Air Live®
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WIAS-3200N v2

802.11n Internet Access Server

User's Manual

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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.

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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 hotspot 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 Package Checklist

The standard package of WIAS-3200N v2 includes:

- WIAS-3200N v2 x 1
- CD-ROM (with User's Manual and QIG) x 1
- Quick Installation Guide (QIG) x 1
- Ethernet Cable x 1
- Power Adapter (DC 12V,1A) x 1
- Antenna x 2
- Ground Cable x 1

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

2 Getting Started with Easy Setup Utility

2.1 Introduce

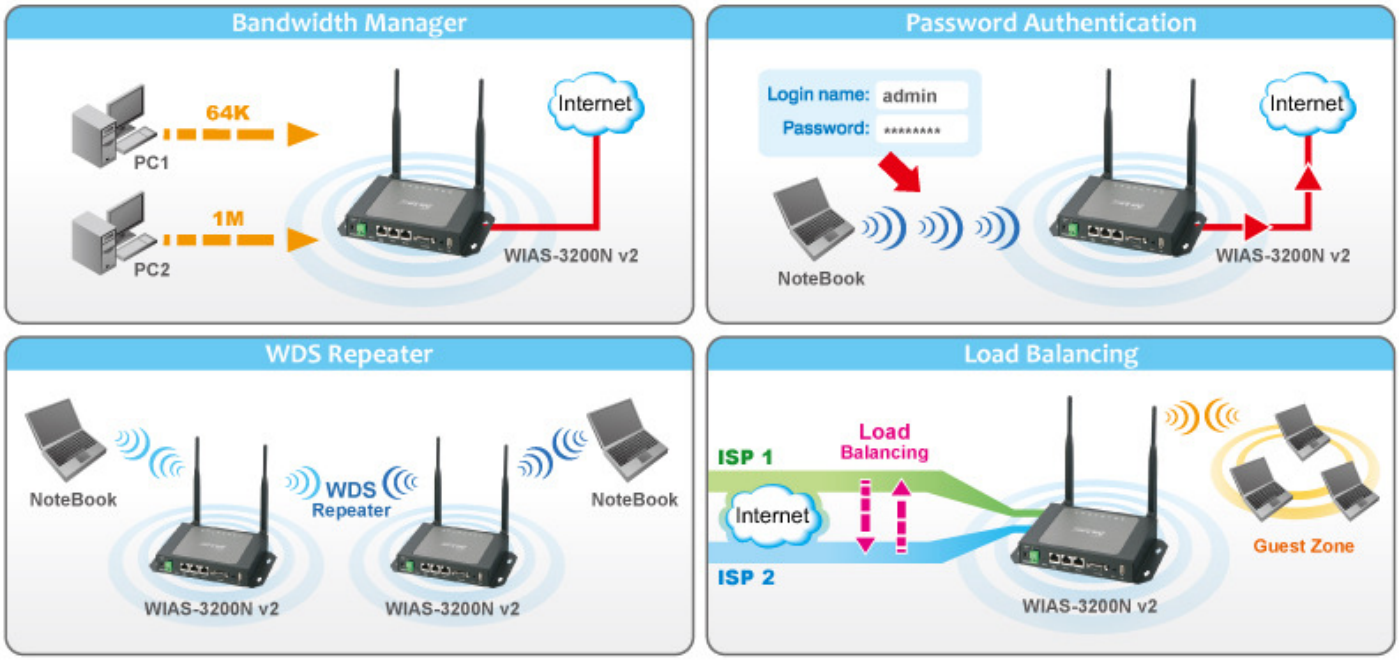
The **WIAS-3200N v2** is the most economical and feature rich **Wireless Hotspot Gateway**, targeting mini-size stores that want to provide small, single-point wireless Internet access service. WIAS-3200N v2 is a perfect choice for beginners to run hotspot businesses. It does not cost much compared to 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 v2 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, credit card gateway, traffic logs, IP sharing , Firewall, Multi-WAN and Qos etc.

One single WIAS-3200N v2 can serve up to 100 simultaneous users, takes control over authentication, authorization, accounting and routing to the Internet as well as to the operating central. Built-in AAA system allows hotspot owners set up public access services without extra RADIUS server.

WIAS-3200N v2 also brings in an extra advantage - the wall-mountable, dust-proof (IP50) metal housing.

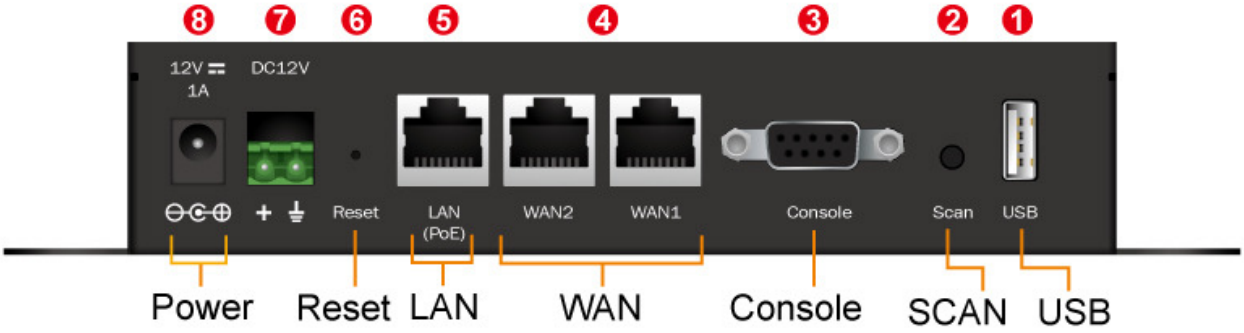
2.2 System Concept

WIAS-3200N v2 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 v2 allows users to easily pay the fee and enjoy the Internet service using credit cards through a variety of payment gateways including PayPal. Furthermore, WIAS-3200N v2 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 v2 set to manage the Internet and network access services at a hotspot venue.



2.3 Hardware Descriptions

2.3.1 Front Panel



No.	Connector	Description
1	**USB**	For future usage only.
2	**Scan Button**	There are two functions for Scan button as following. • **Scan New Channel** Press and hold the Scan button for 3 seconds until STATUS LED FLASH and release to Scan New AP's Channel.

		• **Reset to factory default** Press and hold the Scan button for more than 10 seconds until SYSTEM LED FLASH to reset the system to default configurations.
3	**Console**	Attach the RS-232 console cable here, for management use only.
4	**WAN1/WAN2**	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	**LAN (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	**STB Connector for Power Apply**	For connecting power input via STB, please refer "**Appendix H. Using STB connector for power input**" for more detail.
8	**Power Socket (12VDC/1A)**	For connecting to external power supply via the power adapter.

2.3.2 Rear Panel

Connector	Description
Antenna Connector	Attach antennas here. WIAS-3200N v2 supports 1 RF interface with 2 SMA connectors.

2.3.3 Top LED Panel

No.	Connector	Description
1	**Power**	LED ON indicates power on; OFF indicates power off.
2	**LAN**	LED ON indicates LAN connection; OFF indicates no connection; BLINKING indicates transmitting data.
3	**WAN2**	LED ON indicates WAN connection; OFF indicates disconnection; BLINKING indicates transmitting data.
4	**WAN1**	
5	**WLAN**	LED ON indicates wireless ready.
6	**PRINT**	LED ON thermal ticket printer is ready.
7	**SYSTEM**	LED ON/FLASH indicates Flash busy, OFF indicates Flash Idle
8	**Status**	LED ON indicates System up, OFF indicates down, FLASH indicates Scan button activated.

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 v2:

Please follow the steps mentioned below to install the hardware of WIAS-3200N v2:

Step 1. Place the WIAS-3200N v2 at a best location.

The best location for WIAS-3200N v2 is usually at the center of your wireless network.

Step 2. Connect WIAS-3200N v2 to your outbound network device.

Connect one end of the **Ethernet cable** to the WAN port of WIAS-3200N v2 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.

Step 3. Connect WIAS-3200N v2 to your network device.

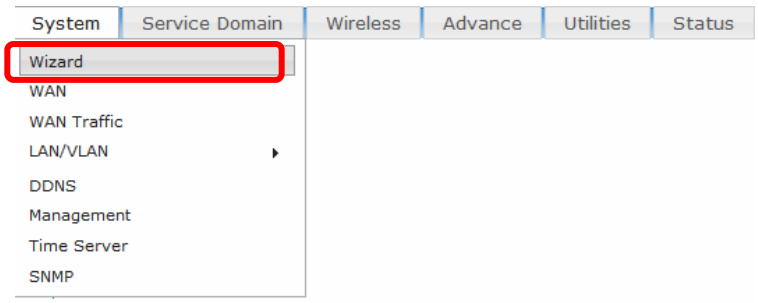
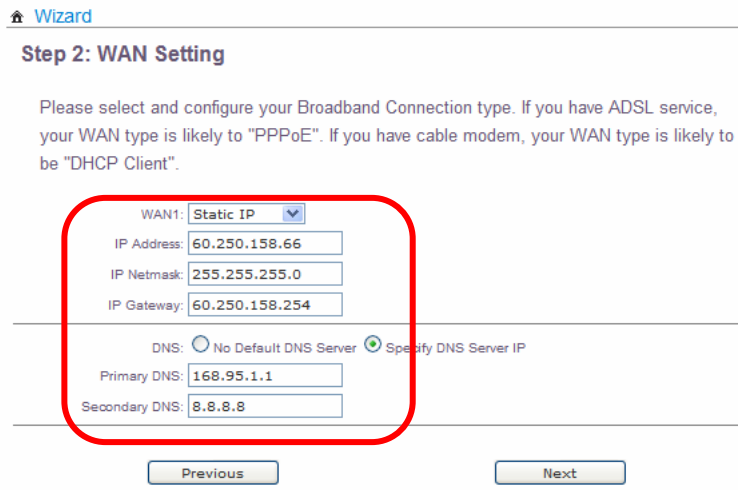
Connect one end of the **Ethernet cable** to the LAN port of WIAS-3200N v2 on the front panel. Connect the other end of the cable to a PC for configuring the system. The LAN LED indicator should be ON to indicate a proper connection.

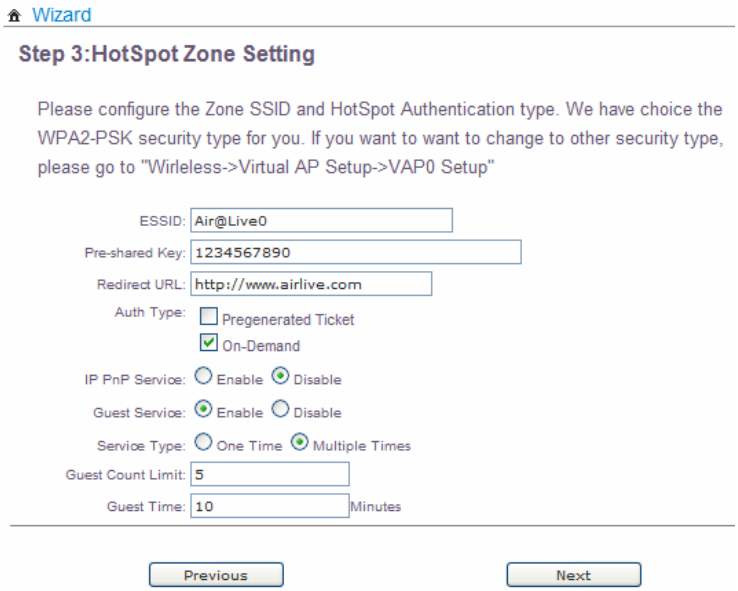
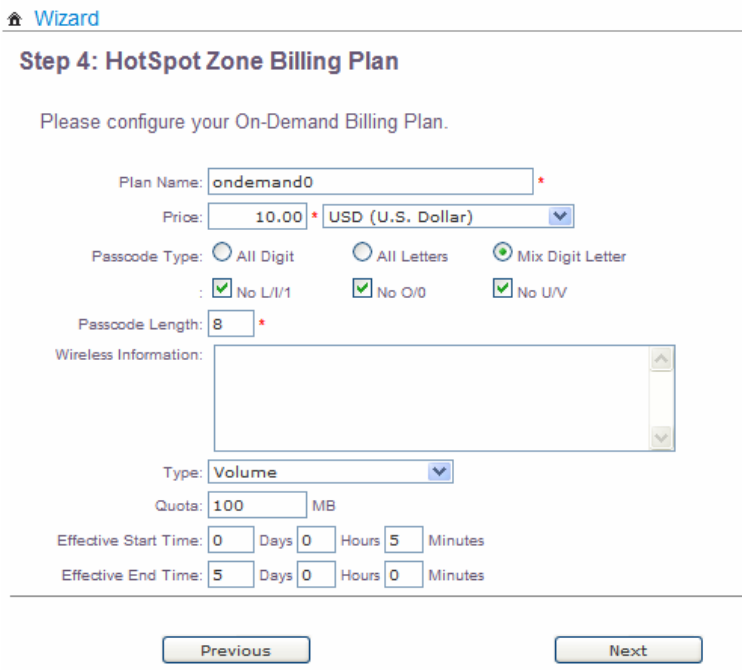
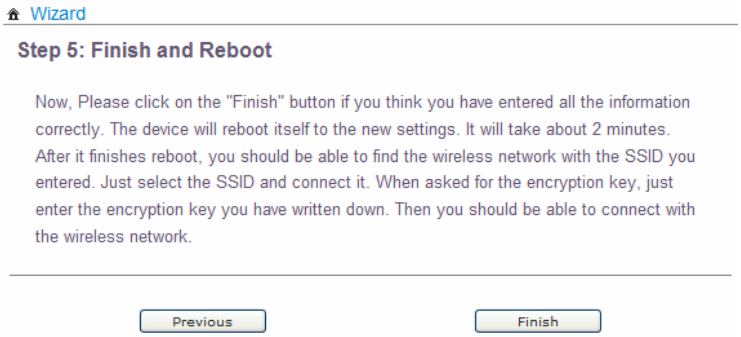
1. There are two ways to supply power over to WIAS-3200N v2.
   (a) Connect the DC power adapter to the WIAS-3200N v2 power socket on the front panel.
   (b) WIAS-3200N v2 is capable of transmitting DC current via its WAN PoE port. Connect an IEEE 802.3af-compliant PSE device, e.g. a PoE-switch, to the WAN port of WIAS-3200N v2 with the Ethernet cable.
2. *Now, the hardware installation is completed.*

***Caution!!** **Please only use the power adapter supplied with the WIAS-3200N v2 package. Using a different power adapter may damage this system.**

***Caution!!** To double verify the wired connection between WIAS-3200N v2 and your switch/router/hub, please check the LED status indication of these network devices.

2.6 Easy Setup

Web UI Wizard	
Please click the **System** > **Wizard** to start the setup wizard.	
Step 1. Select Internet Interface Please select what internet connection you have, and then click "**Next**" to continue.	
Step 2. WAN Setting Configure your WAN connection type, and then click "**Next**" to continue.	

Step 3. Hotspot Zone Setting Please configure the Zone SSID and Hotspot Authentication type. We have choice the WPA2-PSK security type for you. If you want to want to change to other security type, please go to "**Wireless** > **Virtual AP Setup** >**VAP0 Setup**". And, then click "**Next**" to continue.	
Step 4. **Hotspot Zone Billing Plan** Please configure your On-Demand Billing Plan, and then click "**Next**" to continue.	
Step 5. Finish and Reboot Please click on the "Finish" button if you have entered all the information correctly. It will take about 2 minutes to reboot. After reboot, you will use the SSID you entered, and please select the SSID and connect it.	

2.7 Access Web Management Interface

When Hotspot mode is activated, the system can be configured as a Wireless Hotspot Gateway. This section provides information in configuring the Hotspot mode with graphical illustrations. WIAS-3200N v2 provides functions as stated below where they can be configured via a user-friendly web based interface.

System	Service Domain	Wireless	Advanced	Utilities	Status
WAN	Service Domain	General Setup	DMZ	Profile Setting	Overview
WAN Traffic	Authentication	Advanced Setup	IP Filter	Firmware Upgrade	Extra Info
LAN/VLAN	Privilege List	Virtual AP Setup	MAC Filter	Network Utility	Event Log
DDNS	Walled Garden	Associated Clients	Virtual Server	Format Database	
Management	Notification	WDS Status	Time Policy	Reboot	
Time Server	Online Users				
SNMP	Log Info				

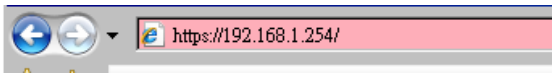
***Note:** After finishing the configuration of the settings, please click **Save** button and pay attention to see if a **Reboot** message appears on the screen. If such message appears, system must be restarted to allow the settings to take effect. All online users will be disconnected during restart.

WIAS-3200N v2 supports Web Management Interface (WMI) configuration. Upon the completion of hardware installation, WIAS-3200N v2 can be configured via web browsers with JavaScript enabled such as Internet Explorer version 6.0 and above or Firefox.

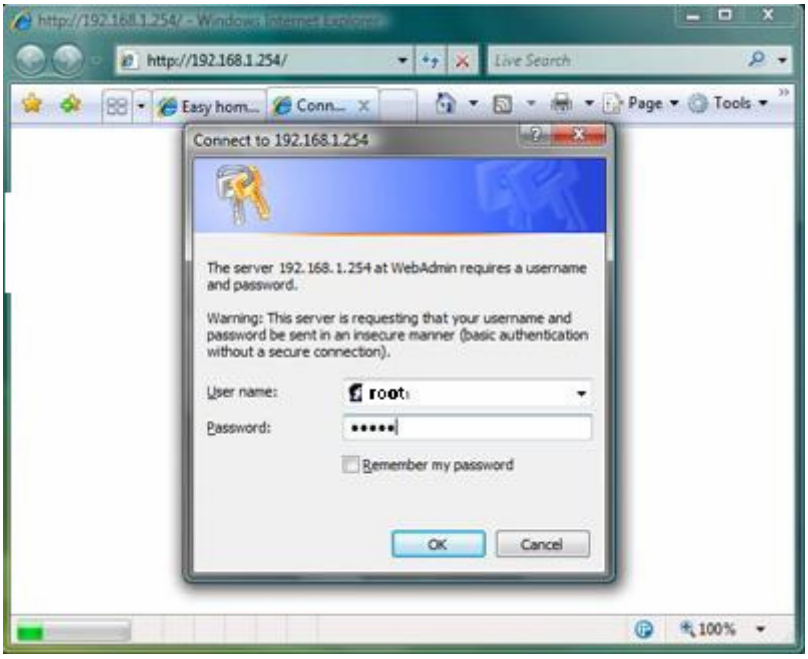
Default LAN interface IP address is **192.168.1.254**.

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”.

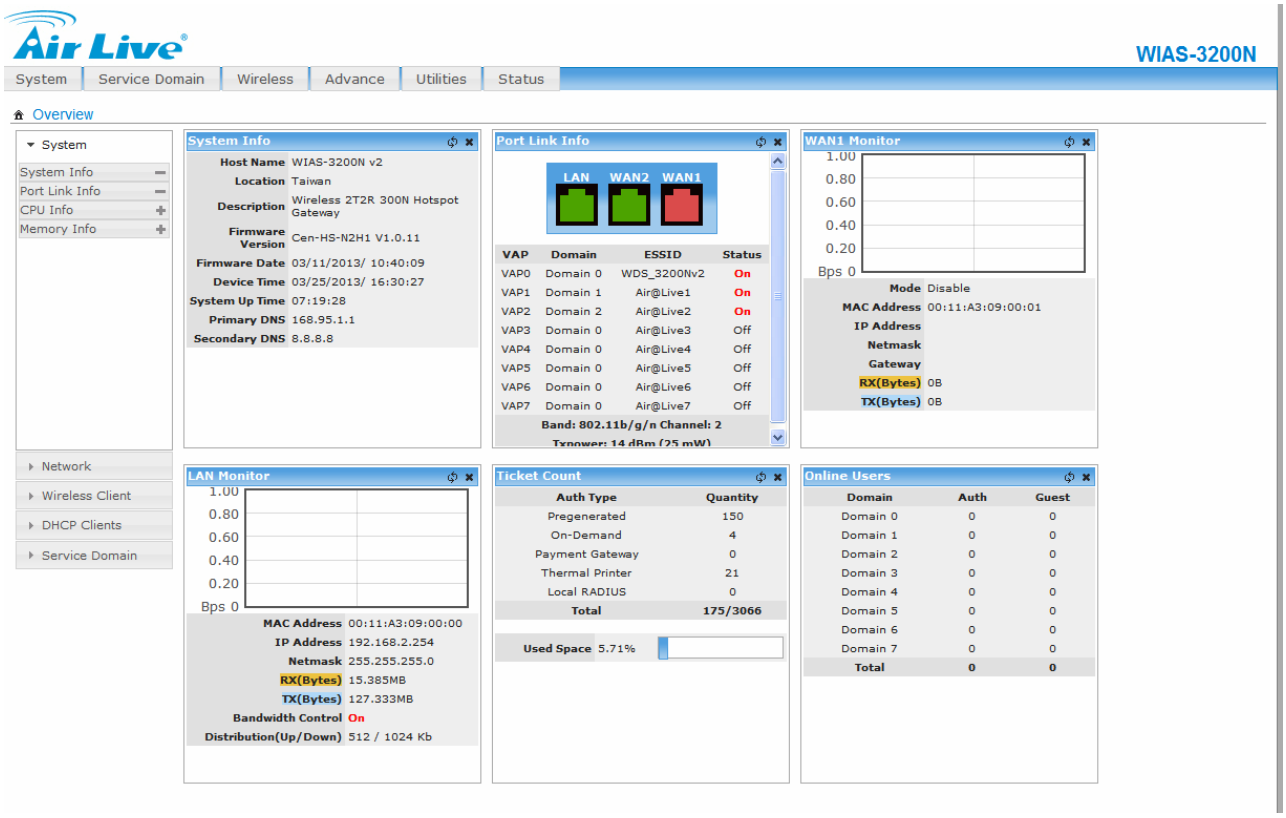
Next, enter the gateway IP address of WIAS-3200N v2 at the address field. The default gateway IP address from LAN Port is http://192.168.1.254.



The administrator login page will appear. Enter “**root**”, 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 six main buttons will appear on the screen.



(“https” is used for a secured connection).

For the first time, if WIAS-3200N v2 is not using a trusted SSL certificate, there will be a “Certificate Error” when enable https login, because the browser treats WIAS-3200N v2 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 G. Network Configuration on PC & User Login”.

3 Configure Hotspot to Network

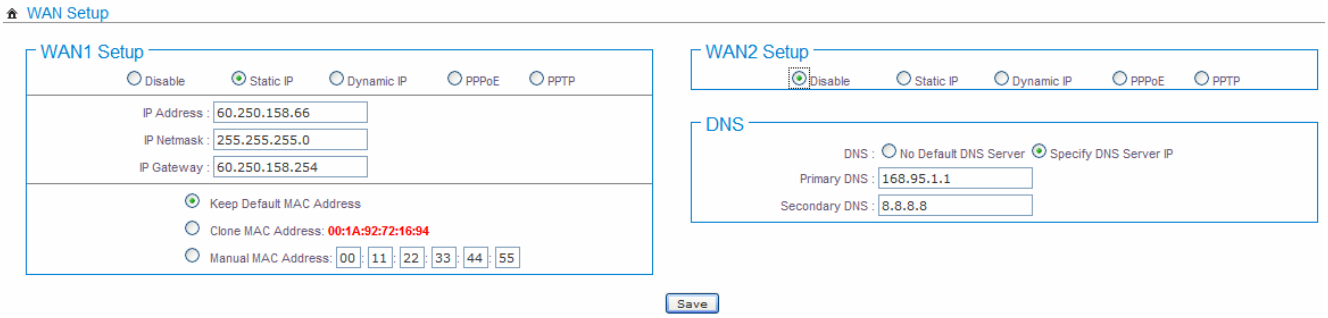
3.1 Network Requirement

In the general network environment, the main role of WIAS-3200N v2 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 v2.

3.2 WAN

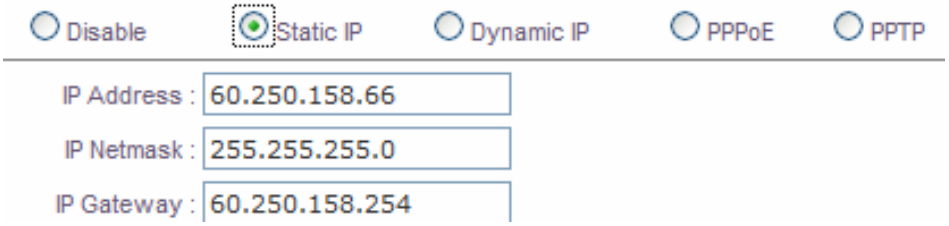
There are 3 connection types for the WAN Port: **Static IP**, **Dynamic IP**, **PPPoE** and **PPTP**.

Now, let us discuss how to configure WAN port. Please click on **System** > **WAN** and follow the below setting.



3.2.1 Static IP

The administrator can manually setup the WAN IP address when static IP is available/ preferred.



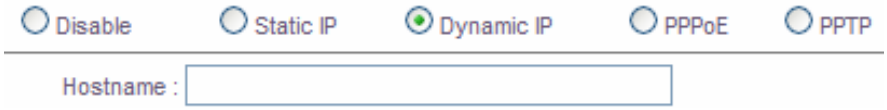
- **IP Address:** The IP address of the WAN port.
- **IP Netmask :** The Subnet mask of the WAN port.
- **IP Gateway:** The IP address of the host router which resides on the external network and provides the point of connection to the next hop towards the Internet. This can be a DSL modem, Cable modem, or a WISP gateway router. AC-920X will direct all the packets to the gateway if the destination host is not within the local network.

Gateway IP address should be from the same address space (on the same network segment) as the AC-920X's external network interface.

3.2.2 Dynamic IP

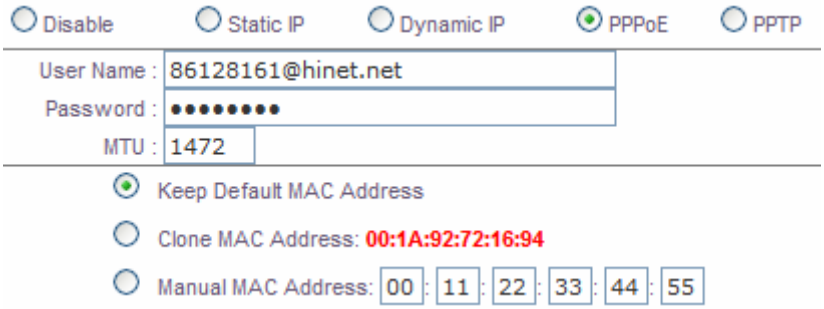
This configuration type is applicable when the WIAS-3200N v2 is connected to a network with the presence of a DHCP server; all related IP information will be provided by the DHCP server automatically. If the IP Address does not assigned from DHCP server, the system need manual connect to DHCP server.

- **Hostname :** The Hostname of the WAN port



3.2.3 PPPoE

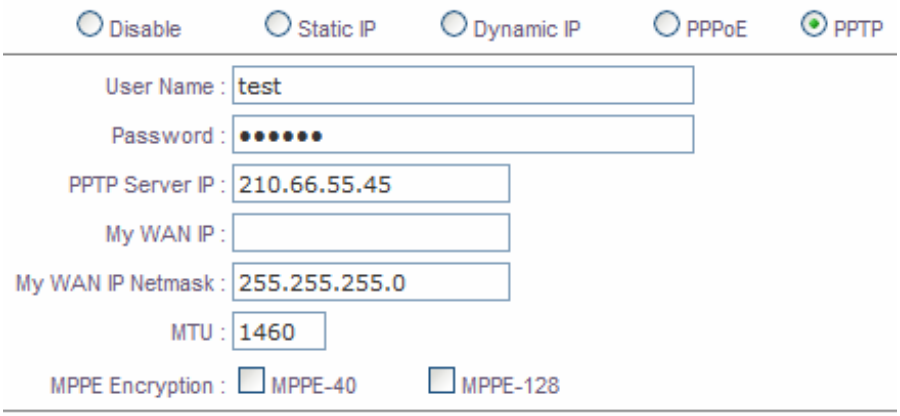
This configuration type is applicable when the WIAS-3200N v2 is connected to a network with the presence of a PPPoE server.



- **User Name :** Enter User Name for PPPoE connection
- **Password :** Enter Password for PPPoE connection
- **MTU:** MTU stands for Maximum Transmission Unit. For PPPoE connections, you may need to set the MTU setting in order to work correctly with your ISP. Default is **1492** bytes.

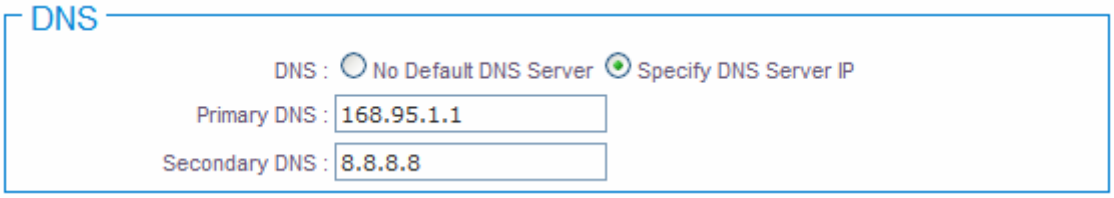
3.2.4 PPTP

The Point-to-Point Tunneling Protocol (PPTP) mode enables the implementation of secure multi-protocol Virtual Private Networks (VPNs) through public networks.



- **Username :** Enter User Name for PPTP connection .(You can set 0-32 alphanumeric and ~!@#$%^*()_+-:<>?[]/;,.= specific characters)
- **Password:** Enter Password for PPTP connection. (You can set 0-32 alphanumeric and ~!@#$%^*()_+-:<>?[]/;,.= specific characters)
- **PPTP Server IP Address :** The IP address of the PPTP server
- **My WAN IP :** The IP address of the WAN port
- **My WAN IP Netmask :** The Subnet mask of the WAN port
- **MTU:** The range is 1400-1460, default is **1460** bytes. MTU stands for Maximum Transmission Unit. Consult with WISP for a correct MTU setting.
- **MPPE Encryption:** Microsoft Point-to-Point Encryption (MPPE) encrypts data in Point-to-Point Protocol (PPP)-based dial-up connections or Point-to-Point Tunneling Protocol (PPTP) virtual private network (VPN) connections. **128-bit** key (strong) and **40-bit** key (standard) MPPE encryption schemes are supported. MPPE provides data security for the PPTP connection that is between the VPN client and the VPN server.

3.2.5 DNS

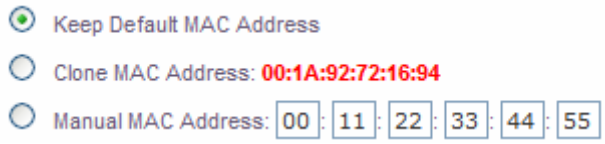


You can select "**No Default DNS Server**" or "**Specify DNS Server IP**" radial button as desired to set up system DNS.

- **Primary:** The IP address of the primary DNS server.
- **Secondary:** The IP address of the secondary DNS server.

3.2.6 MAC Clone

The MAC address is a 12-digit HEX code uniquely assigned to hardware as identification. Some ISPs require you to register a MAC address in order to access to Internet. If not, you could use default MAC or clone MAC from a PC.



- **Keep Default MAC Address:** Keep the default MAC address of WAN port on the system.
- **Clone MAC Address:** If you want to clone the MAC address of the PC, then click the "**Clone MAC Address**" button. The system will automatically detect your PC's MAC address.

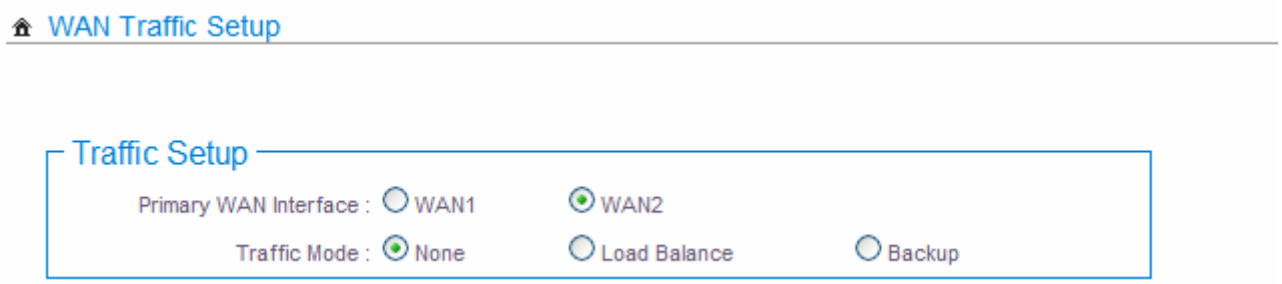
* **Note:** The Clone MAC Address field will display MAC address of the PC connected to system. Click **Save** button can make clone MAC effective.

- **Manual MAC Address:** Enter the MAC address registered with your ISP.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

3.3 WAN Traffic

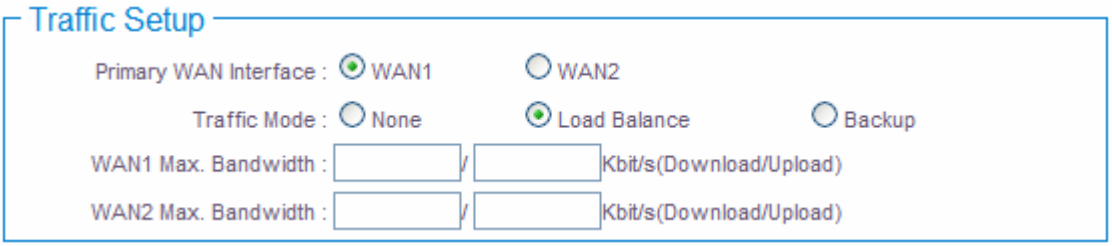
The section is for administrators to configure the control over the entire system's traffic though the WAN interface (WAN1 and WAN2 ports). To configure WAN Traffic, please go to: **System > WAN Traffic**.



- **Primary WAN Interface:** Select desired primary WAN interface for system.
- **Traffic Mode:** There are **three** types: **None**, **Load Balance** and **Backup**.

3.3.1 Load Balance

Outbound load balancing is supported by the system. When enabled, the system will allocate traffic between WAN1 and WAN2 dynamically according to designed algorithms based on the Bandwidth.

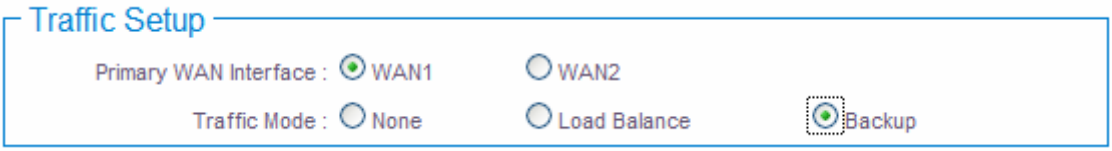


- **WAN1 Max. Bandwidth:** Specify the maximum download and upload bandwidth that can be shared by clients of the WAN1 port.(Download/Upload range is 128-102400 Kbit/s, default is 10240 Kbit/s)
- **WAN2 Max. Bandwidth:** Specify the maximum download and upload bandwidth that can be shared by clients of the WAN2 port. (Download/Upload range is 128-102400 Kbit/s, default is 10240 Kbit/s)

* **Note:** On the Load Balance traffic mode, the primary WAN port is WAN1. When the WAN1 connection is down, the WAN2 will backup automatically.

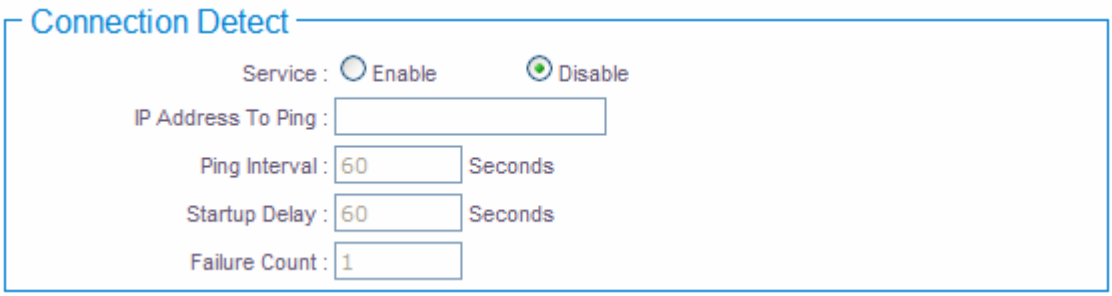
3.3.2 Backup

When primary WAN interface is WAN1 and WAN2 is available, WAN1's traffic will be routed to WAN2 when WAN1 connection is down. When WAN1 connection is up, the route traffic will be connected back to WAN1 automatically.



3.3.3 Connection Detect

The Connect Detect sets the WIAS-3200N v2 to continuously ping a user defined IP address (it can be the Internet gateway for example). If it is unable to ping under the user defined constraints, the WIAS-3200N v2 t will change **Primary WAN** interface to secondary WAN interface automatically. This option is only for “**Load Balance**” or “**Backup**” traffic mode.



- **Service:** By default, it's "**Disable**". To "**Enable**" to activate this function.
- **IP Address To Ping :** specify an IP address of the target host which will be monitored
- **Ping Interval:** specify time interval (in seconds) between the ICMP "echo requests" are sent. (The range is 60-3600, default is **60** seconds.)
- **Startup Delay:** specify initial time delays (in seconds) until first ICMP "echo requests" are sent. The value of Startup Delay should be at least **60** seconds as the network interface and wireless connection initialization takes considerable amount of time if the device is rebooted. (The range is 60-3600, default is **60** seconds.)
- **Failure Count:** specify the number of ICMP "echo response" replies. If the specified number of ICMP "echo response" packets is not received continuously, the primary WAN traffic will be routed secondary WAN. (The range is 1-99, default is **1**.)

* **Note:** If Connection Detect is disabled on "**Load Balance**" or "**Backup**", the system will use default value.

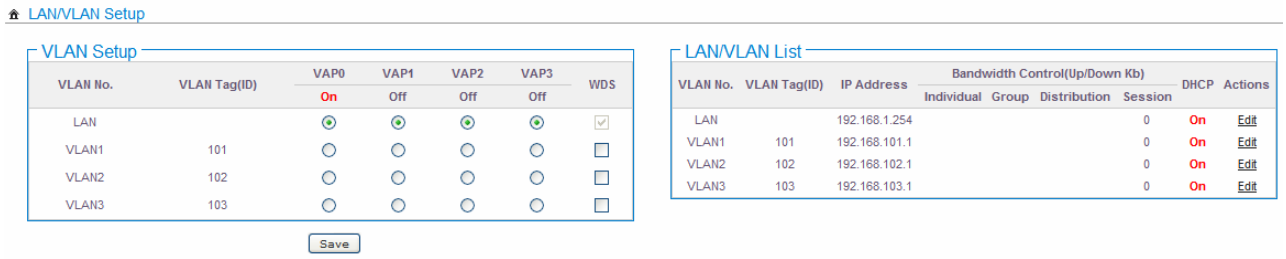
* **Note:** if "Connection Detection" is **disabled** and the PHY's connection status shows **Red** (**Status** > **Port Link Info**). The system will detect PHY on every **5** seconds. When system detects failure **1** times, the traffic of package will routed via **Secondary** WAN Interface. When Primary WAN Interface detects **1** time success, the traffic of package will routed via **Primary** WAN Interface.

If "Connection Detection" is **disabled** and the PHY's connection is **Green** (**Status** > **Port Link Info**), the system will detect remote Gateway IP address of Primary WAN on every **5** seconds. When system detects failure **3** times, the traffic of package will routed via **Secondary** WAN Interface. When Primary WAN Interface detects **1** time success, the traffic of package will routed via **Primary** WAN Interface.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

Here is the instruction for how to setup the local LAN/VLAN IP Address and Netmask. Please click on **System** > **LAN/VLAN,** the LAN/VLAN List should be appear. This page shows information of LAN's/VLAN's settings.

3.4 LAN/VLAN



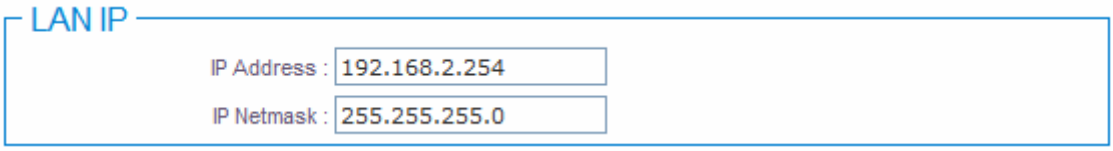
3.4.1 VLAN Setup

- **VLAN No. :** Denote the system's VLAN port.
- **VLAN Tag (ID):** Denote the VLAN tag of the respective VLAN port. Only for VLAN1 ~ VLAN3.
- **VAP0-VAP3:** Select specify the LAN/VLAN port for VAP. The packets from VAP to LAN will insert specify VLAN tag
- **WDS:** Select specify the LAN/VLAN port for WDS. The packets from WDS to LAN will insert specify VLAN tag

3.4.2 LAN/VLAN List

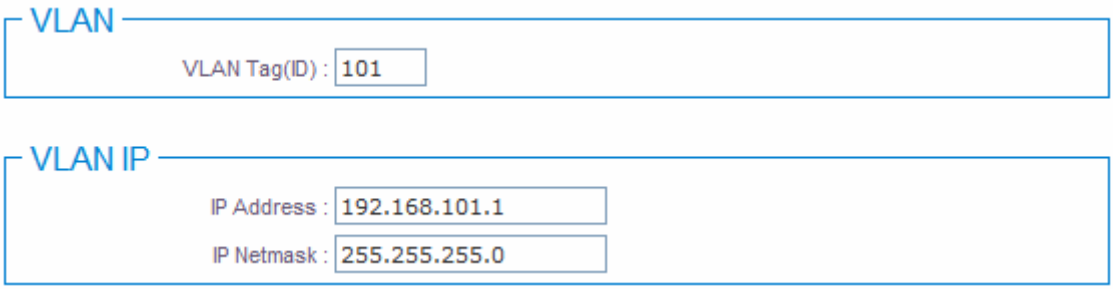
- **VLAN No. :** Denote the system's VLAN port.
- **VLAN Tag (ID):** Denote the VLAN tag of the respective VLAN port. Only for VLAN1 ~ VLAN3.
- **IP Address:** Denote the IP address of the respective LAN/VLAN port.
- **Bandwidth Control(p/Down Kb):**
  (1) **Individual:** Denote the Individual Max. Upload/Download of the respective LAN/VLAN port.
  (2) **Group:** Denote the Group Upload/Download of the respective LAN/VLAN port.
  (3) **Distribution:** Denote the Distribution Upload/Download of the respective LAN/VLAN port.
  (4) **Session:** Denote the Session of the respective LAN/VLAN port.
- **DHCP:** Denote the DHCP server status of the respective LAN/VLAN.
- **Actions:** Click this option to configure LAN/VLAN's settings, the setup page should be appear. Below depicts an example for LAN.

3.4.3 LAN Setup (Domain0)



- **IP Address:** The IP address of the LAN port, and the he default LAN's IP address as **192.168.1.254**,
- **IP Netmask :** The Subnet mask of the VLAN port; default Netmask is 255.255.255.0

3.4.4 VLAN Setup (Domain1-3)

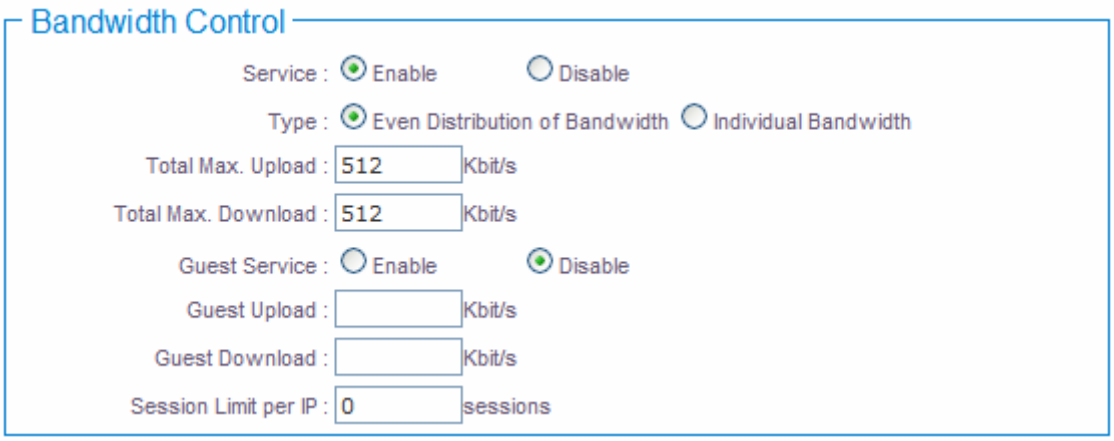


- **VLAN Tag (ID):** Virtual LAN, the system supports **3** tagged VLAN port (VLAN1 ~ VLAN3). The valid values are from **1** to **4094**. The default VLAN1's tag ~ VLAN3's tag are from 101 to 103.

***Note:** Some system and VLAN switch do not support VLAN tag 1

- **IP Address:** The IP address of VLAN port, default VLAN1's ~ VLAN3's IP address as **192.168.101.1** ~ **192.168.103.1**.
- **IP Netmask :** The Subnet mask of the VLAN port; default Netmask is 255.255.255.0

3.4.5 Bandwidth Control



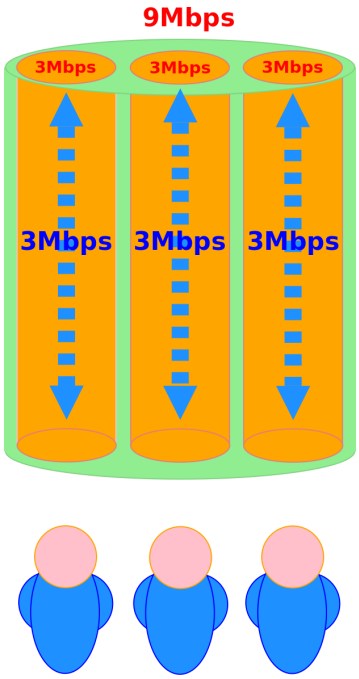
- **Bandwidth Control:** By default, it's "**Disable**". To "**Enable**" to use bandwidth control.
- **Type :** Enable the desire option among "**Even Distribution of Bandwidth**" or "**Individual Bandwidth**"

(1) **Even Distribution of Bandwidth:** Set users distribute Total Max. Upload/Download. Below depicts an example for **Even Distribution of Bandwidth**, set Total Max. Upload or Download to 9 Mbps, if one user access Internet, the maximum upload or download is 9 Mbps; if three users access Internet at the same time, the maximum upload or download is 3 Mbps by each user.

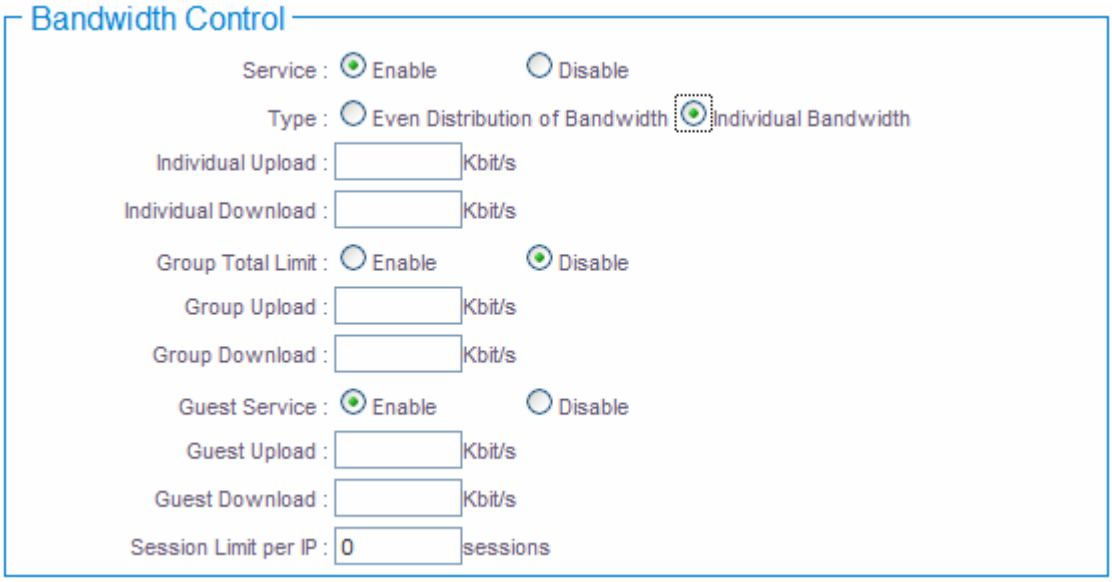
- **Total Max. Upload:** The Total Max. Upload is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s
- **Total Max. Download:** The Total Max. Download is in the range of **0~102400** Kbit/s, 0 indicates unlimited; default is **512** Kbit/s.

***Note:** If the system does not enable any authentication function, all users of the bandwidth control will be based by the "**Total Max. Upload**" and "**Total Max. Download**"

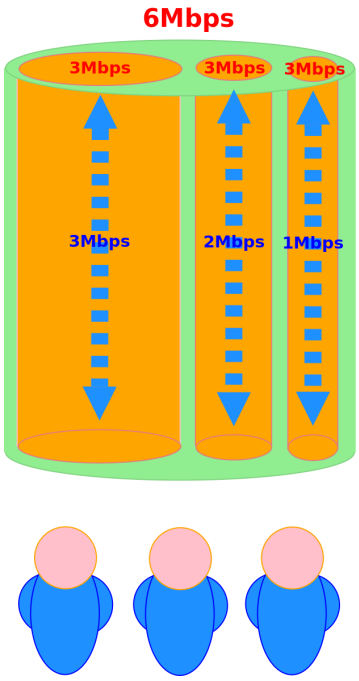
If the system enable authentication function and user in the privilege list, the user of bandwidth will be **uncontrolled** by Even Distribution of Bandwidth



(2) **Individual Bandwidth**: Set each users Individual Upload/Download. Below depicts an example for **Individual Bandwidth**, set Group Upload or Download to 6 Mbps and Individual Upload or Download to 3 Mbps, if one user access Internet, the maximum upload or download is 3 Mbps; if three users access Internet at the same time, the maximum upload or download is 3 Mbps by each user.



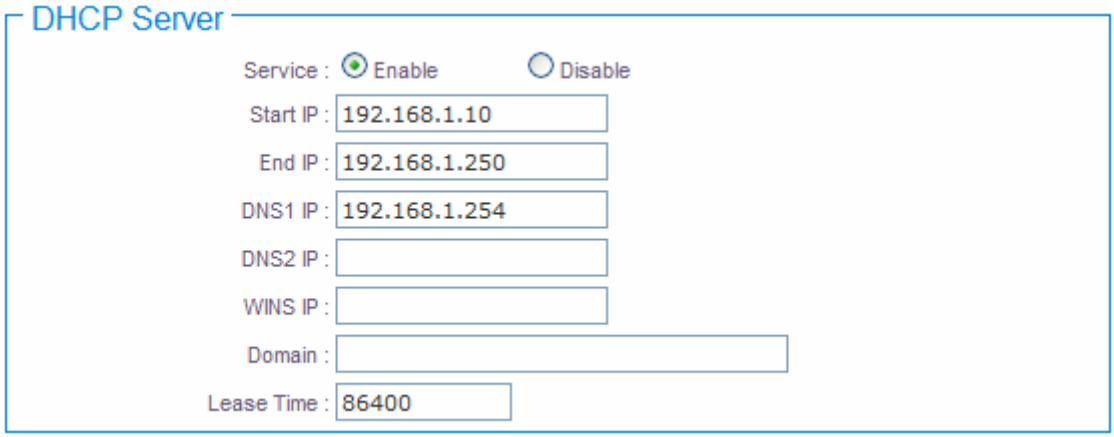
- **Individual Upload :** The Individual Upload is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s
- **Individual Download :** The Individual Download is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s
- **Group Total Limit:** By default, it's "**Disable**". To "**Enable**" to activate Group Total Limit.
- **Group Upload :** The Group Upload is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s
- **Group Download :** The Group Download is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s



***Note:** If the system enable authentication function and user in the privilege list, the user of bandwidth will be **uncontrolled** by Individual Bandwidth

- **Guest Service:** By default, it's "**Disable**". To **Enable** to activate bandwidth control service for guest users.
- **Guest Upload :** The Guest Upload is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s
- **Guest Download :** The Guest Download is in the range of **0~102400** Kbit/s, 0 indicates unlimited, default is **512** Kbit/s
- **Session Limit per IP:** The number of sessions is in the range of **10~500**, 0 indicates unlimited, default is **0**.
- **STP:** By default, it's "**Disable**". To "**Enable**" to activate STP. the spanning tree network protocol provides a loop free topology for any bridged LAN/VLAN. The Spanning Tree Protocol, which is also referred to as STP, is defined in the IEEE Standard 802.1d.

3.4.6 DHCP Server

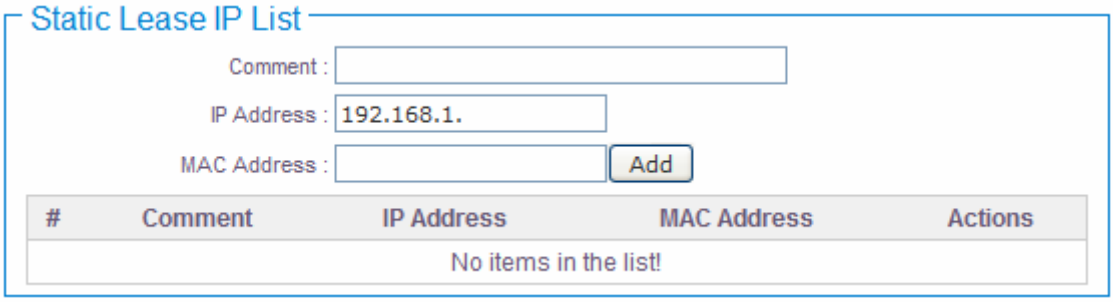


- **Service:** Check "**Enable**" to activate DHCP Server on VLAN/LAN port.
- **Start IP** / **End IP:** Specify the range of IP addresses to be used by the DHCP server when assigning IP address to clients.
- **DNS1** / **DNS2 IP:** The Domain Name System (DNS) is an Internet "phone book" which translates domain names to IP addresses. These fields identify the server IP addresses where the DNS requests are forwarded by the WIAS-3200N v2.DNS1 server IP is mandatory. It is used by the DNS Proxy and for the device management purpose. DNS2 server IP address is optional. It is used as the fail-over in case the primary DNS server will become unresponsive.
- **WINS IP:** Enter IP address of the Windows Internet Name Service (WINS) server; this is optional.
- **Domain:** Enter the domain name for this network.

