IP6600
Administration Manual

Environment

The equipment you have purchased must not be disposed of with household waste. You should return these to your distributor if they are to replace or dispose of them in an approved recycling centre.

FCC Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against radio interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at is own expense, will be required to take whatever measures are necessary to correct the interface.

CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN55022 class B for ITE and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Copyright Notice

Trademarks

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WARNING! 

1. Read these installation instructions carefully before connecting the equipment to its power adapter.
2. To reduce the risk of electric shock, do not remove the cover from the equipment or attempt to dismantle it. Opening or removing covers may expose you to dangerous voltage levels. Equally, incorrect reassembly could cause electric shock on re-use of the appliance.
3. Do not expose the equipment to fire, direct sunlight or excessive heat.
4. Do not expose the equipment to rain or moisture and do not allow it to come into contact with water.
5. Do not install the equipment in an environment likely to present a Threat of Impact.
6. You may clean the equipement using a fine damp cloth. Never use solvents (such as trichloroethylene or acetone), which may damage the equipement's plastic surface. Never spray the equipment with any cleaning product whatsoever.
7. The equipment is designed to work in temperatures from 0^{o}C to 45^{o}C (32^{o}F to 104^{o}F).
8. The equipment must be installed at least 1 meter from radio frequency equipment, such as TVs, radios, hi-fi or video equipments (which radiate electromagnetic fields).
9. Do not connect the LAN/WAN port to any network other than an Ethernet network.
10. Do not attempt to upgrade your equipment in an unstable power environment. This could cause unexpected damages.
11. Do not work on the system during lightning storms. Please disconnect all cables.
12. Children don't recognize the risks of electrical appliances. Therefore use or keep the equipment only under supervision of adults or out of the reach from children.
13. No repair can by performed by the end user, if you experience trouble with this equipment, for repair or warranty information, please contact your supplier.

Electrical Powering:

The IP6600 can be powered with correct power adaptor, the power adaptor must be 12V/1.5A. Any damage caused to the IP6600 as a result of using unsupported power adaptors will not be covered by the manufacturer's warranty.

Product Disposal Warning:

Ultimate disposal of this product, accessories, packing, especially the batteries should be handled carefully for recycle and nature protection in accordance with national laws and regulations.

Table Of Contents

1. Introduction

The IP6600 is an all-in-one solution which has rich feature set of IP PBX telephone systems and IP networking systems. It has business essential PBX features such as an auto-attendant, voice mail, multi-line appearances, three way call conferencing, intercom, music on hold, call-forwarding and much more. The IP6600 system opens up access to the benefits of VoIP, including low cost long distance service, and one network for both voice and data.

The IP6600 is so easy to configure that a fully working system can be set up in minutes. Plug and Play feature allows new telephones to be automatically detected and registered when they are connected. The IP6600 is so easy to be managed and configured by its integrated web server.

The IP6600 system can work with any SIP based IP Phone. However, it is the best to work with our IP Phones IP2032 and IP2061 to take advantages of powerful business features such as plug & play, all paging/group paging, multi line appearances, etc….The IP6600 has a FXS port to support traditional analog devices such as telephone, answering machine, FAX machine.

It must not be an ordinary Integrated Access Device (IAD) solution, nor a mere ATA solution, but with elaborated and popular Voice-centric features, so as to be able to penetrate conventional Voice-centric market

Interfaces

- WAN Interface: 10BASE-T/100BASE-TX/1000BASE-T Gigabit Ethernet port
- CO Interface: 6 FXO (Loop Start, for PSTN)
- Analog Device Interface: 1 FXS (For Analog Telephone or FAX)
- LAN Interface: 1 Ethernet (10BASE-T/100BASE-TX)
- Built-in 802.11b/g/n WiFi access point

- USB Interface : Connects to your USB storage devices, USB printer or 3G dongle.

Terminals

- 1 Analog Terminal (Analog Telephone or FAX)
- 24 IP Stations (Wired or WiFi IP-Phone)

Basically, the Administration is required to do the following things:

(1) To understand the architecture, resources, and devices of whole environment which will be involved with the VoIP communications.

(2) To build a common setting file for most users.

(3) To configure each phone and install them into the network.

(4) To configure each interfaces and install them into IP6600.

(5) And to solve the problems that users encounter during operation.

2. Getting to Know the IP6600

2.1 Front Panel

The front panel contains several LEDs that indicate the status of the IP6600.

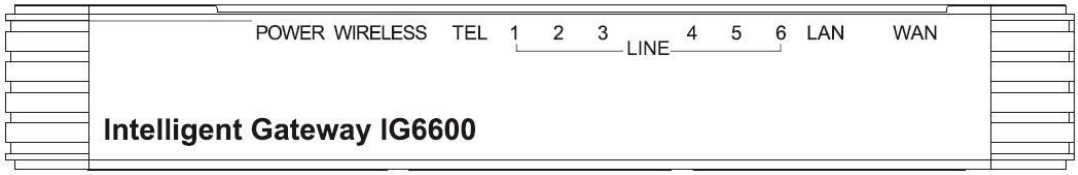


Figure 2-1. Front Panel of IP6600

LED Name	Color	Status	Description
POWER	Red/Blue	Red On	Firmware updating
		Blue Flashing	System booting up
		Blue On	System initialized and running
		Off	Power off
WIRELESS	Blue	On	Wireless LAN is active
		Off	Wireless LAN is idle
LINE (1-6)	Blue	Off	PSTN Line is idle
		On	PSTN Line is active
TEL	Blue	Off	Phone is idle
		On	Phone is active
LAN	Blue	On	LAN is connected
		Off	LAN is not connected
		Flashing	LAN activity present (traffic in either direction)
WAN	Red/Blue	Blue On	WAN is connected and IP is obtained
		Red On	WAN is not conneced or no IP assigned
		Flashing	WAN activity present (traffic in either direction)

2.2 Rear Panel

The rear panel contains the ports for the IP6600's data and power connections.

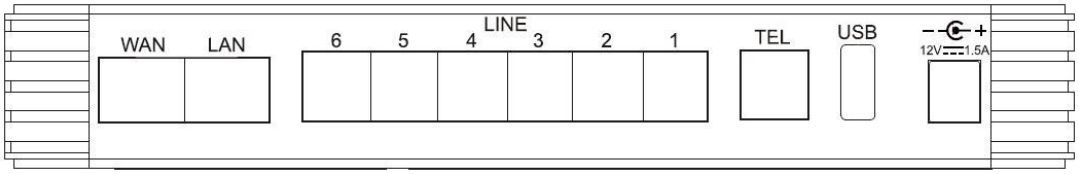


Figure 2-2. Rear Panel of IP6600

Label	Function
WAN	RJ-45 connector: Connects the device to your cable modem, or to your ADSL Modem. It's to connect to the remote network.
LAN	RJ-45 connector: Connects the device to your PC's Ethernet port, or to the uplink port on your LAN's hub.
Line (1-6)	RJ-11 connector: Connects the device to your PSTN lines.
TEL	RJ-11 connector: Connects the device to your analog phone.
USB	Connects to your USB storage devices, USB printer or 3G dongle
Power	Connects to the supplied power converter cable.

3. IP6600 Voice General Features

3.1. Access Control for Web Page

The Access Control settings allow the System Administrator to configure the Web Port, Service Control List, IP Address Access Control mode and password for Administrator, Supporter and User.

IP6600 also provide an external user access to the internal IP phone's Web page. The Registered Phone page will list all registered phones with their IP links. Clicking a specific link will open that specific IP phone's Web page.

IP6600 provides three Access mode for Web Page

- Administrator mode: unrestricted access and program
  (Default: admin1234/123456)
- Support Mode: allow an ISP technician to maintain and run diagnostics
  (Default: support/support)
- User Mode: view some configuration settings and statistics.
  (Default: user/user)

3.2. Answering Position

For incoming calls from the Public Switched Telephone Network (PSTN) (via analog CO or FXO ports), the IP6600 provides the flexibility to ring specific destinations. The IP6600 provides the ability to ring Auto Attendant. The IP6600 also provides the ability to simultaneously ring up to 24 extensions when programmed in a UCD Hunt Group, or the Operator in accordance with the system service mode (day or night). The user can also assign a line to ring directly to an extension. Incoming VoIP calls from a registered ITSP can be programmed and routed in the same manner as the analog CO (FXO) ports.

3.3. Auto Attendant & Voice Mail

The IP6600 Auto Attendant can greatly enhance business productivity by providing either a full-time automated attendant to handle all incoming system calls or part-time automated attendant to handle overflow traffic. The Voice Mail Module provides up to 32 hours recording time that are shared by all extensions. The system can handle six simultaneous calls with following functions.

- **Auto Attendant Functions**
  The Auto Attendant provides an incoming caller with a customized welcome greeting and specific prompts that will describe the options available to the caller.
  - Support 10 AA menus.
  - Support 3 Greeting mode: Working, Holiday and Temporary.
  - At Working Greeting mode, play the welcome greeting messages depending on the system service time: Day, Night, Noon, and Holiday.
  - Route the call to the appropriate destination (phone/virtual extension or UCD

Group) with the dialing digits.
- Leave a message to a particular mailbox.
- Make an outside call via another trunkline (PSTN or SIP-Trunk).
- Enter Voicemail box.
- Multilevel Auto Attendant
- Dial by Name

- **Voice Mail Functions**
  - Message Folder: Urgent, New, Saved, Delete.
  - Delete, save, or skip messages.
  - Forward messages to other mailboxes.
    - Specified mailbox
    - Distribution List (3 Distribution List per mailbox; each Distribution List has 10 mailboxes maximum)
    - All mailboxes.
  - Envelop information indicating the time and date of the message received; sender information will also be included in the email notification.
  - Leave a new message to other extension(s).
  - Change personal greeting and password.
  - Expert mode support (playback controls when reviewing messages).
  - Send a notification via email when a new message is left.
  - Send voice message as the attachment of the email in WAV format.
  - The maximum recording length for each call is 1800 seconds.
  - When 90% of the VM size is used, it shows “Message Full” on the all IP20xx’s LCD.
  - For each extension, the maximum number of Voice Mail is 200.
  - For each leaving message, it's saved 1 - 30 days or infinite
  - Support 50 Virtual Mailboxes
  - Enter voicemail through another phone extension
- **Management Menu**
  - Change the Greeting Mode
  - Record the Greeting Messages
  - Add a Mailbox
  - Delete a Mailbox
  - Change the Personal Password
  - Record the Greeting Message
- **Voice Messages**
  - Provide two languages service for the all voice files.
  - Provide G711-ulaw, G711-alaw or G.729 voice files.
  - Administrators can record the all voice messages by themselves.
  - Administrators can update, backup or delete the all voice messages from/to the PC.

For the detail, please refer Appendix 3.

3.4. Auto Provisioning

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Firmware upgrade or vendor configuration file backup can be done remotely on ACS server. Select the desired values and click "Save Settings" to configure the TR-069 client options.

IP6600 also provides an Auto Provision Server (APS) to update IP6600 FW, Update / Retrieve IP6600 Configuration and the registered IP20xx firmware.

3.5. Basic Call

To make an intercom call, dial a Station number (IP Terminal, POTS) or a Voice Mail number.

To make an outside call, dial a phone number. IP6600 chooses a line (PSTN line, IP trunk, another IP6600) via Call Routing Table to dial out. If it includes “p” in the phone number, and the call is dialed through PSTN Trunk, it will pause for a pre-configured time.

To make an outside call, dial a PSTN, an IP Trunk or a Trunk Group number first. After hearing dial tone, dial the phone number.

3.6. Call Abandon

For every PSTN call, IP6600 provides the facility to monitor the call status. If the remote party hangs up, the ongoing call will be terminated.

The PSTN line monitor is accomplished through monitoring the loop-break signal, polarity reversal or busy tone. The value range of loop-break signal is: “Disable”/100/200/…/1000 ms.

3.7. Call Operator (Call Attendant)

IP6600 supports one Primary operator and one Secondary operator. Any extension can be designated as the operator through system configuration.

One primary operator may be assigned in the system. The standard IP phone will serve as the operator telephone. When assigned as operator, this extension supports general system functions.

While the internal extension dials Operator Directory Number ("0" at default), or the outside party dials the Operator Directory Number when Auto Attendant plays the welcome message, these calls will be stored into Operator Queue. The Operator is First-In-First-Out to service these calls. For the incoming trunk calls at the waiting time, the calling party will be on Music-On-Hold state.

A secondary (alternate) operator position may be designated for common sharing of incoming operator calls during peak traffic period.

3.8. Call Pickup – Group

You may answer trunk calls at another extension using the function. The feature allows you to easily access calls ringing via the single digit “*”.

3.9. Call Restriction

IP6600 provides sophisticated monitoring of digits dialed on PSTN/IP Trunks. If a digit or range of digits dialed on a Trunk line is inconsistent with the dialing extension's COS, the call is denied. This calling COS criteria can be applied to local calls, long distance calls, and specific numbers that are considered allowed in areas where other numbers may be restricted.

IP6600 allows to configure the Call Restriction Allowed Table and Denied Table. It provides the following programming items:

- **From/To**

  The intervals are made up of a From and To entry which establish a numeric range. For example, an entry of "From 1700" , "To 1800" would include the following range of numbers as the leading: 1700, 1701, 1702, …1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9. The "From" entry must be less than or equal to the "To" entry. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9, *, # or X (X representing any digit). The "From" entry must be less than or equal to the "To" entry.

- **Trunk Access**

  IP6600 checks the field only when a call matches the associated interval. If the field is set to "Y", the entry is valid when the trunk is accessed previously. If the field is set to "N", the trunk isn't accessed previously. The trunk will be accessed through Call Routing Table. If the option is set to "YN", the entry is valid no matter the trunk is accessed or not previously.

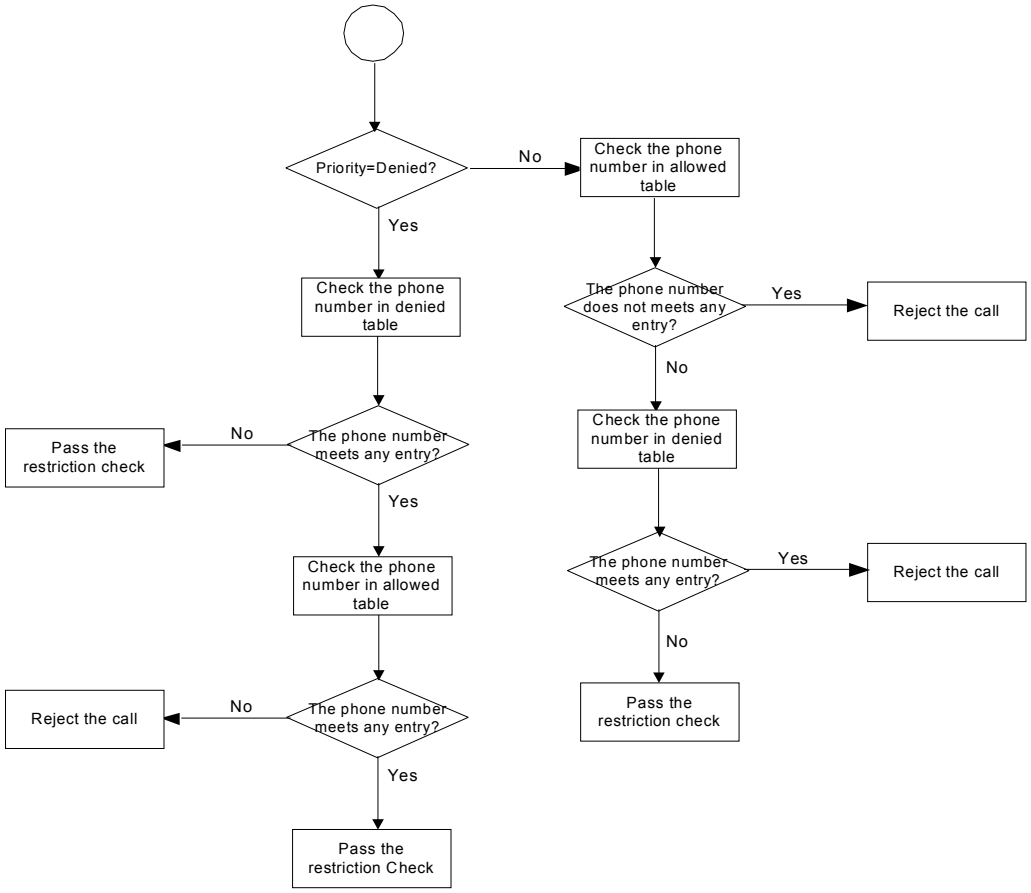
- **COS**

  The COS setting is defined by the intervals. Allow an extension with the COS or higher priority to dial the number(s) specified in that range.

- **Table Type**

  It configures the type of the entry in Call Restriction Table. It's either "Allowed" or "Denied".

A maximum 40 entries can be configured in the table. They are divided into Allowed Table or Denied Table based on “Table Type” setting of the entries. It follows “Priority” (“Allowed” / “Denied”) setting for the target phone number in the check. If it checks Denied Table first, the phone number will be passed if it passes one of the both Table. If it checks Allowed Table first, the phone number will be passed when it passes the both tables. The flow is as below:



3.10. Call Routing

The Call Routing feature automatically routes outgoing calls using the most appropriate route. The appropriate route is determined based on the number dialed. If necessary, IP6600 can automatically modify the dialed number by deleting and inserting digits.

The call routing destination is a PSTN line, an IP line, a line group or another IP6600. It allows you to configure each entry in the Call Routing Table which contains a routing rule for outgoing calls:

- From/To setting defines the number range
- Min/Max defines the match length
- Del can delete some leading digits in the dialed number.
- Insert can add some digits as the leading for the target number. It will be added after doing “Del”.

- Destination defines the outbound call interface trunk

3.11. Caller ID Detection/Generation

IP6600 provides the ability to detect the calling party identification provided by CO via PSTN lines or by Uplink Server via IP trunks. This data when received by the telephone carrier will be displayed on all ringing IP phones.

IP6600 also provide Caller ID Generation to the Caller ID equipped Single Line Telephone.

3.12. Class Of Service (COS)

IP6600 provides 8 Classes of Service (COS) for assignment of outside line dialing-privileges. Each extension may be assigned one Day-COS and one Night-COS. The Extension COS is primarily used for restriction and control of long distance dialing. COS 0 is the highest priority. COS 7 is the lowest one.

3.13. Daylight Saving Time

Daylight Saving Time (DST) feature supports auto adjustment for daylight saving time. It allows you to configure the Daylight Saving Time (DST) which includes support for auto adjustment of daylight saving time.

- Internet Time: it obeys the international standard rule.
- Manual DST Rule: it allows you to define your own Daylight Savings Time Rule.

3.14. Default Set

Clear all settings and return the IP6600 set to the factory condition.

When rebooting the IP6600 to the default, some settings for the registered IP Phones (IP2032, IP2061) are reset to the default also.

- Line Keys
- Call Forward (Direct, Busy, No Answer, DND, Call Fork)
- Auto Answer
- Phone Lock
- Call Waiting

3.15. Direct In Dialing (DID)

IP6600 provides a Direct In Dialing Table for IP Trunks. It will be able to offer its individual phone number for each extension.

IP6600 provides 50 entries in the Direct In Dialing Table. Each entry includes

- DID Number: used to check the caller ID of the incoming call.
- Destination: the ringing destination of the incoming call. It can be an Phone Extension, Virtual Extension, Auto Attendant, UCD Group, Speed Dial, or Paging number. It also can be an outside phone number.
- Outgoing Call ID: used as the private Caller ID when the “Destination” user makes the outgoing call. When the setting is null, it assumes to be the same as “DID Number”.
- Display Name: used as the Caller Name when the “Destination” user makes the

outgoing call.

- Trunk: the applied trunk(s) of this DID entry. If it's null, this entry will be applied for the all IP Trunks.

3.16. Direct Inward System Access (DISA)

The feature allows you to remotely access IP6600 lines to make the outside calls. The current PSTN/IP lines are all DISA lines. While ringing to Auto Attendant, the outside callers have direct access to extensions, or make an outside call,

The out-calling is to dial a star ("#") key at the beginning when Auto Attendant plays the greeting message. The the call is secured by means of verified passwords against the assigned extension number. The use is accomplished only when a valid extension number has been entered and when the password entered matches that stored for the extension number entered.

The DISA function is disabled by default.

3.17. Emergency Call

IP6600 allows you configure five Emergency Call numbers and lines with which Emergency Calls are sent out. Any user can make an Emergency Call regardless of its Call Routing table, Call Restriction, and Phone Lock, when they dial a pre-configured Emergency Call number. The numbers of Emergency Call must not collide with the numbers in Numbering Plan.

It allows to program 5 emergency numbers. "911" is in it by default.

3.18. Extension Password

All extensions of the IP6600 system have an associated User Password. The Password is applied to Voice Mail service, and some system feature settings (Phone Lock, COS Following, DISA, Forward, Restore to Default, Feature Button Reset).

The Extension Password is 4-digit length. The default is "0000".

3.19. Fax/Modem

IP6600 supports FAX/modem tone detection and auto-fallback to G.711. IP6600 also support to use T.38.

3.20. Flash – Analog Port (SLT) Flash Recognition

Flash is the momentary operation of the hook-switch at the analog device, which can be deciphered by the IP6600 system in such a way that the previous call in progress is held, or placed in a status of transfer awaiting further instructions from the user.

3.21. Gateway to Gateway (IGW Group)

This feature allows 10 IP6600 boards connected together through internet to form a private network. In this case, a call from one extension user in one IP6600 perhaps will be routed to another IP6600 via the Call Routing Table. It allows extension users to make a direct call to other extension users in another IP6600. It also allows an IP6600 to share its PSTN or IP Trunks with other IP6600 in the private network, so extension users

belongs to another IP6600 can make an outside call through those trunks shared by other IP6600

In an IGW Group, one Master IP6600 and at most 9 Slave IP6600s are available. Master IP6600 can be a static IP address or a Domain Name (DDNS). Master and all Slave IP6600 share one password for authentication. If the IP address of Master is set in a Slave IP6600, Slave IP6600 sends its IP address, name, and password to the Master. Master IP6600 verifies the received password and name. If the password is valid and the name is not duplicated, Master IP6600 sends the IGW list to all Slave IP6600s.

3.22. IP Trunk

IP6600 can register up to 12 SIP Uplink Servers. The extensions may make a call to the users of the Uplink Servers, or any user in the world through the Uplink Servers.

- SIP messages, including INVITE, re-INVITE, ACK, CANCEL, OPTIONS, BYE, REGISTER, INFO, REFER, SUBSCRIBE/NOTIFY and REPLACE messages
- SIP Proxy, SIP Outbound Proxy, Registrar, and Outbound Registrar
- Auto Registration when Power-on or period
- Session Timer support
- Support IP address, domain name, user name, display name for SIP URL.

3.23. Message Waiting Indication (MWI)

It's a Voice Mail feature. When somebody leaves messages, the router will inform the phones, and phones' LCD will display new voice mails information, and its lamp will flash accordingly.

3.24. Music on Hold

Any PSTN/IP line calls placed on hold will give music to the other external party.

3.25. Numbering Plan

The Numbering Plan refers to the structure of dialed access to the various resources that are part of the system. IP6600 also allows for a very flexible configuration numbering for the various system resources.

IP6600 provides the following resources to be programmed in Numbering Plan.

- Extension Number
- Operator Number
- Voice Mail Service Number
- Virtual Extension Number
- PSTN Line Number
- IP Trunk Numbers
- Trunk Group Numbers
- All Paging Number
- Paging Group Number
- UCD Group Number
- System Speed Dial Number

- Call Park Number

3.26. Pause Insertion

Pause Insertion is used to generate an intentional delay in dialing on Outgoing FXO line calls. A pause can or a combination of pauses may be stored in the dialed number, Call Routing Table or a Speed Dial number (IP20xx also support to program the pause in Phonebook). It uses “P” or “p” as the Pause digit.

3.27. PSTN Backup

In case of power failure, IP6600 automatically switches the first PSTN line to the Single-line analog phone. The other PSTN lines are not supported

3.28. Registration Server

The IP6600 combines Proxy and Registrar servers in its application. For a Registrar server, it acts as the front end to the location service for a domain, reading and writing mappings based on the contents of REGISTER requests. The location service is then typically consulted by a Proxy server.

3.29. Service Mode

IP6600 provide Day and Night settings for each weekday in service mode page. It will be applied in the following function:

- Answering Position: Trunk incoming call may be forwarded to different extensions according to the settings.
- Class of Service (COS): Phone extension may be assigned to have the different COS in the different time.

3.30. Station Message Detailed Recording (SMDR)

The feature allows the administration to track all incoming and outgoing outside call traffic, chronologically by extension number. SMDR is output from the standard Syslog (None/LAN/WAN/Both)

SMDR information includes Trunk Line used, extension number, time and date the call was placed, number dialed, duration of the call.

IP6600 also provides Outgoing Call Duration Start Time to the PSTN call. It’s used to start the record for the PSTN outgoing call.

3.31. System Speed Dial

IP6600 stores frequently dialed numbers. These Speed Dial Numbers are accessed for dialing by the associated Speed Dial Directory Numbers. The Speed Dial Directory Numbers are assigned in Numbering Table. The Speed Dial is only for outgoing calls.

IP6600 stores up to 100 Speed Dial Numbers. In the Speed Dial Number, it’s allowed to store Phone number up to 20 digits in length. Call Restriction and Call Routing are applied and extensions may utilize only those numbers allowed based on their extension COS. The actual dial sent to trunk is not displayed on IP phone’s LCD.

3.32. System Time & Date

The IP6600 system provides a built-in time clock to track System Time for reference in certain features such as day/night service mode. This clock has the ability to automatically adjust with network NTP server through internet.

The IP6600 also supports to use manual time setting. Because IP6600 doesn't support battery backup, the time setting may need to be reset when rebooting the IP6600.

System Time & Date can be applied to IP20xx Phone if it's on IP6600's LAN side, or on WAN side with the same Router as IP6600's..

3.33. Trunk Group

The Trunk Group feature is used to assign each PSTN Trunk and IP Trunk to a specific Trunk Group. Each Trunk can be assigned to only one Trunk Group. The Trunk group assignment is used for Trunk pool access. If setting some PSTN trunks and some IP trunks into the same Trunk Group, the trunk access sequence will depend on the access priority and the search order. The IP6600 provides up to 4 Trunk Groups. All PSTN Trunks are assigned to default Trunk Group 1 and all IP Trunks are assigned to default Trunk Group 2. For the four groups you can choose IP first or PSTN first if programming PSTN and IP Trunk in the same group. This will take effect if call routing entry's destination has been set as Group choice

3.34. UCD (Uniform Call Distribution) Group (or Hunt Group)

IP6600 supports 4 UCD Groups. Each UCD Group can have up to 50 members. There are three kinds of UCD Group mode – All Ring, Linear, and Distributed. For All Ring mode, incoming Trunk calls ring all member extensions simultaneously. For Linear mode, incoming call is put into a queue and then distributed from the first extension. For Distributed mode, it is the same as Linear but selection of an extension is uniformed.

If more than one call rings at the same time, the first agent to go off hook will be connected to the call that has been ringing the longest.

For unanswered Trunk call, it will be forwarded to a Reroute destination. The Reroute destination can be Auto Attendant, Voicemail, Virtual Extension or Phone Extension. If destination is Voicemail, user can choose to reroute to any extension's voicemail.

The missed UCD Group calls are recorded in UCD Call Log. It records the last 100 missed UCD Group calls.

3.35. Wizard Setup

The IP6600 has a setup Wizard that provides the system administrator with a series of step-by-step operations. The setup Wizard starts automatically when the IP6600 is powered up for the first time, or if the system is reset to default configuration via the reset switch on the IP6600 unit.

In IP6600's Wizard Setup, it has two ways to be selected.

- Update the configurations using the saved setting file
- Manual setup

If having an IP6600 configuration file, you can select “Update the configurations using the saved setting file”. It chooses the saved setting file to update device to the saved configurations.

If you don’t have an IP6600 configuration file, you can select “Manual setup” to start the setup wizard to select the appropriate operation mode and configure the corresponding setting step by step. The following eight items are supported.

- WAN Setting
- LAN Setting
- Wireless Basic
- Internet Time (include Manual Time Setting)
- Numbering Plan (Phone Extenion Number and Operator Code only)
- IP Trunk
- Trunk DID Table
- Call Routing Table

4. IP6600 Voice Extension Features

IP6600 follows SIP standard to serve SIP phones. Basically, telephone features that meets SIP standard can be applied in IP6600.

IP20xx phone (IP2032/IP2061) supports many phone features. But for adding some traditional KTS features that are not defined definitely in SIP protocol, some specified information are transmitted between IP6600 and IP2xxx Phones. This section introduces these special phone features. Some features are only for IP20xx phones and/or FXS phone.

The following features depend on whether the phone provides.

Feature	IP20xx	FXS	DMP	Other SIP Phone
Agent Log On/Off – UCD Group	Yes	Yes	No	No
Alphanumeric Display	Yes	Depends	Yes	Depends
Automatic Callback Busy	Yes	No	No	No
Auto Hold	Yes	No	No	Depends
Call Fork	Yes	Yes	No	No
Call Forward – Direct	Yes	Yes	No	Depends
Call Forward – Busy	Yes	Yes	No	Depends
Call Forward – No Answer	Yes	Yes	No	Depends
Call Forward – DND	Yes	Yes	No	Depends
Call Forward – Follow Me	Yes	Yes	No	No
Call Hold	Yes	Yes	Yes	Depends
Call Log	Yes	No	Yes	Depends
Call Park	Yes	No	No	No
Call Park Answer	Yes	Yes	Yes	Yes
Call Waiting	Yes	Yes	Yes	Depends
Caller Blocking	Yes	No	No	Depends
CO Flash	Yes	Yes	No	No
Conference 3 Way	Yes	No	Yes	Depends
COS Following	Yes	Yes	No	No
Default Setting	Yes	Yes	No	Depends
Distinctive Ringing	Yes	Partial	Partial	Depends
Do Not Disturb	Yes	Yes	Yes	Depends
DSS/EDM	IP2061 Only	No	No	No
Feature Key Programming	Yes	No	No	No
Hotline	Yes	Yes	No	Depends
Hold Reminder	Yes	Yes	No	Depends
LCD & Interactive Buttons	Yes	No	Yes	Depends
Multi-Line Appearance	Yes	No	No	Depends
Mute	Yes	No	Yes	Depends
On Hook Dialing	Yes	Depends	Yes	Depends
Page (All/Group) - Paging	Yes	Yes	Yes	Yes
Page (All/Group) - Paged	Yes	No	No	No
Page Answer	Yes	No	No	No
Page Allow / Deny	Yes	No	No	No
Phone Book	Yes	No	Yes	Depends

Phone Lock/Unlock	Yes	Yes	No	No
Plug and Play	Yes	Yes	No	No
Reminder Tone	Yes	Yes	No	Depends
Service Mode Switching	Yes	Yes	No	No
Transfer	Yes	Yes	Yes	Depends
Web Management	Yes	No	No	Depends
Voice Recording	Yes	No	No	No
Volume Control	Yes	Depends	Yes	Depends

NOTE: the word “Depends” means that the features depend on whether the phone provides.

4.1. Agent Log On/Off – UCD Group

Extensions can log on or log off from UCD group.

Enable Agent Log On feature, dial *91.

Disable Agent Log On feature, dial **91.

If an extension disables the Agent Log On feature, the extension should log off from all UCD groups it belongs to.

4.2. Alphanumeric Display

The IP Phone extension provides a graphic LCD that supports 64 alphanumeric characters. The LCD enhances many system features.

4.3. Automatic Callback Busy

IP20xx supports Automatic Callback Busy. When the callee has no session resource, the caller will hear busy tone.

The caller can dial “6” to get the Automatic Callback Busy feature.

The confirmation tone will be heard and come back to idle status. When the callee is no longer in busy status, the caller will hear call back ring.

Remove the Callback Busy calls, dial *66.

4.4. Auto Hold

You may enable the feature to simplify call handling and avoid accidental “lost” calls. Hold will automatically place any call that is currently connected at your phone on hold whenever a Trunk line button is pressed.

4.5. Call Fork

IP6600 supports to ring another extension or an outside destination via IP Trunk simultaneously when the extension gets an incoming call. When the call is answered by one of the both parties, the call at the other party will stop ringing automatically.

IP6600 also support the second Forking destination. When the first Forking destination is non-existed or busy, make the forking call to the second Forking Destination

To Activate (Type: 0 – ICM; 1 – Outside; 2 – Both)

*26 + 1/2 + Type + Ext No

*26 + Type + * + (PSWD) + * + Outside Number

To Cancel

**26 → cancel the both forking destination

**261 → cancel the first forking destination only
**262 → cancel the second forking destination only

Call Fork is executed if Caller is IP20xx, FXS or Trunk. Call Fork is not applied to Operator call, Paging call and UCD call

4.6. Call Forward

Call Forwarding reroutes incoming calls from one extension to another destination. The destination of a call forward can be another extension, voicemail box or an outside phone number (External Call Forward; ECF).

