Multi-functional Residential Gateway
User Manual

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1 Brief Introduction

Pennda gateway integrates communication, entertainment and home security into one device.

Pennda gateway offers not only the functionality of a normal router such as WAN connection, LAN setting, firewall etc, it also offers WiFi access, RSS subscription, Skype application, VoIP, Email server, network attached storage (NAS), FTP server, multimedia application, BT download, personal blog, Internet radio, home security and touch screen functionality. It will bring great convenience and super-value experience for home and SOHO users.

- **WiFi Access**
  As a WiFi Modem, Pennda gateway is able to connect to the Internet through WiFi. At the same time, it works as AP (Access Point).
- **Touch Screen**
  The gateway has 7'' touch screen, which offers more convenient and faster interaction interface for user's basic operations (RSS Reading, picture display etc).
- **RSS Subscription**
  Pennda gateway offers RSS reading function. Users can read various RSS channels via the touch screen.
- **Skype Application**
  Pennda gateway supports Skype application. Users can download and install Skype to the gateway and call their Skype friends.
- **Phone Application**
  Pennda gateway embeds IP PBX. It offers such functions as short number assignment, Follow me, Pre-conversation message, share file during talking-on-phone, call back etc.
- **Email Server**
  Users can make use of Pennda gateway to build their own Email server, thus to receive and send email via the gateway.
- **Network Attached Storage**
  Pennda gateway supports network attached storage. Both LAN and WAN users can access the sharing folders on the gateway.
- **FTP Server**
  Pennda gateway offers FTP server function. Users can access folders on the gateway via FTP.
- **BT Download**
  Pennda gateway supports BT download. When the download task is scheduled, the gateway will perform it automatically.
- **Personal Blog**
  Users can build their own personal blog on the gateway and open access to Internet users.
- **Internet Radio**
  Users can listen to their interested Internet radios via Pennda Gateway.

1.1 System & Device Requirements

To make the best use of the gateway, you must meet the following basic system & device requirements:

- Working broadband connection (xDSL, Cable or WiFi);
- A computer with 10 Mbps or 10/100 Mbps network interface card; For WiFi connection, a 802.11b or 802.11g wireless network interface card is needed;
- TCP/IP protocol; at least one browser (MS Internet Explorer or Netscape etc);
- Operating system: Win98/Win2000/WinXP/Linux.

1.2 Specifications

Standard and Protocol		IEEE 802.11b/g IEEE802.3X、IEEE802.3、IEEE802.3U USB1.1/2.0 TCP/IP、DHCP、UPNP、PPPoE、DDNS、DNS SIP、IAX T38、T30
Port	WAN	1×10 / 100M RJ45 port(Auto MDI/MDIX) **(uplink can be DSL Modem or Cable Modem)**
	LAN	4×10/100M RJ45 ports(Auto MDI/MDIX)
	USB	4×USB1.1/2.0 port
	RJ11	1-3×FXO port 1×FXSport
	Audio	1×earphone port 1×mic port
Network storage equipment		2.5” IDE HDD
Wireless Parameter	Frequency	2.4～2.472GHz
	Transmission Rate	54Mbps、48Mbps、36Mbps； 24Mbps、18Mbps、12Mbps； 9Mbps、6Mbps、11Mbps； 5.5Mbps、2Mbps、1Mbps
	channel	11,13
	Spread spectrum	DSSS
	Data modulation	BPSK,QPSK,CCK and OFDM； (BPSK/QPSK/16-QAM/64-QAM)
	Transmission way	CCK、OFDM
	Data security	WEP,WPA,WPA2

Indicator light	Power state
LCD Screen	16.7 million color; 7 inches touch screen
Certificate	FCC,CE(under control now)

2 Hardware

2.1 Touch Screen

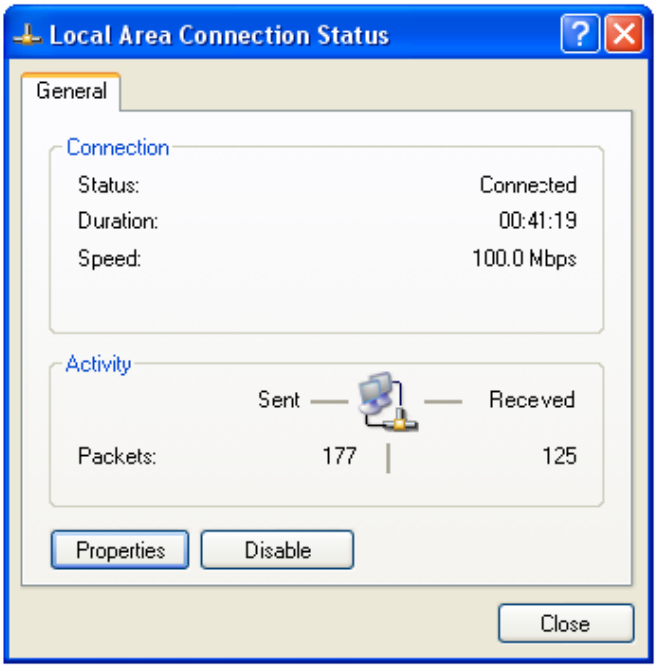
When the gateway powers on, the touch screen starts up automatically. Users are able to use the touch screen to browse digital photos, read RSS news or perform some basic settings.

2.2 Connecting to the Gateway

To make the best use of Pennda gateway, you must configure the gateway.
Before the configuration, please make sure the following steps are completed correctly:

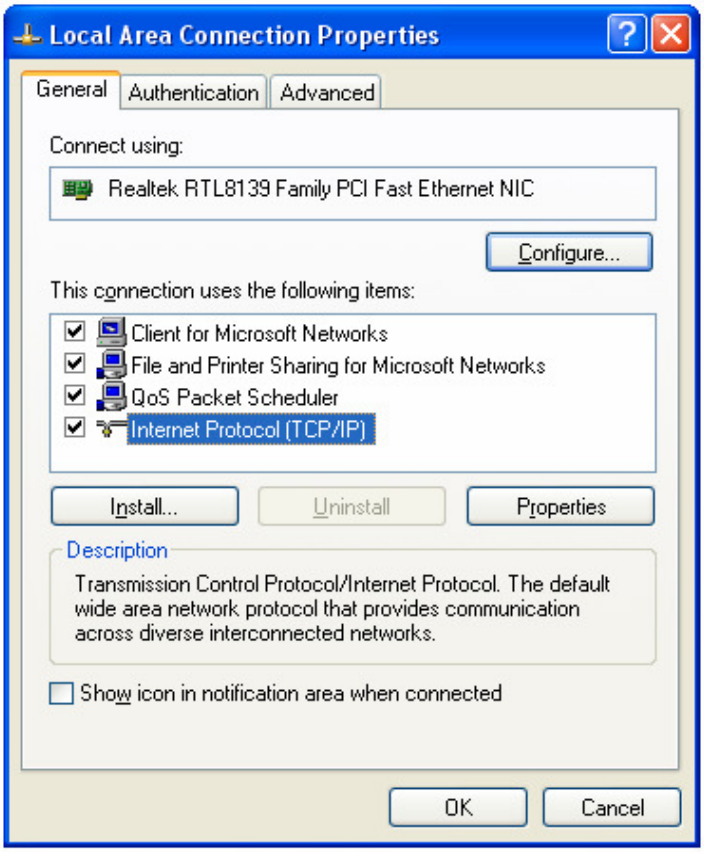
- **Step One**
  Power supply: Plug one end of the equipped power adapter to the gateway's PWR jack, the other to the outlet. Make sure the power indicator on the front panel lights up. Check whether the power is correctly connected if the power indicator doesn't light up.
- **Step Two**
  A computer: with 10/100 Mbps NIC, TCP/IP protocol, at least one browser (Internet Explorer or Netscape etc) correctly installed;
- **Step Three**
  Connect the computer to any of the LAN port with an Ethernet cable (RJ45 jack).

- **Step Four**
  On the computer, click <Start> --<Settings>--<Network Connection>, double click <Local Connection>, click <Properties> to enter the setting page.



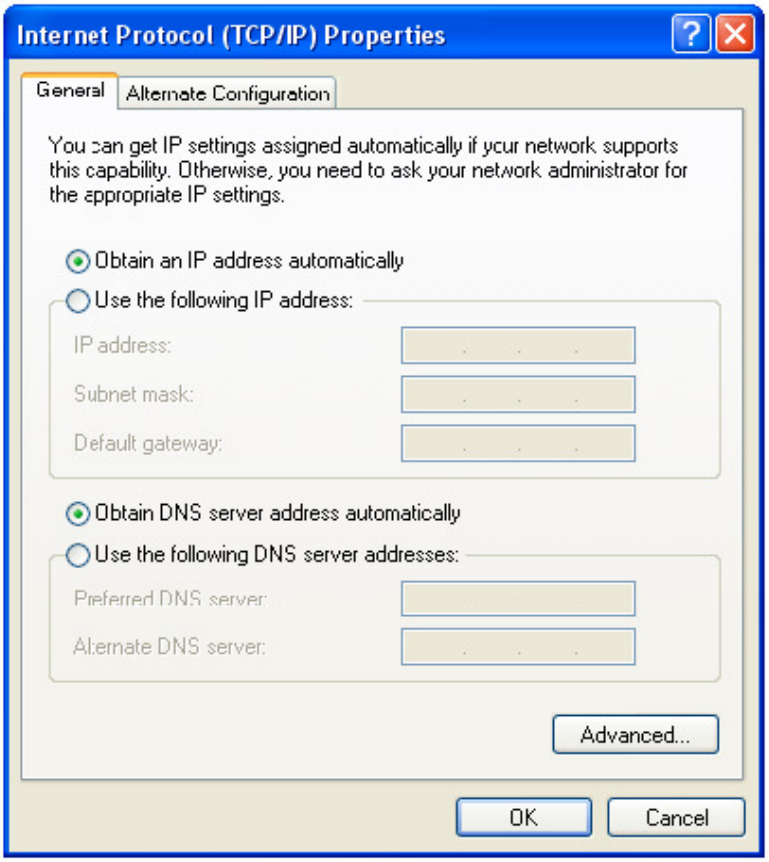
- **Step Five**

  Select <Internet protocol (TCP/IP)> and click <Properties>.



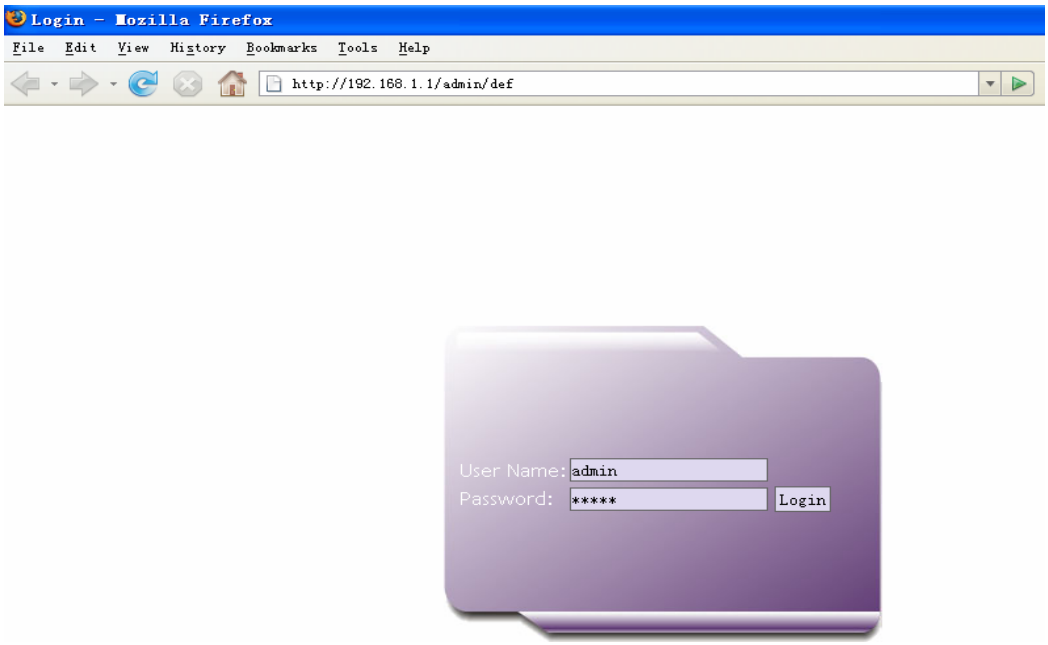
- **Step Six**

Select <Obtain an IP address automatically> and <Obtain DNS server address automatically>, click <OK> button to confirm.



- **Step Seven**

  Input the following URL in the address bar of the browser: 192.168.7.1/admin and click “Enter”. The page below will appear. The default username: admin, password: admin.



Notes:

1. The default local IP address of the gateway is 192.168.7.1. The user can change this address when necessary. Please refer to 3.3.2 LAN setting for more information.(For better operation, it's highly recommended that the user use Firefox.)
2. The default administrator username and password of the gateway is admin/admin. With the Internet access function, any user from the Internet can connect to the web interface as long as they have the username and password. It's highly recommended users change the default username and password for security concern. Pennda does not assume any responsibility for the loss arising out of the username/password disclosure.

3 Function Configuration

3.1 System Management

3.1.1 System Time Zone Setting

To make the system run properly, the time zone of the gateway must be set to the correct time zone of the user's location. The right time synchronization server is necessary for the right system time.

Follow the steps below to configure it:

Step One

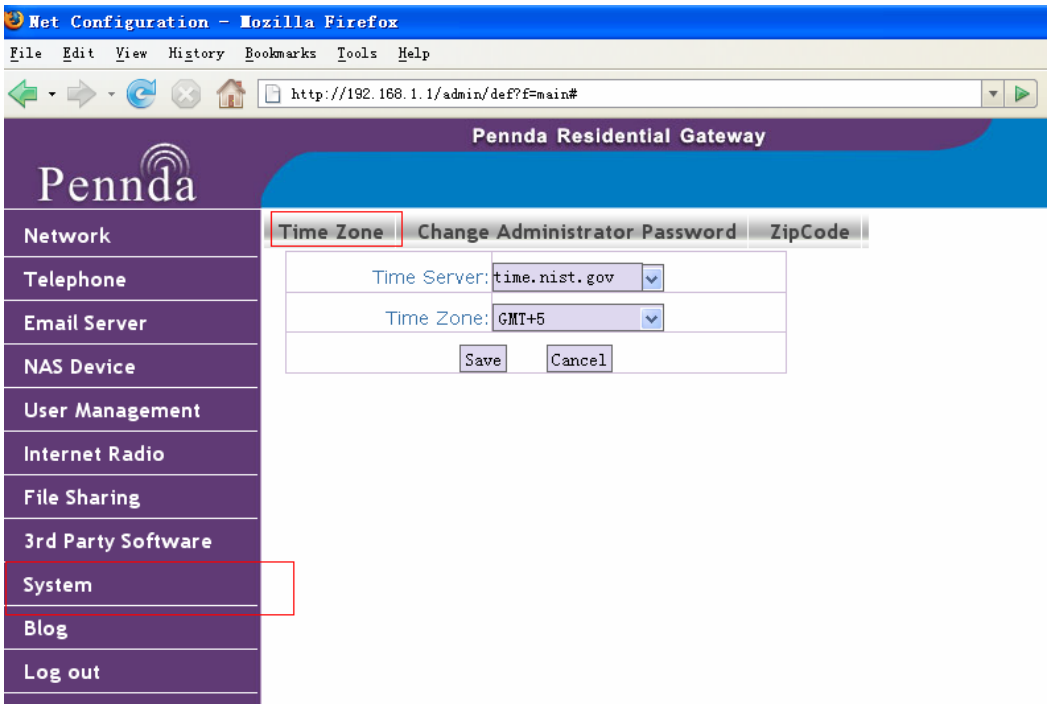
Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <System> -- <Time Zone>.

Select the time synchronization server or enter the URL of the server.

See the figure below:



Notes: The user can either choose from the list a time synchronization server, or choose to enter the URL of a time synchronization server. After the configuration, the gateway will synchronize the time with the time server through the Internet. The system time may not be correct if no broadband connection is available.

Step Three

Set the time zone. The user chooses the correct time zone according to his/her location.

Step Four

Save the changes made.

3.1.2 Change Administrator Password

The gateway offers the function for the user to change administrator password.

Please see below the steps:

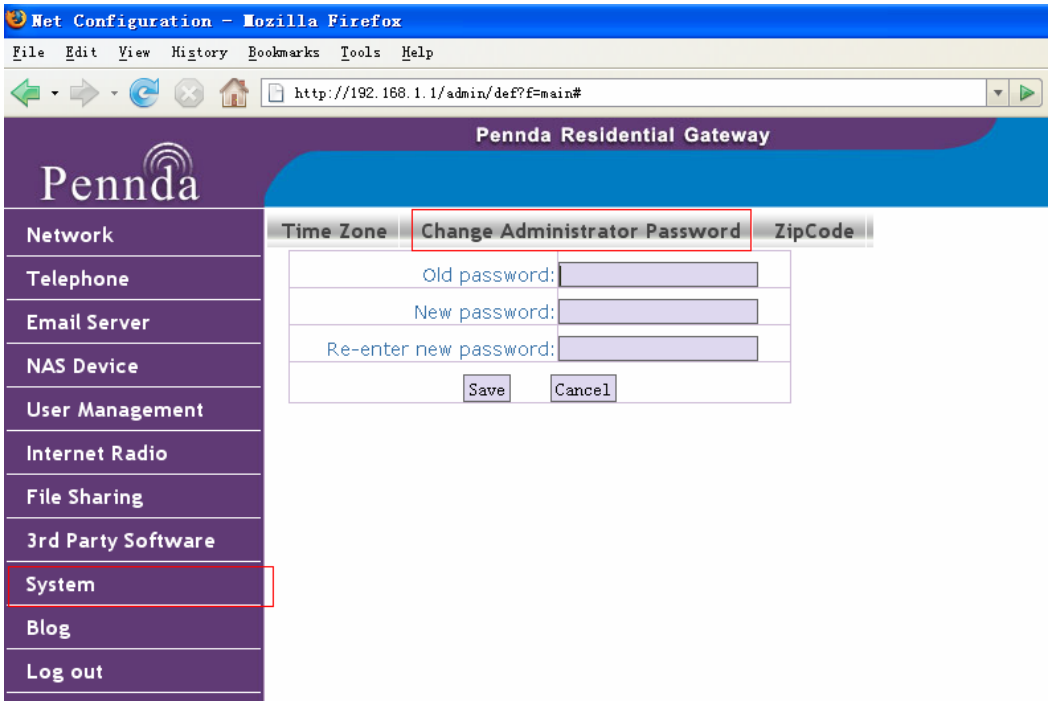
Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how

to go to the web interface.

Step Two

On the web interface, select <System> -- <Change Administrator Password>



Step Three

Enter the new password and click <Save> button.

3.1.3 Zip Code Management

The gateway must configure the correct zip code according to the location of the user. Otherwise, the RSS news will not be displayed correctly.

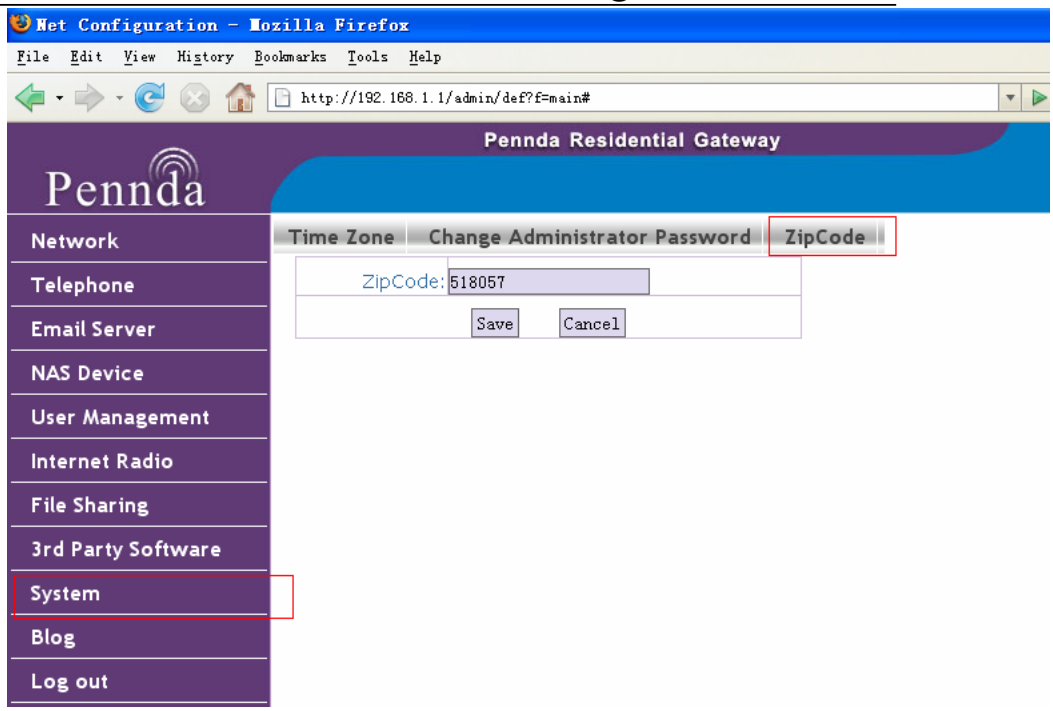
Follow the steps below to configure the zip code:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <System> -- <Zip Code>



Step Three

Enter the zip code of the user's location and click the <Save> button.

3.1.4 System Upgrade

We offer system upgrade for some new functions and versions. The user is able to use the latest functions through online system upgrade.

Before the system upgrade, make sure the following issues:

1. The gateway connects to the Internet properly;
2. When upgrading the system, it's highly recommended that no other operation be performed, in case that may influence the upgrade process;
3. After the upgrade, the system will restart automatically for the upgrade to take effect.

The system upgrade is carried out on the touch screen. See below the steps:

Step One

Click <Setting> -- <Online Upgrade> on the touch screen.

Step Two

Click <OK> button. The system will be upgraded if new version is available.

3.2 WAN Connection

Pennda gateway offers four methods to access the Internet: PPPoE, dynamic IP, static IP, and WiFi.

3.2.1 PPPoE

When using PPPoE to access the Internet, a cable/xDSL Modem and an account from the ISP are required.

Follow the steps below to configure it:

Step One

Connect the cable/xDSL Modem to the gateway's WAN port with an Ethernet cable.

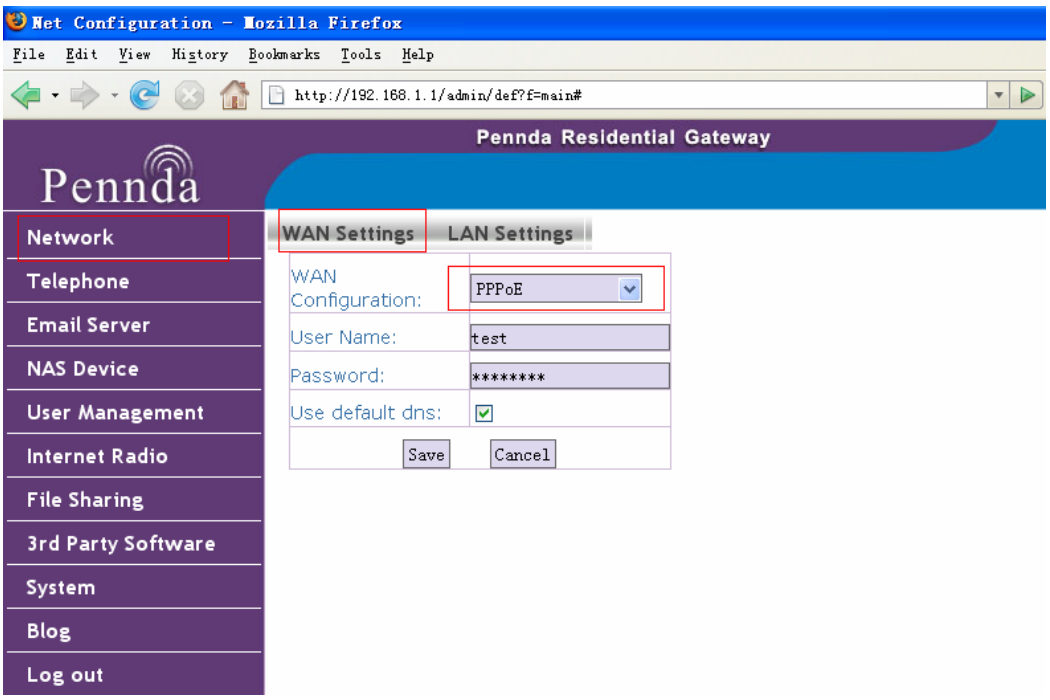
Step Two

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Three

On the web interface, select <Network> -- <WAN Settings>

Choose PPPoE in the drop-down list.



Step Four

Enter the username and password supplied by the ISP.

Step Five

If the ISP offers static DNS, contact the ISP for it.

Otherwise, tick “Use default DNS” check box to let the gateway obtain DNS from the ISP.

Step Six

Save the changes made.

3.2.2 Dynamic IP

Use Dynamic IP to obtain IP address from your ISP automatically.

Follow the steps below to configure it:

Step One

Connect the cable/xDSL Modem to the gateway’s WAN port with an Ethernet cable.