- **Lease Time:** The IP addresses given out by the DHCP server will only be valid for the duration specified by the lease time. Increasing the time ensure client operation without interrupt, but could introduce potential conflicts. Lowering the lease time will avoid potential address conflicts, but might cause more slight interruptions to the client while it will acquire new IP addresses from the DHCP server.

3.4.7 Static Lease List

If you want a computer or device to always have the same IP address assigned, you can create a static lease. The system will assign the IP address only to that computer or device. There are maximum **50** rules allowed in this list.

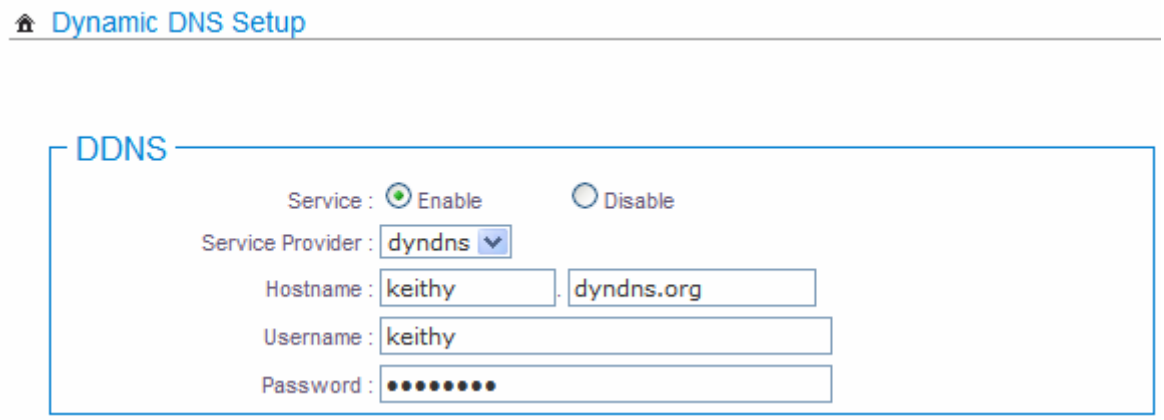


- **Hostname:** Enter the hostname of the computer or device.
- **IP Address:** Enter the IP address you want to assign to the computer or device. This IP Address must be within the DHCP IP Address Range.
- **MAC Address:** Enter the MAC address of the computer or device.
- **Actions:** Click an action button to perform the appropriate action.
- **Delete:** Click this button to remove the lease for a specific LAN device and free an entry in the lease table.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

3.5 Dynamic DNS

Dynamic DNS allows you to make an assumed name as a dynamic IP address to a static hostname. Please click on **System** > **DDNS** and follow the below setting.

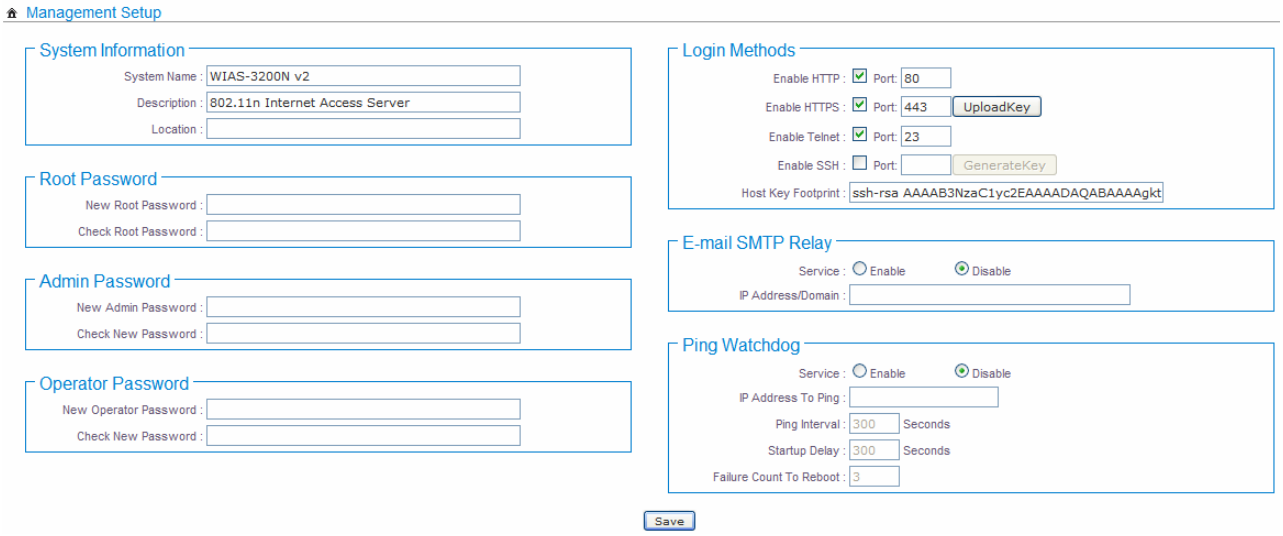


- **Enabled:** Select Enable for DDNS function, each time your IP address for WAN is changed, the information will be updated to DDNS service provider automatically.
- **Service Provider:** Select the correct Service Provider from the drop-down list, here included are dyndns, dhs, ods and tzo embedded in the WIAS-3200N v2.
- **Hostname:** This field represents the Host Name you register to Dynamic-DNS service and expect to export to the world. (You can set 1-32 alphanumeric and @-_. specific characters)
- **User Name & Password:** User Name and Password is used as an identity to login DDNS service. (You can set 1-32 alphanumeric and ~!@#$%^*()_+-:<>?[]/;,.= specific characters)

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

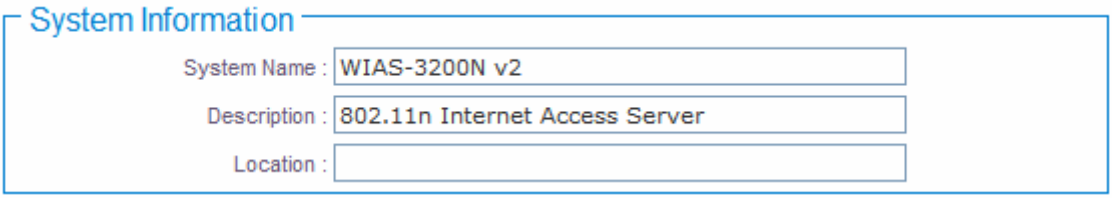
3.6 Management

The administrator can later obtain the geographical location of the system via the information configured here. The administrator also can change system password and configure system login methods. Please click **System** > **Management** and follow the below settings.



3.6.1 System Information

- **System Name:** Enter a desired name or use the default provided.
- **Description:** Denote further information of the system.
- **Location:** Enter related geographical location information of the system; administrator/manager will be able to locate the system easily.



3.6.2 Root Password

Log in as a root user and is allowed to change its own. Root user also can change **admin** user's and **operator** user's password. Click **Save** button to activate the new password. (Default password is **airlive**)

- **New Password:** Please input the new password of administrator.
- **Check New Password:** Please input again the new password of administrator.

3.6.3 Admin Password

Log in as a admin user and is allowed to change its own. Admin user also can change operator user's password. Click **Save** button to activate the new password. (Default password is **airlive**)

- **New Password:** Please input the new password of administrator.
- **Check New Password:** Please input again the new password of administrator.

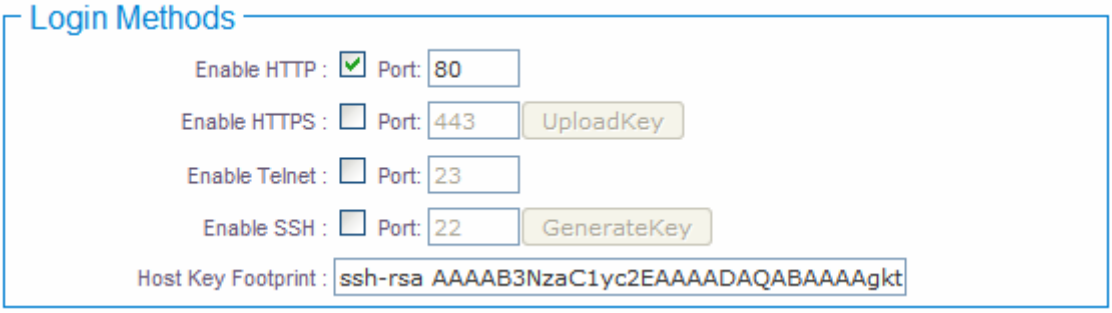
3.6.4 Operator Password

Log in as a operator user and is **not** allowed to change its own. Click **Save** button to activate the new password. (Default password is **airlive**)

- **New Password:** Please input the new password of administrator.
- **Check New Password:** Please input again the new password of administrator.

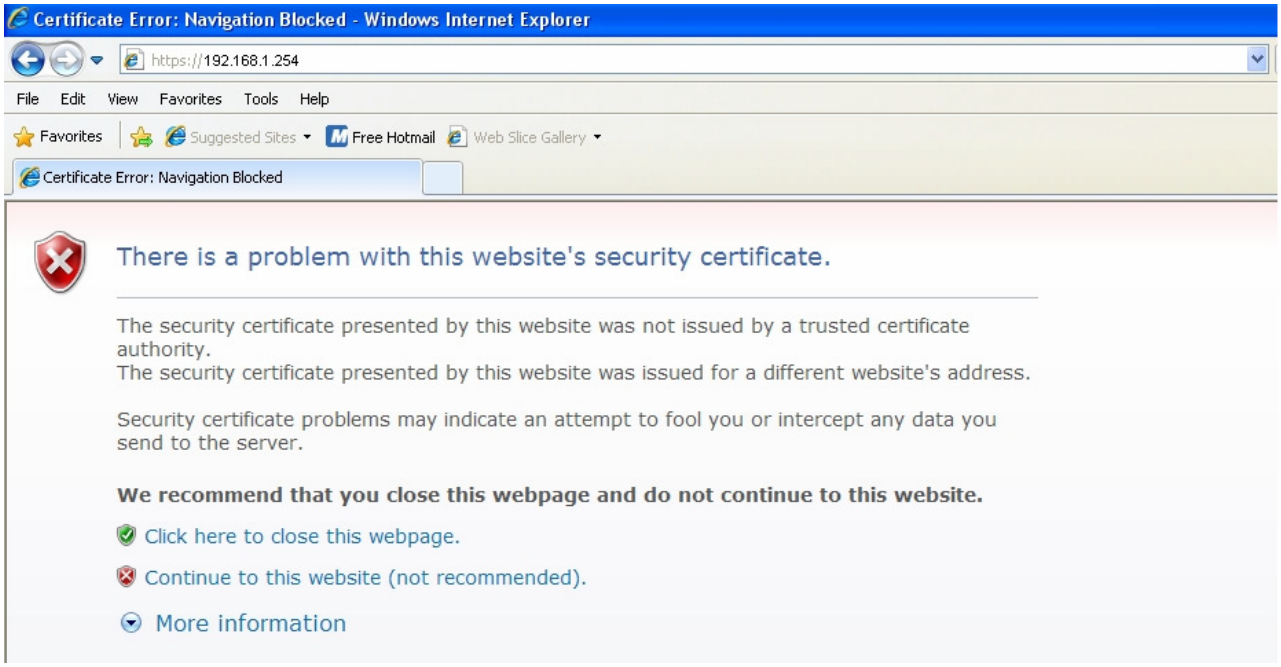
3.6.5 Login Methods

Admin Login Methods, the admin manager can enable or disable system login methods; it also can change services port. Click **Save** button to activate the admin login methods.



- **Enable HTTP:** Select Enable HTTP to activate HTTP Service
- **HTTP Port:** Please input 1 ~ 65535 value to set HTTP Port; default value is **80**.
- **Enable HTTPS:** Select Enable HTTPS to activate HTTPS Service.
- **HTTPS Port:** Please input 1 ~ 65535 value to set HTTPS Port; default value is **443**.

Without a valid certificate, users may encounter the following problem in IE8 when they try to access WIAS-3200N v2 GUI (https://192.168.1.254). There will be a “Certificate Error”, because the browser treats WIAS-3200N v2 as an illegal website.



Click "**Continue to this website**" to access the WIAS-3200N v2's GUI. The WIAS-3200N v2's Home page will be appearing.

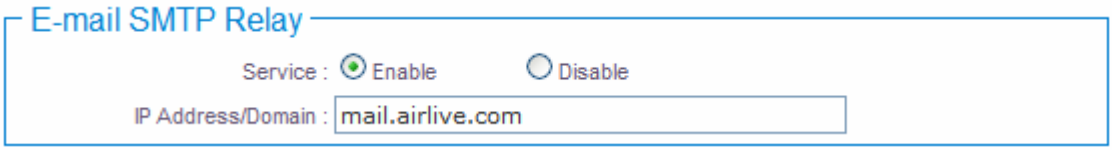
***Note:** If you already have an SSL Certificate, please click **UploadKey** button to select the file and upload it.

- **Enable Telnet:** Select Enable Telnet to activate Telnet Service
- **Telnet Port:** Please input 1 ~ 65535 value to set Telnet Port; default value is **23**.
- **Enable SSH:** Select Enable SSH to activate SSH Service
- **SSH Port:** Please input 1 ~ 65535 value to set SSH Port; default value is **22**.

***Note:** Click **GenerateKey** button to generate RSA private key. The "Display the host key footprint" gray blank will be show content of RSA key.

3.6.6 E-mail SMTP Relay

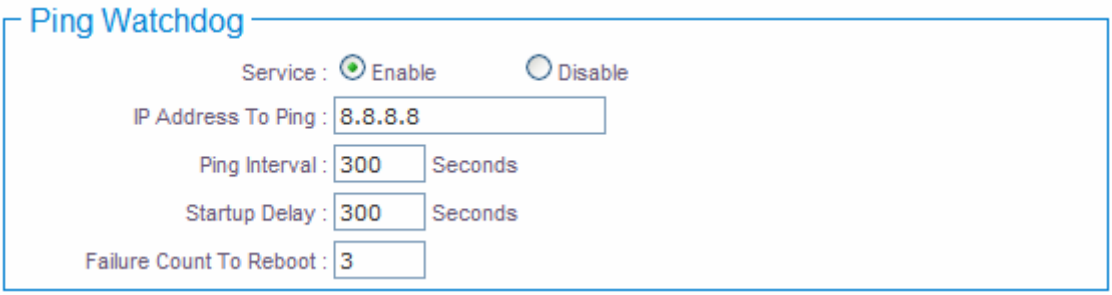
Select Enable Service to activate Email SMTP Relay function. Enter SMTP relay server in IP Address/ Domain field.



3.6.7 Ping Watchdog

The ping watchdog sets the WIAS-3200N v2 to continuously ping a user defined IP address (it can be the Internet gateway for example). If it is unable to ping under the user defined constraints, the WIAS-3200N v2 will automatically reboot. This option creates a kind of "fail-proof" mechanism.

Ping Watchdog is dedicated for continuous monitoring of the particular connection to remote host using the Ping tool. The Ping works by sending ICMP “echo request” packets to the target host and listening for ICMP “echo response” replies. If the defined number of replies is not received, the tool reboots the device.

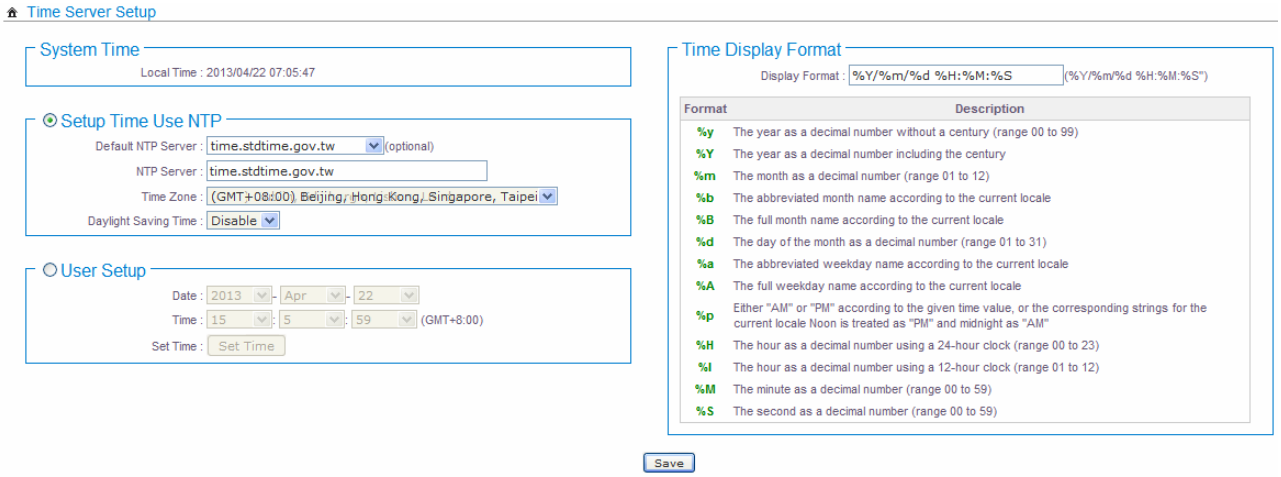


- **Enable Ping Watchdog:** control will enable Ping Watchdog Tool.
- **IP Address to Ping:** specify an IP address of the target host which will be monitored by Ping Watchdog Tool.
- **Ping Interval:** specify time interval (in seconds) between the ICMP “echo requests” are sent by the Ping Watchdog Tool. Default is **300** seconds.
- **Startup Delay:** specify initial time delay (in seconds) until first ICMP “echo requests” are sent by the Ping Watchdog Tool. The value of Startup Delay should be at least **60** seconds as the network interface and wireless connection initialization takes considerable amount of time if the device is rebooted. Default is **300** seconds.
- **Failure Count To Reboot:** specify the number of ICMP “echo response” replies. If the specified number of ICMP “echo response” packets is not received continuously, the Ping Watchdog Tool will reboot the device.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

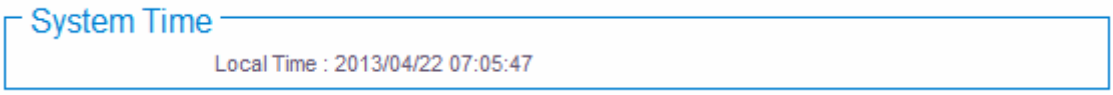
3.7 Time Server

System time can be configured via this page where manual setting and NTP server configuration are both supported. Please click on **System** > **Time Server** and follow the below setting.



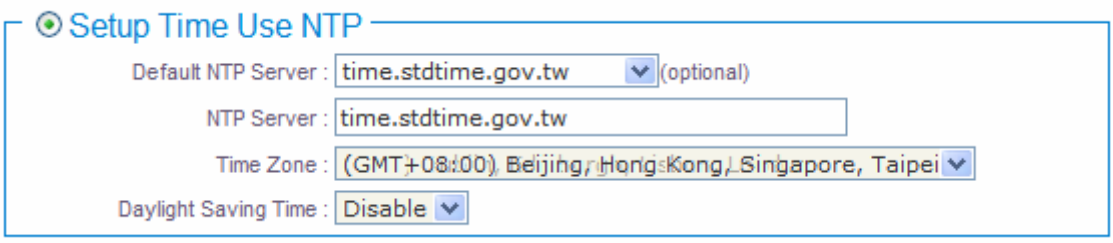
3.7.1 System Time

Display the current time of the system.



3.7.2 Setup Time Use NTP

To enable Network Time Protocol, NTP, to synchronize the system time with NTP server.

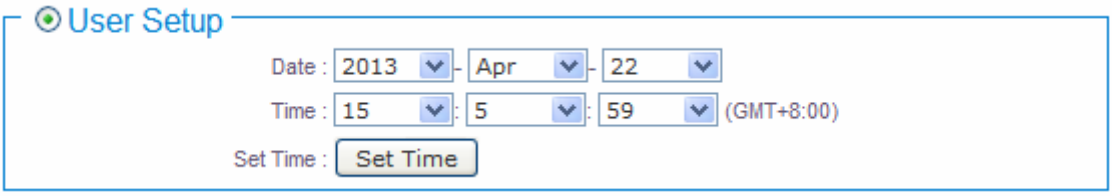


- **Default NTP Server:** Select the NTP Server from the drop-down list.
- **Time Zone:** Please set a time zone from where the accurate time can be supplied, (GMT+08:00) Taipei for example.
- **Daylight saving time:** Enable Daylight saving time from where the accurate time needed.

***Note:** If Time server setting selected in “Setup Time User NTP”, please verify system's Default Gateway and DNS setting first.

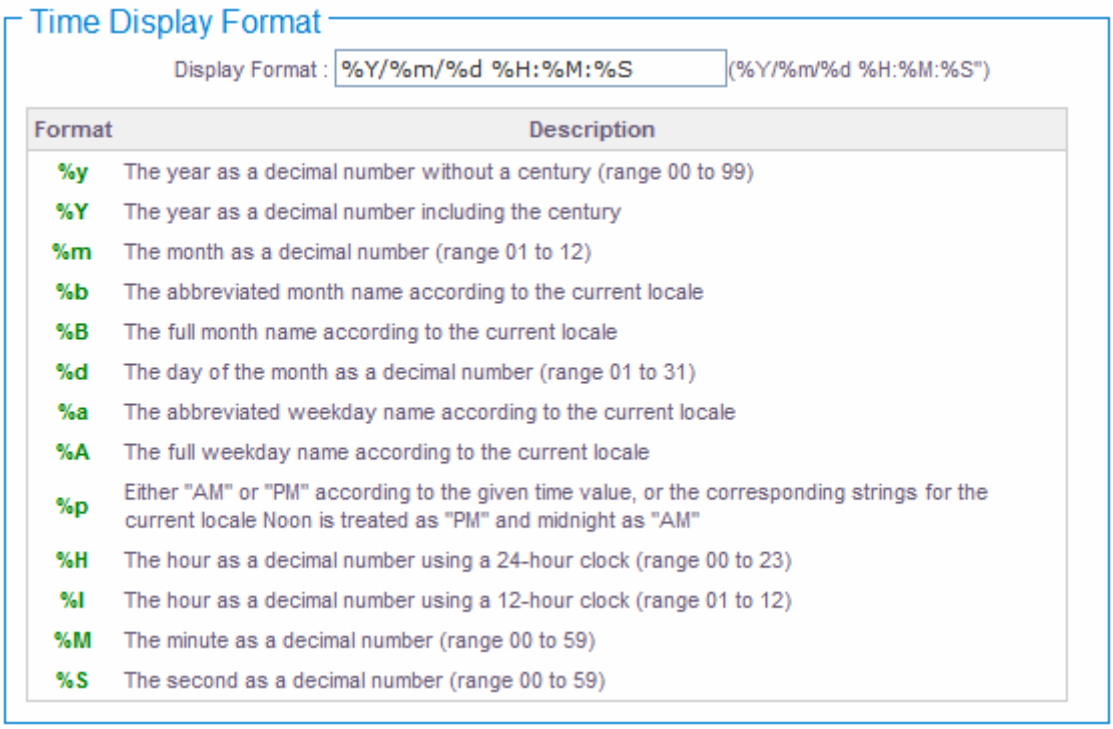
3.7.3 User Setup

Administrator can set Time manually. Click **Set Time** button and **Save** button to change Local Time.



3.7.4 Time Display Format

Administrator can set system's time format. Enter a desired time format or use the default provided.

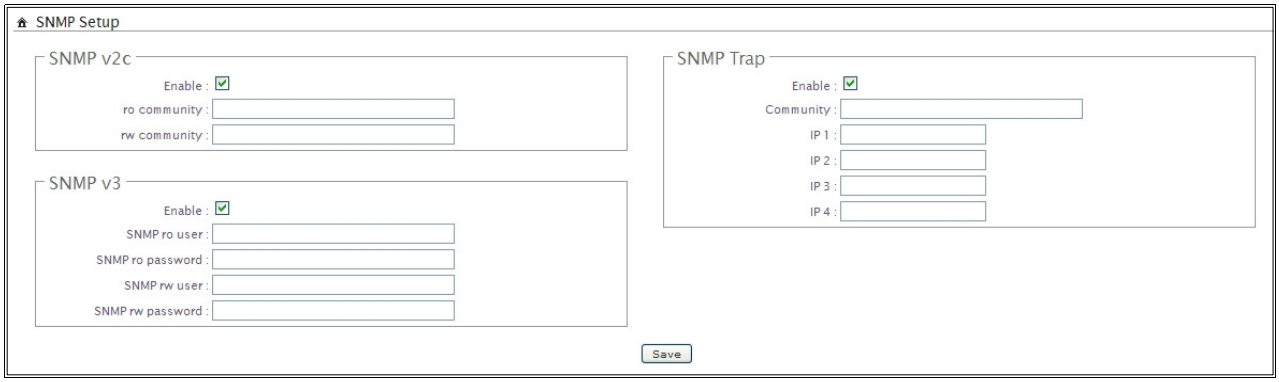


Format	Description
%y	The year as a decimal number without a century (range 00 to 99)
%Y	The year as a decimal number including the century
%m	The month as a decimal number (range 01 to 12)
%b	The abbreviated month name according to the current locale
%B	The full month name according to the current locale
%d	The day of the month as a decimal number (range 01 to 31)
%a	The abbreviated weekday name according to the current locale
%A	The full weekday name according to the current locale
%p	Either "AM" or "PM" according to the given time value, or the corresponding strings for the current locale Noon is treated as "PM" and midnight as "AM"
%H	The hour as a decimal number using a 24-hour clock (range 00 to 23)
%I	The hour as a decimal number using a 12-hour clock (range 01 to 12)
%M	The minute as a decimal number (range 00 to 59)
%S	The second as a decimal number (range 00 to 59)

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

3.8 SNMP

SNMP is an application-layer protocol that provides a message of format for communication between SNMP managers and agents. By enabling SNMP function, the administrator can obtain the system information remotely. Please click on **System** > **SNMP Setup** and follow the below setting.



3.8.1 SNMP v2c

- **Enable:** Check to enable SNMP v2c.
- **ro community :** Set a community string to authorize read-only access.
- **rw community :** Set a community string to authorize read/write access.

3.8.2 SNMP v3

- **Enable:** Check to enable SNMP v3. SNMPv3 supports the highest level SNMP security.
- **SNMP ro user:** Set a community string to authorize read-only access.
- **SNMP ro password:** Set a password to authorize read-only access.
- **SNMP rw user:** Set a community string to authorize read/write access.
- **SNMP rw password:** Set a password to authorize read/write access.

3.8.3 SNMP Trap

Events such as cold start, interface up & down, and association & disassociation will report to an assigned server.

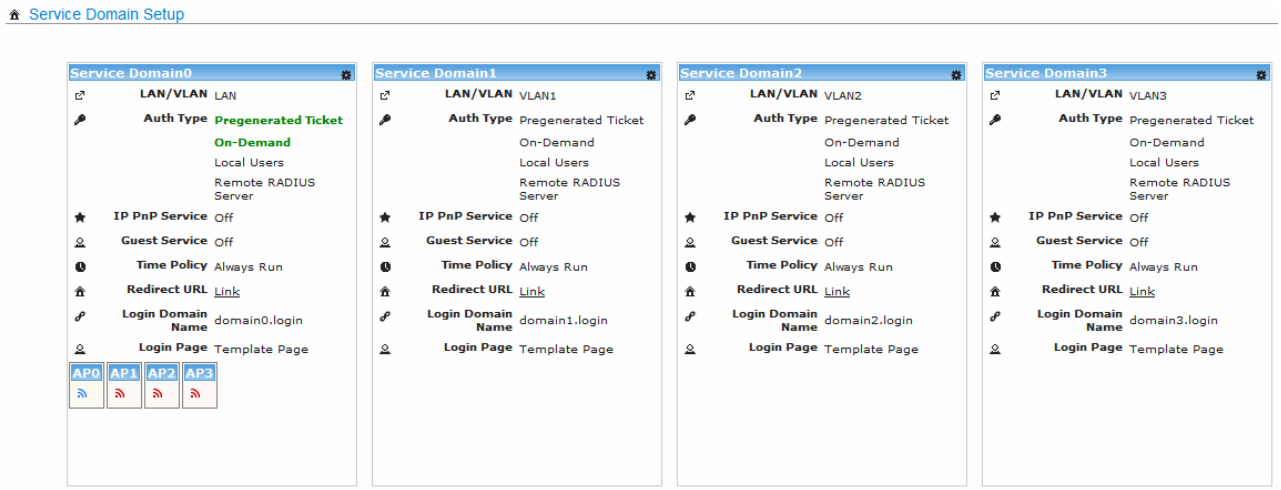
- **Enable**: Check to enable SNMP Trap.
- **Community:** Set a community string required by the remote host computer that will receive trap messages or notices sends by the system.
- **IP:** Enter the IP addresses of the remote hosts to receive trap messages.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

4 Configure Service Domain

4.1 Service Domain

WIAS-3200N v2 support **4** Service Domain, administrator can quick setup hotspot via this page. Each VAP can move to different Domain.



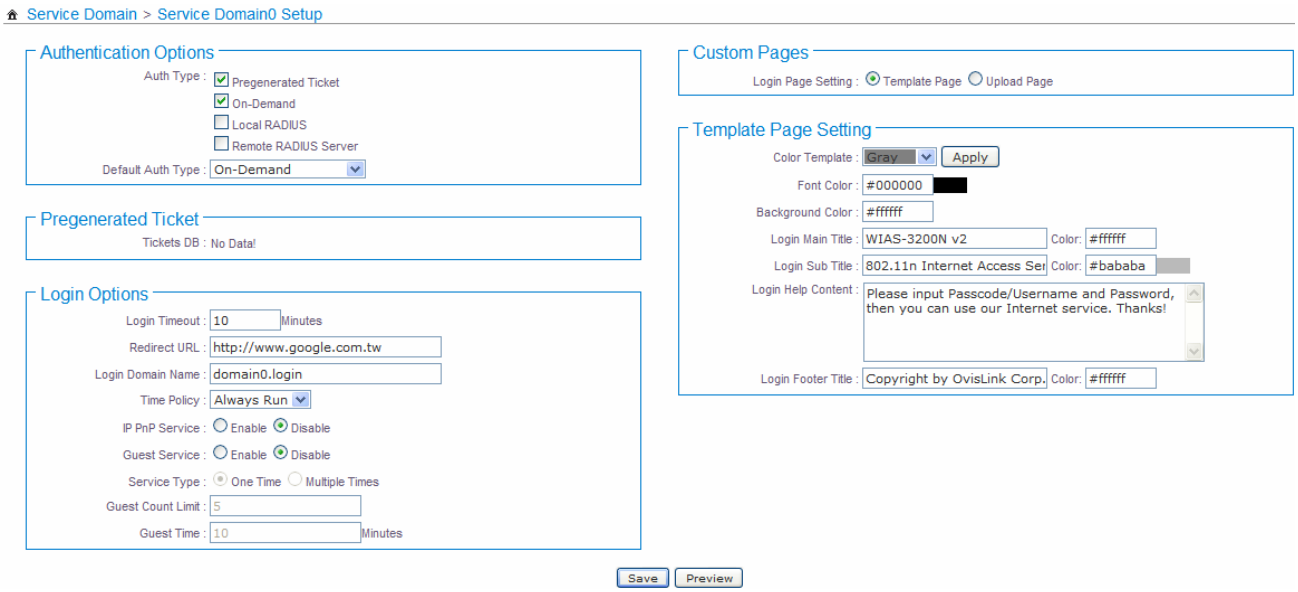
- **:** Click tools icon on the top-right corner of each Domain settings window, the Service Domain page will pop-up.
- **LAN/VLAN :** The bonding interface for this Service Domain
- **Auth Type:** The authentication type for this Service Domain. There are **four** types: Pregenereated Ticket, On-demand, Local Users and Remote RADIUS Server.
- **IP PnP Service:** Denote the current status of IP PnP service on the respective Service Domain.
- **Guest Service:** Denote the current status of guest service on the respective Service Domain.
- **Time Policy:** Denote the schedule of authentication service on the respective Service Domain.
- **Redirect URL:** Denote the redirect URL on this Login page of Service Domain.
- **Login Domain Name :** Denote the login domain name on the respective Service Domain

- **Login Page:** The custom page for this Service Domain. There are two types : **Template** page or **Upload** page
- **:** Click signal icon on each VAP field, the VAP Setup will pop-up.

4.1.1 Service Domain

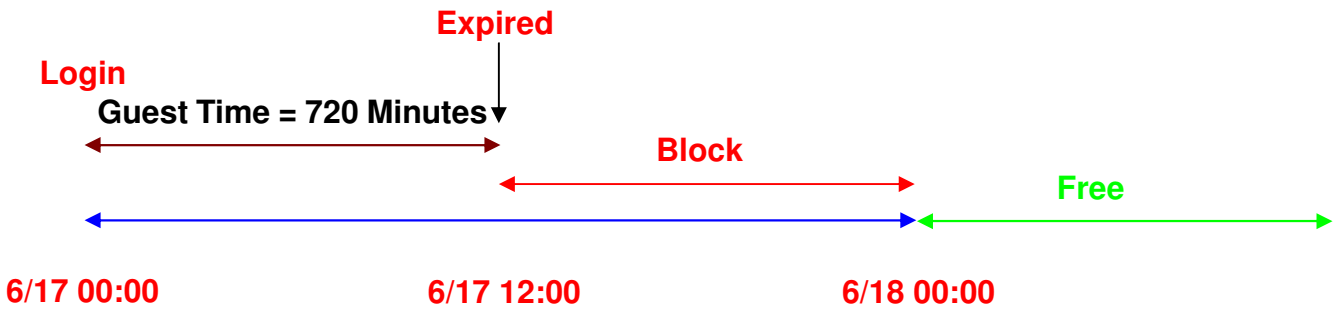
Administrator can configure Service Domain with different authentication service type, IP PnP service, guest free service, idle time , redirect URL, scheduling authentication service and customization login page.

Click on **Service Domain** > **Tools icon** or **Service Domain** > **Service Domain#** to enter **Service Domain Setup** page.

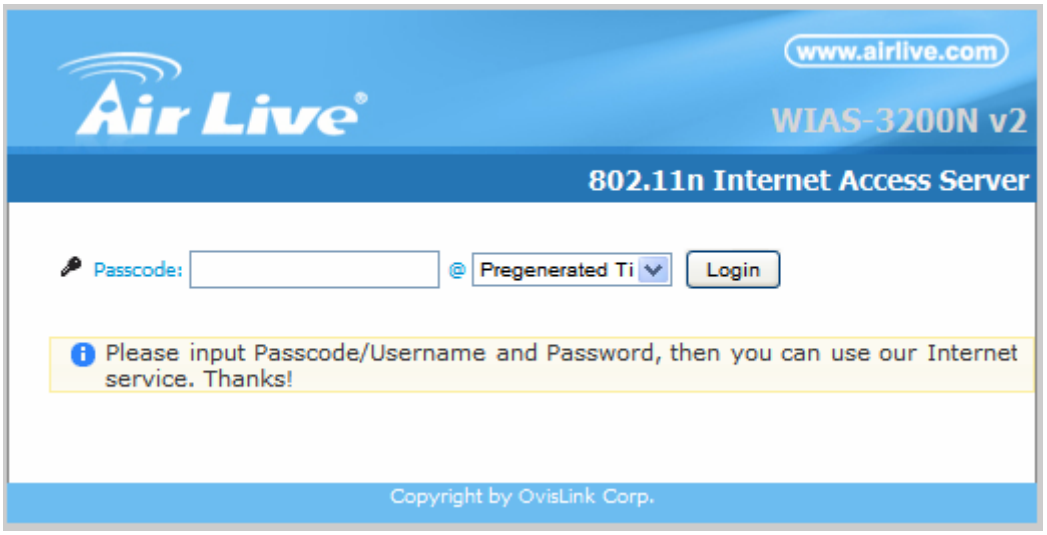


- **Authentication Options:** Select authentication type for this Service Domain. The system supports multiple authentications in one Service Domain.
- **Auth Type:** Select desired authentication type for this Service Domain, each Domain supports multiple authentications.
- **Default Auth Type:** Select default authentication type for this Service Domain.
- **Pregenerated Ticket:** Select desired tickets database for Pregenerated authentication after creating the database of Pregenerated Tickets.
- **Login Options:** When authentication type selected in Auth Type, the Login Options setting field will appear.
- **Login Timeout:** Enter idle timeout for this Service Domain. If users have idled with no network activities, the system will automatically logout the users. The Login Timeout can be set between **0** to **1440** minutes, and the default timeout is **10** minutes.
- **Redirect URL:** Enter the specified website to redirect, when users log in successfully, the pop-up page will direct to the specified URL.

- **Login Domain Name:** Enter the specified URL to display login page. If you close the login page and because you can't click Logout button to stop service, you can enter specified URL on browser to display login page.
- **Time Policy:** Select desired scheduling of the respective Service Domain for authentication service. Scheduling setting is on **Time Policy** page.
- **IP PnP Service:** IP Plug and Play, the AC-920X supports IP PnP for the respective Server Domain. At the user end, a static IP address can be used to connect the system. Regardless of what the IP address at the user end is, authentication can still be performed through WIAS-3200N v2.
- **Guest Service:** By default; it's "**Disable**". To **Enable** to activate guest service limitation, the **Guest** button will appear on the login portal window. Below depicts an example Guest Service.
- **Guest Count Limit:** Enter maximum number of guest to a desired number in the range of **1-100**. The default value is **5**. For example, while the number of the guest is set to 5, only 5 guests are allowed to connect to Internet via controller at the same time.
- **Guest Time:** Enter maximum free service time for guest user within **24** hours. The default is **10** Minutes; the range is between **1** to **720** Minutes.



- **Custom Pages:** Configure Custom pages for this Service Domain. Administrator can select **Template Page** or **Upload Customize Page**.
- **Template Page:** Choose **Template Page** to make a customized login page. Click select to pick up a color and then fill in all of the banks. You also can use **Color Template** for your template. If you use Color Template, please click **Apply** button to change all color. You can change the text as your wish. After finishing the setting, Click **Save** button and **Preview** button to see the result.



- **Upload Page:** Choose the **Upload Page** selection and click **Upload** button to upload the designated page and photo. The upload files will be listed on the **File List** field. Below depicts an example for upload File List. The file name of upload page must be "**login.html**"

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

*** Example for Upload Page:**

Here the codes are supplied. Please note that the red part is for the login feature (can't not modified), the green part can be modified freely by administrators.

```
<meta name="apple-mobile-web-app-capable" content="yes" />
<!--Auto Login for Mac-->
<meta names="apple-mobile-web-app-status-bar-style" content="black" />
<!--Auto Login for Mac-->
<html>
<head>
<title><?hHotspot_main_title></title>
<?JAVASCRIPT>
</head>
<body>
<h1><?hHotspot_main_title></h1>
<p><?hHotspot_sub_title><p>
<div id="CW_MSG"></div>
<!--Main Login Form Content-->
<div id="CW_INFO"><span id="CW_HELP"></span></div>
<!--Main Help Content-->
<div id="WALLED"></div>
<!-- Walled Garden-->
<?hHotspot_footer_title>
</body>
</html>
```

If login page need insert images or css file, please include path “/upload/vlan0/” ~ “/upload/vlan7/”, the “vlan0” ~”vlan7” indicate “Service Domain0” ~ “Server Domain7”, below depicts an example for insert image001.gif image file to login page of Service Domain0.

```
<img src="/upload/vlan0/image001.gif">
```

Below depicts an example for content

```
<div class="ad"><a href="http://www.google.com" title=""
target="_blank">Google</a></div>
```

You only can modify , here is define CSS content for

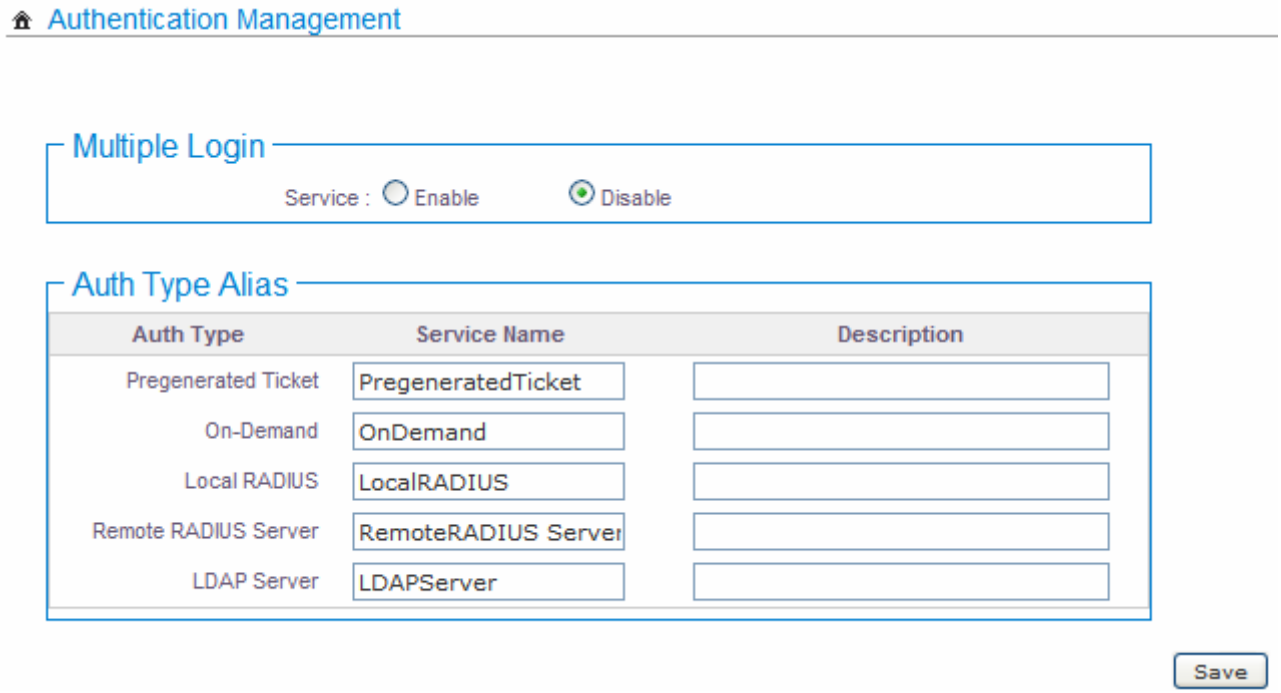
```
.ad{
    float: left;
    display: inline=block;
    text-align: center;
    width: 100px;
    margin: 5px;
    padding: 5px;
    background: #fff;
    font-size: 14px;
    font-weight: bold;
}
.ad a{
    text-decoration: none;
    color: red;
}
.ad:hover, .ad a:hover, ad a:active{
    background: #333333;
    color: blue;
}
```

4.2 Authentication

WIAS-3200N v2 support **5** types of authentication: Pregenerated Tickets, On-Demand Users, Local RADIUS Accounts, Remote RADIUS Server and Remote LDAP Server. This section depicts to configure the settings for Pregenerated tickets, On-Demand users and authentication server. If authentication selected in **None**, the clients can access Internet without authentication.

4.2.1 Authentication Management

The WIAS-3200N v2 supports multiple login for one accounts and administrator can configure alias name of the respective authentication type on login page. Please click on **Service Domain** → **Authentication** → **Authentication Management**, and follow the below setting.

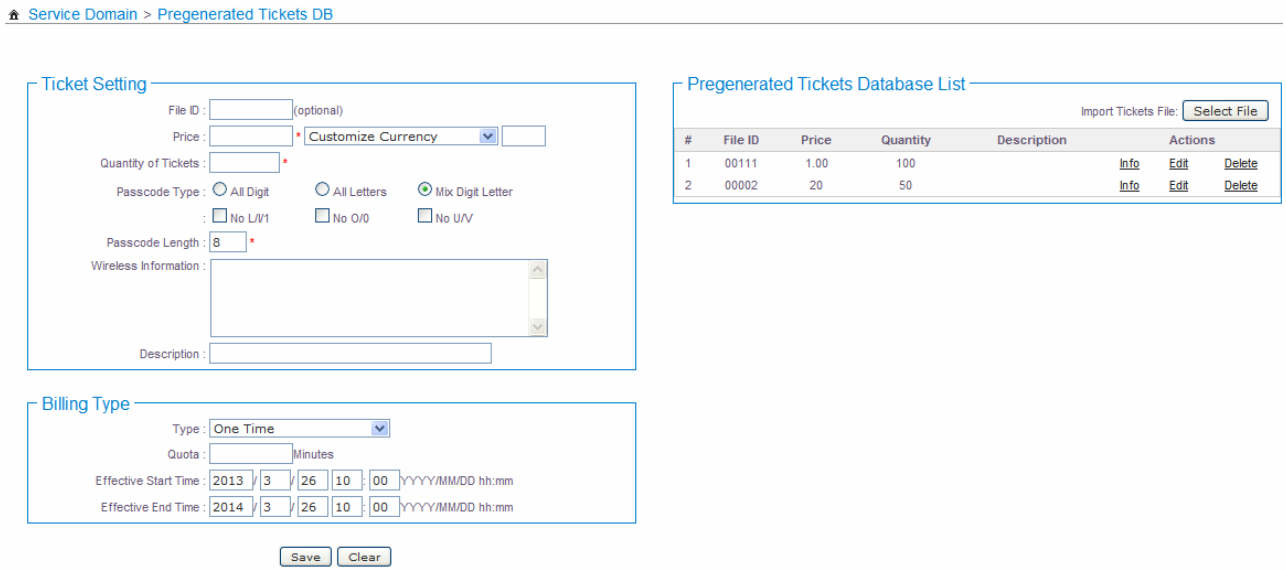


- **Multiple Login:** Select **Enable** to activate multiple login service, and Disable to inactivate multiple login service.
- **Auth Type:** Denote authentication type of the system.
- **Service Name:** Enter desired alias name of the respective authentication type on login page.
- **Description:** Enter desired description name of the respective authentication type.

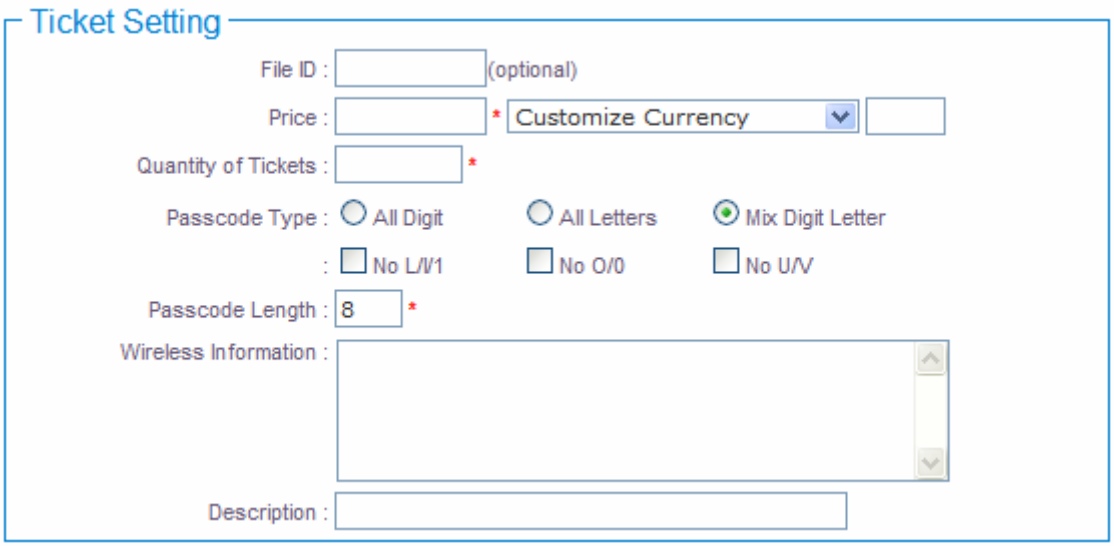
Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

4.2.2 Pregenerate Ticket

This section is for administrators to Pregenerated authentication tickets for entire external Network. There are three types of time policy ticket can be generated (**One Time**, **Multiple Times**, **Volume** and **Unlimited Until End Time**). Please click on **Service Domain** > **Authentication** > **Pregenerated Tickets**, and follow the below setting.



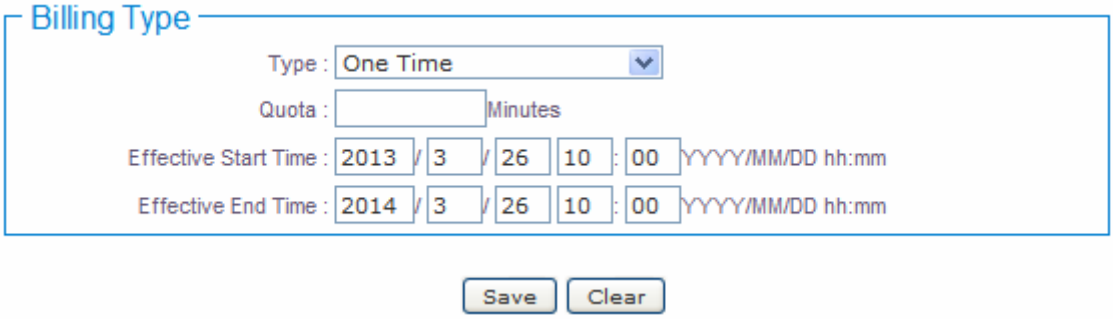
Ticket Setting



- **File ID:** Enter the 8 hex digit numbers for identifying tickets database, this setting is optional, If you don't specified file ID, the system will automatically generate. (The range is 1-32767; Auto generated if no setting.)
- **Price:** The price charged for this tickets database.
- **Currency :** Select currency from drop-down list or enter customize currency for this tickets database
- **Quantity of Tickets:** The range is 1-3066. To specify desired quantity of tickets for this database
- **Passcode Type:** There are different passcode types for this tickets database: All Digit, All Letters, and Mix Digit Letter. Select All Letters or Mix Digit Letter, the sub-item should be shown-up. Select desired excluding letters for passcode of ticket database.
- **Passcode Length :** Specify desired passcode length between 8 to 32 for this tickets database

- **Wireless Information :** Specify desired wireless information for this tickets database(Up to 512 characters)
- **Description :** Enter appropriate text to denote this database

Billing Type



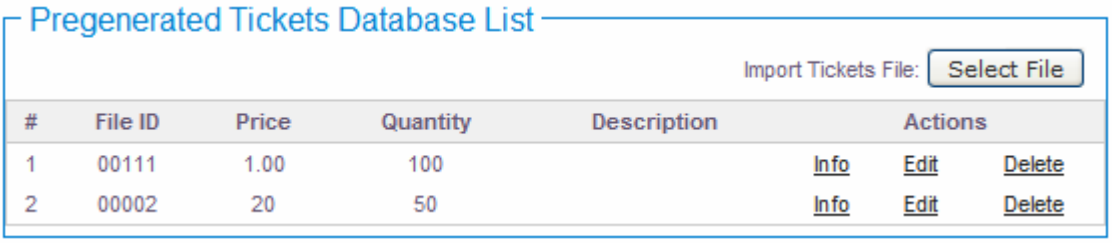
- **Type:** There are different billing policies for this tickets database: One Time, Multiple Times, Volume and Unlimited Until End Time. Select One Time or Multiple Times or Volume, the Quota sub-item should be shown-up.
- **Quota :** Enter the time quota for One Time and Multiple Times policy (the maximum volume allowed is 527040 (366day * 24 * 60)minutes, default is **60** minutes); or enter the volume quota for Volume policy (the maximum volume allowed is 102400 MB, default is 10 MB)
- **Effective Starting Time :** Specify desired effective starting time for this tickets database
- **Effective Ending Time :** Specify desired effective ending time for this tickets database

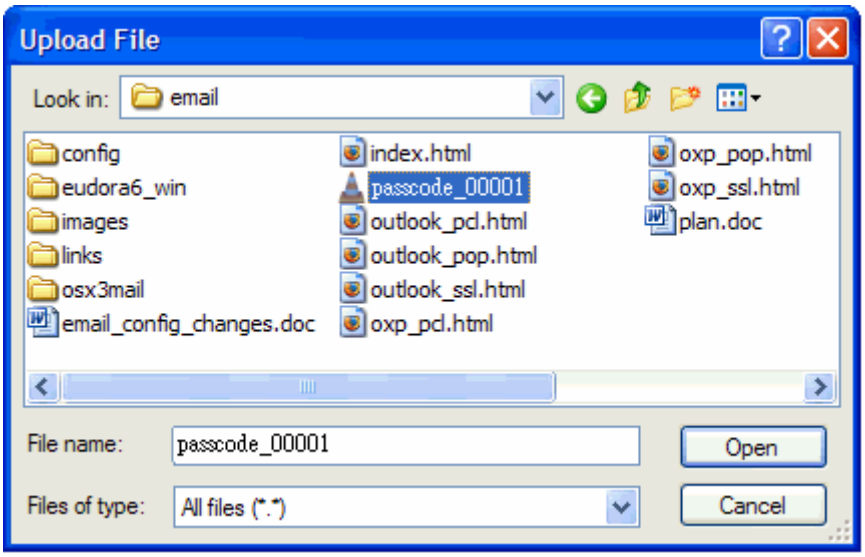
Click **Save** button to create database of ticket.