IP6600 support the following feature access codes to program Call Forwards for IP20xx and FXS. It includes a "Type" setting for each Call Forward. It can be programmed to "ICM", "Outside" or "Both" (Type: 0 – ICM, 1 – Outside, 2 – Both).

Direct Call Forward:
Forward all of the calls without regard to the extension status.
To enable, dial *21 + Type + Ext/VAA/UCD No.
*21 + Type + * + (PSWD) + * + Outside Number
To disable, dial **21.

Busy Call Forward:
Forward the calls if the extension is busy.
To enable, dial *22 + Type + Ext/VAA/UCD No.
*22 + Type + * + (PSWD) + * + Outside Number
To disable, dial **22.

No Answer Call Forward:
Forward the calls if the extension doesn't answer the call within No Answer Time.
To enable, dial *23 + Type + Ext/VAA/UCD No + * + Time.
*23 + Type + * + (PSWD) + * + Outside Number + * + Time
To disable, dial **23.

DND Call Forward:
Forward the calls if the extension enabled DND.
To enable, dial *24 + Type + Ext/VAA/UCD No
*24 + Type + * + (PSWD) + * + Outside Number
To disable, dial **24.

Follow Me Call Forward:
Forwards calls at your extension to the extension where you are currently working.
To enable, dial *25 + Type + Ext No + * + Password
To disable, dial **25 + Ext No + * + Password

These Call Forward features can also be set/cancelled in web page of IP20xx.

4.7. Call Hold

Trunk and Intercom calls can be placed on hold at any extension. Any PSTN/IP line caller placed on hold will hear the Music On Hold. The held trunk can be resumed by other extensions by pushing Feature Key.

For the Single Line phone, it's to put a call on hold, press flash then hang up (optional). It's to return to the original call, press flash or pick up the phone.

4.8. Call Log

The IP20xx phone can store a call log for your reference. To access your call log, use the LCD menus. There are three types of Call Logs - Missed Calls, Received Calls, or Dialed Calls. To dial from a listing, press the soft keys corresponding to the LCD menus display.

4.9. Call Park / Call Park Answer

The feature allows you to “park” a call at IP20xx extension. It also allows any extensions to retrieve a parked call. Calls are parked by pressing the Park feature key. The call parked can be retrieved by dialing the Call Park code or pressing the Parked feature key.

IP6600 supports to have 10 park calls.

4.10. Call Pickup – Individual

You may answer the calls at another specified extension. The feature allows you to easily access calls ringing via the feature access code.

*53 + Extension Number

4.11. Call Waiting

If Call Waiting is enabled for a specific IP20xx station, an alert (muted ring) will be played on the called party IP20xx when a second call is received and the IP20xx is in use.

To enable Call Waiting, dial *98

If Call Waiting is disabled for a specific IP20xx station, the IP20xx will return a busy tone to any calling party while the IP20xx is in use.

To disable Call Waiting, dial **98

4.12. Caller Blocking

IP20xx can block up to 10 phone numbers from reaching you at your phone when a caller attempts to call you from one of these numbers.

4.13. CO Flash

FXO Line is programmed setting that will determine what flash timing will be presented to the CO/PBX when the extension issues a Hook-Flash command while connected to a FXO Line.

4.14. Conference – 3 Way

The Conference feature allows the user to connect two calls into a single conversation.

4.15. COS Following

You can temporarily change the individual Class of Service of each extension on a per call basis. You may want to do this when the user goes to the office of low-priority COS extension and try to make an outgoing call, the user can use the function to use their own COS.

When using the COS Following feature, the station COS change will revert to the station’s original COS after a one minute idle time-out.

To set COS Following, dial *55 + (phone number) + (password)

4.16. Feature Reset

When the feature is activated, the extension will return the features that can be programmed through feature codes to default settings. It will affect the following options:

Call Waiting enabled
Paging Accept
Default Feature Key Setting
Phone Lock disabled
Call Forward (Direct, Busy, No Answer, DND, Call Fork) disabled
DND disabled
Agent Log on
Auto Answer disabled
Distribution List clean

To activate the Default Setting feature, dial *69+(Extension Password or Administrator Password).

4.17. Distinctive Ringing

Distinctive ring cadences can be selected allowing adjacent users to discern which extension is ringing. It also provides different ring tones for intercom and trunk calls.

The IP20xx phones provide 10 types of ringing for indication of specific Trunk Line ringing. Every Trunk Line may be allocated one of the available Ring Types. When the feature is used, the specific ring type assigned to the Trunk Line is the ring type heard when the Trunk Line rings. The feature helps to identify the Trunk Line and the Trunk Group to which it belongs to.

The priority of the Trunk Ring Type for IP20xx is

- The Ring Type if the Caller ID exists in the Phonebook
- The Ring Type assigned by IP6600
- Phone's Ring Type

It also has the fixed, specified Ring for intercom call (IP20xx, FXS)

4.18. Do Not Disturb (DND)

Extension users can enable DND to stop incoming PSTN or IP Trunk calls from ringing at their phone. The DND on an extension can be allowed or denied through the feature access code.

To enable the Do Not Disturb feature, dial *4.
To disable the Do Not Disturb feature, dial **4.

DND and FWD can be set independently. If multiple features are set at the same time, it is applied in the order of Direct FWD > DND > Busy/NoAnswer FWD.

The DND feature can also be set/cancelled in LCD menu or web page of IP20xx.

4.19. DSS/EDM

IP6600 supports to provide the status of the extensions and trunk lines. The status can be shown on the LED of IP20xx's flexible keys. For IP2061, it supports EDM module that can have 24 more keys.

4.20. Feature Key Programming

Feature Keys can be programmed by phone users. A feature key can be programmed for line appearance.

To program a Feature Key, dial *70 + (Feature Key number: 01 – 04/28(*)) + (Feature Key Type; 00 - 06) + Number

Feature Key Type:

0: Null; Number should be null.

1: Extension; Number can be an Extension or Virtual number.

2: Trunk; Number can be a PSTN, IP Trunk or Trunk Group number.

3: Call-Park; Number can be a Park number.

4: Feature Key; Number can be a feature access code

5: Others; Number could be an outside phone number.

6. Do Not Disturb; Number should be null.

Note: IP2061 supports EDM module, it provides 24 more keys for feature access.

4.21. Feature Button Reset

The feature is used to reset all feature buttons to be the same as the current settings in IP6600.

To reset the Feature Buttons, dial *68 + (Password)

4.22. Hold Reminder

IP20xx provides a programmable timer to remind you that a call has been left on Hold. When enabled, you will hear one ring tone repeated each time the selected hold time expires.

4.23. Hotline

The Hotline feature allows an extension to automatically access a given resource each time the extension goes off hook. It can access the resource from 0 to 8 seconds after the extension goes off hook. The delay allows the user to dial another before the hotline takes effect.

If the Delay Time of FXS is 0, it can cancel the setting or dial another by pressing Flash key after making a hotline call.

To activate, dial *9* + (Number) + * + Time //Time: 0~8 seconds; 0: immediately

To Cancel, dial **9*

4.24. LCD & Interactive Buttons

The IP20xx phone is equipped with a Liquid Crystal Display to enhance features operation. The IP20xx also incorporates four-screen-prompt and interactive soft keys that simplify feature operation.

4.25. Multi-Line Appearance

IP6600 provides PSTN line and IP line status to IP20xx.

Trunk LED:

Dark – the line is Null or Idle

Fast Flash – the line is ringing
Slow Flash – the line is held
Wink Flash – the line is held recall
Lit – the line is in talk

4.26. Mute

The Mute feature allows the user to disable the handset transmitter or the speakerphone microphone.

4.27. On Hook Dialing

IP20xx phone extensions may make outgoing calls without lifting the handset and monitor the dialing status through the built-in speaker. The button lamp is lit when dialing.

4.28. Paging (All/Group) / Paging Answer

Paging function can be initiated from any extension in the IP6600. Dialing a Paging Group Directory number allows an extension to broadcast a page to all assigned members of the selected paging group.

IP6600 provides a Paging Range to define the paged extensions.

- LAN: the all assigned extensions on LAN side are paged.
- WAN: the all assigned extensions on WAN side and the extensions are connected to the same router with IP6600 are paged.
- Both: the all extensions on LAN and WAN are paged.

When receiving a Paging call, the paged IP20xx extension can answer the call by pressing the “Answer” soft button.

IP6600 provides 3 Paging Group. Each Group can have 24 extensions.

4.29. Paging Allow/Deny

You can block one-way pages (internal, group, and all page) over the IP phone speaker by dialing the Page Deny code.

To enable Paging Deny, dial *99
To disable Paging Deny, dial **99

4.30. Phone Book

The IP20xx provides users with a Phone Book, with each entry containing a user programmed Phone Number and User Name. The phone number can be an extension number, phone number, or IP address.

4.31. Phone Lock/Unlock

You can use the Lock feature to prevent unauthorized trunk calls from being made from extension. A locked extension continues to receive incoming calls, and a user can continue to place and receive intercom calls. Outgoing Trunk calls are blocked.

To lock the phone, dial *97 + (Password)
To unlock the phone, dial **97 + (Password)

4.32. Plug & Play

While connecting IP20xx to IP6600's LAN port, it will register to IP6600 automatically. IP6600 will also assign a valid extension number to the phone directly.

When IP20xx and IP6600 connect to the same Router, IP6600 will assign a valid extension number to the IP20xx also.

4.33. Reminder Tone

Play stutter dial tone to remind the user that DND or DCFW is enabled at your extension. If having MWI, it also plays the stutter dial tone

4.34. Service Mode Switching

The feature can be used by Operator phone only. Operator uses a programmed key or by feature access code to change IP6600 Service Mode.

*791: assign to Day mode.
*792: assign to Night mode
*793: assign to Time mode

IP6600 also provide a feature code "*790" to switch the Service mode. The rule is

- If "Service Mode" setting is "Day", it changes the setting to "Night".
- If "Service Mode" setting is "Night", it changes the setting to "Day"
- If "Service Mode" setting is "Time", it changes the Service Mode temporarily. The change will be clean when it reaches the time in "Time" service mode.

When the "*790" is programmed on the line key, it shows the current operating mode on the LED indication (the LED is lighten on Night time, dark on Day mode).

4.35. Transfer / Recall

Transfer is used to deliver calls at your extension to another extension. It means that calls can be routed to IP6600's system destinations: an extension or an outside phone number.

When transferring a trunk call to another extension, if the call is not picked up within 30 seconds, the call will be recalled back to the transferring extension.

IP20xx Phone supports Blind Transfer, Unscreened Transfer, and Screened Transfer.

FXS phone supports Unscreened Transfer, and Screened Transfer.

4.36. Voice Recording ("One Touch Recording")

The Voice Recording feature can be activated by using the Voice Recording feature key on your telephone. When activated during an active call, the Voice Recording feature will record the conversation as a voicemail message.

The function won't applied to conference call.

4.37. Volume Control

The IP20xx is equipped with a volume control that is used to adjust the various volume settings of the telephone. The following functions can be adjusted:

- Ringing
- Handset
- Speaker
- Headset

4.38. Web Management

The IP20xx is supported two-level web management. The Administrator has several pages to configure the IP phone. User is able to configure personal information by himself. User level is not including these two pages – software update, SIP configuration.

5. Quick Installation

This Quick Installation help to you install the product quickly and easily. For detailed instructions on installation, and further setup option, please refer to the configuration chapter.

5.1 Connecting the IP6600

(1) Place IP6600 in an optimum location.
(2) Connect the included Category 5 Ethernet network cable to the IP6600's LAN port or WAN port. Then connect the other end of the network cable to a switch or hub or directly your PC's Ethernet port. The IP6600 will then be connected to your 10/100/1000 network.
(3) Connect the AC power adapter to the IP6600's Power port. Only use the power adapter supplied with the IP6600. Use of a different adapter may result in product damage.
(4) Now that you have connected the IP6600 to your network, you are ready to begin setting it up. The Setup Wizard will take you through all necessary steps to help you to configure the IP6600 easily.

5.2 Wizard Setup

This system administrator can configure the IP6600 remotely or locally via a Web Browser. When IP6600 return to default factory settings, its LAN address is "192.168.1.1", and username is "admin1234", password is "123456".

In IP6600's Wizard Setup, it has two ways to be selected.

- Update the configurations using the saved setting file
- Manual setup

If having an IP6600 configuration file, you can select "Update the configurations using the saved setting file", then click "next". At "next" page you can click the "Browse" button to choose the saved setting file and click the "Update Settings" button to update device to the saved configurations.

If you don't have an IP6600 configuration file, you can select "Manual setup" to start the setup wizard (Figure 5-1, Figure 5-2). It allows system administrator to select the appropriate operation mode and configure the corresponding setting step by step. The following eight items are supported.

- WAN Settings
- LAN Settings
- Wireless Basic
- Internet Time
- Numbering Plan
- IP Trunk
- Trunk DID
- Call Routing Table

In the configuration, the administrator presses “Next” or “Back” button to choose the setting item. If pressing “Save & Reboot”, the settings will be saved and the IP6600 will be rebooted automatically. From now on, if entering the IP6600 Web configuration, it goes to home page “*IP6600 Configuration*” directly.

Figure 5-1. Choose Setup Manner

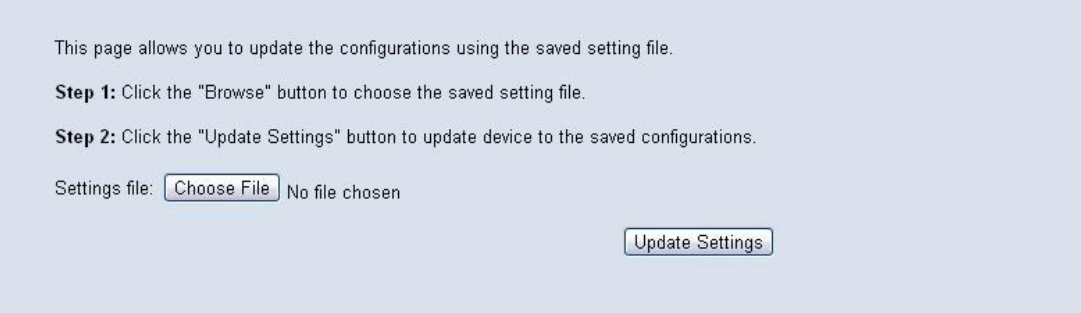


Figure 5-2. Update Settings

5.2.1 WAN Setting

There are three modes that you can configure WAN IP address: Static IP mode, DHCP mode, and PPPoE mode. You can also select to enable or disable Firewall and VLAN service.

Note that Network Address Translation (NAT) function is default enabled and is not showing on the page to prevent it from being disabled.

This page shows that the current existing WAN interface in this system is Static IP mode. (Figure 5-33)

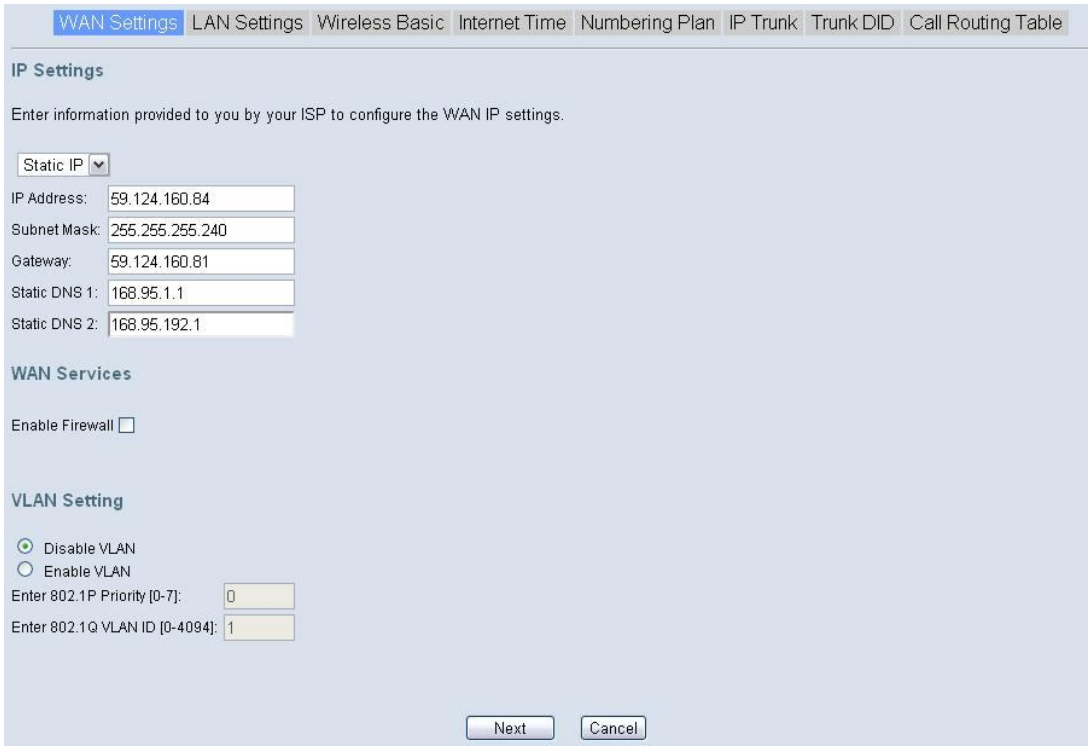


Figure 5-3. Wan Settings (Static IP mode)

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

This page shows the current existing WAN interface in this system is DHCP mode (Figure 5-44).

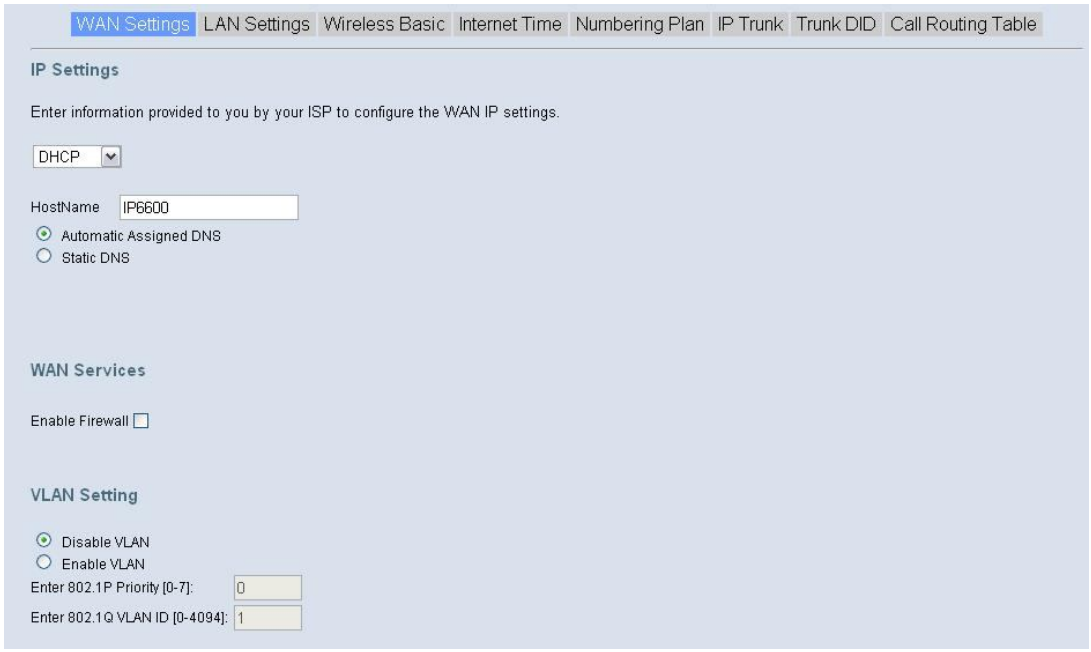


Figure 5-4. Wan Settings (DHCP mode)

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP has provided to you to establish your connection. This page shows that the current existing WAN interface in this system is PPPoE mode (Figure 5-55).

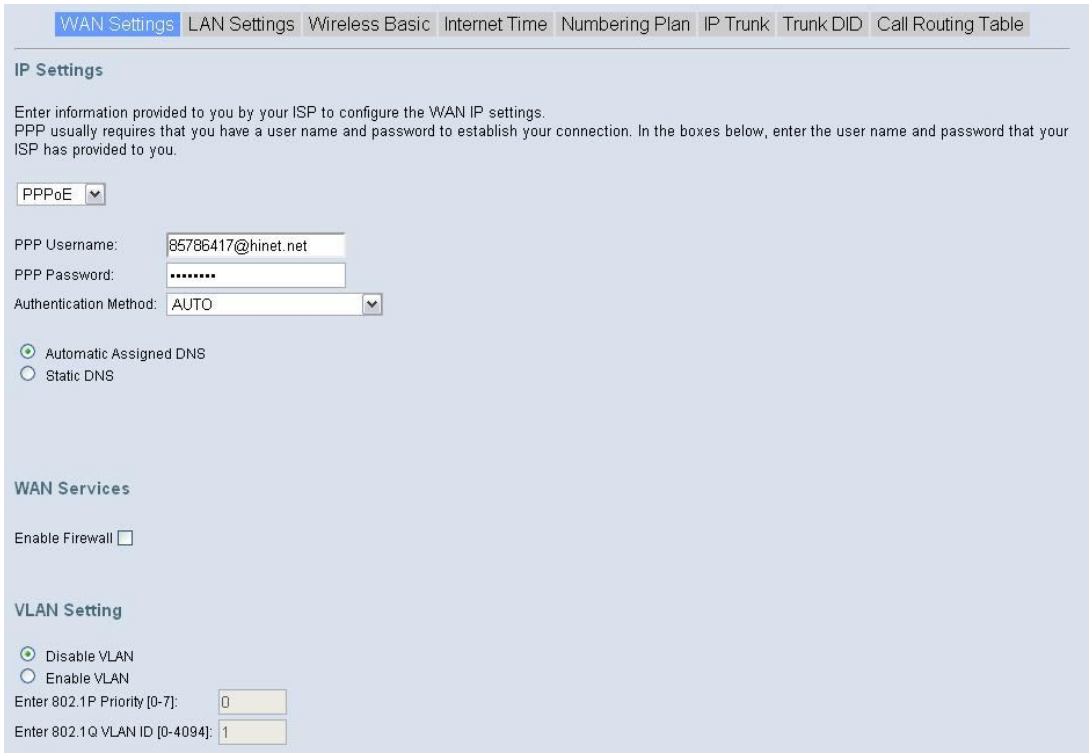


Figure 5-5. Wan Settings (PPPoE mode)

5.2.2 LAN Setting

This page (Figure 5-66) allows you giving LAN IP and Subnet Mask for LAN interface. You can also select to enable or disable DHCP Server and configure related settings for that mode.

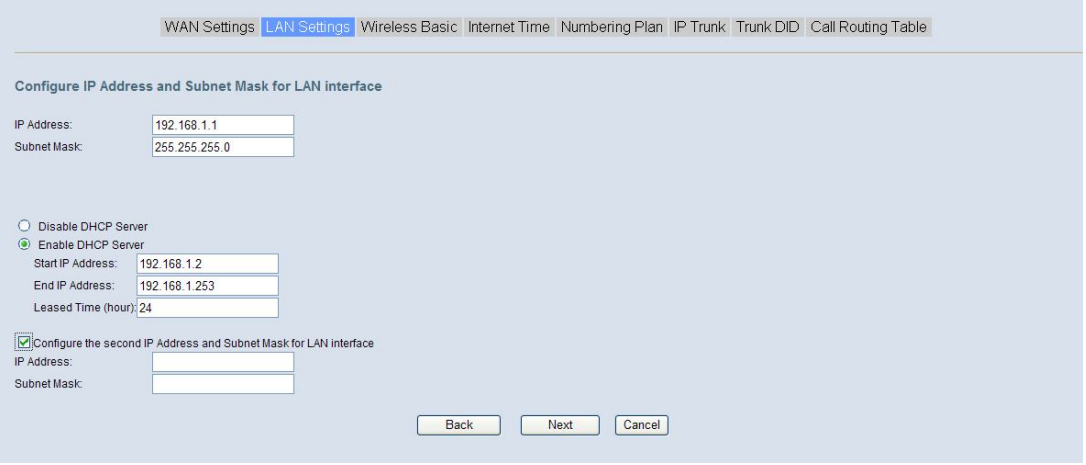


Figure 5-6. LAN Settings

5.2.3 Wireless Basic

The page (Figure 5-77) allows you to configure basic feature of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scanning, set the wireless network name (also known as SSID), and restrict the channel set based on country requirement.

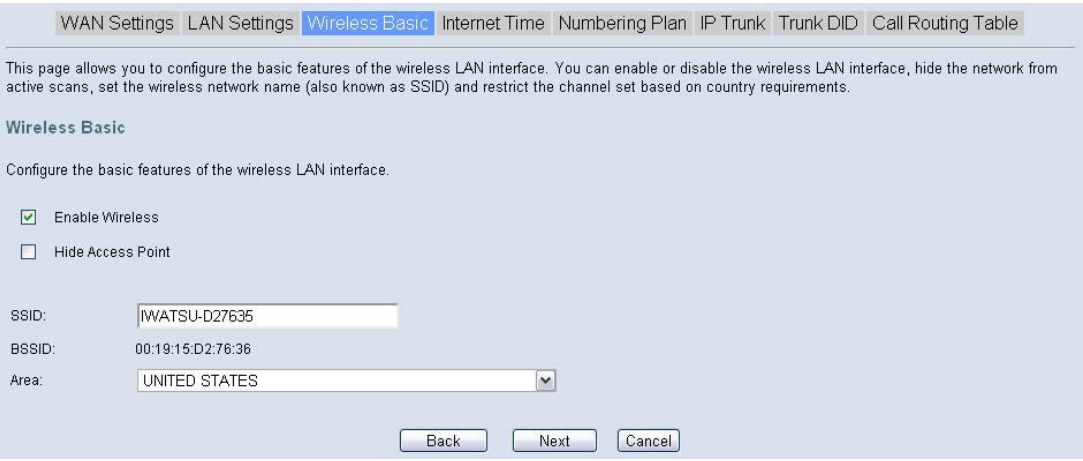


Figure 5-7. Wireless Basic

5.2.4 Internet Time

The page allows you to configure the NTP time server, so the IP6600 can have correct system time. It is useful such as reviewing the System Log. You can also choose “Manual Date and Time Settings” to specify the day and time (Figure 5-8, **錯誤! 找不到參照來源。**).

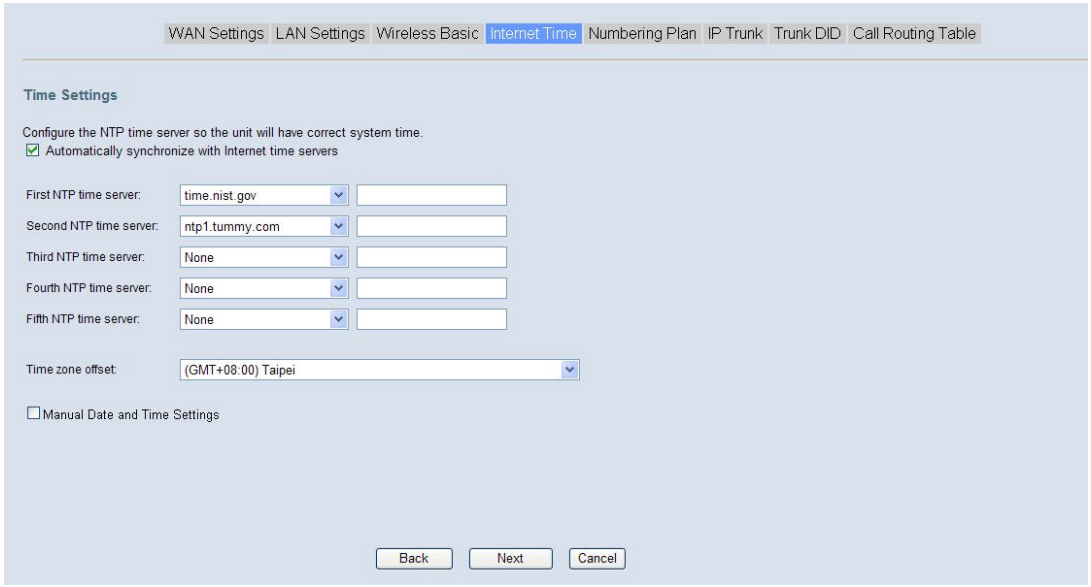


Figure 5-8. Internet Time – Automatic

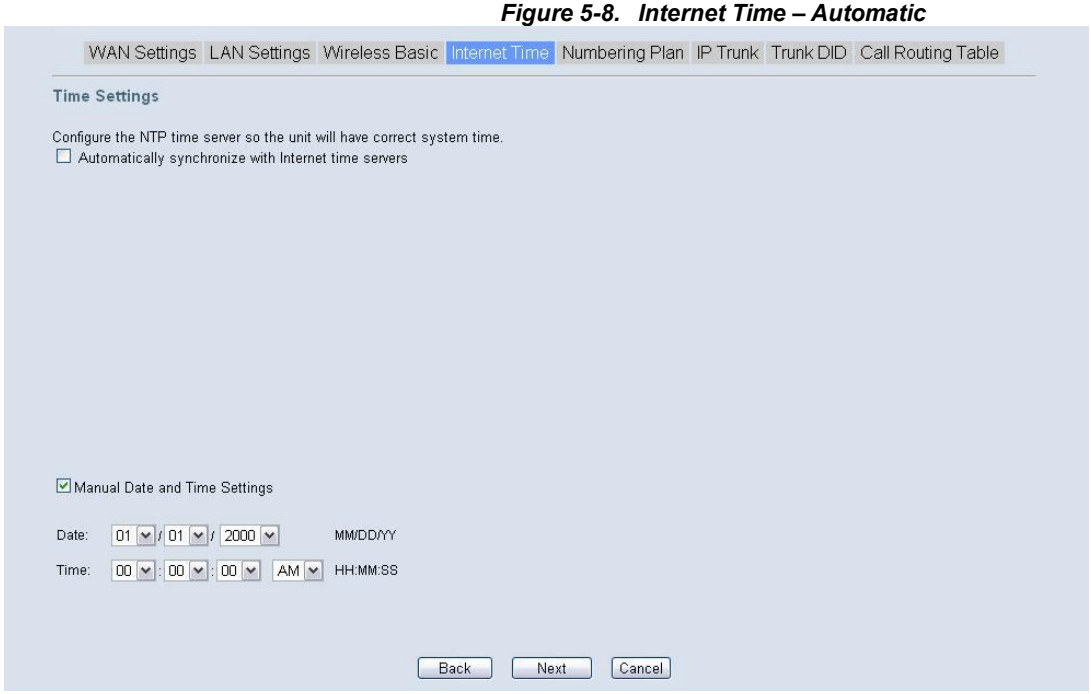


Figure 5-9. Internet Time - Manually

5.2.5 Numbering Plan

IP6600 has a flexible numbering plan so that phone or trunk numbers can be customized to meet a wild range of applications. It will check the numbers what you enter to prevent from conflicting among the all system resources. (Figure 5-1010,Figure 5-1111)