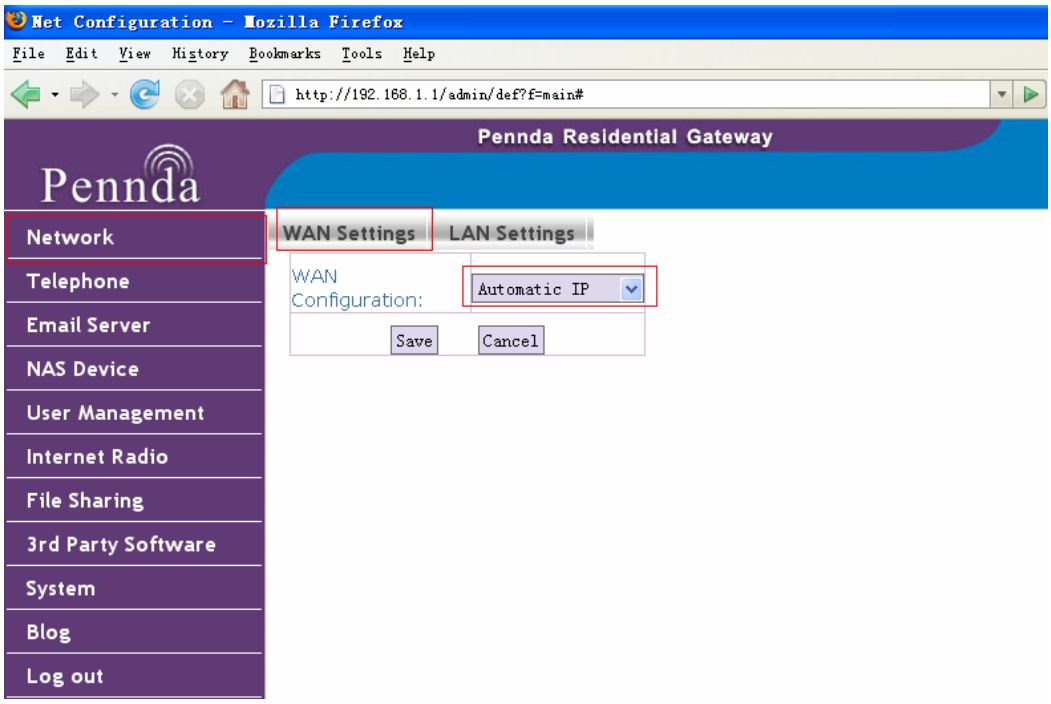
Step Two

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Three

On the web interface, select <Network> -- <WAN Settings>

Select Automatic IP in the drop down list.



Step Four

Save the changes made.

3.2.3 Static IP

If the ISP offers static IP, you need to configure the WAN connection as static IP.

Follow the steps below to configure it:

Step One

Connect the cable/xDSL Modem to the gateway's WAN port with an Ethernet cable.

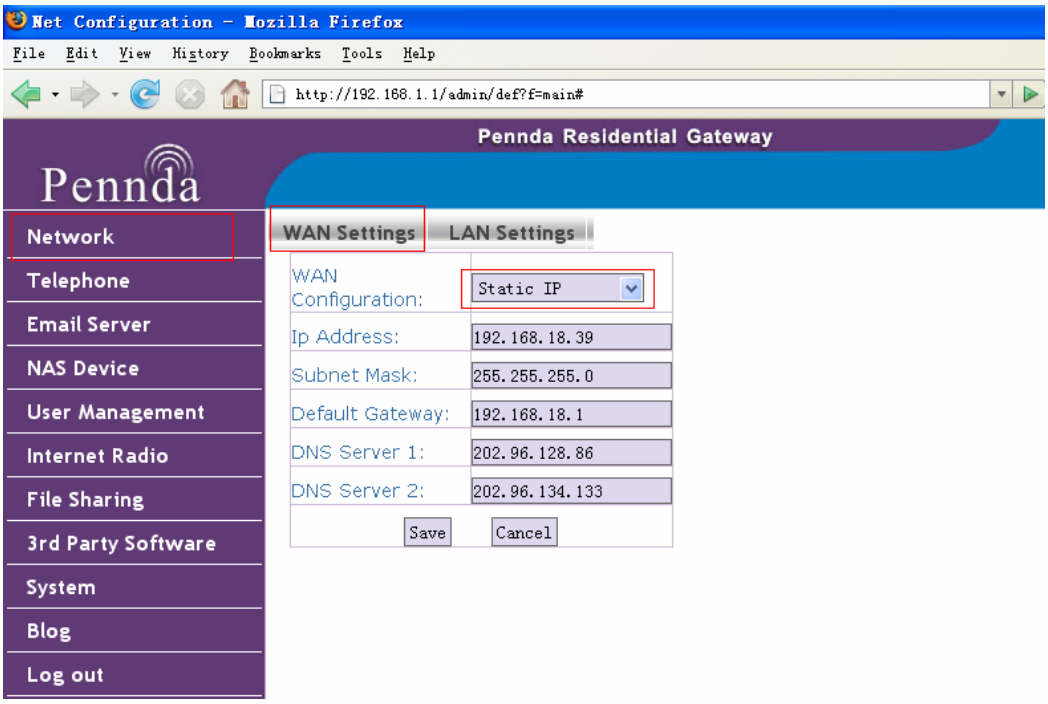
Step Two

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Three

On the web interface, select <Network> -- <WAN Settings>

Select Static IP in the drop down list.



Step Four

Enter the IP address, subnet mask, default gateway and DNS supplied by the ISP.

Step Five

Save the changes made.

3.2.4 WiFi Connection

If the ISP offers WiFi connection, you need to configure the WAN connection as Wireless.

Follow the steps below to configure it:

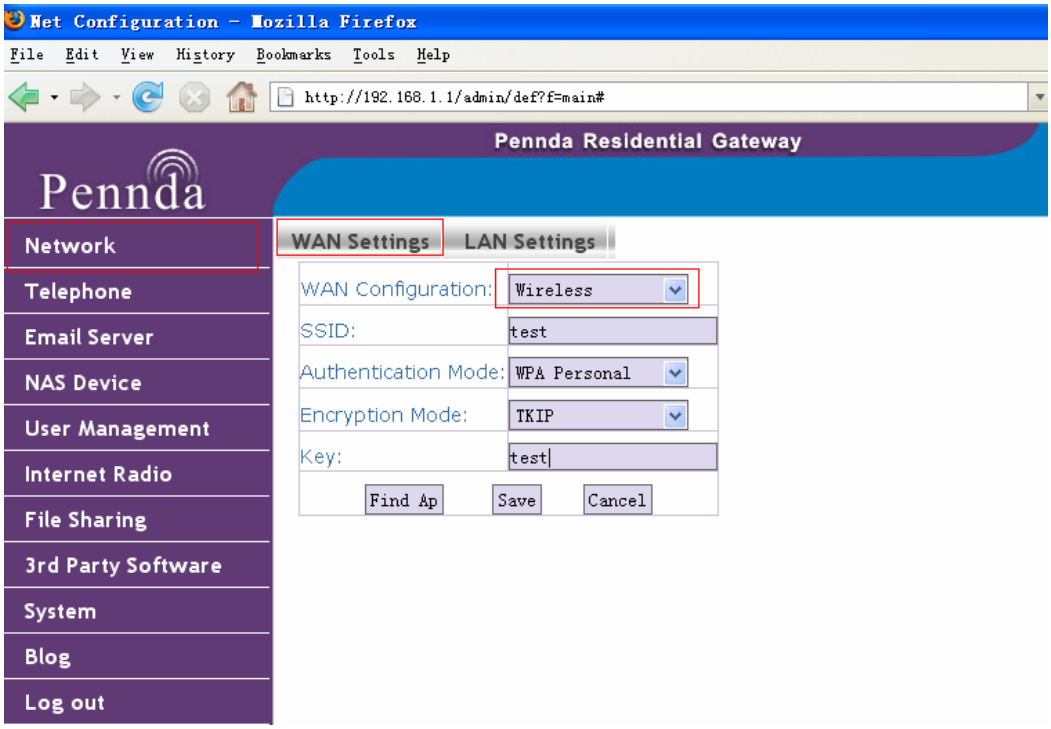
Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

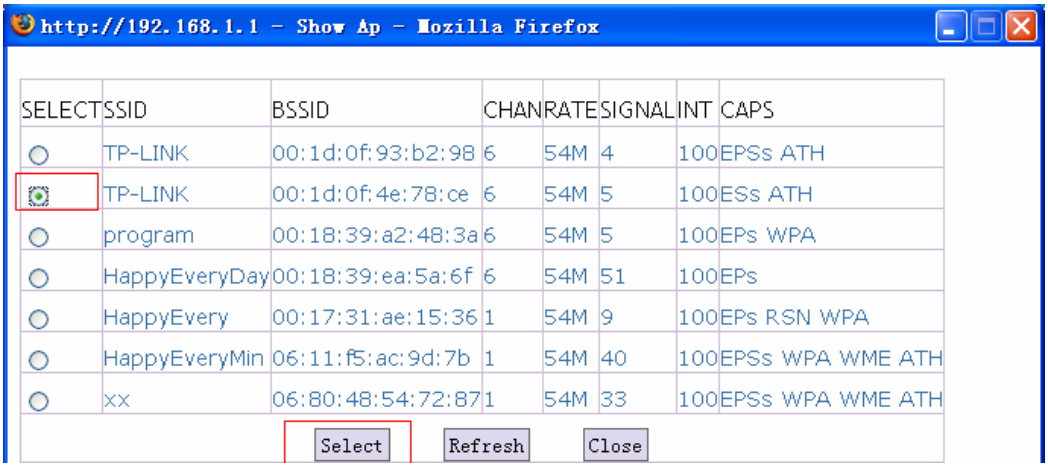
On the web interface, select <Network> -- <WAN Settings>

Select Wireless in the drop down list.



Step Three

Enter the SSID offered by the ISP or click the "Find AP" button. Choose the SSID you would like to connect to in the pop-up window.



Step Four

Enter the password as required by the ISP. The gateway supports four authentication modes: Disable, WPA, WPA2, WEP. Contact the ISP for information on the authentication mode.

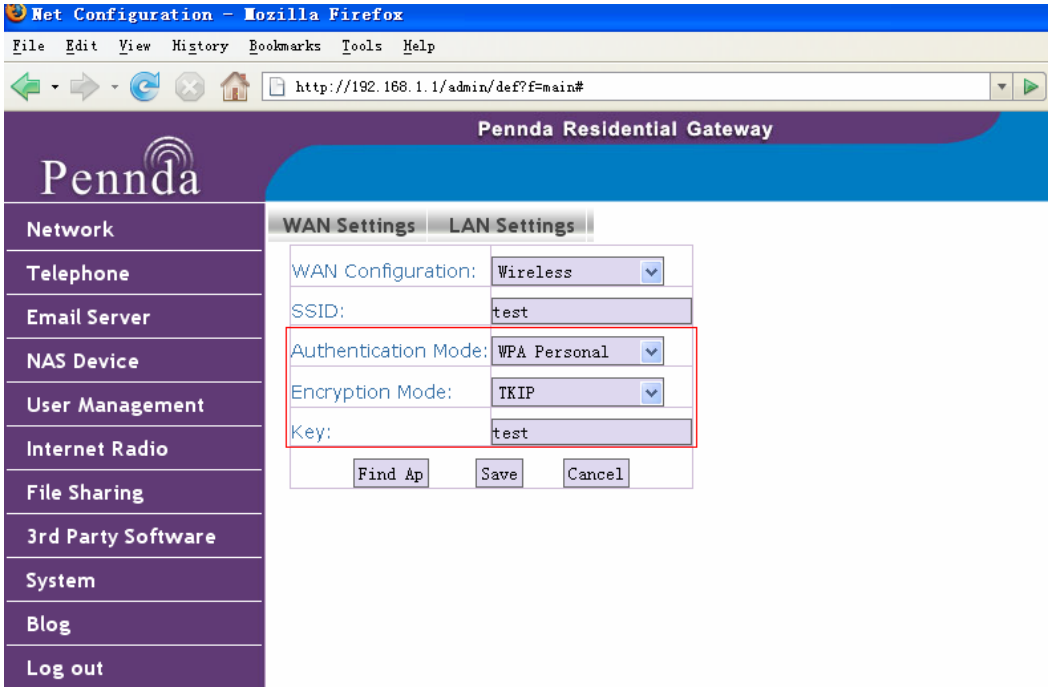
- No password

  If the ISP requires no password, then choose "Disable" in the Authentication Mode field.

- WPA/WPA2

  If the required authentication mode is WPA, you need to check further whether it is AES or TKIS.

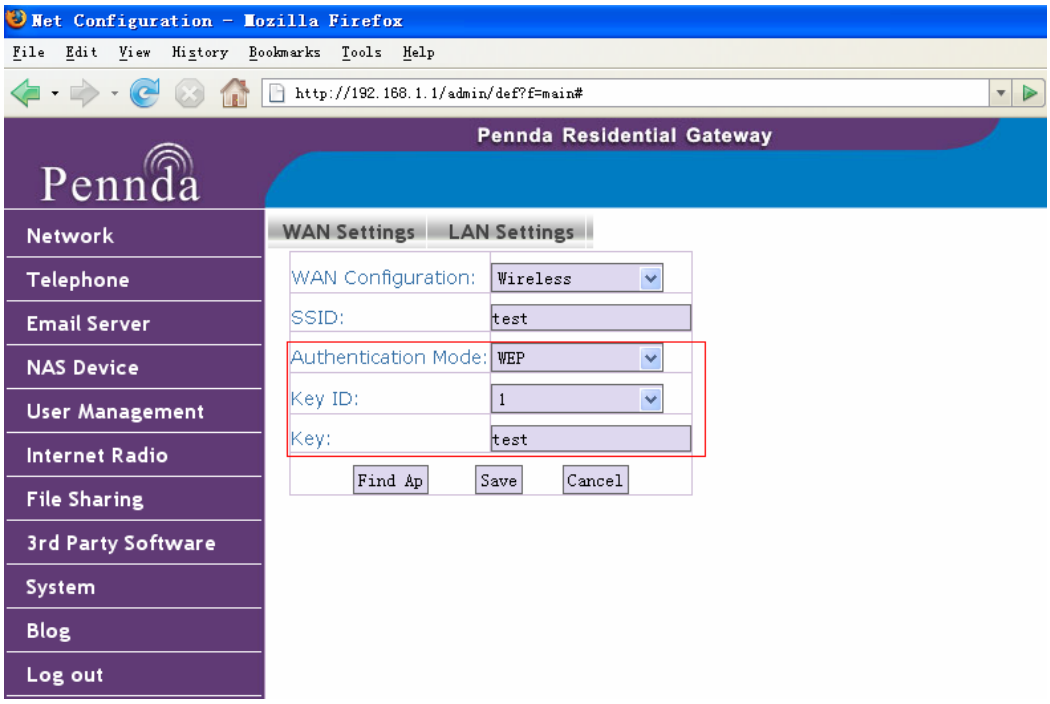
  Select WPA Personal or WPA2 Personal for Authentication Mode, contact your ISP for the WPA encryption mode and WPA Key.



- WEP

  If the required authentication mode is WEP, you need to check the corresponding password index and key supplied by the ISP.

  Select WEP for Authentication Mode, contact your ISP for WEP password index and WEP key.



Step Five

Save the changes made.

3.3 LAN Setting

You can configure the gateway's IP address, DHCP server and AP function in this section.

3.3.1 LAN Interface Setting

Specify the local IP address of the gateway. Any computer that is connected to the gateway can use this address to access the gateway.

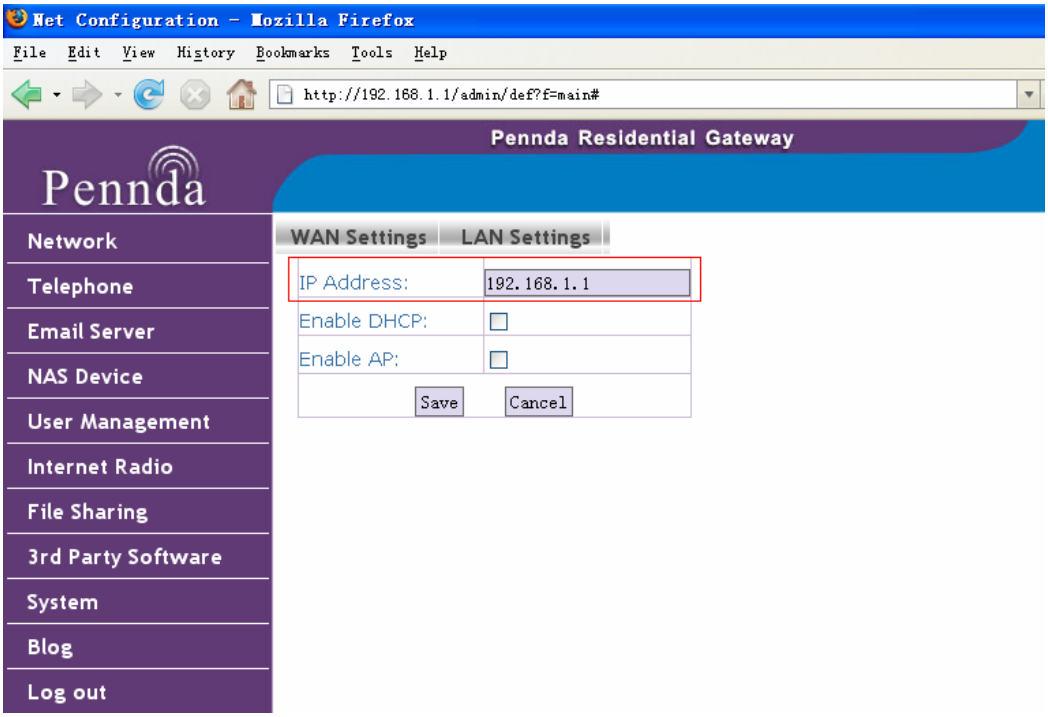
Follow the steps below to configure it:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <Network> -- <LAN Settings>



Step Three

Enter the IP address of the gateway.

Notes: The default IP address of the gateway is 192.168.7.1. The user is able change it when necessary.

Step Four

Save the changes made.

3.3.2 DHCP Server Setting

The gateway supports DHCP. It can assign IP addresses for connected computers dynamically.

See below the steps:

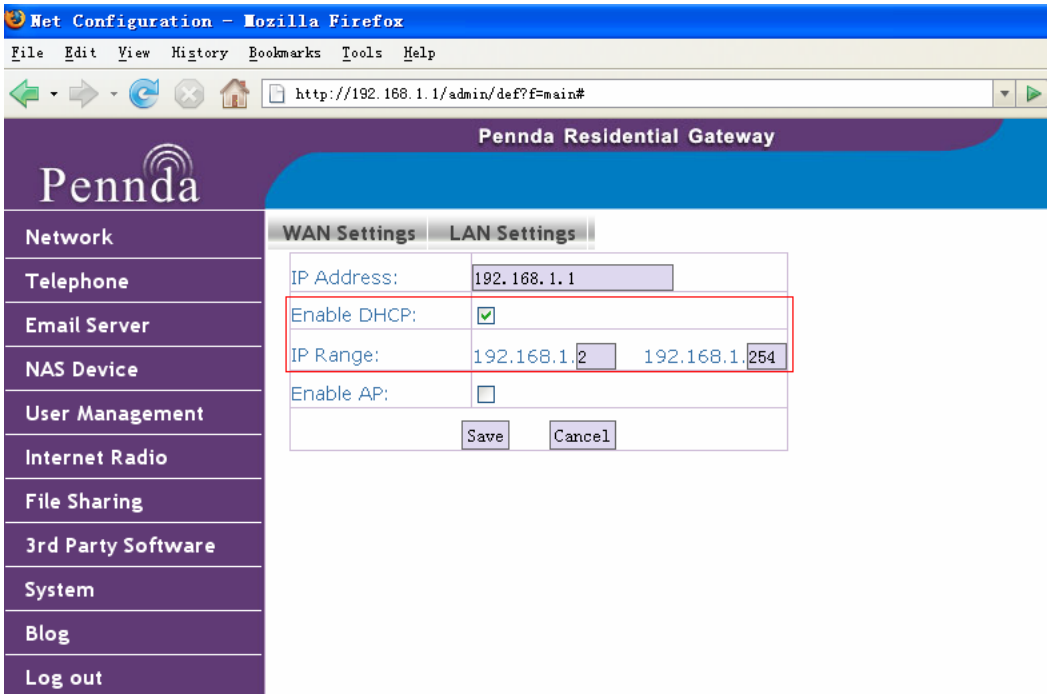
Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <Network> -- <LAN Settings>

Check <Enable DHCP> check box.



Step Three

Enter the range of the dynamic IP address.

Notes: The address range should exclude the address of the gateway. For example, if the gateway's IP is 192.168.1.1, then the range is from 192.168.1.2 to 192.168.1.254 at most.

Step Four

Save the changes made.

3.3.3 WiFi AP Setting

The gateway can work as AP. Users can build a wireless LAN with the gateway.

See below the steps:

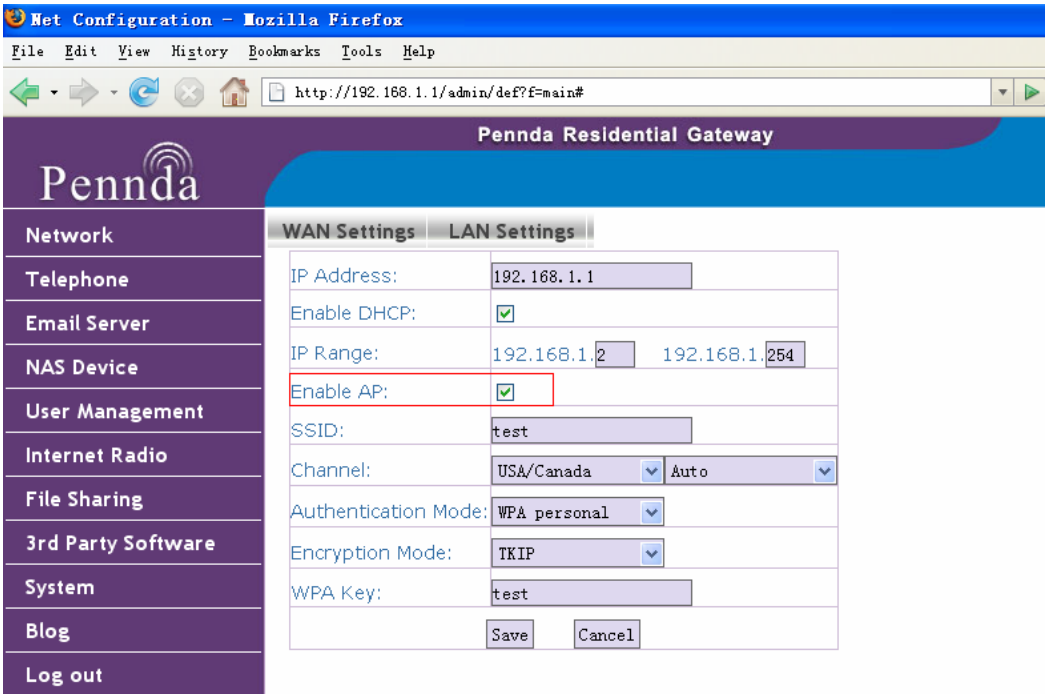
Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <Network> -- <LAN Settings>

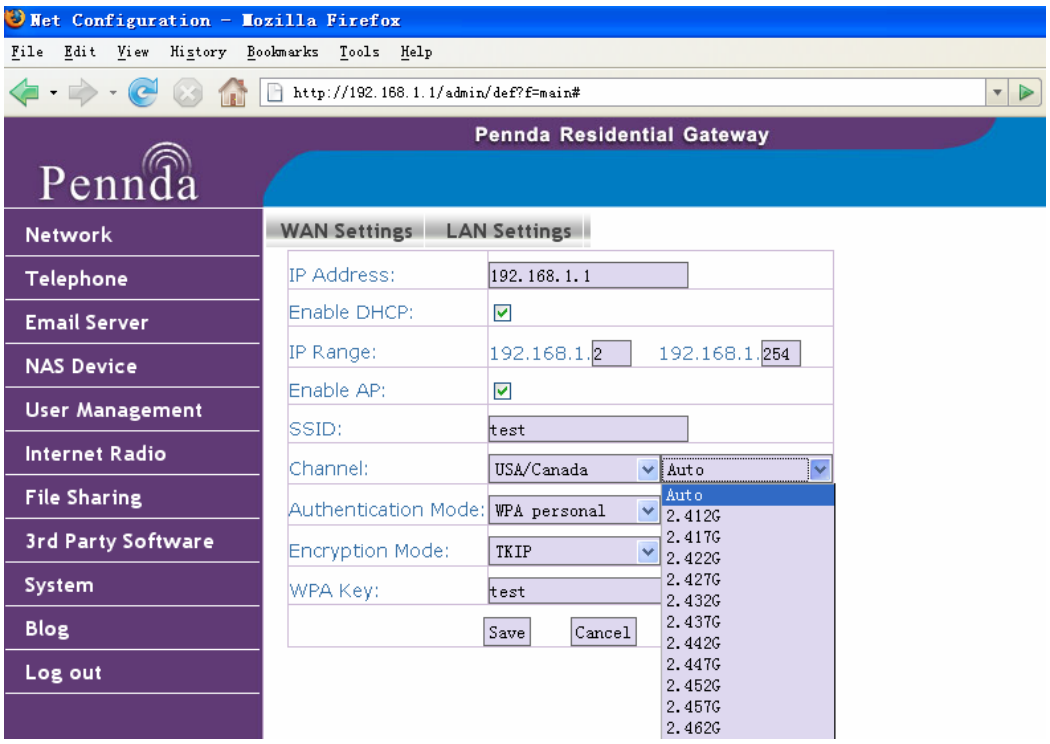
Check the Enable AP check box.



Step Three

Specify the user-defined SSID.

Choose whether to hide SSID to enhance security. When the SSID is hidden, WiFi terminals can't find the gateway's SSID. Only when they know the SSID in advance, will they be able to connect to the gateway.



Notes: The entered SSID should not contain any space.

Step Four

Specify channel type.

The gateway supports two types of channels: 11 channels (US and Canada standard) and 13 channels (major European countries standard).

As you can see from the figure above, the user can either let the system choose the frequency automatically, or specify the frequency manually.

Step Five

Specify the authentication mode of the AP. The gateway supports three authentication modes: no password, WPA, WPA2.

- No Password

Choose “Disable” to set it as an open network.

Notes: when you choose “Disable” as the authentication mode, anyone can access your network and the data transmitted can be intercepted. It’s highly recommended you do NOT use this mode.

- WPA

If you choose the Authentication Mode as WPA, you need to define whether it is AES or TKIS, and the WPA password.

Select WPA personal or WPA2 personal for the authentication mode. You are free to specify the encryption mode and the WPA key as you like.

Notes: WPA is the abbreviation of Wi-Fi Protected Access, a standard for wireless data encryption. It uses Extensible Authentication Protocol to enhance the security function of WEP. An encryption method is added to increase the security of the data transmitting.

