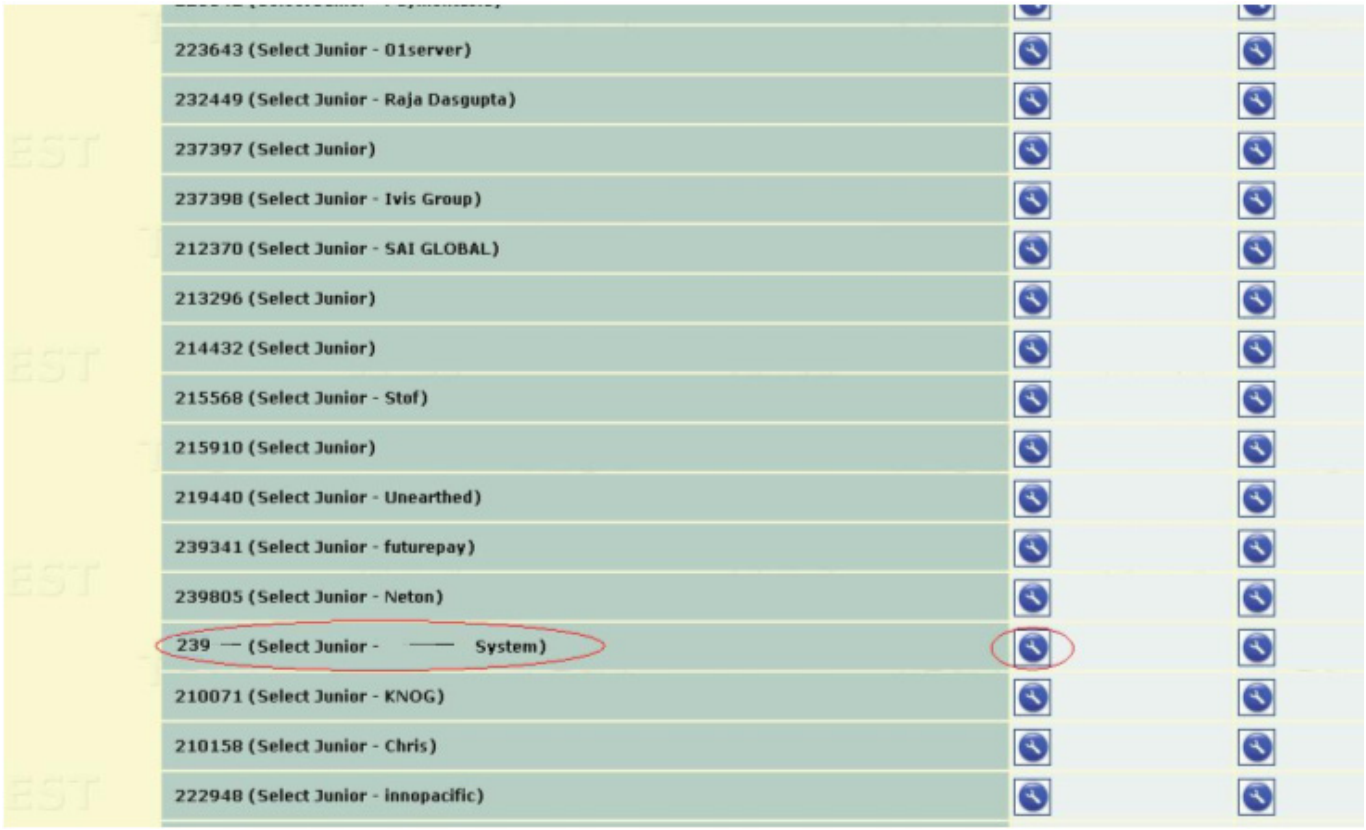
- **WorldPay Note Content**
  The message content will be displayed as a special notice to end customers.

Before setting up “WorldPay”, it is required that the hotspot owners have a valid WorldPay “Merchant Account” from its official website: RBS WorldPay: Merchant Services & Payment Processing, going to **rbsworldpay.com >> support center >> account login**.

STEP□. Log in to the Merchant Interface.
- Login url: www.rbsworldpay.com/support/index.php?page=login&c=WW
- Select Business Gateway - Formerly WorldPay
- Click Merchant Interface
- Username: user2009
- Password: user2009