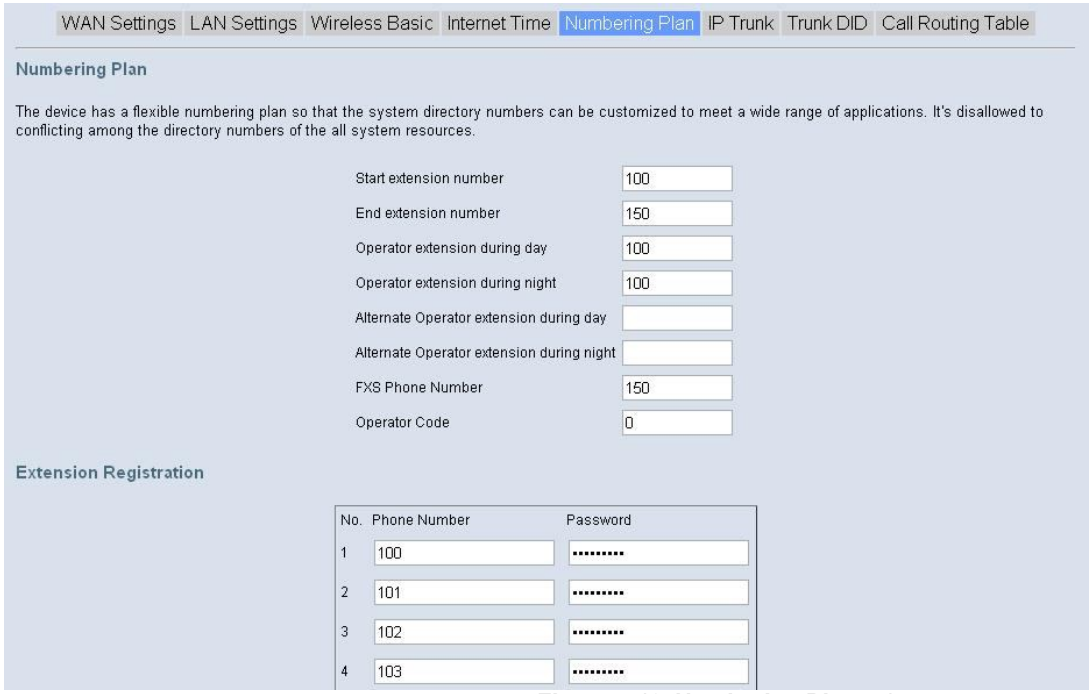


Figure 5-10. Numbering Plan – 1

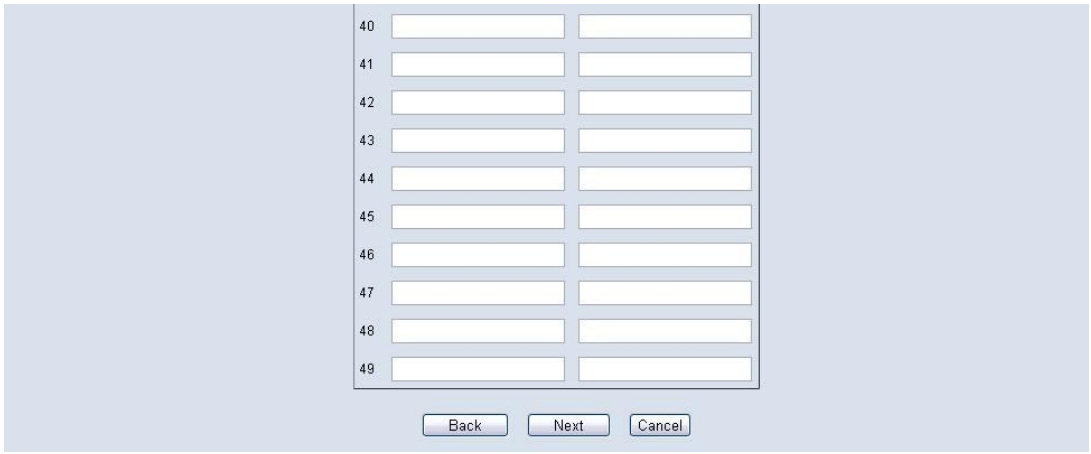


Figure 5-11. Numbering Plan – 2

5.2.6 IP Trunk

IP6600 can register up to 12 SIP Uplink Servers. The extensions may make a call to the users of the Uplink Servers, or any user in the world through the Uplink Servers. (Figure 5-1212,Figure 5-133)

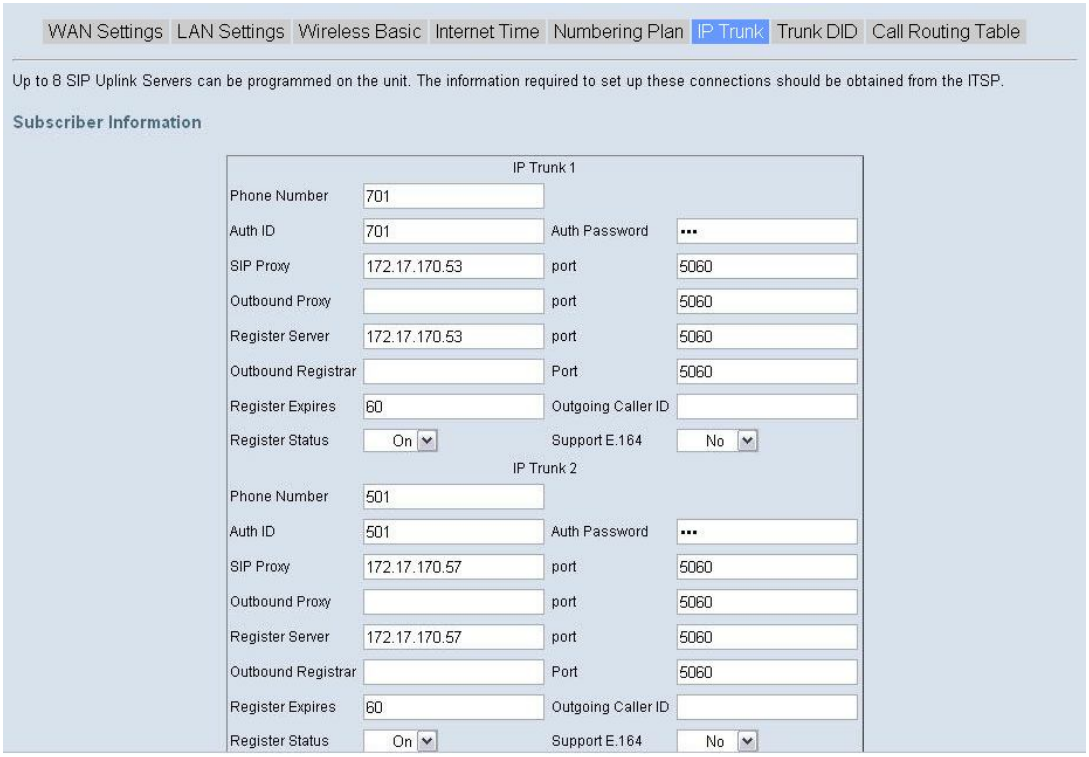


Figure 5-12. IP Trunk – 1

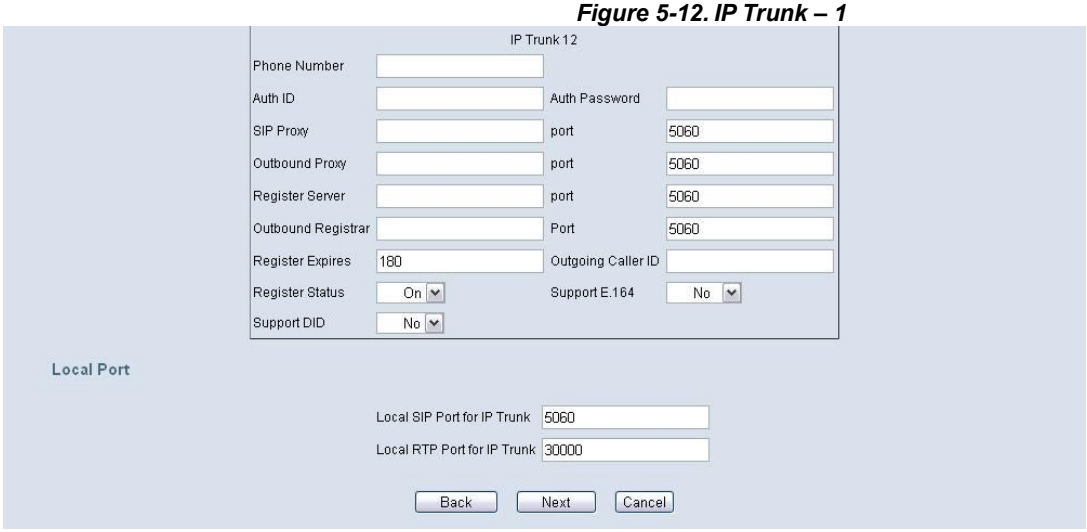


Figure 5-13. IP Trunk – 2

5.2.7 Trunk DID

The table offers its individual phone number for each extension on IP Trunks (Figure 5-124).

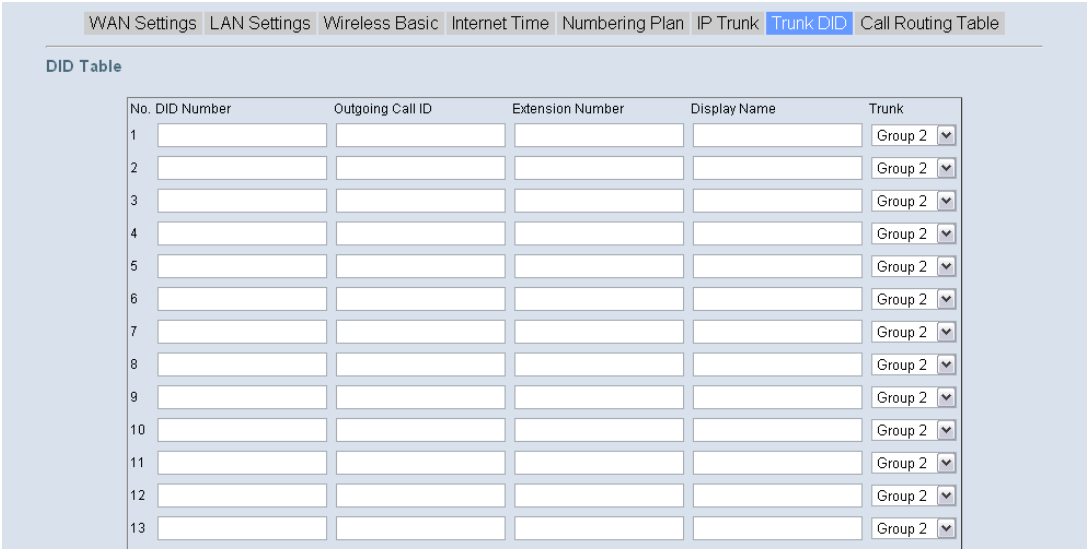


Figure 5-14. DID Trunk

5.2.7 Call Routing Table

The Call Routing Table automatically routes outgoing calls using the most appropriate route. The appropriate route is determined based on the number dialed. If necessary, IP6600 can automatically modify the dialed number by deleting and/or inserting digits. (Figure 5-155,Figure 5-166)

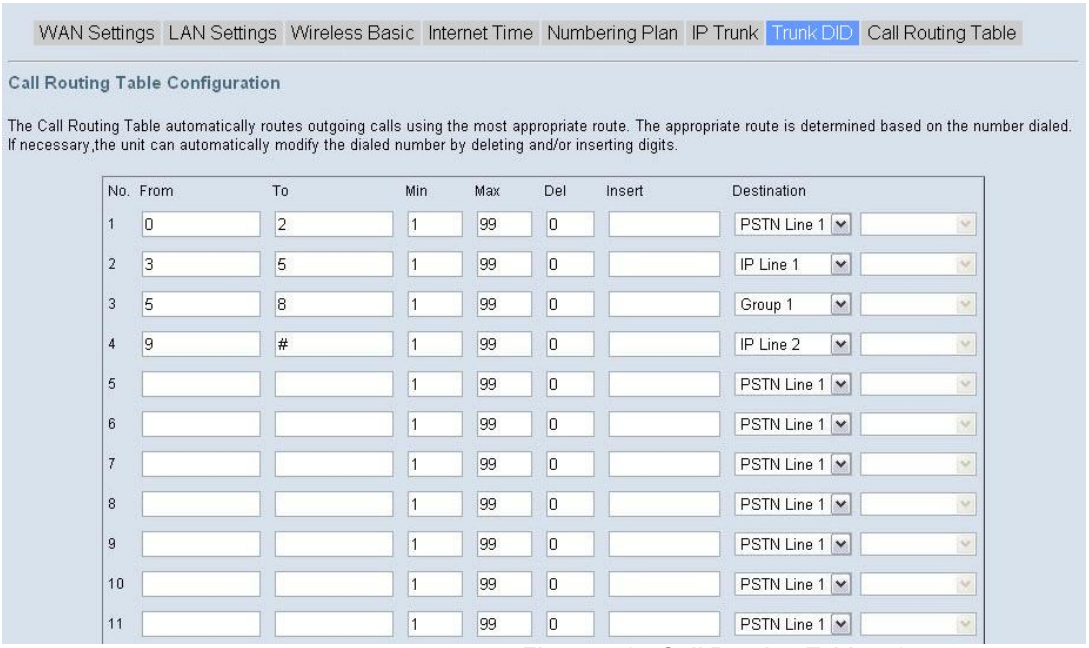


Figure 5-15. Call Routing Table – 1

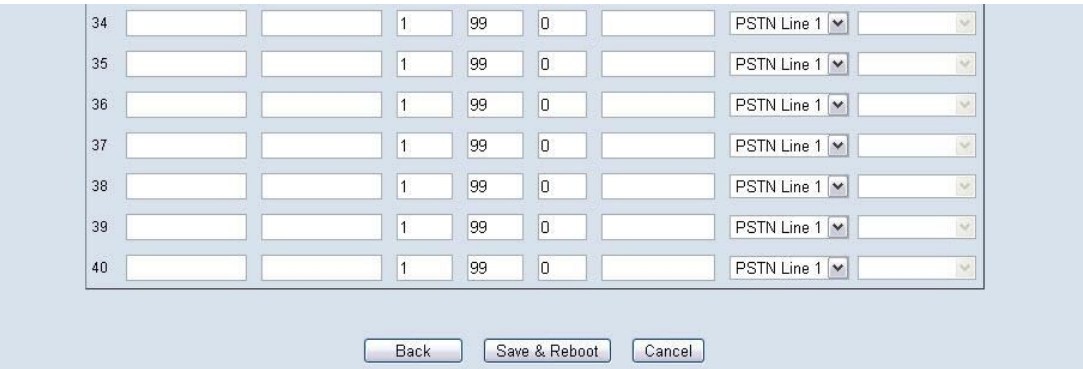


Figure 5-16. Call Routing Table – 2

5.2.8 Wizard Setup Finished

When you click “Save & Reboot” Button at above page, the wizard setup will save your setting and the wizard setup will be finished. Then the system will reboot as shown below.

Figure 5-17. Wizard Setup finished

Congratulations! The wizard setup of the IP6600 is complete.

For additional details, advanced configuration, or any other questions, refers to the next chapter.

6. Configuration

6.1 Setup

- Connect the IP6600 to PC.
- The default LAN IP of the IP6600 is 192.168.1.1.
- The default WAN IP of the IP6600 depends on upper router's DHCP server.
- For web login, the default user name is "admin1234", the default password is "123456".
- For telnet login, the name/password is the same as web login.

6.2 Establish The Connection

Enter the IP address of IP6600 from the Web Browser.

A Dialogue Box will pop up to request the user to enter username and password. (Figure 6-1)

Figure 6-1. Authentication

Please enter the management username/password into the fields then click the OK button (default username/password is admin1234/123456).

When the authentication is OK, the home page "*Device Info – Summary*" will be displayed. In the Web Configuration, it is divided into seven categories (Figure 6-2):

- Device Info
- Advanced Setup
- Wireless

- Mobile Network
- Voice
- Management
- Diagnostics
- Logout

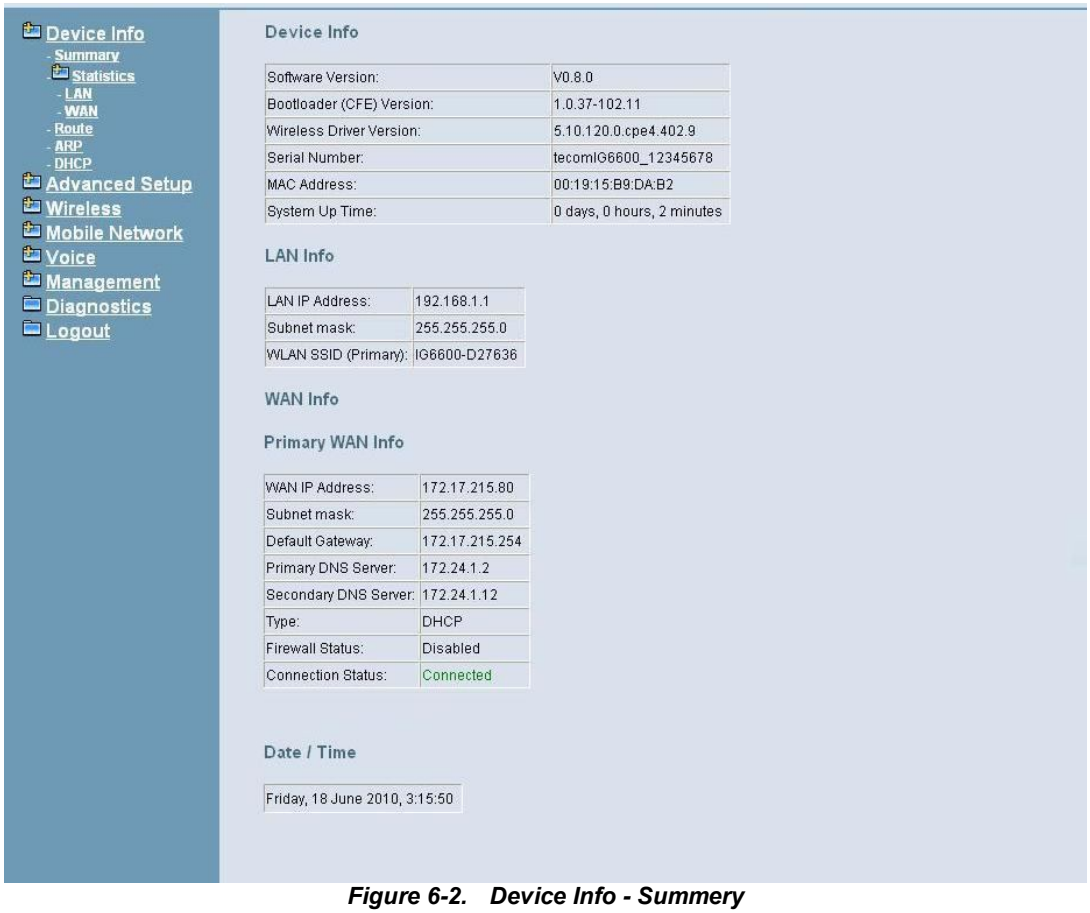


Figure 6-2. Device Info - Summery

6.3 Device Info

This information reflects the current Status of IP6600 connection. It includes the following topics:

- Summary
- Statistics
- Route
- ARP
- DHCP

6.3.1 Summary

In the page (Figure 6-2) you can get the information reflects the current software version and connection status. It includes Device Info, Network Info and Date/Time.

For Network Info, it includes the three parts:

- LAN Info: Ethernet LAN status
- Primary WAN Info: Ethernet WAN status
- Secondary WAN Info: Mobile Network status; shown when it exists.

6.3.2 Statistics

It's separated into two parts: LAN and WAN.

6.3.2.1 LAN

In this page (Figure 6-3) you can get the network statistics of the LAN and Wireless LAN interface. Click "Reset Statistics" to clean up all network statistics.

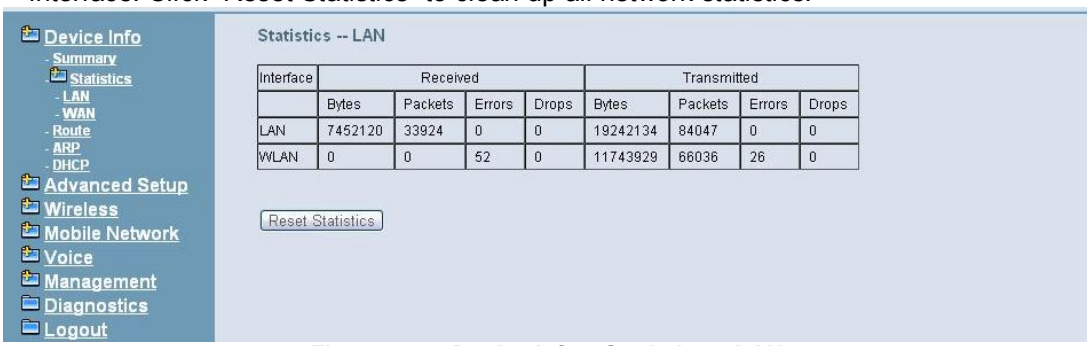


Figure 6-3. Device Info – Statistics – LAN

6.3.2.1 WAN

In this page (Figure 6-4) you can get the network statistics of the WAN interface. Click "Reset Statistics" to clean up all network statistics.

Figure 6-4. Device Info – Statistics – WAN

6.3.3 Route

In this page you can get the IP route information of the device. (Figure 6-5)

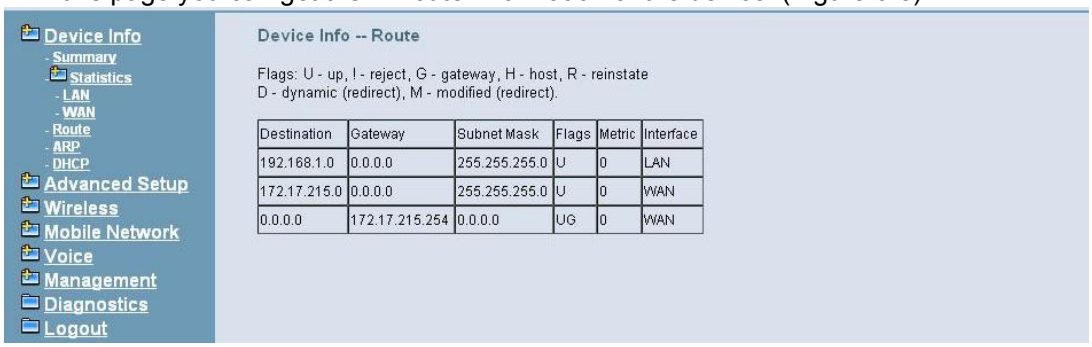


Figure 6-5. Device Info – Route

6.3.4 ARP

This page shows an ARP table which maps IP network addresses to hardware addresses used by data link level protocol. (Figure 6-6)

Figure 6-6. Device Info – ARP

6.3.5 DHCP

This page shows a DHCP Leases table which shows the all used IP address under IP6600's DHCP Server. (Figure 6-7)

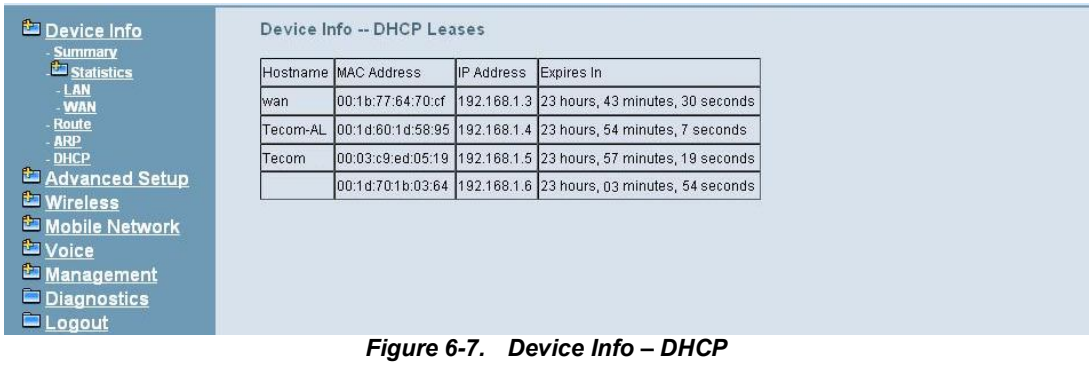


Figure 6-7. Device Info – DHCP

6.4 Advanced

Advanced Setup allows system administrator to configure the following topics:

- WAN
- LAN
- NAT
  - Virtual Servers
  - Port Triggering
  - DMZ Host
- Security
  - IP Filtering
    - Outgoing
    - Incoming
- Parental Control
  - Time Restriction
  - URL Filter
- Quality of Service
  - DSCP Marking
  - Bandwidth Control
- Routing
  - Static Route
- Dynamic DNS
- Upnp
- File Server
- Print Server

6.4.1 WAN

There are three modes that you can give WAN IP address to IP6600: Static IP mode, DHCP mode and PPPoE mode. You can also enable or disable Firewall and VLAN service.

Network Address Translation (NAT) allows you to share one public WAN IP address for multiple computers on your LAN side. In IP6600, NAT is default enabled and is not shown on the page to prevent it from being disabled.

This page shows the setting of WAN interface which is Static IP mode (Figure 6-8).

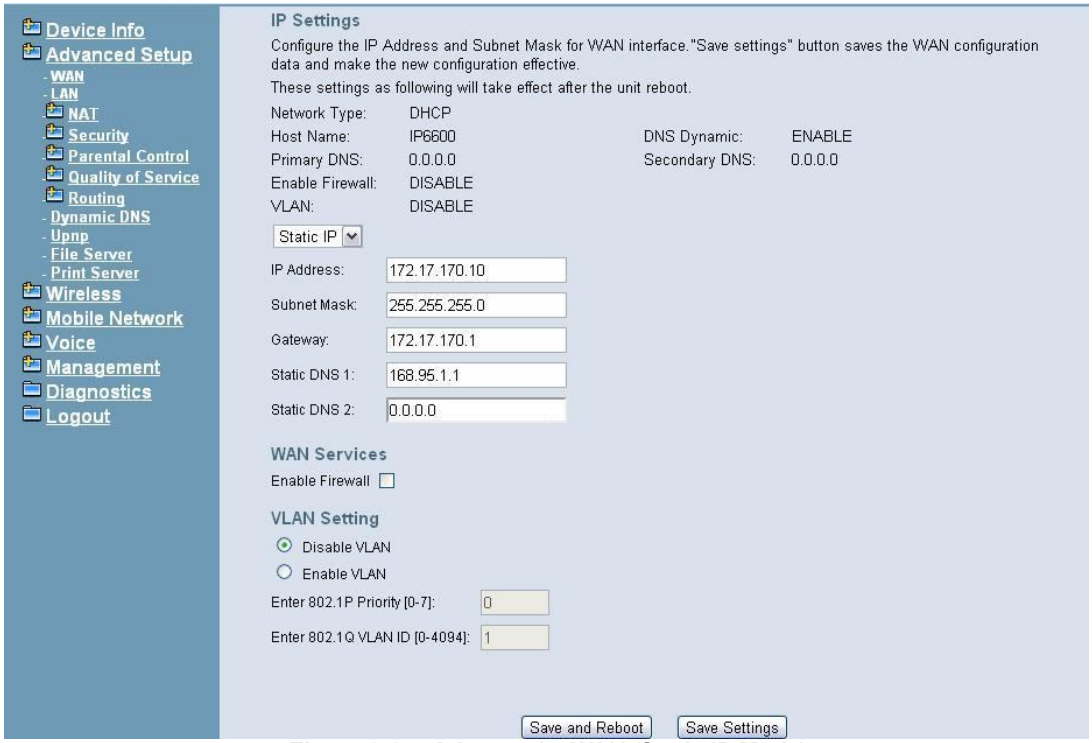


Figure 6-8. Advanced – WAN (Static IP Mode)

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

This page shows the setting of WAN interface which is DHCP mode (Figure 6-9).

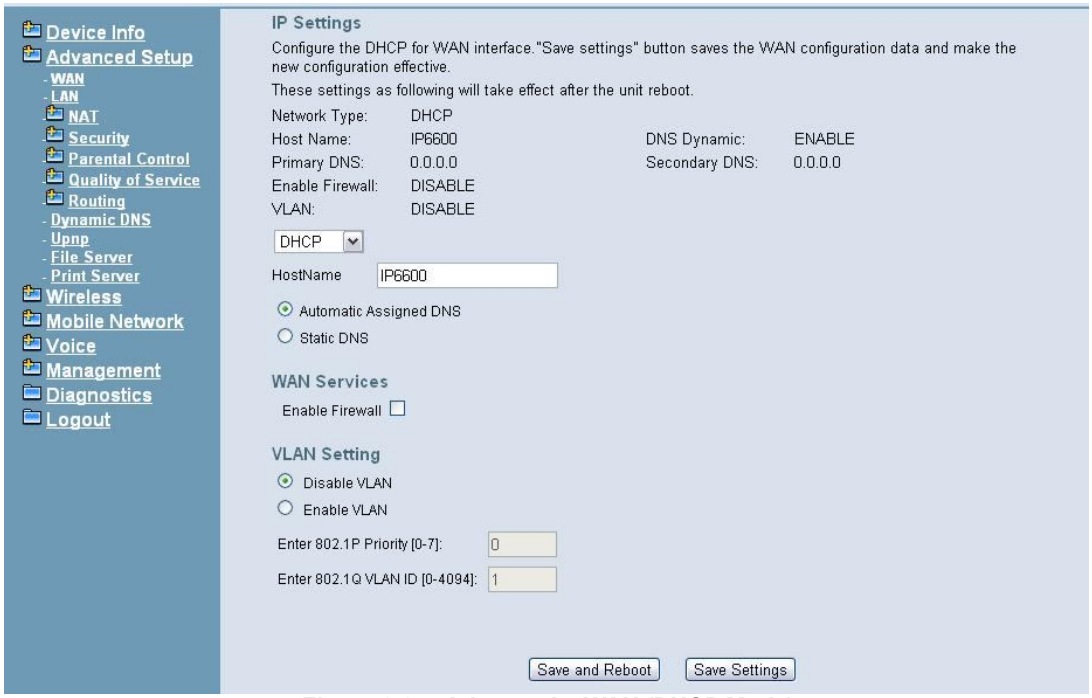


Figure 6-9. Advanced – WAN (DHCP Mode)

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP has provided to you to establish your connection. This page shows the setting of WAN interface which is PPPoE mode (Figure 6-10).

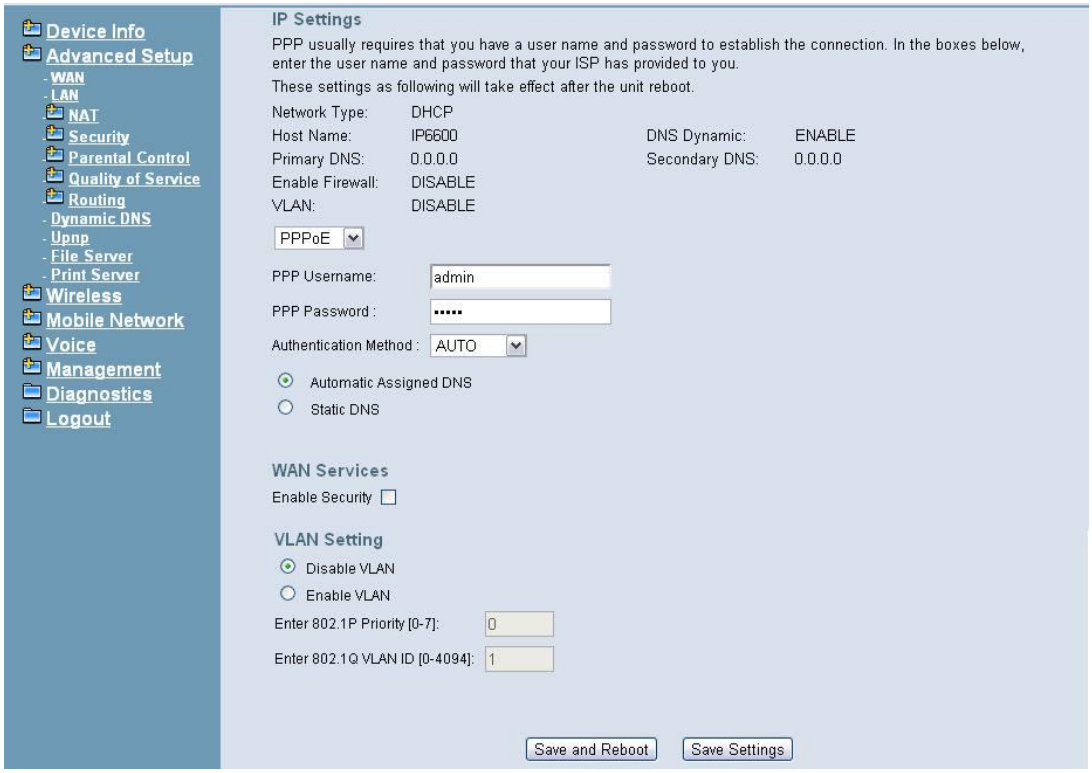


Figure 6-10. Advanced – WAN (PPPoE Mode)

6.4.2 LAN

It allows you to set LAN IP and Subnet Mask for LAN interface. You can also enable or disable DHCP Server and configure related settings. The “Static IP Lease List” allows to program 32 entries to have the fixed IP address for the specified devices. If needed, it can also configure the second IP address and Subnet Mask for the LAN interface (Figure 6-11).