TKIP is the abbreviation of Temporal Key Integrity Protocol, one encryption method. TKIP provides per-packet key mixing, a message integrity check and a re-keying mechanism.

AES is the abbreviation of Advanced Encryption Standard, a symmetric block cipher that can encrypt (encipher) and decrypt (decipher) information.

Step Six

Save the changes made.

3.4 DDNS

Each gateway will be bound with a unique factory domain name. Please refer to the attached card in the package for the detailed domain name.

Users from the Internet can access the gateway via this domain name.

3.5 Attached USB HDD

The user can attach large volume USB HDD to the gateway according to the actual demand. The larger the HDD volume is, the more space that can be shared..

3.5.1 Attached USB HDD Configuration

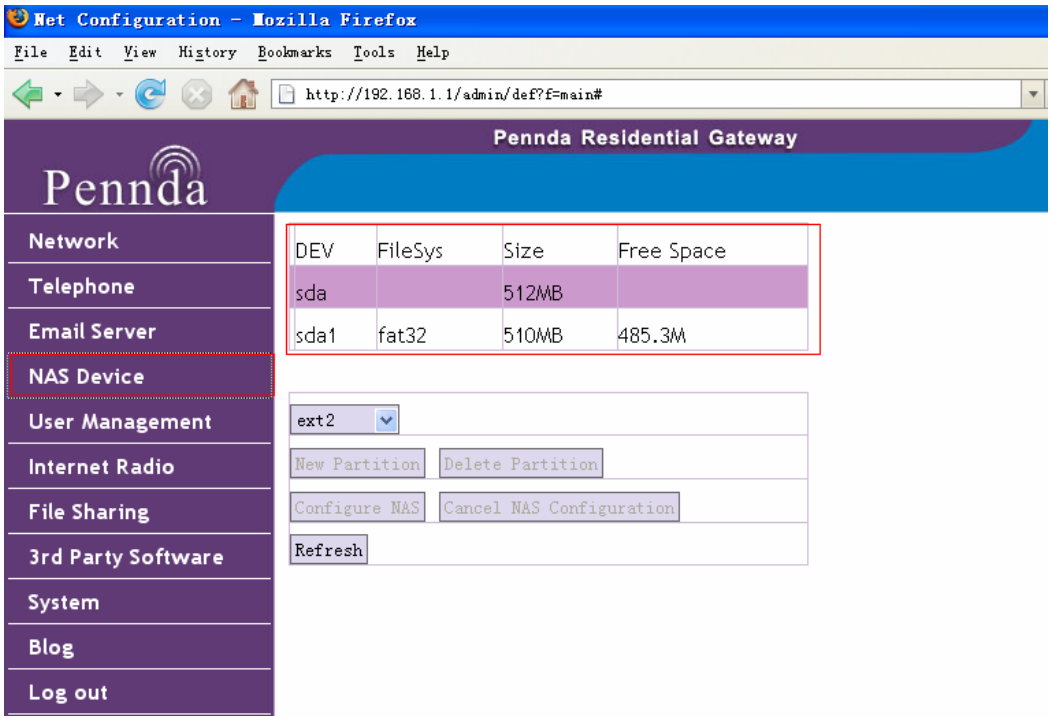
Follow the steps below to configure the HDD:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <NAS Device>. A page that displays the information of the HDD currently attached will appear. See the figure below:

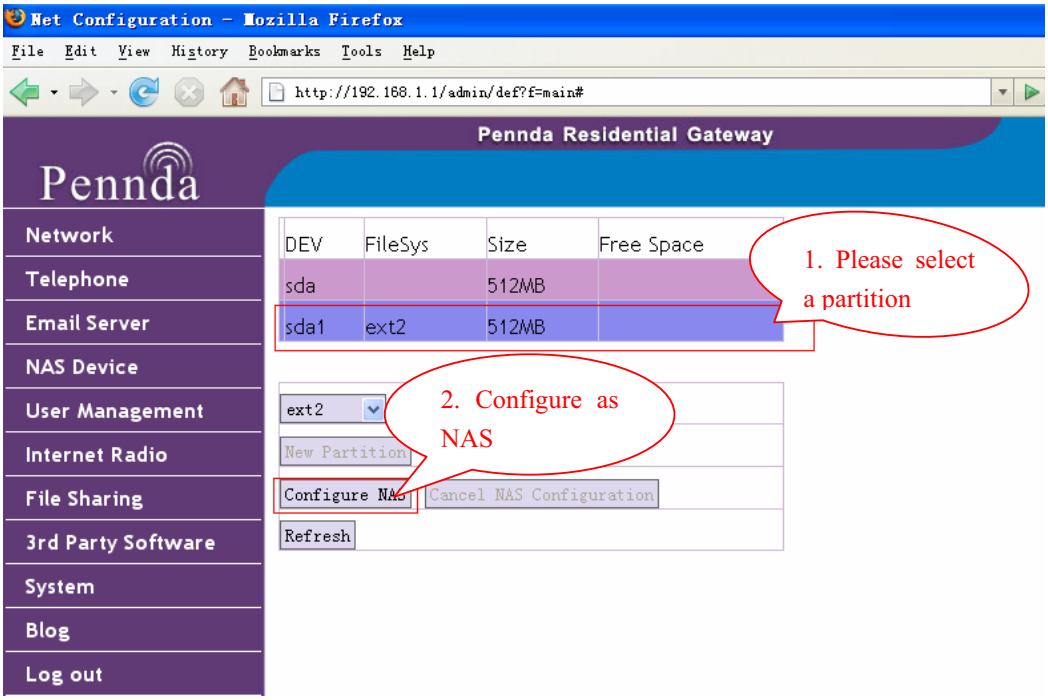


Notes: If no USB HDD is detected, check if the HDD is damaged and if it is correctly connected to the gateway. Please refer to the corresponding section of Chapter Four "Troubleshooting" for further information.

Step Three

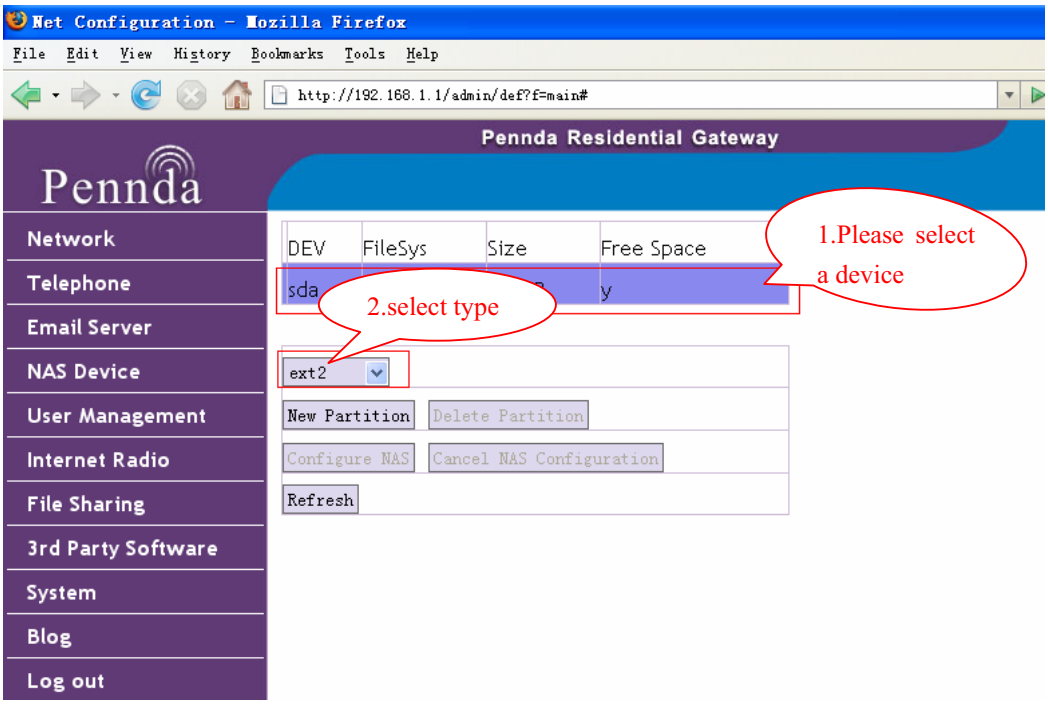
Select a partition to use, click <Configure NAS>. If the configuration is

successfully completed, skip the steps below.



Step Four

The gateway supports ext2 file system format. If the file system of the attached device is beyond this format, the user needs to format the it. Just select the USB device and click the "New Partition" button.



Notes:

1. **If the attached USB device is not displayed, click the "Refresh" button. If that doesn't work, check if the USB device is connected to the gateway correctly.**
2. **If the USB device has more than one partition, only one partition can be chosen as network attached storage. If no partition information of a USB device is displayed, the reason may be that the USD device is not partitioned or the file system format is not supported (the gateway supports only FAT 16/32, ext2). Try the "Create New Partition" function to create a new partition.**

3.6 Network Attached Storage

Pennda gateway supports network attached storage. Cross-platform File sharing is available on the gateway.

3.6.1 Configuration

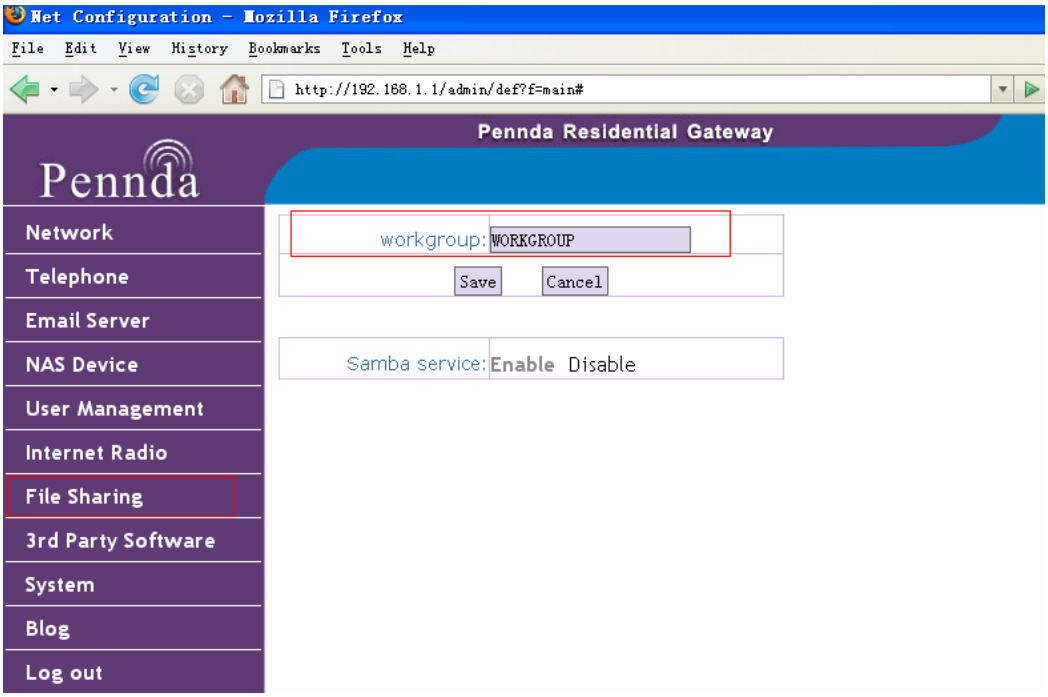
Follow the steps below to configure the network attached storage:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <File Sharing> to configure the parameters of network attached storage.



Notes:

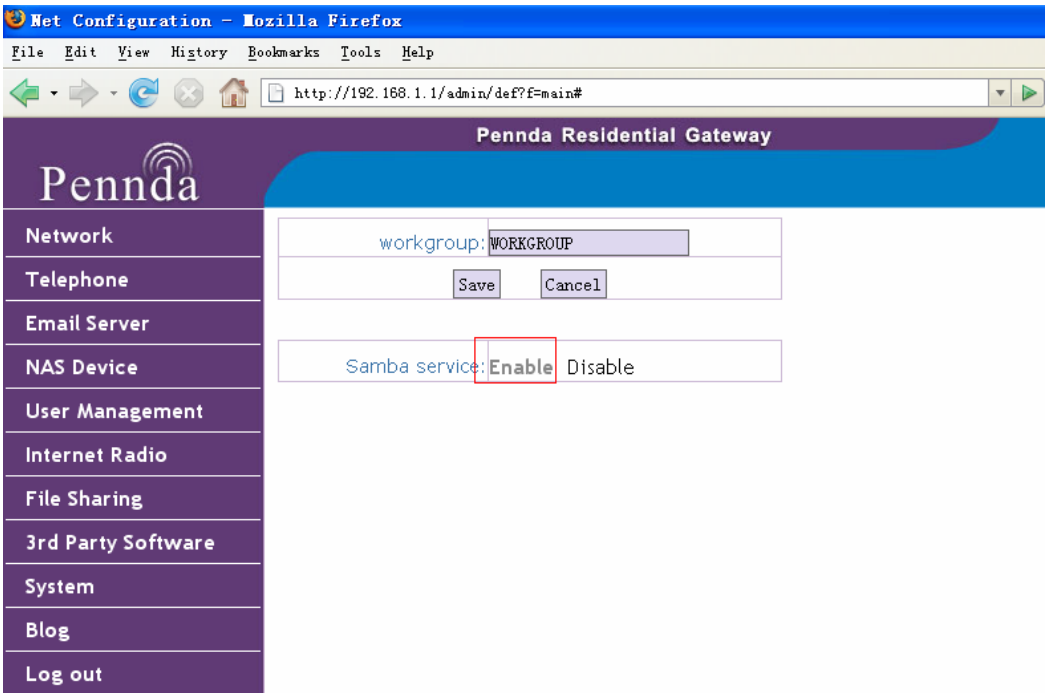
Workgroup: the local Windows user must be in the same workgroup configured in the figure above to access the gateway's sharing folder (refer to 3.6.2 for detailed steps).

Step Three

Save the changes made.

Step Four

Click "Enable" or "Disable" to enable/disable the Samba service (sharing service).



3.6.2 Local User Accessing Sharing Folder

Notes: Only when the local user is assigned local sharing privilege by the gateway administrator, will he/she be able to access the sharing folder of the gateway. See 3.17.1 for more information.

Take Windows XP for example, the steps to configure local users to access the sharing folder is as follows:

Step One

Add the PC to the same workgroup of the gateway.

On the desktop, right click <My Computer>, select <Properties> -- <Computer Name>, Click the “Change” button, go to “Workgroup”, enter the workgroup name specified by the gateway.

Step Two

Double click <Network Neighbourhood>, click “View Workgroup Computers”, you will find a host named “PenndaBox”.

Notes: the gateway name displayed here is the name specified by the user on the web interface. See 3.5.1 for more information.

Step Three

Double click the icon of the gateway, an authentication dialog box will pop up. Input the username and password assigned by the administrator.

Step Four

After the successful authentication, the contents of the gateway's sharing folder will be displayed. The user can perform copy or paste operation only.

3.6.3 Internet User Accessing Sharing Folder

Notes: only when the Internet user is assigned the Internet sharing privilege by the gateway administrator, will he/she be able to access the gateway's sharing folder. See 3.17 for detailed steps on user privilege assignment.

Follow the steps below to configure it:

Step One

Open the browser on the computer, enter the URL in the following format:

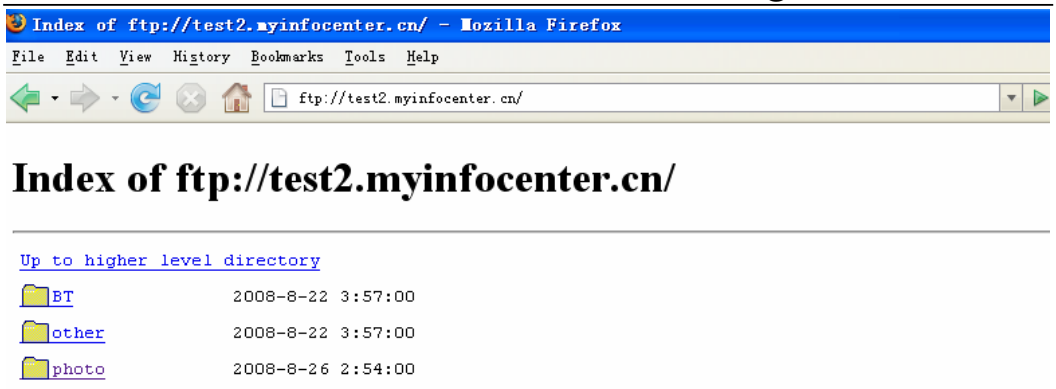
ftp://the gateway's domain name

Step Two

Enter the username and password assigned by the administrator.

Step Three

The gateway's sharing folder contents will be displayed. Depending on your privilege, you can upload or download files.



3.7 RSS Subscription

Pennda gateway offers RSS subscription function. The users are allowed to subscribe to their interested RSS channels and read them on the touch screen.

Notes: Before using the RSS subscription, the Zip Code must be correctly configured. Otherwise, the RSS subscription will not work. See 3.1.3 on how to configure the zip code.

3.7.1 RSS Subscription

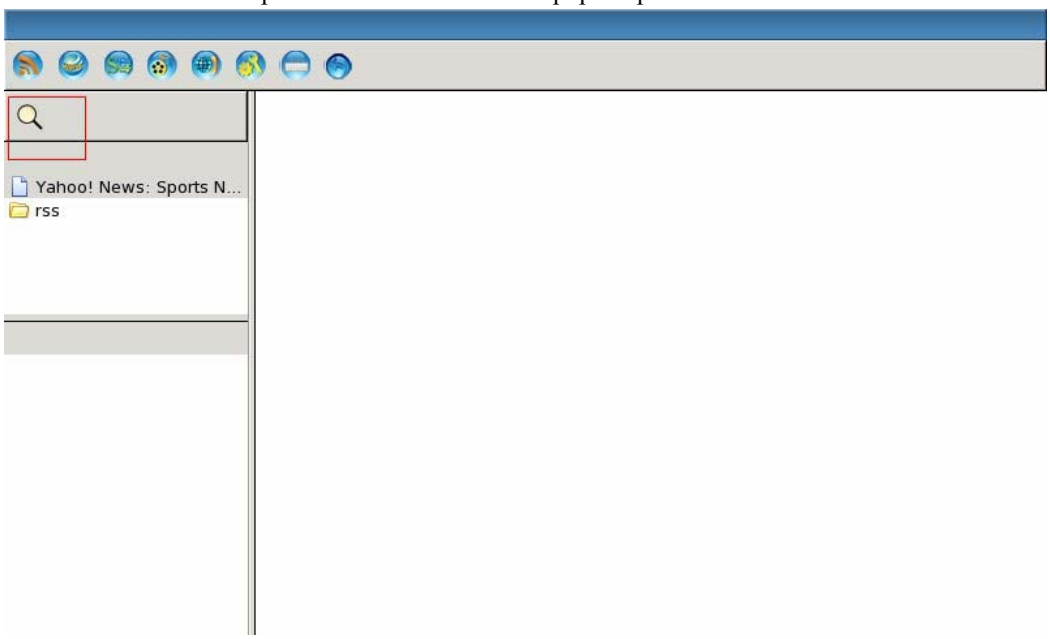
The users are able to subscribe to their interested RSS channels. Follow the steps below to configure it:

Step One

Click the <RSS> icon on the touch screen.

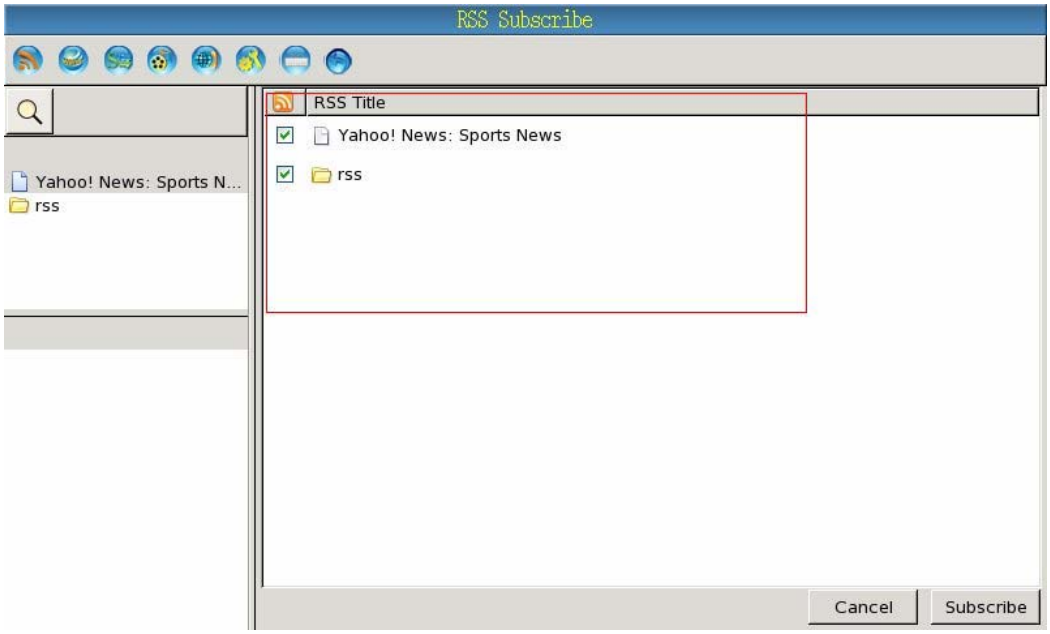
Step Two

Select “Channel Subscription” button on the screen poped up.



Step Three

Select your interested channels and click the “Subscribe” button.



Notes: depending on the zip code the user entered, the gateway will display different channel lists correspondingly.

3.7.2 RSS Reading

Users can use Pennda gateway’s touch screen to read RSS news.

See the steps below:

Step One

Make sure you have subscribed to specific channels. Refer to 3.7.1 for more information.

Step Two

Click the RSS icon on the touch screen.

Select the desired channel to read.

3.8 Phone Configuration

Pennda gateway offers the function for users to build their own small telephone network. It allows the users to assign two-digit short numbers to their friends and relatives. With these numbers, they can call each other for free.

Pennda gateway supports not only Follow me, pre-conversation message, background music during phone call, file sharing during talking-on-phone, push voice mail, call back functions, but also 3rd party VoIP application. That is: the gateway is interoperable with 3rd party VoIP. The gateway can register to 3rd party's VoIP server and make calls to PSTN and mobile phones.

3.8.1 Build Your Own Phone Network

The administrator can assign short numbers to any user with the gateway.

To build your own phone network, you need three steps: number assignment, register and call making.

3.8.1.1 Number Assignment

Notes: 10 is the default number for the phone connected to the gateway and is not allowed to delete.

Follow the steps below to assign numbers:

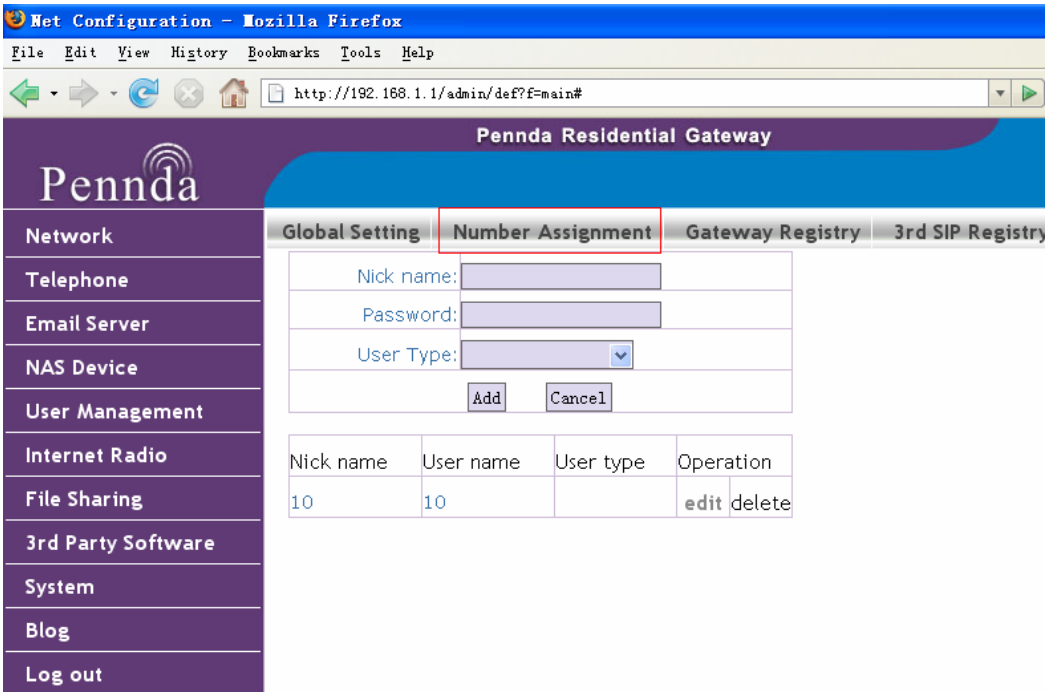
Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <Telephone> and click <Number Assignment>. See

the figure below:



Step Three

Enter Nick Name, Password, select User Type and click the "Add" button.

When the user is added successfully, the system will assign automatically a two-digit number to the user (Number range 11-99).

Notes: Nick Name: the name specified by the administrator for a user, which will be displayed on the touch screen in the phone book of the gateway.

Password: the password specified by the administrator for a user. Only digits are allowed.

The assigned two-digit number: the two-digit number (11-99) assigned by the system automatically in sequence, it's the phone number of the user.

User Name: the user name to register to the gateway, the same as the assigned two-digit number.

User Type: two types: SIP user and Gateway user, among which SIP user refers to the telephone sets or software client compliant with standard SIP protocol; Gateway user refers to Pennda gateway.

3.8.1.2 Register

Before the registry, the user must have the register user name, password and the address of the gateway from the administrator.