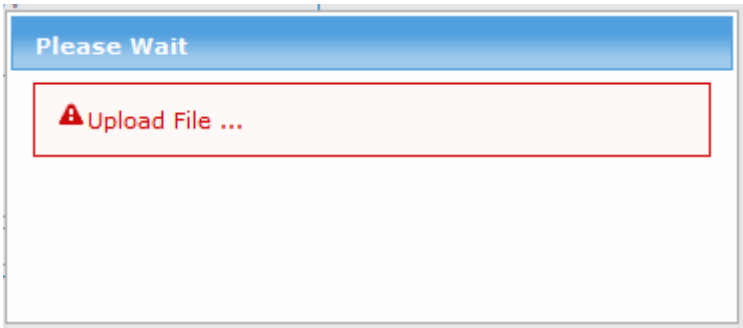
Pregenerated Tickets Database List

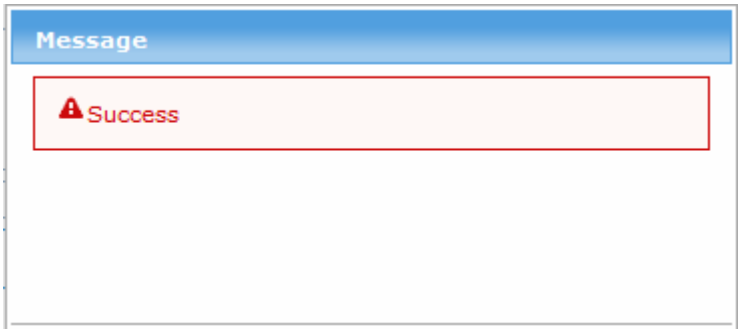
Shows all created ticket of database in the list

- **Import Tickets File:** Click this to upload the tickets of database. Click "**Select File**" button to select the file for the tickets upload. The "Upload File ..." message will appear. (The format is "***.bin**")









- **File ID:** Denote the identity number of the database.
- **Price:** Denote the price of ticket in the database.
- **Quantity:**
- **Description :** Denote the additional information of database
- **Actions:** Click an action button to perform the appropriate action.
- **Info:** Click this option to view information of each tickets database.

Below depicts an example for information of Pregenerated tickets databases when you click"**Info**"option

Service Domain > Pregenerated Tickets DB > Tickets Manager

Refresh

Ticket Information

File ID : 00111
Wireless Information :
Description :
Effective Start Time : 2013/03/08 14:00 GMT+08:00
Effective End Time : 2014/03/08 14:00 GMT+08:00
Type and Quota : Volume, 10 MB
Passcode Type : All Digit
Passcode Length : 8
Quantity : 100
Price : 1.00

Statistics

Ticket Qty : 100
Used Ticket Qty : 2
Expired Ticket Qty : 0
Total Price : 100

Export Tickets

Export Mode : Export BIN Export TXT Printable

Export

Show 10 entries Search:

ID	Code	Type:Quota	Status	Create Time	Open Time	Start Time	End Time	Last Login	Price	Currency	Actions
00111	52611964	Volume: 0 KB	Use up	03/08/2013/ 14:59:46	03/19/2013/ 10:56:58	03/08/2013/ 14:00:00	03/08/2014/ 14:00:00	03/19/2013/ 10:56:58	1.00		Delete
00111	85910387	Volume: 0 KB	Use up	03/08/2013/ 14:59:46	03/19/2013/ 15:06:09	03/08/2013/ 14:00:00	03/08/2014/ 14:00:00	03/20/2013/ 13:21:08	1.00		Delete
00111	11802118	Volume: 0 KB	Use up	03/08/2013/ 14:59:46	03/19/2013/ 17:25:32	03/08/2013/ 14:00:00	03/08/2014/ 14:00:00	03/20/2013/ 13:05:01	1.00		Delete
00111	80722900	Volume: 9 MB	Used	03/08/2013/ 14:59:46	03/20/2013/ 13:55:35	03/08/2013/ 14:00:00	03/08/2014/ 14:00:00	03/20/2013/ 14:10:13	1.00		Delete
00111	16337995	Volume: 10 MB	Unused	03/08/2013/ 14:59:46		03/08/2013/ 14:00:00	03/08/2014/ 14:00:00		1.00		Delete
00111	60864855	Volume: 10 MB	Unused	03/08/2013/ 14:59:46		03/08/2013/ 14:00:00	03/08/2014/ 14:00:00		1.00		Delete
00111	14847126	Volume: 6 MB	Used	03/08/2013/ 14:59:46	03/19/2013/ 10:47:44	03/08/2013/ 14:00:00	03/08/2014/ 14:00:00	03/20/2013/ 10:58:52	1.00		Delete
00111	31060083	Volume: 10 MB	Unused	03/08/2013/ 14:59:46		03/08/2013/ 14:00:00	03/08/2014/ 14:00:00		1.00		Delete
00111	61830707	Volume: 10 MB	Unused	03/08/2013/ 14:59:46		03/08/2013/ 14:00:00	03/08/2014/ 14:00:00		1.00		Delete
00111	89549111	Volume: 10 MB	Unused	03/08/2013/ 14:59:46		03/08/2013/ 14:00:00	03/08/2014/ 14:00:00		1.00		Delete

Showing 1 to 10 of 100 entries First Previous 1 2 3 4 5 Next Last

- **Edit:** Click this option to edit Wireless Information and Description in selected tickets database.
- **Delete:** Click this option to delete selected tickets database.

Ticket Information

Show the ticket information in this database.

Ticket Information

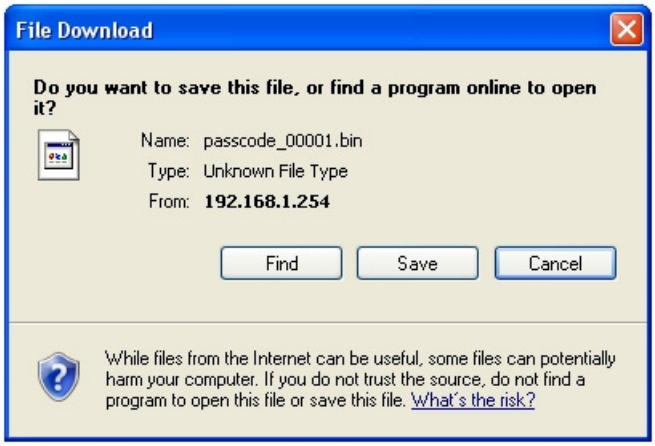
File ID : 00111
Wireless Information :
Description :
Effective Start Time : 2013/03/08 14:00 GMT+08:00
Effective End Time : 2014/03/08 14:00 GMT+08:00
Type and Quota : Volume, 10 MB
Passcode Type : All Digit
Passcode Length : 8
Quantity : 100
Price : 1.00

- **File ID :** Denote the identity number of the database
- **Wireless Information :** Denote the wireless information on the ticket
- **Description :** Denote additional information on the ticket
- **Effective Starting Time :** Denote the effective starting time on the ticket
- **Effective Ending Time :** Denote the effective ending time on the ticket
- **Type and Quota :** Denote the billing type and service quota on the ticket
- **Passcode Type :** Denote the passcode type on the ticket
- **Passcode Length :** Denote the passcode length on the ticket
- **Quantity :** Denote the quantity of ticket in this database
- **Price :** Denote the price charged on the ticket
- **Statistic :** Show the statistics of information in this database
- **Ticket Qty :** Denote the quantity of created ticket in this database
- **Used Ticket Qty :** Denote the quantity of used ticket in this database
- **Expired Ticket Qty :** Denote the quantity of expired ticket in this database
- **Total Price :** Denote the total ticket's price and currency in this database

Export Tickets

There are **three** methods to backup your information of ticket databases

- **Export BIN:** The administrator can backup ticket database or copy to other AC-920X. Click **Export** button, the ticket databases (**FileID_passcode.bin**) will be download from system. Below depicts an example for exporting tickets database.



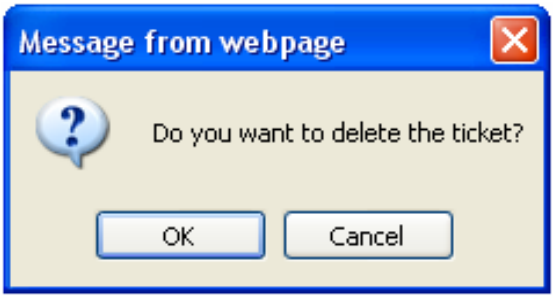
- **Export TXT:** There are **three** type of file list: XML, CSV and TXT(only Passcode). Click **Generate** button, the passcode list of ticket databases will be download from system.

- **Printable:** The selected ticket databases can be previewed on the screen. Click **Print** button, the tickets will be shown including the information of **Passcode**, **Price**, **Start Time**, **End Time**, and **Available SSID** on the screen. Admin

Below depicts an example for printable tickets

Passcode	52611964	Passcode	85910387	Passcode	11802118	Passcode	80722900
Price	1.00	Price	1.00	Price	1.00	Price	1.00
Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00
End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00
Wireless Information		Wireless Information		Wireless Information		Wireless Information	
Passcode	16337995	Passcode	60864855	Passcode	14847126	Passcode	31060083
Price	1.00	Price	1.00	Price	1.00	Price	1.00
Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00
End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00
Wireless Information		Wireless Information		Wireless Information		Wireless Information	
Passcode	61830707	Passcode	89549111	Passcode	59522906	Passcode	01423272
Price	1.00	Price	1.00	Price	1.00	Price	1.00
Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00
End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00
Wireless Information		Wireless Information		Wireless Information		Wireless Information	
Passcode	36755825	Passcode	90981318	Passcode	48079351	Passcode	69393316
Price	1.00	Price	1.00	Price	1.00	Price	1.00
Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00
End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00
Wireless Information		Wireless Information		Wireless Information		Wireless Information	
Passcode	99169620	Passcode	63076271	Passcode	07022538	Passcode	69892153
Price	1.00	Price	1.00	Price	1.00	Price	1.00
Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00	Start Time	03/08/2013/ 14:00:00
End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00	End Time	03/08/2014/ 14:00:00
Wireless Information		Wireless Information		Wireless Information		Wireless Information	

- **Tickets List :** Show all tickets in this database
- **File ID :** Denote the identity number of the database
- **Code :** User can used Passcode of ticket for access Internet
- **Type/Quota :** Denote the billing type and service quota on this ticket
- **Status:** Denote the status of ticket. There three types of status : **Unused**, **Used** and **Expired**
- **Create Time :** Denote the ticket create time
- **Open Time :** Denote the time of the first time used on this ticket
- **Start Time :** Denote effective starting time on this ticket
- **End Time :** Denote effective ending time on this ticket
- **Last Login :** Denote the last login time on this ticket
- **Price:** Denote the price of the charged on this ticket.
- **Currency :** Denote the currency of the charged on this ticket
- **Actions:** Click an action button to perform the appropriate action.
- **Delete:** Click this option to remove ticket from this billing plan. When administrator clicks this option, the alert message will appear as below.



Click **Refresh** button to reload the page.

***Note:** After you login system via Pregenerated authentication, the timer page will appear. Don't close Timer page (Because the **Logout** button on this page)

If Timer Page doesn't appear in the browser, please enter "http(s)://domain0.login" to open Timer Page

4. . On-Demand

Administrators can enable and configure this authentication method to provide clients access in a Hotspot environment. Major functions include billing plans creation, accounts creation, accounts monitoring list, thermal printer support, billing report statistics, and external payment gateway support. There are three method to generate On-Demand accounts: **Generate by Manual**, **Print from Thermal Printer**, **Generate after Online Payments**.

Click on **Service Domain** > **Authentication** > **On-Demand**, then the Billing Plans List page will appears.

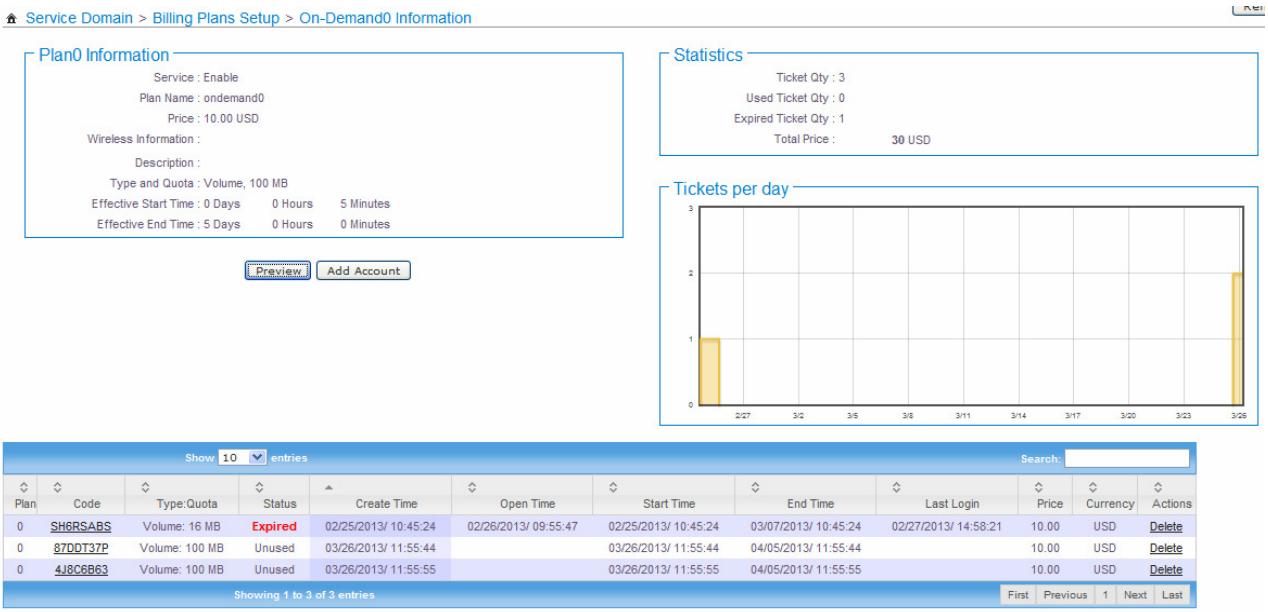
Service Domain > Billing Plans Setup

Billing Plans List

#	Status	Plan Name	Type:Quota	Price		Actions	
0	On	ondemand0	Volume: 100 MB	10.00	USD	Edit	Info
1	On	Package 1	Multiple Times: 60 Minutes	5.00	TWD	Edit	Info
2	On	Plan 2	Unlimited Until End Time	10.00	JPY	Edit	Info
3	Off	Package 3	Unlimited Until End Time	10.00	USD	Edit	Info
4	Off	Package 4	Unlimited Until End Time	10.00	USD	Edit	Info
5	Off	Package 5	Unlimited Until End Time	10.00	USD	Edit	Info
6	Off	Package 6	Unlimited Until End Time	10.00	USD	Edit	Info
7	Off	Package 7	Unlimited Until End Time	10.00	USD	Edit	Info
8	Off	Package 8	Unlimited Until End Time	10.00	USD	Edit	Info
9	Off	Package 9	Unlimited Until End Time	10.00	USD	Edit	Info

- **Status:** Denote the current status of billing plan.
- **Plan Name:** Denote the name of billing plan
- **Type/Quota :** Denote the billing type and quota of billing plan
- **Price:** Denote the price charged of billing plan
- **Actions:** Click an action button to perform the appropriate action.
- **Edit:** Click this option to edit the respective billing plan. There are **10** billing plans can be edited.
- **Info:** Click this option to view accounts list and information of the respective billing plan.

After configuring billing plans, administrator can create and delete On-Demand users on this section. Click **Info** button on **Billing Plans List page** to enter the **On-Demand Information** page. In the On-Demand Information page. Administrator may create and delete On-Demand users.



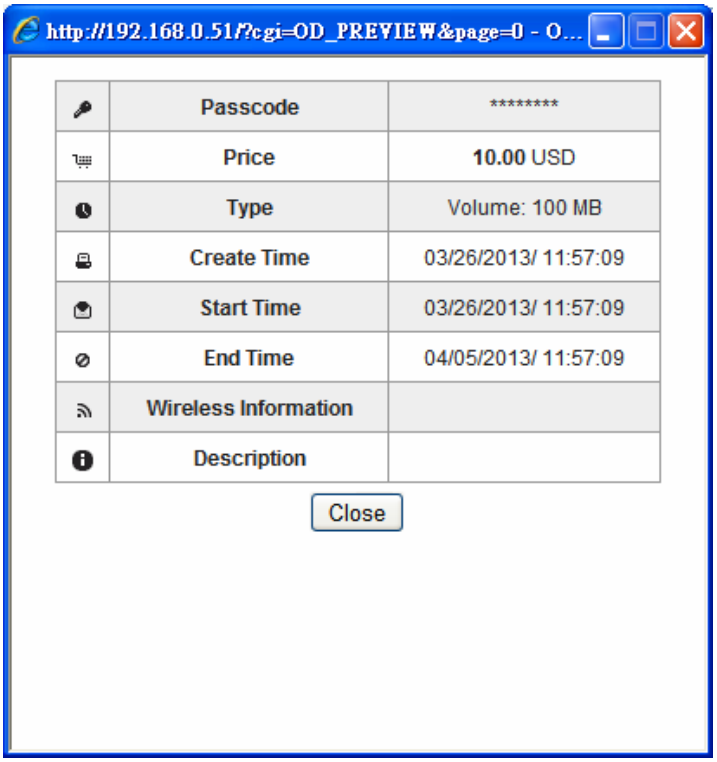
Show 10 entries Search:

Plan	Code	Type:Quota	Status	Create Time	Open Time	Start Time	End Time	Last Login	Price	Currency	Actions
0	SH6RSABS	Volume: 16 MB	Expired	02/25/2013/ 10:45:24	02/26/2013/ 09:55:47	02/25/2013/ 10:45:24	03/07/2013/ 10:45:24	02/27/2013/ 14:58:21	10.00	USD	Delete
0	87DDT37P	Volume: 100 MB	Unused	03/26/2013/ 11:55:44		03/26/2013/ 11:55:44	04/05/2013/ 11:55:44		10.00	USD	Delete
0	4J8C6B63	Volume: 100 MB	Unused	03/26/2013/ 11:55:55		03/26/2013/ 11:55:55	04/05/2013/ 11:55:55		10.00	USD	Delete

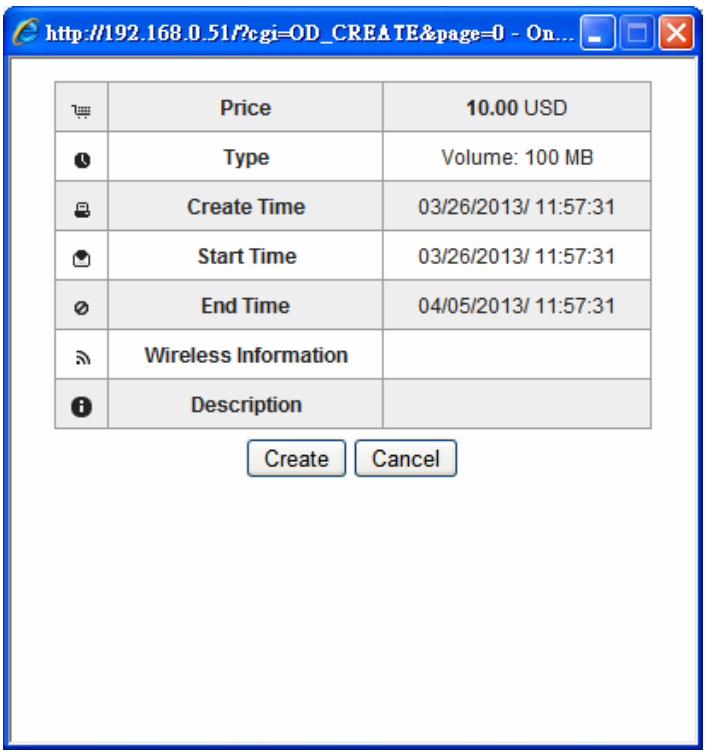
Showing 1 to 3 of 3 entries First Previous 1 Next Last

- **Plan Information :** Show plan information in this billing plan
- **Service :** Denote the current status of billing plan
- **Plan Name :** Denote the plan name of billing plan
- **Price :** Denote the price charged of billing plan
- **Wireless Information :** Denote the wireless information of billing plan
- **Description :** Denote additional information of billing plan
- **Type and Quota :** Denote billing type and service quota of billing plan
- **Effective Starting Time :** Denote effective starting time of billing plan
- **Effective Ending Time :** Denote effective ending time of billing plan

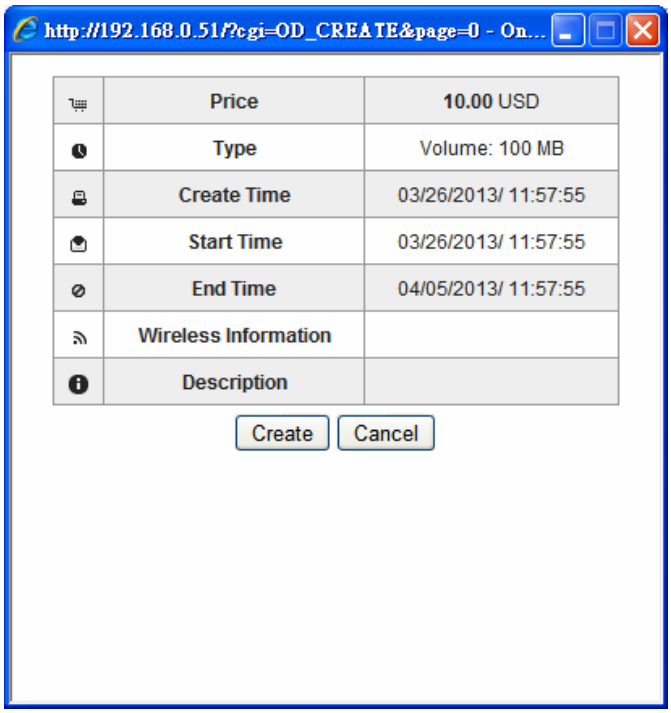
Click **Preview** button to preview ticket in the billing plan. Below depicts an example for previewing ticket. Click **Close** button to close window.



Click **Add Accounts** button, the create page will appear as below. Click **Cancel** button to close window.

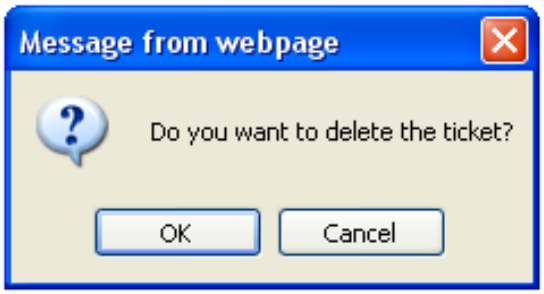


Click **Create** button to add new account for this billing plan. Below depicts an example for creating ticket.



- **Statistic :** Show on-demand users statistic information for this billing plan
- **Ticket Qty :** Denote the quantity of created ticket of billing plan
- **Used Ticket Qty :** Denote the quantity of used ticket of billing plan
- **Expired Ticket Qty :** Denote the quantity of expired ticket of billing plan
- **Total Price :** Denote the total ticket's price and currency of billing plan
- **Tickets per day :** Show the bar chart of quantity of the ticket in this billing plan
- **Tickets List :**
- **Plan :** Denote the billing plan on this ticket
- **Code :** User can used Passcode of ticket for access Internet
- **Type/Quota :** Denote the billing type and service quota on this ticket
- **Status:** Denote the current status on this ticket. There three types of status : **Unused**, **Used** and **Expired**
- **Create Time :** Denote the time of create on this ticket
- **Open Time :** Denote the time of the first time used on this ticket
- **Start Time :** Denote effective starting time on this ticket
- **End Time :** Denote effective ending time on this ticket
- **Last Login :** Denote the last login time on this ticket
- **Price :** Denote the price of the charged on this ticket
- **Currency :** Denote the currency of the charged on this ticket
- **Actions:** Click an action button to perform the appropriate action.

- **Delete:** Click this option to remove ticket from this billing plan. When administrator clicks this option, the alert message will appear as below.



Click **Refresh** button to renew this page.

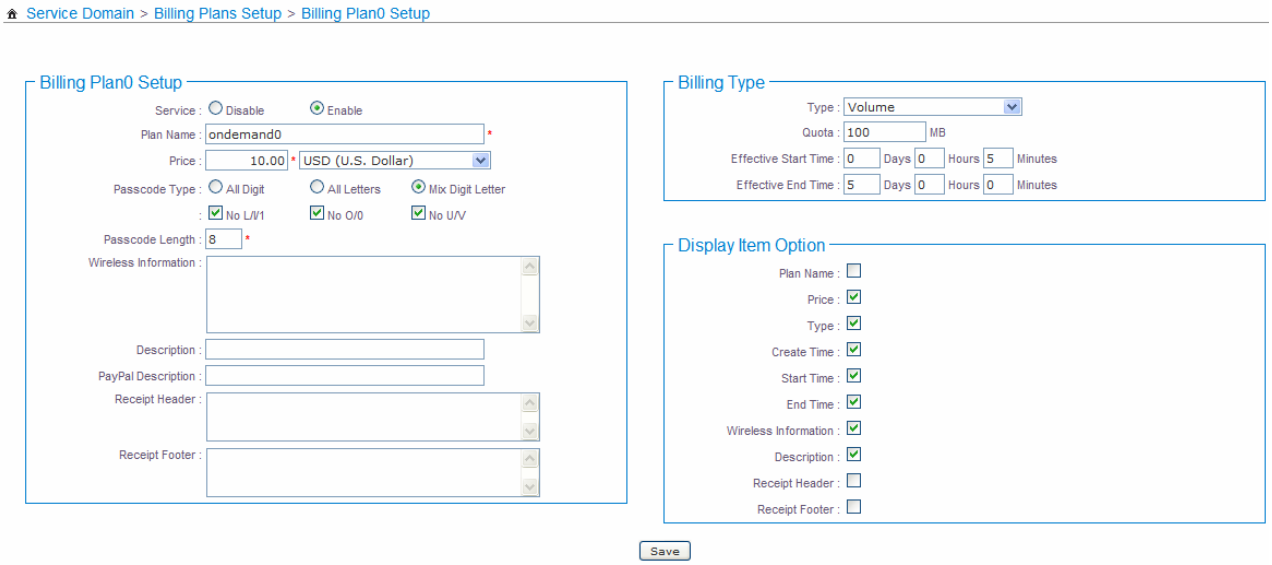
***Note:** The list only shows generate of the ticket by clicking **Add Account** button.

***Note:** After you login system via **On-Demand** authentication, the timer page will appear. Don't close Timer page (Because the **Logout** button on this page)

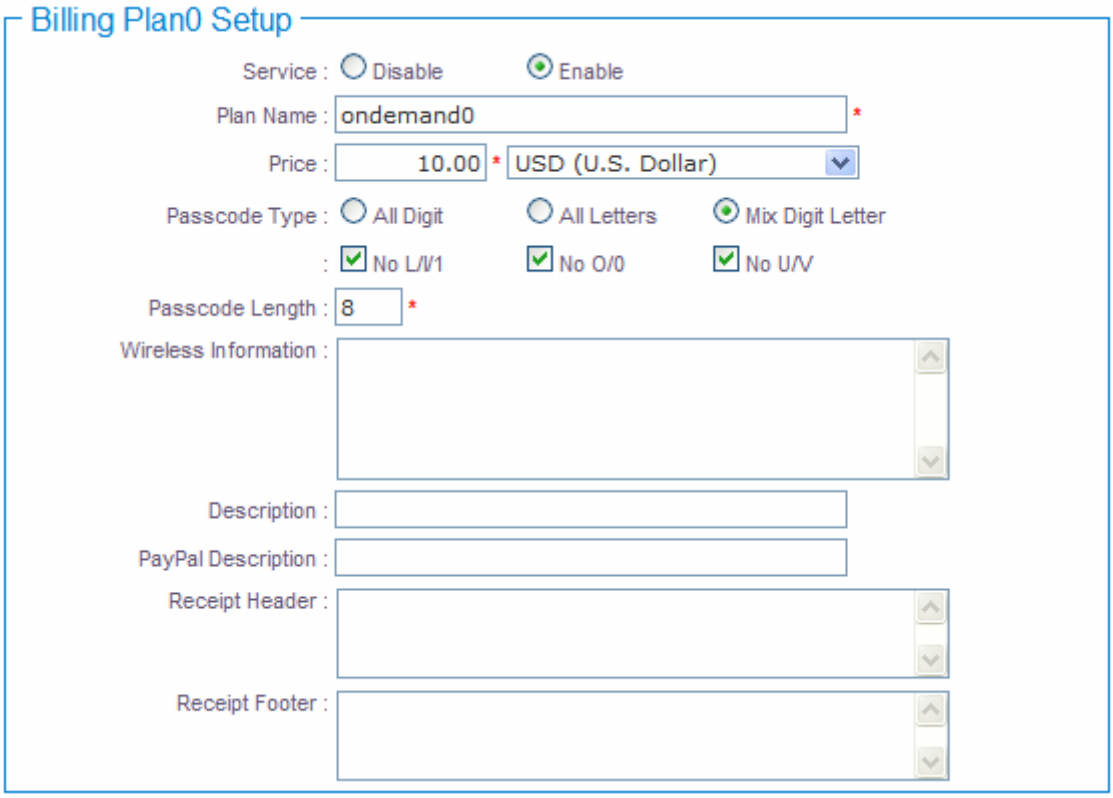
If Timer Page doesn't appear in the browser, please enter "http(s)://domain0.login " to open Timer Page.

4.2.3.1 Billing Plan Setup

Click on **Service Domain** > **Authentication** > **On-Demand** , and click **Edit** option on **Billing Plans List**, the **Billing Plan Setup** page will appear.



Billing Plan0 Setup

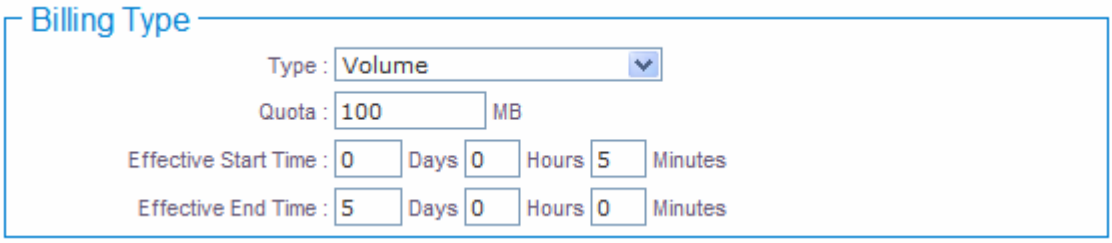


- **Service:** By default, it's "**Disable**". To "**Enable**" to activate this billing plan.
- **Plan Name:** Enter plan name for this billing plan.
- **Price:** The price charged and currency for this billing plan.

* **Note:** The **Paypal** payment gateway does not support "**Customize Currency**" option.

- **Passcode Type:** There are different passcode types for this billing plan: **All Digit**, **All Letters**, **Mix Digit Letter**. Select All Letters or Mix Digit Letter, the sub-item should be shown-up. Select desired excluding letters for passcode of ticket databases.
- **Passcode Length:** Specify desired passcode length between **8** to **32** for this billing plan.
- **Wireless Information:** Enter the wireless information for this billing plan.
- **Description:** Enter any additional information that will appear at the bottom of the receipt.
- **Paypal Description:** Enter any additional information that will appear at the list of the login page.
- **Receipt Header:** Enter header information that will appear at the top of the receipt.
- **Receipt Footer:** Enter footer information that will appear at the bottom of the receipt.

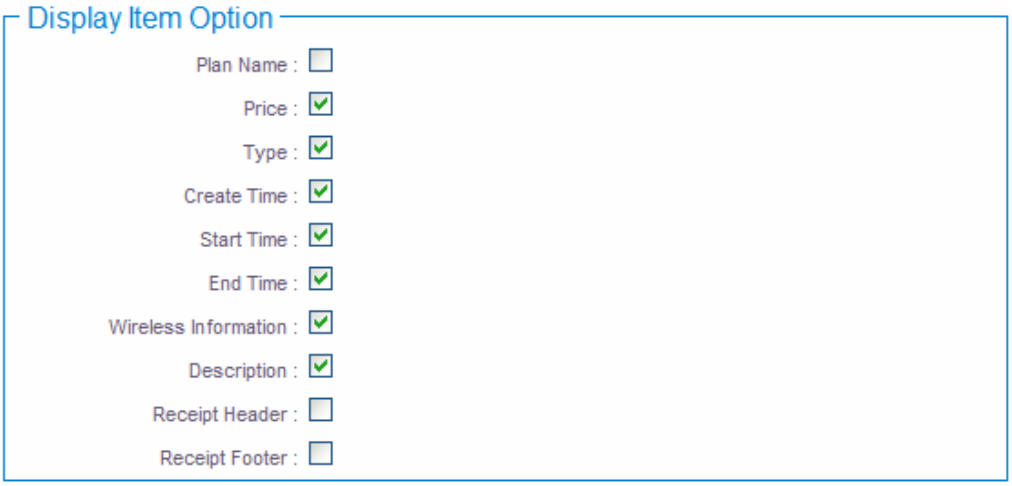
Billing Type



- **Billing Type:** There are different policies for this billing plan: **One Time**, **Multiple Times**, **Volume** and **Unlimited Until End Time**. Select One Time or Multiple Times or Volume, the **Quota** sub-item should be shown-up.
- **Quota :** Enter the time quota for One Time and Multiple Times policy (the maximum volume allowed is **527040** minutes, default is **60** minutes); or enter the volume quota for Volume policy (the maximum volume allowed is **102400** MB, default is **10** MB)
- **Effective Starting Time:** Specify desired effective starting time for this billing plan.
- **Effective Ending Time:** Specify desired effective ending time for this billing plan.

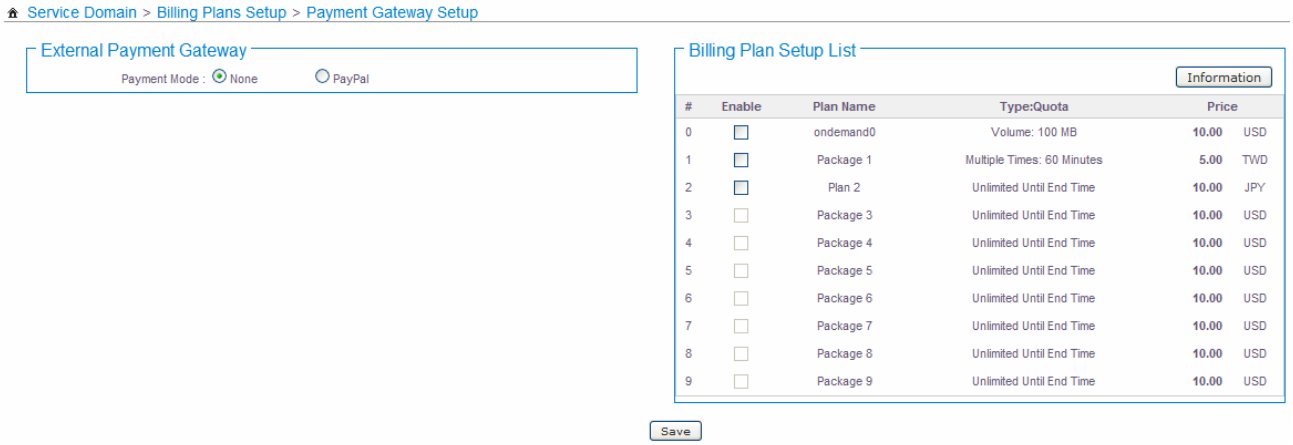
Display Item Option

Select desired display item for ticket

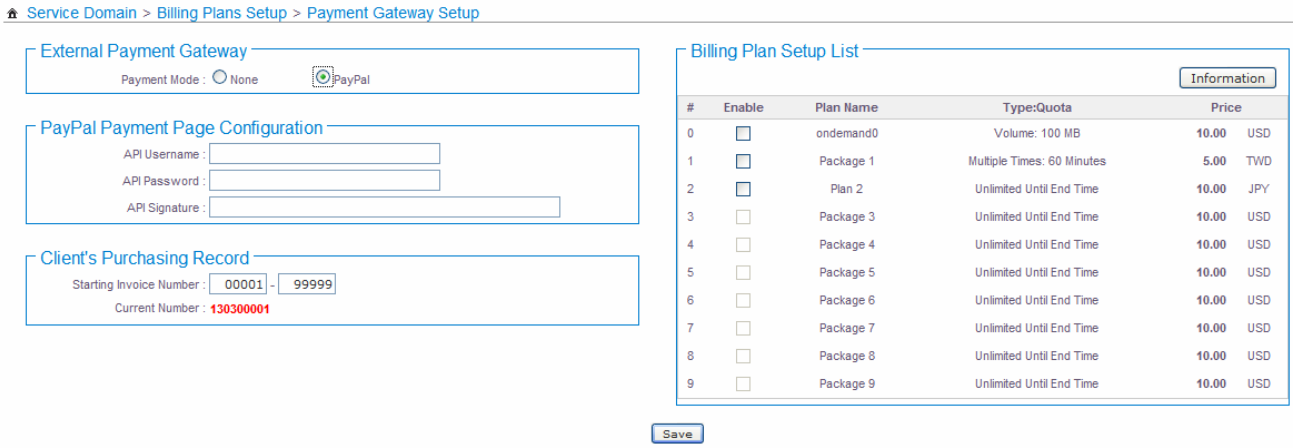


Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

4.2.3.2 Payment Gateway



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



Select Paypal to enable External Payment Gateway. Before setting up "**PayPal**", it is required that the merchant owners have a valid PayPal "**API Username**", "**API Password**".

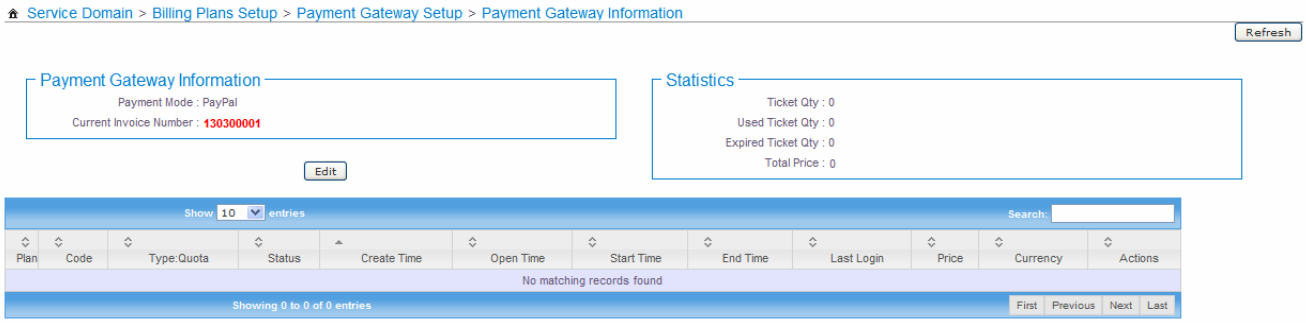
Please see **Appendix D – Accepting Payments via PayPal**, **Appendix E – Examples of Making Payments for End Users** for more information about setting up a PayPal Business Account, relevant maintenance functions, and example for end users.

***Note:** The **Paypal** payment gateway does not support "**Customize Currency**" option on Billing Plan.

After opening a PayPal Business Account, the merchant should find the "**API Signature**" of this PayPal account to continue "External Payment Gateway Setup".

- **API Username:** This is the "Login ID"(E-mail address) that is associated with the PayPal Business Account.
- **API Password:** This is the "Login Password" that is associated with the PayPal Business Account.

- **API Signature:** This the key used by Paypal to validate all the transactions.
- **Invoice Number:** An invoice number may be provided as additional information against a transaction.
- **Current No. :** Show current invoice number.
- **Billing Plan Setup List** :
- **Enable:** Select specified the billing plan for this payment gateway.
- **Plan Name :** Denote the name of billing plan
- **Type/Quota :** Denote the billing type and quota of billing plan
- **Price :** Denote the price charged of billing plan
- **Information:** Click this button to view accounts information for PayPal.



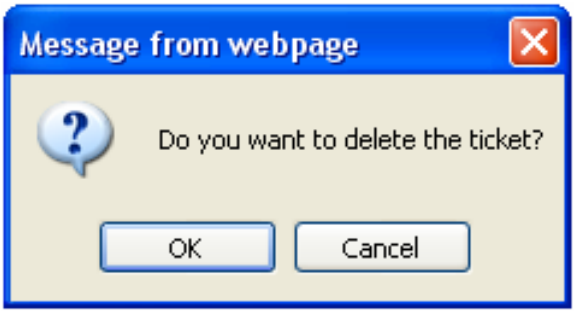
Payment Gateway Information

Show current ticket's invoice number.

Click **Edit** button to enter **Payment Gateway Setup** page.

- **Statistic :** Shows on-demand users statistic information for this billing plan via payment gateway created
- **Ticket Qty :** Denote quantity of created ticket from payment gateway
- **Used Ticket Qty :** Denote quantity of used ticket from payment gateway
- **Expired Ticket Qty :** Denote quantity of expired ticket from payment gateway
- **Total Price :** Denote total ticket's price and currency from payment gateway
- **Tickets per day :** Show the bar chart of quantity of the ticket from payment gateway

- **Tickets List :** Show tickets information
- **Plan :** Denote the billing plan on this ticket
- **Code :** User can used Passcode of ticket for access Internet
- **Type/Quota :** Denote the billing type and service quota on this ticket
- **Status:** Denote the current status on this ticket. There three types of status : **Unused**, **Used** and **Expired**
- **Create Time :** Denote the time of create on this ticket
- **Open Time:** Denote the time of the first time used on this ticket
- **Start Time :** Denote effective starting time on this ticket
- **End Time :** Denote effective ending time on this ticket
- **Last Login :** Denote the last login time on this ticket
- **Price:** Denote the price of the charged on this ticket.
- **Currency :** Denote the currency of the charged on this ticket
- **Actions:** Click an action button to perform the appropriate action.
- **Delete:** Click this option to remove ticket from this billing plan. When administrator clicks this option, the alert message will appear as below.



Click **Refresh** button to renew this page.

***Note:** On this List, it only shows all of generated tickets through **External Payment Gateway**.

***Note:** After you login system via **On-Demand** authentication, the timer page will appear. Don't close Timer page (Because the **Logout** button on this page)

If Timer Page doesn't appear in the browser, please enter "http(s)://domain0.login" to open Timer Page.

***Note:** **If administrator wants to refund transaction, please see Appendix E. Issue Refund for PayPal**

4.2.3.3 Thermal Printer Setup

WIAS-3200N v2 can generate ticket of On-Demand users manually or automatically from Thermal Printer. Please click on **Service Domain** → **Authentication** → **On-Demand** → **Thermal Printer Setup** to enter the **Thermal Printer List** page.

In the Thermal Printer List page, administrator may configure Thermal Printer setting and generate tickets manually and delete tickets.

Service Domain > Billing Plans Setup > Thermal Printer Setup

Thermal Printer List

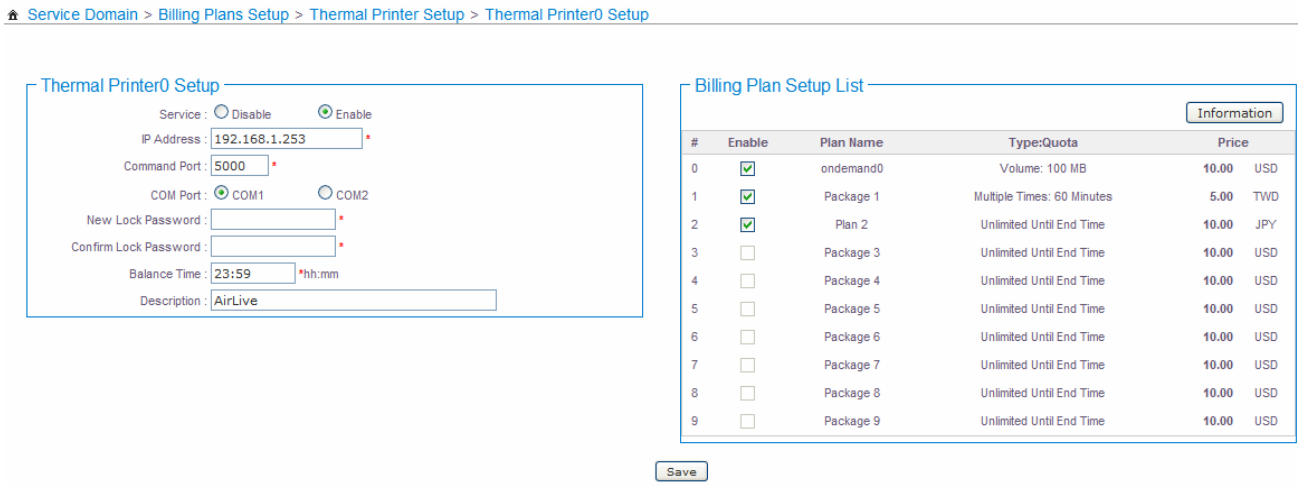
#	Status	IP Address	Command Port	COM Port	Balance Time	Description	Actions
0	On	192.168.1.253	5000	COM1	23:59	AirLive	Edit Info
1	Off		5000	COM1	23:59		Edit Info
2	Off		5000	COM1	23:59		Edit Info
3	Off		5000	COM1	23:59		Edit Info
4	Off		5000	COM1	23:59		Edit Info
5	Off		5000	COM1	23:59		Edit Info
6	Off		5000	COM1	23:59		Edit Info
7	Off		5000	COM1	23:59		Edit Info
8	Off		5000	COM1	23:59		Edit Info
9	Off		5000	COM1	23:59		Edit Info

***Note:** If administrator wants to generate tickets from Thermal Printer, system must use **DS-100 v2** to control Thermal Printer.

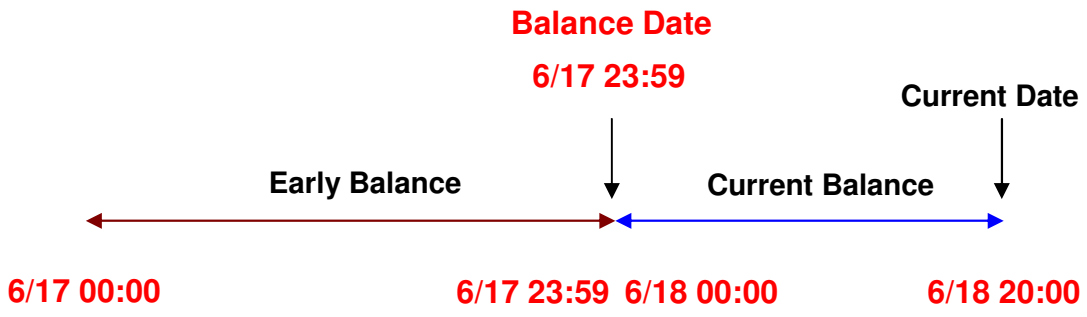
- **Status :** Denote the current status of thermal printer
- **IP Address :** Denote the IP address of f DS-100 v2 device server
- **Command Port :** Denote the command port of f DS-100 v2 device server
- **COM Port :** Denote the COM port of f DS-100 v2 device server to connect to thermal printer
- **Date :** Denote balance date of thermal printer
- **Description :** Denote the additional information of thermal printer
- **Actions:** Click an action button to perform the appropriate action.
- **Edit:** Click this option to edit the respective settings of thermal printer. There are **10** thermal printer can be edited. Each thermal printer can specified billing plan
- **Info :** Click this option to view accounts list and information of the respective billing plan from thermal printer created

Click **Edit** button to enter **Thermal Printer Setup** page. In the Thermal Printer Setup page, administrator may configure related settings.

Thermal Printer Setup



- **Service:** By default, it's "**Disable**". To "Enable" to activate this function.
- **IP Address :** Enter the IP address of WIAS-3200N v2 serial server
- **Command Port :** Enter the command port of WIAS-3200N v2 serial server
- **COM Port :** Select the COM port of WIAS-3200N v2 serial server to connect to thermal printer
- **Balance Date:** Enter balance date for statement printing from thermal printer. Thermal printer can print "**Current Balance**" or "Early Balance" statement. Below depicts an example for balance date.



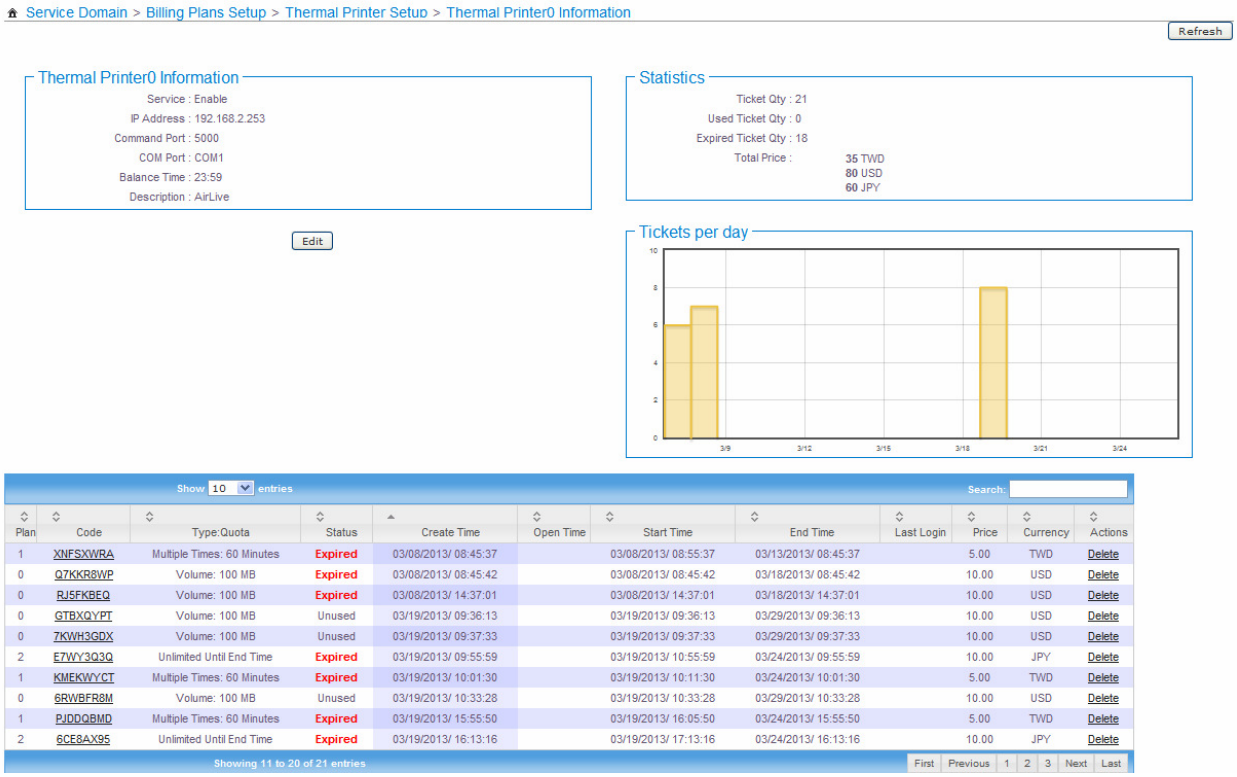
- **Description :** Enter appropriate text to denote this thermal printer
- **Billing Plan Setup List** :
- **Enable :** Select specified the billing plan for this thermal printer
- **Plan Name :** Denote the name of billing plan
- **Type/Quota :** Denote the billing type and quota of billing plan
- **Price :** Denote the price charged of billing plan

- **Information:** Click this button to view accounts information for PayPal.

***Note:** After configuring thermal printer general setting, administrator must select specified billing plan for this thermal printer.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

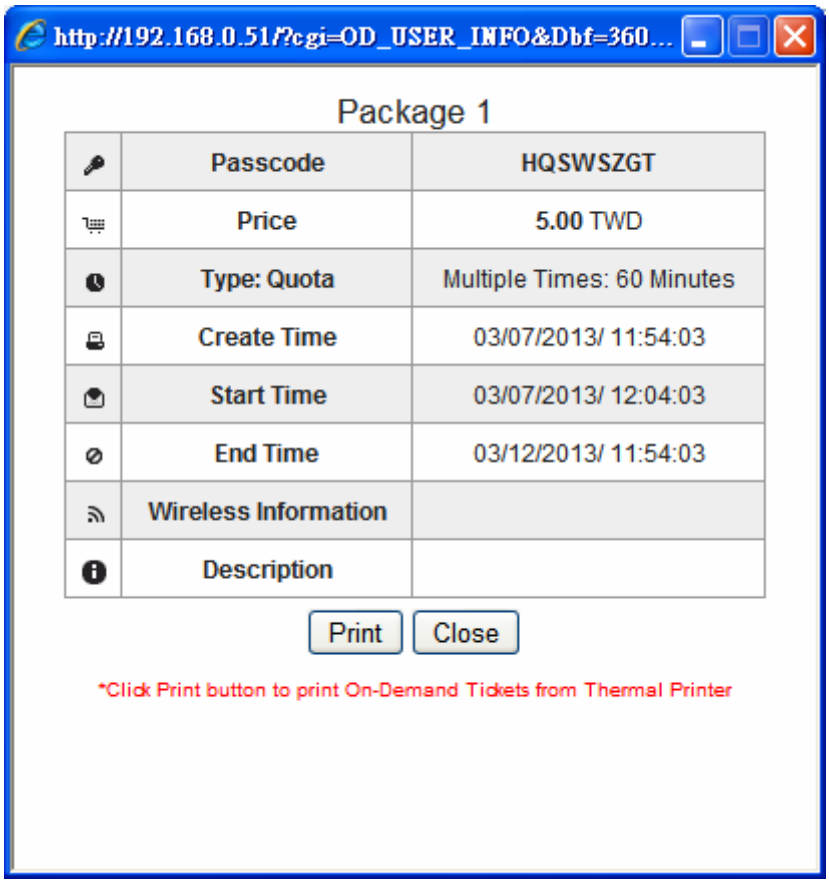
Click **Info** button to enter **Thermal Printer Information** page. In the Thermal Printer Information page, administrator may generated and delete ticket manually.