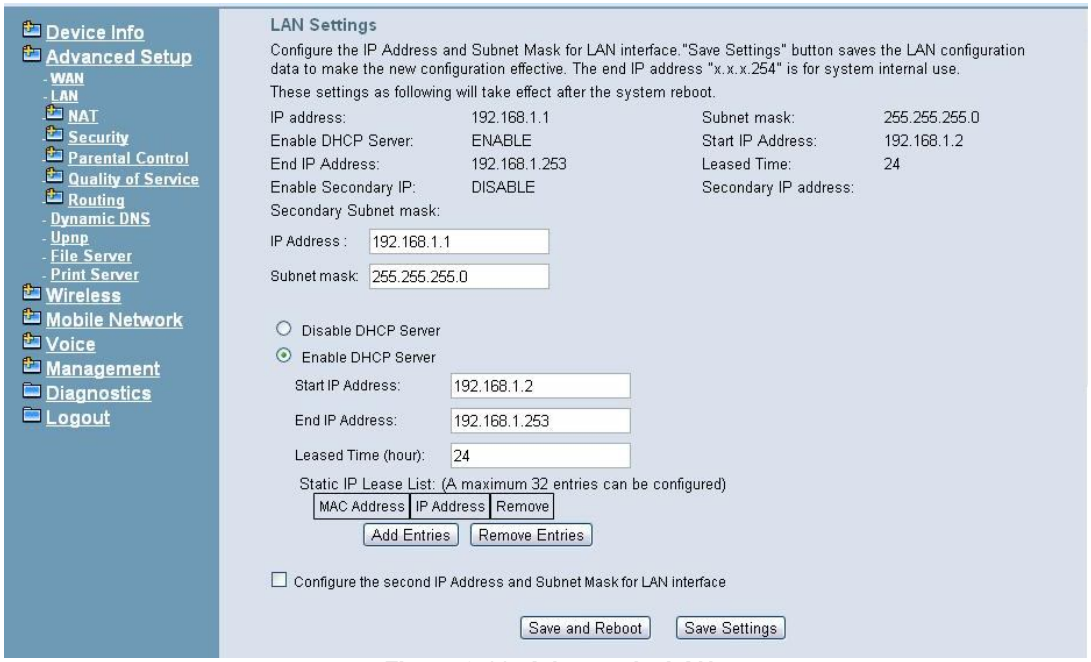


Figure 6-11. Advanced – LAN

6.4.3 NAT

It's separated into three parts: Virtual Servers, Port Triggering, and DMZ Host.

6.4.3.1 Virtual Servers

Virtual Server allows you to direct incoming traffic from WAN side identified by Protocol and External port to the internal server with private IP address on the LAN side. The "Internal Port" can be modified if the "External Port" needs to be converted to a different port number used by the server on the LAN side. The remote IP should be specified in the table to allow the access. A maximum 32 entries can be configured. (Figure 6-12, Figure 6-13)

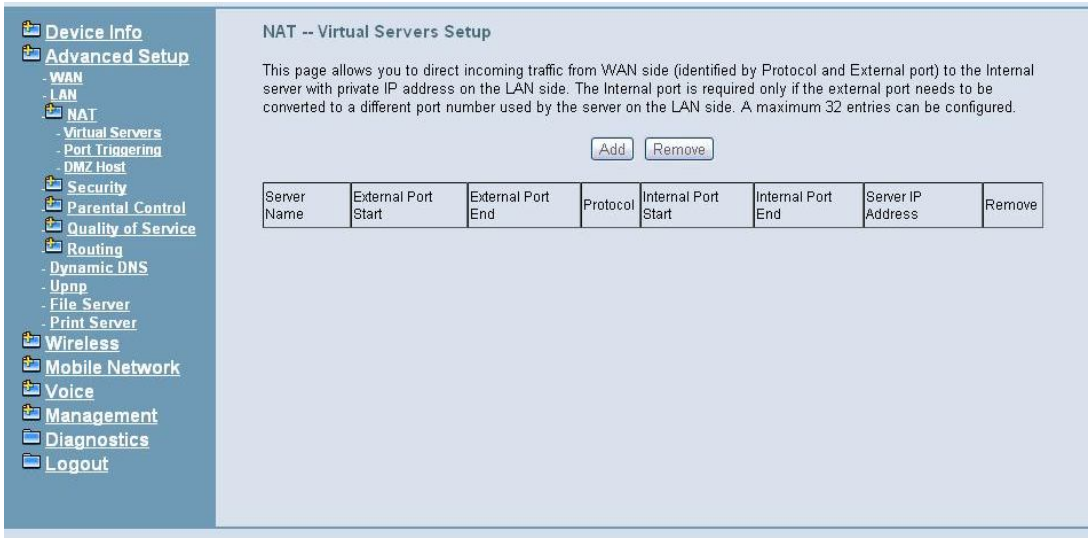


Figure 6-12. Advanced – NAT – Virtual Servers

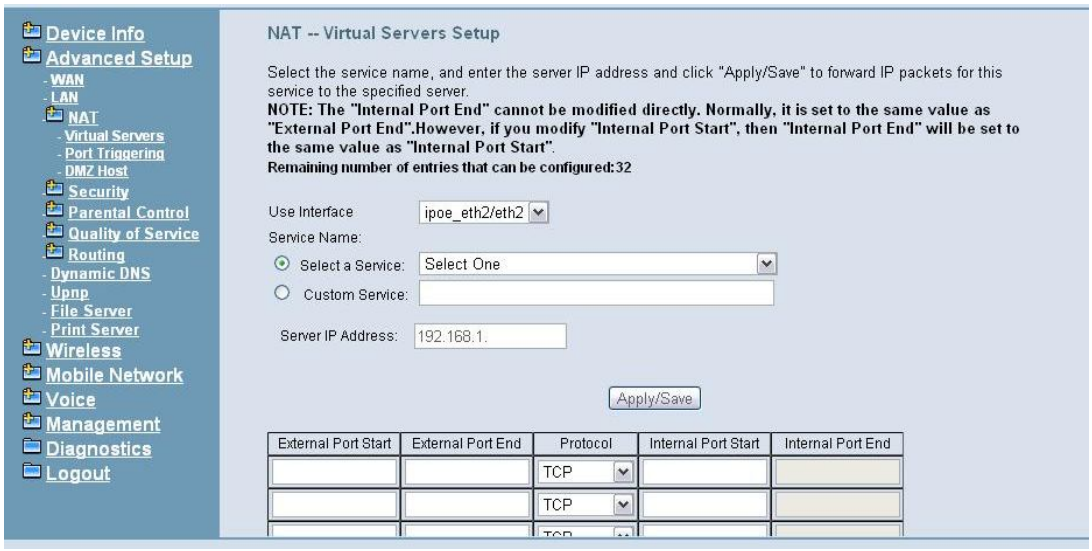


Figure 6-13. Advanced – NAT – Virtual Servers – Add

6.4.3.2 Port Triggering

Some applications require that specific ports in the IP6600's firewall opened for access by the remote parties. Port Triggering dynamically opens up the "Open Ports" in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the "Trigger Ports". IP6600 allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the "Open Ports". A maximum 32 entries can be configured. (Figure 6-14,Figure 6-15)

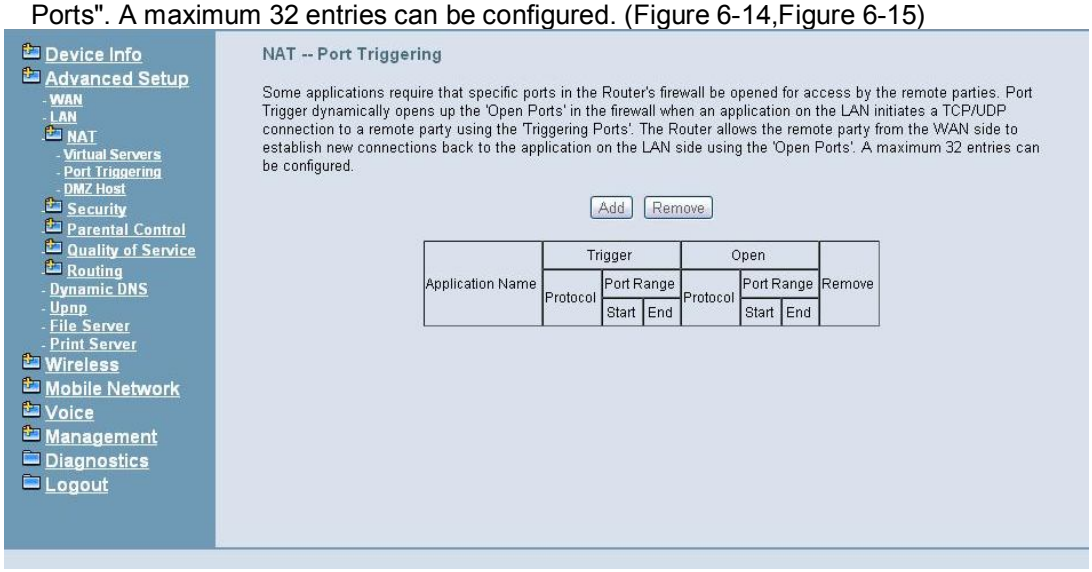


Figure 6-14. Advanced – NAT – Port Triggering

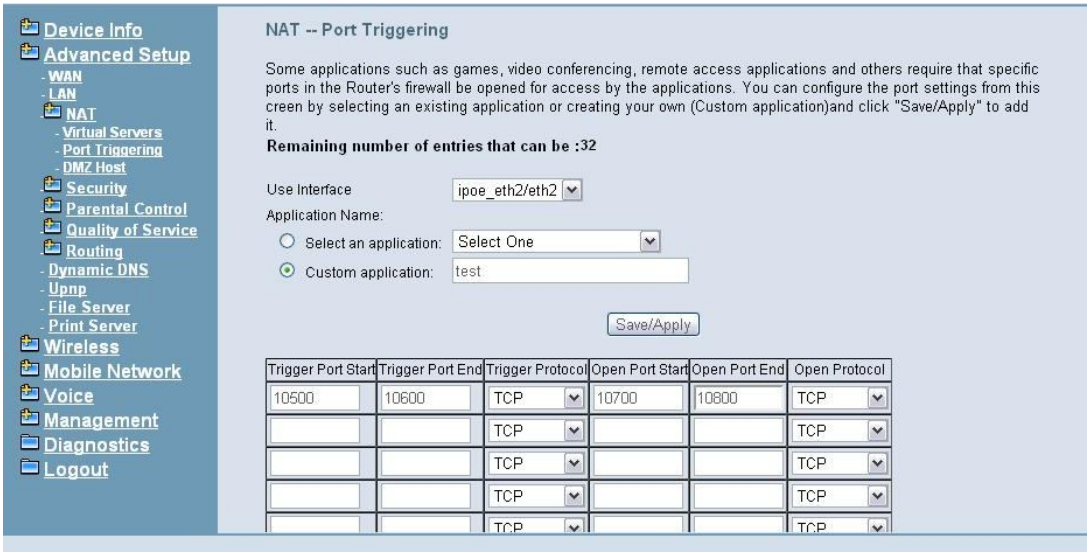


Figure 6-15. Advanced – NAT – Port Triggering – Add

6.4.3.3 DMZ Host

IP6600 will forward IP packets that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer. Enter the computer's IP address and click "Save Settings" to activate the DMZ host. Clear the IP address field and click "Save Settings" to deactivate the DMZ host. (Figure 6-16)

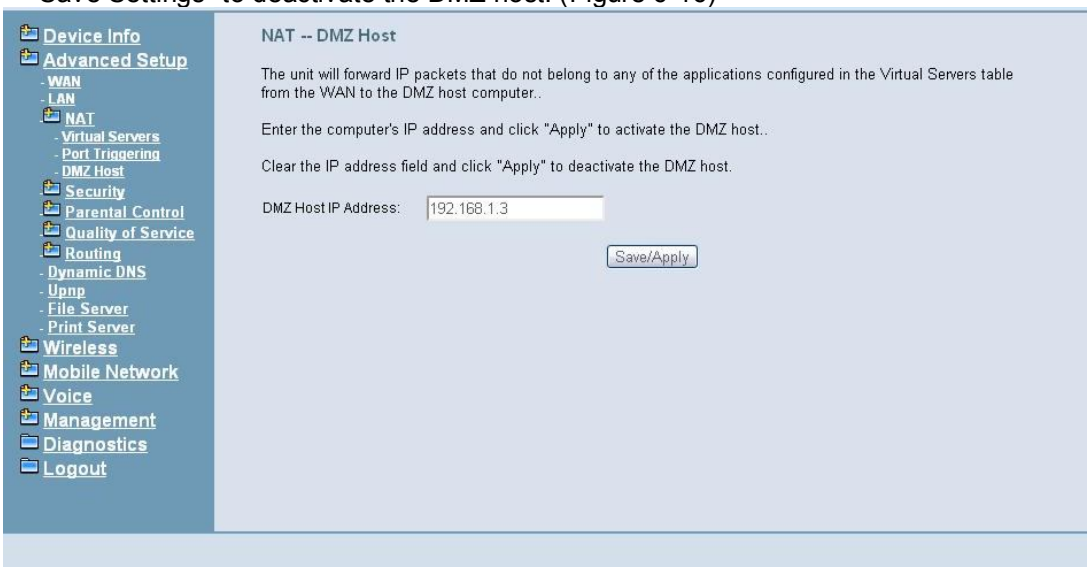


Figure 6-16. Advanced – NAT – DMZ

6.4.4 Security

It supports IP Filtering Setup. It's separated into two parts: Outgoing and Incoming.

6.4.4.1 IP Filtering - Outgoing

It allows the administrator to create a filter rule to identify outgoing IP traffic by specifying a new filter name. At least one condition is needed. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. (Figure 6-17,Figure 6-18)

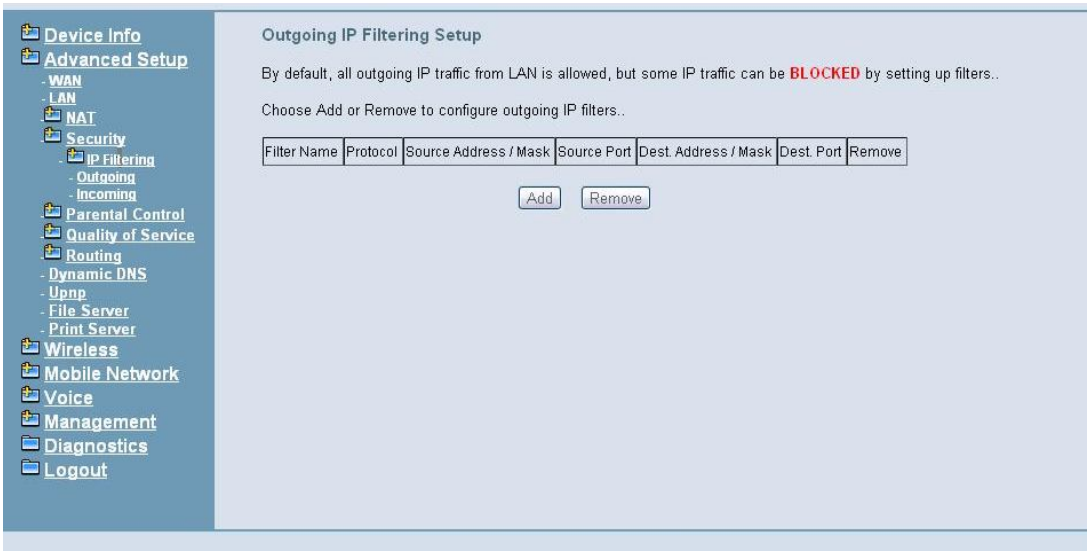


Figure 6-17. Advanced – Security – IP Filtering – Outgoing

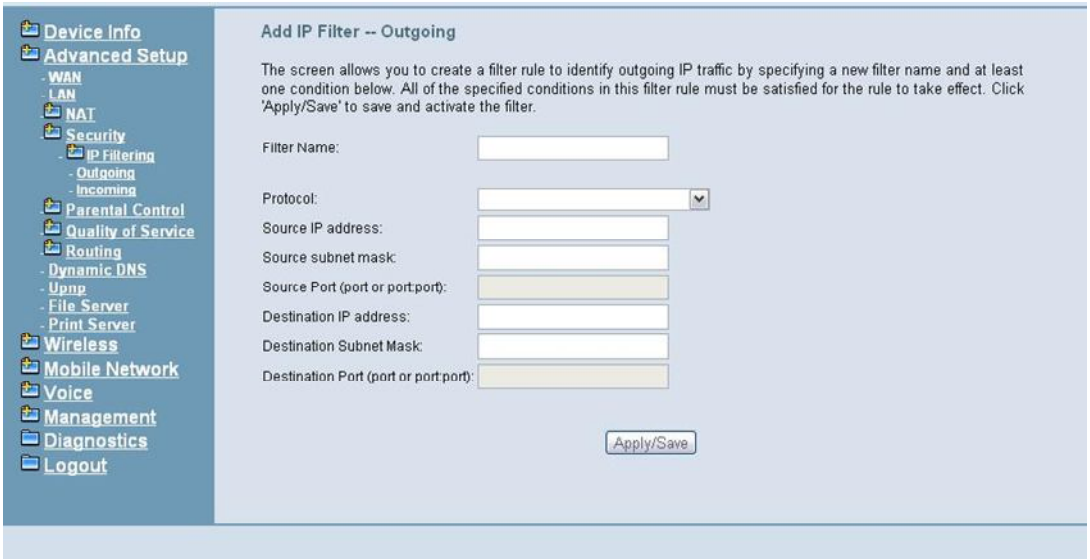


Figure 6-18. Advanced – Security – IP Filtering – Outgoing – Add

6.4.4.2 IP Filtering - Incoming

It allows the administrator to create a filter rule to identify incoming IP traffic by specifying a new filter name. At least one condition is needed. All of the specified conditions in this filter rule must be satisfied for the rule to take effect. (Figure 6-19, Figure 6-20)

By default, all incoming IP traffic from the WAN will be blocked if it is not consistent with the incoming filter rules. In fact, IP6600 has opened some necessary ports such as web port, sip port, and rtp port, to make sure that voice application can communicate well.

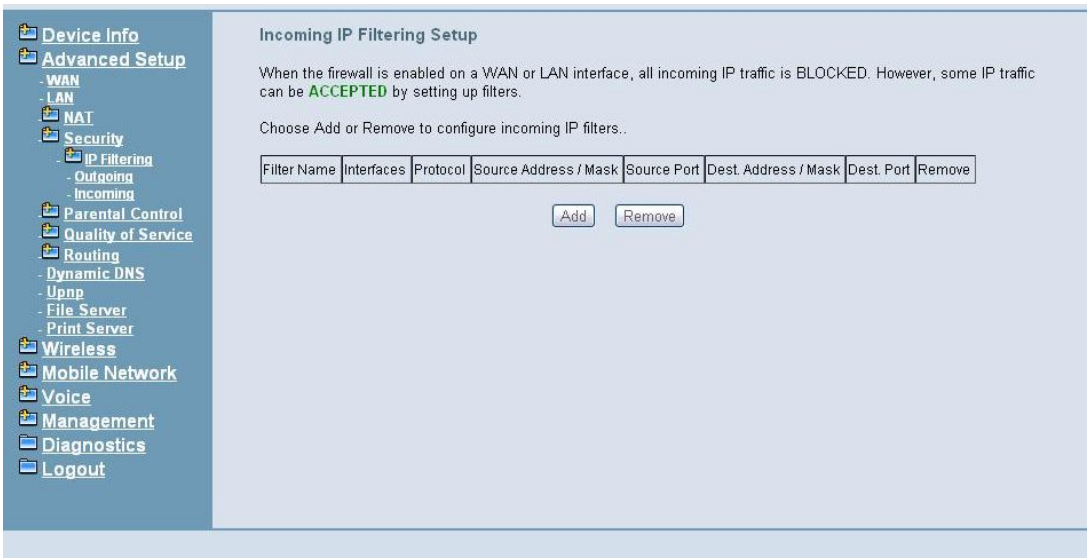


Figure 6-19. Advanced – Security – IP Filtering – Incoming

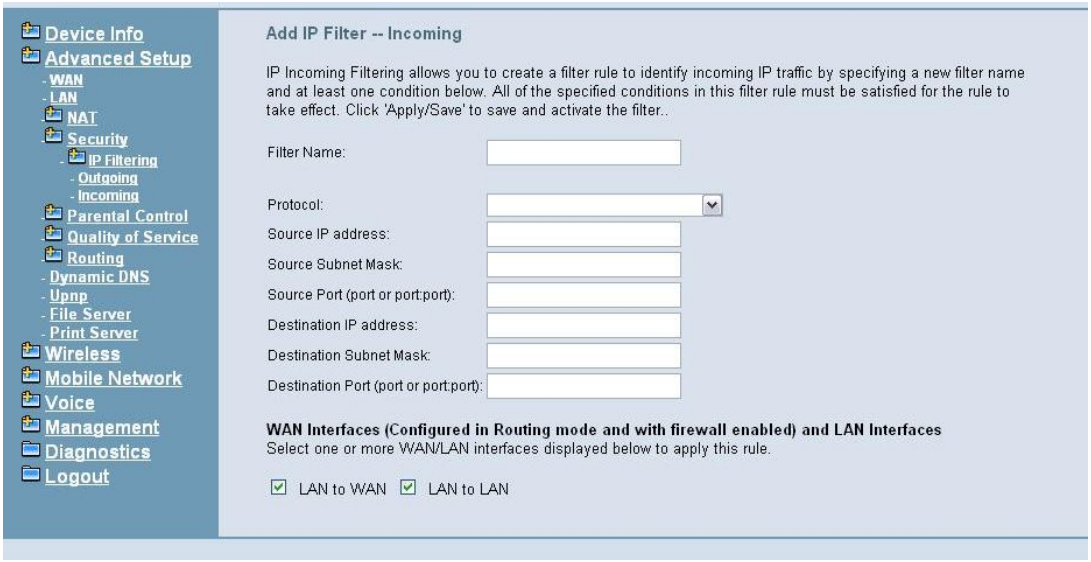


Figure 6-20. Advanced – Security – IP Filtering – Incoming – Add

6.4.5 Parental Control

It's separated into two parts: Time Restriction, and URL Filter.

6.4.5.1 Time Restriction

The administrator can add time restriction to a special LAN device connected to IP6600. The "Browser's MAC Address" automatically displays the MAC address of the LAN device where the browser is running. To restrict other LAN device, click the "Other MAC

Address" button and enter the MAC address of the other LAN device. (Figure 6-21, Figure 6-22)

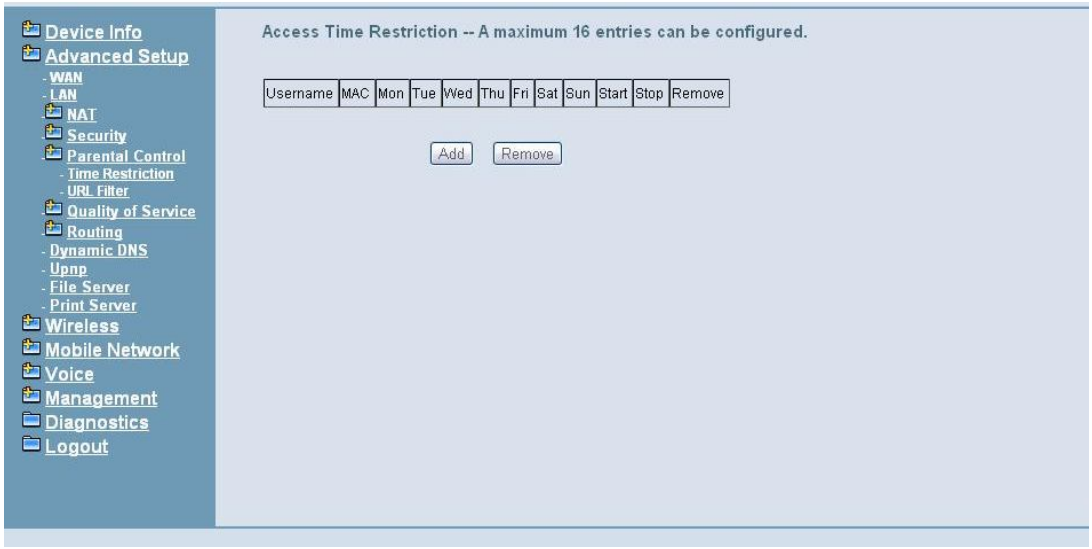


Figure 6-21. Advanced – Parental Control – Time Restriction

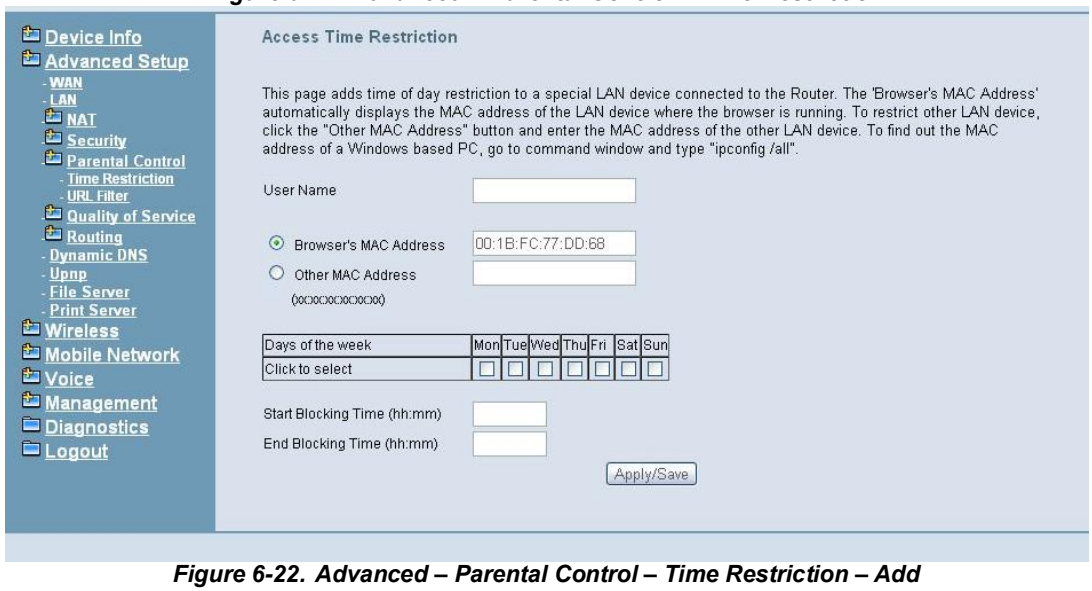


Figure 6-22. Advanced – Parental Control – Time Restriction – Add

6.4.5.1 URL Filter

The administrator can add 100 entries maximum to include/exclude the URL address and Port number. Choose “Include” means the user can only connect to the URL that you add. Choose “Exclude” means the user can not connect to the URL that you add. “Include” and “Exclude” are exclusive. The all entries are for the selected type. (Figure 6-23,Figure 6-24).

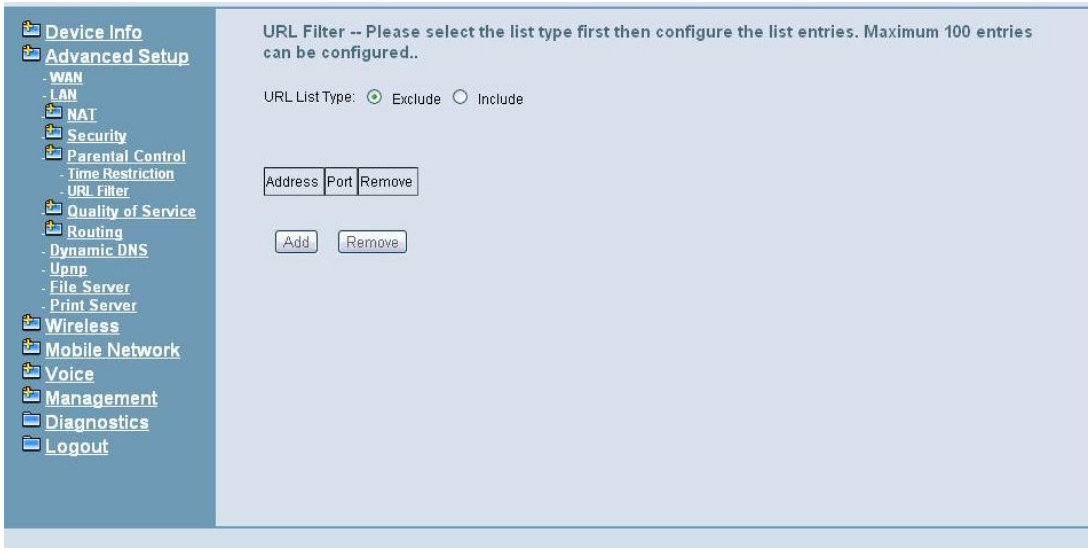


Figure 6-23. Advanced – Parental Control – URL Filter

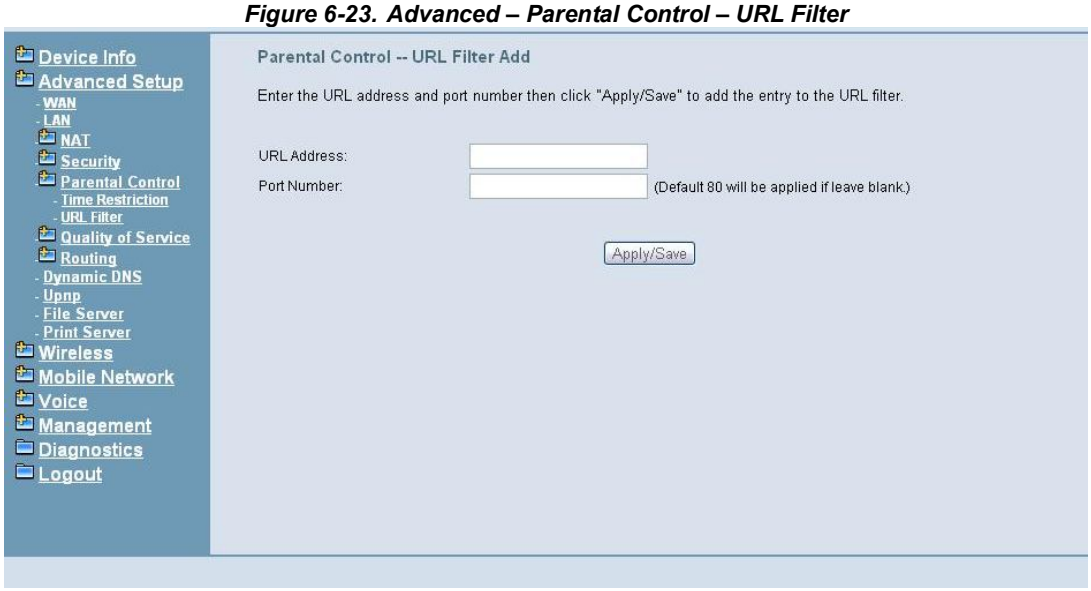


Figure 6-24. Advanced – Parental Control – URL Filter – Add

6.4.6 Quality of Service

It's separated into two parts: DSCP Marking, and Bandwidth Control

6.4.6.1 DSCP Marking

IP QoS is applied to the traffic from LAN to WAN; the traffic from WAN to LAN will not be applied.(Figure 6-25)

If "Enable DSCP Mark" checkbox is selected, choose a default DSCP mark to automatically mark incoming traffic without reference to a particular classifier. Click "Save Settings" button to save it. Note: If "Enable DSCP Mark" checkbox is not selected,

all QoS will be disabled for all interfaces. The default DSCP mark is used to mark all egress packets.

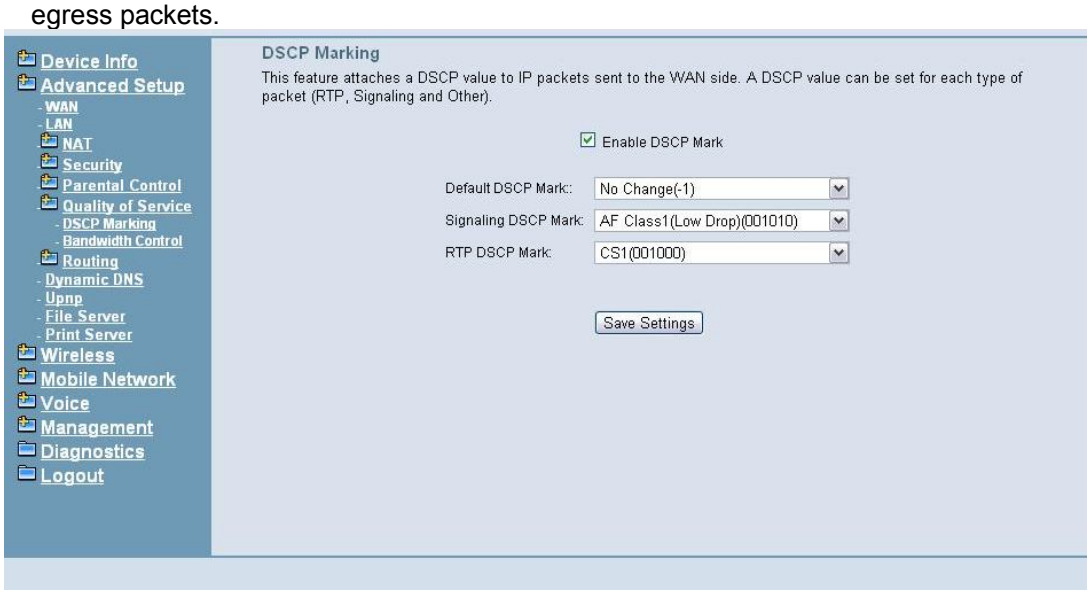


Figure 6-25. Advanced – Quality of Service – DSCP Marking

6.4.6.2 Bandwidth Control

Bandwidth Control allows you to control WAN port's upstream bandwidth according to your settings, and it can ensure the highest priority IP packet traffic throughput. By default, all voice packets have been queued in the highest IP packets, and the others have been queued in the normal IP packets if they have not been set in the traffic class rule.