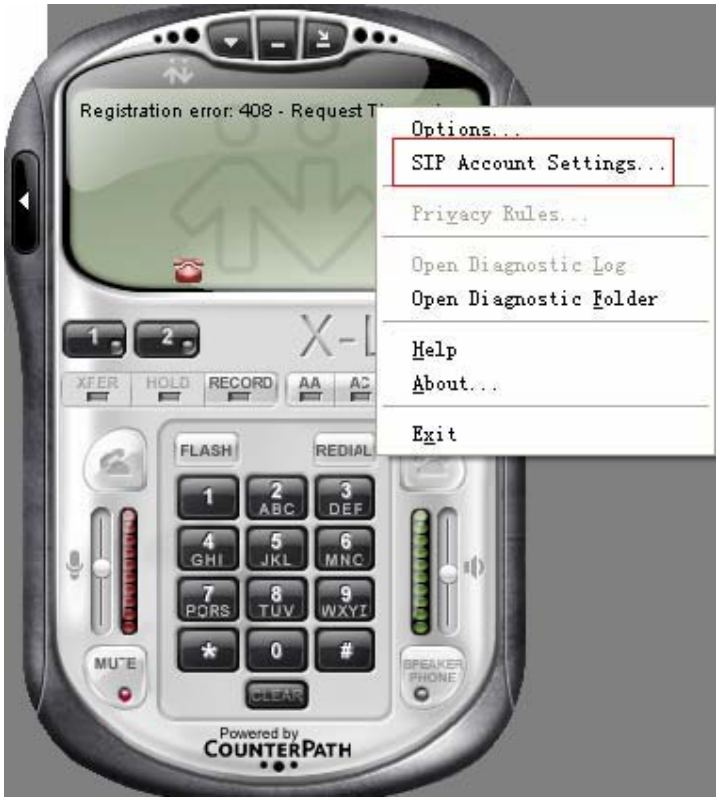
Any telephone set or software client compliant with standard SIP protocol can register to

the gateway.

Take X-Lite for example to demonstrate the steps on registry:

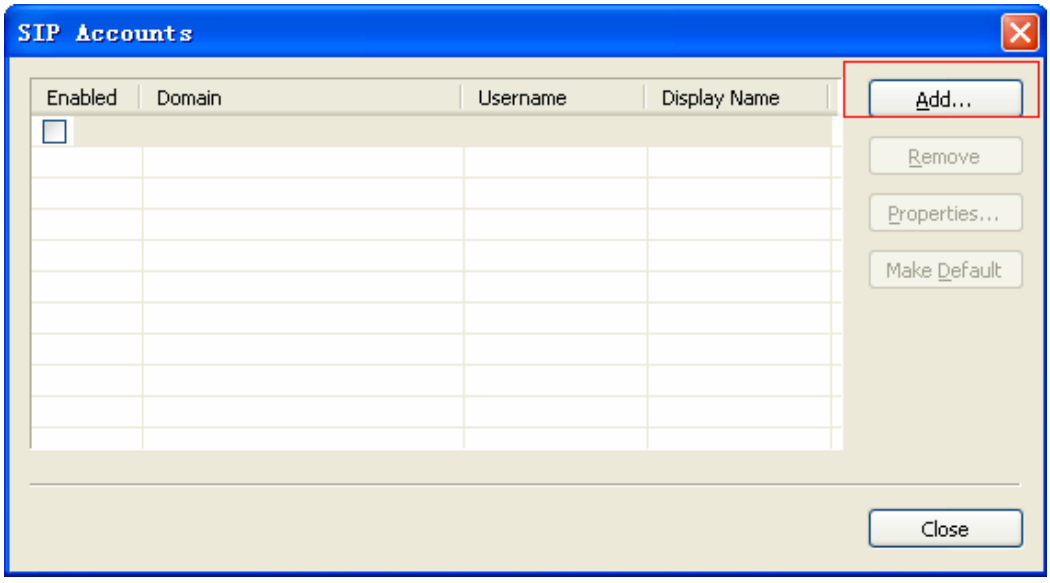
Step One

Start X-Lite, right-click on its interface and select “SIP Account Settings”.



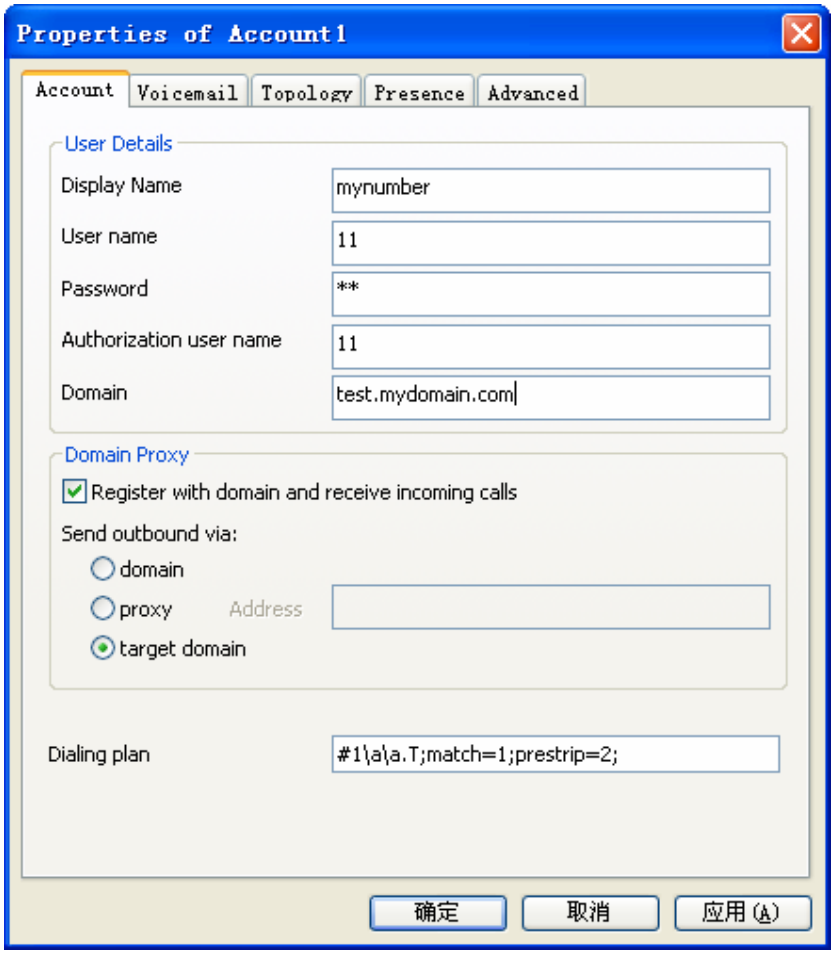
Step Two

Select “Add…” in the window that appears.



Step Three

Enter the corresponding parameters in the dialog box.



Notes:

Display Name: user-defined name. Any name will do;

User Name: the two-digit number assigned by the administrator;

Password: the password specified by the administrator;

Authorization user name: enter the two-digit number assigned by the administrator;

Domain: If the gateway has legal domain name, the Domain will be the gateway's domain name.

If the gateway has no domain name, the Domain will be the gateway's WAN address (the gateway must have a legal fixed WAN address);

If no Internet connection is available, then only the computers connected to the gateway will be able to register to it. In this case, the Domain will be gateway's LAN address (see 3.3.1 LAN settings).

3.8.1.3 Call Making

Users registered to the same gateway can call each other for fee.

Registered users and the gateway can call each other.

- Registered users call each other
  When registered users call each other, dial the other party's two-digit short number.
- Registered users call the gateway
  For registered users, to call the gateway, dial 10.
- The gateway call registered users
  For the gateway, to call registered users, dial their corresponding two-digit short number.

3.8.2 Call Transfer Function

Pennda gateway allows the incoming calls to be put through to another person, just like a legacy exchange.

Follow the steps below to transfer a call:

Step One

The owner of the gateway picks up the handset when there is an incoming call.

Step Two

The owner dials the desired number in the following format:
"#" + "two digit short number"

The call will be transferred to the dialed short number user. If the user is out of reach, the connection between the owner and the caller will still remain on condition that the owner didn't hang up.

3.8.3 Extension Function

Notes: this function applies only to Model No. RGH303, RGH323, RGH303H, RGH323H.

Pennda gateway allows phones connected to each FXS port to call each other with their respective extension number.

Follow the steps below to use this function:
According to the number sequence marked on each port (PHONE1, PHONE2, PHONE3), the extension number will 1, 2, 3 and so on.

3.8.4 Call PSTN

Notes: Only when the land line parameters are correctly set on the web interface, will you be able to make calls to PSTN.

The gateway supports up to three land line methods. The user can set different land line priority according to the fee rate. The system will use the top priority land line method to call PSTN. If the connection can't be built with the first method, then it will turn to the second method, and so on.

The system supports two land line ports: fxo port land line and sip port land line.

3.8.3.1 Fxo Port Land Line Setting

Before the fxo port land line setting, make sure you have working PSTN line from an operator.

Plug the line into the gateway's LINE jack. Refer to 2.1 for more information.

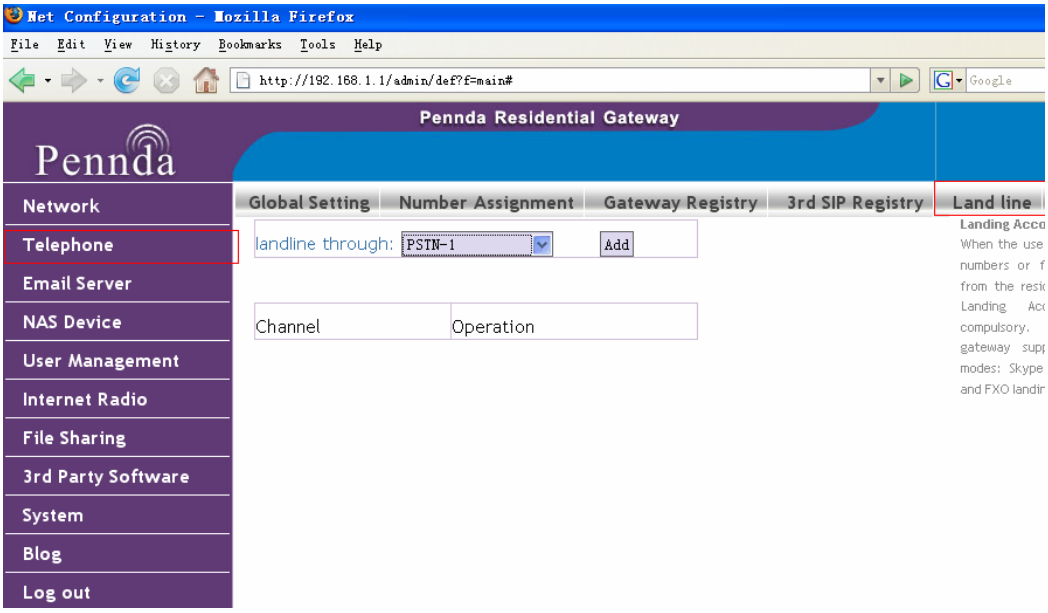
Follow the steps below to configure the fxo port land line.

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

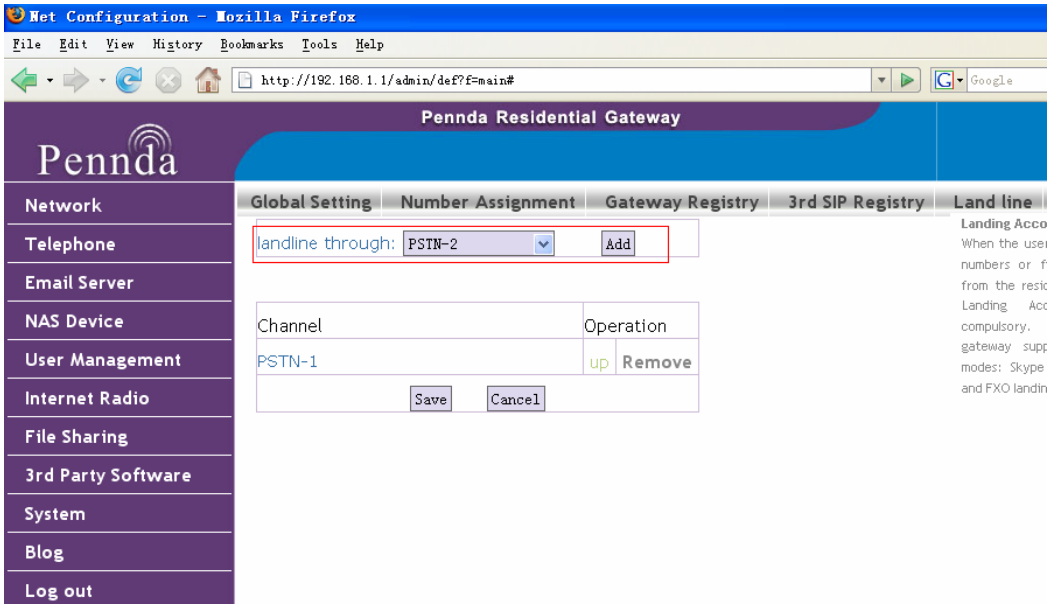
Step Two

On the web interface, select <Telephone>, click <Land line>.



Step Three

Select PSTN in the "Landline through" drop down list and click the "add" button.



Step Four

Click "Save" button to submit the change.

3.8.3.2 SIP Land Line Setting

Before the SIP land line setting, make sure you have working account from VoIP operators and have enough credit. Refer to 3.8.10 for more information.

Follow the steps below to configure the SIP land line:

Step One

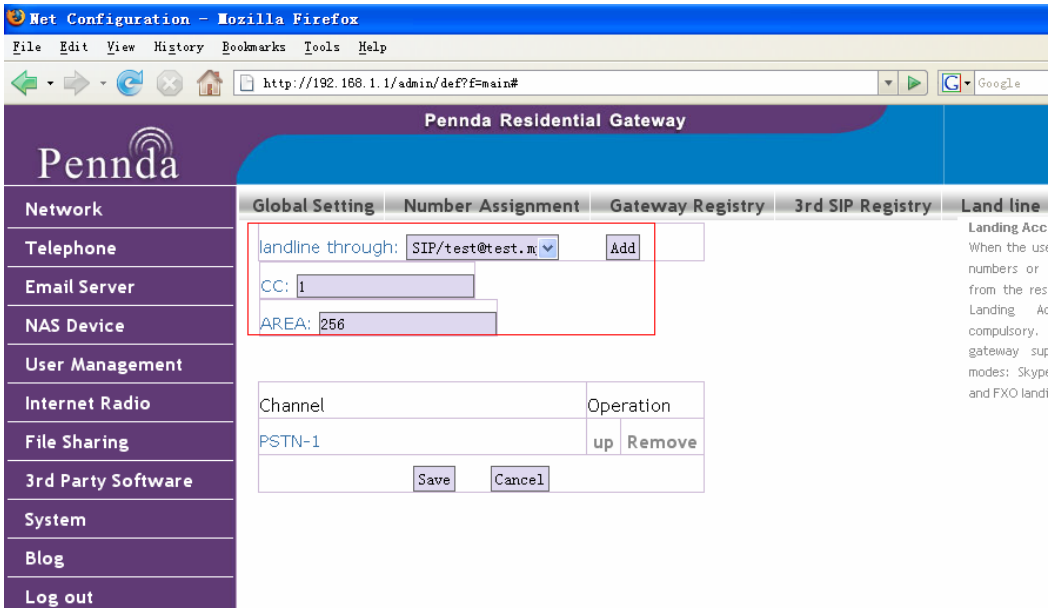
Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface, click <Land line>.

Step Three

Enter the SIP account in the Landline through field, input the country code and area code, then click the "Add" button.



Notes:

1. Only after you have added the 3rd party SIP account, will the corresponding account be shown in the drop down list. See 3.8.11 for more information on how to add 3rd party SIP account.
2. After the entry of country code and area code, the user can use the same dialing rule as PSTN to call PSTN numbers when land line through SIP.

Step Four

Click the "Save" button to submit change.

3.8.3.3 Set Land Line Priority

Notes: when the user has more than one account from different operators, he can set the account with the lowest rate as top priority. When he calls PSTN numbers, the gateway will use the top priority account to land line. If that account doesn't work, then the account with the second priority will be used.

Follow the steps below to set the priority:

Step One

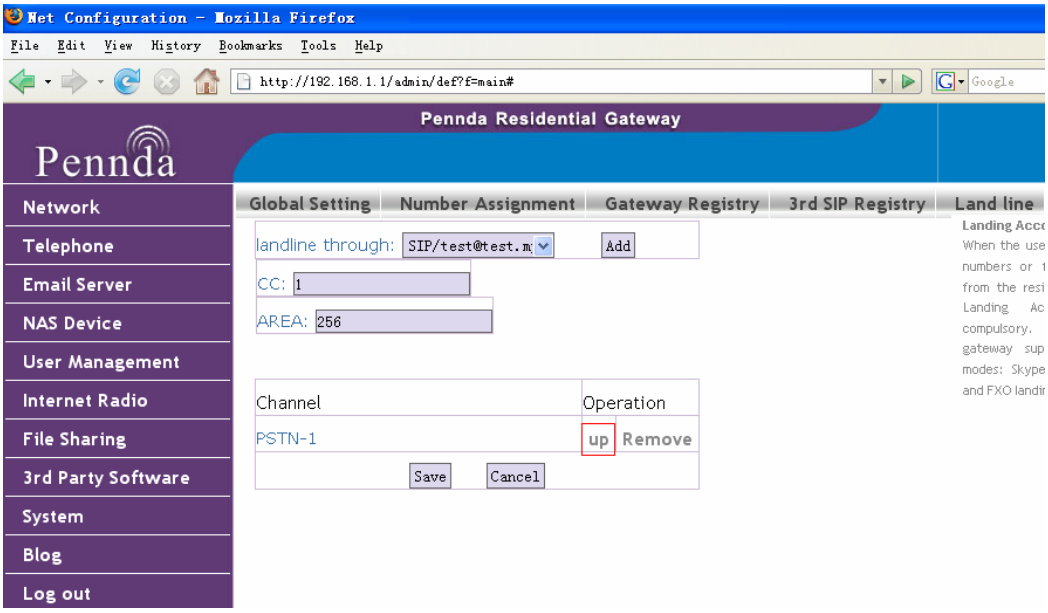
Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface, click <Land Line>.

Step Three

Select the account to set, click the "Up" button to adjust the priority.



Notes: the one on the top has the first priority; the second has the second priority and so on.

Step Four

Click the "Save" button to submit change.

3.8.5 Follow Me Function

Both the administrator and the users registered to the gateway can make use of the Follow me function.

When the follow me function is configured, if the call to the user can't be established, the system will call the follow me numbers in the preset order configured by the user.

The gateway supports mobile phone number, fixed phone number, local SIP short number and email for the follow me function.

Notes: Only when the user has correctly configured the land line setting, will the follow me function be able to include mobile phone or fixed phone number. See 3.8.3 for more information.

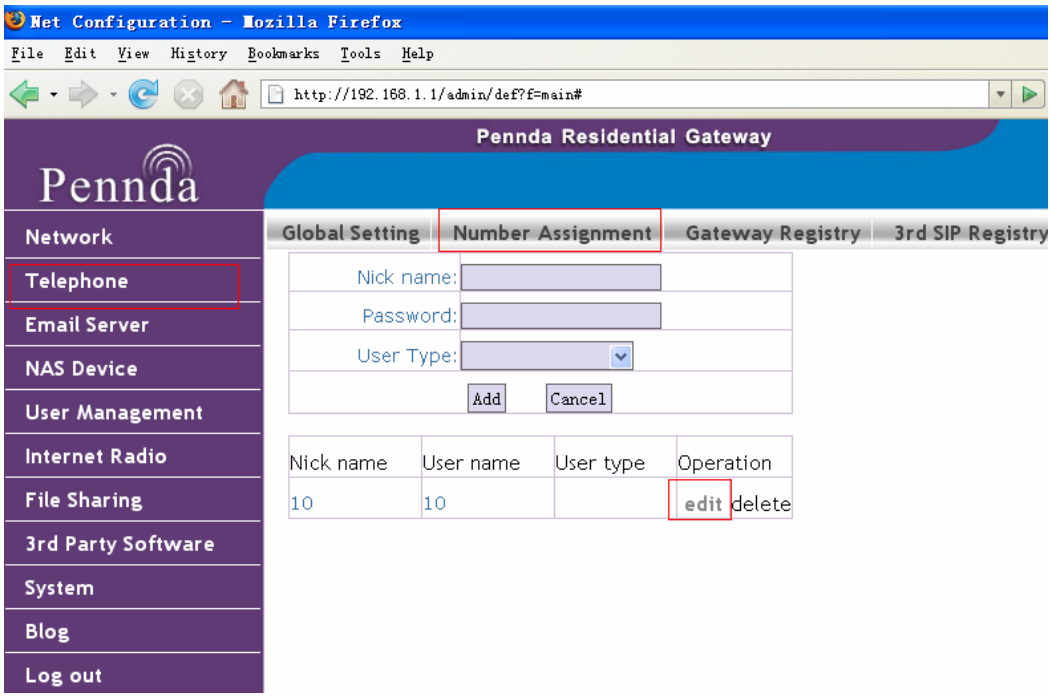
Follow the steps below to configure the follow me function:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface, click <Number Assignment>. Click the "Edit" button after the desired number to configure the follow me function.

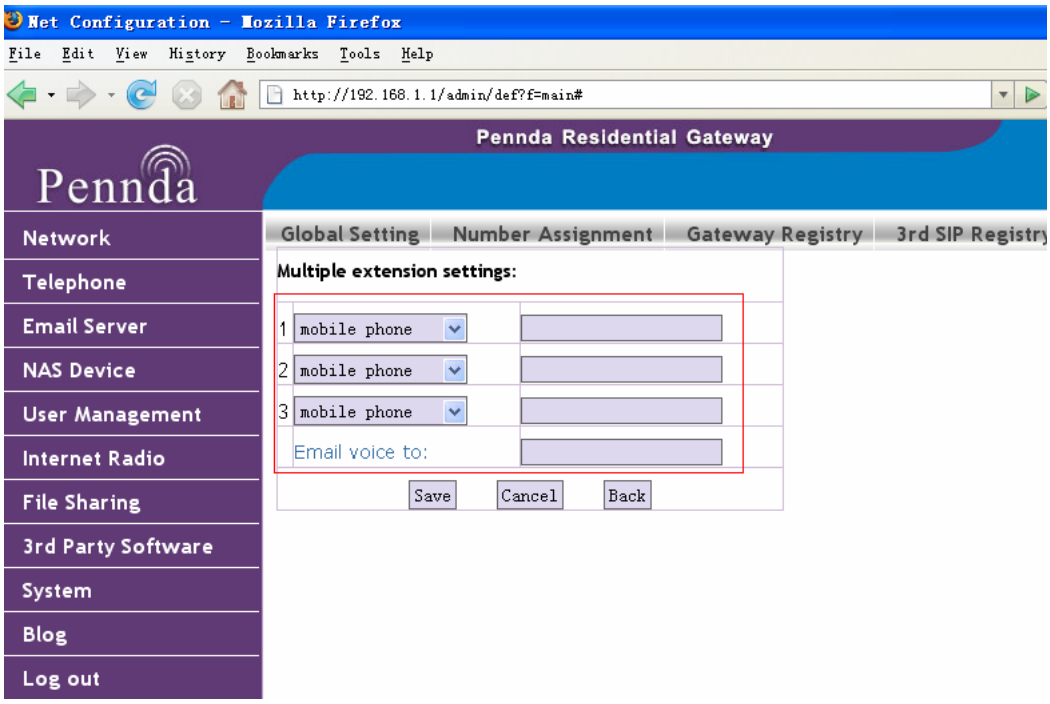


Notes: the number 10 is specified to the gateway.

Click "Edit" button after 10 to configure follow me function for the gateway.

Step Three

Configure the follow me numbers and priority.



Parameters explanation:

mobile phone: mobile phone number

home phone: fixed phone number

sip phone: the short number assigned by the administrator

Email voice to: the address of email box. In case that no number of the follow me function can be reached, the system will record the caller's message and send it to this specified email.

Notes: the follow me function can be configured by the administrator only.

The follow me function is applicable for the gateway and SIP short number only.

Step Four

Click the "Save" button to submit change.

3.8.6 Gateway to Gateway

Pennda gateway supports free calls to another gateway.

The gateway needs to assign number and register to call another gateway. (For example, if Gateway B needs to register to Gateway A, then Gateway A needs to assign the number first, then Gateway B performs registry action.)

3.8.6.1 Server Gateway Number Assignment

To call another gateway, one of the gateways needs to assign a two-digit number for the other one.

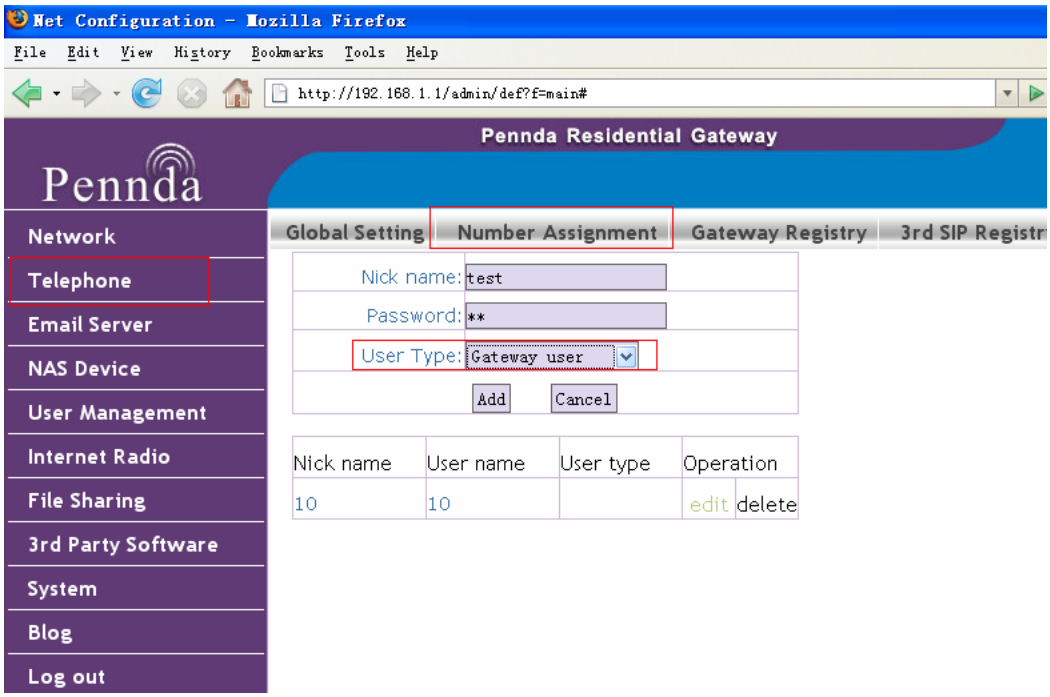
Follow the steps below to assign short number:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface, click <Gateway Users>.