- **Thermal Printer Information:** Show setting information in this thermal printer.
- **Status :** Denote the current status of thermal printer
- **IP Address :** Denote the IP address of DS-100 v2 device server
- **Command Port :** Denote the command port of f DS-100 v2 device server
- **COM Port :** Denote the COM port of f DS-100 v2 device server to connect to thermal printer
- **Date :** Denote balance date of thermal printer
- **Description :** Denote the additional information of thermal printer

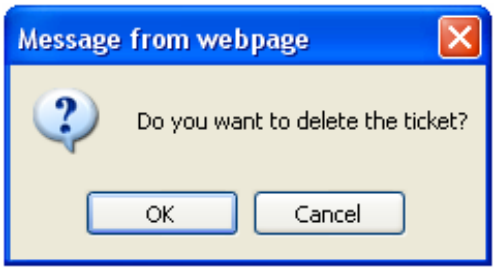
Click **Edit** button to enter Thermal Printer Setup page.

- **Statistic :** Shows on-demand users statistic information for this billing plan via thermal printer created
- **Ticket Qty :** Denote the quantity of created ticket from thermal printer
- **Used Ticket Qty :** Denote the quantity of used ticket from thermal printer
- **Expired Ticket Qty :** Denote the quantity of expired ticket from thermal printer
- **Total Price :** Denote the total ticket's price and currency from thermal printer
- **Tickets per day :** Show the bar chart of quantity of the ticket from thermal printer
- **Tickets List :** Show tickets information
- **Plan :** Denote the billing plan on this ticket
- **Code:** User can use Passcode of ticket for access Internet. Clicking hyperlinks to view this ticket information as below. Click Print button, the ticket will print from thermal printer again.



- **Type/Quota :** Denote the billing type and service quota on this ticket
- **Status:** Denote the current status on this ticket. There three types of status : Unused, Used and Expired
- **Create Time :** Denote the time of create on this ticket
- **Open Time :** Denote the time of the first time used on this ticket

- **Start Time :** Denote the effective starting time on this ticket
- **End Time :** Denote the effective ending time on this ticket
- **Last Login :** Denote the last login time on this ticket
- **Price:** Denote the price of the charged on this ticket.
- **Currency :** Denote the currency of the charged on this ticket
- **Actions:** Click an action button to perform the appropriate action.
- **Delete:** This will delete the ticket individually. When administrator click **Delete** Button, the alert message will appear as below.



Click **Refresh** button to renew this page.

***Note:** On this List, it only shows all of generated tickets from Thermal Printer.

***Note:** After you login system via **On-Demand** authentication, the timer page will appear. Don't close Timer page (Because the **Logout** button on this page)

If Timer Page doesn't appear in the browser, please enter "http(s)://domain0.login" to open Timer Page.

4.2.3.4 Billing Plan Report

Click on **Service Domain** > **Authentication** > **On-Demand** to enter the **Billing Plans Report** page. Administrator can get a complete report or a report of a particular period.

Service Domain > Billing Plans Setup > Billing Plan Report

Search Create Time Range

Search Type : All

Start Time : 2 / 23 / 2013 00 : 00 MM/DD/YYYY hh:mm

End Time : 3 / 26 / 2013 23 : 59 MM/DD/YYYY hh:mm

Search Print Export CSV

Search Result

Search Time: 02/23/2013/ 00:00:00 - 03/26/2013/ 23:59:59

#	Name	On-Demand	Payment Gateway	Thermal Printer	Amount Qty	Unit Price	Subtotal	
0	ondemand0	4		8	12	10.00	120.00	USD
1	Package 1			7	7	5.00	35.00	TWD
2	Plan 2	3		6	9	10.00	90.00	JPY
3	Package 3					10.00		USD
4	Package 4					10.00		USD
5	Package 5					10.00		USD
6	Package 6					10.00		USD
7	Package 7					10.00		USD
8	Package 8					10.00		USD
9	Package 9					10.00		USD
							120.00	USD
	Total	7	0	21	28		35.00	TWD
							90.00	JPY

Search Create Time Range

Search Create Time Range

Search Type : All

Start Time : 2 / 23 / 2013 00 : 00 MM/DD/YYYY hh:mm

End Time : 3 / 26 / 2013 23 : 59 MM/DD/YYYY hh:mm

Search Print Export CSV

- **On-Demand Type:** There are four type can be selected: ALL, Manually Create, Payment Gateway and Thermal Printer.
- **Start Time :** Specify desired search starting time
- **End Time :** Specify desired search ending time
- **Search Result:** Select a time period to get a period report. The report tells the total income and individual accounting of each plan for all plans available for that period of time.

.

Search Result

Shows search result of the specified time range

Search Result

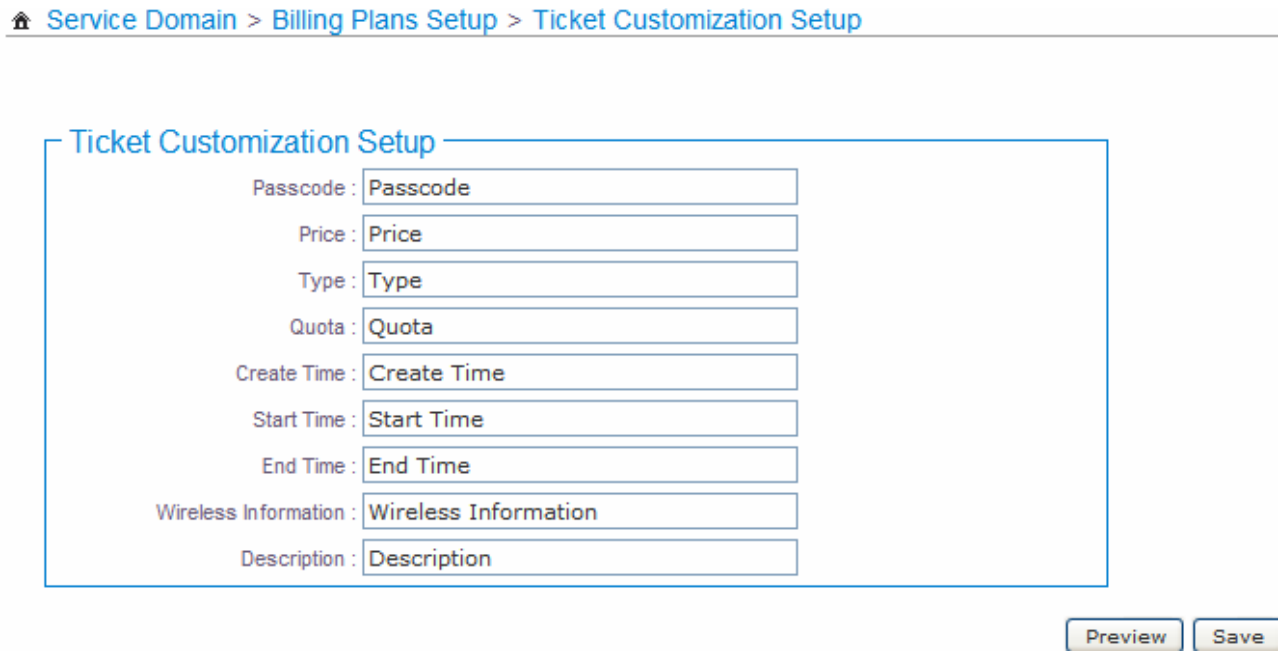
Search Time: 02/23/2013/ 00:00:00 - 03/26/2013/ 23:59:59

#	Name	On-Demand	Payment Gateway	Thermal Printer	Amount Qty	Unit Price	Subtotal	
0	ondemand0	4		8	12	10.00	120.00	USD
1	Package 1			7	7	5.00	35.00	TWD
2	Plan 2	3		6	9	10.00	90.00	JPY
3	Package 3					10.00		USD
4	Package 4					10.00		USD
5	Package 5					10.00		USD
6	Package 6					10.00		USD
7	Package 7					10.00		USD
8	Package 8					10.00		USD
9	Package 9					10.00		USD
							120.00	USD
	Total	7	0	21	28		35.00	TWD
							90.00	JPY

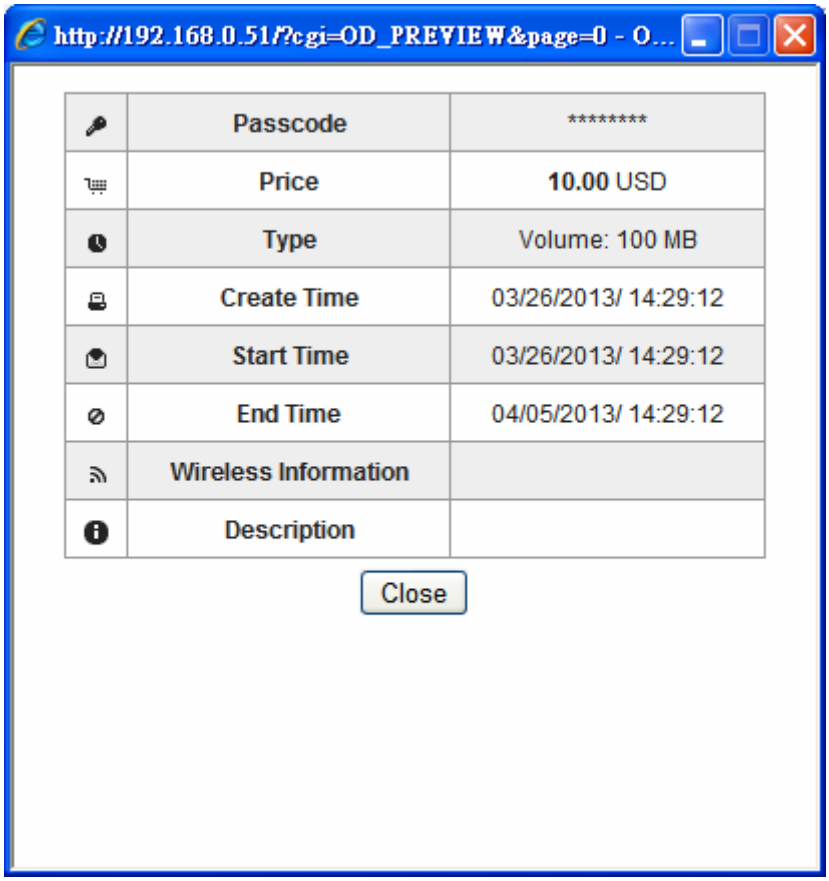
- **Search Time:** Denote the specified search time range.
- **Name:** Denote the name of billing plan.
- **On-Demand:** Denote the quantity of ticket from manually created.
- **Payment Gateway:** Denote the quantity of ticket from payment gateway created.
- **Thermal Printer:** Denote the quantity of ticket from thermal printer created.
- **Amount Qty:** Denote total quantity of created ticket of billing plan.
- **Unit Price:** Denote the unit price of billing plan.
- **Subtotal:** Denote the total price of billing plan.
- **Total:** Denote the total price and quantity on all billing plan.

4.2.3.5 Ticket Customization

Click on **Service Domain** > **Authentication** > **On-Demand** to enter the **Ticket Customization** page. Administrator can edit text on printed ticket on this page.



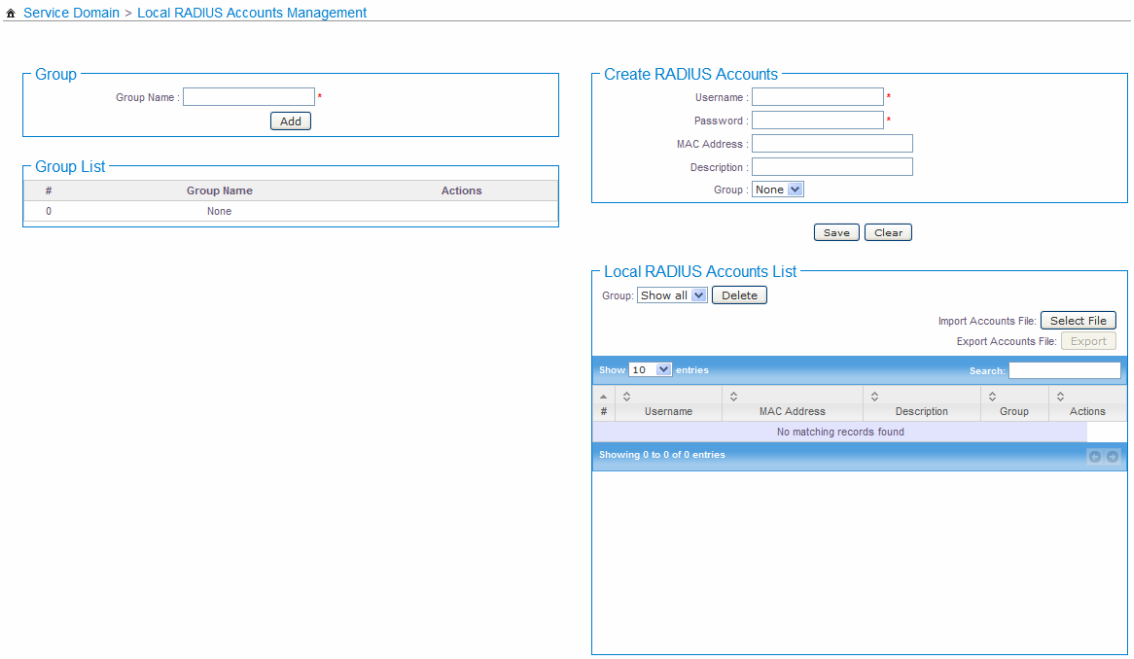
Change these settings as described here and click **Save** button to save your changes. Click **Preview** button to preview ticket in the **Billing Plan 0**. Below depicts an example for previewing ticket. Click **Close** button to close window.



Click **Reboot** button to activate your changes

4.3.3 Local RADIUS Accounts

WIAS-3200N v2 provide Local RADIUS server authentication. Please click on **Service Domain** > **Authentication** > **Remote RADIUS Server**, the page of **Remote RADIUS Server Setup** will appear. Administrator can add accounts by manual or import accounts file.



- **Group Setup:** Enter the specified name on group and click **Add** button to create. Up to **20** groups can add. (You can set **4-16** alphanumeric and ~!@#$%^*()_+-:{}

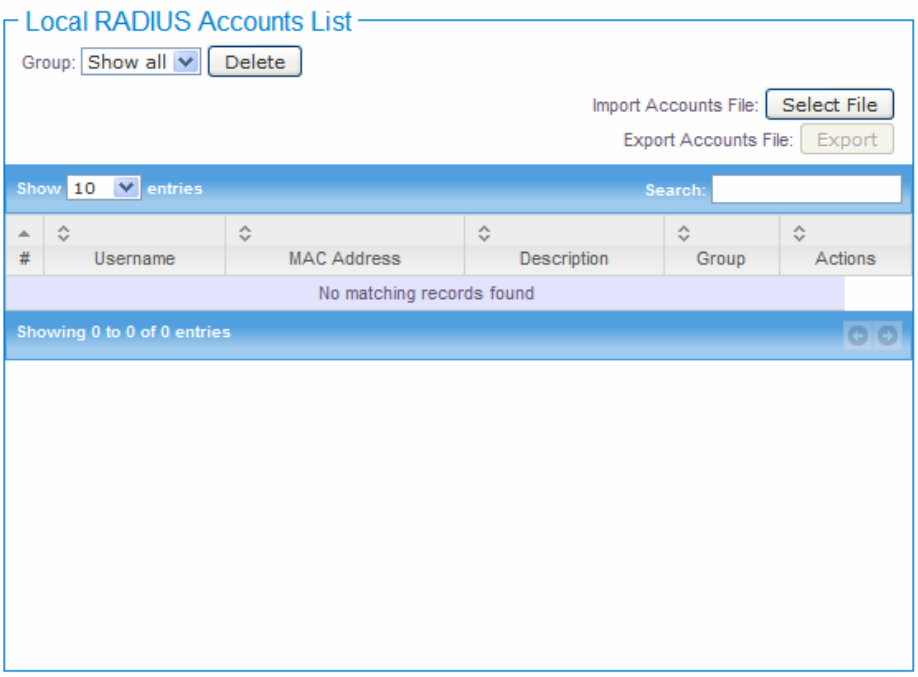
  |:<>?[]/,'.= specific characters)
- **Group List:** Display all of groups in the list, click **Delete** option to remove group name and all of the accounts in this group will be removed, click **Edit** option to change group name.
- **RADIUS Accounts Setup :**
- **Username/Password:** Enter the username and password of account on local RADIUS authentication.(You can set **4-16** alphanumeric and ~!@#$%^*()_+-:

  {}|:<>?[]/;'..= specific characters)
- **MAC Address:** Enter the MAC address of account on local RADIUS authentication.

  (**Optional**)
- **Description:** Enter appropriate text to denote this account.
- **Group:** Select the specified group on local RADIUS authentication, default is **None**.

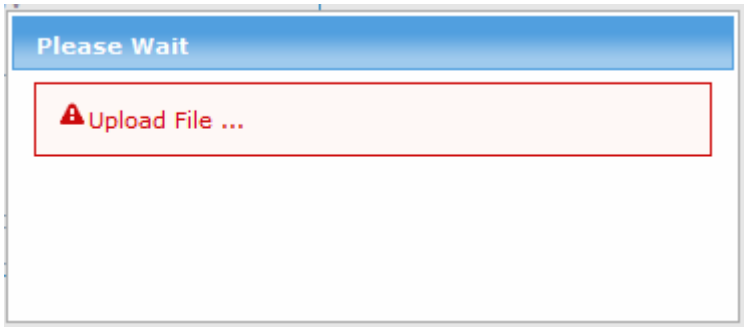
Click **Save** button to add new account, all of accounts can be **edited** (**Username cannot edit**) and **deleted**.

Local RADIUS Accounts List

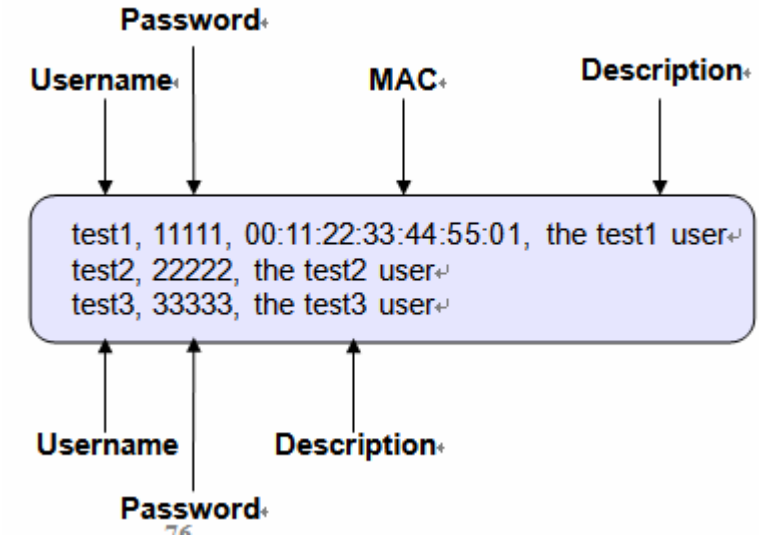


- **Delete:** Select the specified group and click Delete button to remove accounts of the specified group.

- **Import Accounts File:** Select the specified group on Group option and click Select File button to select the text file for uploading the accounts of the specified group. The the “Upload File ...” message will appear.

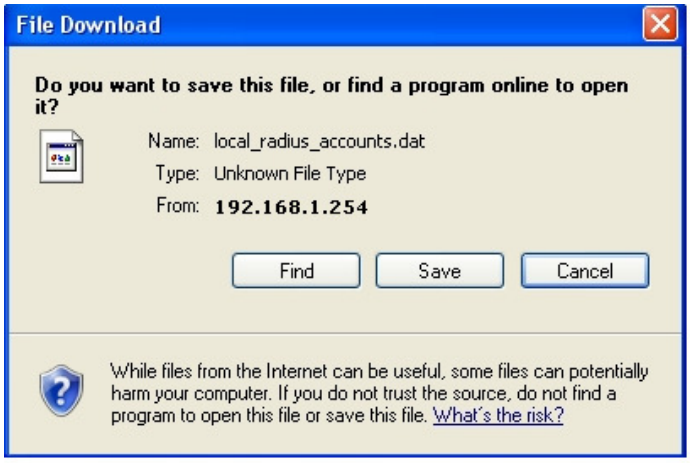


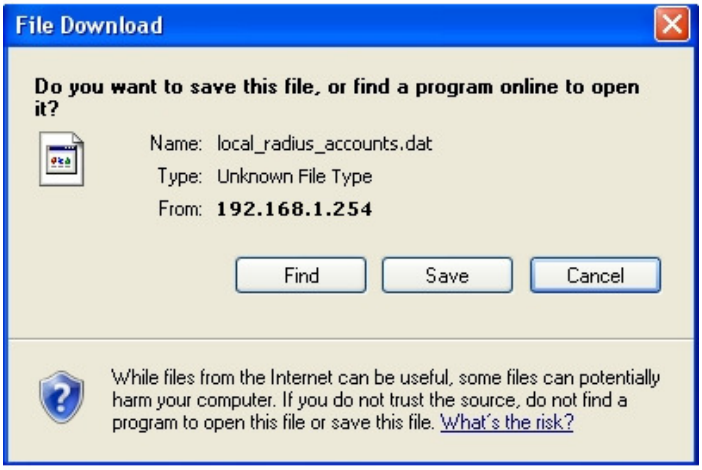
The upload file should be a text file and the format of each line is “Username, Password, MAC, Description” without the quotes. There must be no spaces between the fields and commas. The MAC field could be omitted but the trailing comma must be retained. When adding accounts by uploading a file, the existing accounts in the embedded database, uploading process will fail. Below depicts an example for text file.



***Note:** The same Username account can't exist on different groups, the Group option only for convenient management.

- **Export Accounts File:** Select the specified group on Group option and click Export button to save accounts of the specified group to PC. The “File Download” window will appear.



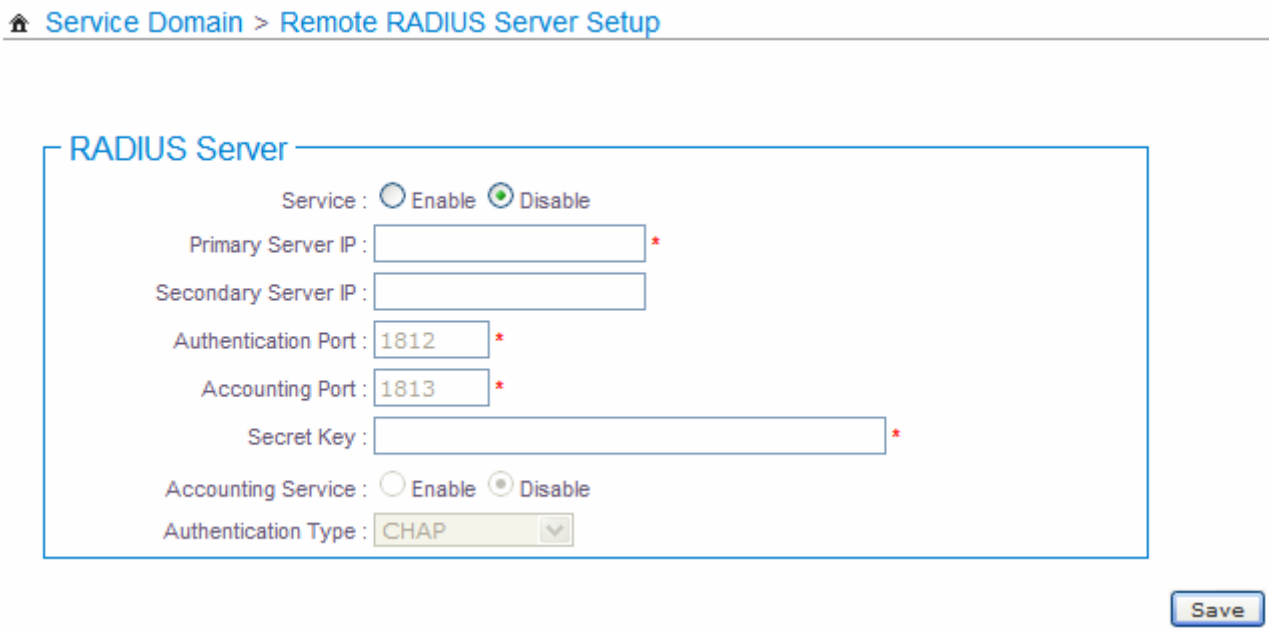


- **Search:** Enter a keyword to be searched in the text field and all matching the keyword will be listed.
- **Username :** Denote the username of account on local RADIUS authentication
- **MAC Address :** Denote the MAC address of account on local RADIUS authentication
- **Description :** Enter appropriate text to denote this account
- **Group :** Denote the specified of account on local RADIUS authentication
- **Actions:** Click an action button to perform the appropriate action.
- **Delete:** Click this option to remove the specified account.
- **Edit :** Click this option to edit the specified account

***Note:** These settings will become effective immediately after clicking the **Save** button.

4.3.4 Remote RADIUS Accounts

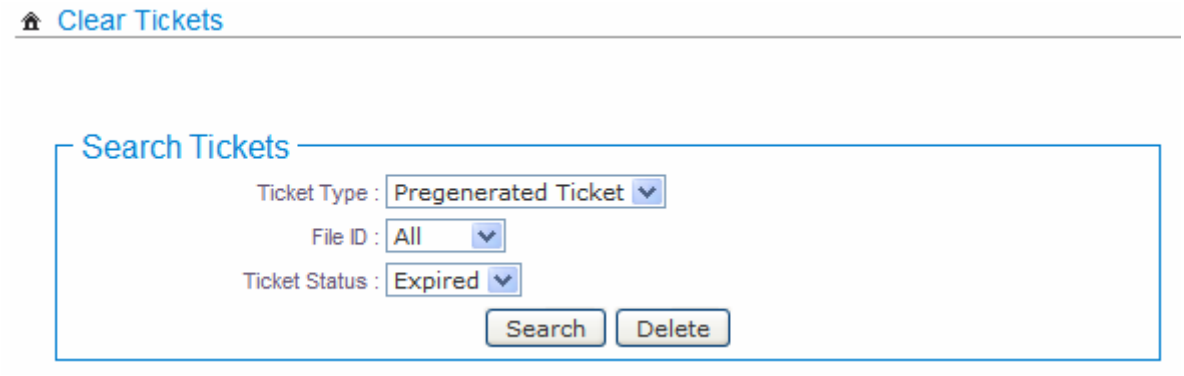
WIAS-3200N v2 provide remote RADIUS server authentication. Please click on **Service Domain** > **Authentication** > **Remote RADIUS Server**, the page of **Remote RADIUS Server Setup** will appear



- **Service:** By default, it's "**Disable**". To "**Enable**" to activate this function.
- **Primary/Secondary Server IP:** Enter the IP address of the Authentication RADIUS server.
- **Authentication Port:** The port number used by Authentication RADIUS server. Use the default **1812** or enter port number specified.
- **Accounting Port:** The port number used by Accounting RADIUS server. Use the default **1813** or enter port number specified.
- **Secret Key:** The secret key for system to communicate with RADIUS server. Support **1** to **64** characters.
- **Accounting Service:** Select this to enable or disable the "**Accounting Service**" for accounting capabilities.
- **Authentication Type:** Select the desired authentication type from the drop-down list; the options are **CHAP** and **PAP**.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

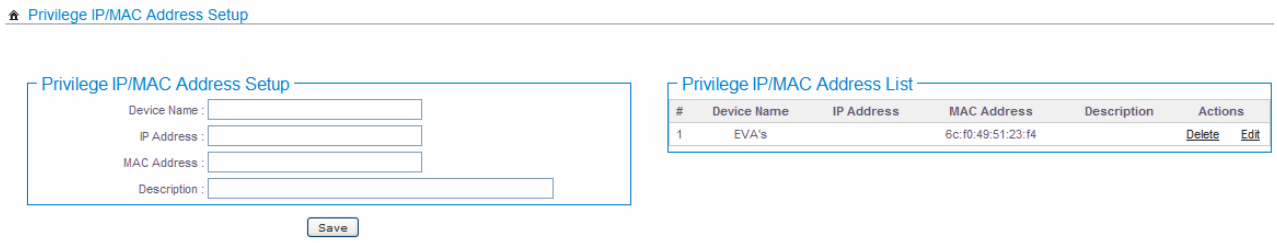
4.3.5 Clear Tickets



- **Ticket Type:** There are four ticket types for you to select: Pregenerated Ticket, On-Demand Ticket, Payment Gateway, and Thermal Printer.
- **File ID:** Select File ID.
- **Ticket Status:** Select Expired or Use up.
- **Search:** Click "**Search**" button to search the ticket which selected.
- **Delete:** Click "**Delete**" button to delete the ticket which selected.

4.4 Privilege IP/MAC Address

This function provides local device can access Internet without authentication. If there are some workstations belonging WIAS-3200N v2 that need to access to network without authentication, enter the IP or MAC address of these workstations in this list. Up to **20** addresses can be defined in this list. Please click on **Service Domain** > **Privilege IP/MAC Address**, the page of **Privilege IP/MAC Address Setup** will appear.



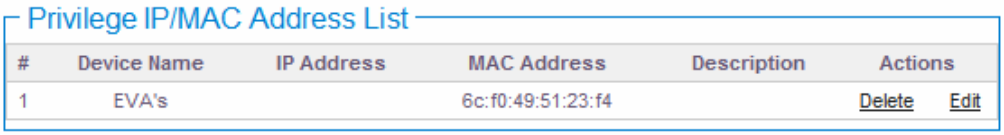
Privilege IP/MAC Address Setup

- **Device Name:** Enter the name of the workstation, 4-32 characters.

- **IP Address:** Enter the IP address (or **IP address/Mask**) of the workstation. Permitting specific IP addresses to have network access rights without going through standard authentication process
- **MAC Address:** Enter the MAC address of the workstation. Permitting specific MAC addresses to have network access rights without going through standard authentication process
- **Description:** Enter appropriate text to denote this workstation, up to 64 characters.

Click **Save** button to add new rule, all of rules can be **edited** and **deleted**

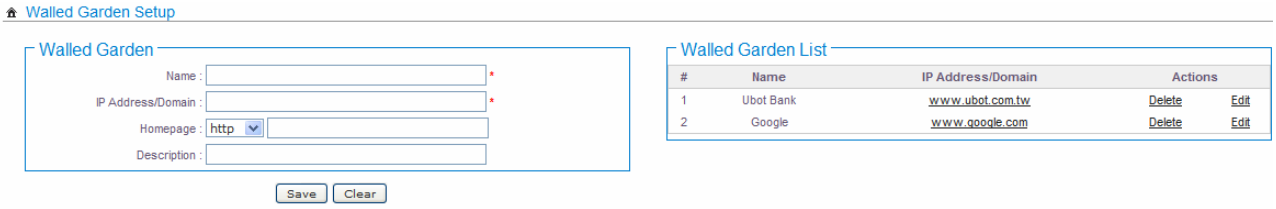
Privilege IP/MAC Address List



- **Device Name:** Denote the name of workstation.
- **IP Address :** Denote the IP address(or **IP address/Mask**) of workstation
- **MAC Address:** Denote the MAC address of workstation.
- **Description:** Enter appropriate text to denote this workstation.
- **Actions:** Click an action button to perform the appropriate action.
- **Delete :** Click this option to remove the specified item
- **Edit :** Click this option to edit the specified item

4.5 Walled Garden

This function provides certain free services or advertisement web pages for users to access the websites listed before login and authentication. Up to **20** address or domain names of the websites can be defined in this list. User without the network access right can still have a chance to experience the actual network service free of charge. Please click on **Service Domain** > **Walled Garden**, the page of **Walled Garden Setup** will appear.



Walled Garden

- **Name :** Enter a descriptive name for this rule for identifying purposes
- **IP Address/Domain:** Enter the IP address/Domain of the workstation.
- **Homepages:** Enter the MAC address of the workstation.
- **Description :** Enter appropriate text to denote this workstation

Click **Save** button to add new rule, all of rules can be **edited** and **deleted**

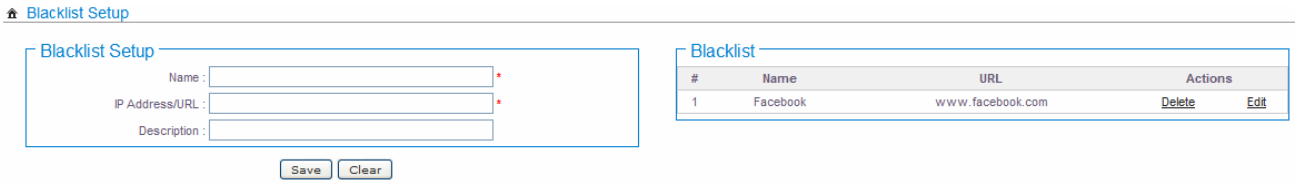
Walled Garden List

- **Name :** Denote the name of workstation
- **IP Address/Domain :** Denote the IP address(or **IP address/Mask**) of workstation
- **Actions:** Click an action button to perform the appropriate action.
- **Delete :** Click this option to remove the specified item
- **Edit :** Click this option to edit the specified item

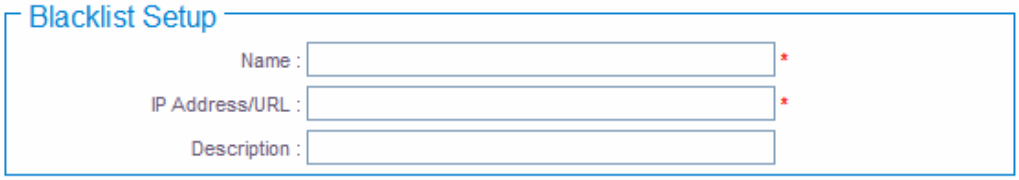
After add website on the list, the Walled Name will appear on Login page. Below depicts an example for Walled Garden

4.6 Blacklist

The administrator can add, delete and edit blacklist for uses access. If the system wants to deny uses access to specified website, enter the IP address, URL or Keyword of these websites in this list. Up to **20** rules can be defined in this list. Please click on **Service Domain** → **Blacklist**, the page of B**lacklist Setup** will appear.



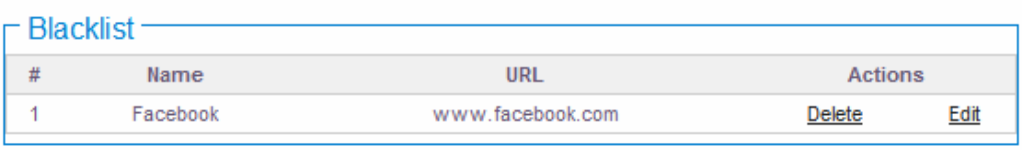
Blacklist Setup



- **Name :** Enter a descriptive name for this rule for identifying purposes
- **IP Address/URL:** Enter the specified IP address/URL of the website or Keyword of the website. Rejecting specific website to access rights
- **Description:** Enter appropriate text to denote this website.

Click **Save** button to add new rule, all of rules can be **edited** and **deleted**

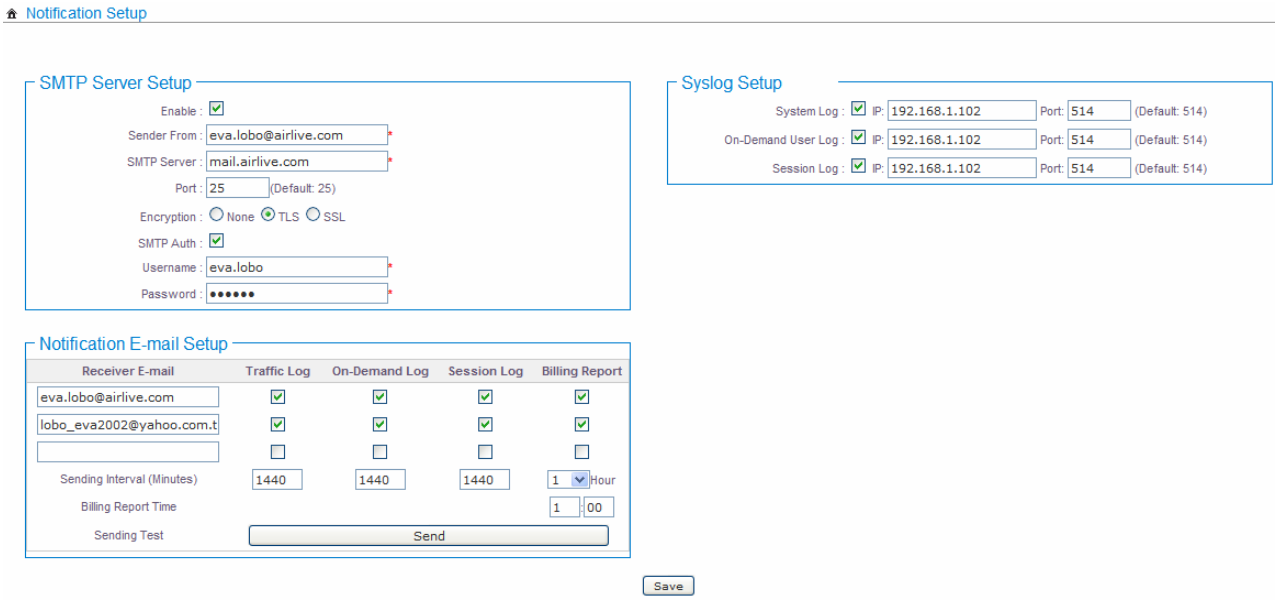
Blacklist



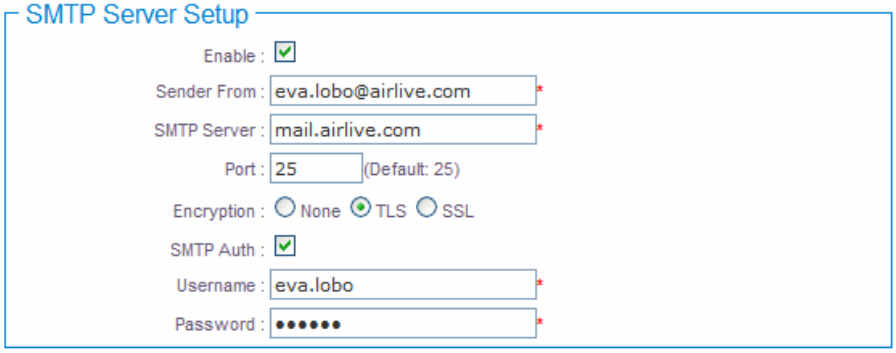
- **Name:** Denote the name of rule
- **URL:** Denote the IP address/URL or Keyword of the website
- **Actions:** Click an action button to perform the appropriate action.
- **Delete:** Click this option to remove the specified item
- **Edit:** Click this option to edit the specified item

4.7 Notification

WIAS-3200N v2 can automatically send the notification of **Traffic Log**, **On-Demand Log**, **Session Log** and **Billing Report** to 3 particular E-mail addresses. A trial email is provided by the system for validation. Please click on **Service Domain** > **Notification**, the page of **Notification E-mail Setup** will appear.



SMTP Server Setup

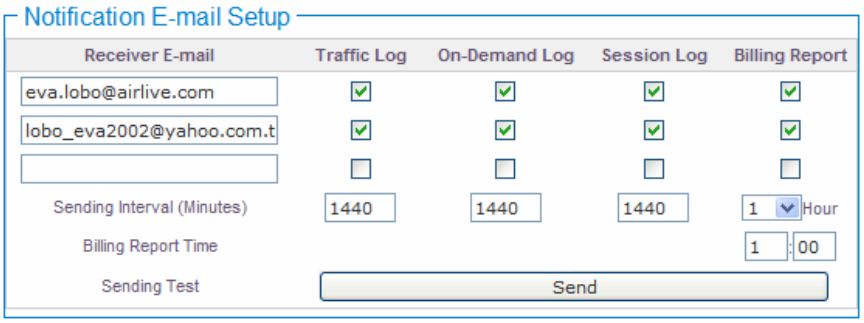


- **Enabled:** Click Enabled to activated SMTP Server
- **Sender From:** The E-mail address of the administrator in charge of monitoring. This will show up as the sender's E-mail.
- **SMTP Server:** The IP address / Domain of the sender's SMTP server.
- **Port:** The port of the sender's SMTP server. (Default is **25**)

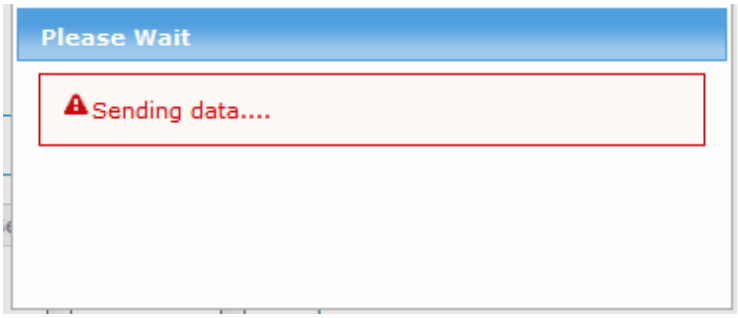
***Note:** Sometimes SMTP server use Port **587** for **TLS** encryption and Port **465** for **SSL** encryption

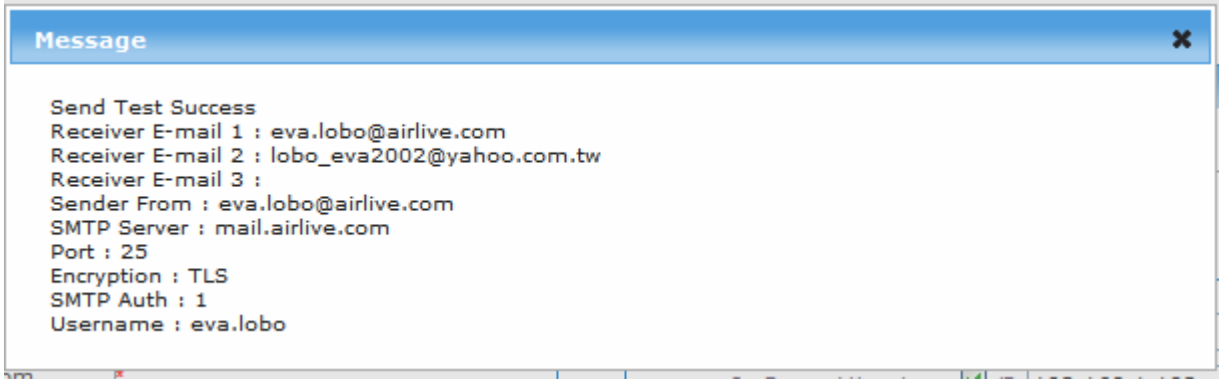
- **Encryption:** Some SMTP server needs encryption linking for sending E-mail. The system provides encryption for sender's SMTP server
- **SMTP Auth:** Some SMTP server needs authentication username and password for sending E-mail. The system provides authentication for sender's SMTP server
- **Username:** The sender's authentication username for STMP server
- **Password:** The sender's authentication password for STMP server

Notification E-mail Setup

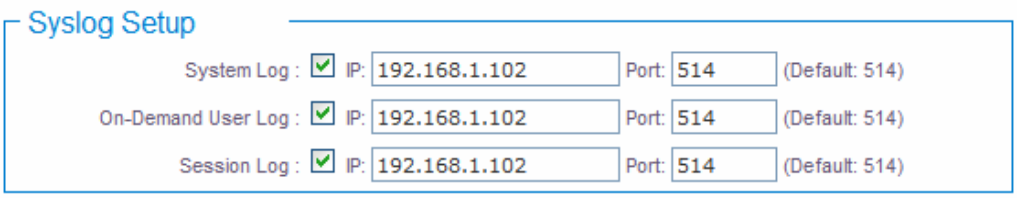


- **Receiver E-mail Address (es):** Up to 3 E-mail address can be set up to receive the notification. These are the receiver's E-mail address.
- **Sending Interval:** The time interval (in minute) to send the E-mail report. (Default is **1440** minutes; the range is between **10** to **4200** minutes)
- **Billing Report Time:** The start time of sending e-mail. For example: the Billing Report Time is 14:00 and Sending Interval is 6 hours, the system will send report on 20:00.
- **SMTP Sending Test:** Click **Send** button to verify Notification E-mail settings. Below depicts an example for success sending test.





Syslog Setup



There are 3 types of Syslog supported: **Syslog Log**, **On-Demand User Log** and **Session Log**. Enter the specify IP address and Port number to sent report.

***Note:** The all history log are saved in the DRAM, if you restart system, the all of history log will empty.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

If the history E-mail has been entered above Notification settings, after **Sending Interval**, the system will send **History** E-mail to receiver's E-mail address automatically.

Traffic Log

As shown in the following figure, each line is traffic history record consisting of 10 fields : **Date**, **Auth Type**, **Status**, **Passcode/Username**, **IP**, **MAC**, **Packets In**, **Bytes In**, **Packets Out** and **Bytes Out**.

#Date	AuthType	Status	Passcode/Username	IP	MAC	Packets In	Bytes In	Packets Out	Bytes Out
2011-02-16 16:36:24	On-Demand	LOGIN	3CC28M93	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 16:36:54	On-Demand	KICK	3CC28M93	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	9	572B
2011-02-16 16:37:53	Local Users	LOGIN	test1	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 16:38:06	Local Users	KICK	test1	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	9	572B
2011-02-16 17:16:27	On-Demand	LOGIN	BG4SD5HJ	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 17:29:14	On-Demand	LOGOUT	BG4SD5HJ	192.168.1.10	00:1A:92:9F:A4:9B	1094	1.157MB	827	95.7KB
2011-02-16 17:29:18	Pregenerated	LOGIN	GB0R0RDL	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 17:30:14	Pregenerated	TIME OUT OF RANGE	GB0R0RDL	192.168.1.10	00:1A:92:9F:A4:9B	393	283.2KB	344	57.0KB
2011-02-16 17:47:37	Local Users	LOGIN	test1	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 17:50:28	Local Users	LOGOUT	test1	192.168.1.10	00:1A:92:9F:A4:9B	467	348.9KB	395	63.3KB
2011-02-16 17:50:52	On-Demand	LOGIN	XKEQHPAY	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 18:00:32	On-Demand	TIME OUT OF RANGE	XKEQHPAY	192.168.1.10	00:1A:92:9F:A4:9B	1265	1.051MB	861	147.7KB
2011-02-16 18:22:00	Guest	LOGIN		192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 18:32:48	Guest	USE UP		192.168.1.10	00:1A:92:9F:A4:9B	1183	702.8KB	1088	273.5KB
2011-02-16 18:34:06	On-Demand	LOGIN	2W8HX7BE	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 18:52:57	On-Demand	IDLE TIMEOUT	2W8HX7BE	192.168.1.10	00:1A:92:9F:A4:9B	27	9.1KB	40	9.4KB
2011-02-16 18:54:06	On-Demand	LOGIN	2W8HX7BE	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B
2011-02-16 19:05:03	On-Demand	USE UP	2W8HX7BE	192.168.1.10	00:1A:92:9F:A4:9B	1095	767.4KB	978	204.9KB
2011-02-16 19:07:28	Pregenerated	LOGIN	UJTD79G4	192.168.1.10	00:1A:92:9F:A4:9B	0	0B	0	0B

- **Date :** Denote the current event's date and time
- **Auth Type:** There will shows **6** types of authentication: **Pregenerated**, **On-Demand**, **Local Users** (Local RADIUS Users), **Remote RADIUS**, **LDAP** and **Guest**.
- **Status :** There will show **10** types of status as below :
- **LOGIN :** Denote the user login to the hotspot service
- **LOGOUT :** Denote the user logout to the hotspot service
- **IDLE TIMEOUT :** Denote the user idle time is over timeout setting of **Service Domain**, the system will logout user automatically
- **USE UP :** Denote the quota of time of user is over
- **SESSION TIMEOUT :** Denote the user session timeout for connecting to remote RAIDUS
- **VOLUME USE UP :** Denote the quota of volume of user is over
- **KICK:** Denote the system kick out the user.
- **TIME OUT OF RANGE :** Denote the service time out of range
- **Passcode/Username :** Denote the user's passcode or username
- **IP :** Denote the user's IP address
- **MAC :** Denote the user's MAC address
- **Packets In :** Denote the current user's packets in
- **Bytes In :** Denote the current user's bytes in
- **Packet Out :** Denote the current user's packets out
- **Bytes Out :** Denote the current user's bytes out

On-Demand Log

As shown in the following figure, each line is traffic history record consisting of 15 fields : **Date**, **Location**, **Status**, **Passcode/Username**, **IP**, **MAC**, **Packets In**, **Bytes In**, **Packets Out**, **Bytes Out**, **Start Time**, **End Time, Plan**, **Payment Type** and **Cost**

#Date	Location	Status	Passcode/Username	IP	MAC	Packets In	Bytes In	Packets Out	Bytes Out	Start Time	End Time	Plan	Payment Type	Cost
2012-02-13 14:19:27		ADD OD ACCOUNT	QEJ6GNG9	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:19:27	2012-02-18 14:19:27	Plan 3	Cash	USD 2.00
2012-02-13 14:19:37		ADD OD ACCOUNT	KPE3YG6S	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:19:37	2012-02-18 14:19:37	Plan 3	Cash	USD 2.00
2012-02-13 14:19:45		ADD OD ACCOUNT	Z7CWKZ73	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:19:45	2012-02-18 14:19:45	Plan 3	Cash	USD 2.00
2012-02-13 14:19:53		ADD OD ACCOUNT	XMMN9W7C	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:19:53	2012-02-18 14:19:53	Plan 3	Cash	USD 2.00
2012-02-13 14:20:24		ADD OD ACCOUNT	F4E7CHCS	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 14:20:43		ADD OD ACCOUNT	J8DYNBTH	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:20:43	2012-02-18 14:20:43	Plan 0	Cash	USD 10.00
2012-02-13 14:37:24		LOGIN	XMMN9W7C	192.168.3.10	E4:CE:8F:4B:C2:9E	0	0B	0	0B	2012-02-13 14:19:53	2012-02-18 14:19:53	Plan 3	Cash	USD 2.00
2012-02-13 14:42:46		VOLUME USE UP	XMMN9W7C	192.168.3.10	E4:CE:8F:4B:C2:9E	146258	201.165MB	80276	3.376MB	2012-02-13 14:19:53	2012-02-18 14:19:53	Plan 3	Cash	USD 2.00
2012-02-13 14:43:42		LOGIN	F4E7CHCS	192.168.3.10	E4:CE:8F:4B:C2:9E	0	0B	0	0B	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 14:55:54		IDLE TIMEOUT	F4E7CHCS	192.168.3.10	E4:CE:8F:4B:C2:9E	15119	20.684MB	8054	355.3KB	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 15:04:13		LOGIN	F4E7CHCS	192.168.3.10	E4:CE:8F:4B:C2:9E	0	0B	0	0B	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 15:05:02		LOGOUT	F4E7CHCS	192.168.3.10	E4:CE:8F:4B:C2:9E	1549	1.723MB	1295	145.5KB	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 15:05:52		LOGIN	F4E7CHCS	192.168.3.10	E4:CE:8F:4B:C2:9E	1	52B	2	104B	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 15:15:56		KICK	F4E7CHCS	192.168.3.10	E4:CE:8F:4B:C2:9E	3799	2.008MB	4879	577.6KB	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 15:15:56		DELETE OD ACCOUNT	F4E7CHCS	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 14:20:24	2012-02-18 14:20:24	Plan 2	Cash	USD 2.00
2012-02-13 15:17:47		ADD OD ACCOUNT	6C6RW3FC	0.0.0.0	00:00:00:00:00:00	0	0B	0	0B	2012-02-13 15:17:47	2012-02-18 15:17:47	Plan 1	Cash	USD 5.00

- **Date :** Denote the current event's date and time
- **Location :** Denote the current device's location
- **Status :** There will show **10** types of status as below :
- **LOGIN :** Denote the user login to the hotspot service
- **LOGOUT :** Denote the user logout to the hotspot service
- **IDLE TIMEOUT :** Denote the user idle time is over timeout setting of **Service Domain**, the system will logout user automatically
- **USE UP :** Denote the quota of time of user is over
- **VOLUME USE UP :** Denote the quota of volume of user is over
- **KICK :** Denote the system kick out the user
- **TIME OUT OF RANGE :** Denote the service time out of range
- **ADD OD ACCOUNT :** Denote the system add On-Demand user account
- **DELETE OD ACCOUNT :** Denote the system delete On-Demand user account
- **Passcode/Username :** Denote the user's passcode or username
- **IP :** Denote the user's IP address
- **MAC :** Denote the user's MAC address
- **Packets In :** Denote the current user's packets in
- **Bytes In :** Denote the current user's bytes in
- **Packet Out :** Denote the current user's packets out
- **Bytes Out :** Denote the current user's bytes out
- **Start Time :** Denote the start time on this users
- **End Time :** Denote the end time on this users
- **Plan :** Denote the current user's billing plan
- **Payment Type :** Denote the current payment type, there were show **Cash** or **PayPal**
- **Cost :** Denote the current service charge

- **Session Log:** The system can recorded connection details of each user accessing the Internet and sent out to a specified Syslog Server or E-Mail based on defined interval time. As shown in the following figure, each line is traffic history record consisting of 10 fields, Date, **Time**, **Session Type**, **Username**, **Service Domain**, **Source IP**, **Source Port**, **Destination IP**, **Destination Port**, **and MAC.**

```
2011/02/15 12:25:22 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3676 dst=122.116.218.88 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:22 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3688 dst=122.116.218.88 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:22 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3690 dst=122.116.218.88 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:22 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3691 dst=202.89.225.189 dport=443 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:23 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3694 dst=122.116.218.88 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:23 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3695 dst=122.116.218.88 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:38 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3725 dst=119.160.246.241 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:38 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3732 dst=119.160.254.215 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:38 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3733 dst=119.160.254.215 dport=80 MAC=00:1A:92:9F:A4:9B
2011/02/15 12:25:38 [NEW]test1@Local Radius TCP dm=0 src=192.168.1.10 sport=3736 dst=119.160.254.215 dport=80 MAC=00:1A:92:9F:A4:9B
```

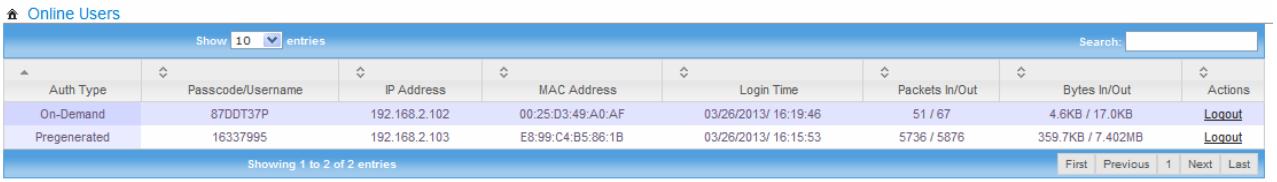
Billing Report

The system can record the billing report and sent out to a specified E-Mail based on defined **Billing Report Time**. As shown in the following figure.

```
 ~ 2012/02/14 11:00:00
#  Name                On Demand Payment Gateway Thermal Printer Amount Qty Unit Price Subtotal
==================================================================================================
0  Plan1               19        0               0               19        10.00     190.00    USD
1  Plan2               10        0               0               10        5.00      50.00     USD
2  Plan3               8         0               0               8         2.00      16.00     USD
3  Plan4               10        0               0               10        2.00      20.00     USD
4  Package 4           0         0               0               0         0.00      0.00      USD
5  Package 5           0         0               0               0         0.00      0.00      USD
6  Package 6           0         0               0               0         0.00      0.00      USD
7  Package 7           0         0               0               0         0.00      0.00      USD
8  Package 8           0         0               0               0         0.00      0.00      USD
9  Package 9           0         0               0               0         0.00      0.00      USD
==================================================================================================
                       47        0               0               47
--------------------------------------------------------------------------------------------------
                                                                                     276.00    USD
```

4.8 Online Users

The administrator can view status of all online users on each Service Domain. Please click on **Service Domain** > **Online Users**, the page of **Online Users** will appear. Below depicts an example for Online User Information. There provided information of **Passocde**, **IP Address**, **MAC Address**, **Login Time**, **Packets In/Out** and **Bytes In/Out**.