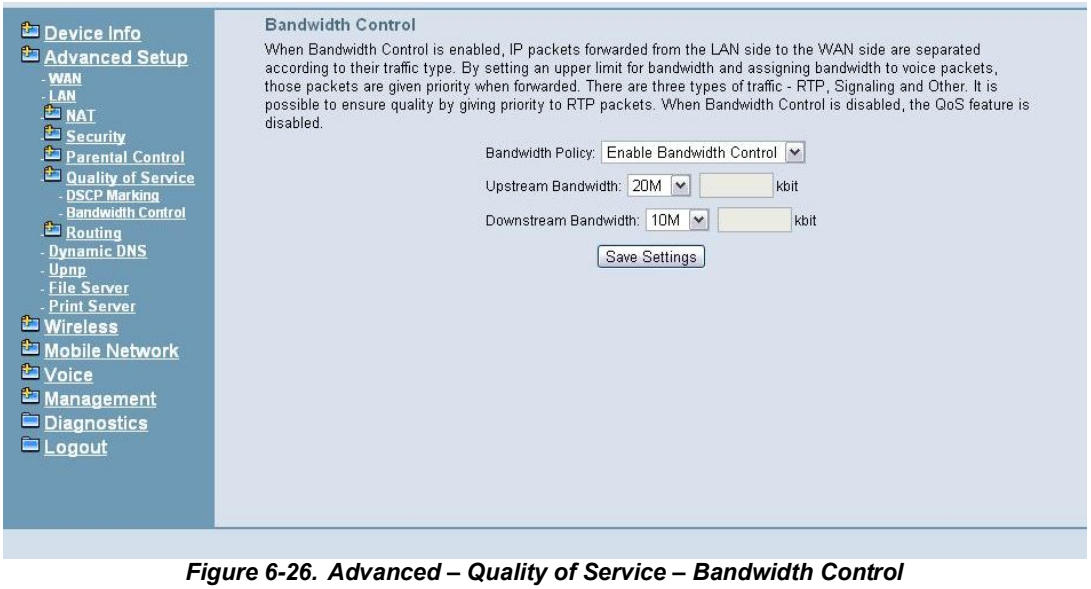


Figure 6-26. Advanced – Quality of Service – Bandwidth Control

6.4.7 Routing

6.4.7.1 Static Route

The Static Route allows you to add special routing rules into routing table.

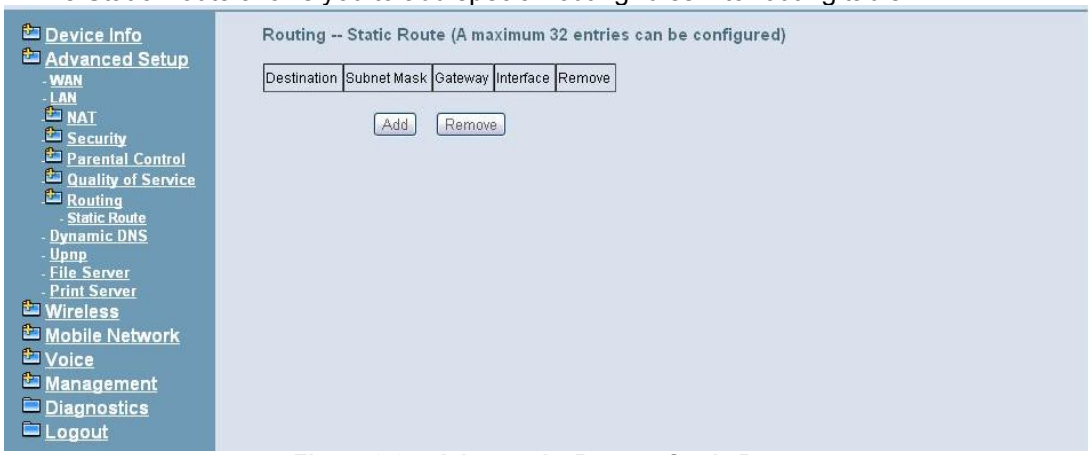


Figure 6-27. Advanced – Route – Static Route

Click “Add” to create a new Static Route. Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save Settings" to add the entry to the routing table. (Figure 6-27,Figure 6-28)

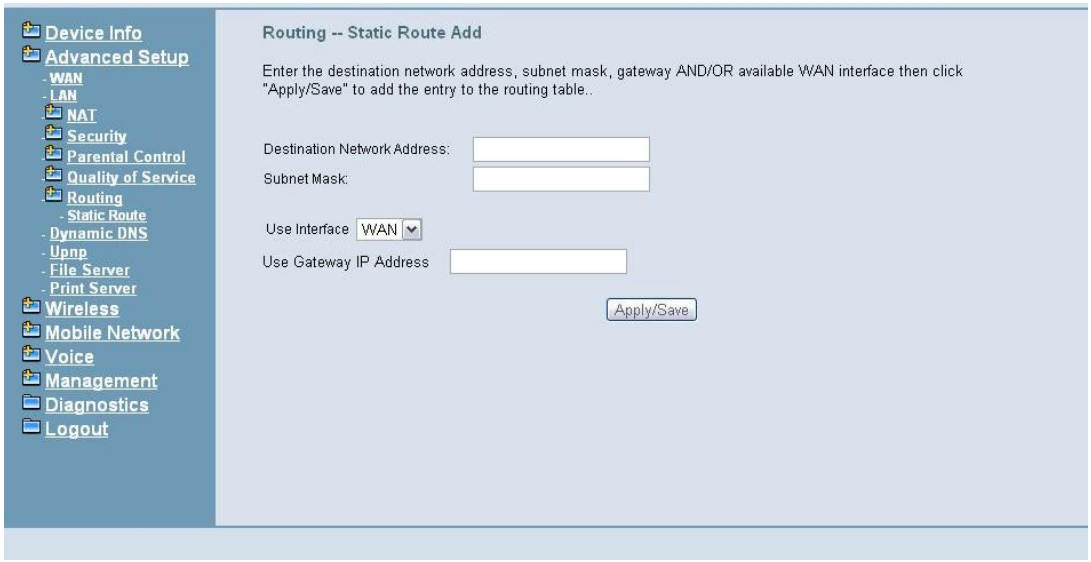


Figure 6-28. Advanced – Route – Static Route – Add

6.4.8 Dynamic DNS

The Dynamic DNS service allows you to alias a register domain name to a dynamic IP address. It allows IP6600 to be more easily accessed from various locations on the Internet. Click “Add” or “Remove” to configure Dynamic DNS. (Figure 6-29)

Figure 6-29. Advanced – Dynamic DNS

Now IP6600 support for two DDNS provider, DynDNS.org and TZO. Specify the register hostname and choose the related interface. Fill in the username/password or email/key and click “Apply/Save”. IP6600 will update the current IP with DDNS provider when click “Apply/Save” or system reboot successfully. IP6600 will also update the current IP automatically with DDNS provider in the programmed Update Cycle. (Figure 6-30,Figure 6-31)

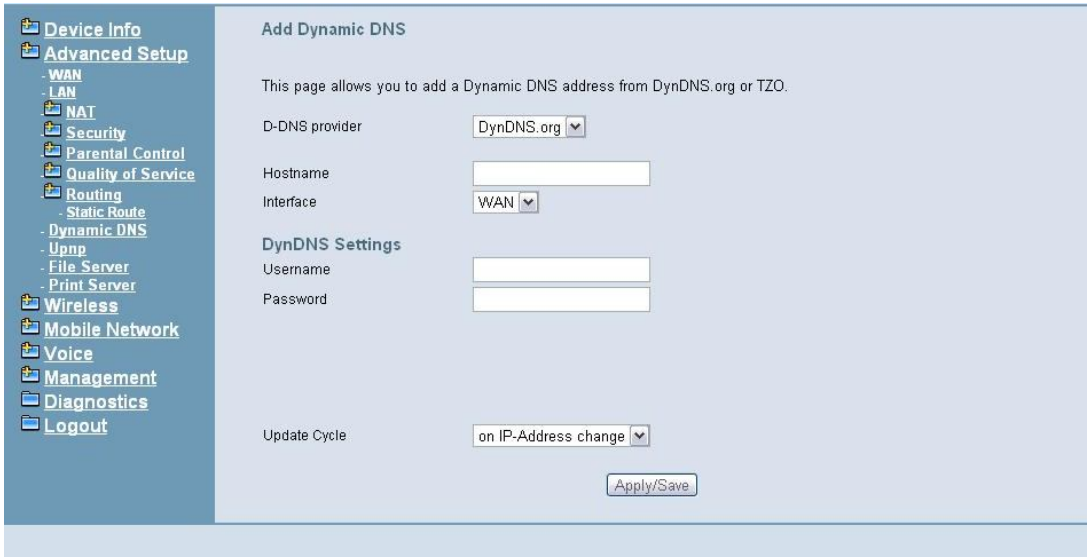


Figure 6-30. Advanced – Dynamic DNS – DynDNS.org

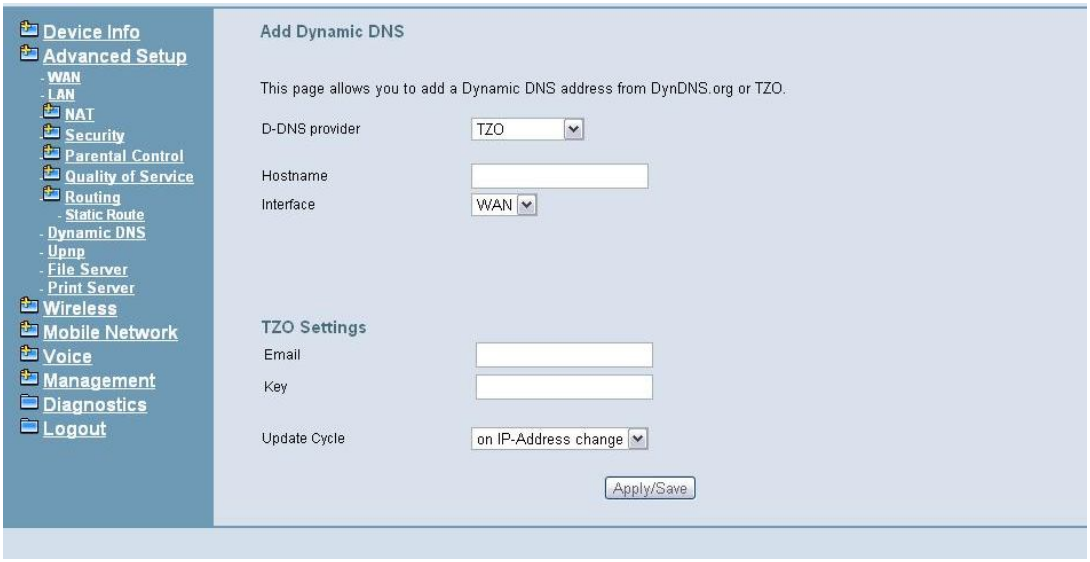


Figure 6-31. Advanced – Dynamic DNS – TZO

6.4.9 Upnp

It's used to enable or disable the universal plug and play function. (Figure 6-32)

Figure 6-32. Advanced – Upnp

6.4.10 File Server

IP6600 provides file sharing service for various Microsoft Windows clients. Your USB mass storage can plug into the IP6600 USB port and can be accessed by Windows/Linux Network Neighborhood (Figure 6-33).

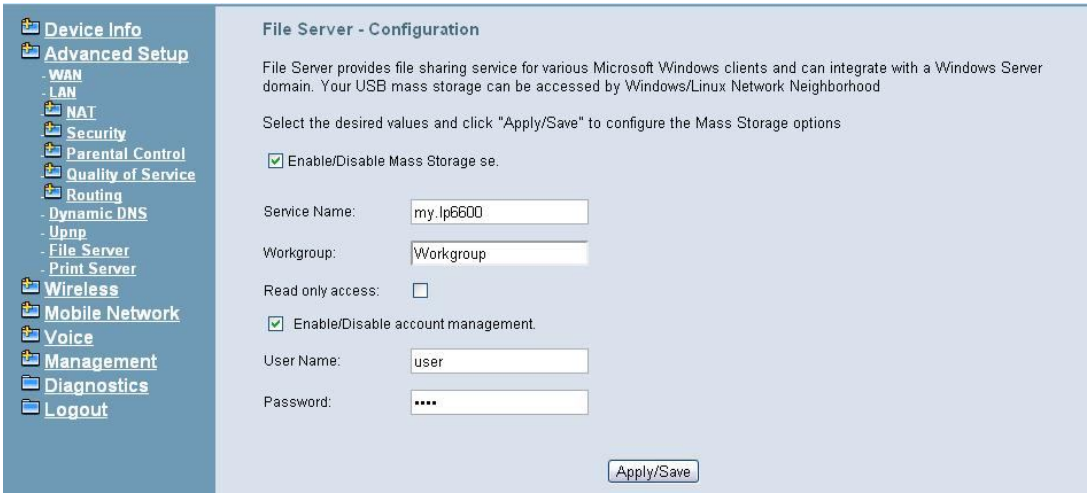


Figure 6-33. Advanced – File Server

Enter the service name and Workgroup. The “Workgroup” is the name of the group that shares the same resources on the local network. The workgroup name of windows system user must the same with the IP6600 workgroup. You can check your workgroup by the following step:

1. Open the Control Panel from the Start menu and click on the “System” icon.
2. Open the “System Properties” window.
3. Click the “Computer Name” tab. It will show details of the computer's description, name and workgroup.(Figure 6-34)
4. If workgroup name is different from IP6600 workgroup name, you can click “Change” to revise workgroup name of your computer or just change IP6600 workgroup name.(Figure 6-35)

Figure 6-34. Windows workgroup

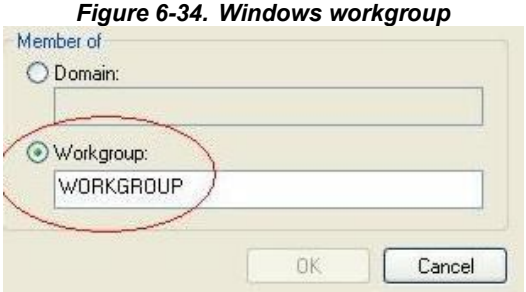


Figure 6-35. Change windows system workgroup

User can use search function in windows to connect to IP6600 file server:

A. Click “Search” in the windows “Start menu”.

B. Click “Computers and People” and input IP6600 Service Name. Click “Search”. (Figure 6-36)

C. The window will show IP6600 file server icon. Click the icon. (Figure 6-36)

D. Enter the user name and password that you register in the IP6600 file server. Then you will see the sharing files of your account. (Figure 6-37)(Figure 6-38)

Figure 6-36. Search IP6600 file server

Figure 6-37. Input file server username and password

Figure 6-38. USB Sharing files

6.4.11 Print Server

IP6600 has a USB Interface. It allows connecting a USB printer. The page is to program the Printer setting. (Figure 6-39)

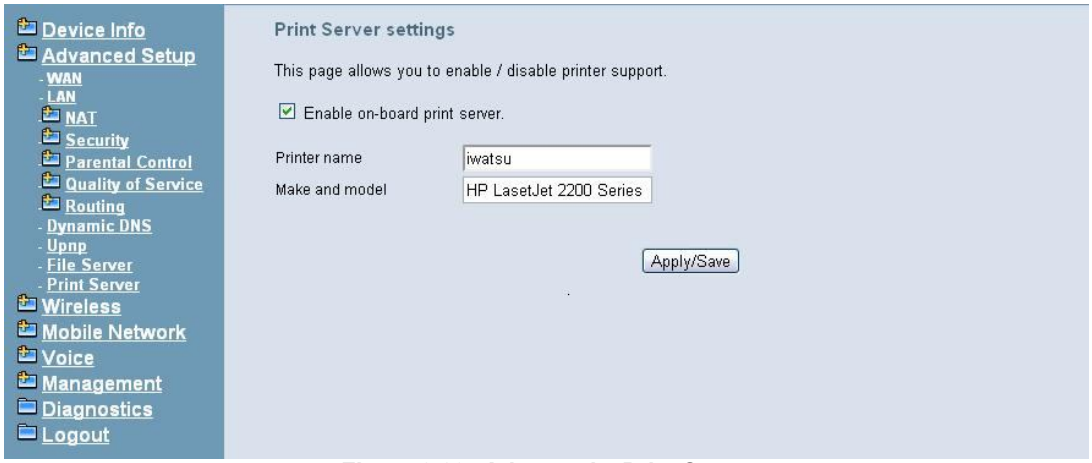


Figure 6-39. Advanced – Print Server

Enter the Printer name. The printer name will be used by user to access the printer. “Make and model” is the model name of the printer. User can access the USB printer by the following step:

1. Open the Printers and Faxes Window in windows system control panel.
2. Select the Add New Printer link. The add printer wizard window will be displayed.(Figure 6-40)
3. Select Next on the Add New Printer Wizard Screen. Select “A network printer, or a printer attached to another computer.” Then press the Next button.(Figure 6-41)

Figure 6-40. Add Printer Wizard

Figure 6-41. Local or Network Printer

4. Select “Connect to a printer on the Internet or on a home or office network” and Input the URL:”http://192.168.1.1/printers/iwatsu”. The 192.168.1.1 in the URL is your IP6600 LAN IP address. The “iwatsu” in the URL is the Printer name.(Figure 6-42)

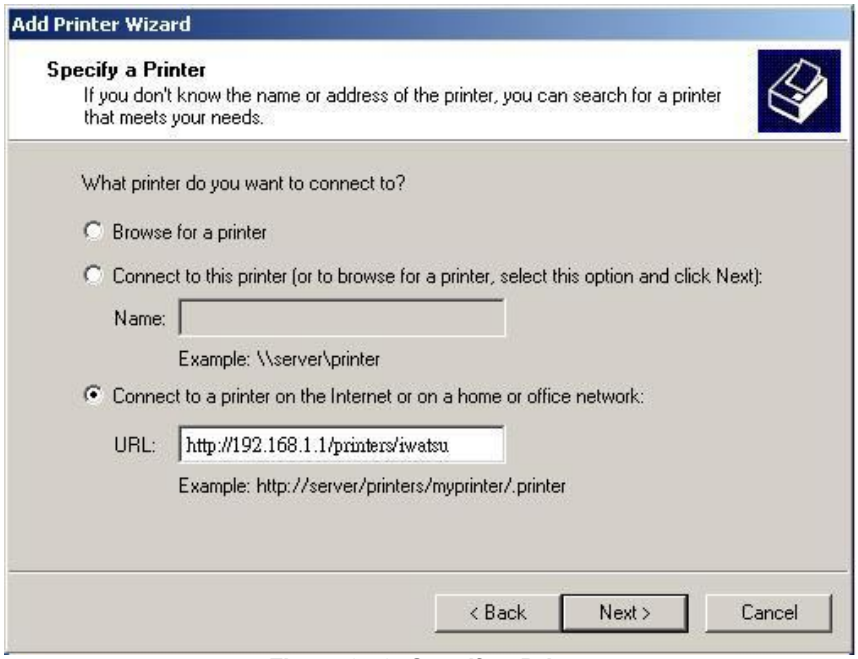


Figure 6-42. Specify a Printer

5. Select the Manufacturer and model of your printer. Press OK.(Figure 6-43)

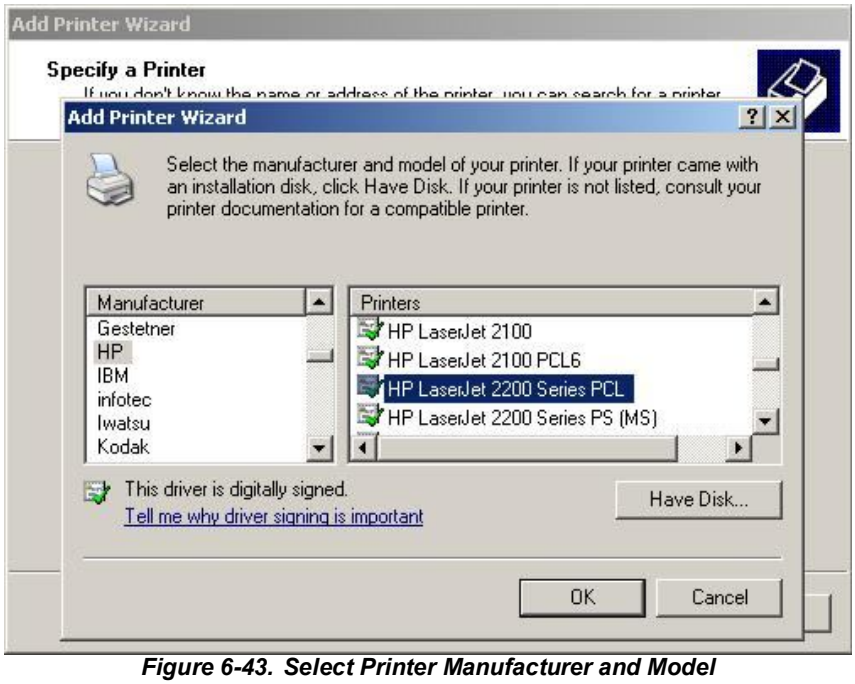


Figure 6-43. Select Printer Manufacturer and Model

6. The setup is completed.(Figure 6-44)

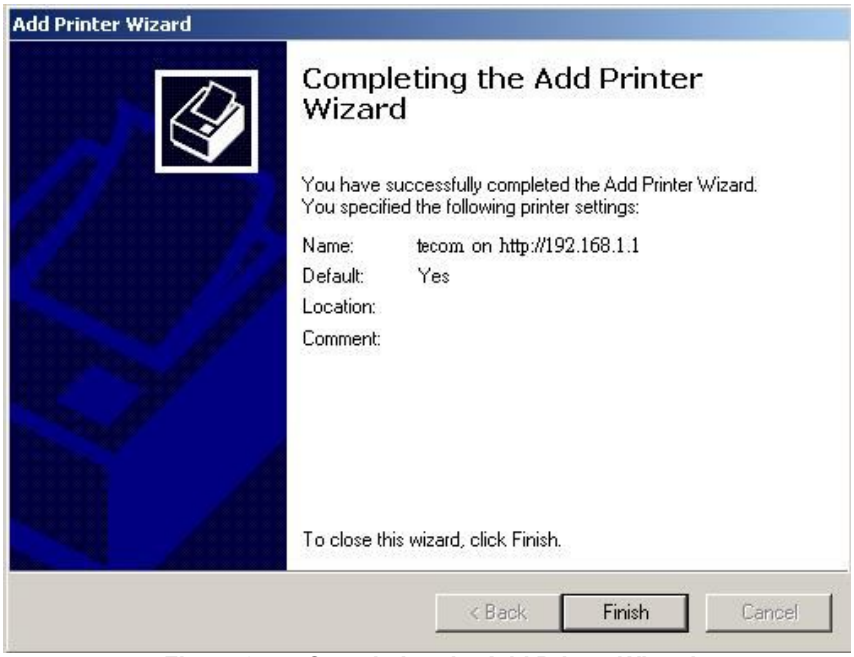


Figure 6-44. Completing the Add Printer Wizard

6.5 Wireless

Use the Wireless screen to configure the IP6600 for wireless access. It is separated into 7 parts:

- Basic
  - Primary
  - Additional
- Security
- MAC Filter
- Wireless Bridge
- Advanced
- Station Info
- Power Saving

The configurable items for each part would be described in the following.

6.5.1 Basic

It's separated into two parts: Primary, and Additional.

6.5.1.1 Primary

This page allows you to configure the basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, active the client isolation, disable WMM advertise and enable wireless multicast forwarding.

User can set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. The max clients are 16. (Figure 6-45)

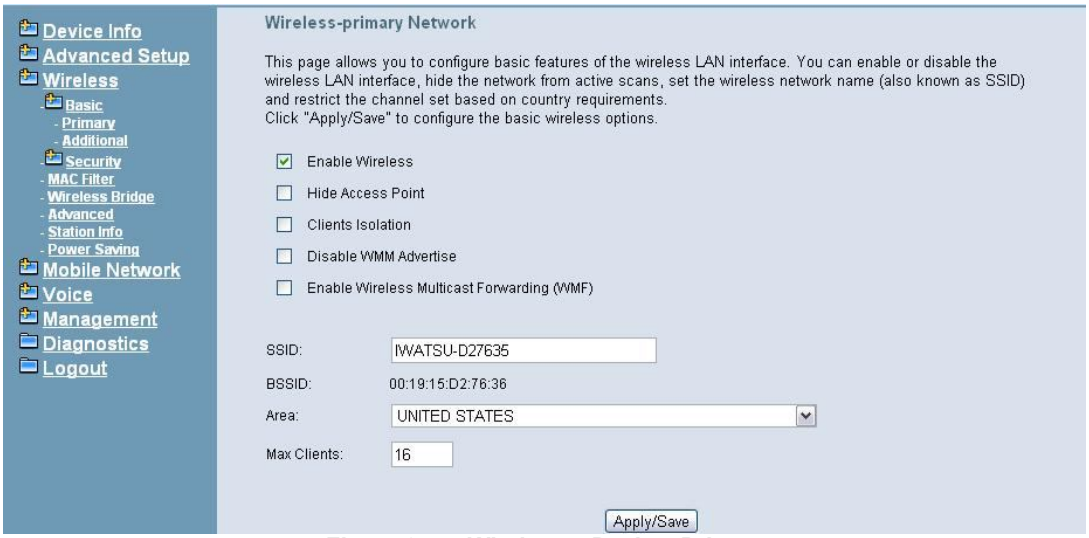


Figure 6-45. Wireless – Basic – Primary

6.5.1.1 Additional

IP6600 supports to configure 3 additional Wireless networks. Each SSID can have different name and configurations. (Figure 6-46)

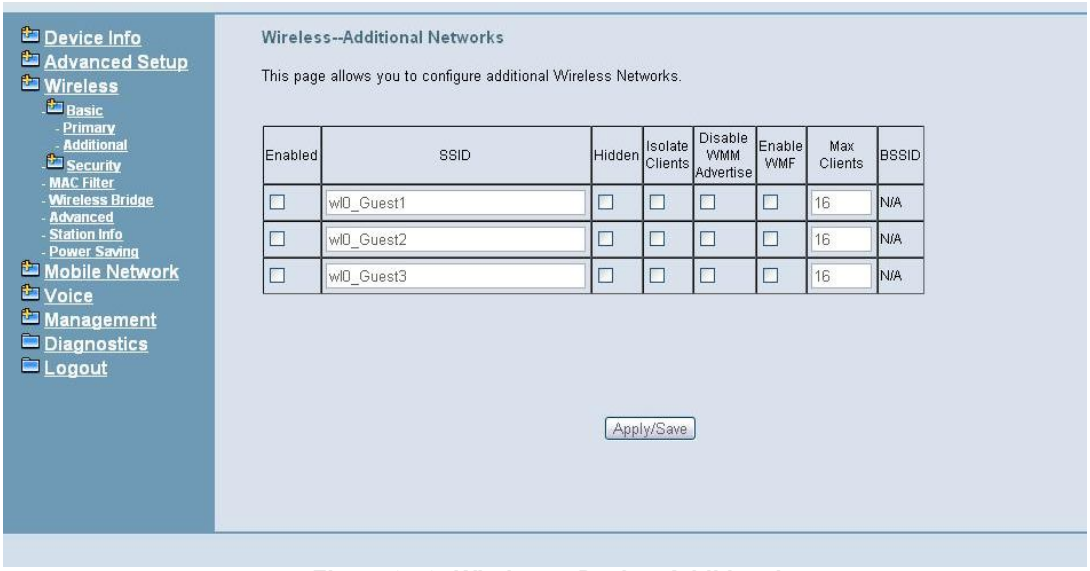


Figure 6-46. Wireless – Basic – Additional

6.5.2 Security

This page allows you to configure security features of the wireless LAN interface. It allows you to select your Security Mode: Manual and WPS.

In WPS mode, it follows the Wi-Fi Protected Setup standard for easy and secure wireless network set up and connection. User can use Push-Button or PIN to configure the connection with IP6600. In Push-Button method, IP6600 and client must press the WPS button to establish connection. In PIN mode, when the Access Point Pin is used, client can input the PIN to establish the connection. When the External Device PIN is used, client device PIN can be entered in the field to establish connection (Figure 6-47).

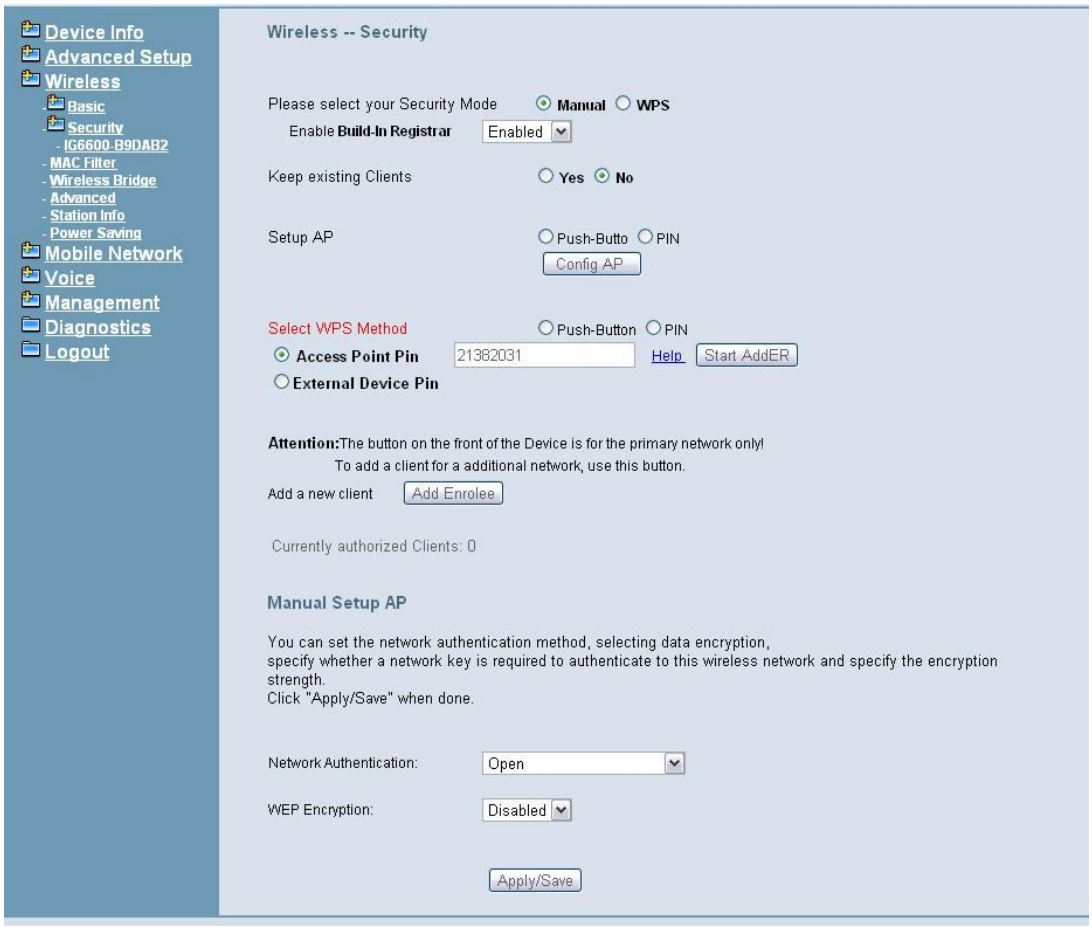


Figure 6-47. Wireless – Security

In Manual mode, you can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply/Save" to configure the wireless security options. (Figure 6-48,Figure 6-49)

The following items will be configured in the page:

Network Authentication: Set the network Authentication method. Open and Shared can use the WEP Encryption. 802.1X and WPA require setting valid RADIUS parameters. WPA-PSK requires a valid WPA Pre-Shared Key to be set.