Step Three

Enter Nick Name and password. Select “Gateway User” in the User Type field. Click the “Add” button.

When the user is successfully added, the system will assign a two-digit number (range: 11 to 99) as the short number for the client gateway.

Notes:

Nick Name: the name specified by the administrator for a user, which will be displayed on the touch screen in the phone book of gateway.

Password: the password specified by the administrator for a user. Only digits are allowed.

The assigned two-digit number: the two-digit number (11-99) assigned by the system automatically in sequence, it’s the phone number of the user.

User Name: the user name to register to the gateway, the same as the assigned two-digit number.

Step Four

Click the “Save” button to submit change.

3.8.6.2 Client Gateway Register

To call the other gateway, one of the gateways working as a client must register to the server gateway.

Before the registry, make sure you have the correct user name, password and address

of the gateway.

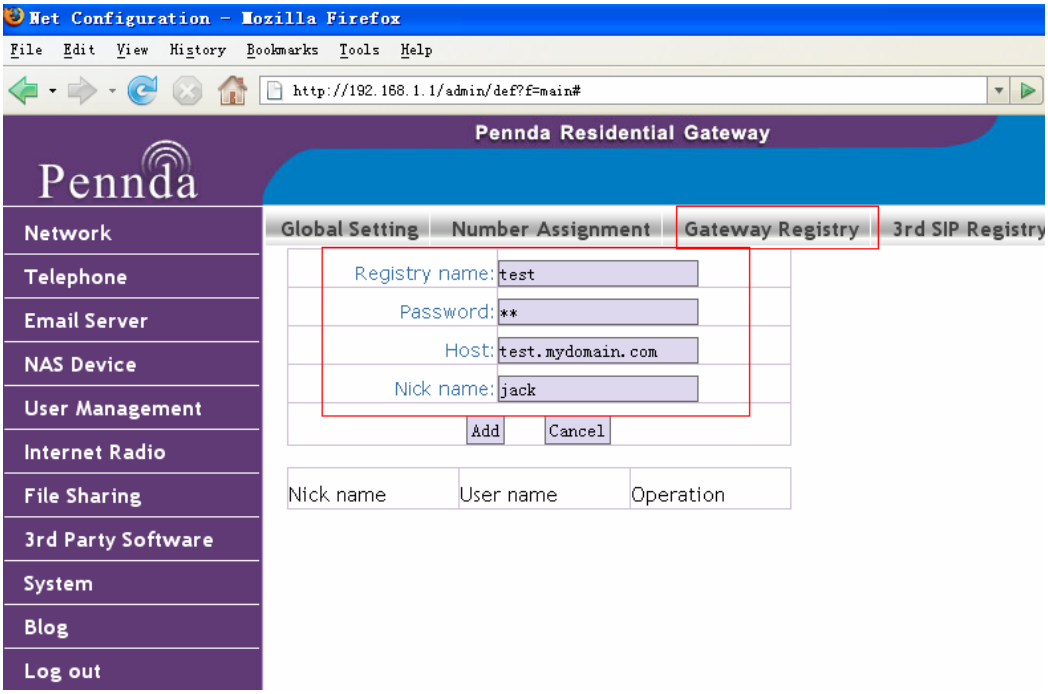
Follow the steps below to register:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface, click <Gateway Registry>.



Step Three

Enter Registry Name, Password, Host (Registry Gateway Address), Nick Name in each field. Click the “Add” button.

When the user is successfully added, the system will assign a two-digit number (range: 11 to 99) as the short number for the server gateway.

Notes:

Registry Name: the user name assigned by server gateway.

Password: the password specified by server gateway.

Host (Registry Gateway Address): the IP address or domain name of the server gateway.

Nick Name: the name specified by the administrator for a user, which will be displayed on the touch screen in the phone book of gateway.

The assigned two-digit number: the two-digit number (11-99) assigned for the server gateway by the client, used to identify the server gateway.

Step Four

Click the “Save” button to submit change.

3.8.6.3 Gateways Call Each Other

Gateways can call each other either by the nick name on the touch screen, or through the phone connected to the gateway.

- To call from the touch screen, follow the steps below:

Step One

Click the <Phone> icon on the touch screen.

Step Two

Pick up the handset of the phone connected to the gateway.

Step Three

Select the nick name that you would like to call on the user list.Click the <Dial> icon and wait for the called party to answer the call.

- To call from the phone, follow the steps below:

Step One

Pick up the handset of the phone connected to the gateway.

Step Two

Dial the two-digit short number assigned to the desired gateway.

3.8.6.4 Registered Users Change Registry Address

To ensure the successful registry after each restart of the gateway, you are highly recommended to keep the server gateway’s IP address or domain name fixed. If the IP address or domain changes, the administrator needs to inform the registered users of that, thus for them to change the registry address accordingly.

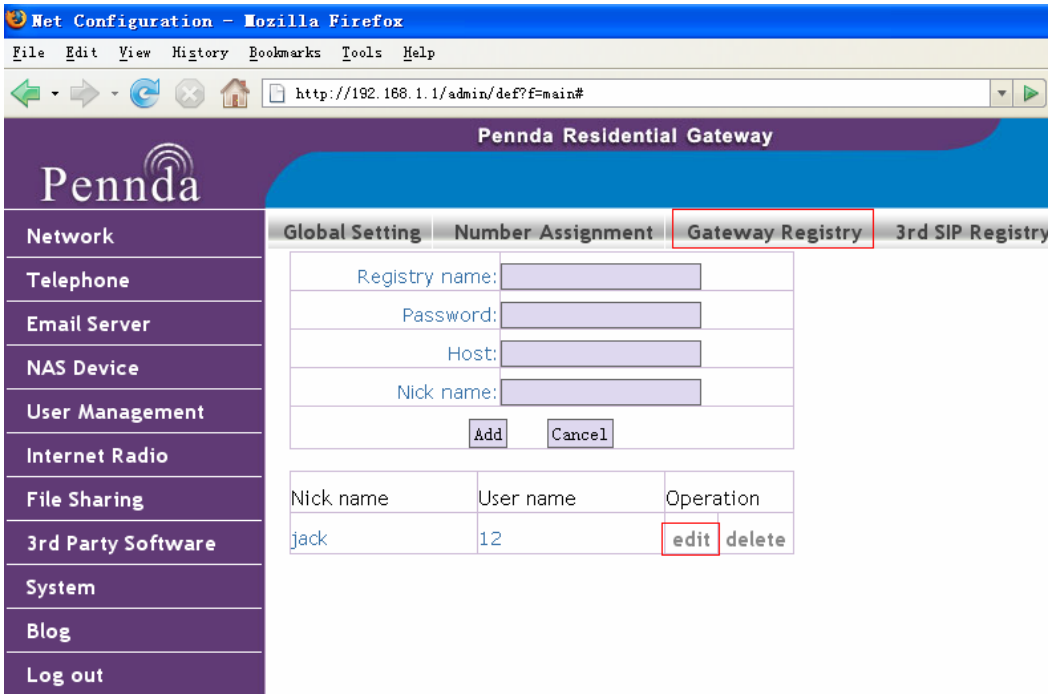
As the client gateway, take the following steps to change the registry address.

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

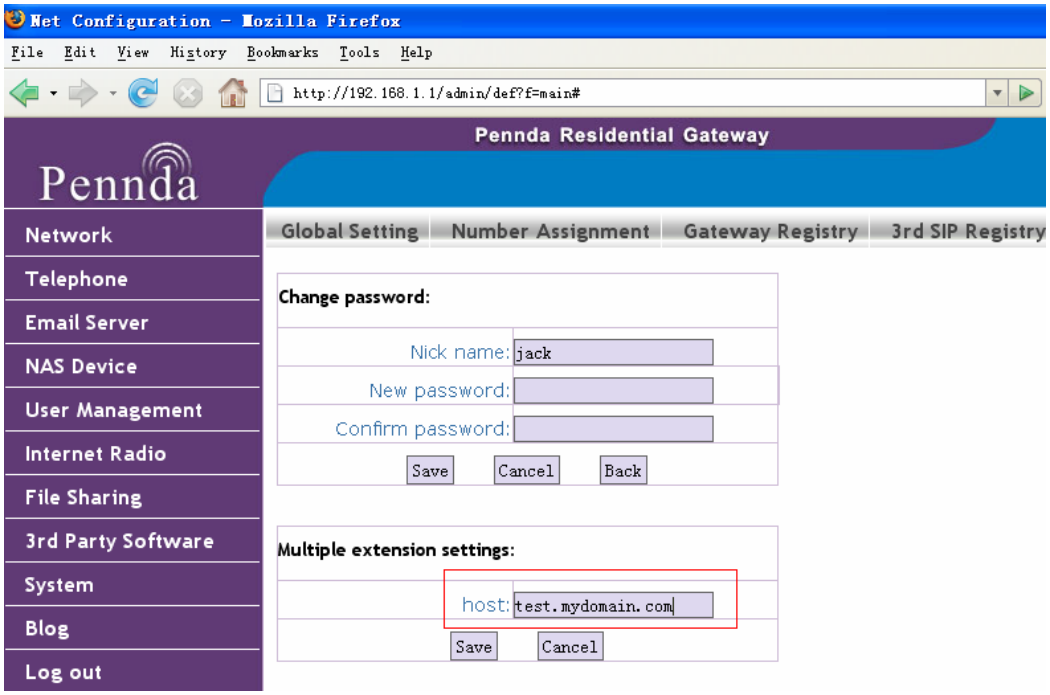
Step Two

Select <Telephone> on the web interface, click <Gateway Registry>. Click the <Edit> button after the desired server gateway’s short number.



Step Three

Change the value of Host field to the current IP address or domain name.



Step Four

Click the “Save” button to submit change.

3.8.7 Pre-conversation Message

Pre-conversation message function description: when gateways call each other, if the called gateway enables Pre-conversation message function, the caller can record a short real-time message as the ringtone of the called gateway, thus to realize personalized ringtone.

Make sure the gateways can call each other to use the Pre-conversation message function. See 3.8.5 for more info.

3.8.6.1 Pre-conversation Message Configuration

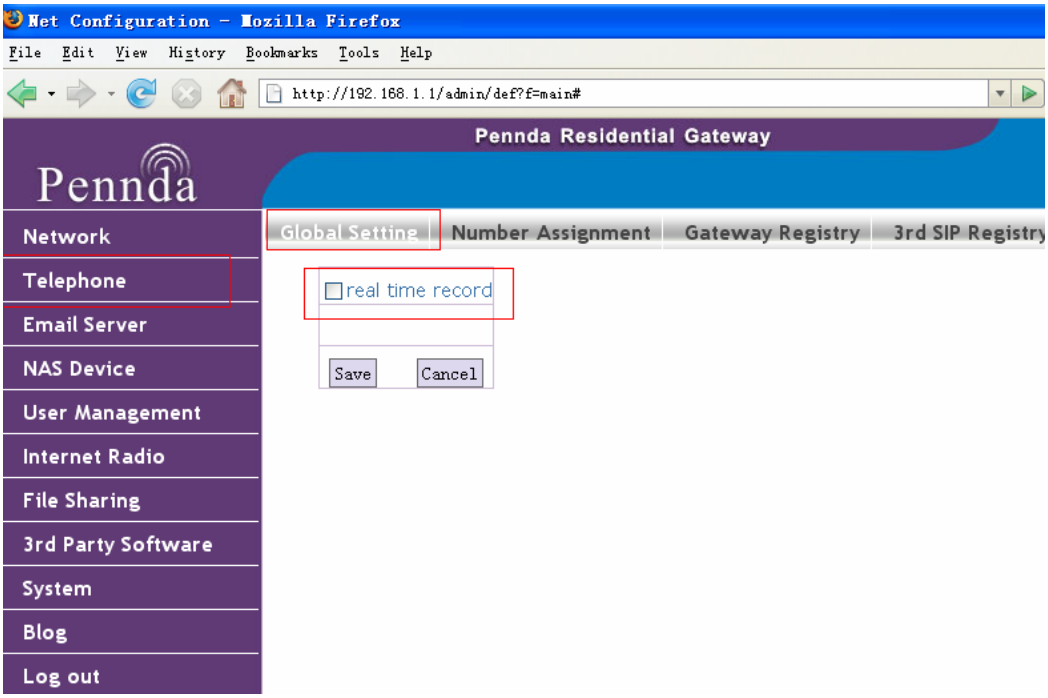
Notes: The Pre-conversation message function must be enabled by the called gateway before it can be used.

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface and click <Global Setting>.



Step Three

Tick the “real-time record” check box and click “Save to submit change.

Notes: Un-tick the check box to disable the Pre-conversation message function.

3.8.6.2 Use Pre-conversation Message

The Pre-conversation message function can be only used through the touch screen. Make sure the called gateway has enabled it before using.

Step One

Call another gateway.

Step Two

If the Pre-conversation message function is enabled on the called gateway, a prompt will pop up, indicating that you can record voice now. Click "OK" to begin the recording.

Notes: the Pre-conversation message function can only be used between gateways.
The time for recording voice is 15 seconds.

Step Three

The called gateway will play the voice recorded by the caller gateway for three times.

3.8.8 Share File during Talking-on-phone

Notes:

The share file during talking-on-phone function works between gateways only. Make sure the gateways can call each other properly.

The share file during talking-on-phone function can only realized through the touch screen.

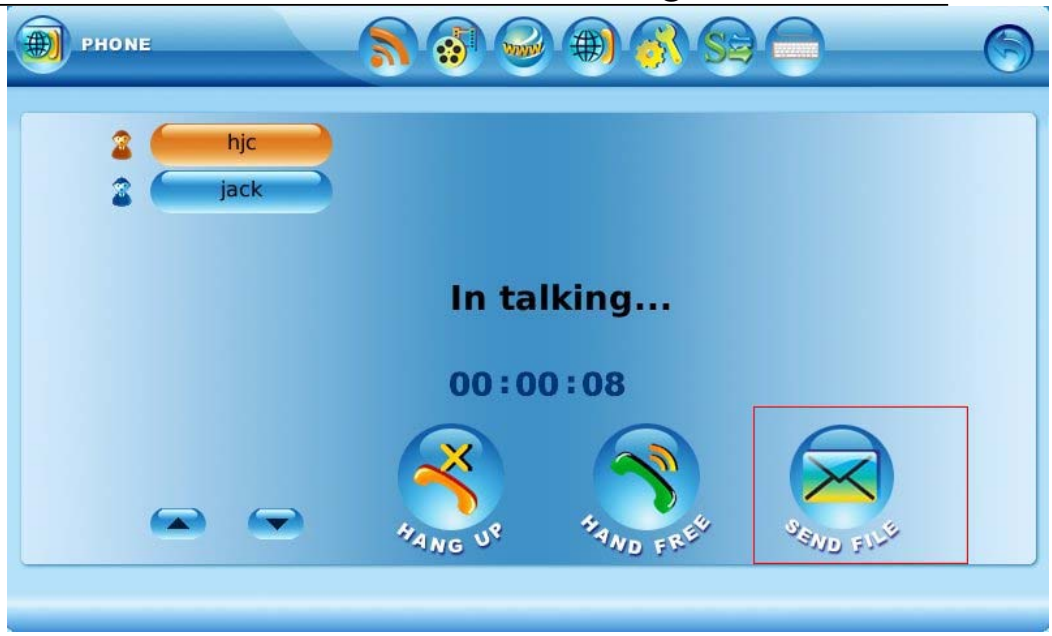
Follow the steps below to use this function:

Step One

Call another gateway.

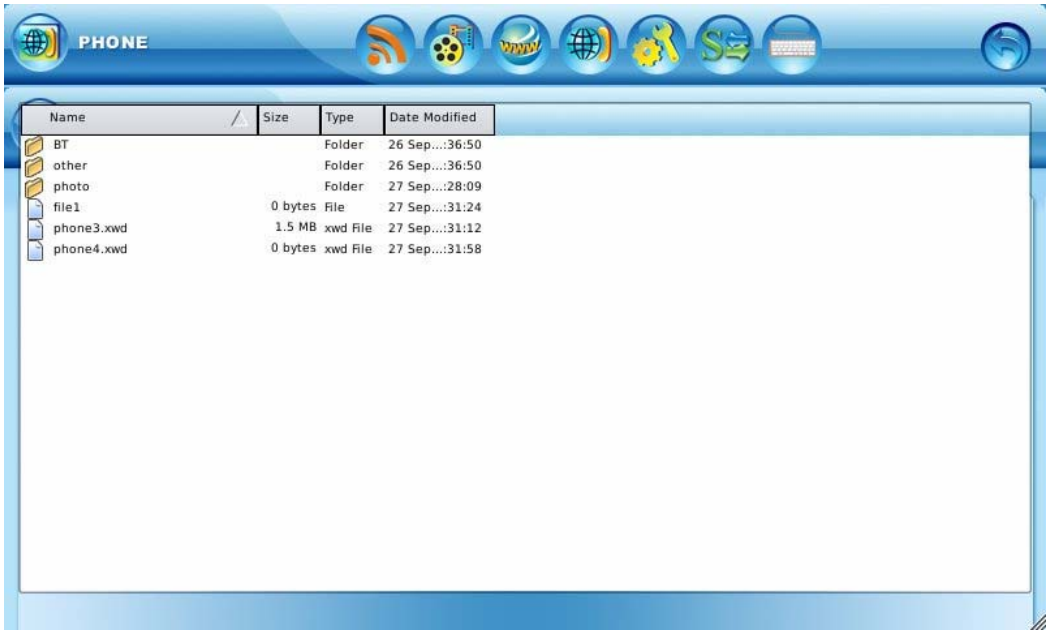
Step Two

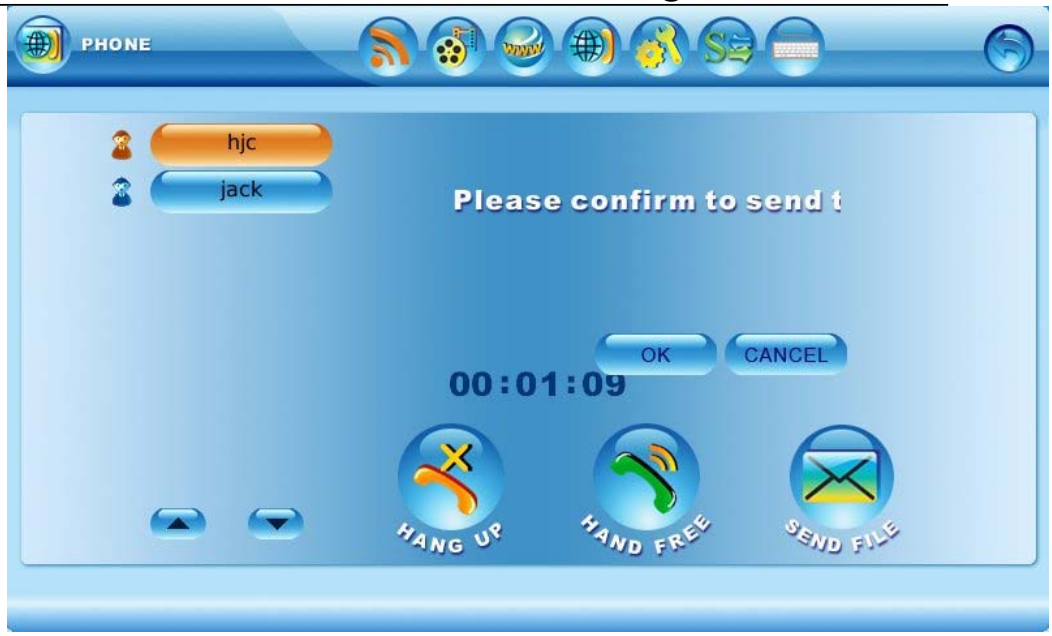
When the communication is established, either party can click the "Send File" button on the touch screen.



Step Three

Select the file to send in the file dialog box and click the “OK” button.

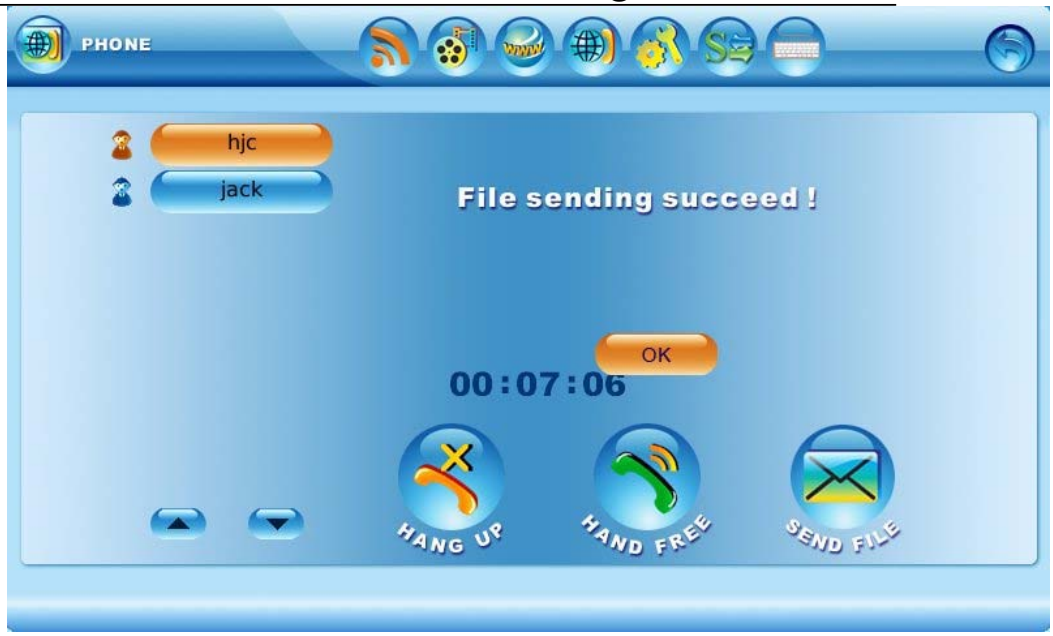




Step Four

A prompt will pop up on the other gateway's touch screen, indicating the request to transfer files. Click "OK" to begin the transfer.

The system will prompt you when the file is successfully sent.



3.8.9 Handsfree

The gateway supports handsfree function with the inbuilt speaker and microphone. This function can only be realized through the touch screen.

3.8.9.1 Call with Handsfree

Take the following steps to call with handsfree:

Step One

Select the user to call on the touch screen, click the “Handsfree” button and then click the “Dial”.

Step Two

When the called party answers the phone, the user can talk to him with the inbuilt microphone and speaker.

3.8.9.2 Answer a Call with Handsfree

The steps to answer a call with handsfree:

When there is an incoming call, click the “Handsfree” button, talk with the caller through the inbuilt microphone and speaker.

3.8.10 3rd Party VoIP

Pennda gateway supports 3rd party VoIP. It allows users to communicate with 3rd party VoIP users.

Take the following steps to use 3rd party VoIP function:

1. 3rd party VoIP configuration;
2. Call 3rd party VoIP users,

Notes: the system supports up to three 3rd party VoIP interfaces.

3.8.10.1 3rd party VoIP Configuration

Notes: before the configuration, make sure you have legal user name and password from VoIP operators.

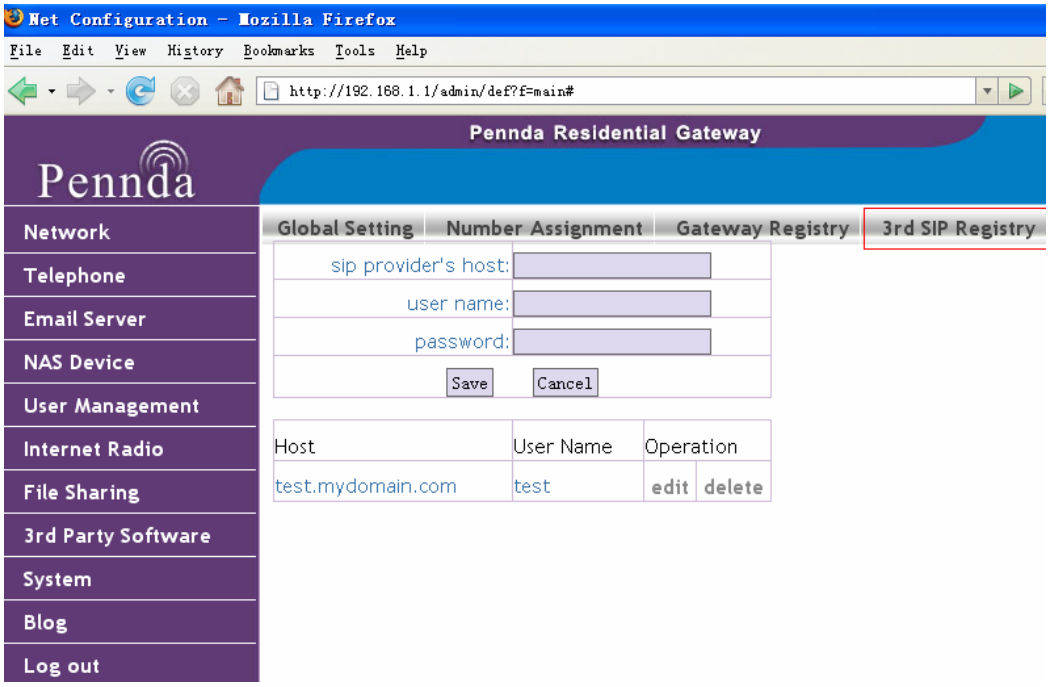
Follow the steps below to configure the 3rd party VoIP interface:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <Telephone> on the web interface and click <3rd SIP registry>.