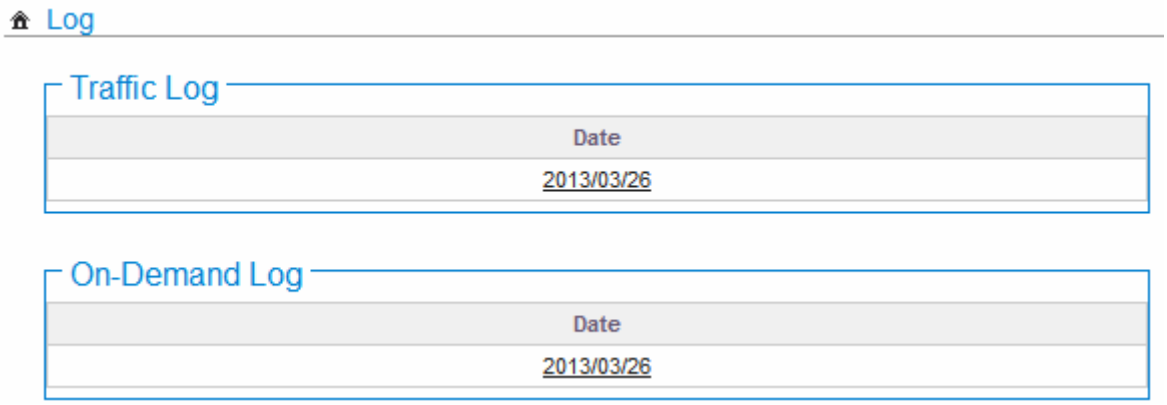
- **Auth Type :** Denote the current user's authentication type
- **Passcode/Username :** Denote the current user's passcode or username
- **IP Address :** Denote the current user's IP address

- **MAC Address :** Denote the current user's MAC address
- **Login Time :** Denote the login time on this user
- **Packets In/Out :** Denote the current user's packets in and out
- **Bytes In/Out :** Denote the current user's bytes in and out
- **Actions:** Click **Logout** option to logout online users

Click **Refresh** button to reload the page

4.9 Log Info

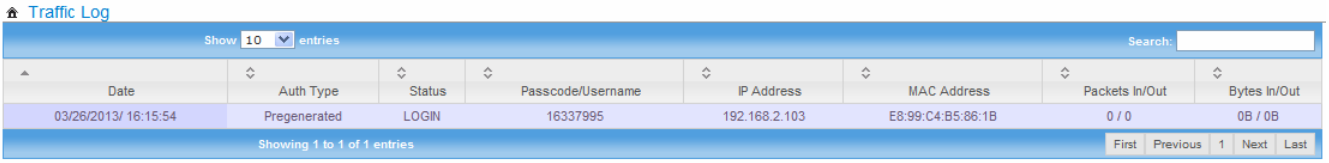
The WIAS-3200N v2 can record authentication traffic history and the system will automatically send out the history information via notification service (See **Notification** page). The history of each day will be saved separately in the DRAM for 3 days and sorted by time, the traffic provides all login and logout activity of specific date. Other information includes Passocde/Username, IP Address, MAC Address, Packets In/Out and Bytes In/Out. Please click on **Service Domain** > **Traffic Info**, the page of **Log Info** will appear.



***Note:** The all history log are saved in the DRAM, if you need restart system and also keep the history, please manually copy and save the information before restarting.

Traffic Log

As shown in the following figure, each line is traffic history record consisting of 10 fields : **Date**, **Auth Type**, **Status**, **Passcode/Username**, **IP**, **MAC**, **Packets In**, **Bytes In**, **Packets Out** and **Bytes Out**.



- **Date :** Denote current event's date and time

- **Auth Type:** There will shows **6** types of authentication: **Pregenerated**, **On-Demand**, **Local Users** (Local RADIUS Users), **Remote RADIUS**, **LDAP** and **Guest**.
- **Status :** There will show **10** types of status as below :
- **Passcode/Username:** Denote the user's passcode or username.
- **IP :** Denote the user's IP address
- **MAC :** Denote the user's MAC address
- **Packets In:** Denote the current user's packets in.
- **Bytes In:** Denote the current user's bytes in.
- **Packet Out:** Denote the current user's packets out.
- **Bytes Out:** Denote the current user's bytes out.

On-Demand Log

As shown in the following figure, each line is traffic history record consisting of 14 fields : **Date**, **Status**, **Passcode/Username**, **IP**, **MAC**, **Packets In/Out**, **Bytes In/Out**, **Start Time**, **End Time**, **Plan**, **Payment Type** and **Cost**.

On-Demand Log

Show 10 entries Search:

Date	Status	Passcode/Username	IP Address	MAC Address	Packets In/Out	Bytes In/Out	Start Time	End Time	Plan	Payment Type	Cost
03/26/2013/ 16:19:46	LOGIN	87DDT37P	192.168.2.102	00:25:D3:49:A0:AF	0 / 0	0B / 0B	03/26/2013/ 11:55:44	04/05/2013/ 11:55:44	0	Cash	USD 10.00

Showing 1 to 1 of 1 entries First Previous 1 Next Last

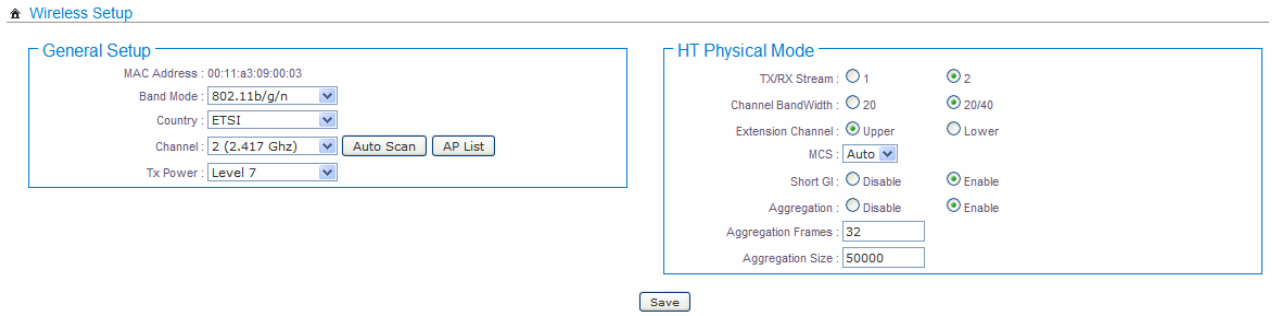
- **Date :** Denote current event's date and time
- **Status :** There will show **10** types of status as below :
- **Passcode/Username:** Denote the user's passcode or username.
- **IP :** Denote the user's IP address
- **MAC :** Denote the user's MAC address
- **Packets In:** Denote the current user's packets in.
- **Bytes In:** Denote the current user's bytes in.
- **Packet Out:** Denote the current user's packets out.
- **Bytes Out:** Denote the current user's bytes out.
- **Start Time :** Denote the start time of current service users
- **End Time :** Denote the end time of current service users
- **Plan:** Denote the current user's billing plan.
- **Payment Type :** Denote the current payment type, there were show **Cash** or **PayPal**
- **Cost :** Denote the current service charge

Click **Refresh** button to reload the page.

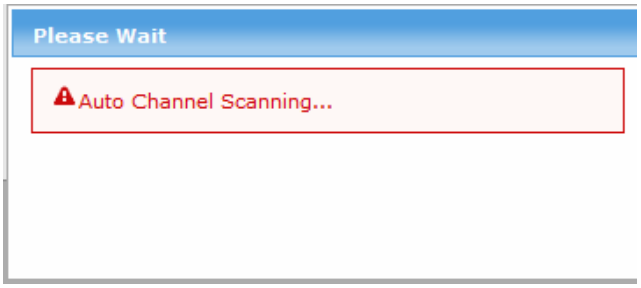
5 Configure Wireless Connection

5.1 General Setups

The administrator can change the data transmission, channel and output power settings for the system. Please click on **Wireless** > **General Setup** and follow the below setting.



- **MAC address:** The MAC address of the Wireless interface is displayed here.
- **Band Mode:** Select an appropriate wireless band; bands available are 801.11b, 802.11b/g, 802.11b/g/n and 802.11n.
- **Transmit Rate Control:** Select the desired rate from the drop-down list; the options are auto or ranging from 1Mbps to 54Mbps for 802.11b/g modes, or 1Mbps to 11Mbps for 802.11b mode.
- **Country:** Select the desired country code from the drop-down list; the options are US, ETSI and Japan.
- **Channel:** The channel range will be changed by selecting different country code. The channel range from **1** to **11** for **US** country code, or **1** to **13** for **ETSI** country code, or **1** to **14** for Japan (Channel **14** only for **802.11b** Rate).
- **Auto Scan:** Click this button, the channel will be changed to suitable channel.



- **AP List:** Click this button, the system will show current all AP list. Click **Rescan** button to rescan list, click **Close** button to close window

AP Site Survey List

ESSID	MAC Address	Channel	Signal/Noise, dBm	Encryption
Air4G	00:4F:B9:62::83:99	1	-53 / -95	On
N450R	00:4F:89:62:99:18	1	-60 / -95	On
N.Power	00:4F:FD:B9:62:83	1	-60 / -95	On
ICA-HM227W	00:30:4F:03:04:05	1	-46 / -95	On
SHINE1023	00:0A:79:A9:8B:68	1	-53 / -95	On
RTL8186-default	00:E0:4C:81:86:33	1	-1 / -95	Off
Planet	6C:FD:B9:6E:9C:78	2	-9 / -95	On
Winky Onlin	00:19:CB:15:11:35	3	-24 / -95	On
ASUS	F4:6D:04:EB:46:B8	5	-23 / -95	Off
easy	00:4F:81:00:5C:9C	6	-1 / -95	On
Active-Semi International	00:11:95:F5:BA:38	6	-32 / -95	On
IPCam	00:E0:4C:81:86:34	6	-1 / -95	On
CHT Wi-Fi(HiNet)	5C:D1:98:BB:D2:C3	6	-67 / -95	Off
APTG Wi-Fi	5C:D2:98:BB:D2:C3	6	-67 / -95	Off
CHT Wi-Fi Auto	5C:D9:98:BB:D2:C3	6	-74 / -95	On
IPCAM_BC5010	00:0C:43:30:50:40	9	-1 / -95	Off
3Com	00:1A:C1:35:92:C8	11	-46 / -95	On
(hidden)	20:10:7A:72:EB:49	11	-32 / -95	On
				Current Frequency:2.427 GHz (Channel 4)

Rescan Close

- **Tx Power:** You can adjust the output power of the system to get the appropriate coverage for your wireless network. Select LEVEL 1 to LEVEL 7 needed for your environment. If you are not sure of which setting to choose, then keep the default setting, **LEVEL 7**.
- When **Band Mode** select in **802.11b/g/n or 802.11n**, the **HT Physical Mode** settings should be show immediately.

HT Physical Mode

TX/RX Stream : 1 2
Channel BandWidth : 20 20/40
Extension Channel : Upper Lower
MCS : Auto
Short GI : Disable Enable
Aggregation : Disable Enable
Aggregation Frames : 32
Aggregation Size : 50000

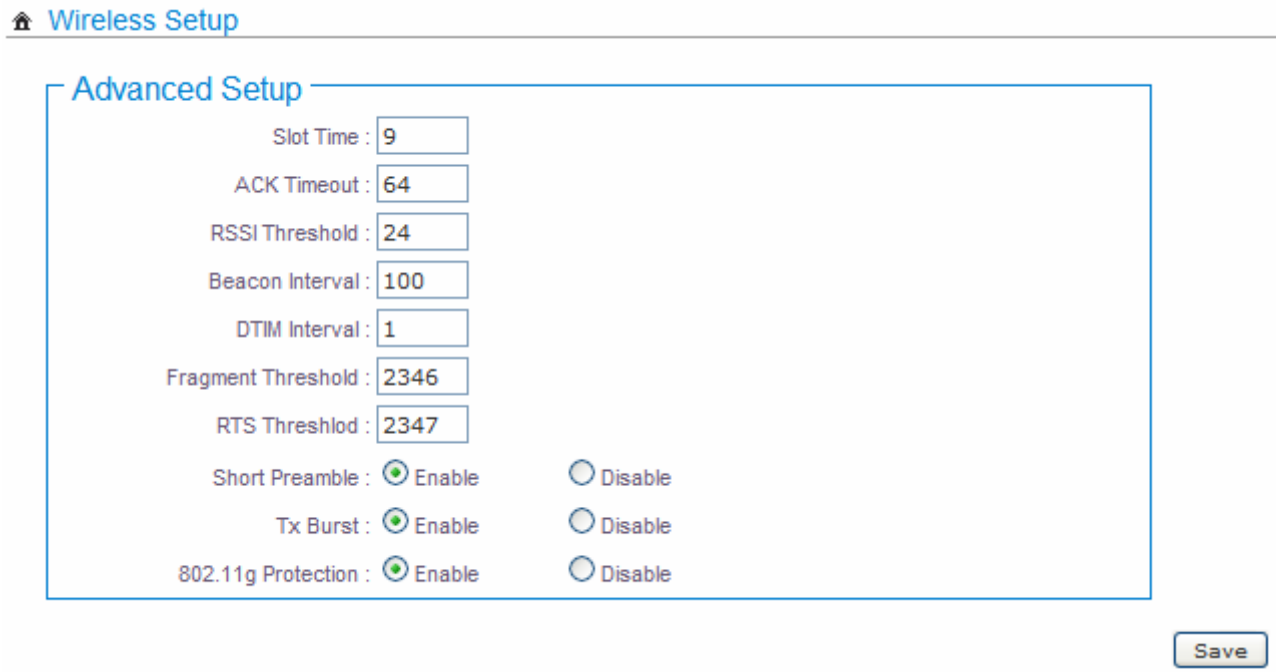
- **Tx/Rx Stream:** By default, it's **2**.
- **Channel Bandwidth:** The "**20/40**" MHz option is usually best. The other option is available for special circumstances.
- **Extension Channel:** Only for Channel Bandwidth "**40**" MHz Select the desired channel bonding for control.

- **MCS:** This parameter represents transmission rate. By default (Auto) the fastest possible transmission rate will be selected. You have the option of selecting the speed if necessary.
- **Shout GI:** Short Guard Interval, by default, it's “Enable”. It can increase throughput. However, it can also increase error rate in some installations, due to increased sensitivity to radio-frequency reflections. Select the option that works best for your installation.
- **Aggregation:** By default, it's “**Enable**”. To “Disable” to deactivated Aggregation. A part of the 802.11n standard (or draft-standard). It allows sending multiple frames per single access to the medium by combining frames together into one larger frame. It creates the larger frame by combining smaller frames with the same physical source and destination end points and traffic class (i.e. QoS) into one large frame with a common MAC header.
- **Aggregation Frames:** The Aggregation Frames is in the range of **2~64**, default is **32**. It determines the number of frames combined on the new larger frame.
- **Aggregation Size:** The Aggregation Size is in the range of **1024~65535**, default is **50000**. It determines the size (in Bytes) of the larger frame.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes. The item in this page is for AP's RF general settings and will be applied to **all VAPs and WDS Link**.

5.2 Advanced Setup

The administrator can change the Slot Time, ACK Timeout, and RTS threshold and fragmentation threshold settings for the system. Please click on **Wireless** > **Advanced Setup** and follow the below setting.



- **Slot Time:** Slot time is in the range of **9~1489** and set in unit of **microsecond**. The default value is **9** microsecond. Slot time is the amount of time a device waits after a collision before retransmitting a packet. Reducing the slot time decreases the overall back-off, which increases throughput. Back-off, which is a multiple of the slot time, is the random length of time a station waits before sending a packet on the LAN. For a sender and receiver own right of the channel the shorter slot time help manage shorter wait time to re-transmit from collision because of hidden wireless clients or other causes. When collision sources can be removed sooner and other senders attempting to send are listening the channel (CSMA/CA) the owner of the channel should continue ownership and finish their transmission and release the channel. Then, following ownership of the channel will be sooner for the new pair due to shorter slot time. However, when long duration of existing collision sources and shorter slot time exist the owners might experience subsequent collisions. When adjustment to longer slot time can't improve performance then RTS/CTS could supplement and help improve performance.
- **ACK Timeout:** ACK timeout is in the range of **1~372** and set in unit of **microsecond**. The default value is **64** microsecond. All data transmission in 802.11b/g request an "Acknowledgement" (ACK) send by receiving radio. The transmitter will resend the original packet if correspondent ACK failed to arrive within specific time interval, also refer to as "ACK Timeout".

  ACK Timeout is adjustable due to the fact that distance between two radio links may vary in different deployment. ACK Timeout makes significant influence in performance of long distance radio link. If ACK Timeout is set too short, transmitter will start to "Resend" packet before ACK is received, and throughput become low due to excessively high re-transmission.

  ACK Timeout is best determined by distance between the radios, data rate of average environment. The Timeout value is calculated based on round-trip time of packet with a little tolerance, so, if experiencing re-transmissions or poor performance the ACK Timeout could be made longer to accommodate.

  ***Note:** Slot Time and ACK Timeout settings are for long distance links. It is important to tweak settings to achieve the optimal result based on requirement.

- **RSSI Threshold:** RSSI (Received Signal Strength Indication) Threshold is in the range of **-127** ~ **128**. The default value is **24**. RSSI Threshold can be used to control the level of noise received by the device.
- **Beacon Interval:** Beacon Interval is in the range of **40~3500** and set in unit of millisecond. The default value is **100** msec.

  Access Point (AP) in IEEE 802.11 will send out a special approximated 50-byte frame, called "Beacon". Beacon is broadcast to all the stations, provides the basic information of AP such as SSID, channel, encryption keys, signal strength, time stamp, support data rate.

  All the radio stations received beacon recognizes the existence of such AP, and may proceed next actions if the information from AP matches the requirement. Beacon is sent on a periodic basis, the time interval can be adjusted.

By increasing the beacon interval, you can reduce the number of beacons and associated overhead, but that will likely delay the association and roaming process because stations scanning for available access points may miss the beacons. You can decrease the beacon interval, which increases the rate of beacons. This will make the association and roaming process very responsive; however, the network will incur additional overhead and throughput will go down.

- **DTIM Interval:** The DTIM interval is in the range of **1**~**255**. The default is **1**.

  DTIM is defined as Delivery Traffic Indication Message. It is used to notify the wireless stations, which support power saving mode, when to wake up to receive multicast frame. DTIM is necessary and critical in wireless environment as a mechanism to fulfill power-saving synchronization.

  A DTIM interval is a count of the number of beacon frames that must occur before the access point sends the buffered multicast frames. For instance, if DTIM Interval is set to 3, then the Wi-Fi clients will expect to receive a multicast frame after receiving three Beacon frame. The higher DTIM interval will help power saving and possibly decrease wireless throughput in multicast applications.

- **Fragment Threshold:** The Fragment Threshold is in the range of **256**~**2346** byte. The default is **2346** byte.

  Each Wi-Fi packet can be divided into smaller packets, marked with a sequential fragment number and re-assemble in the receiving ends. The purpose is to make a short frame, instead of long frame, transmitting by radio in a heavy noisy environment. Because of sending smaller frames, corruptions are much less likely to occur. The pros is obvious, the cons is the overhead for transmission. So, in a clean environment, higher fragment threshold can be an option to increase throughput.

  Fragmentation will be triggered by setting the Fragment Threshold, usually in Byte-length. Only when the frame size is over the Threshold, fragmentation will take place automatically.

- **RTS Threshold:** TRTS Threshold is in the range of **1**~**2347** byte. The default is **2347** byte.

  The main purpose of enabling RTS by changing RTS threshold is to reduce possible collisions due to hidden wireless clients. RTS in AP will be enabled automatically if the packet size is larger than the Threshold value. By default, RTS is disabled in a normal environment supports non-jumbo frames.

- **Short Preamble:** By default, it's "**Enable**". To **Disable** is to use Long 128-bit Preamble Synchronization field.

- The preamble is used to signal "here is a train of data coming" to the receiver. The short preamble provides 72-bit Synchronization field to improve WLAN transmission efficiency with less overhead.

- **Tx Burst:** By default, it's "**Enable**". To **Disable** is to deactivate Tx Burst.

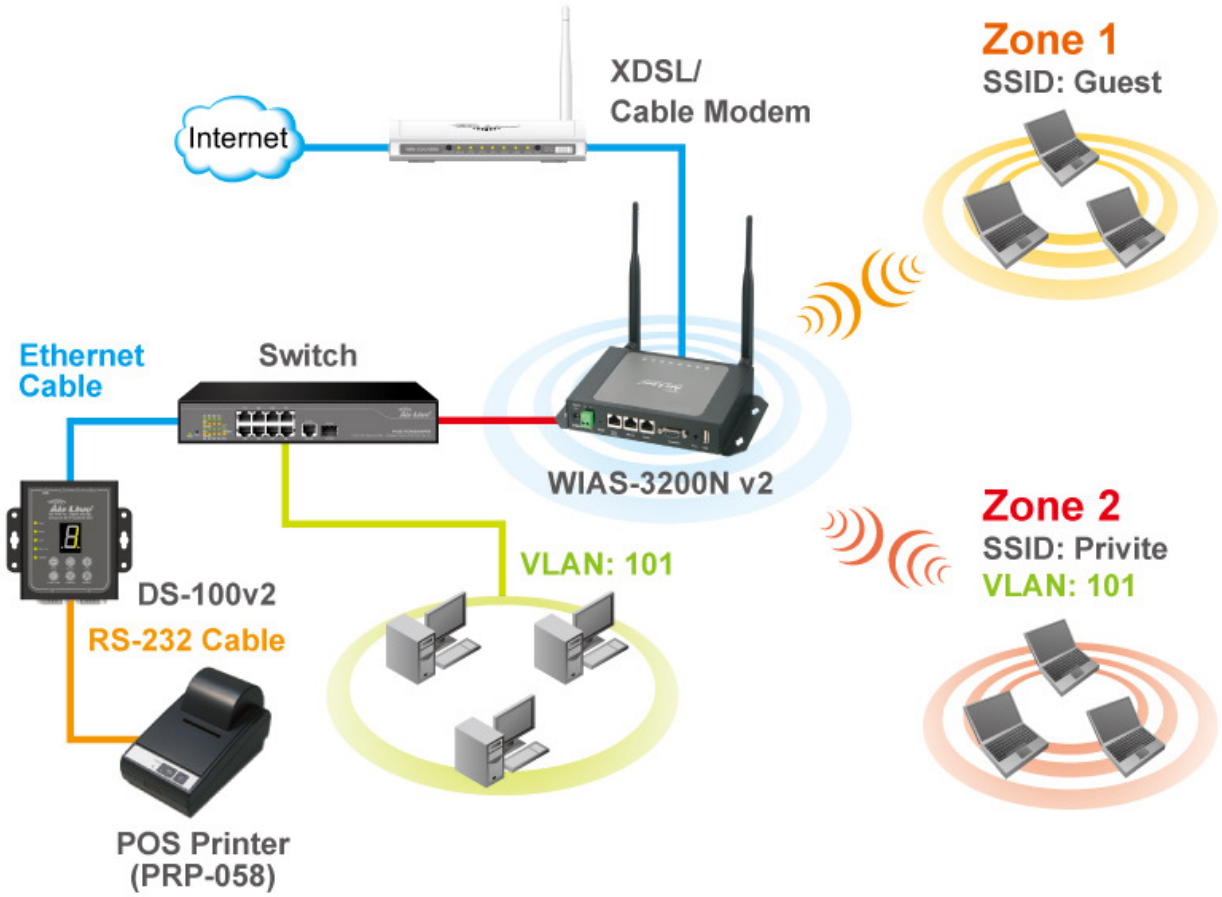
  With TX burst enabled, AP will send many packets in a burst, without collision detection and RTS/CTS for each packet. TX Burst have better throughput but cause interference with other APs in channel.

- **802.11g Protection:** Click **Enable** button to activate 802.11g Protection Mode, and Disable to inactivate 802.11g Protection Mode.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes. The items in this page are for AP's RF general settings and will be applied to **all VAPs and WDS Link**.

5.3 Virtual AP Setup

The WIAS-3200N v2 support broadcasting multiple SSIDs, allowing the creation of Virtual Access Points, partitioning a single physical access point into **8** logical access points, each of which can have a different set of security, VLAN Tag(ID) and network settings. If wireless client connect to wire area network with VLAN Tag (ID), the administrator can use dump switch or VLAN switch on wired area network, below picture shows multiple SSIDs with different VLAN settings use dump switch connect to wired area. It also shows multiple SSIDs with different VLAN settings use VLAN switch connect to wired area.



Multiple SSIDs with different VLAN settings use dump switch connect to wired area.

Multiple SSIDs with different VLAN settings use VLAN switch connect to wire area.

The administrator can create Virtual AP via this page. Please click on **Wireless** > **Virtual AP Setup** and follow the below setting.

Virtual AP Overview

VAP List

VAP	MAC Address	ESSID	Status	Security Type	MAC Filter Setup	VAP Edit
VAP0	00:11:A3:09:00:03	Air@Live0	On	WPA2-PSK	Disable	Edit
VAP1		Air@Live1	Off	Disabled	Disable	Edit
VAP2		Air@Live2	Off	Disabled	Disable	Edit
VAP3		Air@Live3	Off	Disabled	Disable	Edit

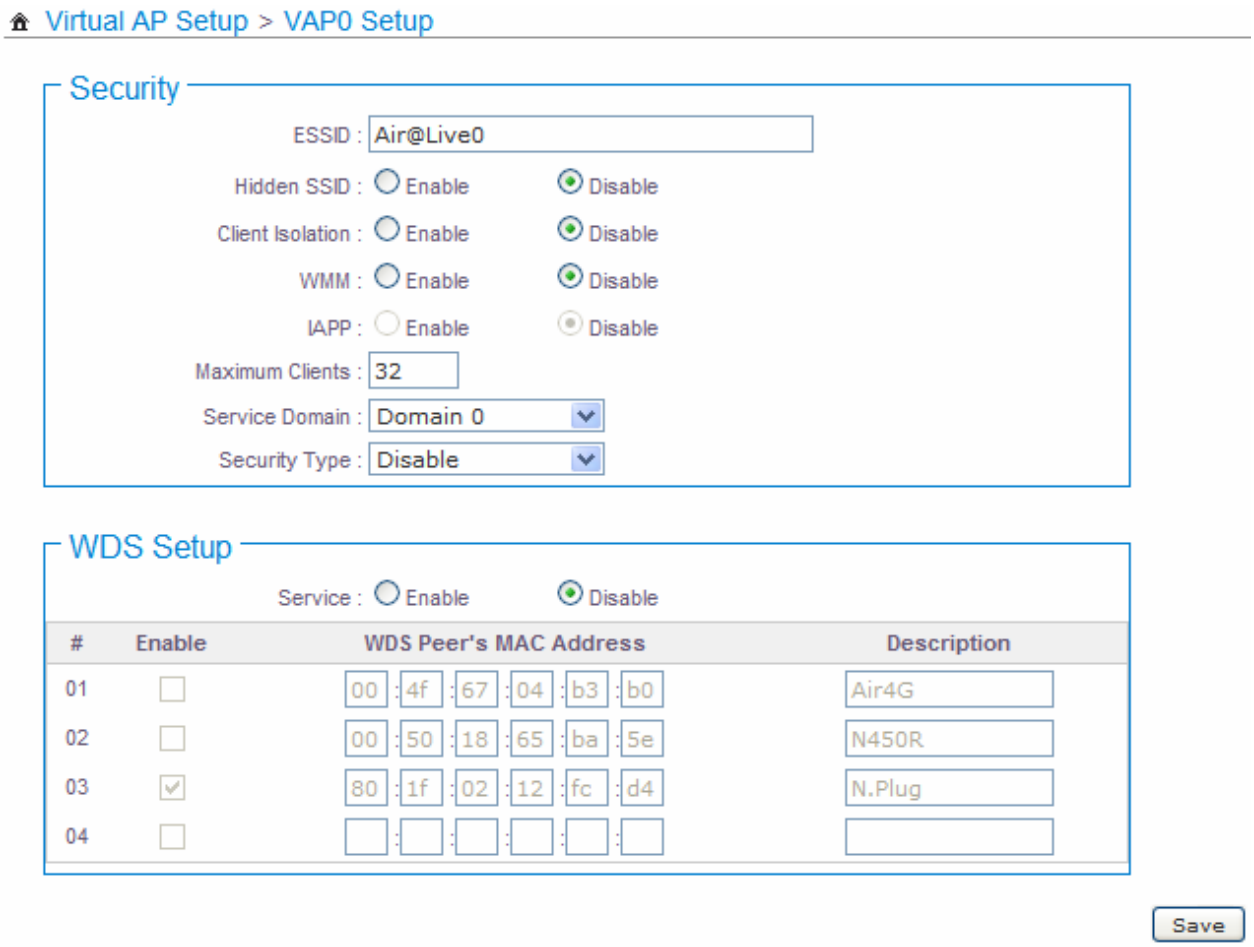
- **VAP:** Indicate the system's Virtual AP.**MAC Address:** The MAC address of the VAP Interface is displayed here. When you enable AP and reboot system, the MAC address will display here.
- **ESSID:** Indicate the ESSID of the respective Virtual AP
- **Status:** Indicate the current Status of the respective Virtual AP. The **VAP0** always on.
- **Security Type:** Indicate a used security type of the respective Virtual AP.
- **MAC Filter:** Indicate a used MAC filter of the respective Virtual AP. Click this option to configure MAC Filter of the respective Virtual AP.
- **Edit:** Click this option to configure Virtual AP's settings

5.3.1 VAP0-3 Setup

For each Virtual AP, administrators can configure general settings and security type.

Click **Wireless** > **Virtual AP**, click "**Edit**" of Virtual AP List and then Virtual AP Configuration page appears.

5.3.1.1 Security



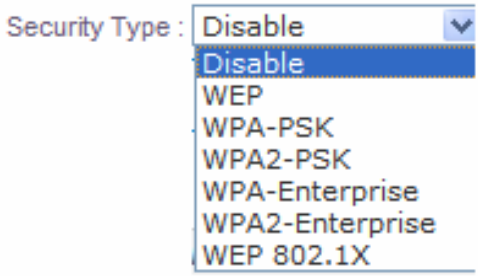
- **ESSID:** Extended Service Set ID indicates the SSID which the clients used to connect to the VAP. ESSID will determine the service type of a client which is assigned to the specified VAP.
- **Enable AP:** By default, it's "**Disable**" for VAP1 ~ VAP3. **The VAP0 always enabled**.

  Select "**Enable**" to activate VAP or click "**Disable**" to deactivate this function
- **Hidden SSID:** Select this option to enable the SSID to broadcast in your network. When configuring the network, it is suggested to enable this function but disable it when the configuration is complete. With this enabled, someone could easily obtain the SSID information with the site survey software and get unauthorized access to a private network. With this disabled, network security is enhanced and can prevent the SSID from begin seen on networked.
- **Client Isolation:** Select **Enable**, all clients will be isolated from each other that mean all clients cannot reach to other clients.
- **WMM:** Select Enable, the packets with QoS WMM will has higher priority.
- **IAPP Support :** Inter Access-Point Protocol is designed for the enforcement of unique association throughout a ESS(Extended Service Set) and for secure exchange of station's security context between current access point (AP) and new AP during hand off period.

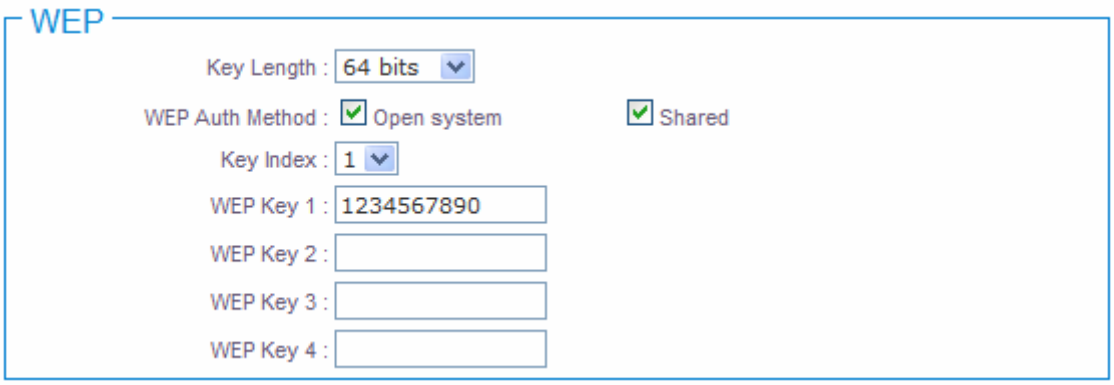
***Note:** IAPP only used on WAP2 security type. Only one of VAPs can be enabled

- **Maximum Clients:** Enter maximum number of clients to a desired number. For example, while the number of client is set to 32, only 32 clients are allowed to connect with this VAP.
- **Service Domain:** Select the desired Service Domain from the drop-down list.

- **Security Type:** Select the desired security type from the drop-down list; the options are WEP, WPA-PSK, WPA2-PSK, WPA-Enterprise, WPA2-Enterprise and WEP 802.1X.



- **Disable:** Data are unencrypted during transmission when this option is selected.
- **WEP:** WEP, Wired Equivalent Privacy, is a data encryption mechanism based on a 64-bit, 128-bit or 152-bit shared key. Select **WEP** as the security type from the drop down list as desired.



1) **Key Length:** Select the desire option are **64 bits**, **128 bits** or **152 bits** from drop-down list.
2) **WEP auth Method:** Enable the desire option among **Open system** or **Shared**.
3) **Key Index:** Select key index used to designate the WEP key during data transmission. 4 different WEP keys can be configured at the same time, but only

one is used. Effective key is set with a choice of WEP Key 1, 2, 3, or 4.

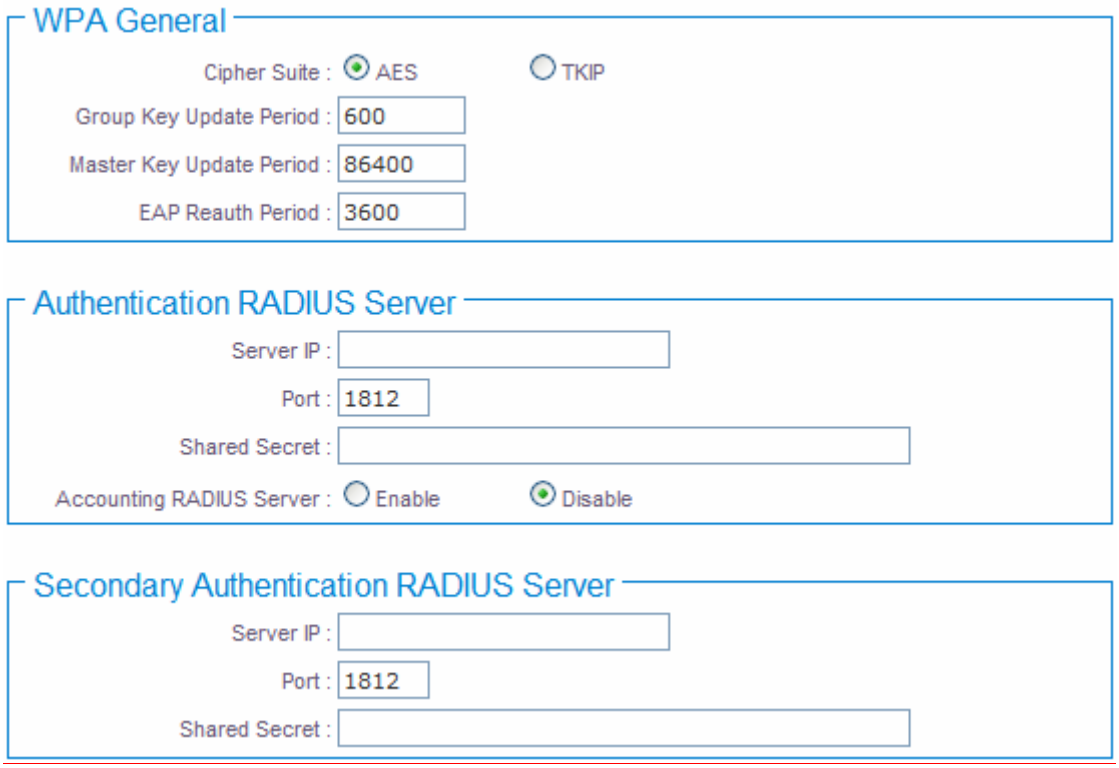
4) **WEP Key:** Enter HEX format WEP key value; the system support up to 4 sets of WEP keys.

- **WPA-PSK (or WPA2-PSK):** WPA (or WPA2) Algorithms, allows the system accessing the network by using the WPA-PSK (WPA2-PSK) protected access.

1) **Cipher Suite:** Check on the respected button to enable either **AES** or **TKIP** cipher suites; default is **TKIP**.
2) **Group Key Update Period:** This time interval for re-keying GTK (broadcast/multicast encryption keys) in seconds. Enter the time-length required; the default time is **600** seconds.
3) **Master Key Update Period:** This time interval for re-keying GMK (master key used internally to generate GTKs) in seconds. Enter the time-length required; the default time is **83400** seconds.
4) **Key Type:** Check on the respected button to enable either **ASCII** or **HEX** format for the Pre-shared Key.
5) **Pre-shared Key:** Enter the information for pre-shared key; the format of the information shall according to the key type selected.

***Note:** Pre-shared key can be either entered as a 256-bit secret in 64 HEX digits format, or 8 to 63 ASCII characters.

- **WPA-Enterprise (or WPA2-Enterprise):** The RADIUS authentication and encryption will be both enabled if this selected. The WIAS-3200N v2 support two 802.1x Authentication/ Accounting RADIUS Server



1) **WPA General Settings**

(a) **Cipher Suite:** Check on the respected button to enable either **AES** or **TKIP** cipher suites.

(b) **Group Key Update Period:** This time interval for re-keying GTK (broadcast/ multicast encryption keys) in seconds. Enter the time-length required; the default time is **600** seconds.

(c) **Master Key Update Period:** This time interval for re-keying GMK (master key used internally to generate GTKs) in seconds. Enter the time-length required; the default time is **83400** seconds.

(d) **EAP Reauth Period:** EAP re-authentication period in seconds; default is **3600**; **0** indicates **disable** re-authentication.

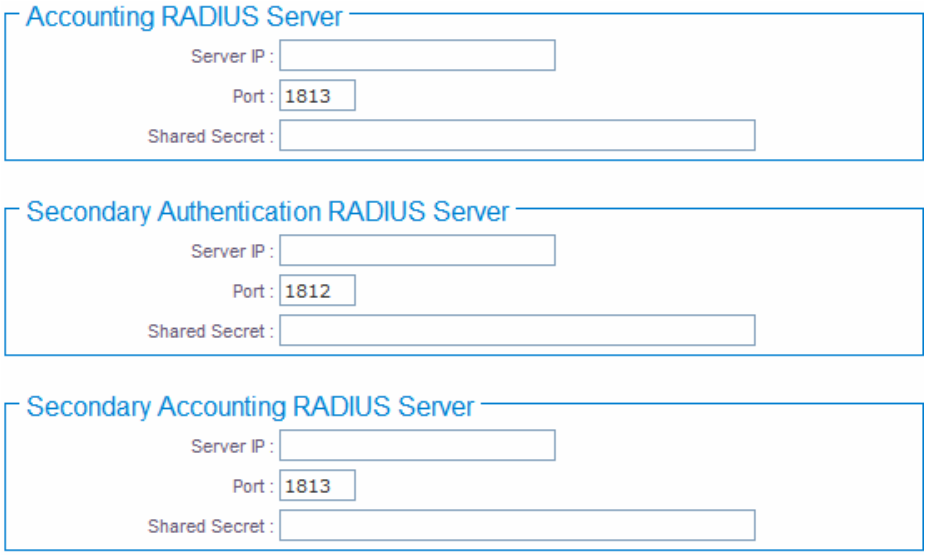
2) **Authentication RADIUS Server Settings**

(a) **Authentication Server:** Enter the IP address of the Authentication RADIUS server.

(b) **Port:** The port number used by Authentication RADIUS server. Use the default 1812 or enter port number specified.

(c) **Shared secret:** The secret key for system to communicate with Authentication RADIUS server. Support 1 to 64 characters.

(d) **Accounting RADIUS Server:** Check on the respected button to enable either Enable or Disable accounting RADIUS server.

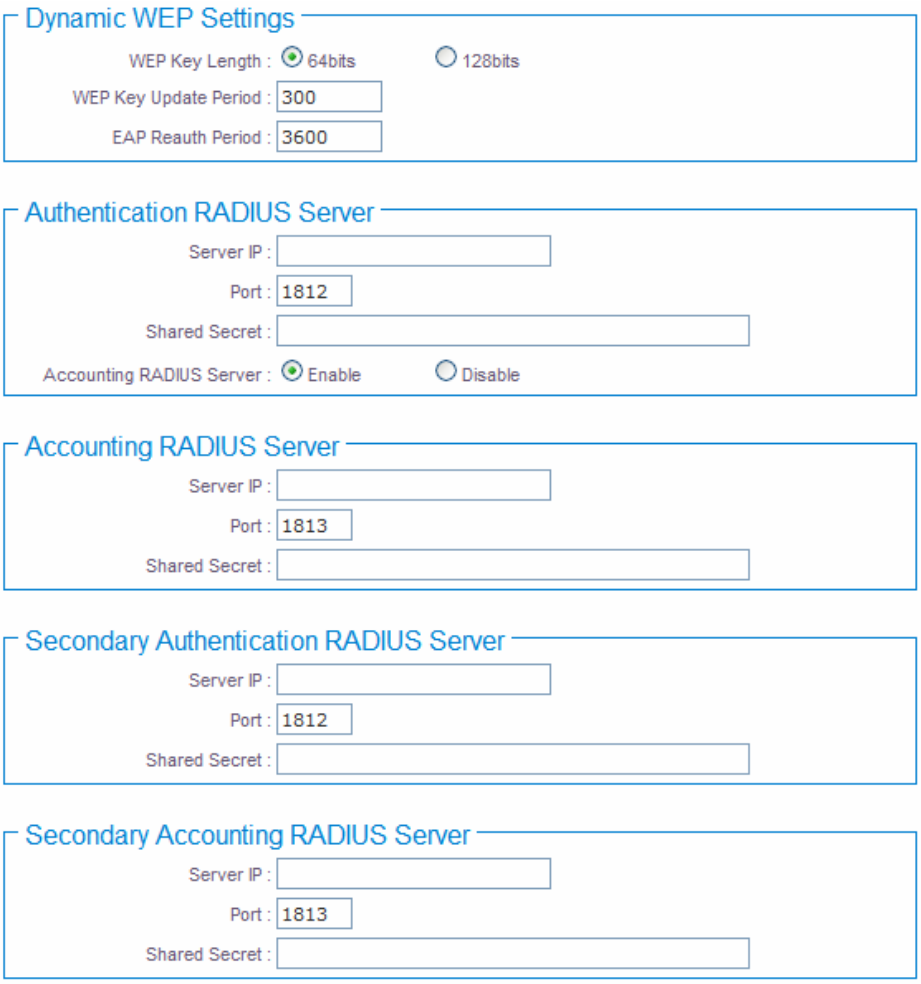


i. **Accounting Server:** Enter the IP address of the Accounting RADIUS server.

ii. **Port:** The port number used by Accounting RADIUS server. Use the default 1813 or enter port number specified.

iii. **Shared Secret:** The secret key for system to communicate with Accounting RADIUS server. Support 1 to 64 characters.

3) **WEP 802.1X:** When WEP 802.1x Authentication is enabled, please refer to the following Dynamic WEP and RADIUS settings to complete the configuration.



(a) **WEP Key length:** Check on the respected button to enable either 64bits or 128bits key length. The system will automatically generate WEP keys for encryption.

(b) **WEP Key Update Period:** The time interval WEP will then be updated; the unit is in seconds; default is **300** seconds; **0** indicates no re-key.

(c) **EAP Reauth Period:** EAP re-authentication period in seconds; default is **3600**; **0** indicates **disable** re-authentication.

(d) **Authentication RADIUS Server Settings :**

i. **Authentication Server:** Enter the IP address of the Authentication RADIUS server.

ii. **Port:** The port number used by Authentication RADIUS server. Use the default 1812 or enter port number specified.

iii. **Shared Secret:** The secret key for system to communicate with Accounting RADIUS server. Support 1 to 64 characters.

(e) **Accounting RADIUS Server:** Check on the respected button to enable either Enable or Disable accounting RADIUS server.

i. **Accounting Server:** Enter the IP address of the Accounting RADIUS server.

ii. **Port:** The port number used by Accounting RADIUS server. Use the default 1813 or enter port number specified.

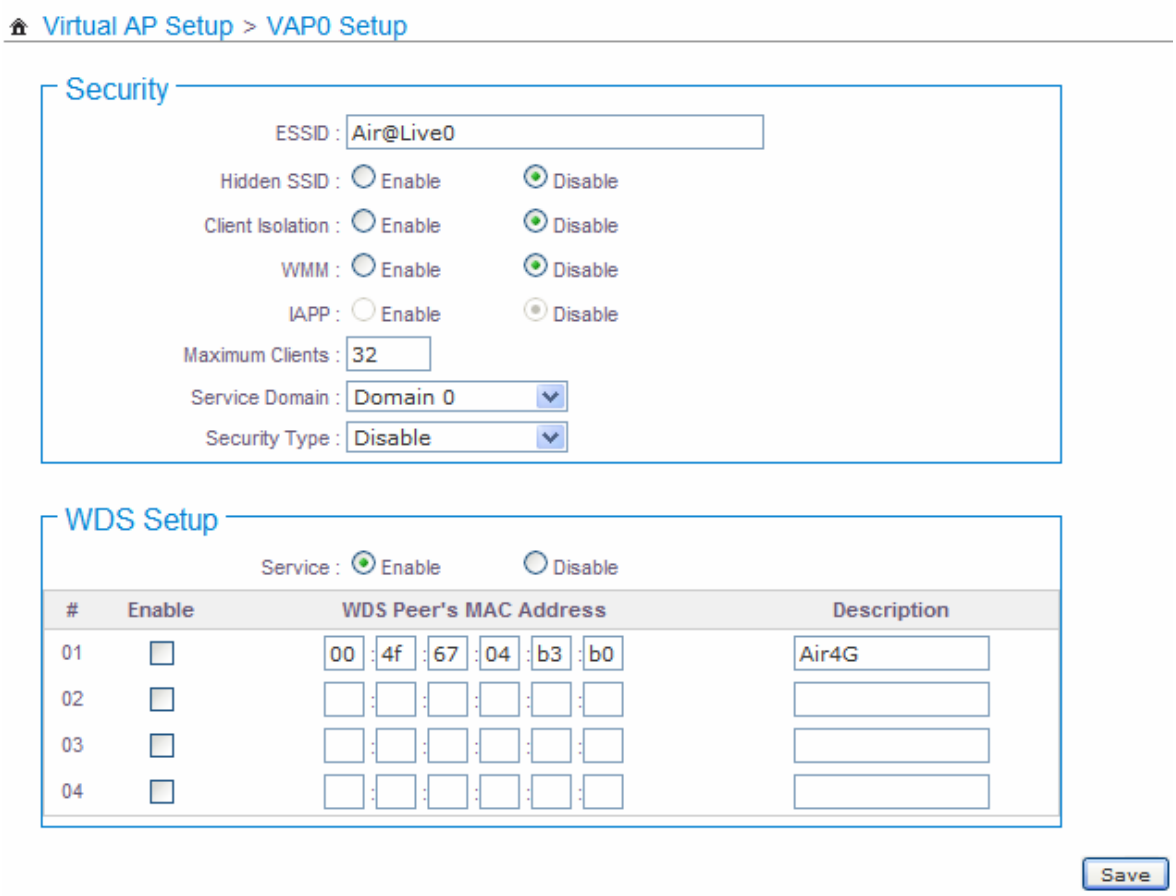
iii. **Shared Secret:** The secret key for system to communicate with Accounting RADIUS server. Support 1 to 64 characters.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes

5.3.1.2 WDS

The administrator can create WDS Links for expanding wireless network via this page.

Please click on **Wireless** > **Virtual AP Setup** > **VAP0 Setup** and follow the below setting.



WDS Setup

Service : Enable Disable

#	Enable	WDS Peer's MAC Address	Description
01	☐	00 : 4f : 67 : 04 : b3 : b0	Air4G
02	☐	: : : : :	
03	☐	: : : : :	
04	☐	: : : : :	

- **Service:** By default, it's "**Disable**". To "Enable" to activate WDS.
- **Enable:** Click **Enable** to create WDS link.
- **WDS Peer's MAC Address:** Enter the MAC address of WDS peer.
- **Description:** Description of WDS link.

***Note:** If WDS activate, the Security Type only support "WEP" on VAP0.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

5.3.2 Wireless MAC Filter

For each Virtual AP, administrators can configure general settings and security type.

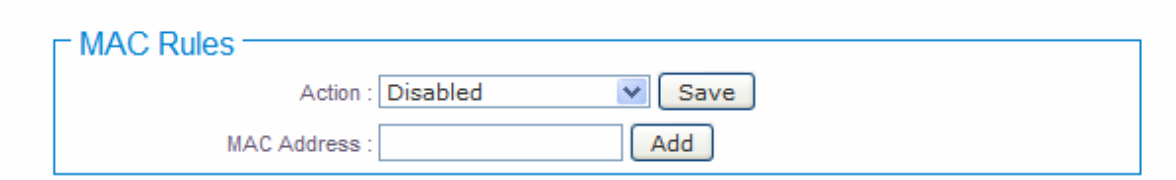
Click **Wireless** > **Virtual AP**, click "**Edit**" of Virtual AP List and then Virtual AP Configuration page appears.

Virtual AP Overview

VAP List

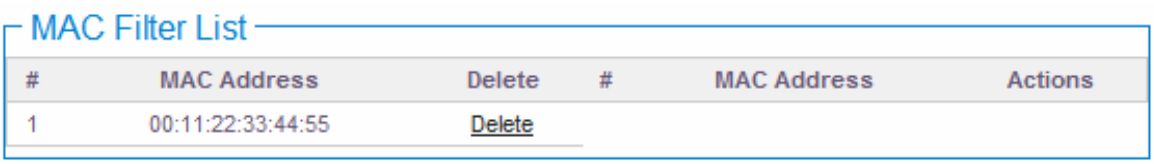
VAP	MAC Address	ESSID	Status	Security Type	MAC Filter Setup	VAP Edit
VAP0	00:11:A3:09:00:03	Air@Live0	On	Disabled	Disable	Edit
VAP1		Air@Live1	Off	Disabled	Disable	Edit
VAP2		Air@Live2	Off	Disabled	Disable	Edit
VAP3		Air@Live3	Off	Disabled	Disable	Edit
VAP4		Air@Live4	Off	Disabled	Disable	Edit
VAP5		Air@Live5	Off	Disabled	Disable	Edit
VAP6		Air@Live6	Off	Disabled	Disable	Edit
VAP7		Air@Live7	Off	Disabled	Disable	Edit

In this function, the administrator can be allow or reject clients to access Virtual AP. Please click on **Wireless** > **Virtual AP Setup**, then click button on column of MAC Filter Setup. The MAC Filter Configuration page appears. Follow the below setting.



- **Action:** Select the desired access control type from the drop-down list; the options are "**Disabled**", "**Only Deny List MAC**" or "**Only Allow List MAC**".
- Define certain wireless clients in the list which will have denied access to the Access Point while the access will be granted for all the remaining clients – **Action** is set to **Only Deny List MAC**.
- Define certain wireless clients in the list which will have granted access to the Access Point while the access will be denied for all the remaining clients – **Action** is set to **Only Allow List MAC**.
- **MAC Address:** Enter MAC address in this field. There are maximum **20** clients users allowed in this MAC address list.