802.1X: As the IEEE standard for access control for wireless and wired LANs, 802.1x provides a means of authentication and authorizing devices to attach to a LAN port. This standard defines the Extensible Authentication Protocol (EAP), which uses a central authentication server to authenticate each user on the network.

WPA/WPA2: The Wi-Fi Alliance put together WPA/WPA2 as a data encryption method for 802.11 wireless LANs. WPA is an industry-supported, pre-standard version of 802.11i utilizing the Tempoal Key Integrity Protocol (TKIP), which fixes the problems of WEP, including using dynamic keys.

WPA/WPA2 Pre-Shared Key: Set the WPA/WPA2 Pre-Shared Key (PSK).

WPA/WPA2 Group Rekey Interval: Set the WPA/WPA2 Group Rekey Interval in seconds. Leave blank or set to zero to disable periodic re-keying.

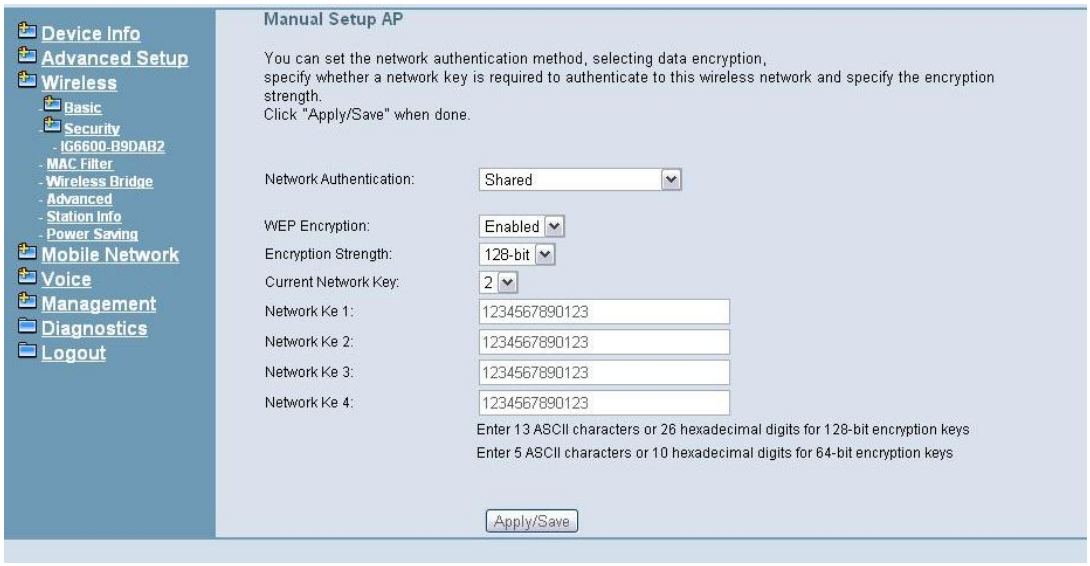


Figure 6-48. Wireless – Security – 1

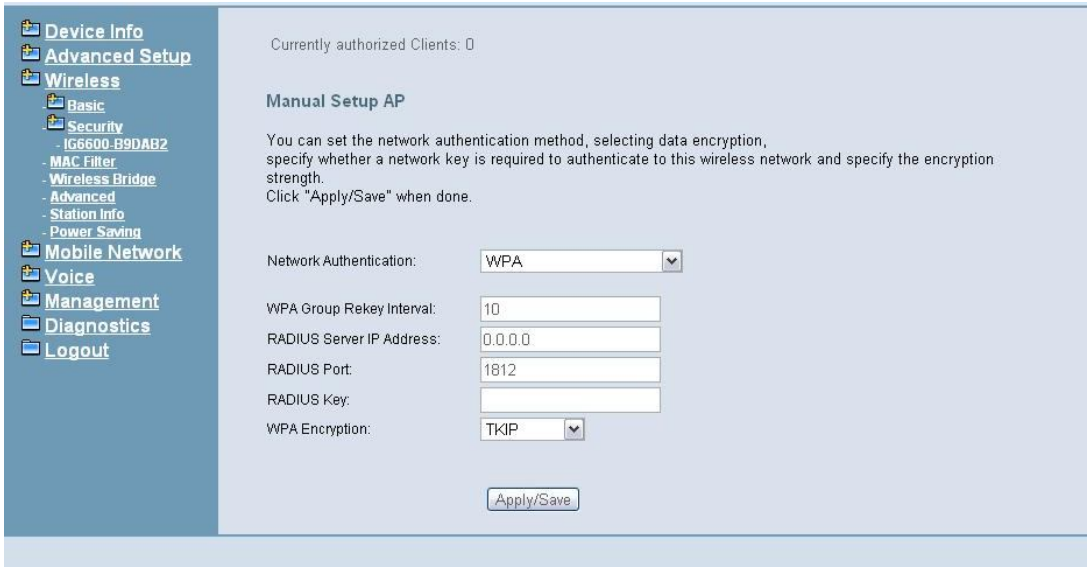


Figure 6-49. Wireless – Security – 2

Radius Server: Set the IP address of the RADIUS server to use for authentication and dynamic key derivation.

RADIUS Server is responsible for receiving user connection requests, authenticating the user, and then returning all of the configuration information necessary for the client to deliver the server to the user.

Radius Port: Sets the UDP port number of the RADIUS server. The port number is usually 1812 or 1645 and depends on the server.

Radius Key: Set the shared secret for the RADIUS connection.

WEP Encryption: Selecting Disabled disables WEP data encryption. Selecting Enabled enables WEP data encryption and requires that a valid network key be set and selected unless 802.1X is enabled.

WEP, short for Wired Equivalent Privacy, is a protocol for wireless LANs or local area networks. This WEP is defined in the 802.11 Standard. WEP is designed so security levels are maintained at the same level as the wired LAN. WEP's aim is to provide security by encrypting data over radio waves. WEP protects data as it's transmitted from one end point to another. WEP is used at two lowest layers, the data link and physical layer. WEP is designed to make up for the inherent security in wireless transmission as compared to wired transmission.

Network Key: Set whether shared key authentication is required to associate. A valid network key must be set and selected if required.

6.5.3 MAC Filter

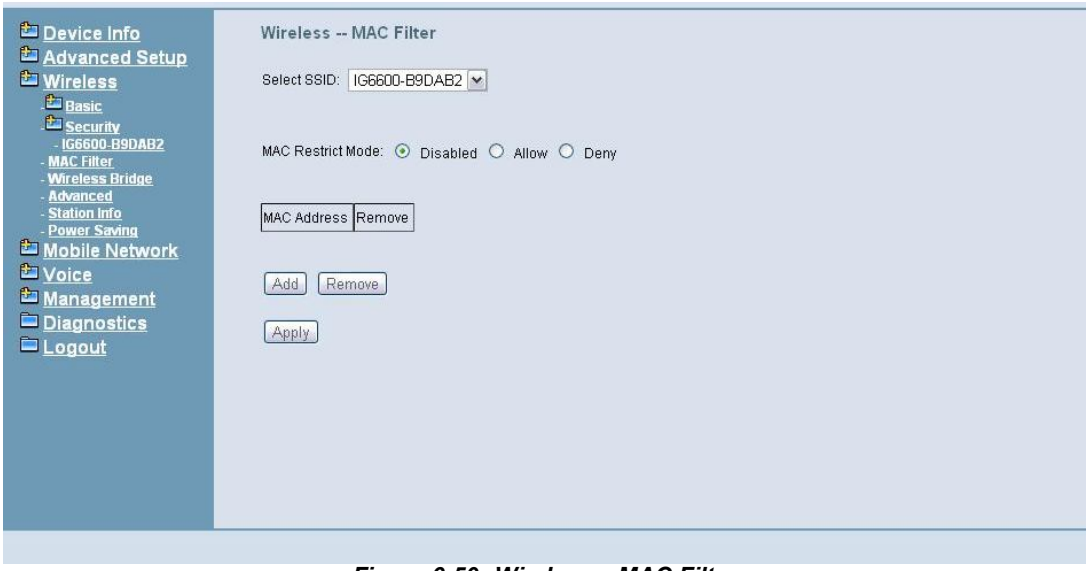


Figure 6-50. Wireless – MAC Filter

This page allows users to Add/Remove hosts with the specified MAC addresses that are able or unable to access the wireless network. When users decide to use Allow, only the MAC addressed in the user-defined list can access the wireless network. When users use Deny, only the user specified MAC addresses are unable to access to wireless network. And if the Disable option is selected, all users will be able to access to wireless network.

Note: The MAC addresses in the list would immediately take effect when Allow or Deny is checked. (Figure 6-50,Figure 6-51)

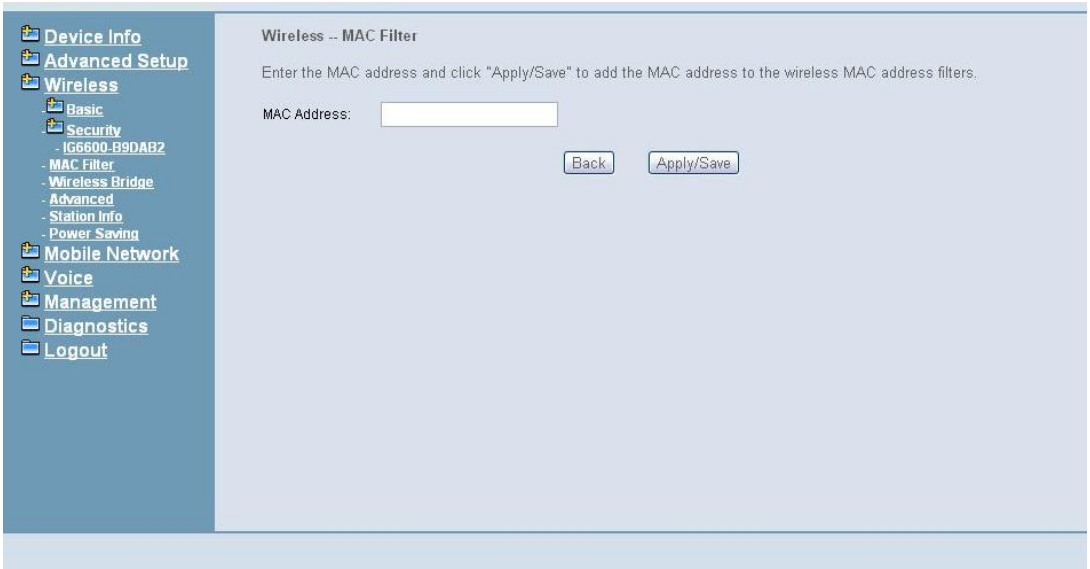


Figure 6-51. Wireless – MAC Filter – Allow/Deny

6.5.4 Wireless Bridge

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to connect to other wireless bridge device, but the access point functionality will be disabled. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled (Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click "Refresh" to update the remote bridges. Wait for few seconds to update. Click "Save Settings" to configure the wireless bridge options. (Figure 6-52)

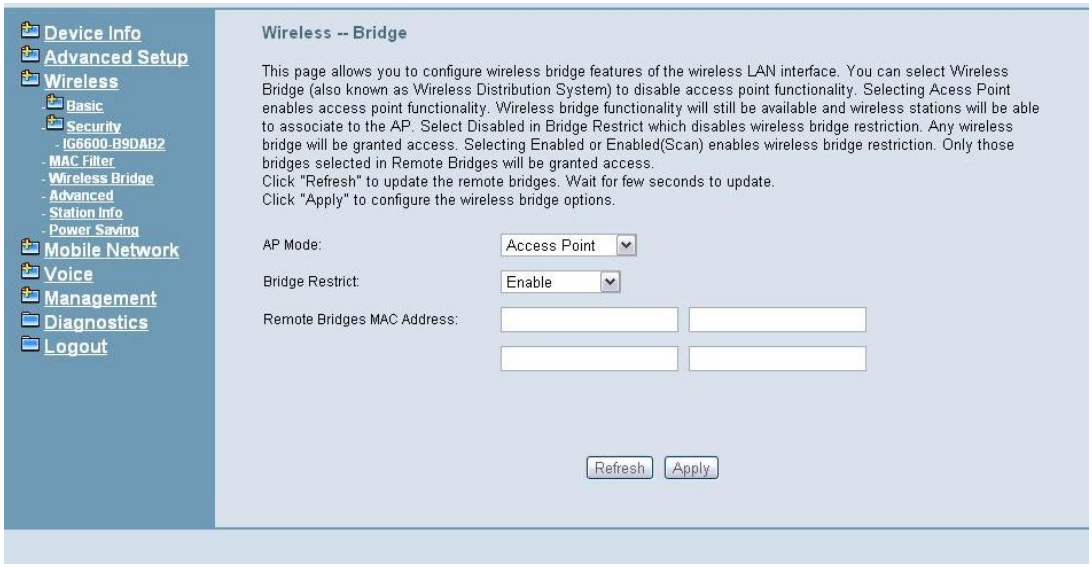


Figure 6-52. Wireless – Wireless Bridge

6.5.5 Advanced

It allows you to configure advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used. Click "Save Settings" to configure the advanced wireless options. (Figure 6-53,Figure 6-54)

Band: Default setting is 2.4GHz.

Channel: Select the appropriate channel from the list provided to correspond with your network settings. All devices in your wireless network must use the same channel in order to function correctly.

Auto Channel Timer: The IP6600 should search for the best wireless channel in this period (minute).

802.11n/EWC: Automatic or disable 802.11n support.

Bandwidth: User can choose 20MHz/40MHz in both band or 20MHz in 2.4G band/40MHz in 5G band.

Control Sideband: Specify if the extension channel should be in the “Upper” or “Lower**”** sideband.

802.11n Rate: Set the Physical Layer rate. These rates are only applicable when the”802.11n/EWC” is configured as “Auto”.

802.11n Protection: In “Auto” mode, the wireless devices use RTS/CTS to improve 802.11n performance in mixed 802.11g/802.11b networks. Turn protection off to maximize 802.11n throughput under most conditions. Do not disable 802.11n protection if there is a possibility that 802.11b or 802.11g devices will use your wireless network.

Support 802.11n Client Only: “On” enables support for 802.11n clients only. Off will enable support for clients that are not 802.11n.

54g® Rate: The default setting is Auto. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, Auto, to have the IAD automatically use the fastest possible data rate.

Multicast Rate: The default setting is 54Mbps. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, to have the IAD automatically use the fastest data rate for multicast packets.

Basic Rate: Select the basic rate that wireless clients must support.

Fragmentation Threshold: This value should remain at its default setting of 2346. The range is 256~2346 bytes. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting this value too low may result in poor network performance. Only minor modifications of this value are recommended.

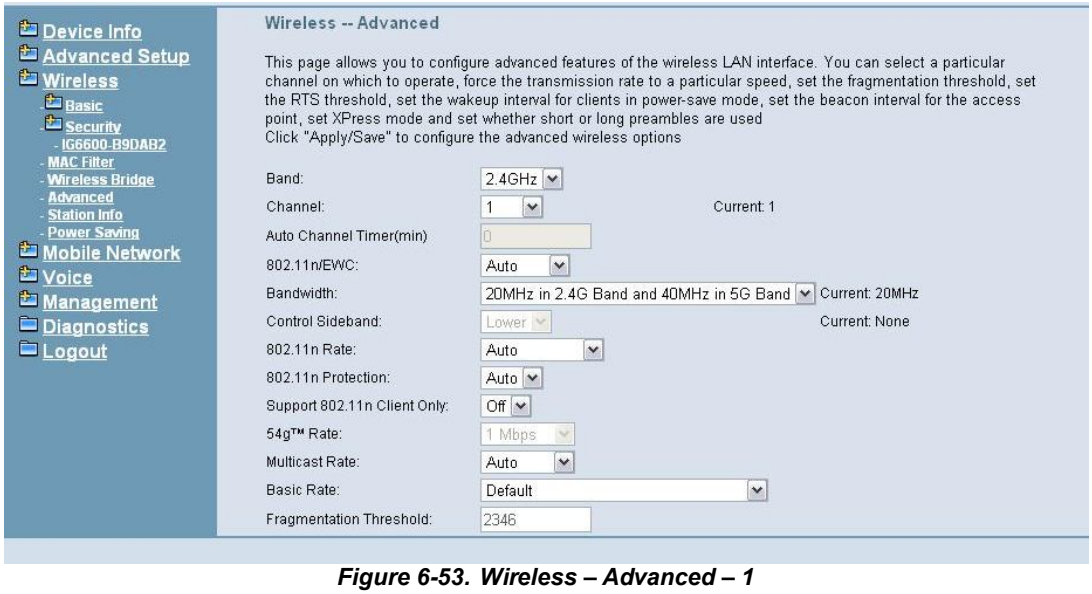


Figure 6-53. Wireless – Advanced – 1

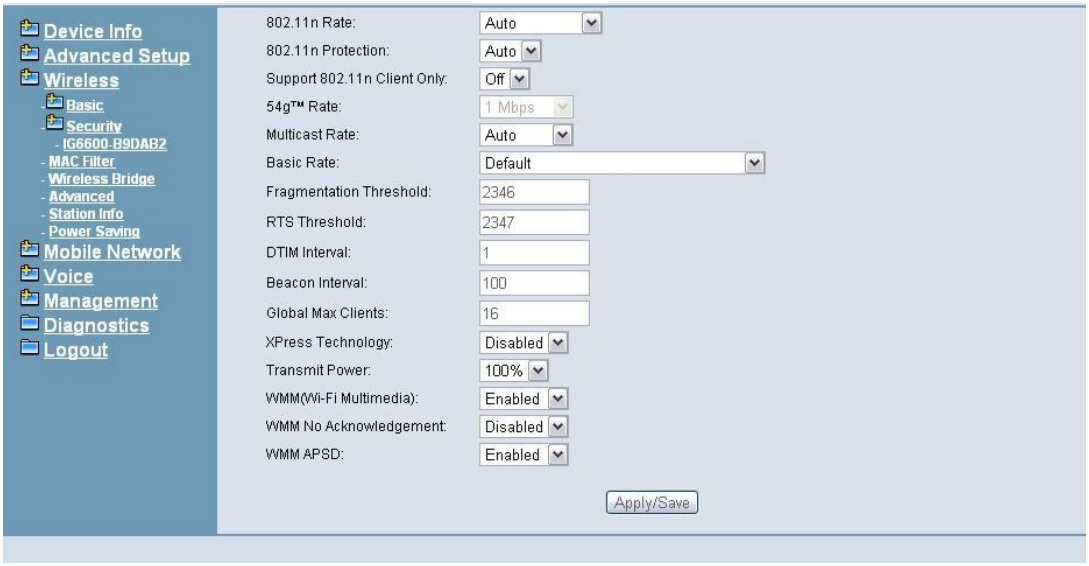


Figure 6-54. Wireless – Advanced – 2

RTS Threshold: This value should remain at its default setting of 2347. The range is 0~2347 bytes. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the packet RTS threshold size, the RTS/CTS mechanism will not be enabled. The IAD sends Request of Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.

DTIM Interval: The default value is 3. This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast message.

Beacon Interval: The default value is 100. Enter a value between 1 and 65535 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the router to synchronize the wireless network.

Global Max Clients: Maximum number of wireless clients.

XPress™ Technology: Select “Enable” to improve the wireless performance. It is a technology that utilizes standards based on framebursting to achieve higher throughput.

Transmit Power: User can set the transmit power as 20%, 40%, 60%, 80% and 100%

WMM (Wi-Fi Multimedia): Feature that improves the experience for audio, video and voice applications over a Wi-Fi network.

WMM No Acknowledgement: When the “WMM No Acknowledgement" is enabled, the receiver will not acknowledge received packets during wireless packet transmit. It

is suitable in the environment where communication quality is good and interference is weak. It can improve transmission efficiency.

WMM APSD: WMM Automatic Power Save Delivery. APSD is useful for VoIP phone to achieve low power consumption.

6.5.6 Station Info

Authenticated wireless stations and their status will be shown here. (Figure 6-55)

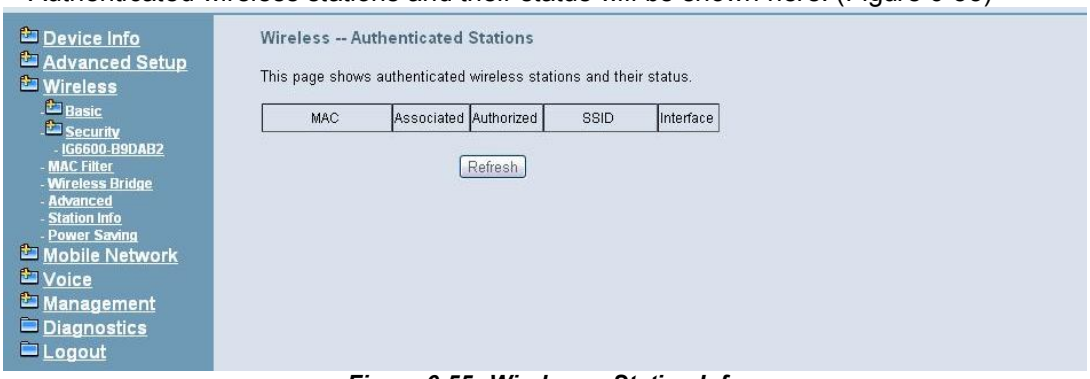


Figure 6-55. Wireless – Station Info

6.5.7 Power Saving

The Power Saving Features provide the ability to turn off specific interfaces at specific times. (Figure 6-56)

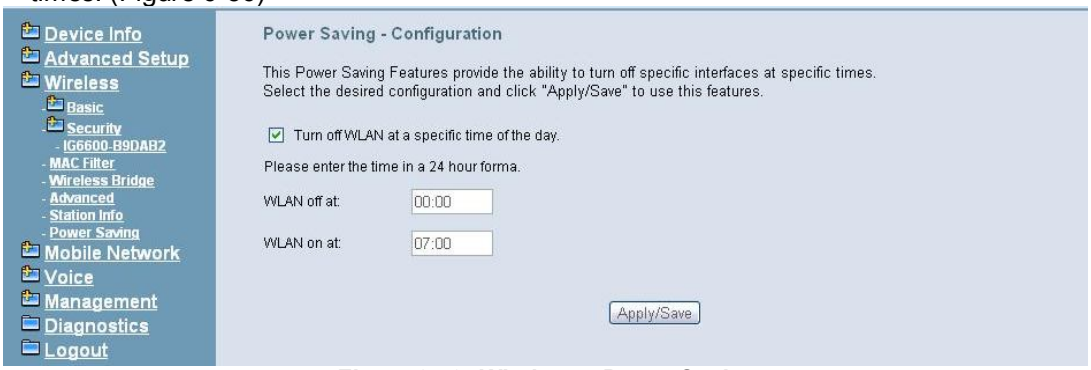


Figure 6-56. Wireless – Power Saving

6.6 Mobile Network

The IP6600 provides the WAN failover feature which allows gateway to reroute the traffic to the 3G WAN interface when main Ethernet WAN interface is down. Once the main Ethernet WAN is back, the traffic will fall back to Ethernet WAN.

6.6.1 3G Device

The following HSPA setting can be bound to the special HSPA stick, If you want so please select the HSPA stick in device list. User can select prefer Network Access Type and service operator. If your SIM Card has PIN lock, the PIN Code form allows user to enter the PIN code. (Figure 6.57)

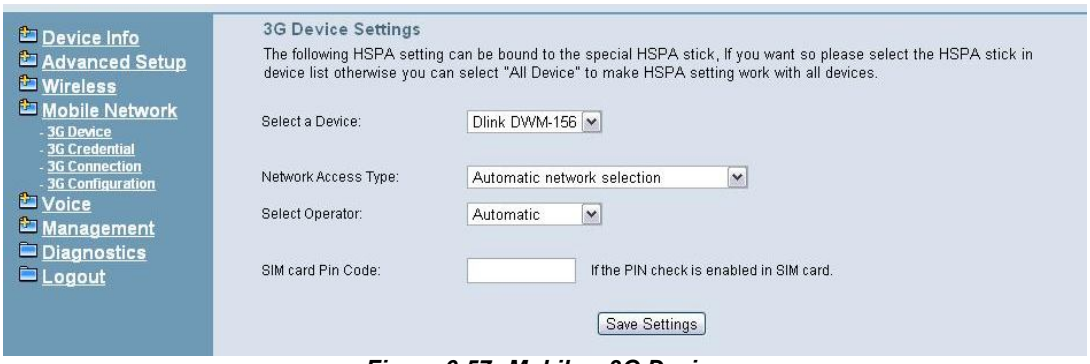


Figure 6-57. Mobile – 3G Device

6.6.2 3G Credential Settings

Before establish the 3G backup, user need to configure the mobile network connection settings which provide by your service provider.

- Dial Number: The dial number is provided by your service subscriber. Please check with your subscriber.
- Access Point Name: The APN (Access Point Name) is the name used to identify packet service in the 3G/2G mobile network. The APN defines the type of service that is provided in the packet data connection.
- Username/Password: User can enter the username/password here.
- Authentication: The network connection authentication.

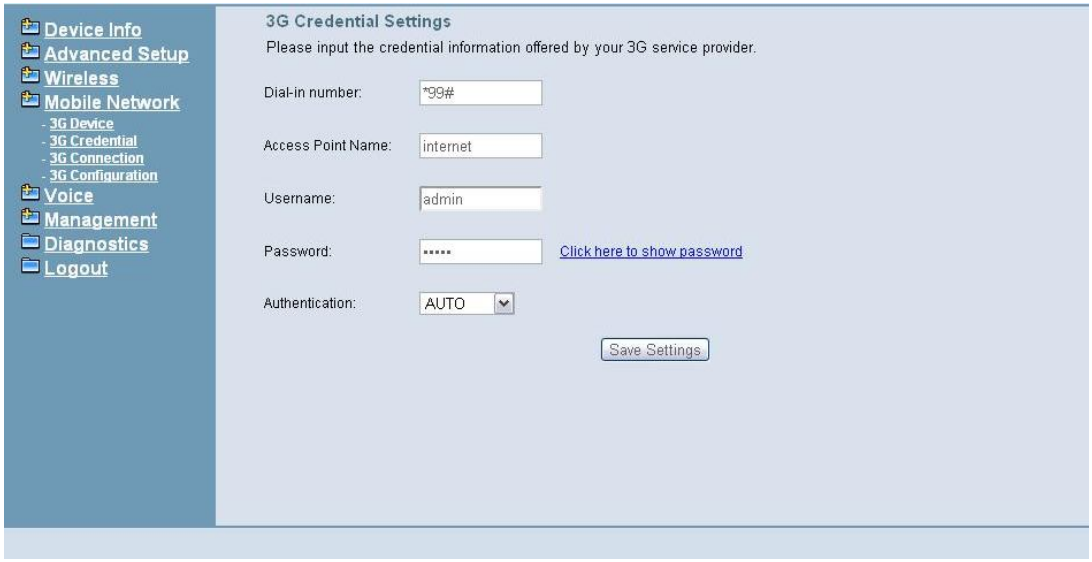


Figure 6-58. Mobile – 3G Credential

6.6.3 3G Connection Setting

User can configure the connection preference that Include connection usage, MTU Size, DNS Server.

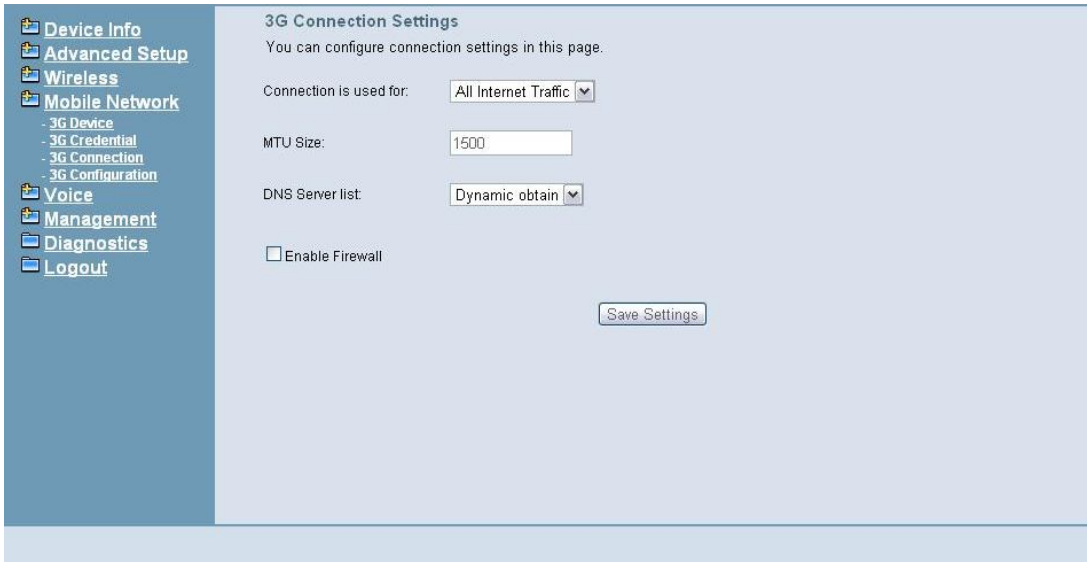


Figure 6-59. Mobile – 3G Connction

6.6.4 3G configuration

Here allows user to setup the 3G WAN interface back up configuration. The instant activation will switch back to main WAN interface when it is available. The WAN interface fail test mode can be WAN interface status or PING responses of DGW and DNS.

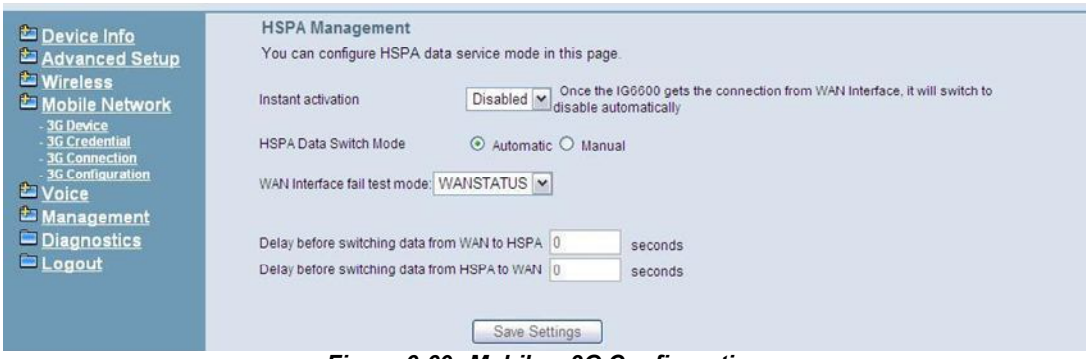


Figure 6-60. Mobile – 3G Configuration

6.7 Voice

Use the Voice screen to configure the IP6600's voice related parameters. It allows system administrator to configure the following topics:

- Phone
  - Phone Extension
  - Programmable Linekey
- Trunk
  - IP Trunk
  - Trunk DID
  - Trunk Group
  - Answering Position
  - Call Routing
  - Call Restriction
  - Emergency Numbers
- System
  - Numbering Plan
  - Service Mode
  - Transmission
  - IGW Group
  - SMDR
  - UCD Call Log
- Voicemail
  - General
  - Phone Extension
  - Virtual Extension
  - Update MOH File
  - Holiday
  - Advanced
- Registered Phone

The configurable items for each part would be described in the following.

6.7.1 Phone

Use the Phone screen to configure IP6600's phone extension authentication and configure the default linekey setting.