Step Three

Enter the required parameters on the page poped up and click “Save” button.

Notes: host: VoIP operator’s domain name or IP address;

User name: the user name applied from any VoIP operator;

Password: the corresponding password from the VoIP operator;

3.8.10.2 Call 3rd Party VoIP Users

Notes: to call 3rd party VoIP users, make sure the gateway can connect to the Internet and the 3rd party VoIP interface is correctly configured. See 3.8.10.1 for more information.

When calling 3rd party VoIP users, follow the dialing rules below:

To call the first VoIP user, dial “#” + “number assigned by the VoIP operator”

To call the second VoIP user, dial “##” + “number assigned by the VoIP operator”

To call the third VoIP user, dial “###” + “number assigned by the VoIP operator”

When a 3rd party VoIP user call the gateway, the phone connected to the gateway will ring. Pick up the handset to answer the phone.

3.9 Skype Application

Pennda gateway allows users to install and use 3rd party VoIP software. Skype is now supported.

3.9.1 Install Skype

Follow the steps below to install Skype:

Step One

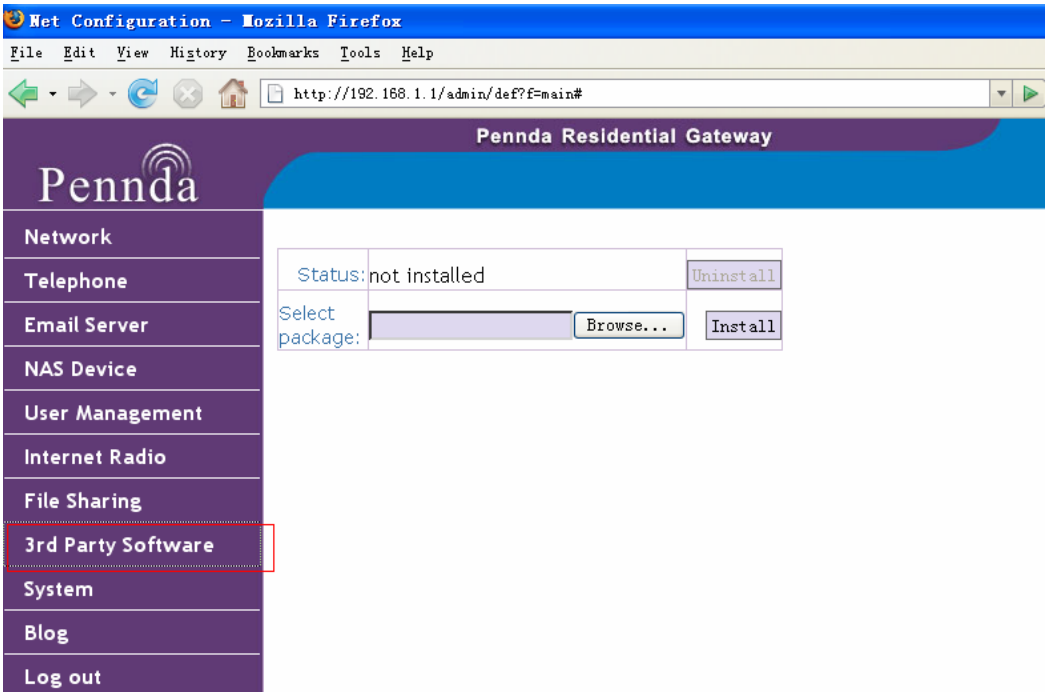
Download Skype installation package from Skype website to your PC.

Notes: The package must be static installation package (Linux version).

Step Two

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Select <3rd Party Software> on the web interface.

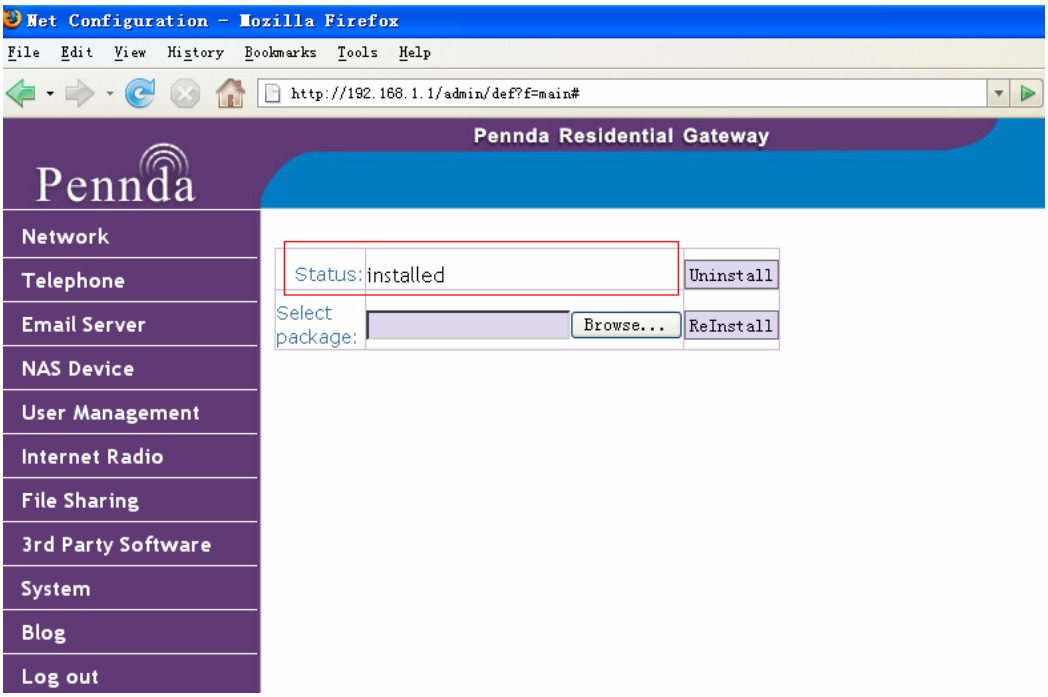


Step Three

Click “Browse…” button, go to the directory where the Skype installation package is saved, select it and click “OK” button.

Step Four

Click “Install” button to install Skype to the gateway.



Notes: when Skype is successfully installed to the gateway, the status label will indicate: installed.

3.9.2 Use Skype

Notes: before using Skype, make sure Skype is correctly installed and a phone is connected to the gateway (Currently, use the phone on phone1 port to answer Skype call.). Refer to 3.9.1 for more information on how to install Skype.

The Skype application is used through the touch screen. Follow the steps below to use it:

Step One

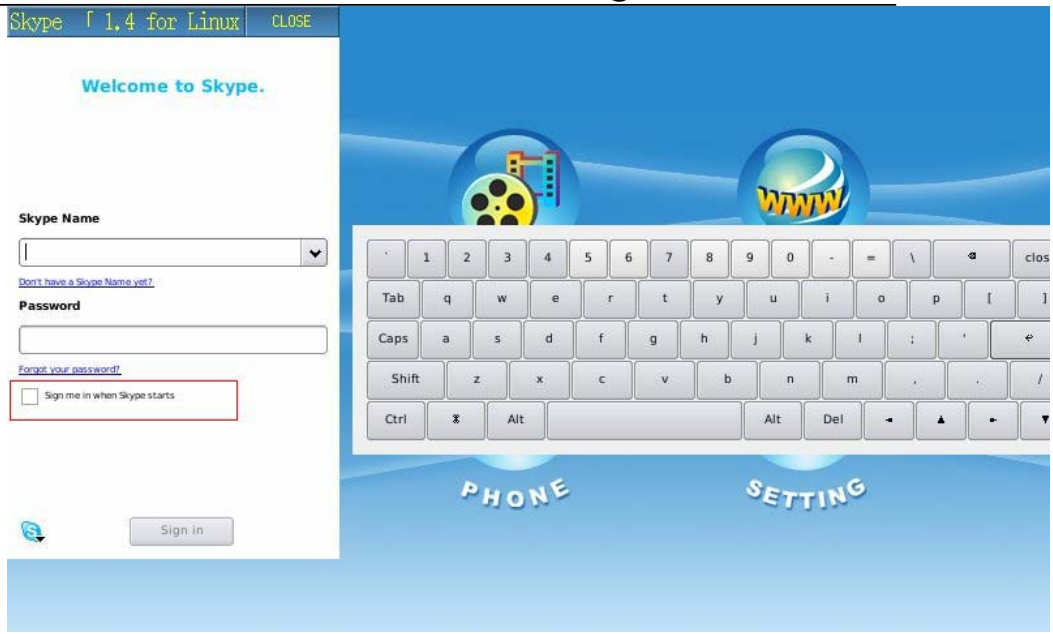
Click <3rd Software> icon on the screen.

Notes: the gateway supports Skype only as 3rd party software.

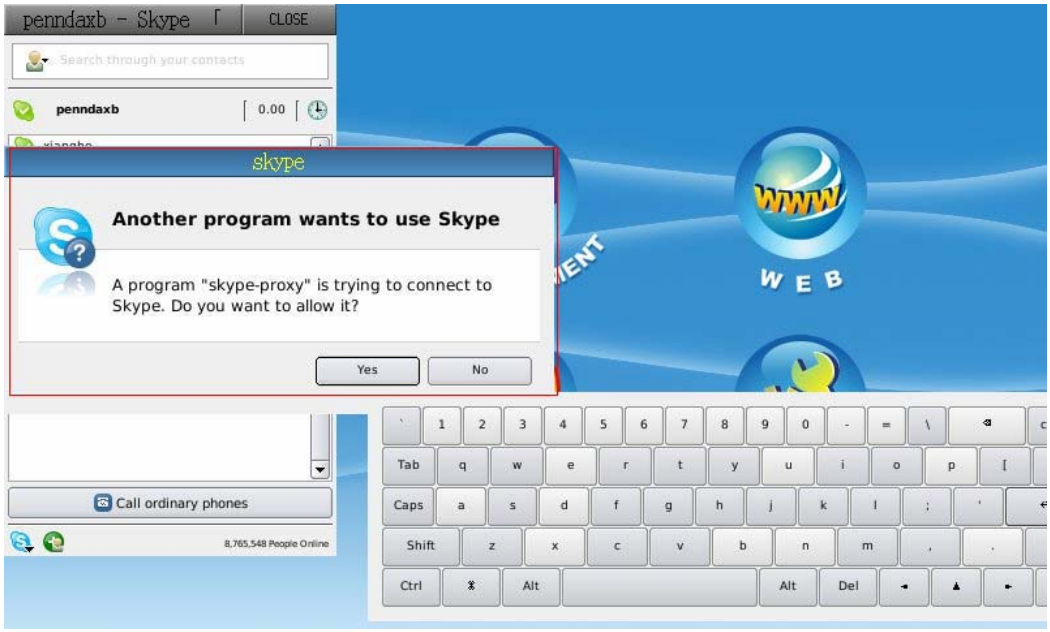
Step Two

The Skype log on interface will pop up. Users can use the soft keyboard to input the Skype account and password to log on.

(For the first logon, the Skype End User License Agreement will pop up. Just click the <Accept> button)



Notes: users are recommended they tick "Log on automatically" check box, so that they do not need to re-log on every time the gateway restarts.



At the first logon, the above prompt will pop up. Just click the <Yes> button.

Step Three

To call your Skype friends, click the desired user icon and make a call. After your friend answers the call, pick up the handset of the phone connected to the gateway's phone1 port.

Step Four

To receive a call:

When there is an incoming call, click the “Answer” button on the touch screen and pick up the handset of the phone connected to phone1 port to answer the call.

Use the shortcut button on the above of each sub-interface to hide/display Skype.

Step Five

Call mobile phone or fixed phone numbers with Skype: if your account has enough Skype credit, you can call mobile phone or fixed phone numbers with Skype on our gateway.

3.10 BT Download

Pennda gateway supports BT download. Schedule the download task on your PC and the gateway will perform the task automatically.

3.10.1 Seed File Upload

To use the BT download function, you must first upload the seed file of the file to download to the sharing folder of the gateway.

Follow the steps below to upload seed file:

Step One

Search and download BT seed file (extension: torrent) on the Internet.

Step Two

Upload the seed file to the gateway' BT folder in the sharing folder directory. Refer to 3.6.2 for more information on how to access the sharing folder.

3.10.2 BT Download

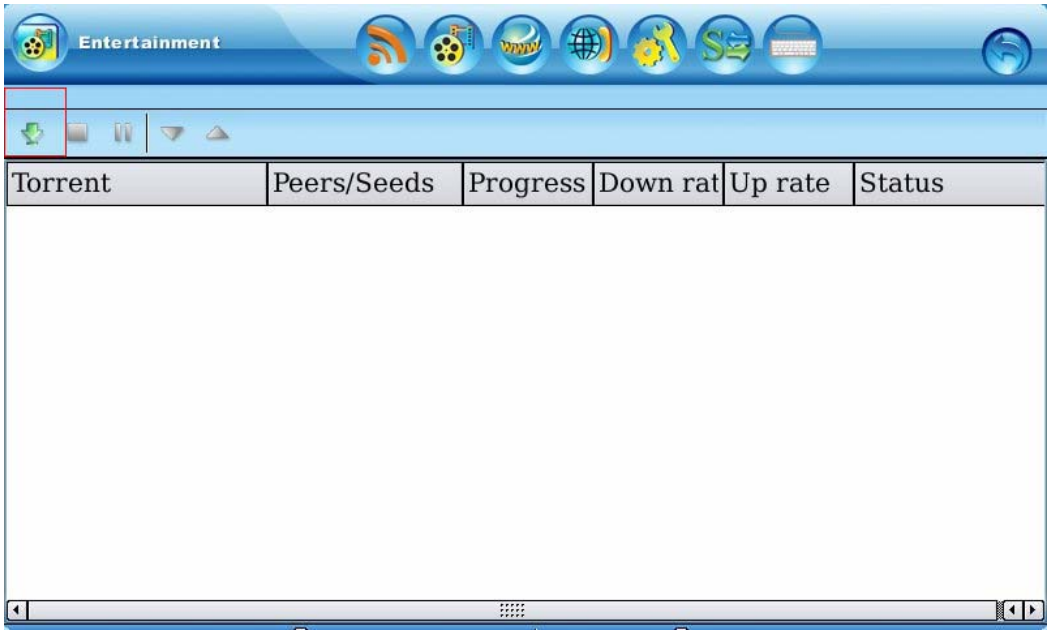
The gateway's BT download is performed on the touch screen. See steps below:

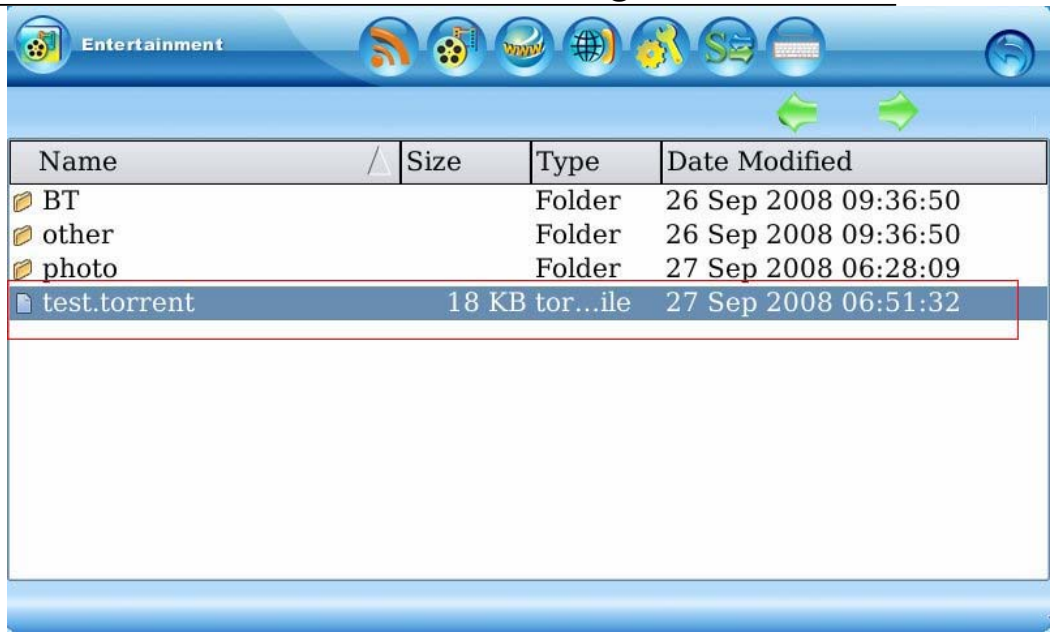
Step One

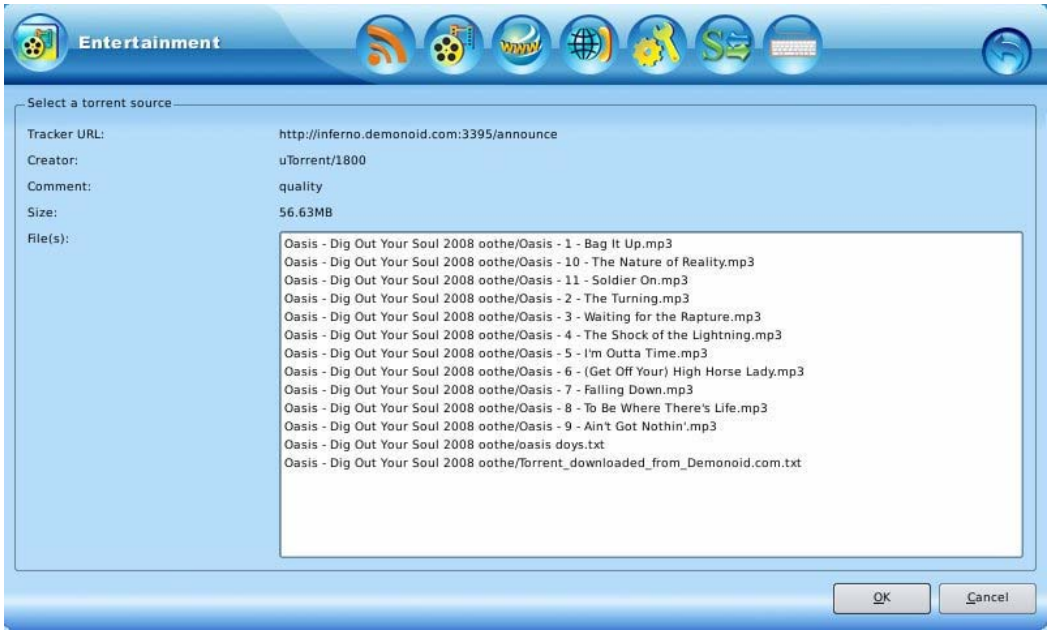
One the touch screen, click <Entertainment> - <BT DOWNLOAD >

Step Two

Select the desired seed file and click “OK” button.





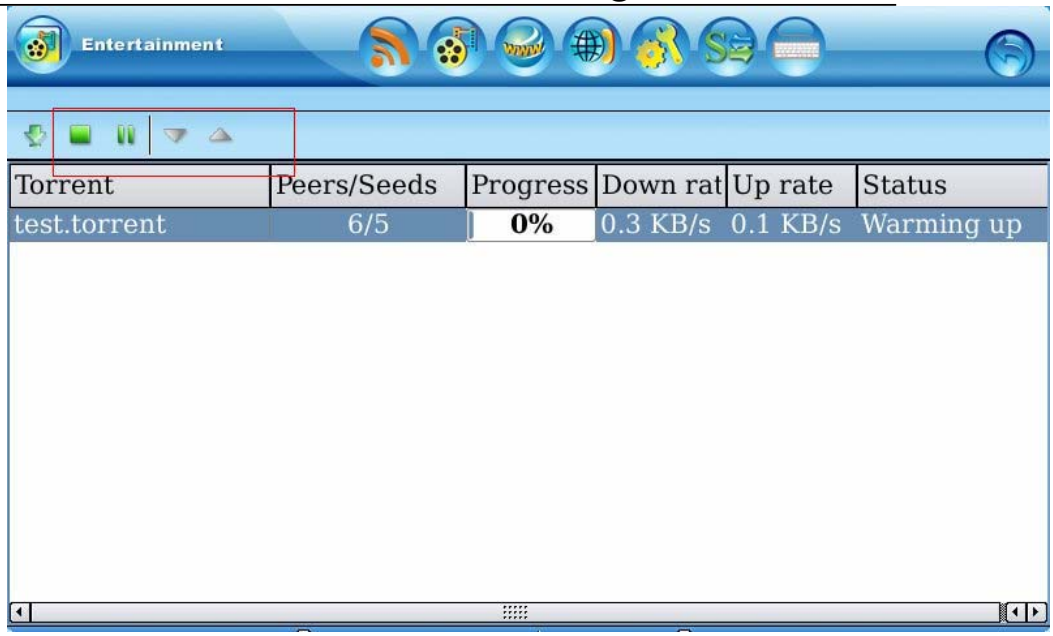


Notes

1. Make sure you have uploaded seed files to the USB HDD attached to the gateway. Otherwise, you will not be able to select any seed file.
2. The file to be downloaded will be stored in the same directory with the seed file.

Step Three

The downloading process can be paused.



Step Four

The downloading process can be stopped.

Step Five

The user can adjust the priority of each downloading process when necessary.

3.11 Video Play

Notes: the video files stored in the USB storage or under the sharing directory of the gateway can be played. Currently the system supports MPEG-4, AVI, XviD and WMV format.

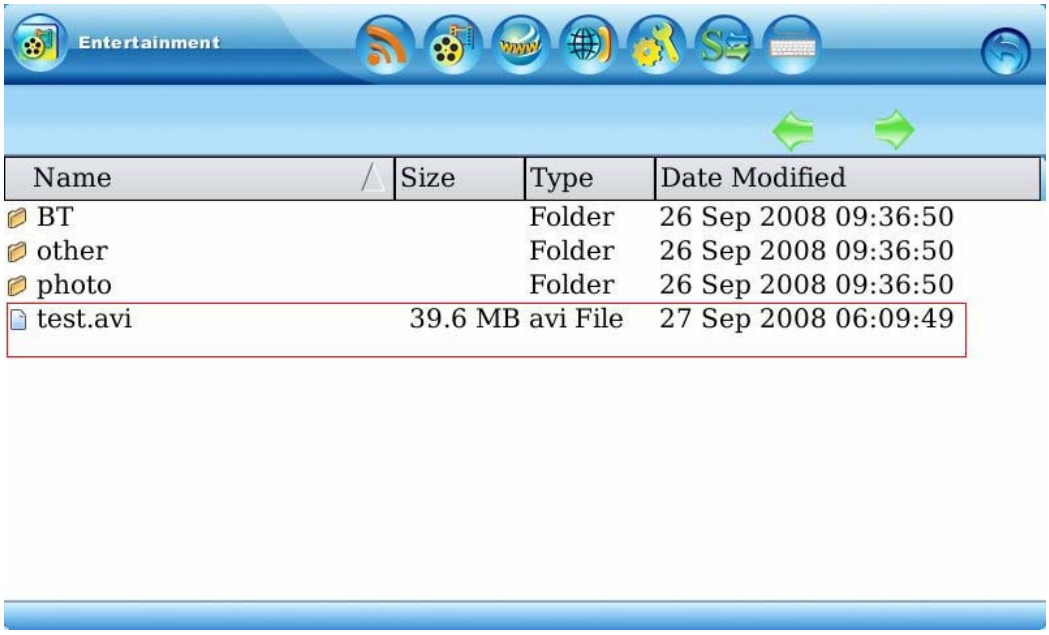
Take the steps below to play video:

Step One

On the touch screen, click <Entertainment> - <Video>.

Step Two

Select the video file.



3.12 Digital Photo Frame

Notes: the digital photo frame can browse the pictures in the sharing directory of the gateway or the pictures on the attached USB storage.

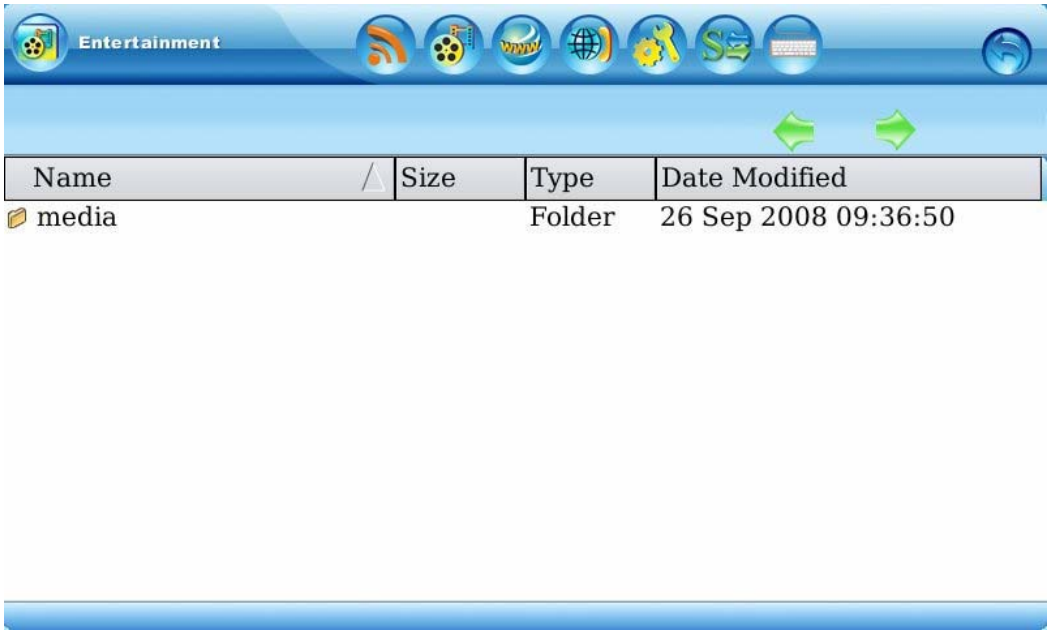
Take the steps below to browse pictures:

Step One

On the touch screen, click <Entertainment> - <Digital Photo Frame>

Step Two

Select the device with digital photos stored in the device list poped up.