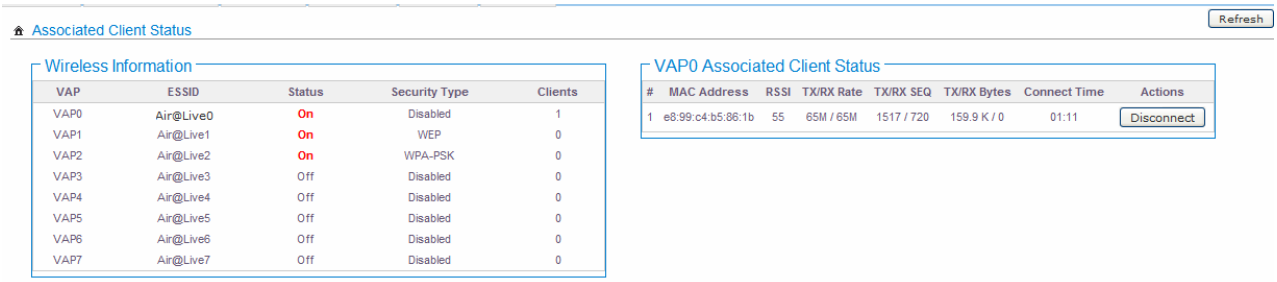
The MAC Address of the wireless clients can be added and removed to the MAC Filter List using the **Add** and **Delete** buttons. Click **Reboot** button to activate your changes



***Note:** MAC Access Control is the weakest security approach. WPA or WPA2 security methods should be used when possible.

5.4 Associated Clients

The administrator can obtain detailed wireless information and all associated clients' status via this page. Please click on **Wireless** > **Associated Client**s. The **Associated Clients Status** appears.



Wireless Information

Display the Virtual AP configuration information of the system.

Wireless Information

VAP	ESSID	Status	Security Type	Clients
VAP0	Air@Live0	On	Disabled	1
VAP1	Air@Live1	On	WEP	0
VAP2	Air@Live2	On	WPA-PSK	0
VAP3	Air@Live3	Off	Disabled	0
VAP4	Air@Live4	Off	Disabled	0
VAP5	Air@Live5	Off	Disabled	0
VAP6	Air@Live6	Off	Disabled	0
VAP7	Air@Live7	Off	Disabled	0

- **VAP:** Display number of system's Virtual AP.
- **ESSID:** Extended Service Set ID of the Virtual AP.
- **Status:** Display Virtual AP status currently.
- **Security Type:** Security type activated by the Virtual AP.
- **Clients:** Number of clients currently associated to the Virtual AP.

Associated Client Status

Display the Virtual AP configuration information of the system.

VAP0 Associated Client Status

#	MAC Address	RSSI	TX/RX Rate	TX/RX SEQ	TX/RX Bytes	Connect Time	Actions
1	e8:99:c4:b5:86:1b	55	65M / 65M	1517 / 720	159.9 K / 0	01:11	Disconnect

- **AP:** Virtual AP which the device is associated with.
- **RSSI:** Denote the RSSI of the respective client's association.
- **TX/RX Rate:** Denote the TX/RX Rate of the respective client's association.
- **TX/RX SEQ:** Denote the TX/RX sequence of the respective client's association.
- **TX/RX Bytes:** Denote the TX/RX Bytes of the respective client's association.
- **Actions:** Click an action button to perform the appropriate action.
- **Disconnect :** Click this button to kick out specific client from accessing the AP

5.5 WDS Status

Peers MAC Address, received signal strength and TX/RX rate for each WDS are available.

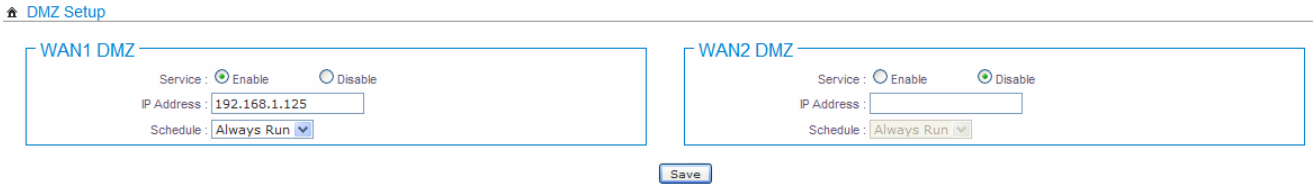
- **MAC Address:** Display MAC address of WDS peer.
- **RSSI:** Denote the RSSI of the respective WDS's link.
- **TX/RX Rate:** Denote the TX/RX Rate of the respective WDS's link.
- **TX/RX SEQ:** Denote the TX/RX sequence of the respective WDS's link.
- **TX/RX Bytes:** Denote the TX/RX Bytes of the respective WDS's link.
- **Actions:** Click an action button to perform the appropriate action.
- **Disconnect :** Click this button to kick out specific WDS's link

6 Advance Functions

6.1 DMZ

The Demilitarized zone (**DMZ**) can be enabled and used as a place where services can be placed such as Web Servers, Proxy Servers, and E-mail Servers such that these services can still serve the local network and are at the same time isolated from it for additional security. DMZ is commonly used with the NAT functionality as an alternative for the Virtual Server (IP / Port Forwarding) while makes all the ports of the host network device be visible from the external network side.

Please click on **Advance** > **DMZ** and follow the below setting.

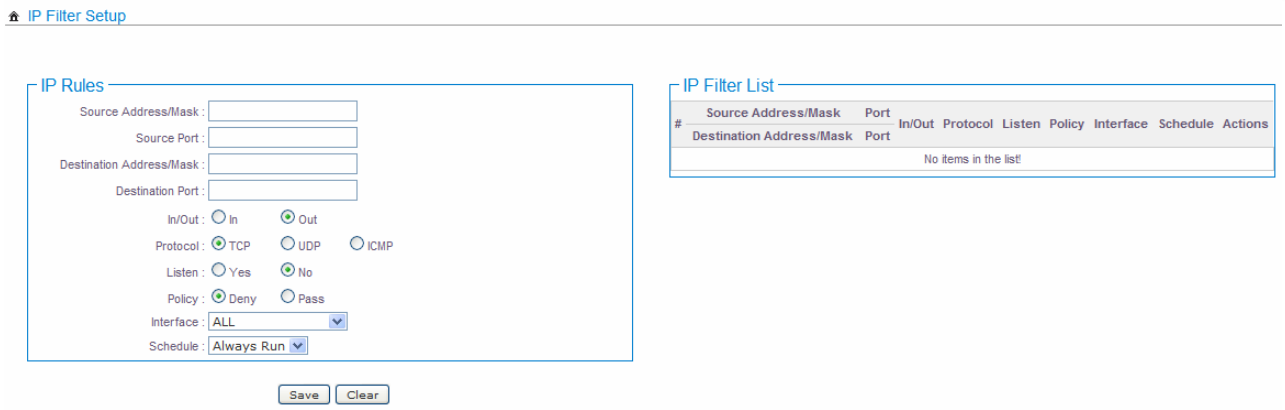


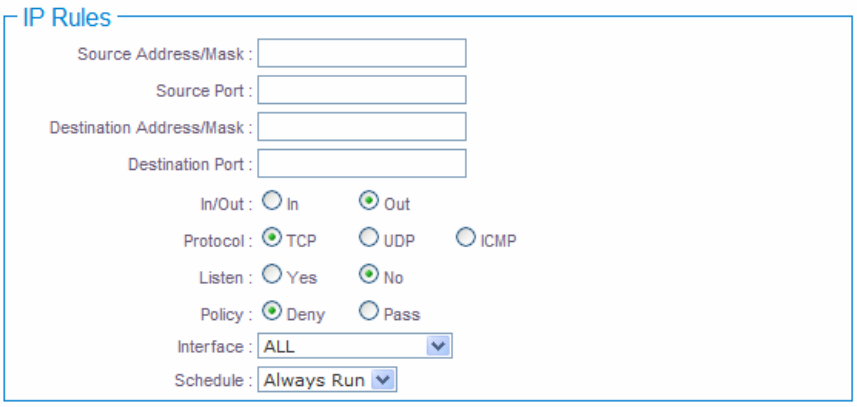
- **Service:** Check **Enable** button to activate this function, and **Disable** to deactivate.
- **IP Address:** Enter the IP address of the computer or server to be used as DMZ host; only one DMZ host can be activate at any time period.
- **Schedule:** Select specified time period for this rule.

Change these settings as described here and click **Save** button to save your changes. Click **Reboot** button to activate your changes.

6.2 IP Filter

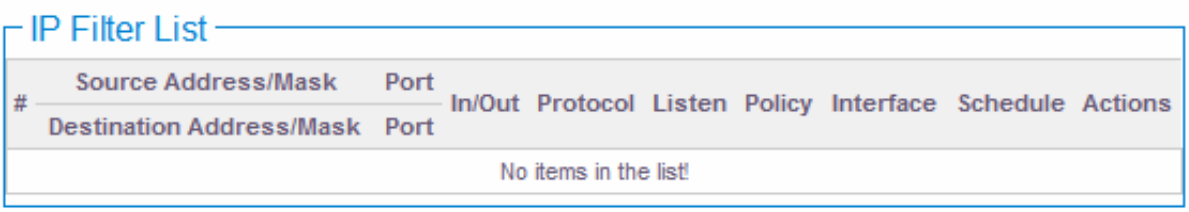
The administrator can setting IP Filter via this page, Please click on **Advance** > **IP Filter** and follow the below setting.





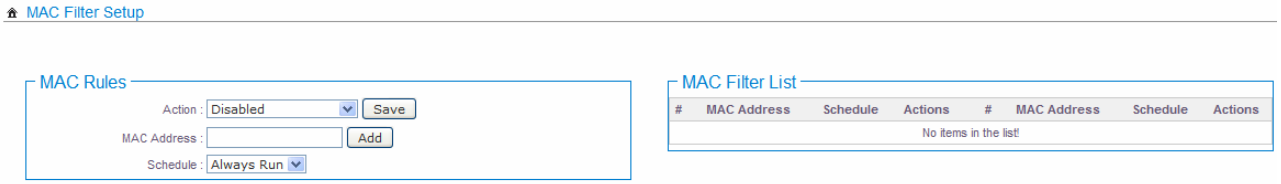
- **Source Address/Mask :** Enter the desired source IP address and netmask; the mask must be a plain number, i.e. 192.168.100.10/32
- **Source Port:** The source port(s) required for this rule. A single port may be given, or a range may be given as **start:end** , which will match all ports from start to end, inclusive.
- **Destination Address/Mask :** Enter the desired destination IP address and netmask; the mask must be a plain number, i.e. 192.168.1.10/32
- **Destination Port:** The destination port(s) required for this rule. A single port may be given, or a range may be given as **start:end** , which will match all ports from start to end, inclusive.
- **In/Out:** This option used for specialized packet alteration. The system support In (INPUT : for packets coming into the interface itself) or Out (FORWARD : for altering packets being routed through the interface)
- **Protocol:** This option allows you to select protocol type. The system support TCP, UDP or ICMP.
- **Listen:** Enable **Yes** to match TCP packets only with the SYN flag.
- **Policy :** Enter **Deny** to DROP specialized packet; **Pass** to ACCET the specialized packet
- **Interface :** Select specified interface where filtering of the incoming /passing-through packets is processed
- **Schedule:** Select specified time period for this rule.

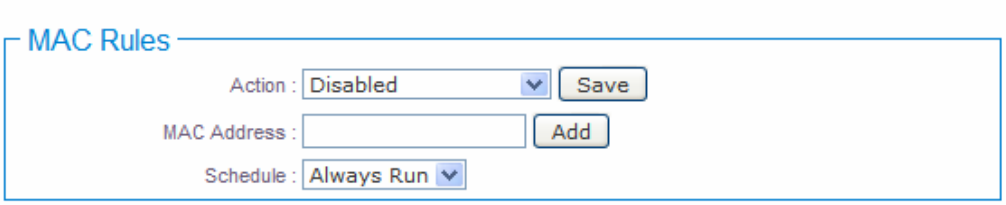
Click **Save** button to add IP filter rule to List. There are **20** rules maximum allowed in this IP Filter List. All rules can be **edited** or **removed** on the List. Click **Reboot** button to activate your changes.



6.3 MAC Filter

The administrator can setting MAC Filter via this page, Please click on **Advance** > **MAC Filter** and follow the below setting.



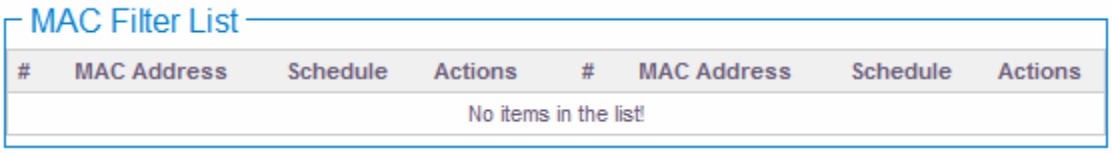


- **Action:** Select the desired access control rule; the options are "**Only Deny List MAC**" or "**Disable**". Define certain clients in the list which will have denied access to the Access Point while the access will be granted for all the remaining clients – **Access Control Type** is set to **Reject**.

- **MAC Address:** Enter MAC address in this field. There are maximum **20** clients users allowed in this MAC address list.

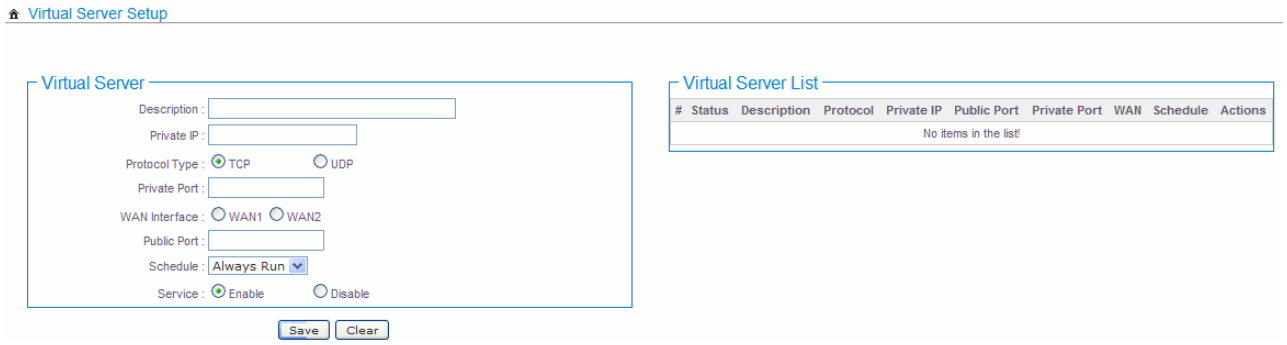
- **Time Policy:** Select specified time period for this rule.

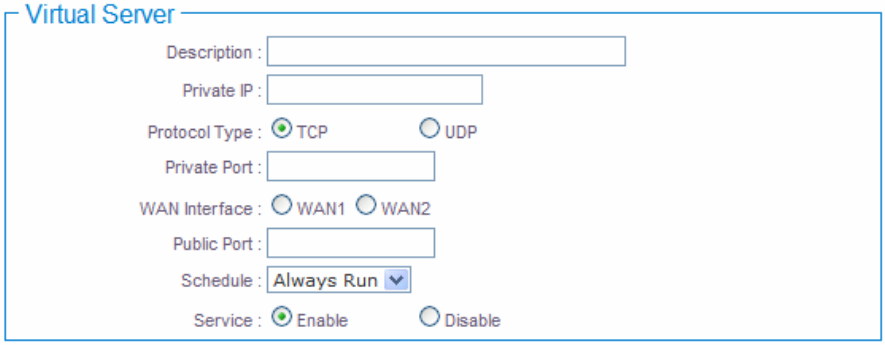
Click **Save** button to add MAC filter rule to List. There are maximum **20** rules allowed in this MAC Filter List. All rules can **removed** on the List. Click **Reboot** button to activate your changes.



6.4 Virtual Server

A certain area in the network can be exposed to the Internet in a limited and controlled way for on-line game or video conferencing via this page. Please ensure the internal port to be used is not occupied by other applications. Please click on **Advance** > **Virtual Server** and follow the below setting.





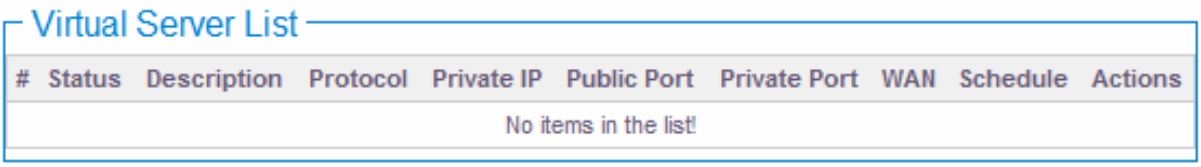
- **Description:** Enter appropriate text to denote this virtual server.
- **Private IP:** The corresponding IP address of the LAN port used for the respected service. Enter the LAN IP address of the assigned host.
- **Protocol Type:** The communication protocol of session. Select an appropriate protocol type, either TCP or UDP protocol.
- **Private Port:** The private port(s) required for this rule. A single port may be given, or a range may be given as **start: end**, which will match all ports from start to end, inclusive.
- **WAN Interface:** Select specified WAN interface where forwarding of incoming packets is processed

- **Public Port:** The public port(s) required for this rule. A single port may be given, or a range may be given as **start: end**, which will match all ports from start to end, inclusive.
- **Schedule:** Select specified time period for this rule.
- **Service:** Check **Enable** option to activate this rule, and **Disable** to deactivate.

***Note:** The Private Port and Public Port can be different, but the port range needs the same.

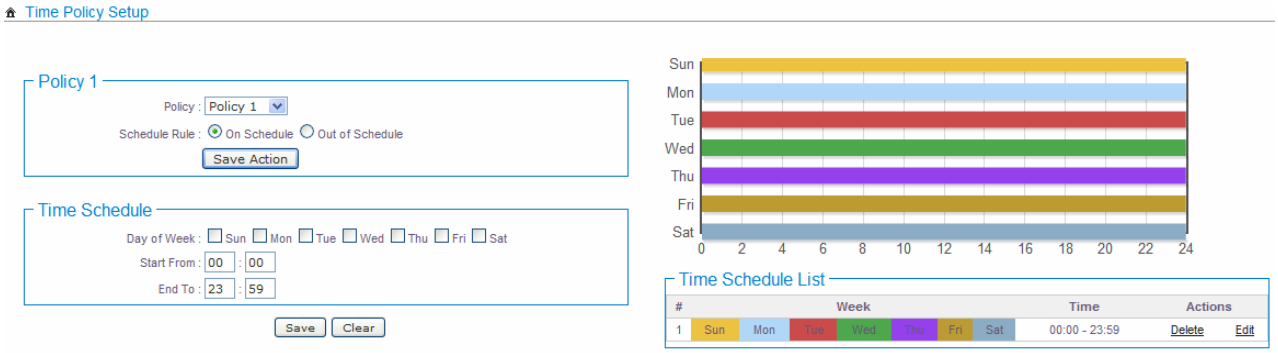
Example: Public Port is 10 to 20; the Private Port can be 30 to 40 or other 10 ports range.

Click **Save** button to add Virtual Server rule to List. There are maximum **20** rules allowed in this List. All rules can be **edited** or **removed** on the List. Click **Reboot** button to activate your changes.



6.5 Time Policy

Administrator can define time policy for **Service Domain**, **IP Filtering**, **MAC Filtering** and **Virtual Server**. There are **10** policy can be defined. Please click on **Advance** > **Time Policy** to enter **Time Policy Setup** page.

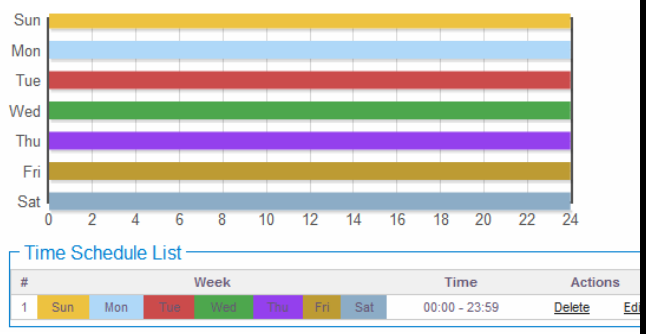
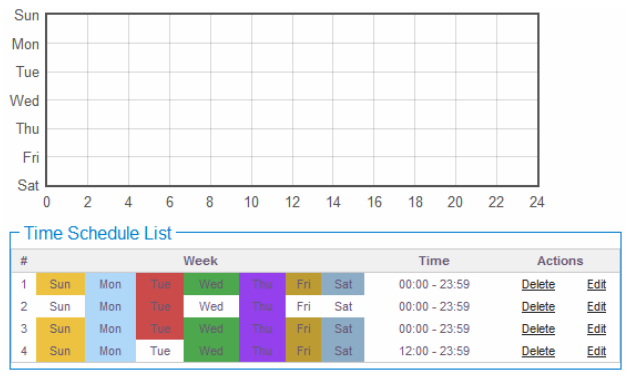


Policy:

There are **10** Policy can be selected.

- **Schedule Rule :** Select desired schedule for this policy，click **Save Action** button to save Schedule Rule setting
- **Time Schedule:** Select desired day of week and time period for this policy.

Below depicts an example for “**On Schedule**” and “**Out of Schedule**”.

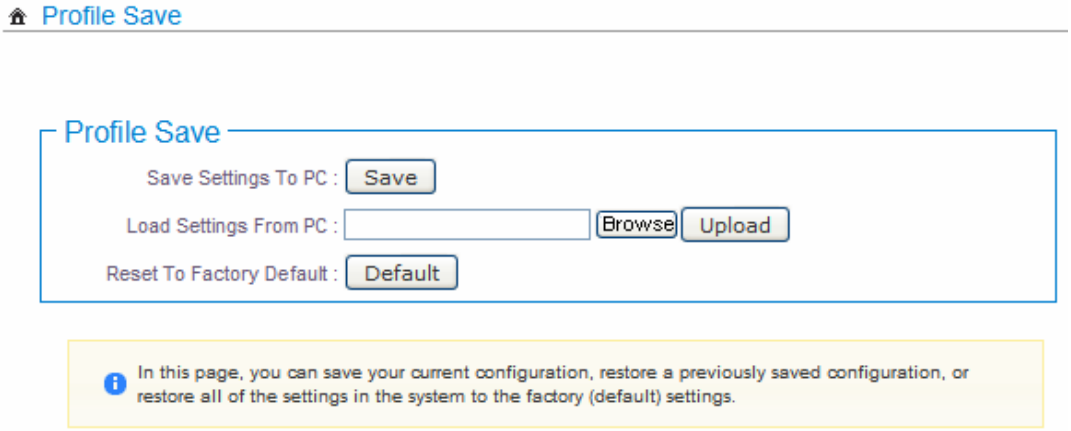
On Schedule	Out of Schedule
	

Click **Save** button to add schedule to policy. There are **10** schedule maximum allowed in the each time policy. All schedules can be **edited** or **removed** in the each time policy. Click **Reboot** button to activate your changes.

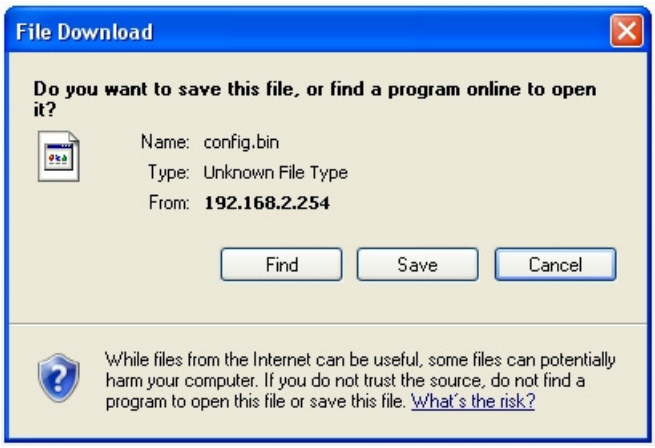
7 Network Utilities

7.1 Profile Setting (Backup/Restore and Reset to Factory)

Current settings on the system can be backed up, or previous backed up settings can be restored as well as resetting the system back to factory default can be performed via this page. Please click on **Utilities** > **Profile Setting** and follow the below setting.



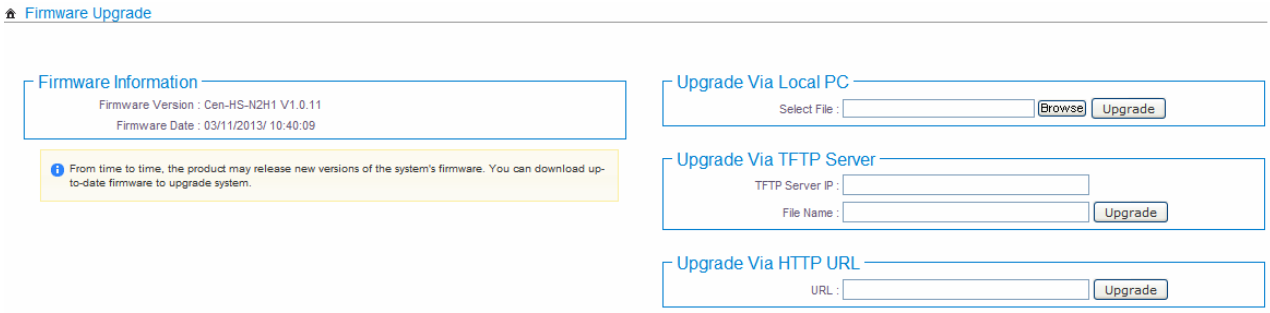
- **Save Settings To PC:** Click **Save** button to save the current configuration and **database** to a local disk.



- **Load Settings from PC:** Click **Browse** button to locate a configuration file and database to restore, and then click **Upload** button to upload. The system will **restart** after uploading configuration and database.
- **Reset To Factory Default:** Click **Default** button to reset back to the factory default settings. The system will **restart** after uploading configuration and database.

7.2 Firmware Upgrade

The administrator can download the latest firmware from website and upgrade the system here. It might take a few minutes before the upgrade process completes and the system needs to be restarted to activate the new firmware.



- **Upgrade via Local PC:** Click **Browse** button to locate the new firmware, and then click **Upgrade** button to upgrade.
- **Upgrade via TFTP Server:** Enter TFTP Server IP address and firmware file, and then click Upgrade button to upgrade.
- **Upgrade via HTTP URL:** Enter URL address (example: http://192.168.1.10/xxx.bin), and then click Upgrade button to upgrade.

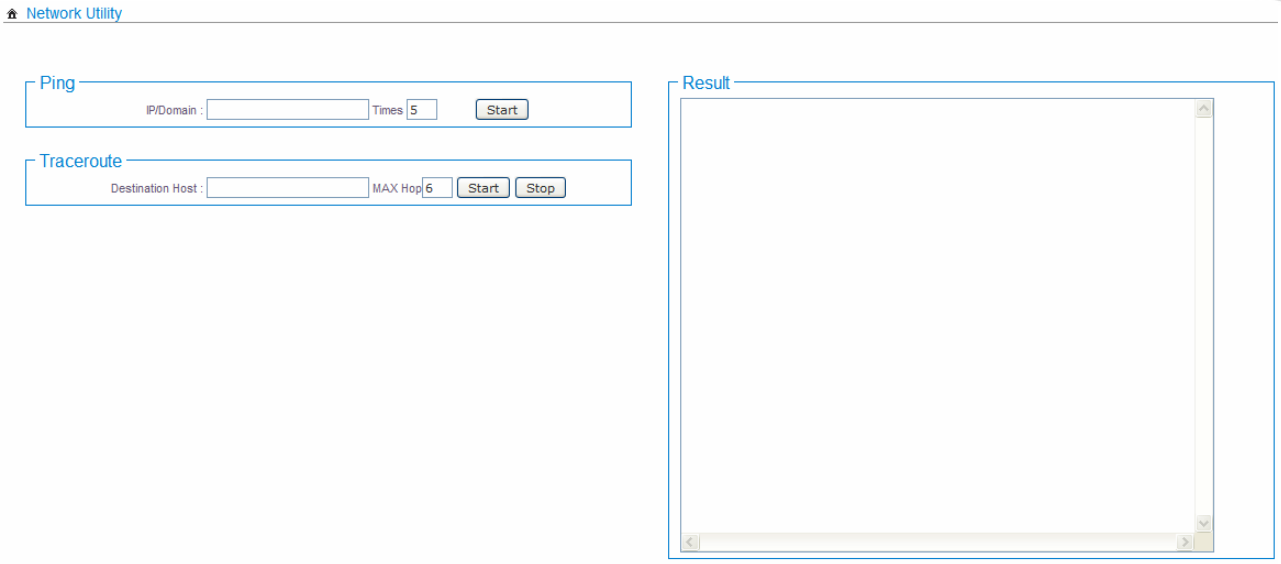
***Note:** To prevent data loss during firmware upgrade, please backup current settings before proceeding.

***Note:** Do not interrupt during firmware upgrade including power on/off as this may damage system.

***Note**: Never perform firmware upgrade over wireless connection or via remote access connection.

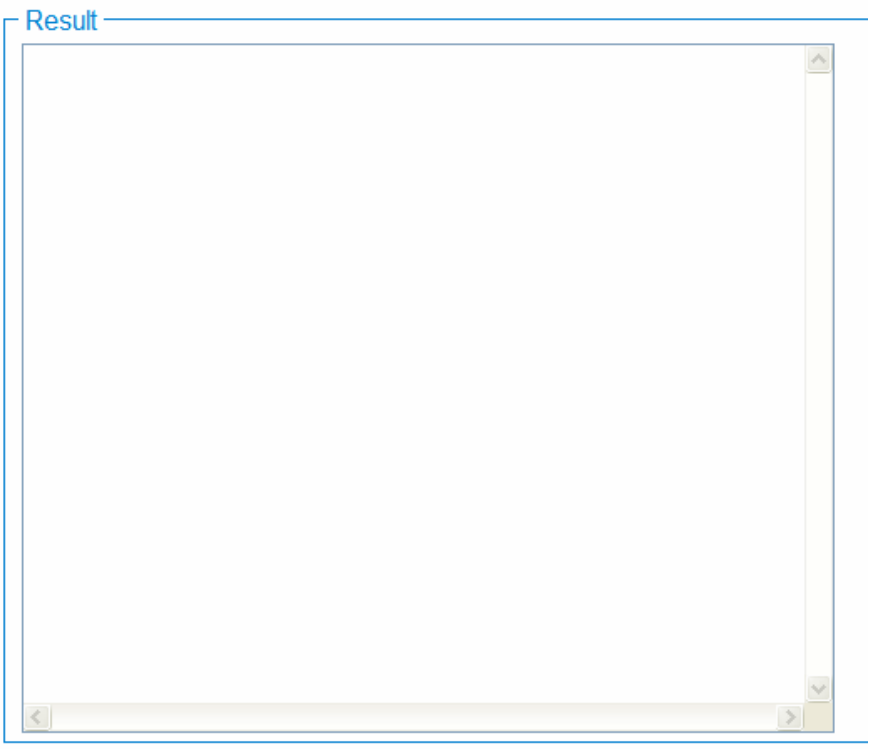
7.3 Network Utility

The administrator can diagnose network connectivity via the PING utility. Please click on **Utilities** > **Network Utility** and follow the below setting.



Ping

This utility will help ping other devices on the network to verify connectivity. Ping utility, using ICMP packets, detects connectivity and latency between two network nodes. As result of that, packet loss and latency time are available in the **Result** field while running the PING test.



- **Destination IP/Domain:** Enter desired domain name, i.e. www.google.com, or IP address of the destination, and click **Start** button to proceed. The ping result will be shown in the **Result** field.
- **Times:** By default, it's 5 and the range is from 1 to 60. It indicates number of connectivity test.

Traceroute

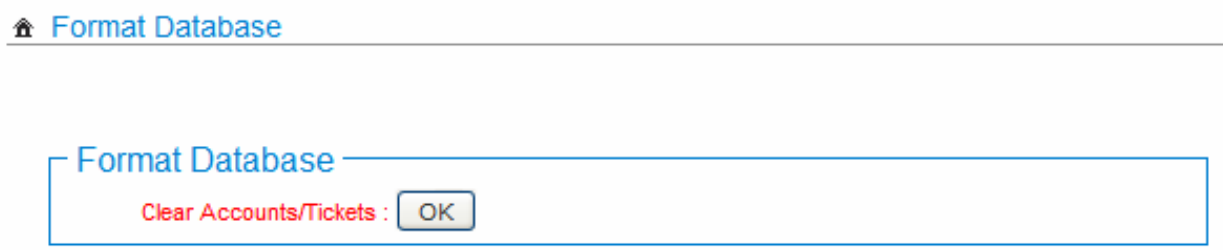
Allows tracing the hops from the WIAS-3200N v2 to a selected outgoing IP address. It should be used for the finding the route taken by ICMP packets across the network to the destination host.

The test is started using the **Start** button, click **Stop** button to stopped test

- **Destination Host:** Specifies the Destination Host for the finding the route taken by ICMP packets across the network.
- **MAX Hop:** Specifies the maximum number of hops(max time-to-live value) traceroute will probe.

7.4 Format Database

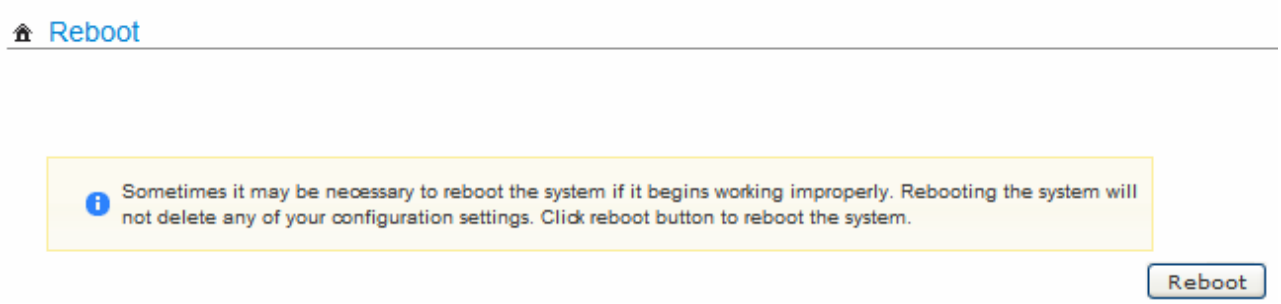
This function allows administrator to format system's database. Click **Format** button to proceed and take around three minutes to complete.



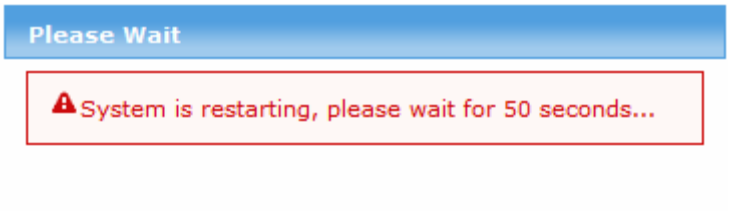
***Note:** Do not interrupt during format database including power on/off as this may damage system.

7.5 Reboot

This function allows administrator to restart system with existing or most current settings when changes are made. Click **Reboot** button to proceed and take around three minutes to complete.



A reminder will be available for remaining time to complete. If power cycle is necessary, please wait till completion of the reboot process.

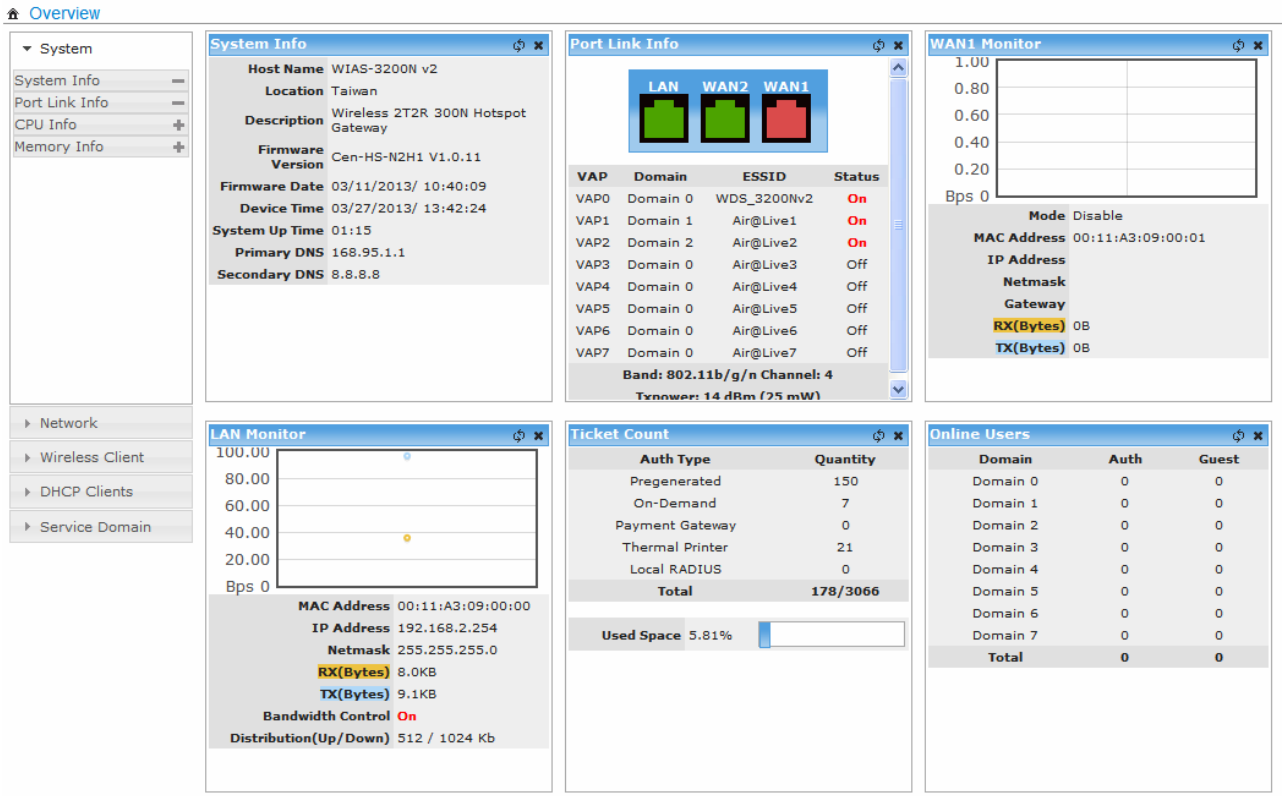


The **Home** page appears upon the completion of reboot.

8 View System Log & Status

8.1 Overview

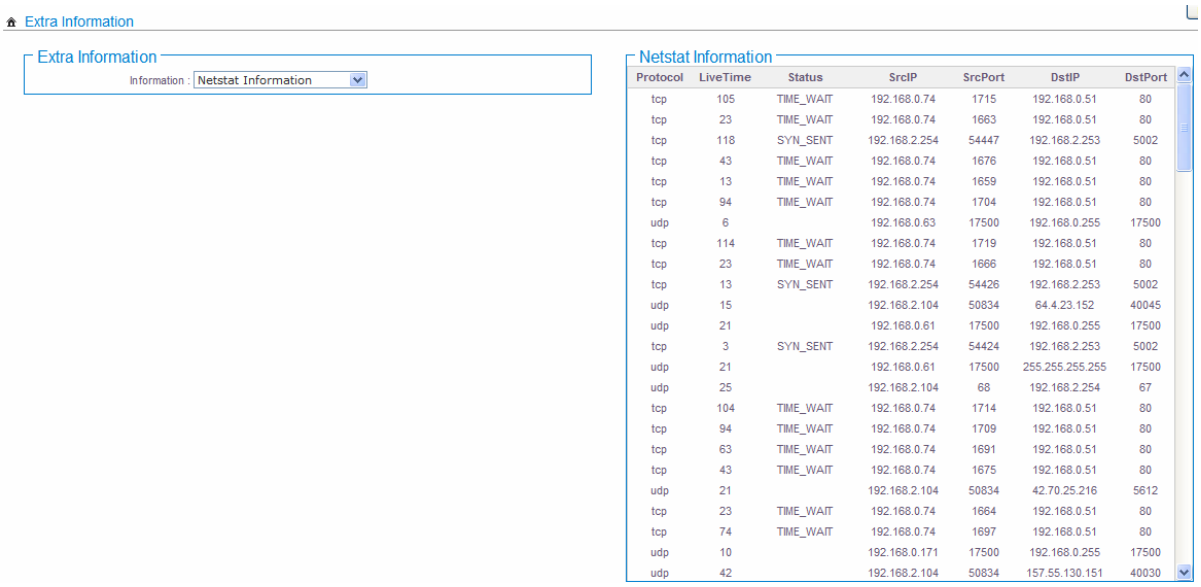
Detailed information on **System**, **Network**, **Wireless Client**, **DHCP Clients** and **Service Domain** can be reviewed via this page.



- **System Information:** Display the information of the system.
- **Networking Information:** Display the information of the network.
- **Wireless Client Information:** Display the information of the wireless clients.
- **DHCP Clients Information:** Display the information of the DHCP clients.
- **Service Domain Information:** Display the information of the Service Domain.

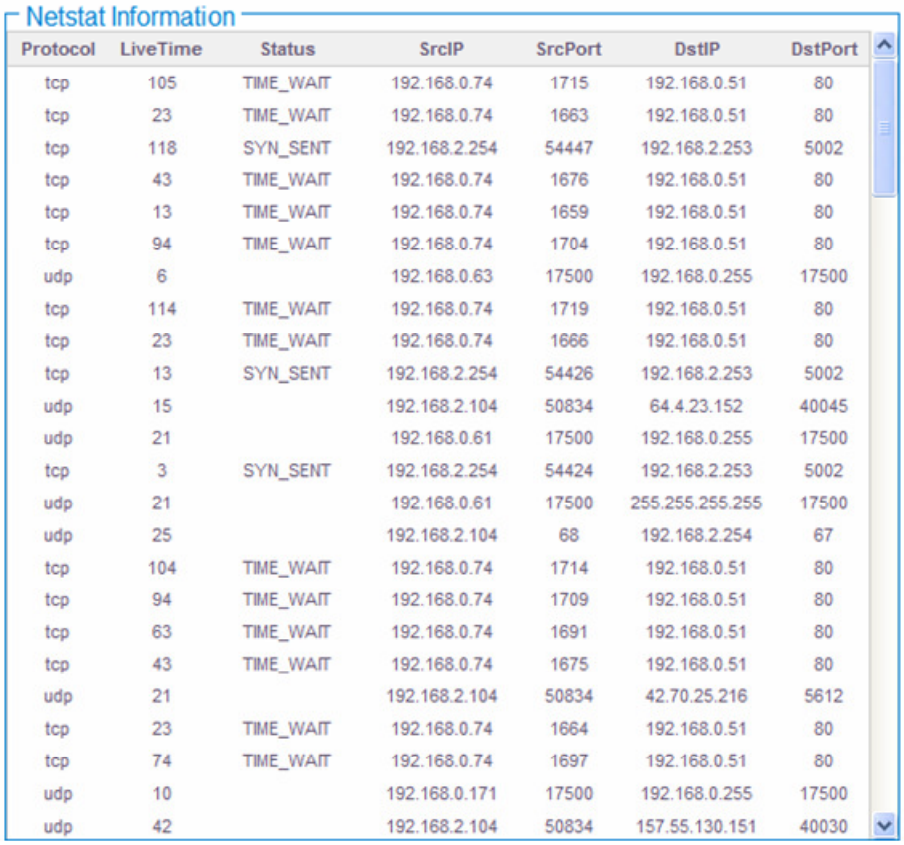
8.2 Extra Info

Administrator could pull out information such as Route table, ARP table, MAC table, Bridge table or STP available in the drop-down list from system. The **Refresh** button is used to retrieve latest table information.



Protocol	LiveTime	Status	SrcIP	SrcPort	DstIP	DstPort
tcp	105	TIME_WAIT	192.168.0.74	1715	192.168.0.51	80
tcp	23	TIME_WAIT	192.168.0.74	1663	192.168.0.51	80
tcp	118	SYN_SENT	192.168.2.254	54447	192.168.2.253	5002
tcp	43	TIME_WAIT	192.168.0.74	1676	192.168.0.51	80
tcp	13	TIME_WAIT	192.168.0.74	1659	192.168.0.51	80
tcp	94	TIME_WAIT	192.168.0.74	1704	192.168.0.51	80
udp	6		192.168.0.63	17500	192.168.0.255	17500
tcp	114	TIME_WAIT	192.168.0.74	1719	192.168.0.51	80
tcp	23	TIME_WAIT	192.168.0.74	1666	192.168.0.51	80
tcp	13	SYN_SENT	192.168.2.254	54426	192.168.2.253	5002
udp	15		192.168.2.104	50834	64.4.23.152	40045
udp	21		192.168.0.61	17500	192.168.0.255	17500
tcp	3	SYN_SENT	192.168.2.254	54424	192.168.2.253	5002
udp	21		192.168.0.61	17500	255.255.255.255	17500
udp	25		192.168.2.104	68	192.168.2.254	67
tcp	104	TIME_WAIT	192.168.0.74	1714	192.168.0.51	80
tcp	94	TIME_WAIT	192.168.0.74	1709	192.168.0.51	80
tcp	63	TIME_WAIT	192.168.0.74	1691	192.168.0.51	80
tcp	43	TIME_WAIT	192.168.0.74	1675	192.168.0.51	80
udp	21		192.168.2.104	50834	42.70.25.216	5612
tcp	23	TIME_WAIT	192.168.0.74	1664	192.168.0.51	80
tcp	74	TIME_WAIT	192.168.0.74	1697	192.168.0.51	80
udp	10		192.168.0.171	17500	192.168.0.255	17500
udp	42		192.168.2.104	50834	157.55.130.151	40030

- **Netstat Information:** Select "**NetStatus Information**" on the drop-down list, the connection track list should show-up. NetStatus will show all connection track on the system, the information include Protocol, Live Time, Status, Source/Destination IP address and Port.



Protocol	LiveTime	Status	SrcIP	SrcPort	DstIP	DstPort
tcp	105	TIME_WAIT	192.168.0.74	1715	192.168.0.51	80
tcp	23	TIME_WAIT	192.168.0.74	1663	192.168.0.51	80
tcp	118	SYN_SENT	192.168.2.254	54447	192.168.2.253	5002
tcp	43	TIME_WAIT	192.168.0.74	1676	192.168.0.51	80
tcp	13	TIME_WAIT	192.168.0.74	1659	192.168.0.51	80
tcp	94	TIME_WAIT	192.168.0.74	1704	192.168.0.51	80
udp	6		192.168.0.63	17500	192.168.0.255	17500
tcp	114	TIME_WAIT	192.168.0.74	1719	192.168.0.51	80
tcp	23	TIME_WAIT	192.168.0.74	1666	192.168.0.51	80
tcp	13	SYN_SENT	192.168.2.254	54426	192.168.2.253	5002
udp	15		192.168.2.104	50834	64.4.23.152	40045
udp	21		192.168.0.61	17500	192.168.0.255	17500
tcp	3	SYN_SENT	192.168.2.254	54424	192.168.2.253	5002
udp	21		192.168.0.61	17500	255.255.255.255	17500
udp	25		192.168.2.104	68	192.168.2.254	67
tcp	104	TIME_WAIT	192.168.0.74	1714	192.168.0.51	80
tcp	94	TIME_WAIT	192.168.0.74	1709	192.168.0.51	80
tcp	63	TIME_WAIT	192.168.0.74	1691	192.168.0.51	80
tcp	43	TIME_WAIT	192.168.0.74	1675	192.168.0.51	80
udp	21		192.168.2.104	50834	42.70.25.216	5612
tcp	23	TIME_WAIT	192.168.0.74	1664	192.168.0.51	80
tcp	74	TIME_WAIT	192.168.0.74	1697	192.168.0.51	80
udp	10		192.168.0.171	17500	192.168.0.255	17500
udp	42		192.168.2.104	50834	157.55.130.151	40030

- **Route Information:** Select "**Route Information**" on the drop-down list to display route table.WIAS-3200N v2 could be used as a L2 or L3 device. It doesn't support dynamic routing protocols such as RIP or OSPF. Static routes to specific hosts, networks or default gateway are set up automatically according to the IP configuration of system's interfaces. When used as a L2 device, it could switch packets and, as L3 device, it's capable of being a gateway to route packets inward and outward.

Route Information

Destination	Gateway	Netmask	Interface
192.168.101.0	0.0.0.0	255.255.255.0	brv1
192.168.102.0	0.0.0.0	255.255.255.0	brv2
192.168.103.0	0.0.0.0	255.255.255.0	brv3
192.168.2.0	0.0.0.0	255.255.255.0	bre0
192.168.0.0	0.0.0.0	255.255.255.0	eth1.2
192.168.104.0	0.0.0.0	255.255.255.0	brv4
192.168.105.0	0.0.0.0	255.255.255.0	brv5
192.168.106.0	0.0.0.0	255.255.255.0	brv6
192.168.107.0	0.0.0.0	255.255.255.0	brv7
0.0.0.0	192.168.0.254	0.0.0.0	eth1.2

- **ARP Table Information:** Select "**ARP Table Information**" on the drop-down list to display ARP table. ARP associates each IP address to a unique hardware address (MAC) of a device. It is important to have a unique IP address as final destination to switch packets to.

ARP Table Information

IP Address	MAC Address	Interface
192.168.0.200	00:26:73:4A:CB:68	eth1.2
192.168.0.254	00:4F:68:00:2E:B3	eth1.2
192.168.0.74	00:1A:92:72:16:94	eth1.2
192.168.0.29	48:5B:39:4F:4B:9F	eth1.2
192.168.0.66	00:1B:FC:DA:4C:56	eth1.2
192.168.2.104	6C:F0:49:51:23:F4	bre0
192.168.2.253	00:00:00:00:00:00	bre0
192.168.0.90	00:1B:B9:6A:B1:43	eth1.2

- **Bridge Table Information:** Select "**Bridge Table Information**" on the drop-down list to display bridge table. Bridge table will show Bridge ID and STP's Status on the each Ethernet bridge and its attached interfaces, the Bridge Port should be attached to some interfaces (e.g. eth0, eth0.vlan_tag, ath0~ath7).

Bridge Table Information

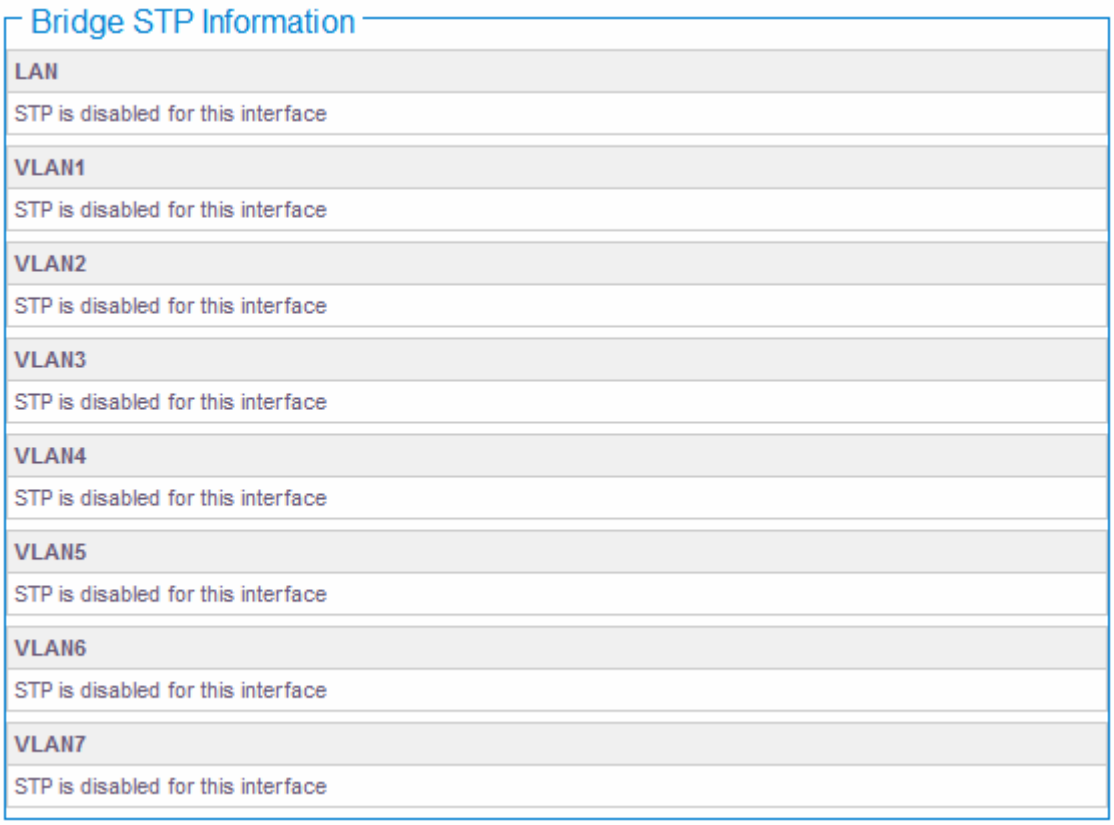
Bridge Port	Bridge ID	STP Enabled	Interface
VLAN7	8000.0011a3090000	no	eth0.107
VLAN6	8000.0011a3090000	no	eth0.106
VLAN5	8000.0011a3090000	no	eth0.105
VLAN4	8000.0011a3090000	no	eth0.104
VLAN3	8000.0011a3090000	no	eth0.103
VLAN2	8000.0011a3090000	no	eth0.102
			ath2
VLAN1	8000.0011a3090000	no	eth0.101
			ath1
LAN	8000.0011a3090000	no	eth0
			ath0

- **Bridge MACs Information:** Select "**Bridge MACs Information**" on the drop-down list to display MAC table. This table displays local MAC addresses associated with wired or wireless interfaces, but also remember non-local MAC addresses learned from wired or wireless interfaces. Ageing timers will be reset when existing MAC addresses in table are learned again or added when new MAC addresses are seen from wired or wireless interfaces as well. When time runs out for a particular entry, it will be pruned from the table. In that situation, switching packet to that particular MAC address will be dropped.