6.7.1.1 Phone Extension

The IP6600 combines Proxy and Register servers in its application. All phones registered to the internal Register server are set here. (Figure 6-61,Figure 6-62)

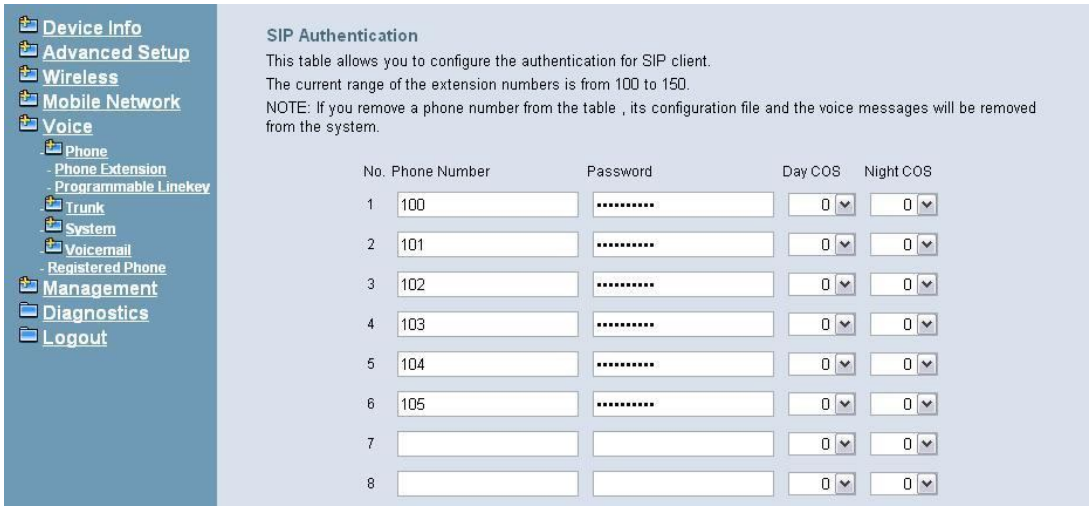


Figure 6-61. Voice – Phone – Phone Extension – 1

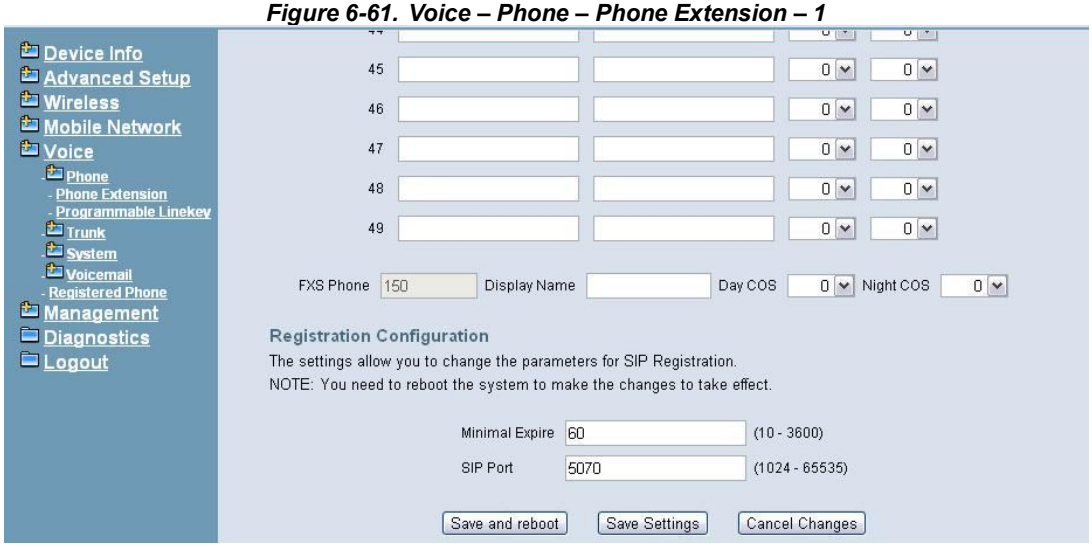


Figure 6-62. Voice – Phone – Phone Extension – 2

SIP Authentication: It provides 49 IP phones to register.

Phone Number: The phone number is a station number. If it conflicts with the setting in Numbering Plan, it fails to add or make the change. Its value range is limited by Start Extension Number and End Extension Number settings in Numbering Plan page.

Password: The user password of this phone. The length is up to 24 digits or characters. It's used for Digest Authentication.

Day COS: The field assigns Class of Service for day mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.

Night COS: The field assigns Class of Service for night mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.

FXS Phone: It shows the FXS phone number. It's programmed in Numbering Plan.

Display Name: The FXS user's Calling Name.

Registration Configuration:

The settings allow you to change the parameters for SIP Registration. You need to reboot the system to make the changes to take effect.

Minimal Expire: Minimal registered period of IP phone.

SIP Port: The IP6600 listens for requests on the SIP port. This port is used for UDP application and 5060 is its recommended value.

6.7.1.2 Programmable Linekey

This page allows you to configure the default settings for IP phone's linekeys. While a new-allocated IP phone is registering to IP6600, IP6600 will send these settings to the phone. You can select Extension, Trunk, Call Park, Feature key and Others to these linekey. (Figure 6-63) (Figure 6-64)

It has 28 Line Keys to be configured. The Line Keys 5-28 can be applied to IP2061's EDM.

Auto Hold: When you are using a line and press the other linekey, IP6600 can hold the original line. Select "Enable" to open this function.

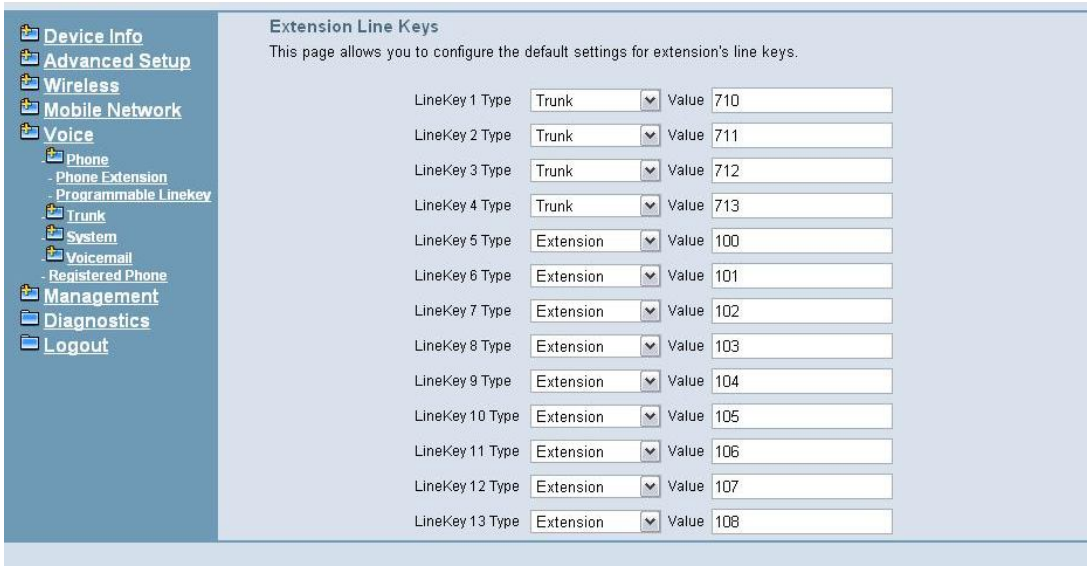


Figure 6-63. Voice – Phone – Extension Linekey-1

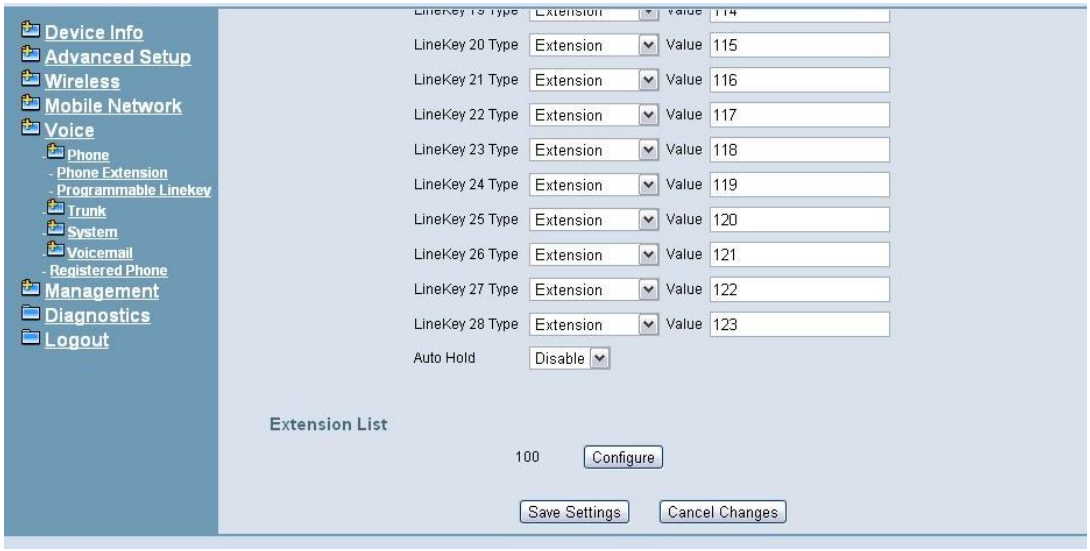


Figure 6-64. Voice – Phone – Extension Linekey-2

When there are IP phones registered to IP6600, you can configure their linekey setting. In Extension List, press “Configure” to configure linekey of the specified phone.

Use Default Settings: Use default IP6600 linekey setting for the IP phone.

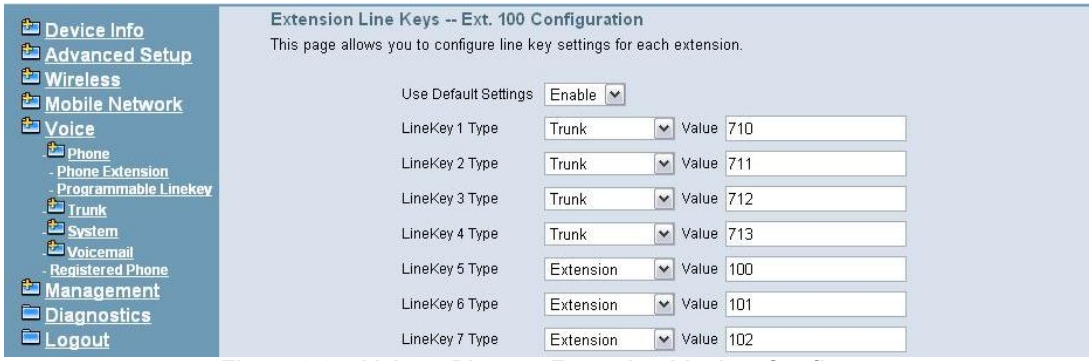


Figure 6-65. Voice – Phone – Extension Linekey-Configure

6.7.2 Trunk

Use the Trunk screen to configure the PSTN/IP Trunk function related parameters. It is separated into 6 parts:

- IP Trunk
- Trunk DID
- Trunk Group
- Answering Position
- Call Routing
- Call Restriction
- Emergency Numbers

6.7.2.1 IP Trunk

This page allows you to configure the Proxy and Register server of IP Trunk, up to 8 lines of IP Trunk are supported. (Figure 6-66,Figure 6-67)

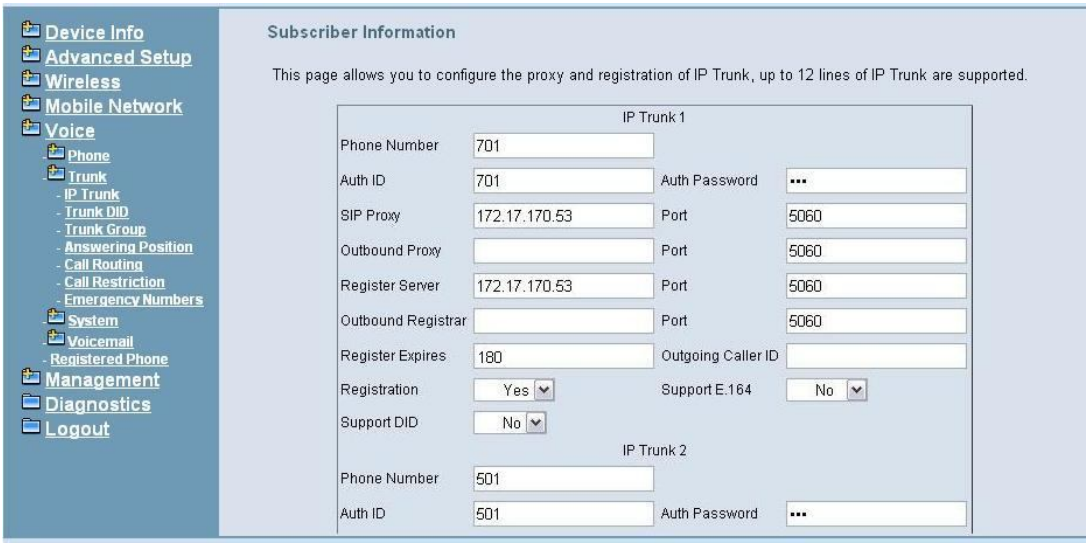


Figure 6-66. Voice – Trunk – IP Trunk – 1

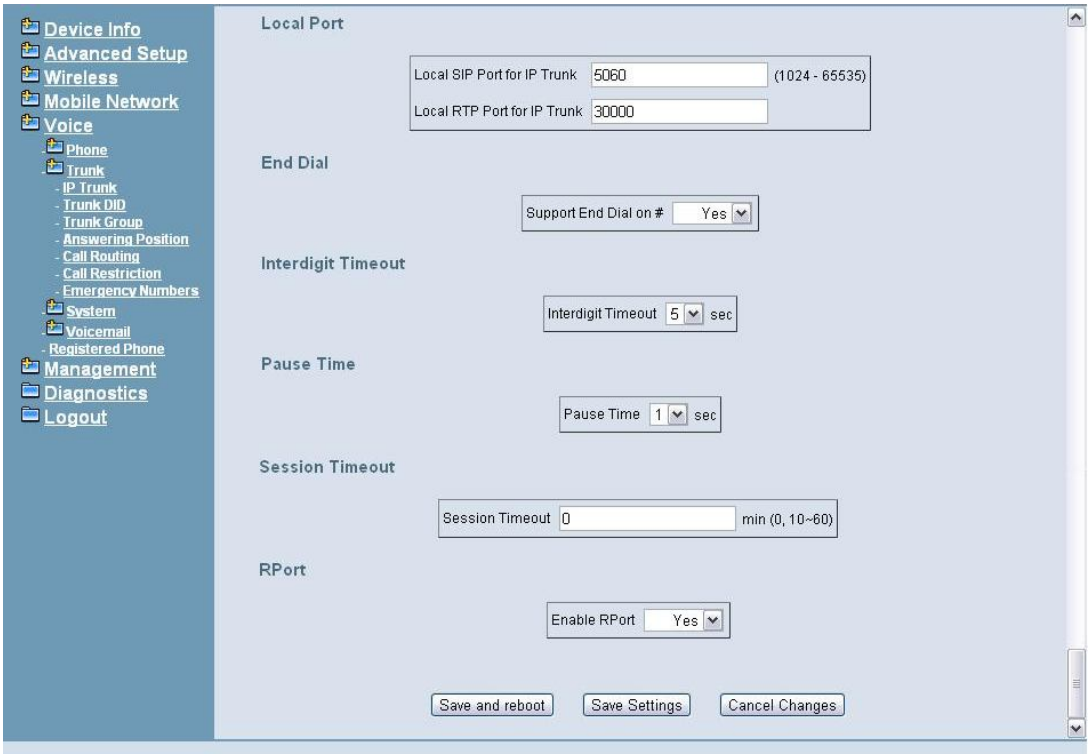


Figure 6-67. Voice – Trunk – IP Trunk – 2

Subscriber Information:

Phone Number: It's the assigned phone number from uplink server.

Auth ID: The Account ID of registration to uplink server. It's used for Digest Authentication.

Auth Password: The Password of registration to uplink server. It's used for Digest Authentication.

SIP Proxy: The position of uplink SIP proxy server. IP address and domain name are all supported.

SIP Proxy Port: The SIP signal port of uplink registrar server.

Outbound Proxy: The address of uplink outbound proxy server. All sip request packet will be sent to this server that will determine their next hops.

Outbound Proxy Port: The SIP signal port of uplink outbound proxy server.

Register Proxy: The position of uplink register server. IP address and domain name are all supported.

Register Proxy Port: The SIP signal port of uplink registrar server.

Outbound Registrar: The address of uplink outbound Registrar server. All REGISTER packets will be sent to this server that will determine their next hops.

Outbound Proxy Port: The SIP signal port of uplink outbound registrar server.

Register Expires: It's the time for IP6600 sends REGISTER to uplink register server. It counts based on second.

Outgoing Caller ID: It's used as the Caller ID for the outgoing calls.

Registration: If "Registration" is No, the IP Trunk will not send REGISTER to the Register Proxy.

Support E.164: If "Support E.164" is Yes, the IP Trunk follows E.164 format to send to outgoing phone number.

Support DID: If "Support DID" is Yes, the IP Trunk is used in DID operation.

Local Port:

Local SIP Port for IP Trunk: SIP control signal packet Port of IP Trunk Client.

Local RTP Port for IP Trunk: Real-Time Protocol packet Port of IP Trunk Client. It's the start RTP port address for these IP Trunks.

End Dial:

If "Support End Dial on #" is Yes, outgoing number from IP trunk will be sent out immediately after pressing pound key (#).

Interdigit Timeout:

If there is no any dialed number after the setting time, the number will be sent out immediately. Its range is form 2 to 9 seconds.

Pause Time:

The pause time of alphabet "p" in the process of call dialing

Session Timeout:

It means the longest communication time for IP trunks, zero means no restriction.

RPort:

When client is behind a NAT, the rport and received filed can allow SIP proxy to append the public IP address and port of NAT and transfer SIP message correctly. Choose “Enable” to use this function.

6.7.2.2 Trunk DID

The table offers its individual phone number for each extension (Figure 6-68)

DID Number: It’s the assigned phone number from uplink server.

Destination: the specified ringing extension(s) for the individual DID phone number.

Outgoing Call ID: It’s the assigned Caller ID number from uplink server.

Display Name: the specified extension user name for the individual number.

Trunk: The DID item is for the specified trunk(s).

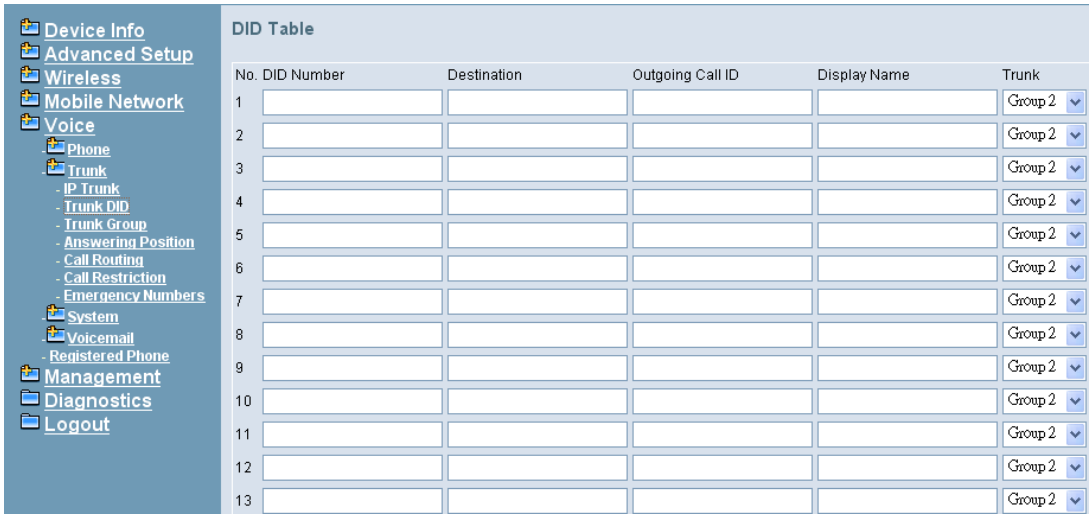


Figure 6-68. Voice – Trunk – Trunk DID

6.7.2.2 Trunk Group

This page allows you to configure the virtual Trunk Group, up to 4 Trunk Groups are supported. (Figure 6-69,Figure 6-70)

Trunk Group & Label:

This item allows you to assign physical Trunk to virtual Trunk Group. And you can configure your personal string as incoming Caller ID number. For six PSTN lines and eight IP lines you can choose from Group1 to Group 4.

Ring Type:

It can identify the trunk line and the trunk group to which it belongs to.

Trunk Group Priority:

This Item allows you to define 4 Trunk Group's interior priority.

Access Priority:

This Item allows you to define 4 Trunk Group's interior priority. For four groups you can choose IP first or PSTN first. This will take effect if call routing entry's destination has been set as Group choice.

Search Order:

You can choose the search order to use the specified access priority. For example, when you choose IP First and increase, IP6600 will try to find an available IP Trunk and search from the first IP Trunk in the Group.

Figure 6-69. Voice – Trunk – Trunk Group – 1

Figure 6-70. Voice – Trunk – Trunk Group – 2

6.7.2.3 Answering Position

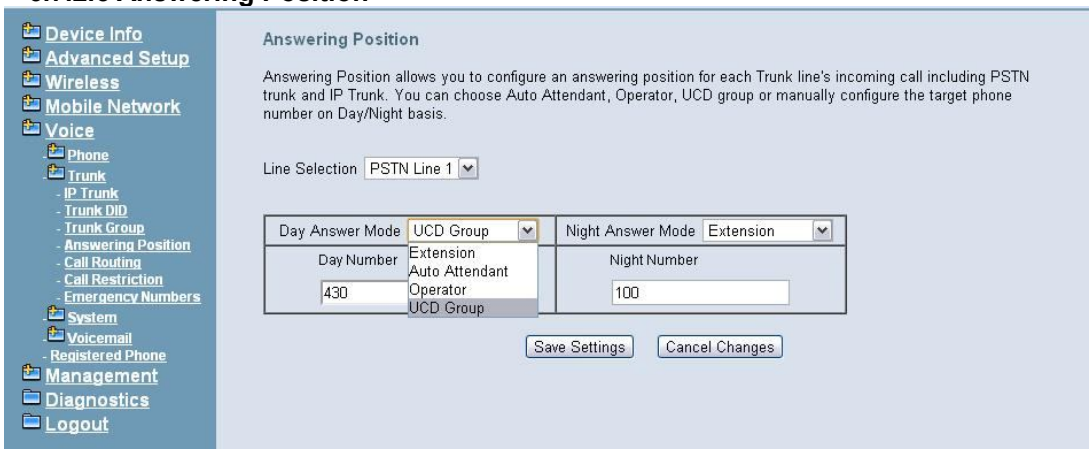


Figure 6-71. Voice – Trunk – Answering Positions

This page allows you to configure an answering position for each Trunk line's incoming call including PSTN trunk and IP Trunk. You can choose Auto Attendant, Operator, UCD Group or manually configure the target extension phone number on Day/night basis. (Figure 6-71)

Choose Auto Attendant, an idle VAA will auto-answer this incoming trunk call.

Choose Extension, you must configure the target phone number on Day/Night basis.

Choose UCD Group, you can configure an UCD group. The maximum phones for one UCD group are 50.

Choose Operator, the incoming trunk call will be redirected to Operator.

6.7.2.4 Call Routing

This page allows you to configure the call routing table. Each item is a routing rule for outgoing call. From/To define the number range, Min/Max define the match length, Del/Insert can change the target number, Destination to define the outbound call interface.

In the Destination field, the drop list includes a particular option: “IGW Group”. When selecting “IGW Group”, the next field “I” contains the founded IP6600’s name which is maintained by the IGW group, and you can select a suitable IP6600 to route your calls. (Figure 6-72)

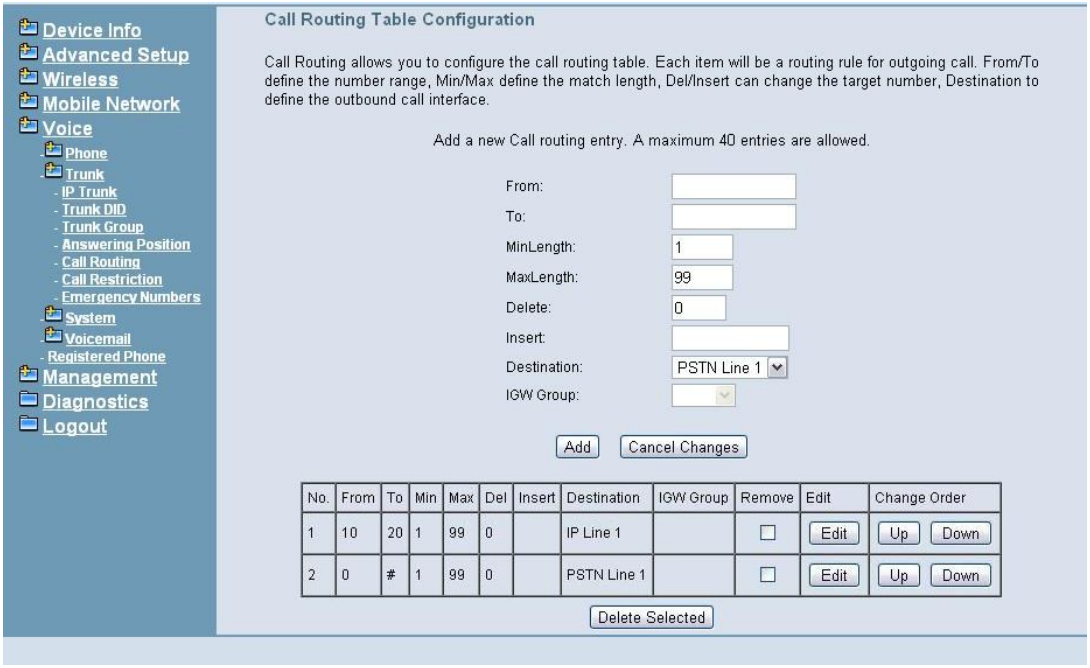


Figure 6-72. Voice – Trunk – Call Routing Table

6.7.2.5 Call Restriction

This page allows you to configure the call restriction table. If the caller's COS priority is higher than the entry's COS value, the call is allowed. (Figure 6-73)

The allowed intervals are made up of “From” and “To” entry which establish a numeric range. For example, an entry of “From 1700”, “To 1800” would include the following range of numbers as the leading: 1700, 1701, 1702, …, 1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9. The “From” entry must be less than or equal to the “To” entry.

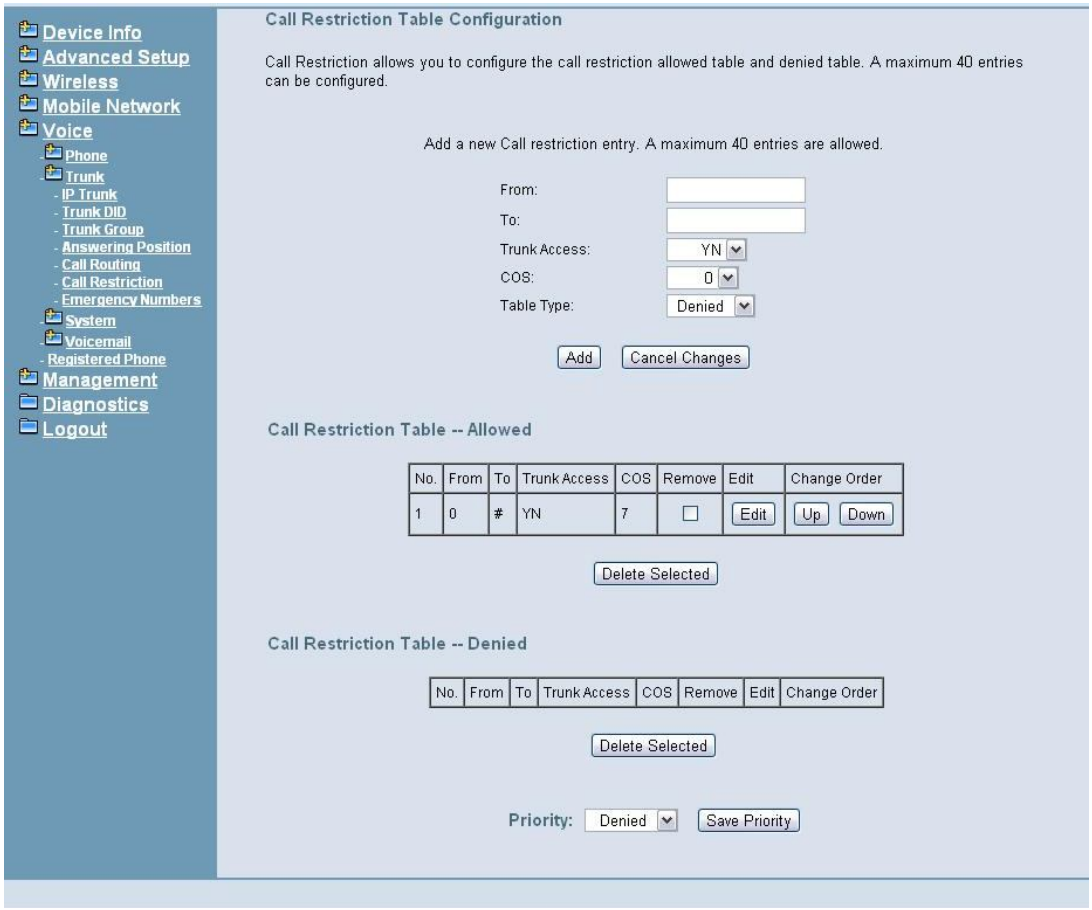


Figure 6-73. Voice – Trunk – Call Restriction

If the TrunkAccess value is set to Y, the call will follow the restriction setting only when seizing line and make a call. If the TrunkAccess value is set to N, the call will follow the restriction only when dialing a number directly. If the TrunkAccess value is set to YN, it's suitable for both operations. If the Table Type is set "Denied" and the caller match the restriction in call restriction table, the caller will be denied to call. If the Table Type is set "Allow" and the caller match the restriction in call restriction table, the caller will be allowed to call. You can also select the check priority between the allowed and denied call restriction table.

6.7.2.6 Emergency Numbers

When they dial a pre-configured emergency number, any user can make an emergency call regardless of call routing table, call restriction, and station lock. Notice: The numbers of emergency dial must not collide with the numbers in Numbering Plan.

This page allows you configure five emergency call numbers and lines with which emergency calls are sent out. (Figure 6-74)

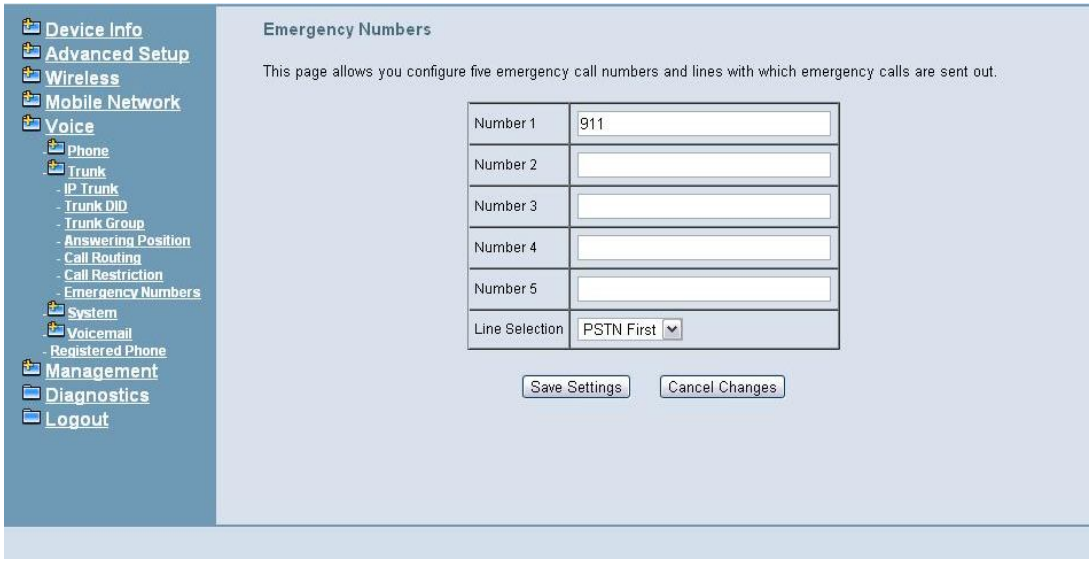


Figure 6-74. Voice – Trunk – Emergency Dial

6.7.3 System

Use the System screen to configure the System function related parameters. It is separated into 6 parts:

- Numbering Plan
- Service Mode
- Transmission
- IGW Group
- SMDR
- UCD Call Log

6.7.3.1 Numbering Plan

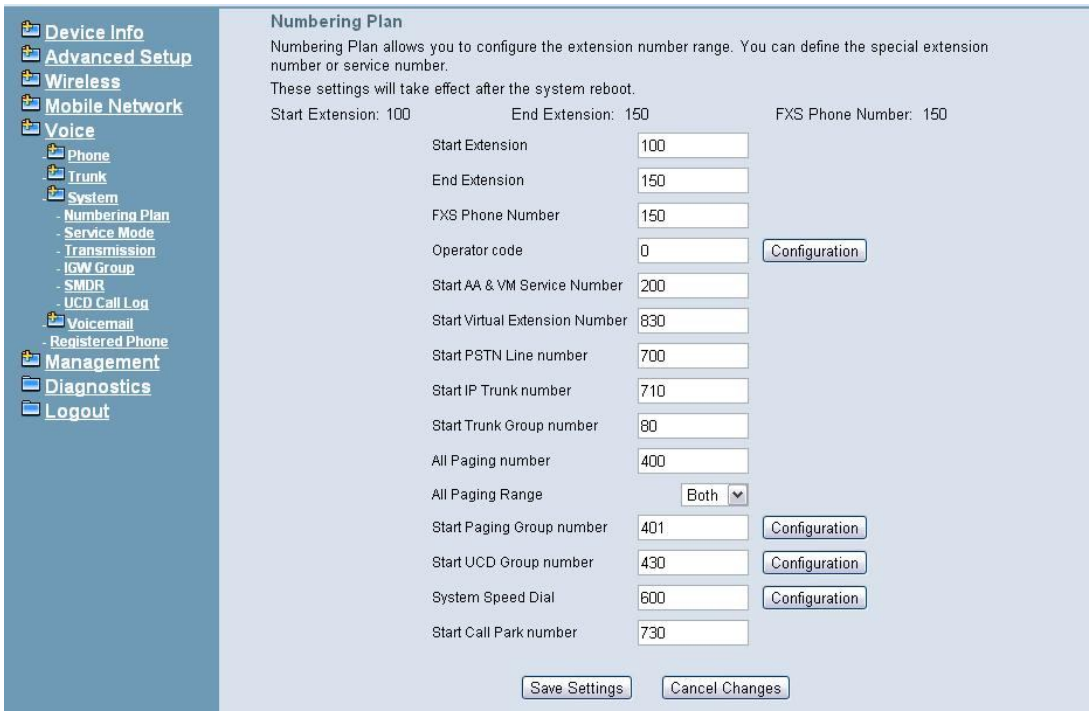


Figure 6-75. Voice – System – Numbering Plan

This page allows you to configure extension number range. You can also define some special service numbers in the table. (Figure 6-75)

Start extension: It's the start phone number of system internal extension. All valid extension number can't be smaller than it.