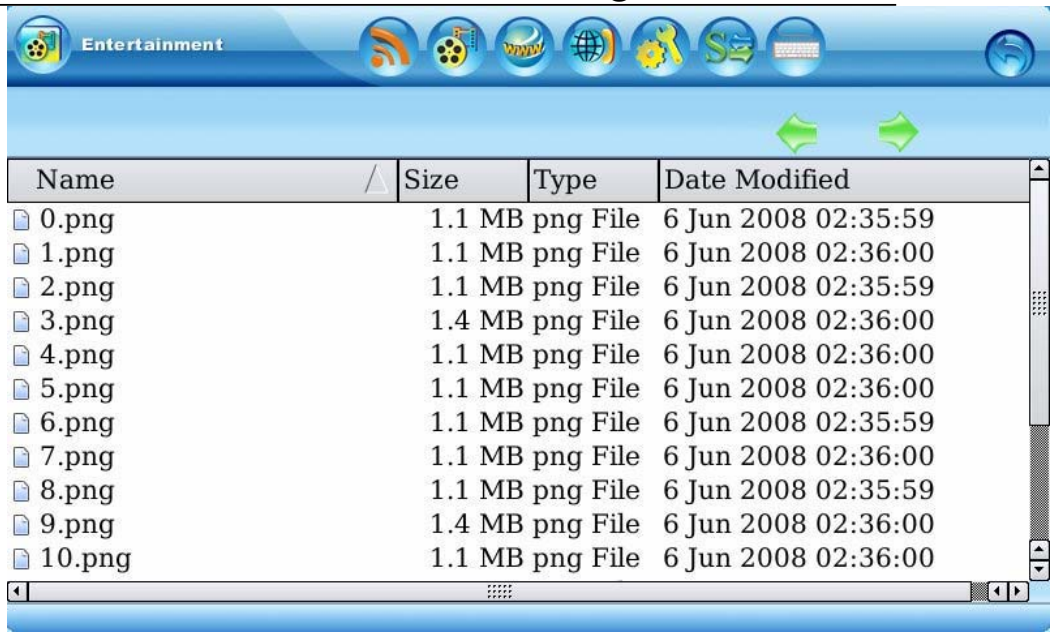


Step Three

Select the folder with digital photos stored in the folder list poped up.

Step Four

Click any of the photo and the photos in the folder will all be displayed repeatedly.



Step Five

Click on the center of the touch screen to change the display mode to manual play. Click again to turn to repeat play.

Step Six

Click on the left/right part of the touch screen to display the previous/next photo.

Step Seven

Click on the lower right corner of the touch screen to return to the photo selection screen.

3.13 Internet Radio

Pennda gateway supports Internet radio. Users can choose their interested Internet radio stations and listen to them through our gateway.

3.13.1 Configure Internet Radio

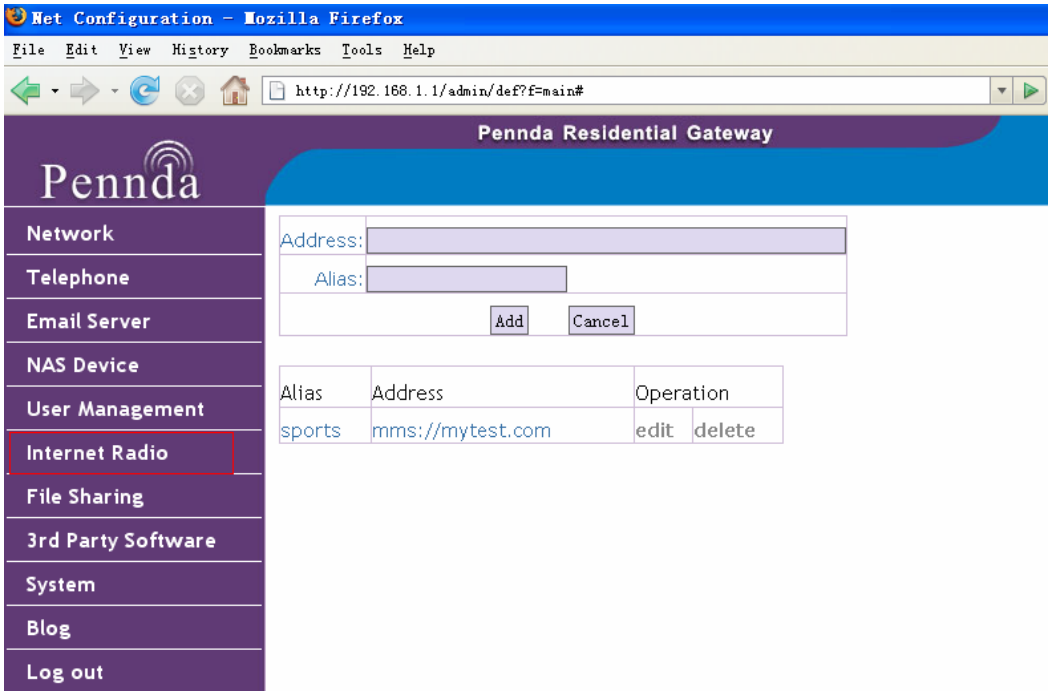
Take the steps below to configure the Internet radio:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

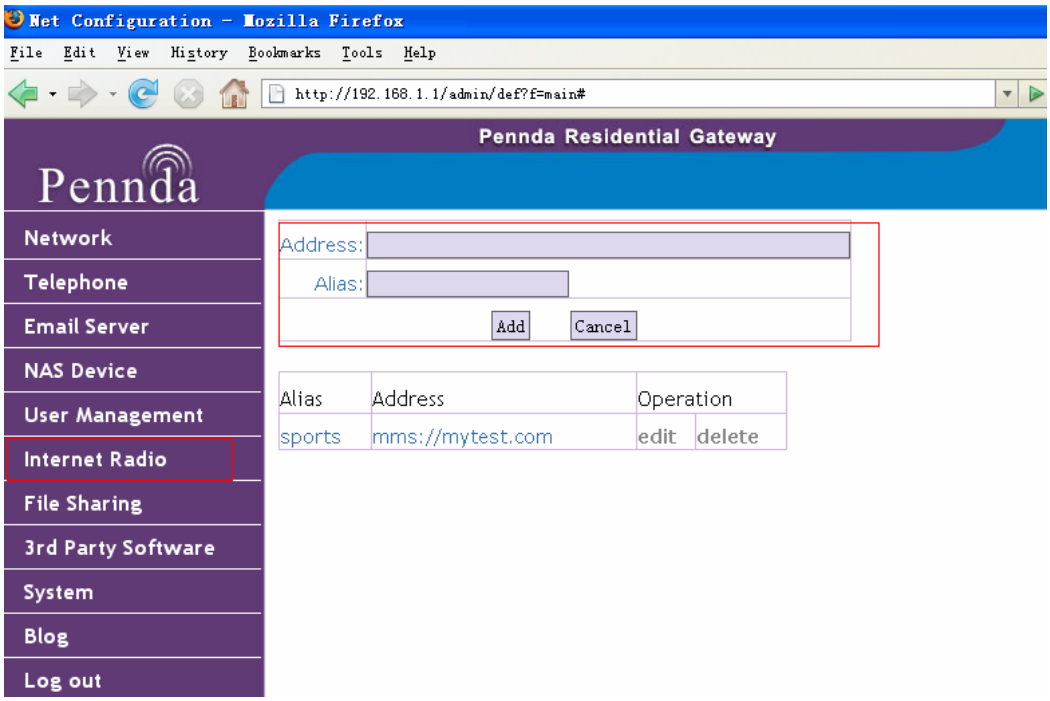
Step Two

Select <Internet Radio> on the web interface.



Step Three

Find your interested Internet radio address with search engines, define the radio alias and click the “Add” button.



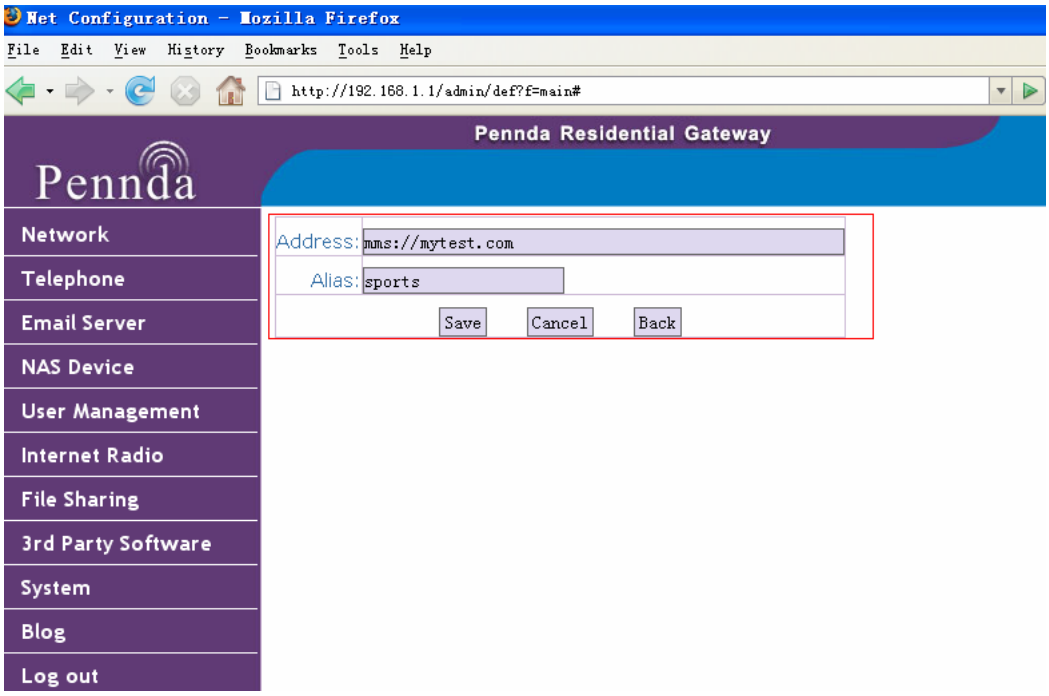
Notes: the gateway supports only Internet radio addresses that are in MMS format;

You are allowed to add up to 7 Internet radio addresses.

The radio alias will be displayed on the touch screen.

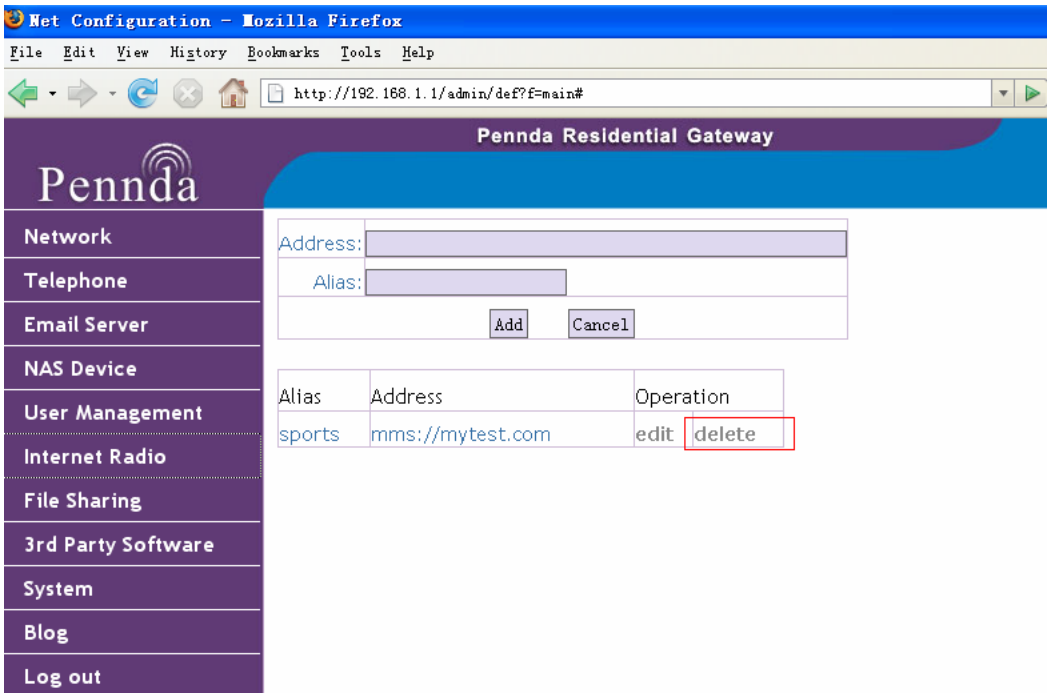
Step Four

To edit the Internet radio that already exists, click the "Modify" button after each entry. The users are allowed to edit both the address and the alias.



Step Five

To delete the Internet radio that already exists, click the "Delete" button after each entry.



3.13.2 Listen to Internet Radio

Users can listen to the Internet radio by using the touch screen.

Follow the steps below to listen to it:

Step One

Make sure you have added Internet radios. Refer to 3.14.1 for more information on how to add Internet radios.

Step Two

On the touch screen, click <Entertainment> - <Radio> icon, click the related Internet radio number to play it.

Step Three

Users are free to decide when to stop the radio.

3.14 Personal Blog

Pennda gateway allows users to build their own personal blog website, which makes users no longer to be constrained to the space of the server rented. What's more, it's more convenient for them to maintain the blog contents when necessary.

Notes: to use the personal blog function, make sure the gateway must be able to access the Internet and has a legal domain name. Otherwise the function will not work. Refer to 3.4 for more information on domain name configuration.

3.14.1 Browse Personal Blog

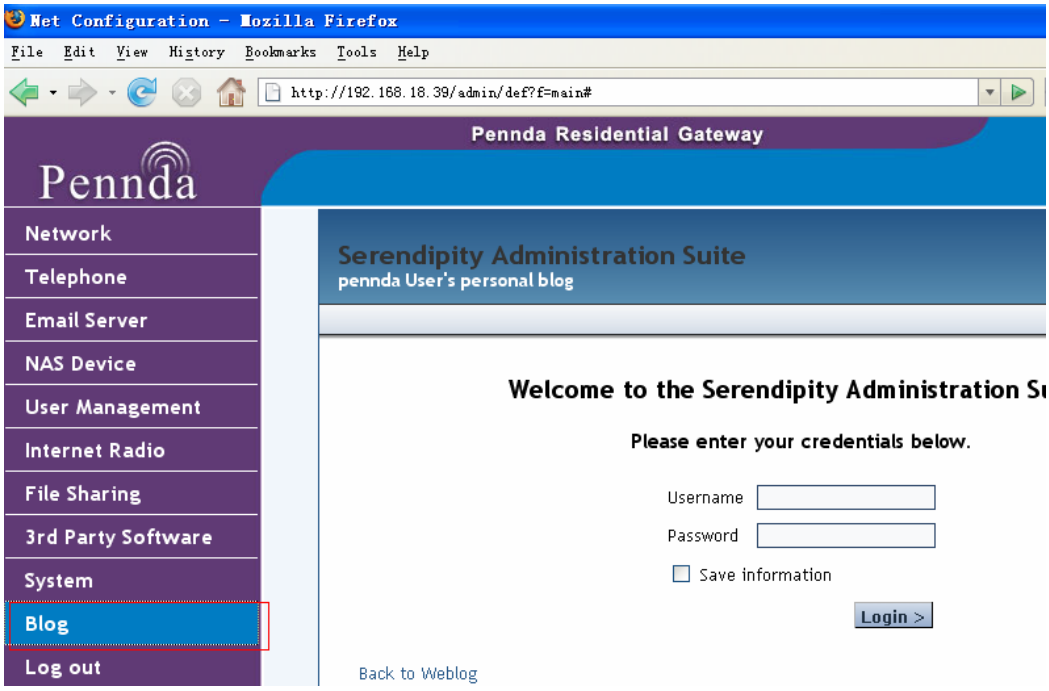
When the gateway is connected to the Internet, any user from the Internet can access your personal blog website.
Access the personal blog with the same method as accessing ordinary websites. Just enter the domain name of the gateway. For example: www.pennda.com

3.14.2 Manage Personal Blog

The gateway administrator is free to manage the personal blog website when necessary.

The management operation of the personal blog includes: Personal Settings, New Entry, Edit Entry, Comments, Categories, Add Media, Media Library and Configuration.

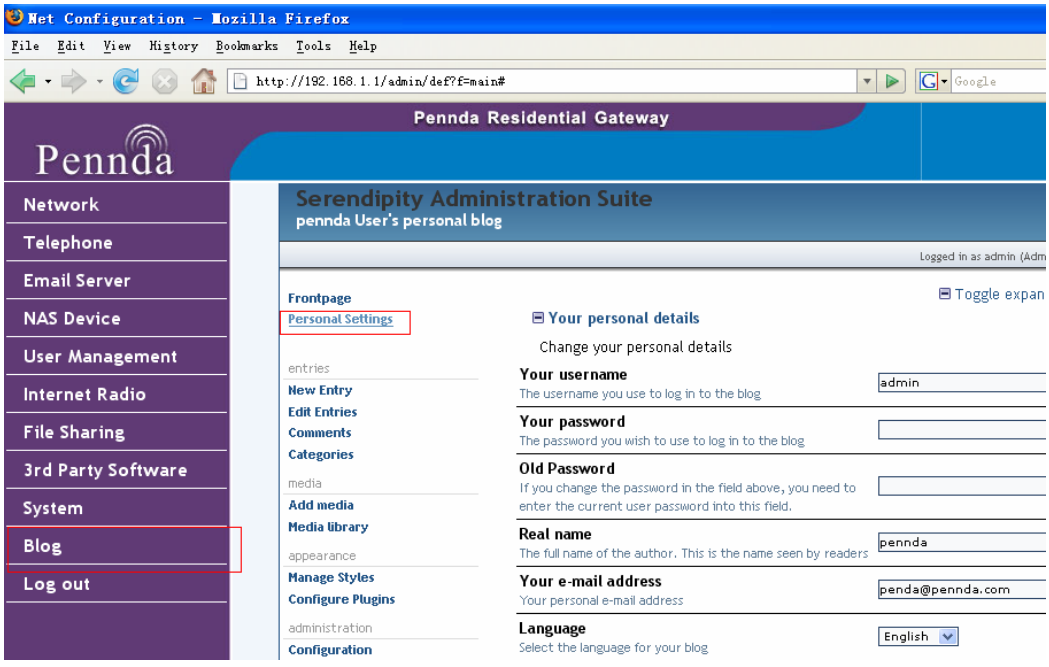
To enter the personal blog management web interface, follow the steps below:
Step One
Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.
Step Two
Select <Blog> on the web page.



Notes: default username/password: admin/admin

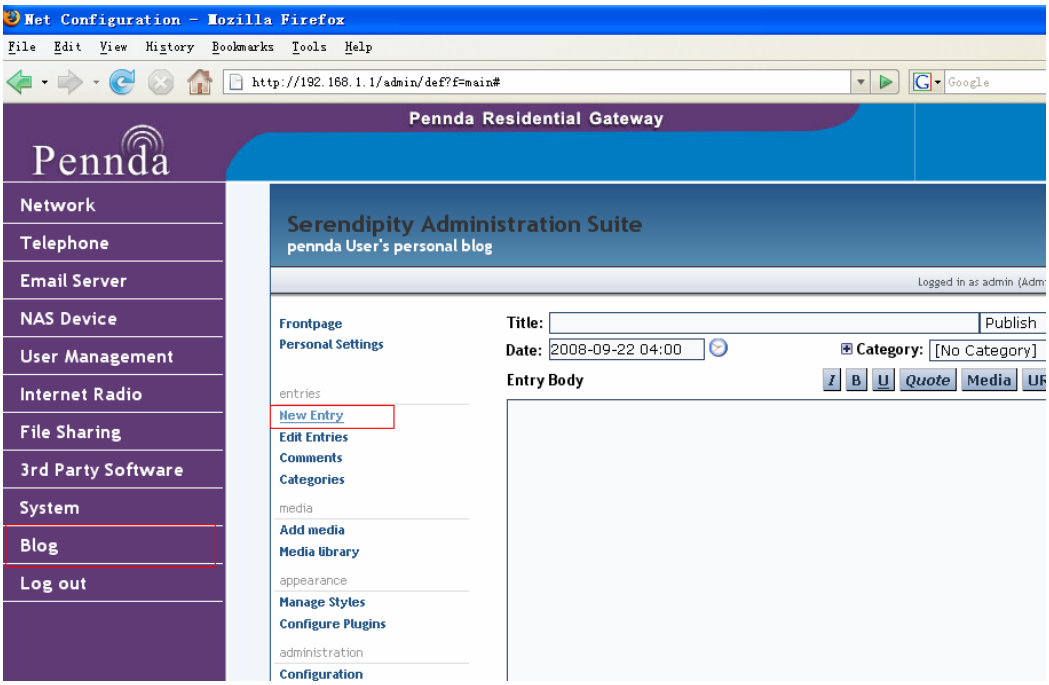
3.15.2.1 Personal Settings

On the Personal Settings web page, the administrator can manage his/her own password.

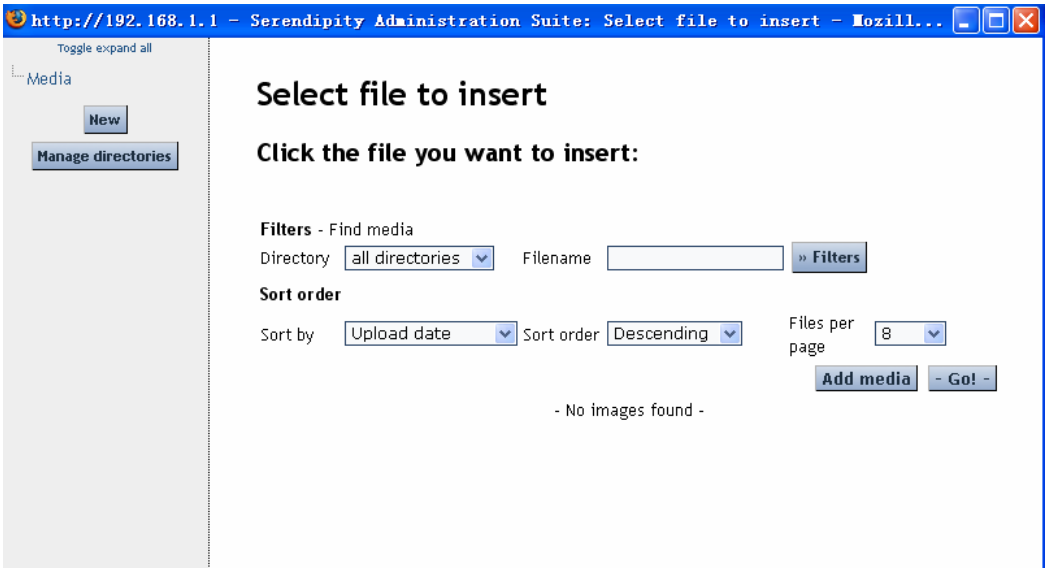


3.15.2.2 New Entry

On the New Entry web page, the administrator can add contents to the blog.

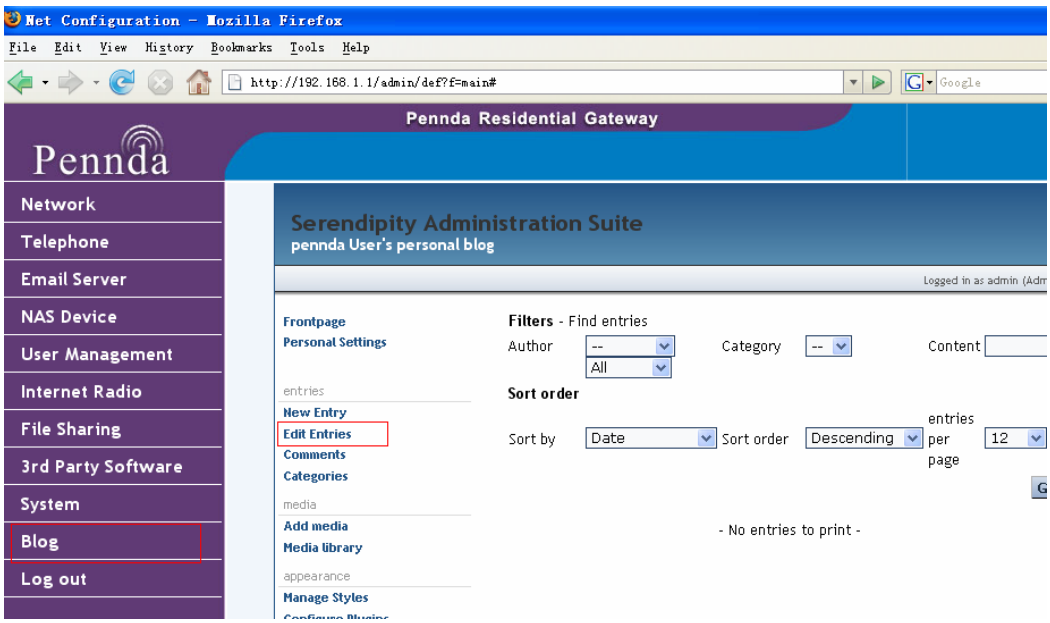


You can add media when adding contents by clicking the “Media” button on the figure above..