Bridge MACs Information

Port	MAC Address	Local	Ageing Timer
LAN	00:4F:a3:09:00:03	yes	0.00
WLAN	00:4F:a3:09:00:00	yes	0.00
LAN	6c:f0:49:51:23:f4	no	0.50
VLAN1	00:4F:a3:09:00:00	yes	0.00
WLAN	00:4F:a3:09:00:03	yes	0.00
VLAN2	00:4F:a3:09:00:00	yes	0.00
WLAN	00:4F:a3:09:00:03	yes	0.00
VLAN3	00:4F:a3:09:00:00	yes	0.00
VLAN4	00:4F:a3:09:00:03	yes	0.00
VLAN5	00:4F:a3:09:00:00	yes	0.00
VLAN6	00:4F:a3:09:00:03	yes	0.00
VLAN7	00:4F:a3:09:00:00	yes	0.00

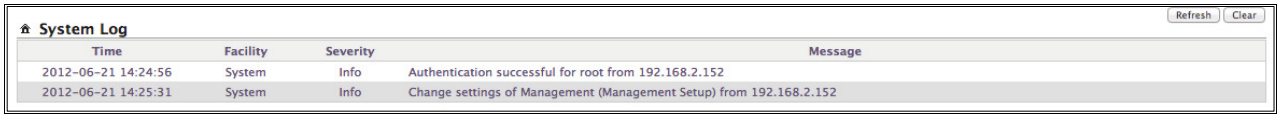
- **Bridge STP Information:** Select "**Bridge STP Information**" on the drop-down list to display a list of bridge STP information.



8. Event Log

Event Log

The Event log displays system events when system is up and running. Also, it becomes very useful as a troubleshooting tool when issues are experienced in system.



Time: The date and time when the event occurred.

Facility: It helps users to identify source of events such “System” or “User”

Severity: Severity level that a specific event is associated such as “info”, “error”, “warning”, etc.

Message: Description of the event.

Refresh: Click this button to renew the log

Clear: Click this button to clear all the record

A Appendix A. Specifications

Features

➢ **Network**

- Support NAT or Router Mode
- Support static IP, Dynamic IP(DHCP Client), PPPoE and PPTP on WAN connection
- DHCP Server Per VLAN; Multiple DHCP Networks
- 802.3 Bridging
- Proxy DNS/Dynamic DNS
- Support NAT
- IP/Port destination redirection
- DMZ server mapping
- Virtual server mapping
- Built-in with DHCP server
- NTP Client
- Binding VLAN with Ethernet and Wireless interface
- H.323, SIP Pass-through
- Support MAC Filter
- Support IP Filter
- Support URL Filter
- Support Walled garden (free surfing zone)
- Support MAC-address and IP-address pass through
- IP Plug and Play (IP PnP)

➢ **User Management**

- Suggest 100 simultaneous authentication users
- Max 3066 Accounts
- Support Pregenerated Users, On-Demand Users and Local RADIUS Accounts.
- Users Session Management
- Configurable user Black list (with Time-based control)

- Allows MAC address and user identity binding for local user authentication
- SSL protected login portal page
- Login Session idle time out setting
- Session and account expiration control
- User Log and traffic statistic notification via automatically email service
- Login time frame control
- Session limit
- Real-Time Online Users Traffic Statistic Reporting
- Support local account roaming
- Seamless Mobility : User-centric networking manages wired and wireless users as they roam between ports or wireless APs

➢ **Multiple Service Domains**

- The network is divided into maximum 4 groups, each defined by a pair of VLAN tag and ESSID.
- Each Domain has its own **(1) login portal page (2) authentication options (3) LAN interface IP address range (4) Session number limit control (5) Traffic shaping (6) IP Plug and Play (IP PnP) (7) Multiple Authentication**.
- Enable DHCP or not, and DHCP address range
- Enable authentication or not
- Enable Guest service or not
- Types of authentication options (Local RADIUS, Remote RADIUS, LDAP, On-Demand and Pregenerated)
- Bandwidth (Distribution or Individual)
- Scheduling authentication service control on different Service Domain

➢ **Authentication**

- Authentication: single sign-on (SSO) client with authentication integrated into the local authentication environment through local/domain, LDAP, RADIUS, MAC authentication, and 802.1x
- Customizable Login and Logout Portal Pages
- Customizable Advertisement Links on Login Portal Page
- User authentication with UAM (Universal Access Method), 802.1x /EAPoLAN ,MAC address
- Allow MAC address and users identity binding for local user authentication
- Support Multiple Login service on one Accounts
- Each group (role) may get different network policies in different Service Domain

- Max simultaneous user session (TCP/UDP) limit
- Configurable user black list
- Export/Import local users list to/from a text file
- Web-based Captive Portal for SSL browser-based authentication
- Authentication Type :

i. IEEE802.1X(EAP, EAP/TLS, EAP/TTLS, EAP/GTC, EAP/MD5, EAP/MSCHAP-V2)
ii. RFC2865 RADIUS Authentication
iii. RFC3579 RADIUS Support for EAP
iv. RFC3748 Extensible Authentication Protocol
v. MAC Address authentication
vi. Web-based captive portal authentication

➢ **Accounting :**

- Provides billing plans for Pregenerated accounts
- Provides billing plans for On-Demand accounts
- Enables session expiration control for both Pregenerated tickets and On-Demand accounts by Time(Hours) and Data Volume(MB)
- Detailed per-user traffic history based on time and data volume for both Pregenerated tickets and On-Demand accounts
- Support Local RADIUS, Pregenerated, On-Demand and external RADIUS server
- Contain 10 configurable billing plans for On-Demand accounts
- Support credit card billing system by Papal
- Support automatic email network traffic history

➢ **Security**

➢ Layer 2 User Isolation

- Blocks client to client discovery within a specified VLAN
- Setting for TKIP/CCMP/AES key's refreshing periodically
- Hidden ESSID support
- Setting for " Deny Any " connection request
- MAC Address Filtering (MAC ACL)
- Support Data Encryption : WEP(64/128-bit), WAP, WAP2
- Support various authentication methods : WPA-PSK, WPA-RADIUS, IEEE802.1X
- No. Of Registered RADIUS Servers : 2
- Support VPN pass-through

- Encryption Type:

i. WEP: 64, 128 and 152 bit
ii. WAP-TKIP , WPA-PSK –TKIP, WPA-AES, WPS-PSK-AES
iii. WAP2/802.11i :WPA2-AES, WAP2-PSK-AES, WAP2-TKIP, WPA-PSK-TKIP
iv. Secure Socket Layer (SSL) and TLS : RC4 128-bit and RSA1024-bit and 2048-bit

➢ **Dual WAN**

- Load Balancing
- Outbound Fault Tolerance
- Outbound load balance
- Multiple Domain Support
- By Traffic
- Bandwidth Management by individual and distribution on different network(Service Domain)
- WAN Connection Detection

➢ **QoS Enforcement**

- Packet classification via DSCP (Differentiated Services code Point)
- Traffic Statistics:
- Diff/TOS
- IEEE 802.1Q Tag VLAN priority control
- IEEE 802.11e WMM
- Automatic mapping of WMM priorities to 802.1p and IP DSCP
- Upload and Download Traffic Management

➢ **Wireless**

- Transmission power control : 4 Levels
- Channel selection : Manual or Auto
- No. of associated clients per AP : 32
- Setting for max no associated clients : Yes
- No. of BBSID (Virtual AP) : 8
- No. of Max. WDS setting : 4
- Preamble setting : Short / Long
- Setting for 802.11b/g/n mix, 802.11b only or 802.11 b/g only or 802.11n only

- Setting for transmission speed
- IEEE802.11f IAPP (Inter Access Point Protocol), hand over users to another AP
- IEEE802.11i Preauth (PMSKA Cache)
- IEEE802.11d Multi country roaming
- Automatic channel assignment
- Coordinated Access ensures optimal performance of nearby APs on the same channel
- Secure wireless bridge connects access points without wire
- Monitoring and reporting

➢ **System Administration**

- Intuitive Web Management Interface
- Three administrator accounts
- Provide customizable login and logout portal page
- CLI access (Remote Management) via Telnet and SSH
- Remote firmware upgrade (via Web)
- Utilities to backup and restore the system configuration
- Remote Link Test – Display connect statistics
- Full Statistics and Status Reporting
- Real time traffic monitor
- Ping Watchdog
- Traffic history report via email to administrator
- Users' session log can be sent by external Syslog Server or E-mail
- Even Syslog
- SNMP v1, v2c,v3
- SNMP Traps to a list of IP Address
- Support MIB-II
- Spanning Tree Protocol
- NTP Time Synchronization
- Customizable Time Display Format for System
- Administrative Access : HTTP / HTTPS

Specifications

Hardware Specifications	
Base Platform	AR7240+AR9283
CPU Clock Speed	400 MHz
Wireless Radio	802.11bgn
Serial Port	1 (DB-9)
USB Port (Optional)	1 (Optional 3G interface radio with major brands – ODM only)
Reset Switch Built-in	Push-button momentary contact switch
RF Channel Scan Hardware Button	Hardware Push-button to scan for a better channel to use
Standards Conformance	IEEE 802.3 / IEEE 802.3u
Ethernet Configuration	10/100BASE-TX auto-negotiation Ethernet port x 3 (RJ-45 connector) WAN * 2 LAN * 1 Auto MDI/MDI-X enabled , IEEE802.3af Power Over Ethernet Compatible , Auto Fail over
SDRAM	On board : 64 Mbytes
Flash	On board : 16 Mbytes
Built-In LED Indicators	1x Power, 2 x WAN ,1x LAN , 1x Status, 1x System, 1x Printer
Wireless Specifications	
Network Standards Conformance	IEEE802.11 b /g /n compliant

Data Transfer Rate	IEEE802.11b：1 / 2 / 5.5 / 11Mbps (auto sensing) IEEE802.11g：6 / 9 / 12 / 18 / 24 / 36 / 48 / 54(auto sensing) IEEE802.11n : 300 (auto sensing)
Frequency Range	IEEE802.11b/g： 2.412 ~ 2.462GHz (USA) 2.412 ~ 2.484GHz (Japan) 2.412 ~ 2.472 GHz (Europe ETSI) 2.457 ~ 2.462 GHz (Spain) 2.457 ~ 2.472 GHz (France)
Media Access Protocol	CSMA / CA with ACK
Modulation Method	IEEE802.11b：DSSS (DBPK,DQPSK,CCK) IEEE802.11g/n：OFDM(64-QAM,16-QAM,QPSK,BPSK)
Operating Channels	802.11b/g/n : 11 for FCC,14 for Japan,13 for Europe, 2 for Spain, 4 for France
RF Output Power	100mW
Transmit Power Variation	802.11g/n : Up to 16 dBm 802.11b : up to 18 dBm
Frequency Response flatness	±1dB over operating range
Receiver Sensitivity	802.11b/g /n -90dBm@1Mbps, -86dBm@6Mbps,-84dBm@11Mbps,-69dBm@54Mbps
Environmental & Mechanical Characteristics	
Operating Temperature	-20 ℃ ~ 50 ℃
Storage Temperature	-20 ℃ ~ 60 ℃
Operating Humidity	10% to 80% Non-Condensing
Storage Humidity	5% to 90% Non-Condensing
Antenna Connector	SMA-Type Connector

Power Supply	110 – 220V AC Power; 12 VDC, 1.5A input. Support 802.3af Compliant , Power Over Ethernet (48V/0.3 A)
Unit Dimensions	205 x 125 x 35 (mm) (Width x Depth x Height)
Unit Weight	600g
Form Factor	Wall Mountable , Metal case compliant with IP50 standard
Certifications	FCC,CE, IP50,ROHS compliant

B Appendix B. Web UI Valid Characters

	Field	Valid Characters
LAN/VLAN	VLAN Tag	0-4094
	IP Address	A.B.C.D IP Format
	IP Netmask	128.0.0.0 ~ 255.255.255.252
	IP Gateway	A.B.C.D IP Format
	Hostname	Length : Up to 32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
Bandwidth Control	Total Max. Upload/Download	0-102400, 0 is unlimited, default is 512
	Individual Upload/Download	0-102400, 0 is unlimited, default is 512
	Group Upload/Download	0-102400, 0 is unlimited, default is 512
	Session Limit per IP	10-500, 0 is unlimited
DHCP Server	Start/End IP	A.B.C.D IP Format
	DNS1/DNS2 IP	A.B.C.D IP Format
	WINS IP	A.B.C.D IP Format

	Domain	Length : Up to 32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	Lease Time	600-99999999, default is 86400
WAN	Manual MAC Address	12 HEX characters
	IP Address	A.B.C.D IP Format
	IP Netmask	128.0.0.0 ~ 255.255.255.255
	IP Gateway	A.B.C.D IP Format
	PPTP Server	A.B.C.D IP Format
	My WAN IP	A.B.C.D IP Format
	My WAN IP Netmask	128.0.0.0 ~ 255.255.255.252
	Hostname	Length : Up to 32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	User name	Length : Up to 32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	Password	
	MTU	576 ~ 1492
	Primary/Secondary DNS	A.B.C.D IP Format

DDNS	Hostname	Length : Up to 32 0-9, A-Z, a-z @ - _ .
	User Name	Length : Up to 32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` =
	Password	
Block	Field	Valid Characters
Management	System Name	Length : 1-32 0-9, A-Z, a-z
	Description	Length : Up to 50 chars
	Location	Length : 32 0-9, A-Z, a-z
	New Password	Length : 4 ~ 30 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	Check New Password	Length : 4 ~ 30 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	Port	1 ~ 65535
	IP Address/ Domain	A.B.C.D IP Format or Domain
	IP Address to Ping	A.B.C.D IP Format
	Ping Interval	60~3600; default is 300
	Startup Delay	60~3600; default is 300
	Failure Count To Reboot	1~99; default is 3

SNMP	RO/ RW community	Length : 1-32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] ; ` = `
	RO/ RW user	Length : 1-31 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] ; ` , . = `
	RO/ RW password	Length : 8 ~ 32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] ; ` , . = `
	Community	Length : 1-32 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] ; `
	IP	A.B.C.D IP Format
General Setup	Aggregation Frames	2-64, default is 32
	Aggregation Size	1024-65535, default is 50000
Advanced Setup	Beacon Interval	40 ~ 3500
	DTIM Interval	1 ~ 255
	Fragment Threshold	256 ~ 2346
	RTS Threshold	1 ~ 2347
Virtual AP Setup	ESSID	Length : 1-31 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . = `

	Maximum Clients	1 ~ 32
	WEP Key	10, 26, 32 HEX characters or 5, 13, 16 ASCII characters
	Group Key Update Period	>=0 seconds, default is 600
	Master Key Update Period	>=0 seconds, default is 86400
	WEP Key Update Period	>=0 seconds, default is 300, 0 is disable
	Pre-Shared Key	8 ~ 63 ASCII chars; 64 HEX chars
	RADIUS Server IP	A.B.C.D IP Format
	RADIUS Port	1 ~ 65535
	Shared Secret	1 ~ 64 characters
	EAP Reauth Period	>= 0 seconds; 0 is disable, default is 3600
WDS Setup	WEP Key	10, 26, 32 HEX chars or 5, 13, 16 ASCII chars
	Peer's MAC Address	12 HEX characters
	Description	Up to 32 characters Space
IP Filter	Source/Destination Address	A.B.C.D IP Format
	Source/Destination Mask	0 ~ 32

	Source/Destination Port	1 ~ 65535
MAC Filter	MAC address	MAC Format; 12 HEX characters
Virtual Server	Description	Up to 32 characters
	Private IP	A.B.C.D IP Format
	Private/Public Port	1 ~ 65535
DMZ	IP Address	A.B.C.D IP Format
Time Policy	Start From / End To	Time Format : hh:mm Start From < End To
Service Domain	Login Timeout	1~60; default is 10
	Redirect URL	URL Format
	Guest Count Limit	1~100; default is 5
	Guest Time	1~720; default is 10
Pregenerated Tickets	File ID	1 ~ 32767
	Price	1-7 digit number : xxxxx.xx
	Currency	1~3 letters characters
	Quantity of Tickets	1 ~ 3069
	Passcode Length	8 ~ 31, default is 8
	Wireless Information	Up to 512 characters
	Description	Up to 32 characters Space
	Time Quota	1 ~ 366x24x60 , default is 60
	Volume Quota	Default 10; Max is 102400
	Effective Start/ End Time	Date / Time Format : MM/DD/YYYY

		HH:MM Start Time < End Time
Billing Plan	Plan Name	Up to 32 characters
	Price	1-7 digit number : xxxxx.xx
	Currency	1~3 letters characters
	Passcode Length	8 ~ 31, default is 8
	Wireless Information	Up to 512 characters
	Description	Up to 100 characters Space
	Time Quota	1 ~ 366x24x60 , default is 60
	Volume Quota	Default 10; Max is 102400
Thermal Printer	IP Address	A.B.C.D IP Format
	Command Port	1 ~ 65535, default is 5000
	New Lock Password	4-8 digit number
	Confirm Lock Password	4-8 digit number
	Balance Date	Time format : HH:MM
	Description	Up to 32 characters Space
Local RADIUS	Group	Length : 4-16 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` . =

	Username/Password	Length : 4-16 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` . =
	MAC Address	MAC Format; 12 HEX characters
	Description	Up to 32 characters Space
Remote RADIUS	Primary/Secondary Server IP	A.B.C.D IP Format
	Authentication/Account Port	1 ~ 65535
	Secret Key	1-64 characters
LDAP	Server IP	A.B.C.D IP Format
	Port	1 ~ 65535
	Username	1-64 characters
	Password	1-16 characters
	Base DN	1-64 characters
	Account Attribute	1-64 characters
	Identity	1-128 characters
Walled Garden	Walled Name	4-32 characters Space
	IP Address/ Domain	A.B.C.D IP Format or Domain
	Homepage	URL Format
	Description	32 characters Space
Privilege List	Device Name	4-32 characters
	IP Address	A.B.C.D IP Format

	MAC Address	MAC Format; 12 HEX characters
	Description	Up to 64 characters
Black List	Name	4-32 characters
	IP/URL	4-32 characters
	Description	Up to 32 characters
Notification	Sender From	E-mail Format
	SMTP Server	A.B.C.D IP Format or Domain
	Port	1-65535, default is 25
	Username	Length : 1-64 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	Password	Length : 1-64 0-9, A-Z, a-z ~ ! @ # $ % ^ * ( ) _ + - { } | : < > ? [ ] / ; ` , . =
	Receiver E-mail	E-mail Format
	Sending Interval	10-4200, default is 1440
	Billing Report Time	hh:mm Time format
	IP	A.B.C.D IP Format

C Appendix C. System Manager Privileges

There are three system management accounts for maintaining the system; namely, the **root**, **admin** and **operator** accounts are with different levels of privileges. The root manager account is empowered with full privilege to Read & Write while the admin manager account is Read only.

The following table display admin and operator account's privileges.

Main Menu	Sub Menu	Group	Admin Privilege	0perator Privilege
System	WAN		None	None
	WAN Traffic		None	None
	LAN/VLAN		None	None
	DDNS		None	None
	Management	System Information	Read	None
		Root Password	Read	None
		Admin Password	Read & Write	None
		Operator Password	Read & Write	None
		Login Methods	Read	None
	Time Server		None	None
	SNMP		None	None
Service Domain	Service Domain		Read & Write	None
	Authentication – Management		Read & Write	None
	Authentication – Pregenerated		Read & Write	None
	Authentication – OnDemand	Billing Plan Setup	Read & Write	None
		Create Accounts	Read & Write	Read & Write
		Payment Gateway	Read & Write	Read & Write
		Thermal Printer Setup	Read & Write	Read & Write
		Billing Plan Report	Read & Write	Read & Write
	Authentication – Local RADIUS		Read & Write	None

	Authentication – Remote RADIUS		Read & Write	None
	Authentication – LDAP		Read & Write	None
	Privilege List		Read & Write	None
	Walled Garden		Read & Write	None
	Blacklist		Read & Write	None
	Notification		Read & Write	None
	Online Users		Read & Write	Read & Write
	Log Info		Read & Write	Read & Write
Wireless	General		Read & Write	None
	Advanced		Read & Write	None
	Virtual AP		Read & Write	None
	Associated Clients		Read & Write	None
	WDS Status		Read & Write	None
Advance	DMZ		Read & Write	None
	IP Filter		Read & Write	None
	MAC Filter		Read & Write	None
	Virtual Server		Read & Write	None
	Time Policy		Read & Write	None
Utilities	Profile Settings	Backup Settings	Read & Write	None
		Restore Settings	Read & Write	None
		Reset to Default	Read & Write	None
	System Upgrade		Read & Write	None
	Network Utility		Read & Write	None
	Format Database		Read & Write	None
	Reboot		Read & Write	None

D

Appendix D. Create PayPal Business Account

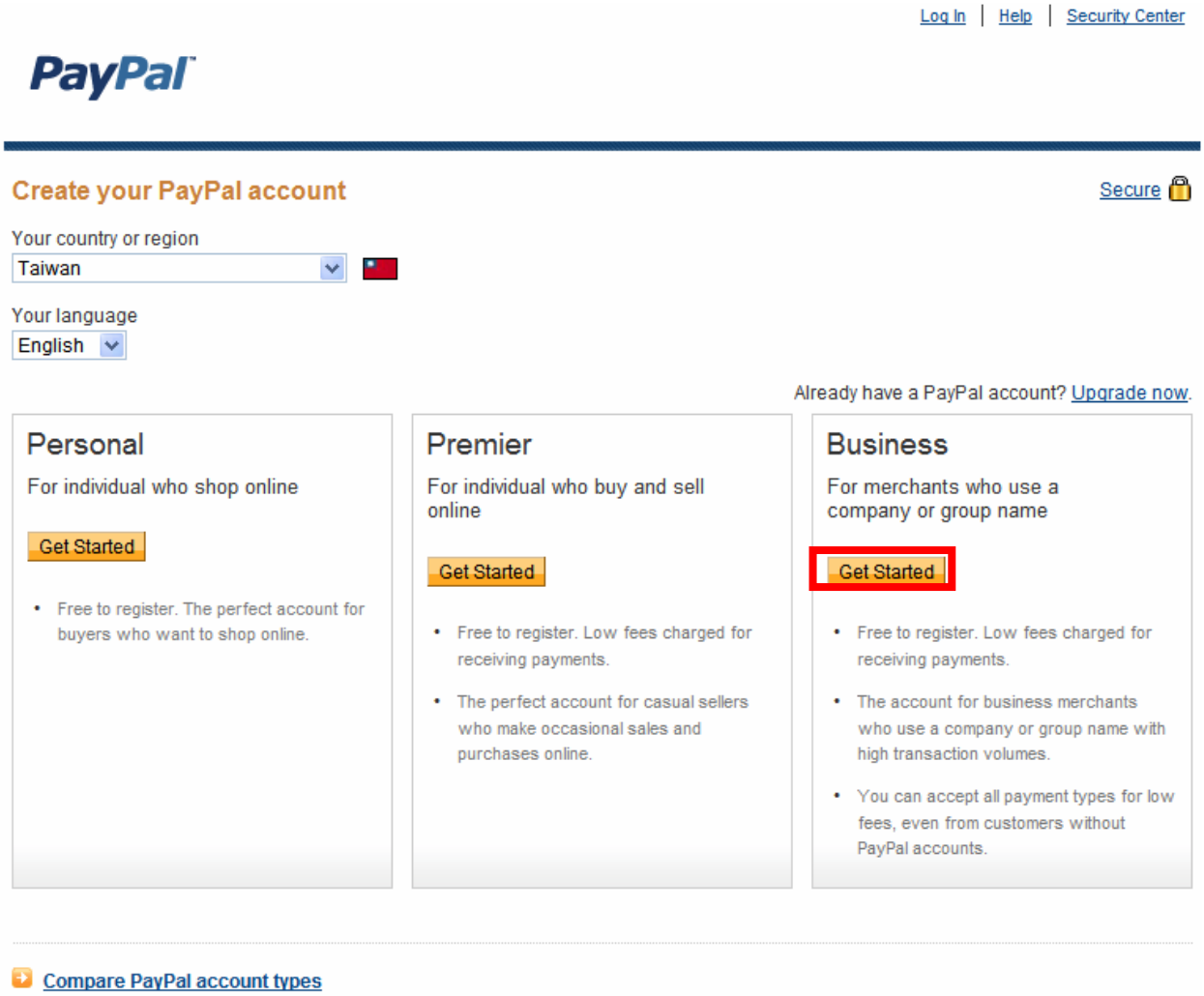
This section is to show independent Hotspot owners how to configure related settings in order to accept payments via PayPal, making the Hotspot an e-commerce environment for end users to pay for and obtain Internet access using their PayPal accounts or credit cards.

As follows are the basic steps to open and configure a "**Business Account**" on **PayPal**.

Sign Up Process:

Step 1. Sign up for a PayPal **Business Account** and Login.

Here is a link: https://www.paypal.com/cgi-bin/webscr?cmd=_registration-run



Click **Get Started** button to create **PayPal Business Account** on Business field, the Account

Sign Up page will appear.

PayPal

Business Account Sign Up

Secure

1 Information 2 Account

Business Information

Please enter the information for your group, organization, government entity, individual business, or partnership.

Business type

Corporation

Business name

(Please enter your business name as shown on your business bank account. If it is Chinese, enter Chinese characters.)

City / County

Township / District

Postal code (optional)

Address line 1

Address line 2 (optional)

Country

Taiwan

Primary currency What's this?

New Taiwan Dollars

Category What's this?

-- Choose a category --

Subcategory

-- Choose a category --

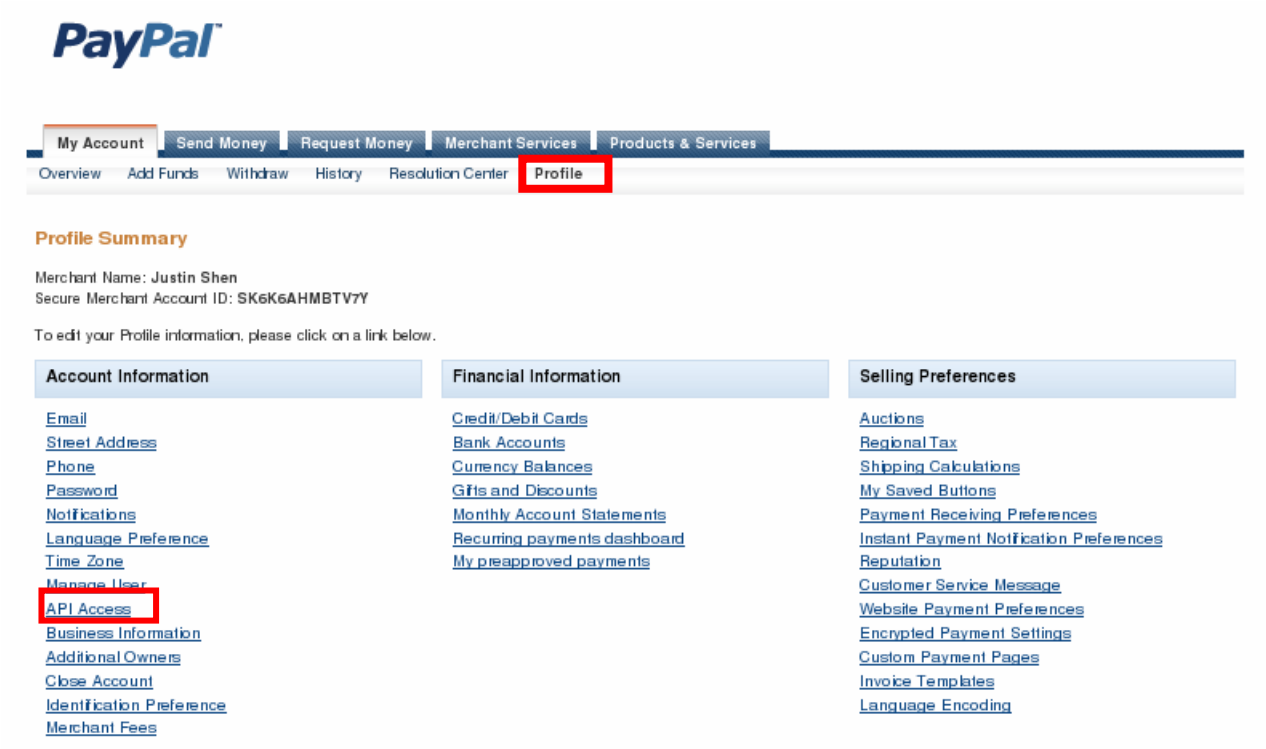
Date of registration What's this?

yyyy mm dd

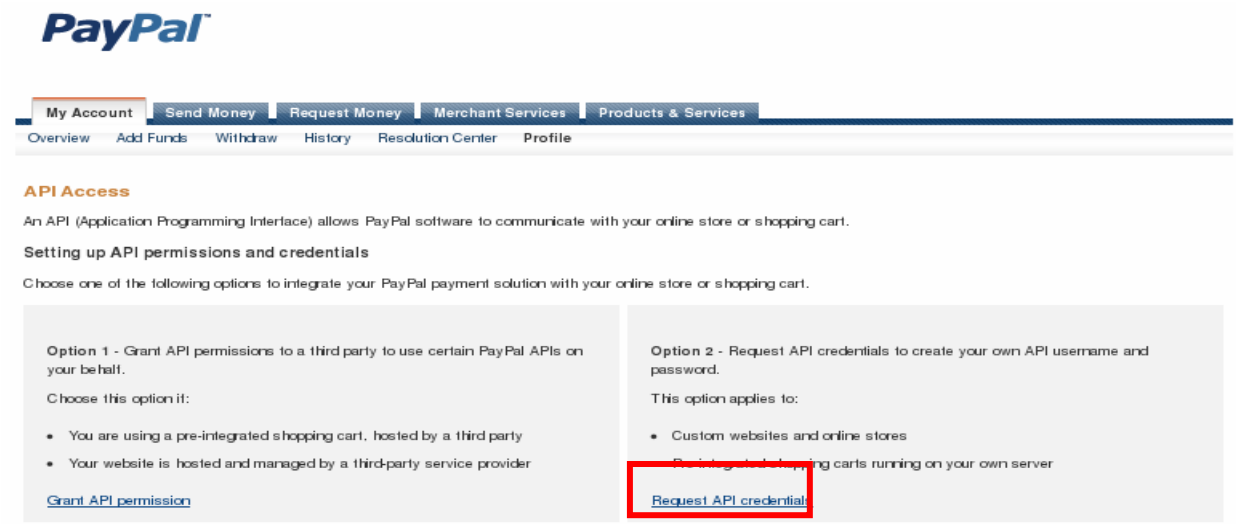
Business URL (optional) What's this?

Step 2. NECESSARY settings in "**API Access**"

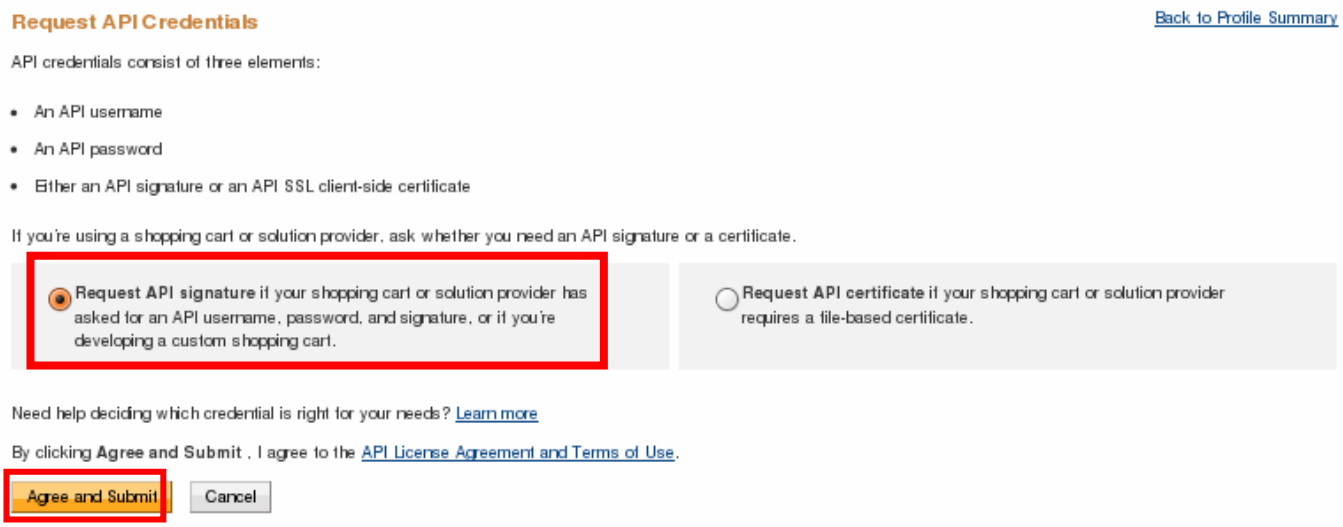
Please click on **Profile** -> **API Access** in the **Account Information**.



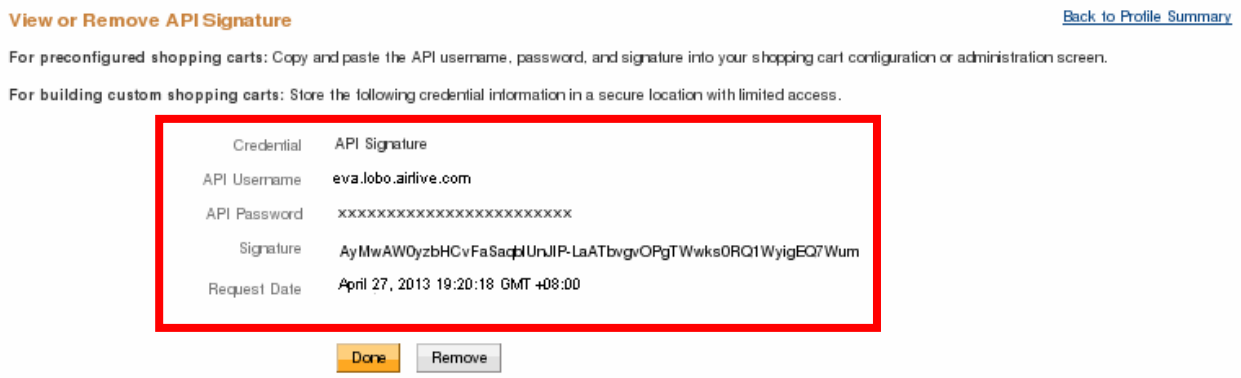
After click API Access on Account Information, the API Access setting will appear. Click "**Request API credentials**" in **Option 2 – Request API credentials to create your own API username and password**.



Select **Request API signature** and click **Agree and Submit** button to generate **API username**, **API password**, and **API signature**.



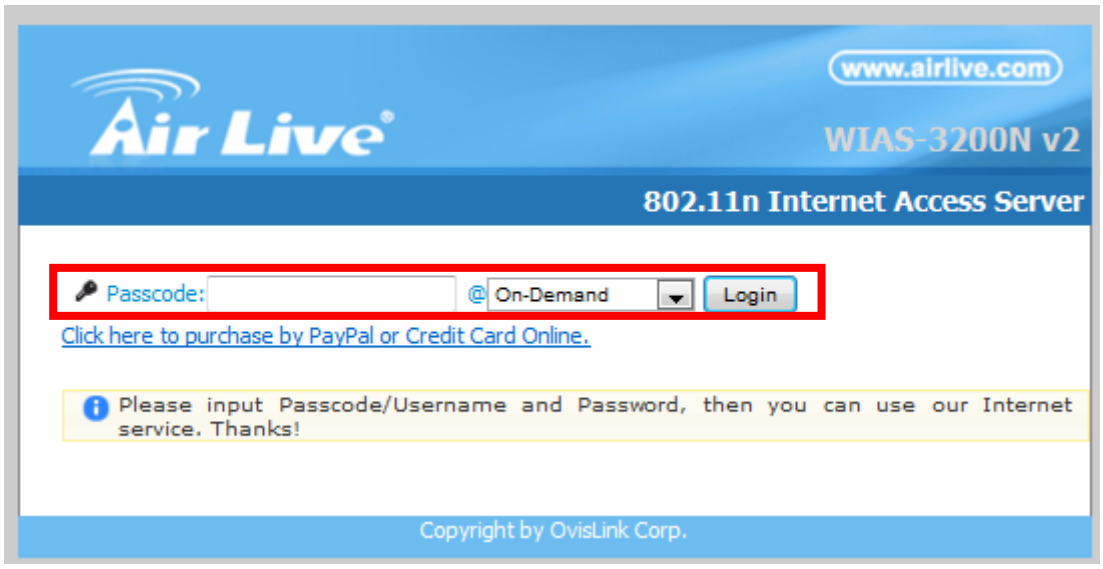
The **API Username**, **API Password** and **Signature** will generated. Click **Done** button to finish process.



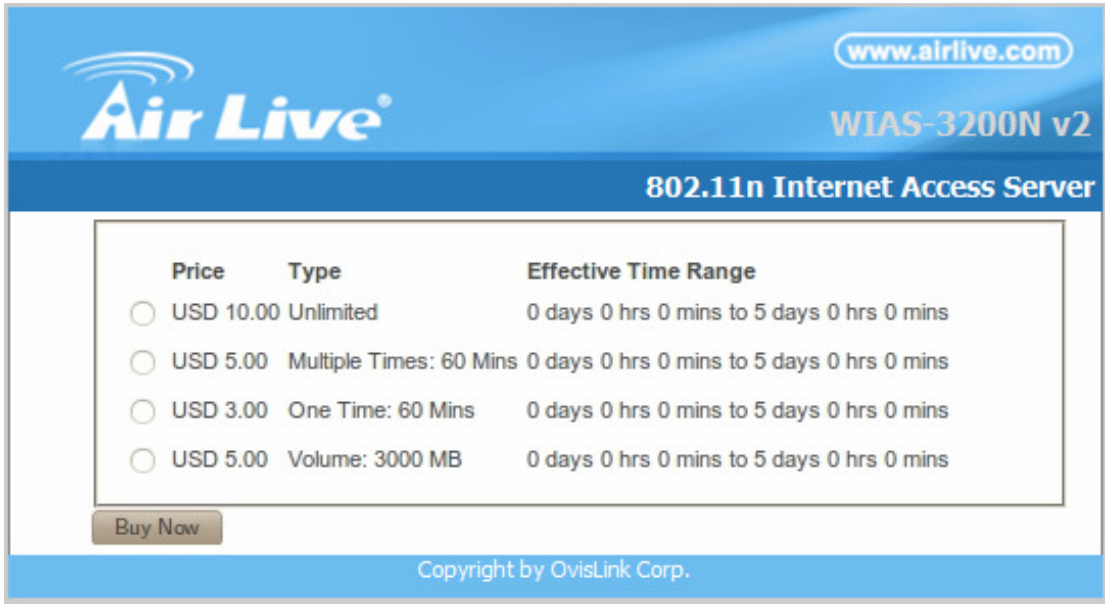
E

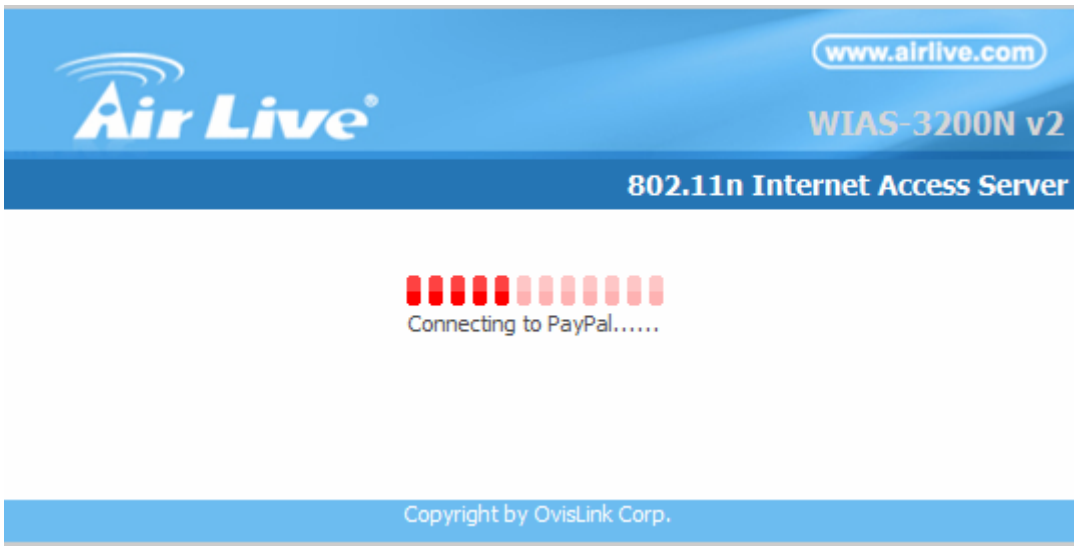
Appendix E. Example of Making Payments for End Users

Step 1. Click the link below the login window to pay for the service by credit card via PayPal.

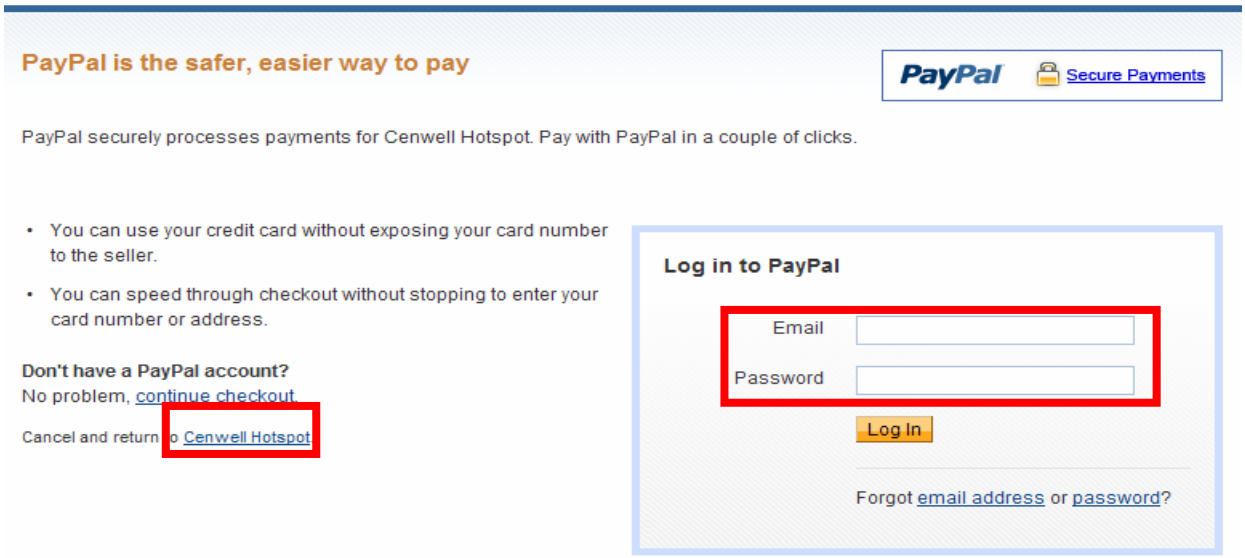


Step 2. Select service package and Click **Buy Now** button to send out this transaction. There will be a connecting message as below.

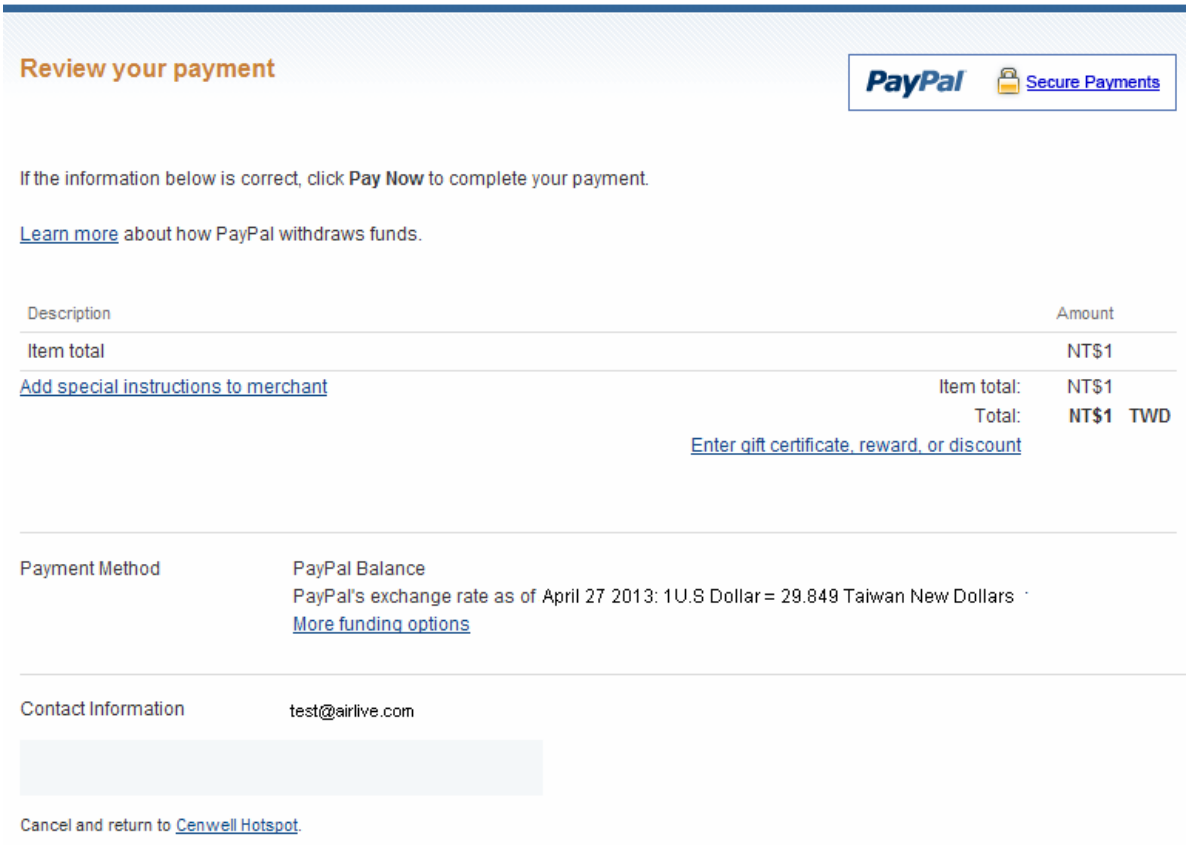




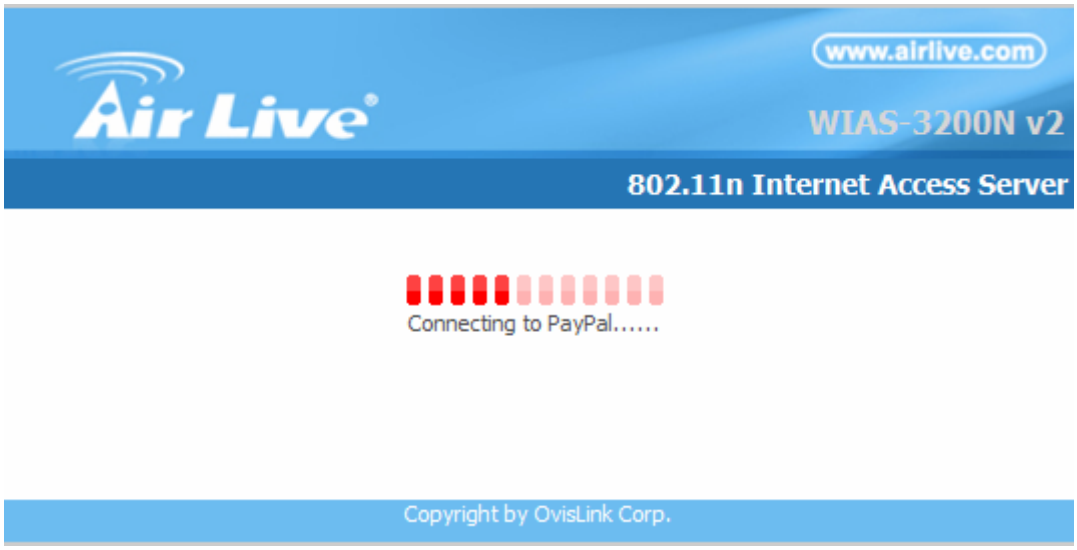
Step 3. You will be redirected to PayPal website to complete the payment process. You can pay service fee via Paypal account or use your credit card (Click "**continue checkout**" hyperlinks)



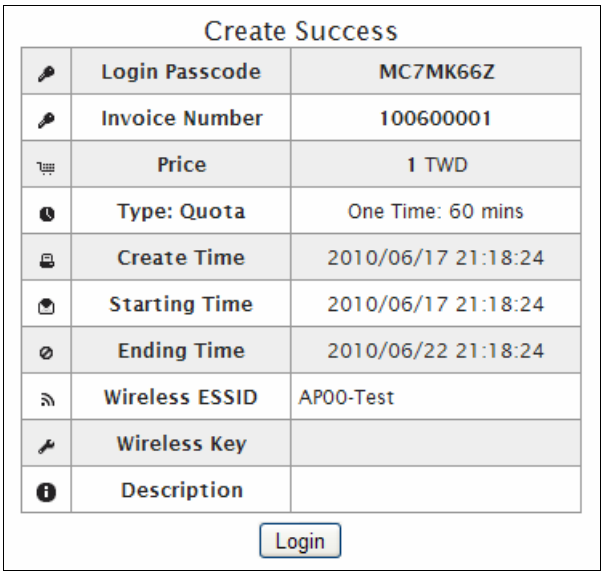
Step 4. After login Paypal The payment information will appear. Click **Pay Now** button to get passcode.



Step 5. After clicking **Pay Now** button, the process of paying confirm will appear. **Please don't close this window**.



Step 6. After paying confirm, the system will create **Passcode** for end users login. Click **Login** button to enter Login page. (Write down your "**Login Passcode**" before you click **Login** button)

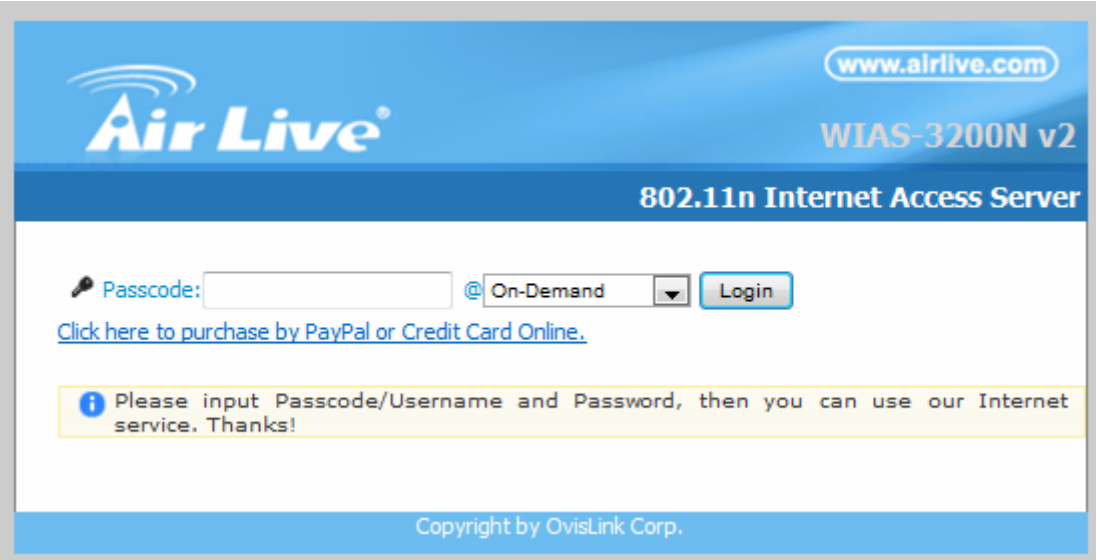


Create Success

Login Passcode	MC7MK66Z
Invoice Number	100600001
Price	1 TWD
Type: Quota	One Time: 60 mins
Create Time	2010/06/17 21:18:24
Starting Time	2010/06/17 21:18:24
Ending Time	2010/06/22 21:18:24
Wireless ESSID	AP00-Test
Wireless Key	
Description	

Login

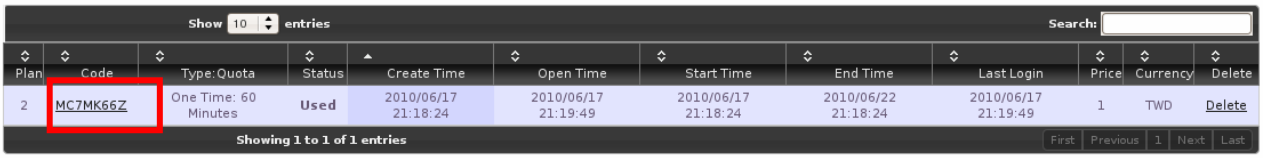
Step 7. Input generated passcode and click **Login** button to login Internet Service.