STEP□. Select Installations from the left hand navigation

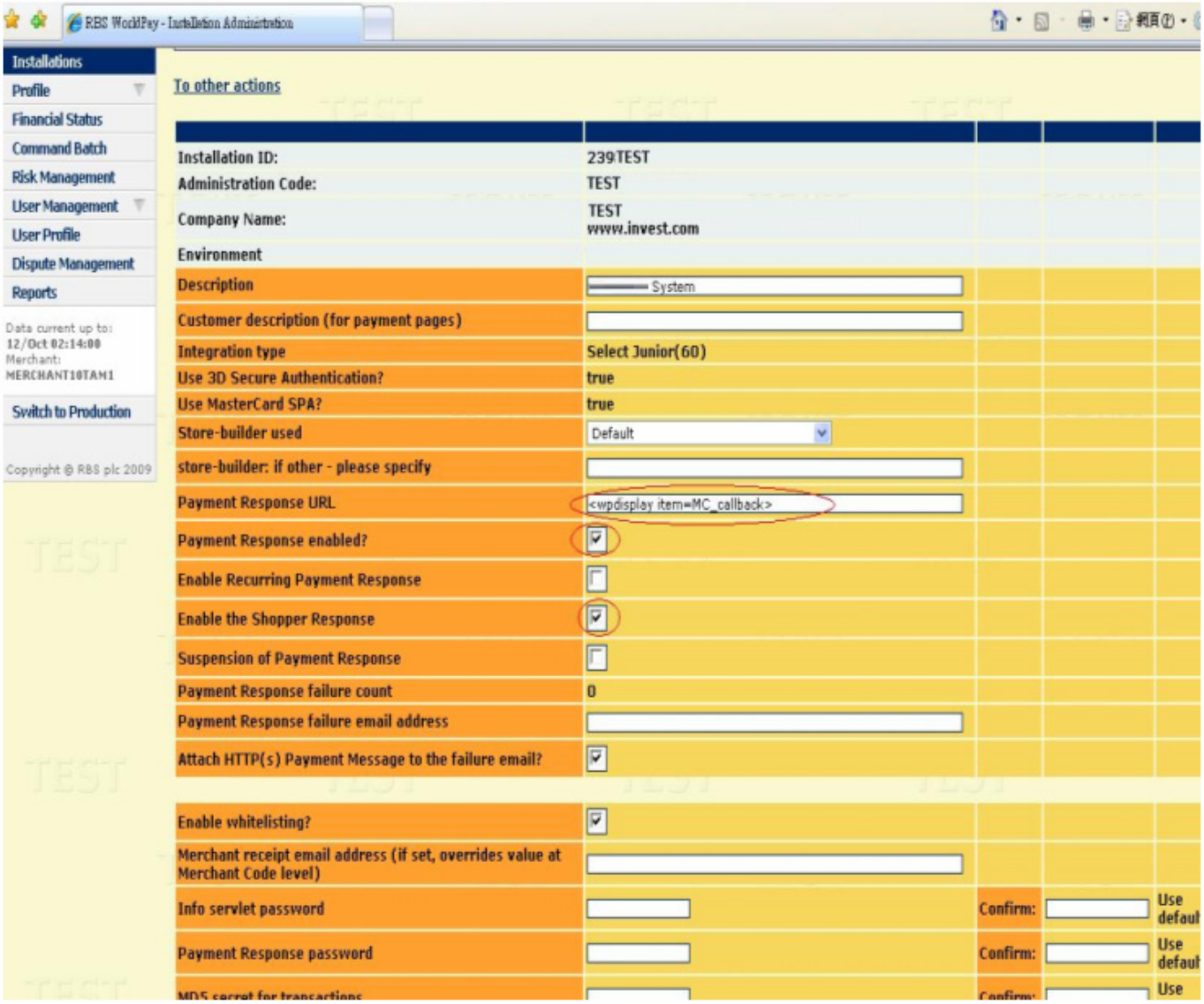
STEP□. Choose an installation and select the Integration Setup button for the specific environment.
- Installation ID: 239xxx



STEP□. Check the Enable Payment Response checkbox.

STEP□. Enter the Payment Response URL.
- URL : <wpdisplay item=MC_callback>

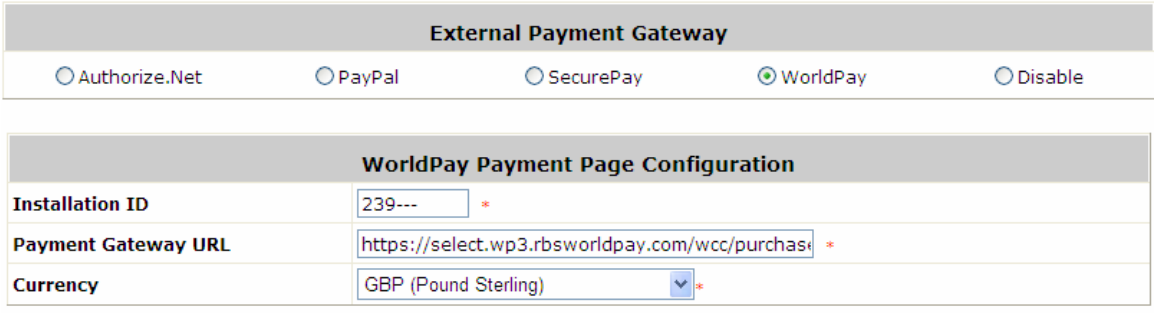
STEP□. Check the Enable the Shopper Response.



STEP□. Select the Save Changes button

STEP□. Input Installation ID and Payment Gateway URL in gateway UI.

- Installation ID: 2009test
- URL : https://select.wp3.rbsworldpay.com/wcc/purchase



Note: The WAN IP of gateway must be real IP.