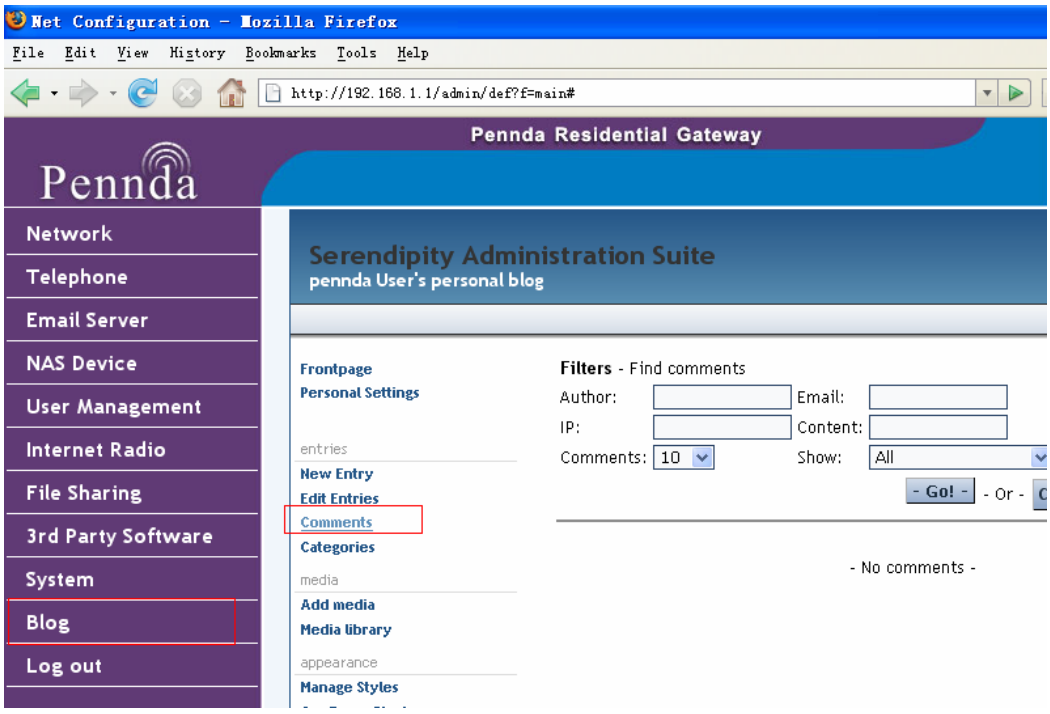
3.15.2.3 Edit Entry

On the Edit Entry web page, the administrator can modify the blog contents.



3.15.2.4 Comments

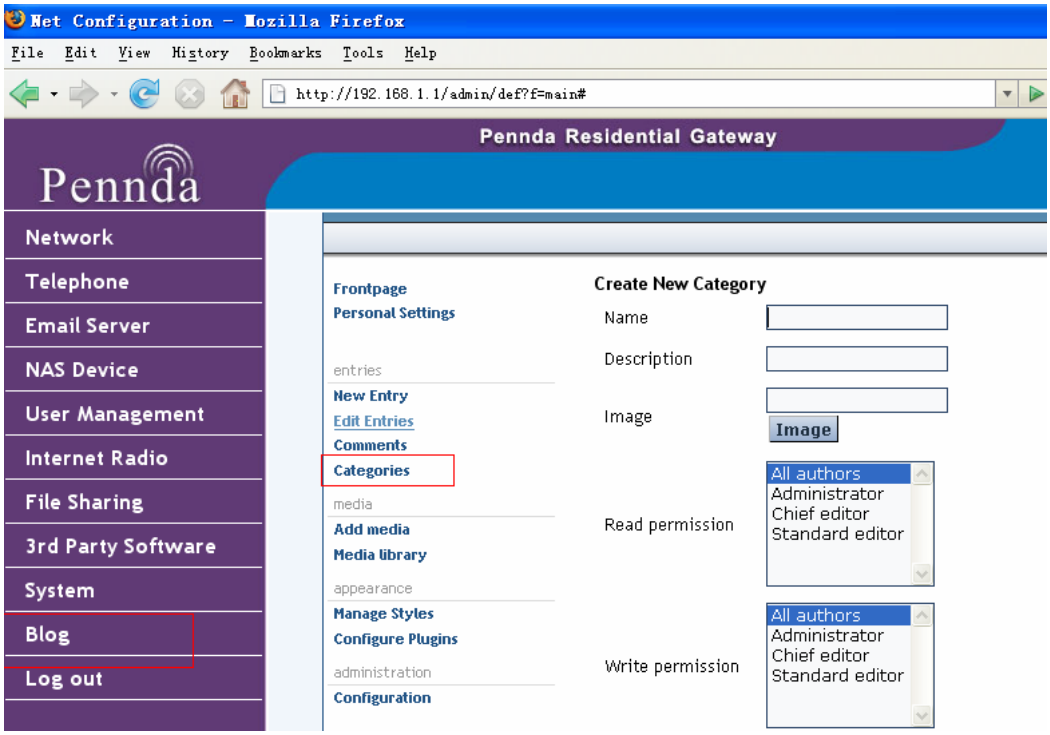
On the Comments web page, the administrator can manage the comments on related blog contents.



3.15.2.5 Categories

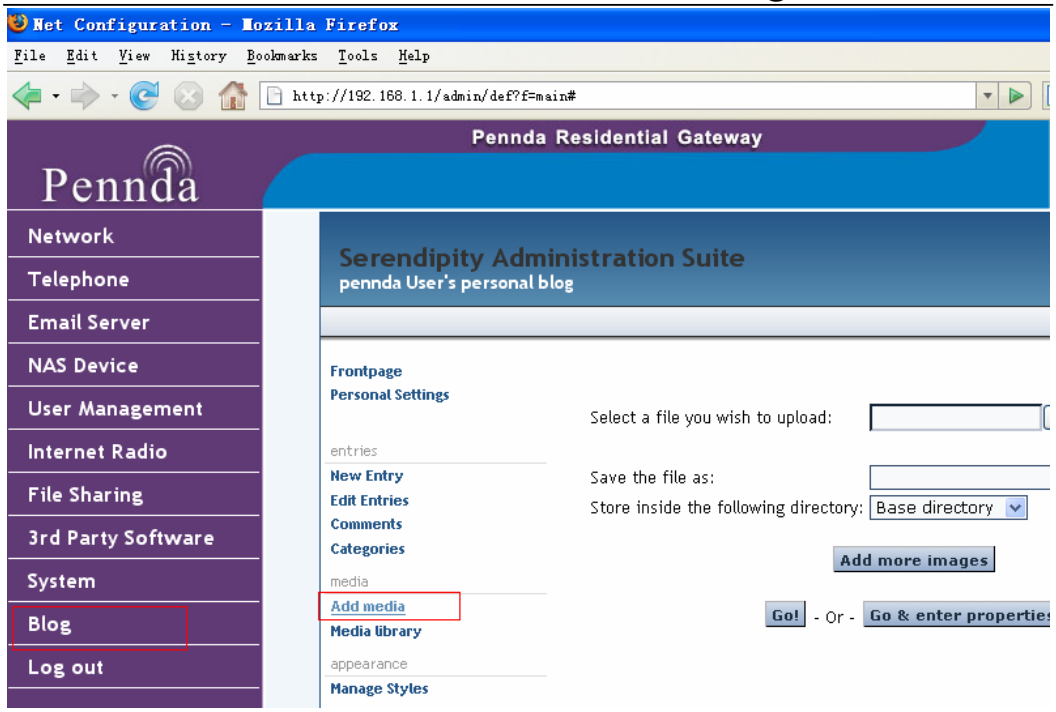
On the Categories web page, the administrator can manage the classification of the blog.

He/she is free to create various classifications to organize the blog contents.



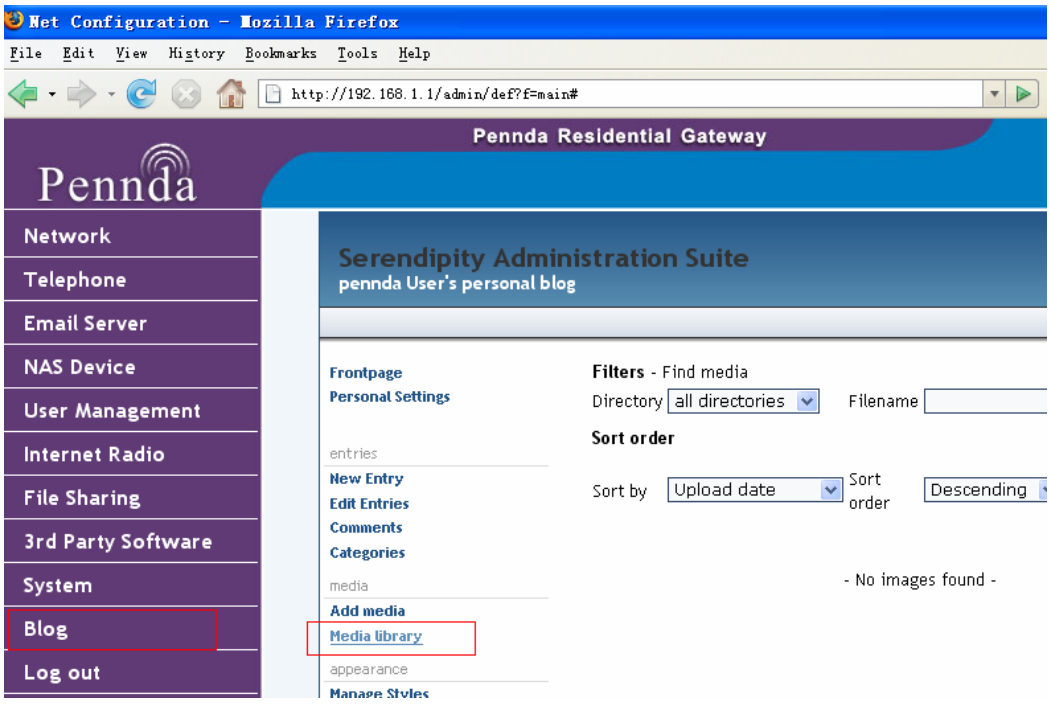
3.15.2.6 Add media

On the Add media web page, the administrator can add photos to the blog.



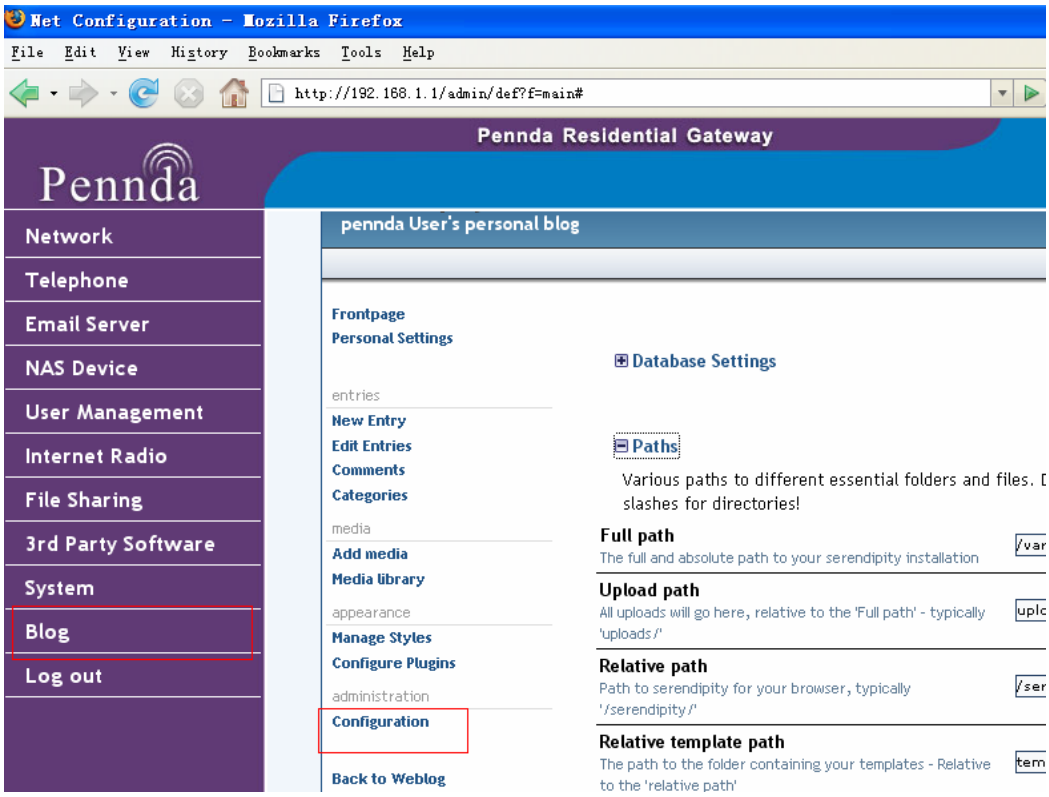
3.15.2.7 Media library

On the Media library web page, the administrator can manage his/her own photo library.



3.15.2.8 Configuration

On the Configuration web page, the administrator can configure the domain name/IP address of the blog.



3.15 USB Storage Copy

Pennda gateway supports USB storage (For example, digital camera, mp3, flash drive, USB HDD etc) copy function. It enables users to copy files from one USB device to another.

With this function, you can copy files on the USB storage to the attached HDD of the gateway, thus, other users can share the files.

Follow the steps below to copy USB storage contents:

Step One

On the touch screen, click <Entertainment> - <USB Copy>.

Step Two

Select the source USB device to copy files on the screen.

Notes: due to format compatibility reason, the gateway doesn't support some old USD devices. As a result, the gateway may not be able to recognize your USB devices.

Step Three

Choose the files/folders to copy on the USB device and click "Copy" icon.

Step Four

Select the destination USB device to save files.

Step Five

Select the directory to save the files and click "Paste" icon. The system will copy the source files/folders the user has chosen to the destination folders.

3.16 User Management

Pennda user management function enables the administrator to add, modify and delete users and to control the FTP privilege, email privilege and network storage privilege of the users.

3.16.1 Add User

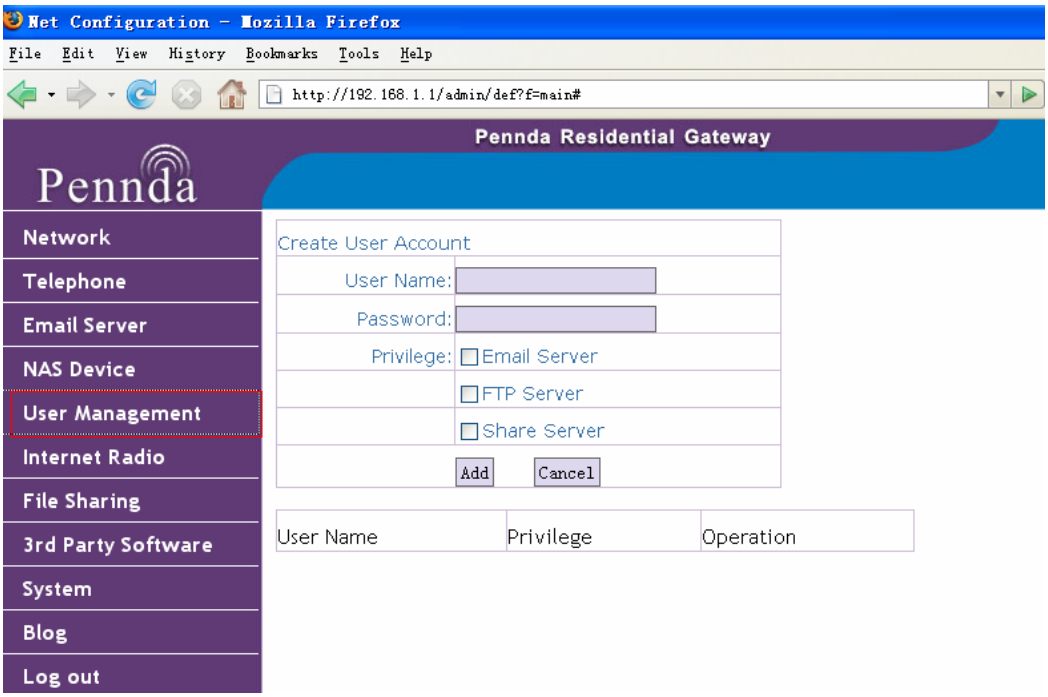
Follow the steps below to add a user:

Step One

Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

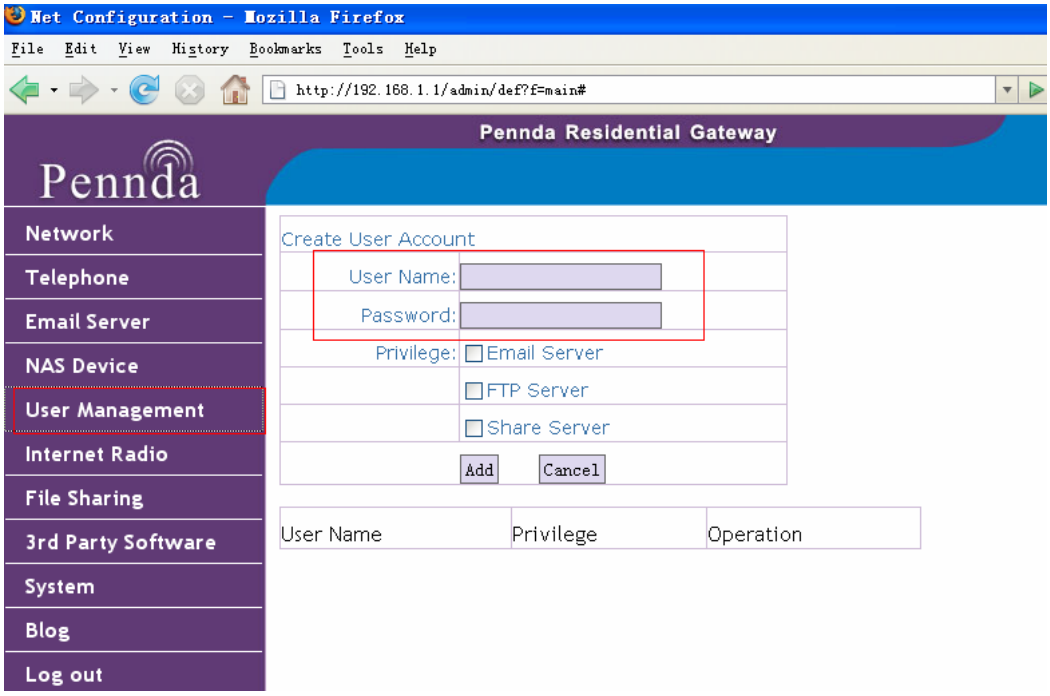
Step Two

Select <User Management> on the web interface.



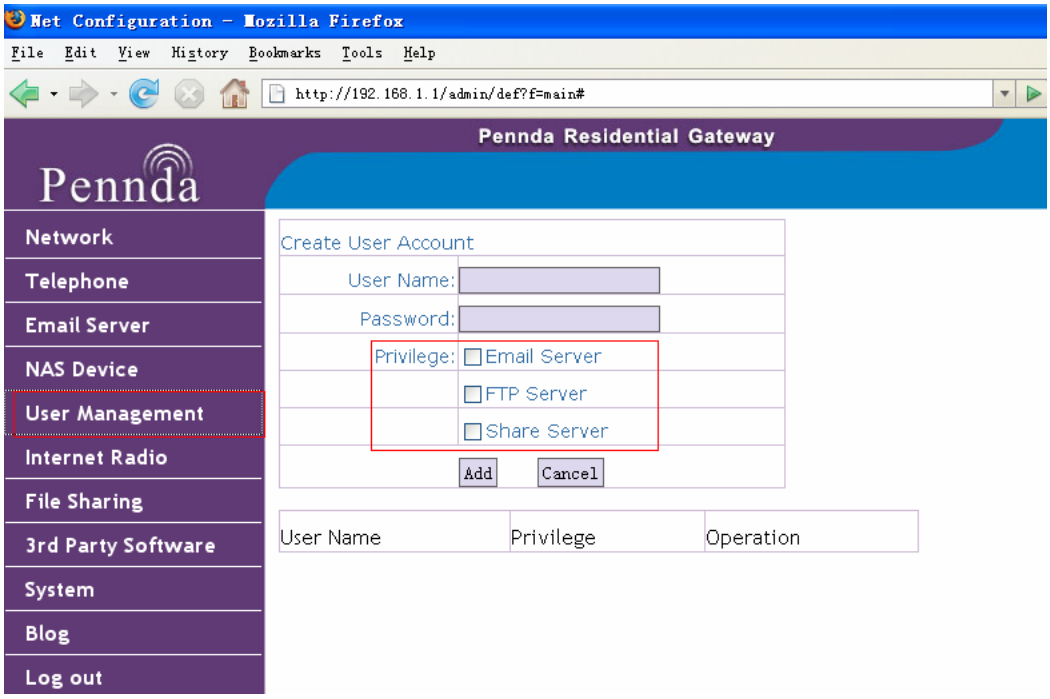
Step Three

Enter user name and password.



Step Four

Tick the check box to assign corresponding privilege to the user and click "Add" button.



Notes: Only when the user is assigned certain privilege, will he/she be able to use the corresponding function of the gateway.

Privileges that can be assigned:

Email Server: when the user is assigned this privilege, he/she is able to receive/send email through the gateway.

FTP Server: when the user is assigned this privilege, he/she is able to access the sharing folder of the gateway from the Internet via FTP.

Sharing Server: when the user is assigned this privilege, he/she is able to access the gateway as a network storage device.

3.16.2 Delete User

Follow the steps below to delete a user:

Step One

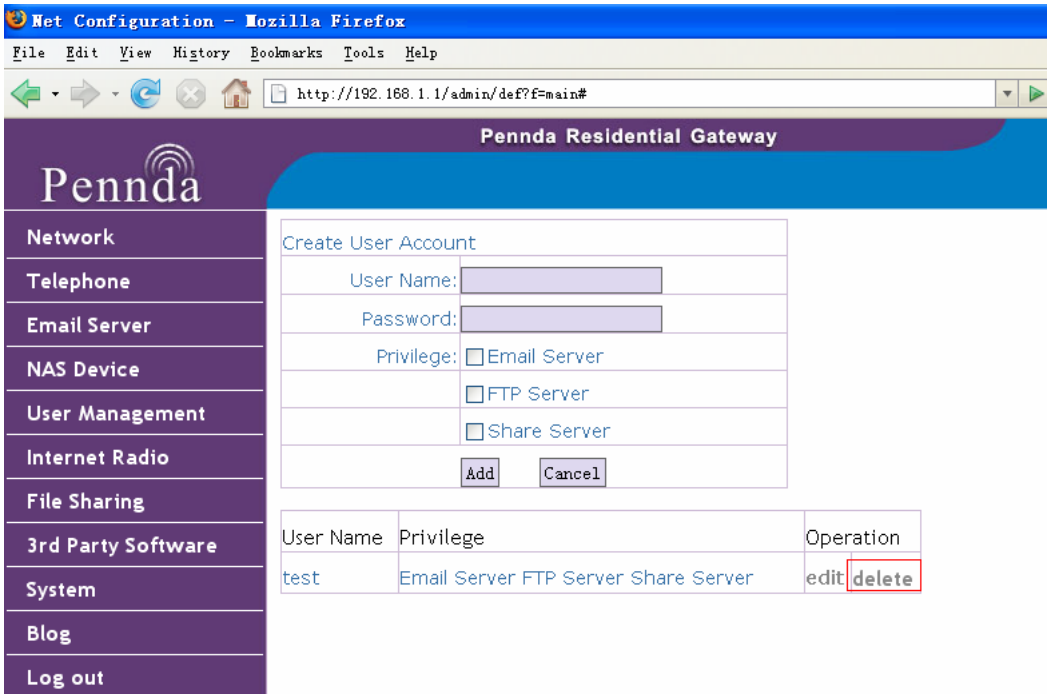
Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

On the web interface, select <User Management>.

Step Three

Select the user to delete and click “Delete” button.



Notes: if a user who has been assigned email server privilege is deleted, the corresponding email will be deleted too.

3.16.3 Modify User

To modify the privilege, password of a user, follow the steps below:

Step One

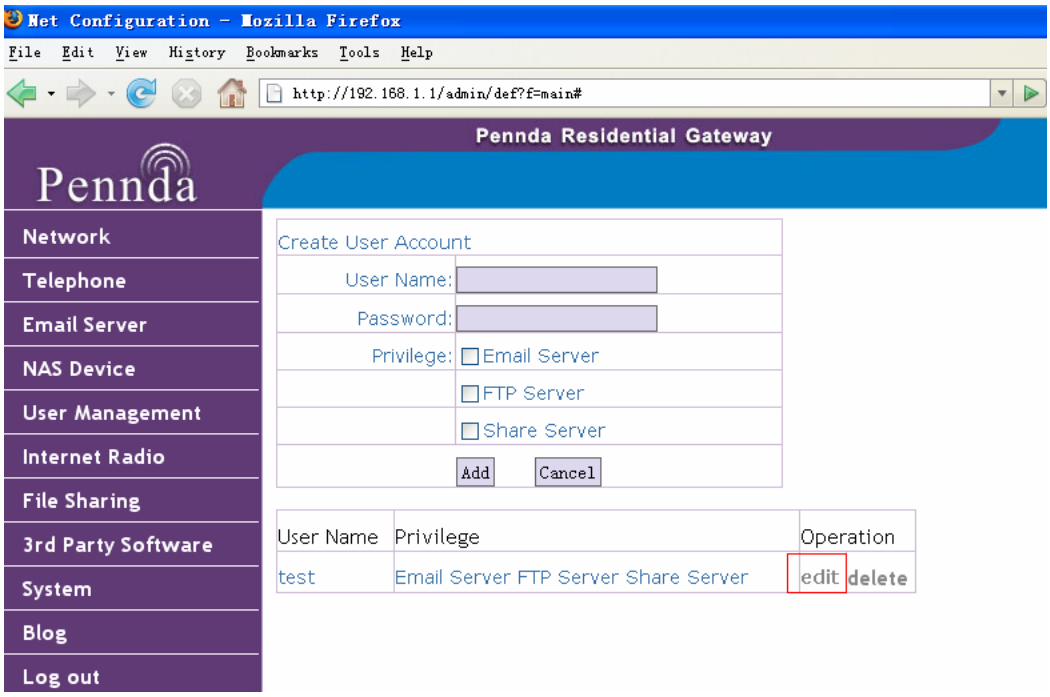
Connect a PC to the gateway, go to the web interface. Refer to 2.2 for steps on how to go to the web interface.

Step Two

Select <User Management> on the web interface.

Step Three

Select the user to modify.



Step Four

Modify the parameters.

3.17 Shut down/Restart Gateway

Abnormal shut down or restart by disconnecting the power supply may damage the device, as a result, the gateway may not work.
Users must shut down or restart the gateway with proper steps. Pennda Technologies does not assume any responsibility for any device damage arising for not following the correct operation instructions.

Follow the steps below to restart the gateway:
Step One
On the touch screen, click <Setting> - <Restart>.

Step One
Click <OK> button to restart the gateway.

Notes: the gateway needs about 30 seconds to restart.

Follow the steps below to shut down the gateway:
Step One
On the touch screen, click <Setting> - <Shut down>.

Step Two
Click <OK> button to shut down the gateway.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

IMPORTANT NOTE:

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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: 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 or more 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.