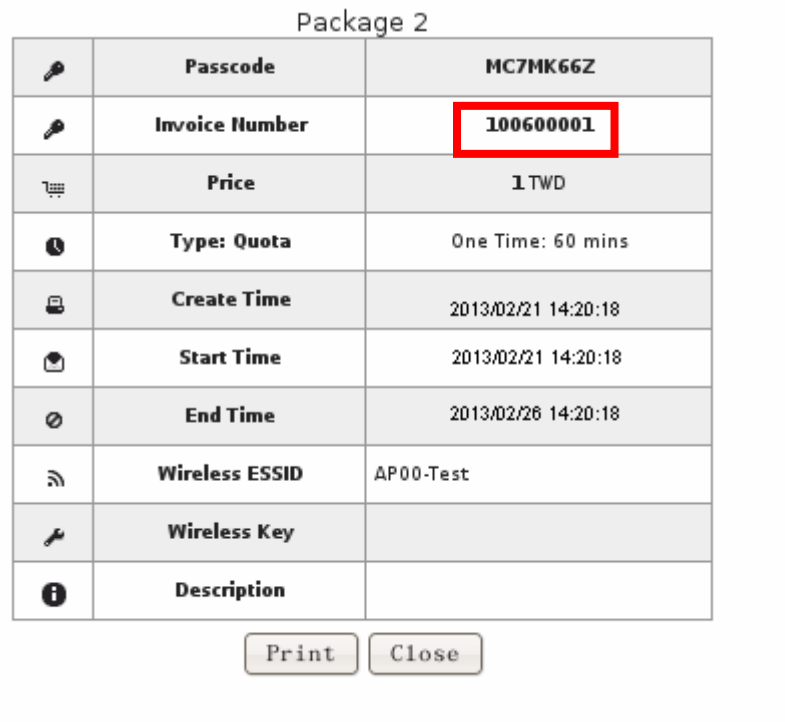


F

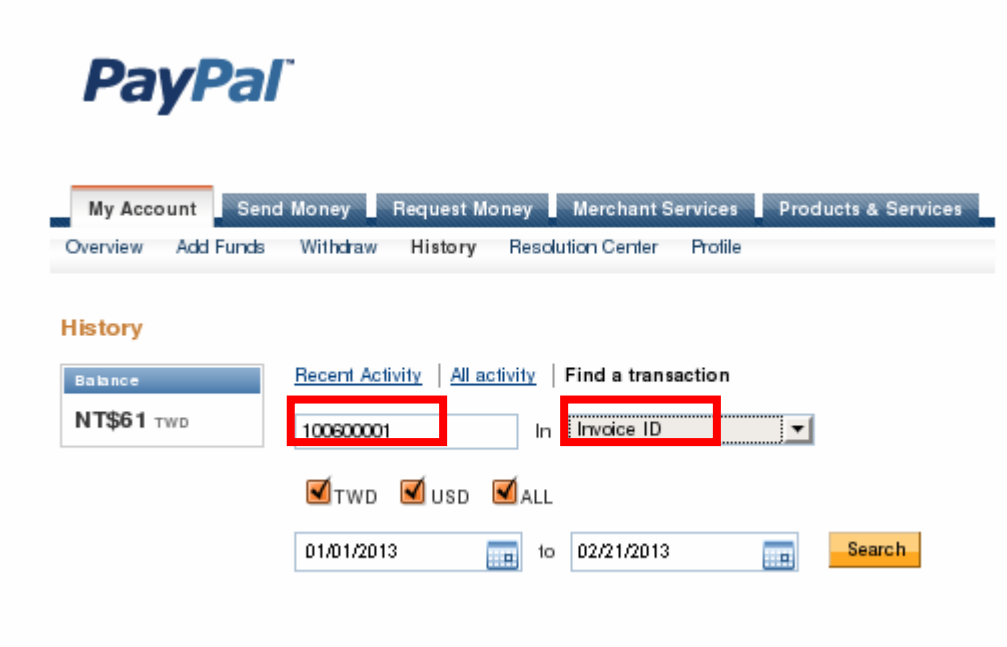
Appendix F. Issue Refund for PayPal

Step 1. Click on **Service Domain** > **Authentication** > **On-Demand** > **Payment Gateway Setup**, and then click **Information** button on the Billing Plan Setup List to enter **Payment Gateway Information** page. Click on selected passcode's hyperlinks for viewing this ticket's **Invoice Number**

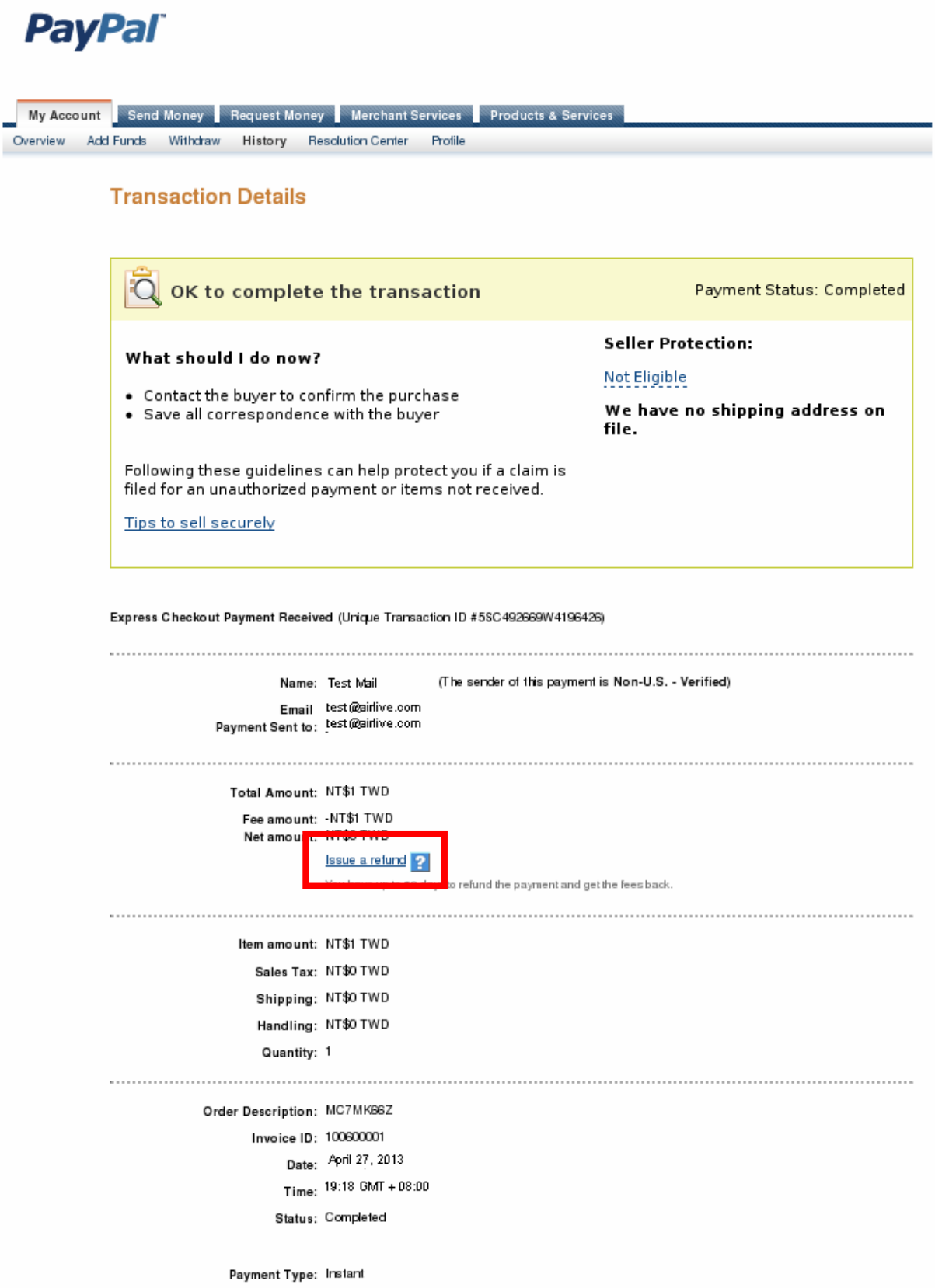




Step 2. Please login in PayPal, and click on **History** > **Find a transaction**. Then enter **Invoice Number** in "**Invoice ID**" and specify the time period for search. Click **Search** button to view the transaction details.



Step 3. View the transaction detail and click "**Issue a refund**".



Step 4. Go **My Account**, and verify **Transaction Details**.

My recent activity | Payments received | Payments sent View all of my transactio

My recent activity - Last 7 days (April 27,2013-May 04,2013)

Archive What's this Payment status glossary

Date	Type	Name/Email	Payment status	Details	Order status/Actions	Gross
April 27, 2013	Fee Reversal From	Cancelled Fee	Completed	Details		NT$1 TWD
April 27, 2013	Refund To	Test Mail	Completed	Details		-NT$1 TWD

PayPal

My Account | Send Money | Request Money | Merchant Services | Products & Services

Overview | Add Funds | Withdraw | History | Resolution Center | Profile

Transaction Details

Refund (Unique Transaction ID #84W7234108381423T)
See related 5SC492669W4196426

Original Transaction

Date	Type	Status	Details	Gross	Fee	Net
April 27,2013	Payment From SHEN CHUN TE	Refunded	Details	NT$1 TWD	-NT$1 TWD	NT$0 TWD

Related Transaction

Date	Type	Status	Details	Gross	Fee	Net
April 27,2013	Refund	Completed	...	-NT$1 TWD	NT$1 TWD	NT$0 TWD

Sent to: Test Mail
Email test@airlive.com
Total Amount: -NT$1 TWD
Fee amount: NT$1 TWD
Net amount: NT$0 TWD

Date: Jun 17, 2010
Time April 27,2013 19:38 GMT+8:00
Status: Completed

G

Appendix G. Network Configuration on PC & User Login

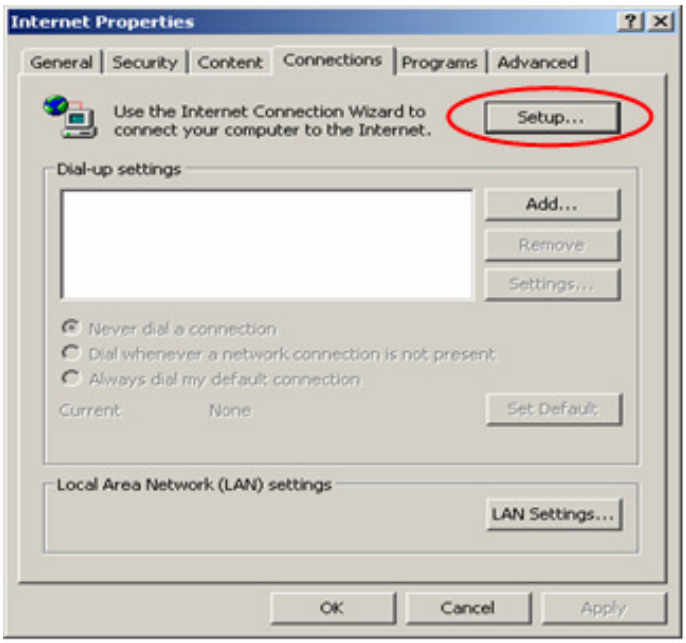
- **Network Configuration on PC**

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**

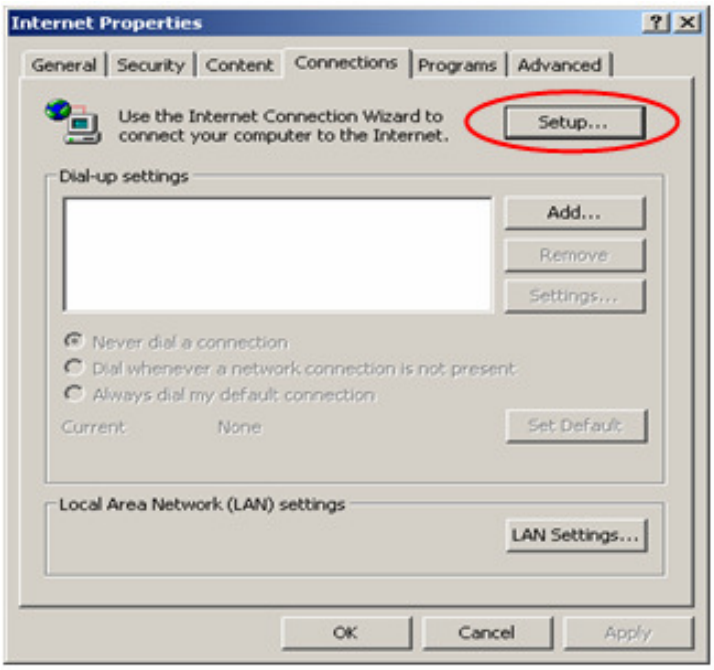
Step 1.

Choose **Start** > **Control Panel** > **Internet Options**.



Step 2.

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

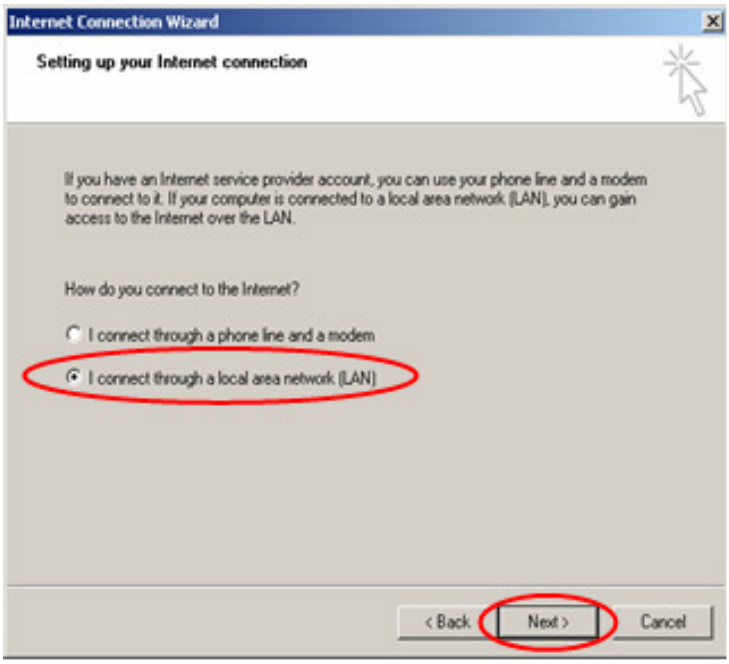


Step 3.

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**.

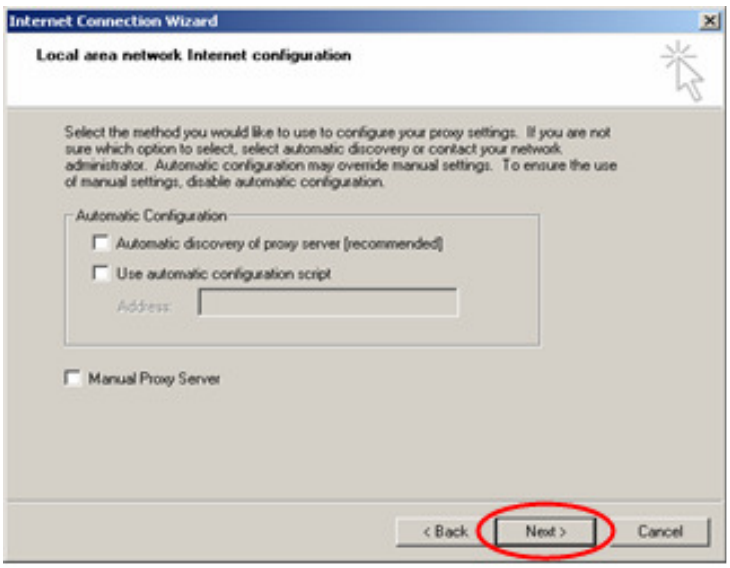
Step 4.

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



Step 5.

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



Step 6.

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

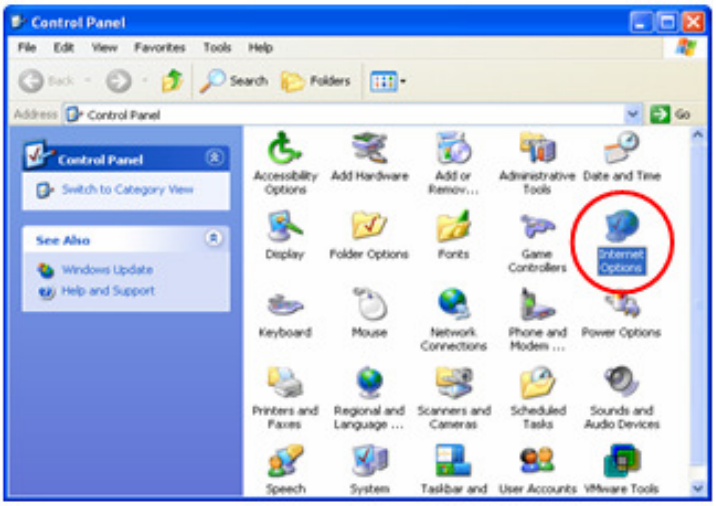
Step 7.

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

- **Windows XP**

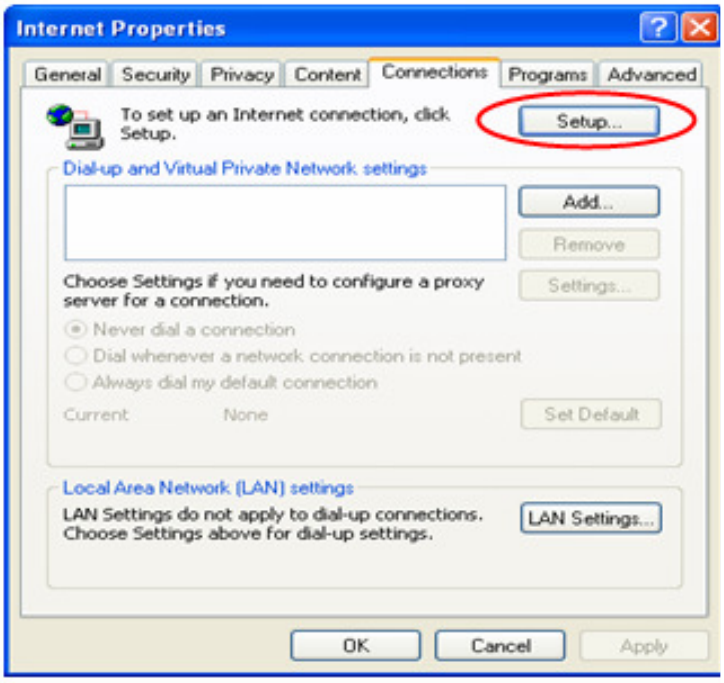
Step 1.

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



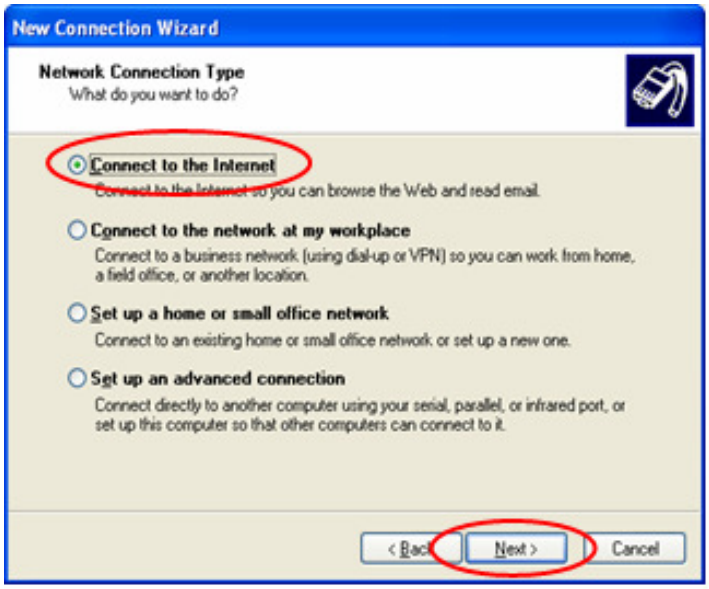
Step 2.

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



Step 3.

Choose **"Connect to Internet"** and then click **Next**.

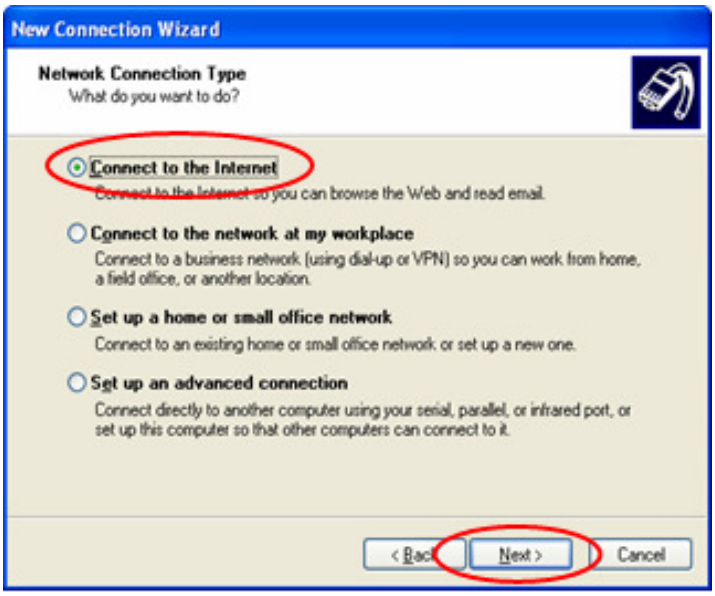


Step 4.

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

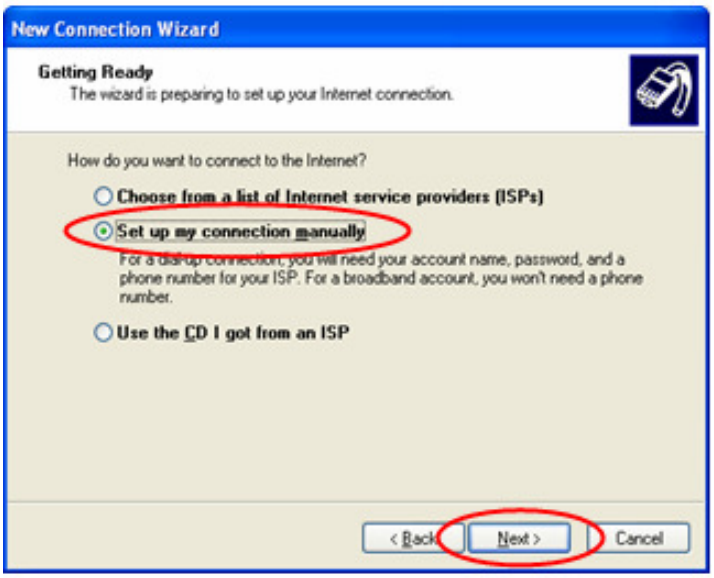
Step 5.

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



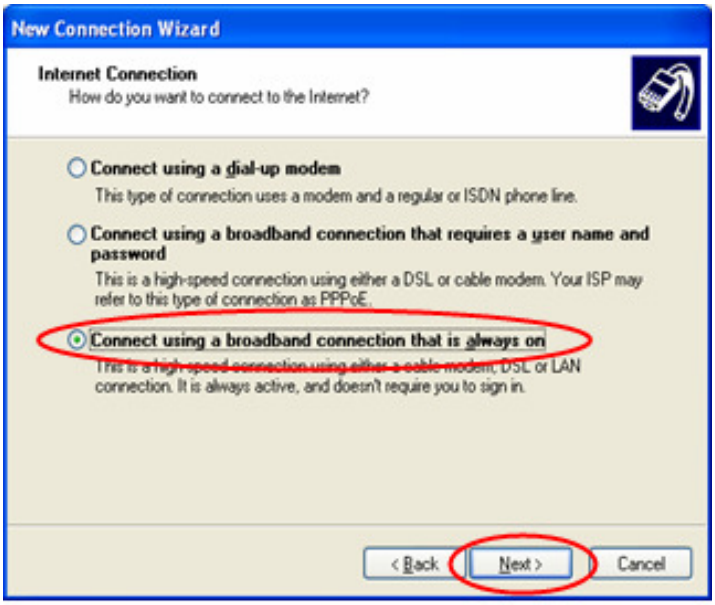
Step 6.

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



Step 7.

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



Step 8.

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

- **TCP/IP Network Setup**

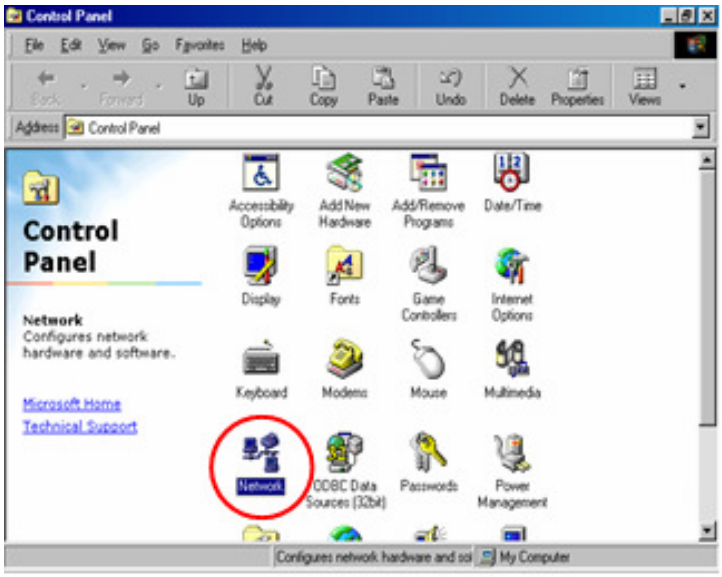
If the operating system of the PC in use is Windows 95/98/ME/2000/XP, keep the default settings without any changes to directly start/restart the system. With the factory default settings, during the process of starting the system, WIAS-3200N with DHCP function will automatically assign an appropriate 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**

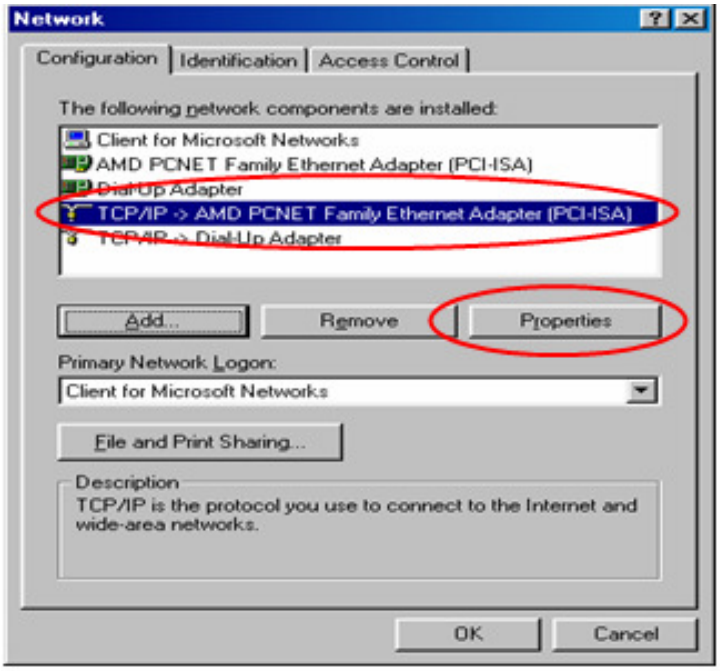
Step 1.

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



Step 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.



Step 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 v2.

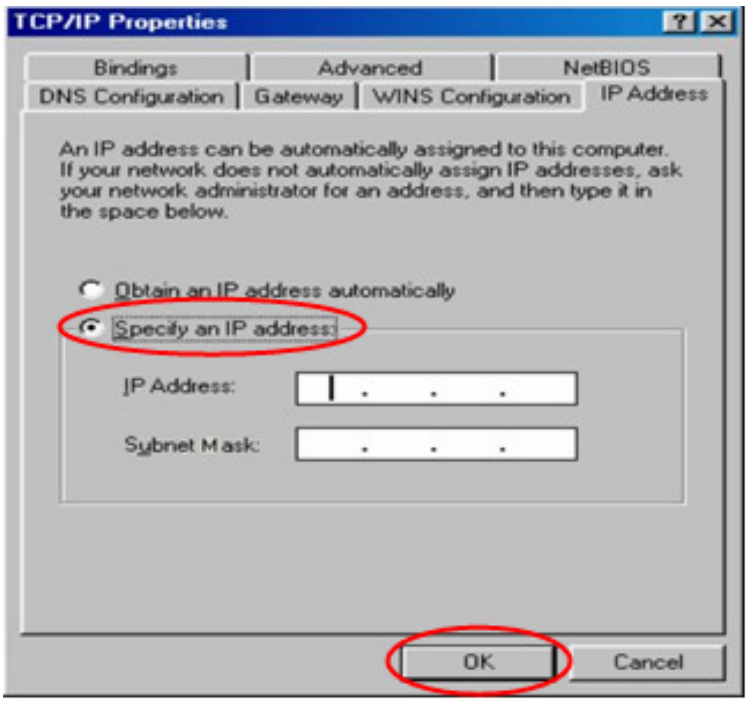
Using Specific IP Address: If you want to use a specific IP address, acquire the following information from the network administrator: the IP Address, Subnet Mask and DNS Server address provided by your ISP and the Gateway address of WIAS-3200N v2.

***Caution!!**

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

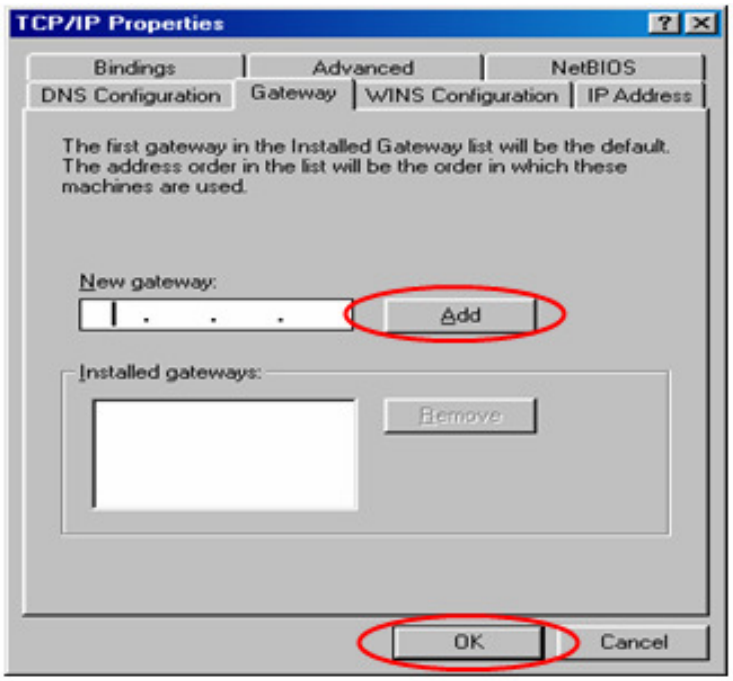
Step 4.

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



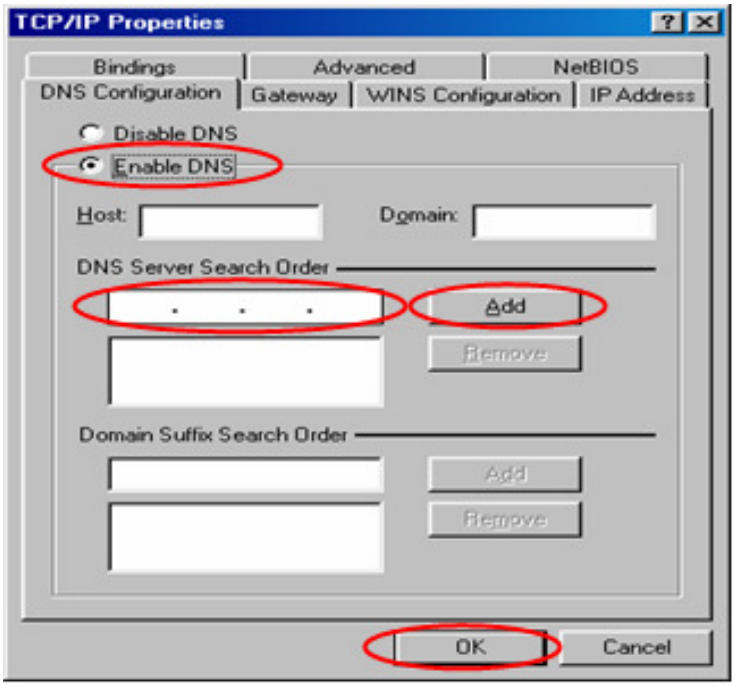
Step 5.

Click on the **Gateway** tab. Enter the gateway address of WIAS-3200N v2 in the **"New gateway"** field and click **Add**. Then, click **OK**.



Step 6.

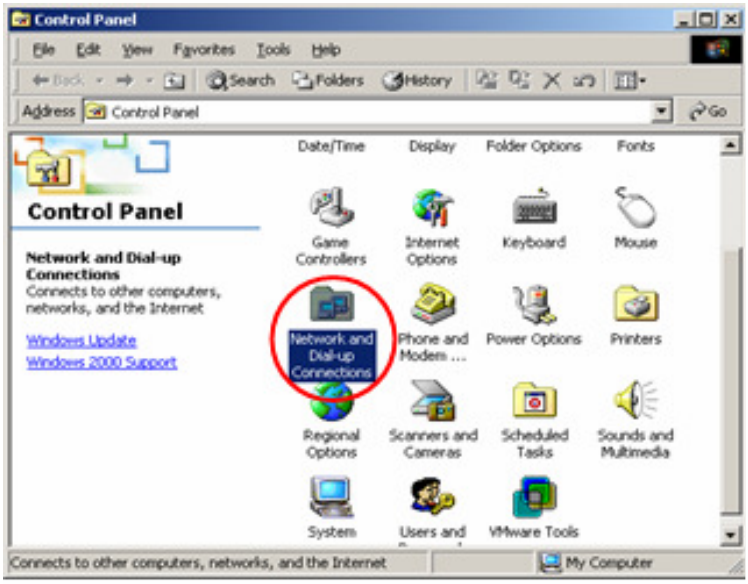
Click on **DNS Configuration** tab. If the DNS Server field is empty, select **"Enable DNS"** and enter DNS Server address. Click **Add**, and then click **OK** to complete the configuration.



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

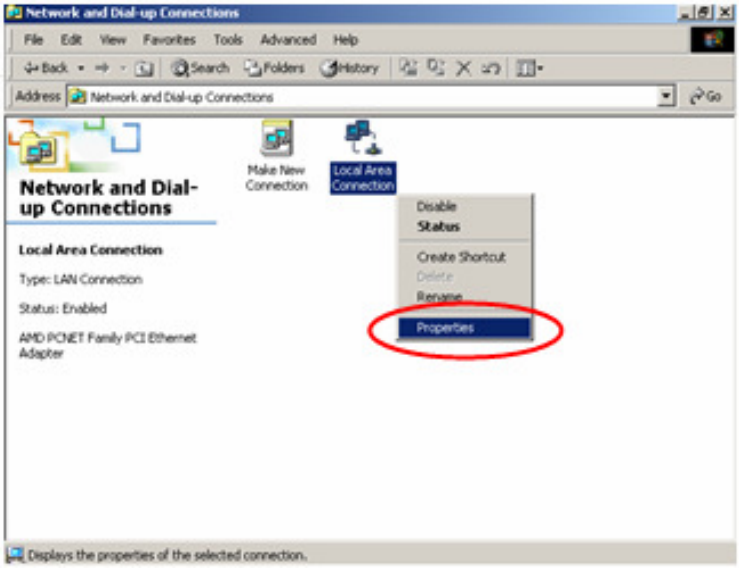
Step 1.

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



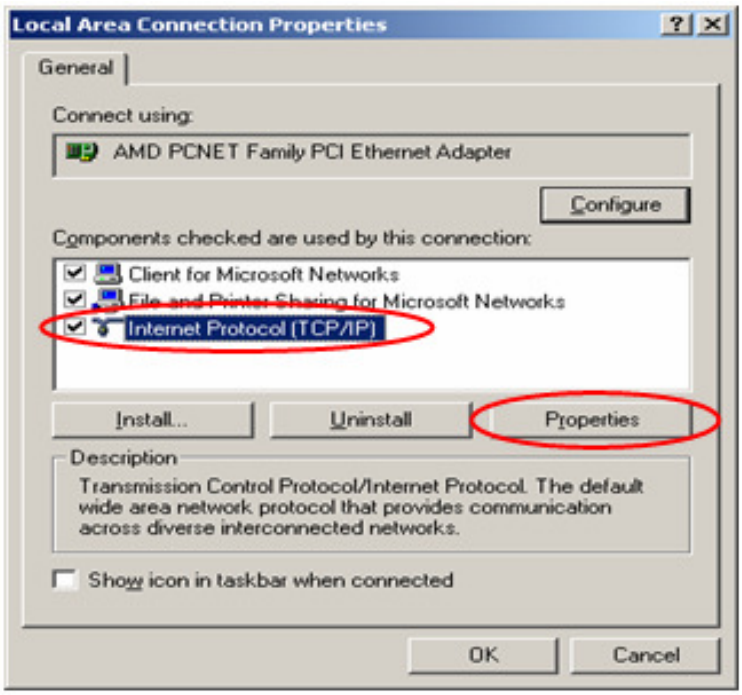
Step 2.

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



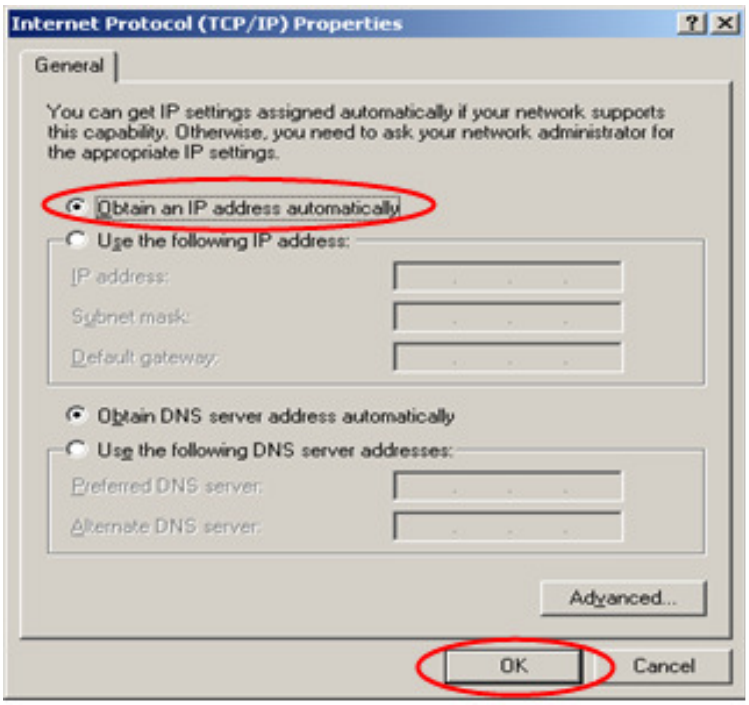
Step 3.

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



Step 4.

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**.



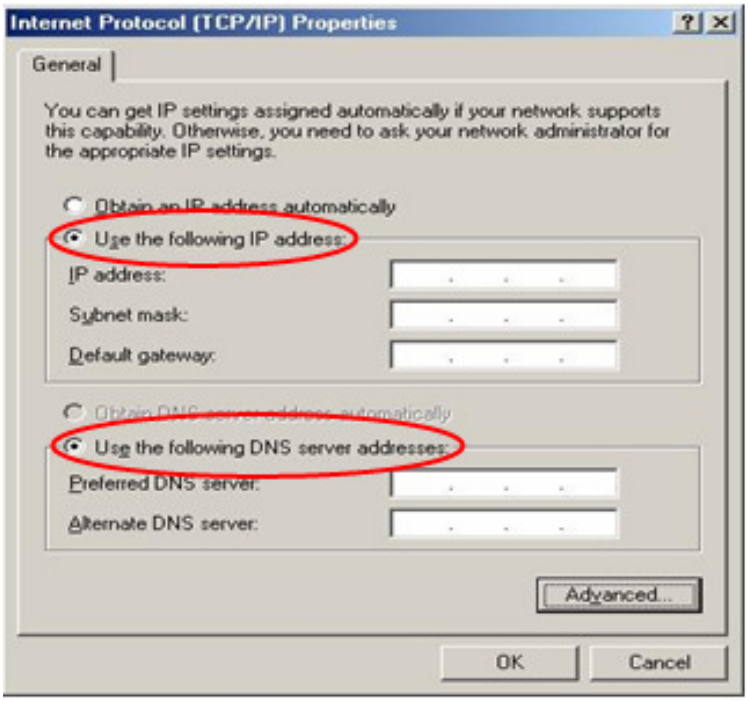
If choose **Using Specific IP Address:** If you want to use a specific IP address, acquire the following information from the network administrator: the IP Address, Subnet Mask and DNS Server address provided by your ISP and the Gateway address of WIAS-3200N.

***Caution!!**

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

Step 5.

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**.

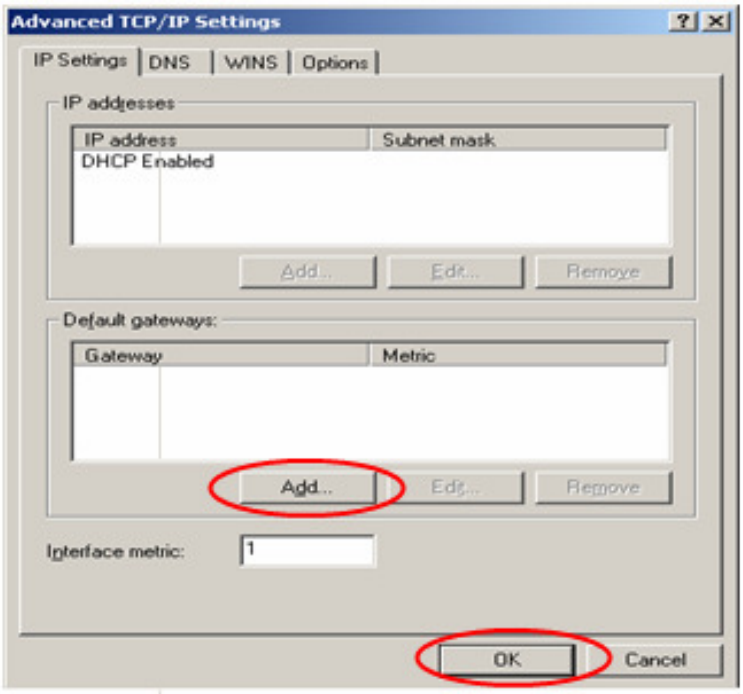


Step 6.

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

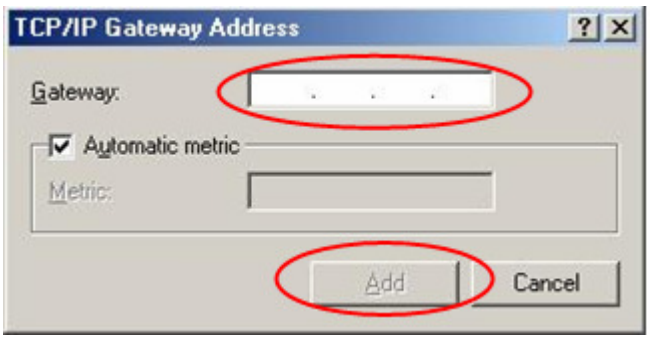
Step 7.

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



Step 8.

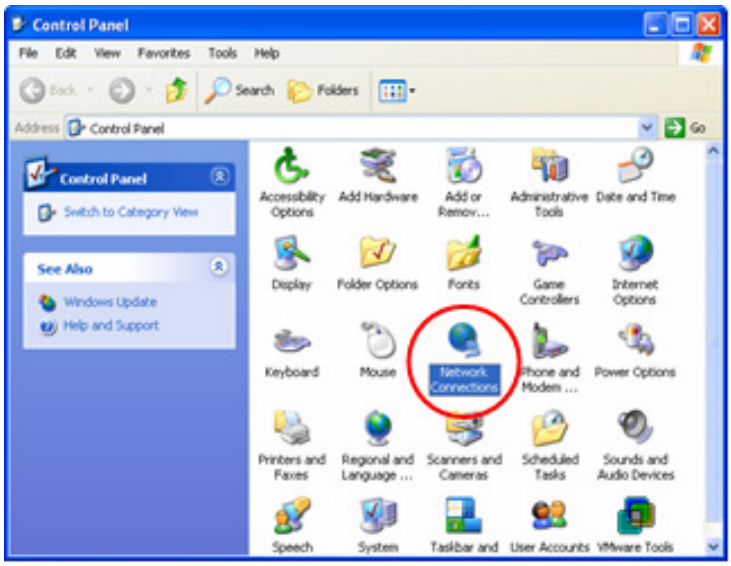
Enter the gateway address of WIAS-3200N v2 in the **"Gateway"** field, and then click **Add**. After back to the **IP Settings** tab, click **OK** to complete the configuration.



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

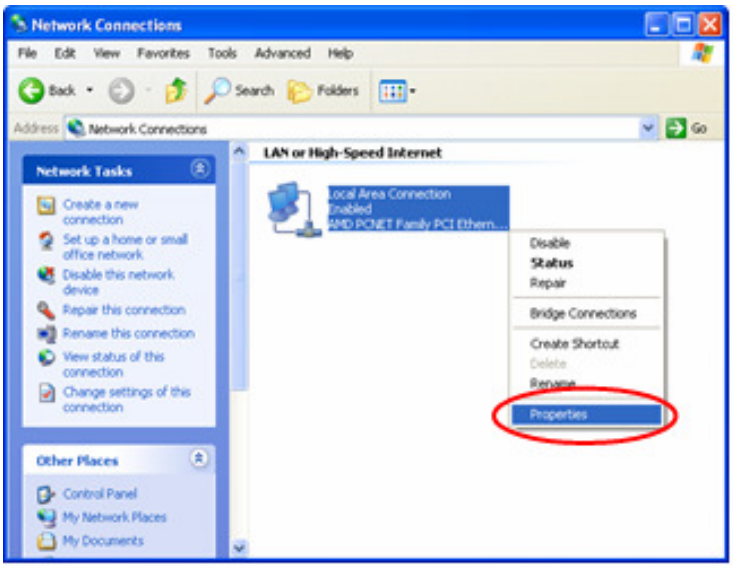
Step 1.

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



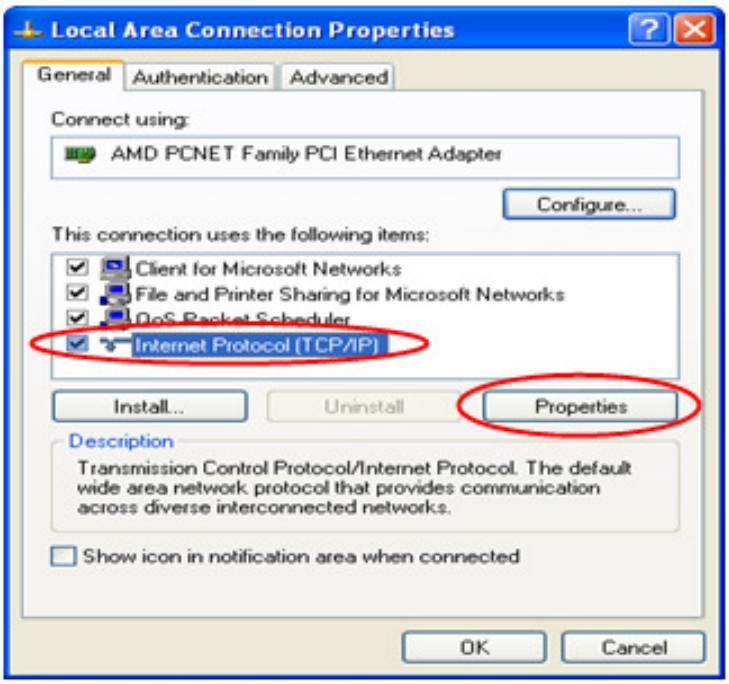
Step 2.

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



Step 3.

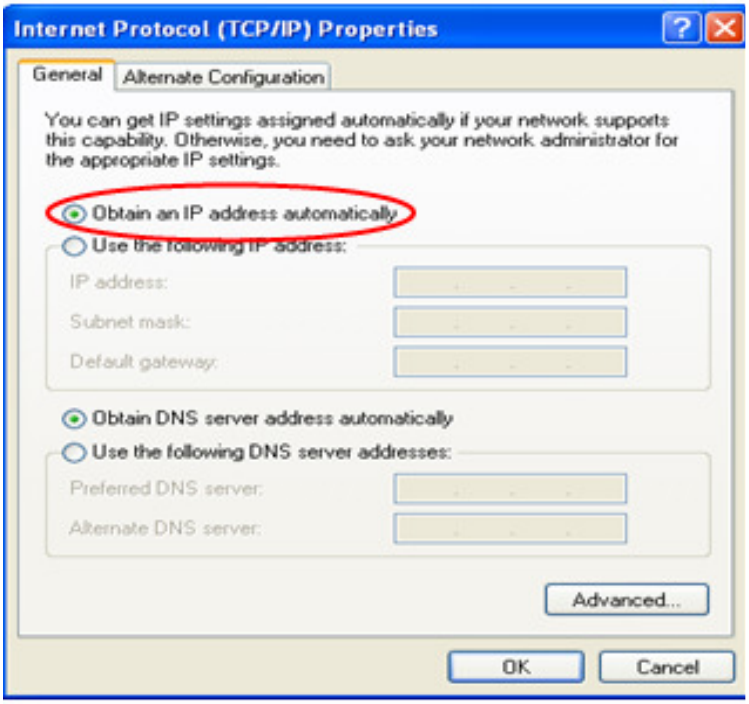
Click on the **General** tab and choose **"Internet Protocol (TCP/IP)"**, and then click **Properties**. Now, you can choose to use DHCP or a specific IP address.



Step 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 v2.

If choose **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 v2.

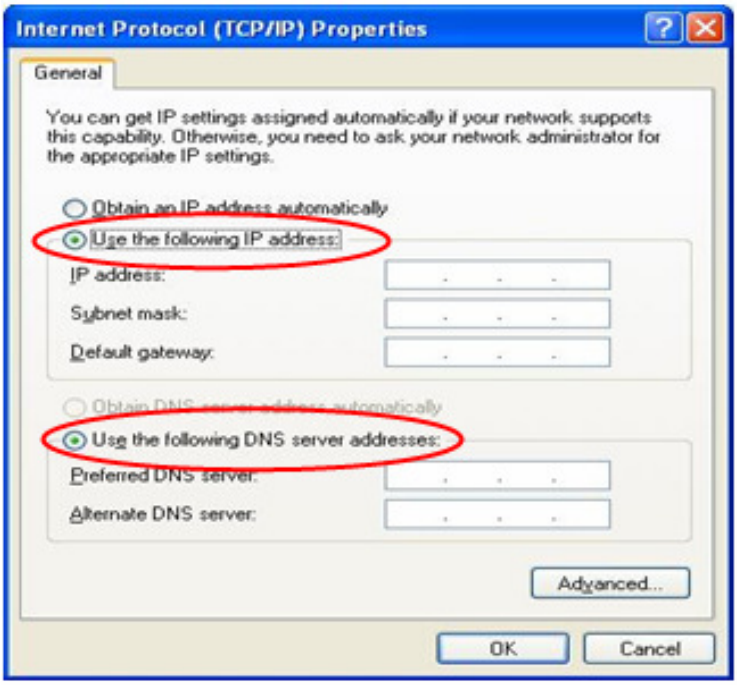


***Caution!!**

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

Step 5.

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**.

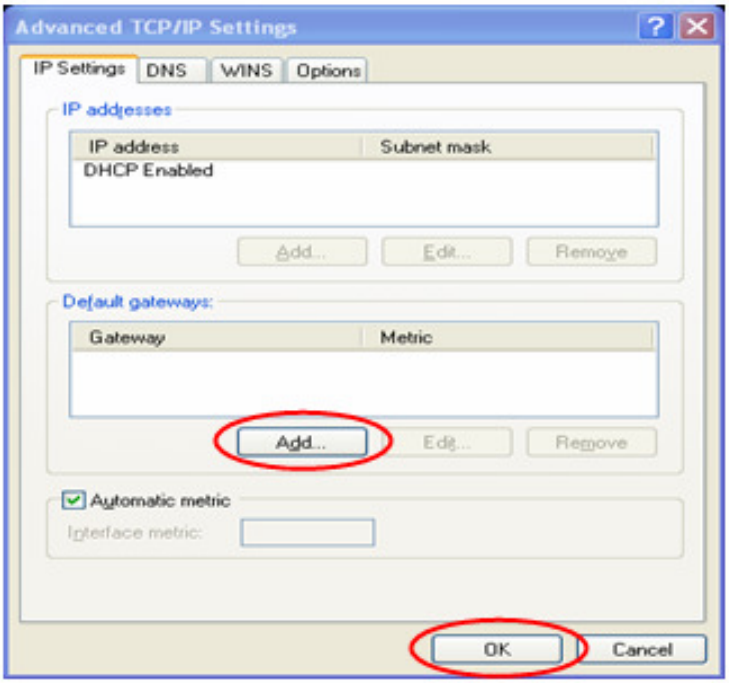


Step 6.

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

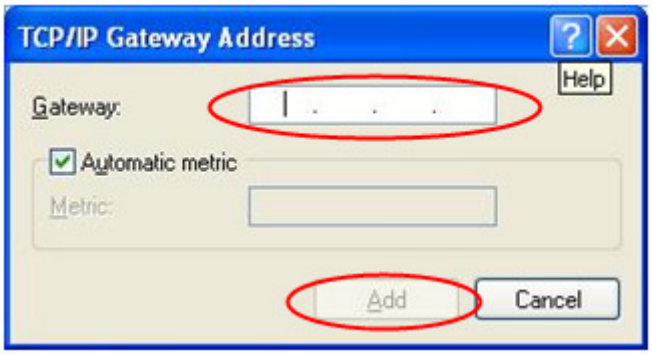
Step 7.

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



Step 8.

Enter the gateway address of WIAS-3200N v2 in the **"Gateway"** field, and then click **Add**. After back to the **IP Settings** tab, click **OK** to finish the configuration.



H

Appendix H. Using STB connector for power input

For any DC power input, you may use STB as power convertor.

Step 1. Loosen the screw on top of the STB-male connector

Step 2. Plug in the ground pin of your DC power into the right position hole of STB-male connector (Shown as **Fig1.**)

Step 3. Plug in the DC power into the left position hole of STB-male connector (Shown as **Fig1.**)

Step 4. Tighten up the screw on top of the STB-male connector, makes sure the DC cable has been fixed properly.

Step 5. Insert the STB-female connector to the rear side of device (Shown as **Fig2**.)

***Note:** Check the DC power apply to STB connector fist, makes sure the DC power is 12VDC

Fig1.

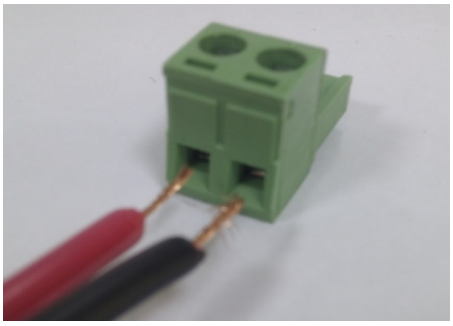


Fig2.