End extension: It's the end phone number of system internal extension. All valid extension number can't be greater than it. If receiving an IP20xx's Plug & Play request, IP6600 will allocate the first unused number from this limited region.

FXS Phone Number: It determines the FXS phone number.

Operator speed-dial number: If dial this number, the operator extension will be called. The length is limited on 1 character.

When you press the "Configuration" button, the operator-related settings can be configured: (Figure 6-76)

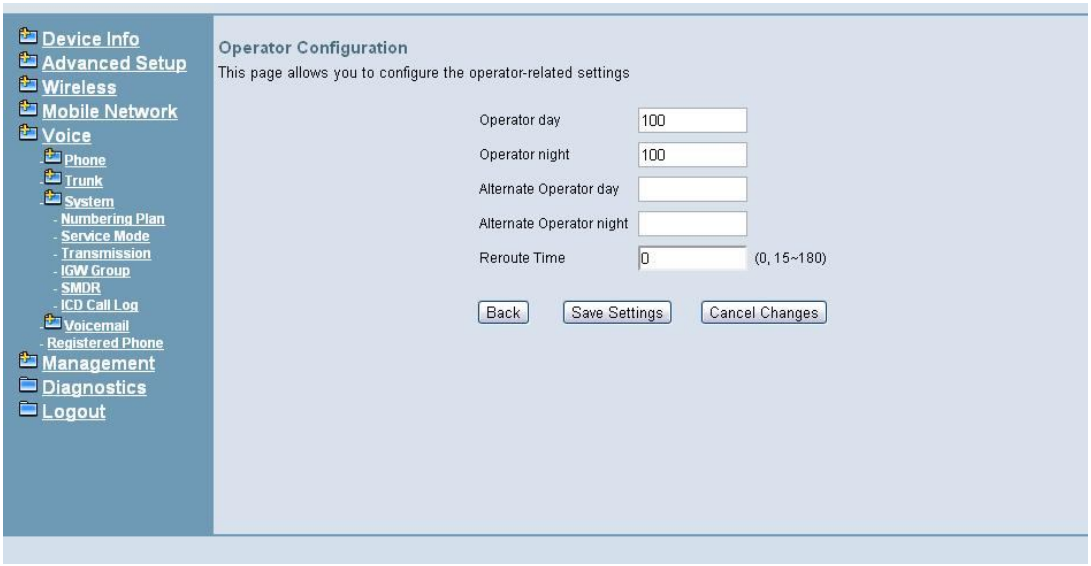


Figure 6-76. Voice – System – Numbering Plan – Operator Configuration

Operator day: It's the system operator number during day. If dial Operator speed-dial number, this extension will be called during day.

Operator Night: It's the system operator number during night. If dial Operator speed-dial number, this extension will be called during night.

Alternate Operator day: When the Operator during day does not answer a call, the call will be rerouted to alternate operator during day.

Alternate Operator night: When the Operator during night does not answer a call, the call will be rerouted to alternate operator during night.

Reroute Time: Set the length of operator no answer time to reroute to alternate operator. The time is applied to the call for alternate operator also. If alternate operator doesn't answer the call in the Reroute time, the call is reroute to Operator's Voice Mail box. "0" means it keeps ringing to the operator.

Voice mail service number: If dial this number, internal user can enter IP6600's voicemail system and do some operations such as listening personal message.

Start Virtual Extension Number: IP6600 provides virtual extension number for the members not works in the office, or as a secondary mailbox.

Start PSTN Line number: IP6600 provides 6 PSTN lines at most. Every line has its own internal alias number. You can dial these numbers directly to access PSTN trunks.

Start IP Trunk number: IP6600 provides 12 IP Trunk lines at most. Every line has its own internal alias number. You can dial these numbers directly to access IP Trunks.

Start Trunk Group number: IP6600 provides 4 trunk groups at most. If dialing trunk group number, IP6600 will choose the first idle line for caller automatically.

All Paging number: If dialing this number, all internal IP20xx will be paged.

All Paging range: You can select the range of the paged extensions. If it's LAN, it pages the IP20xx on IP6600's LAN side. If it's WAN, it pages the IP200xx on IP6600

WAN side, but under the same Router with IP6600. If it's Both, it pages the all IP20xx on LAN and WAN.

Start Paging Group number: 3 paging groups are defined in IP6600. If dialing a Paging Group number, the call will page to predefined internal IP phones. It can also select the Range like All Paging Number. The maximum phones for each paging group are 49.

While pressing "Configuration" in "Start Paging Group number", it shows Paging Group Configuration screen. (Figure 6-77)

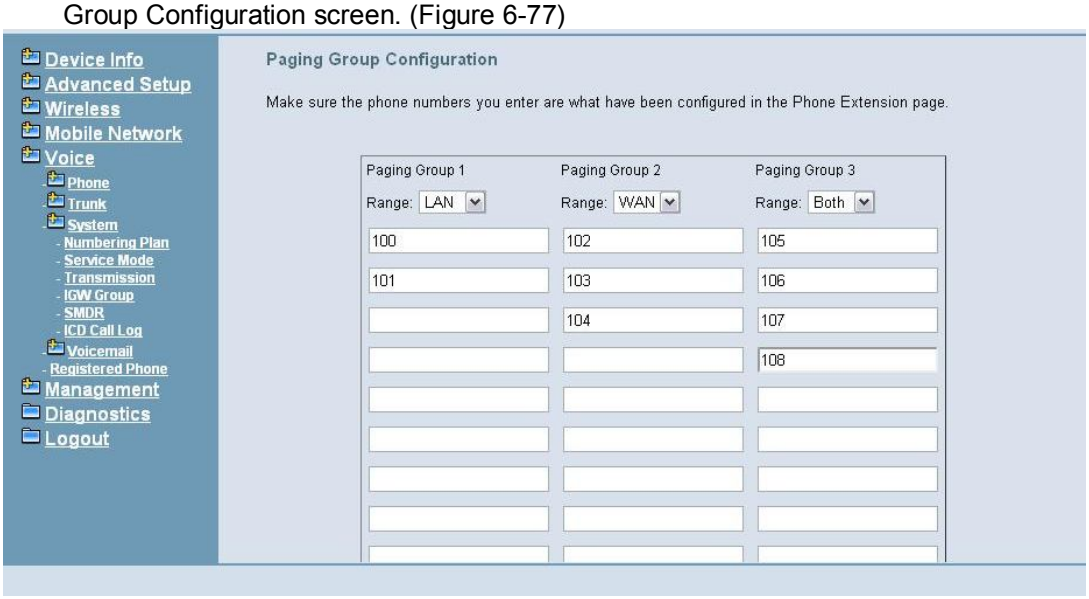


Figure 6-77. Voice – System – Numbering Plan – Paging Group

Start UCD Group number: 4 UCD groups are defined in IP6600. The maximum phones for each UCD group are 50. If one UCD Group is assigned to Answer Position of certain line, when there is an incoming trunk call, extensions of the UCD group will be called and ringing

While pressing "Configuration" in "Start UCD Group number", it shows UCD Group Configuration screen. (Figure 6-78)

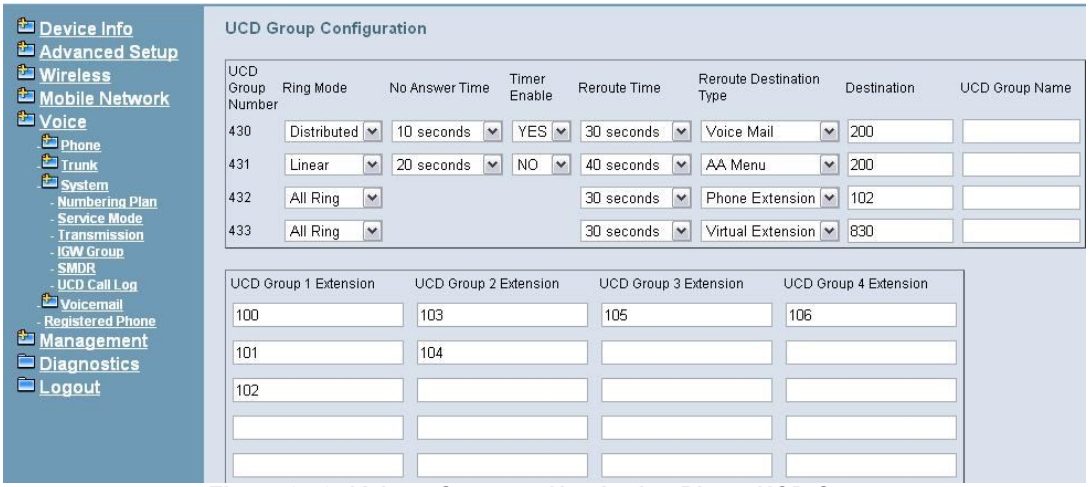


Figure 6-78. Voice – System – Numbering Plan – UCD Group

There are six items to be decided.

For Ring Mode: The “All Ring” mode is no needed to use “No Answer Time” and “Timer Enable”.

If the call isn’t answered in “Reroute Time”, the call will be forwarded to “Reroute Destination”. The Destination could be “AA Menu”, “Voicemail” (the first extension of the UCD Group), “Phone Extension” or “Virtual Extension”.

For other items: If “Timer Enable” is YES, the incoming call will be transferred to another UCD Group’s member every “No Answer Time”. If NO, the call will ignore “No Answer Time” and finally reroute to “Reroute Destination” after “Reroute Time”. “UCD Group Name” is shown on the phone when receiving the UCD Group call.

System Speed Dial: Speed Dialing allows you to store frequently outgoing numbers. There are 100 sets to configure (600~699). Extension’s Class of service (COS) can also be checked or not. (Figure 6-79)

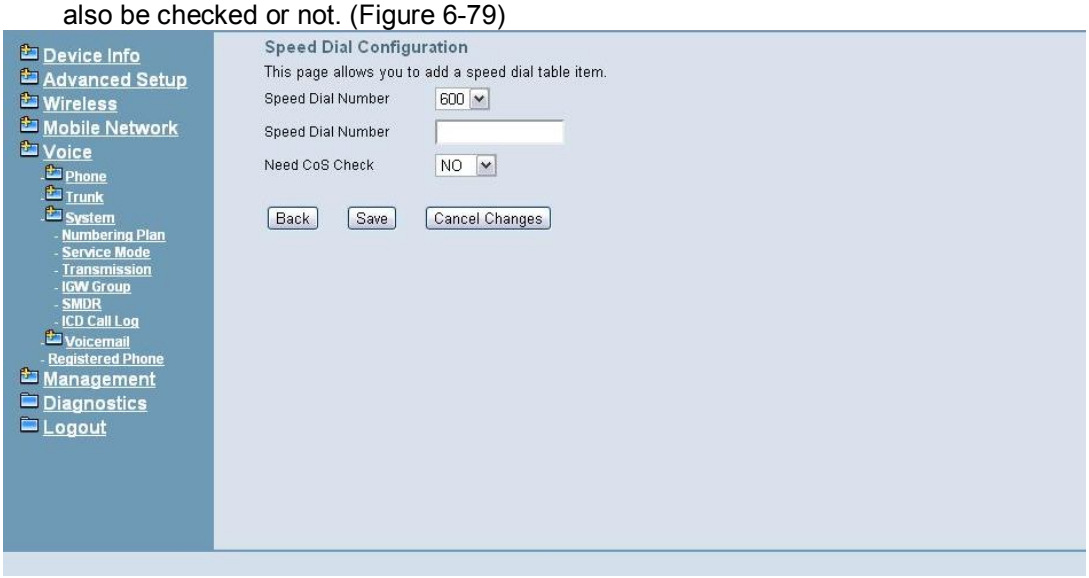


Figure 6-79. Voice – System – Speed Dial

Start Call Park Number: IP6600 supports to park 10 trunk calls maximum. The Call Park number can be programmed on the line keys.

6.7.3.2 Service Mode

This page allows you to configure the day/night/time service mode. You can also customize the working time manually for each weekday.

If you choose Time Mode, it's for the specified day of week. The time is entered in 24-hour format. Valid entries are 00:00 to 23:59 in 1-minute increments. (Figure 6-80)

Working Hours: It's applied in Answering Positions and Auto Attendant Greeting.

Lunch Break: It's applied in Auto Attendant Greeting

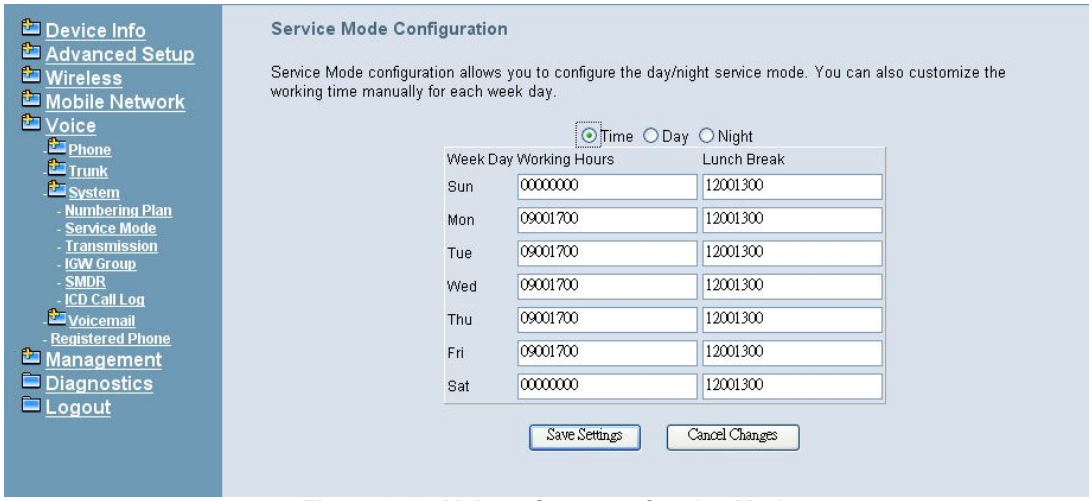


Figure 6-80. Voice – System – Service Mode

6.7.3.3 Transmission

This page allows you to configure the Audio, FXS, and FXO settings. Click "Save Settings" button to save the new configuration. (Figure 6-81,Figure 6-82)

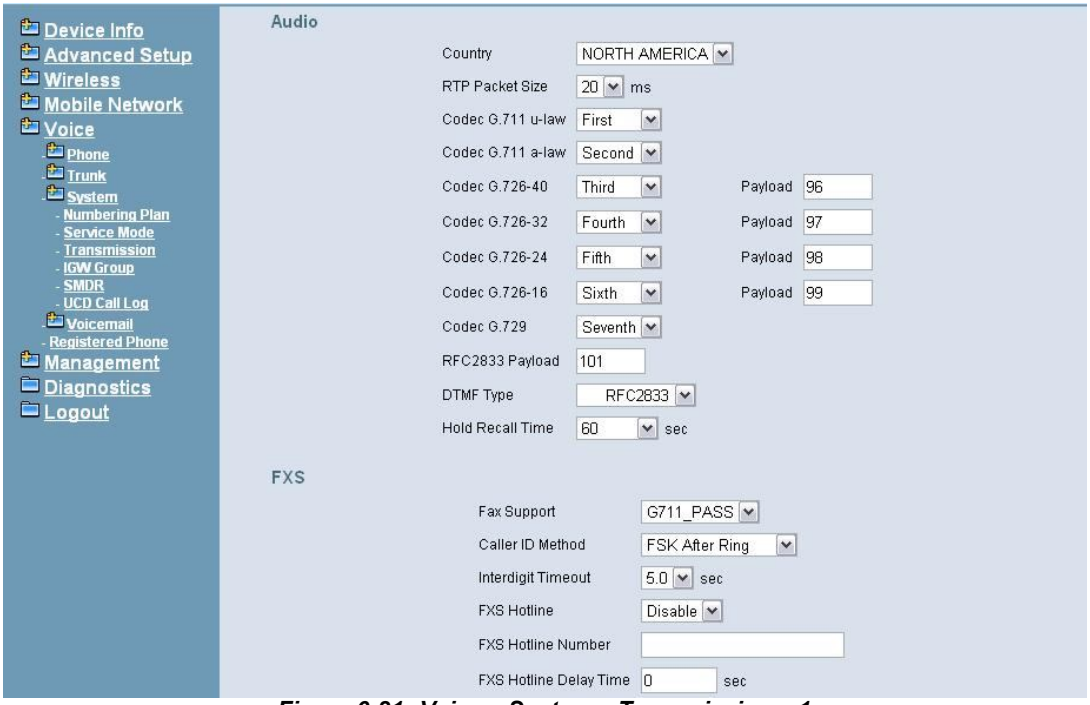


Figure 6-81. Voice – System – Transmission – 1

Audio: It is used to set many Audio-related options. It will be applied to the all FXS and PSTN lines.

Country: It may be used to determine not only the Caller ID detection/transmission method but also ring/tone cadence/frequency.

RTP Packet Size: 10/20/30/40/50/60 ms.

Codec G.711 u-law, G.711 a-law, G.726-16, G.726-24, G.726-32, G.726-40, G.729: IP6600 supports different audio priority. You can choose “None”, “First”, “Second”, “Third”, “Fourth”, “Fifth” “Sixth” and “Seventh”.

RFC2833 Payload: RFC2833 payload ID.

DTMF Type: In IP6600, there are two methods for transmitting DTMF tone. Select RFC2833 Method, the DTMF tone will be transmitted by event packet. Select SIP-INFO Method, the DTMF tone will be represent in SIP INFO Message.

Hold Recall Time: IP6600 provides hold recall line LED indication. When the hold recall time expires, IG changes the Line LED to Hold Recall indication.

FXS: It is used to set many FXS-related options.

Fax Support: The system supports FAX/modem tone detection with G.711 and T38 mode.

Call ID Method: The system provides the ability to detect the calling party identification provided by PSTN lines. It also transmits the calling party identification to POTS ports. There are four choices: NONE, DTMF Before Ring, DTMF After Ring, FSK Before Ring , FSK After Ring.

Inter-digit Timeout: Its range is from 2 to 9 seconds.

FXS Hotline: program the hotline number and the delay time.

Figure 6-82. Voice – System – Transmission – 2

FXO: It is used to set many central office line options.

Call Abandon Time: For every PSTN/FXO call, system provides the facility to monitor the call status. If the remote party hangs up, the ongoing call must be terminated. The PSTN line monitor is done by the loop-break signal or busy tone. The value range is: Disable/100/200/…/1000 ms.

Ring Recognition Time: The timer determines the minimum ring duration recognized as a valid incoming ring on a FXO port. Shorter ring signals are ignored. The timer range is 200ms to 600ms in 40ms increments.

Delay Ring Time: The timer is to allow the Central Office to send ICLID before the call is answered. Once the timer expires, the programmed extensions will ring and the ICLID number will be sent to the ringing extensions. The timer range is 3 to 6 seconds on 0.5 second increments.

Dial Wait Time: When the user seizes a PSTN/FXO line, the Stable Time delay is needed to wait the dial tone from Central Office. Its range is from 350 to 950 ms.

Inter-digit Timeout: Its range is from 2 to 9 seconds.

Flash Time: The on-off duration for sending the FLASH signal. Its range is from 90 to 700 ms.

Flash New Call: If this item is set “Enable”, a call will be taken account of a new call when the CO FLASH feature is used.

FXO to FXO Call Duration: The maximum calling time between two FXO lines.

DTMF Signal On/Off Duration: The on/off time duration of DTMF signal. Their ranges are from 50 to 200 ms.

Pause Time: The pause time of alphabet “p” in the process of call dialing. The four values are 1.5, 2.5, 3.5, and 4.5.

Ring Abandon Time: It specifies the maximum time between valid ring signals from the CO/PBX. If the duration between rings exceed the Ring Abandon time, IP6600 stops ringing the destination(s) and the port returns to idle.

Release Guard Time: The guard time to ignore the noise signal when releasing the call.

6.7.3.4 IGW Group

Several IP6600s can be set into an IGW Group. IGW Group’s members can share the whole trunks.

In an IGW Group, one master IP6600 and at most 9 slave IP6600s are available. Master IP6600 must have a static IP address. Master and all slave IP6600s share one password for authentication. If the IP address of master is set in a slave IP6600, slave IP6600 sends its IP address, name, and password to the master. Master IP6600 verifies the received password and name. If the password is valid and the name is not duplicated, master IP6600 sends the IGW list to all slave IP6600s. (Figure 6-83)

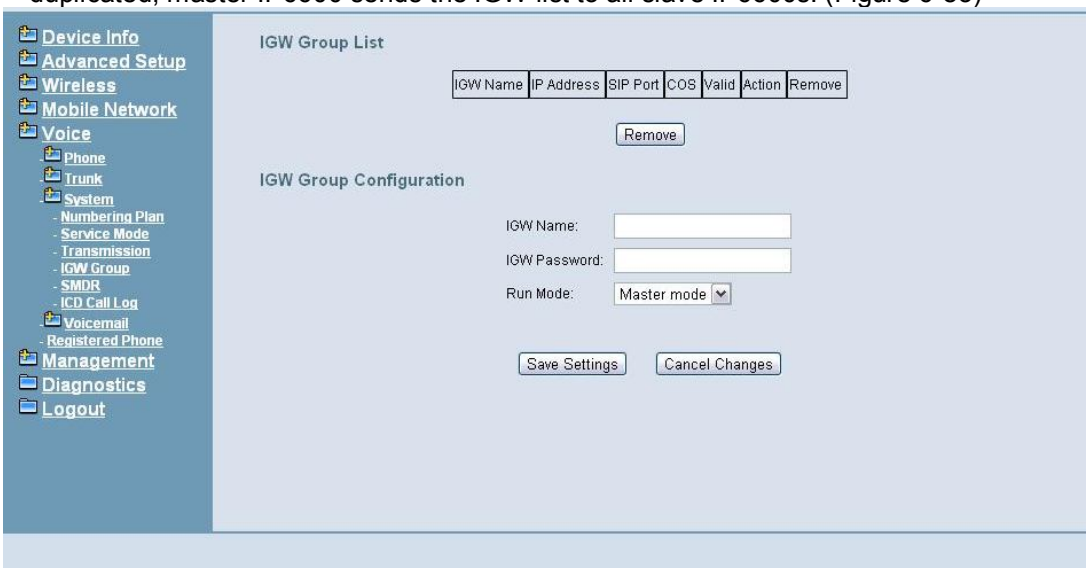


Figure 6-83. Voice – System – IP6600 Group

6.7.3.5 SMDR

SMDR (Station Message Detail Recording) will take down user’s dialing record. It contains every calling period. From the log of SMDR, the administrator can charge some fees from the user.

This page allows you to view the SMDR record and configure the SMDR. Click “View SMDR” button to view the SMDR record, and click “Configure SMDR” button to configure the SMDR. (Figure 6-84,Figure 6-85,Figure 6-866)

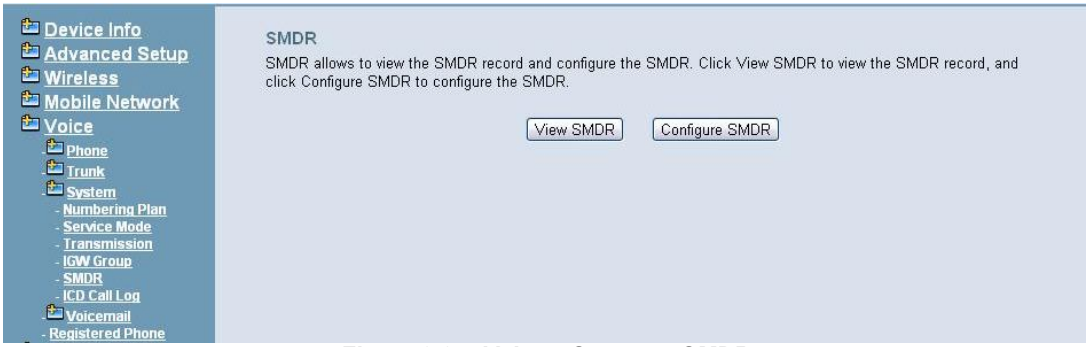


Figure 6-84. Voice – System – SMDR

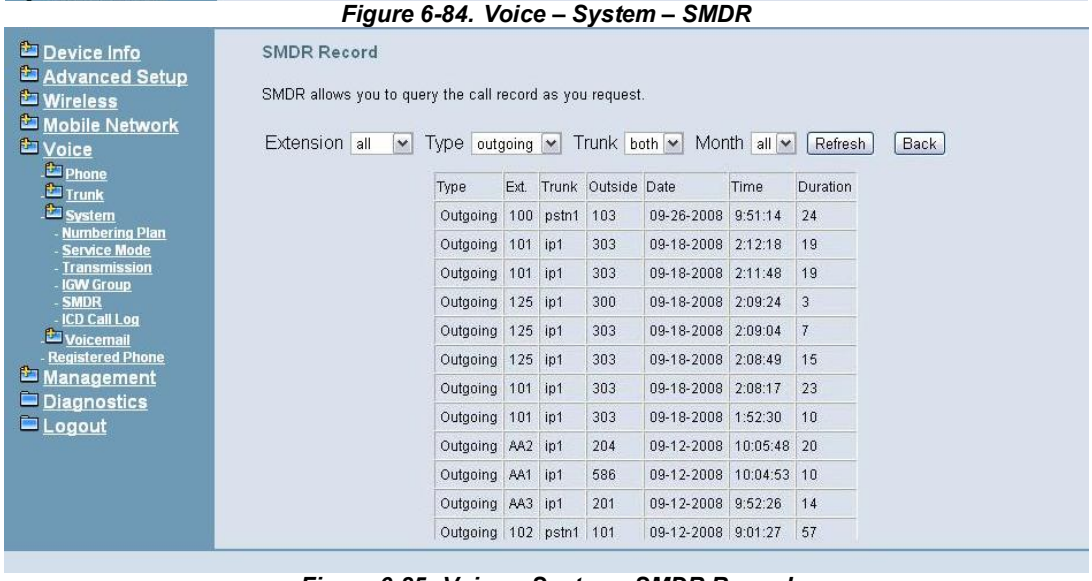


Figure 6-85. Voice – System –SMDR Record

The “PSTN Outgoing Call Duration Start Time” is used to estimate whether the PSTN outgoing call to be recorded. If the duration is less than it, the call won't be recorded. If log mode is configured, the specified SMDR record will be sent to local or/and remote log server.

Figure 6-86. Voice – System –SMDR Configuration

6.7.3.6 UCD Call Log

This page shows the Call Log for incoming call to UCD group. (Figure 6-87)

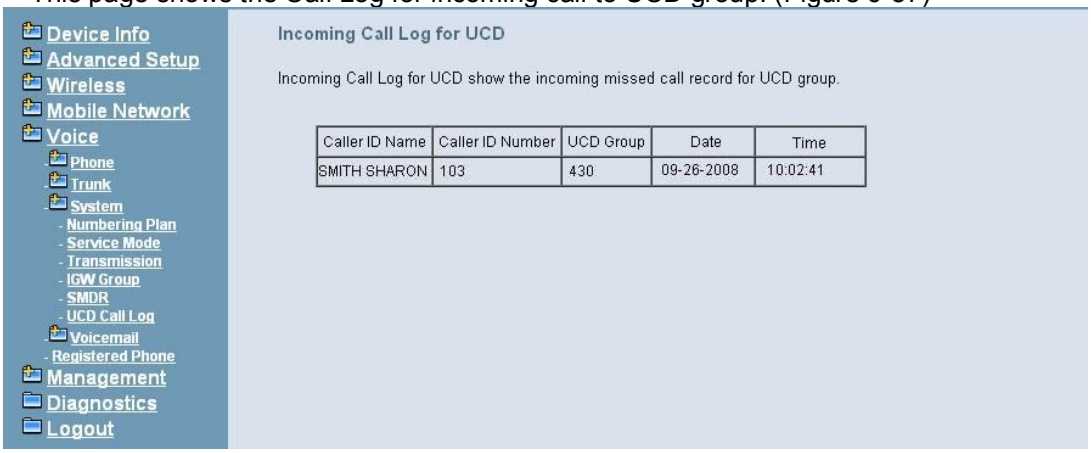


Figure 6-87. Voice – System – UCD Call Log

6.7.4 Voice Mail

IP6600 provides a built-in Auto Attendant and Voice Mail System. It is separated into 4 parts:

- General
- Phone Extension
- Virtual Extension
- Update MOH File
- Holiday
- Advanced

The configurable items for each part would be described in the following.

6.7.4.1 General

This page allows you to configure the general settings of the auto attendant and voice mail.

Auto Attendant: (錯誤! 找不到參照來源。8,Figure 6-909)

Admin Password: The password of administrator.

Max Try Time: Maximum error times for extension's key input.

Action When Max Error Reached: You can set the system "Forward to operator" or "Disconnect" when reaching the "Max Try Time" errors for key input.

Prompt Language: Automated Attendant language type. It provides one or two languages to be chosen.

VAA Codec: Choose the codec (PCMU, PCMA, G729) of virtual auto attendant.

RTP Packet Size: Choose the RTP packet size of auto attendant.

DISA: Enable/Disable DISA. When enable DISA, Auto Attendant plays the Greeting message and the Caller dials "#" key, caller can make an outside call. When disable DISA, caller can't make an outside call.

Dial by Name Code: The caller can dial a name to forward the call. When Auto Attendant plays the Greeting message, caller can press the code to enter "Dial by Name" function.

Single Digit Table: Setup the single digit table. You can choose "UCD Group" or "Extension" from Speed dial Number 0 to 9. When user uses the auto attendant, user can press Speed dial Number to call the specified extension or UCD Group.

Greeting Mode: "Working", "Holiday" or "Temporary".

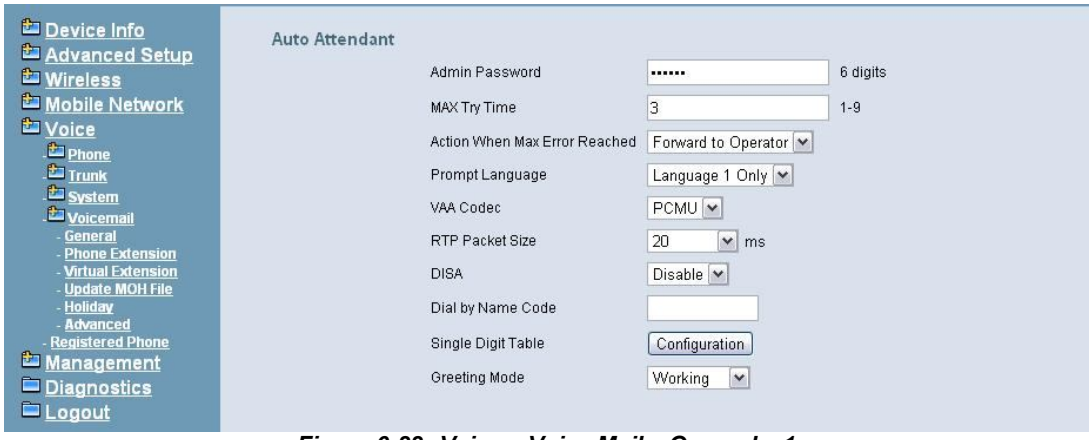


Figure 6-88. Voice – Voice Mail – General – 1

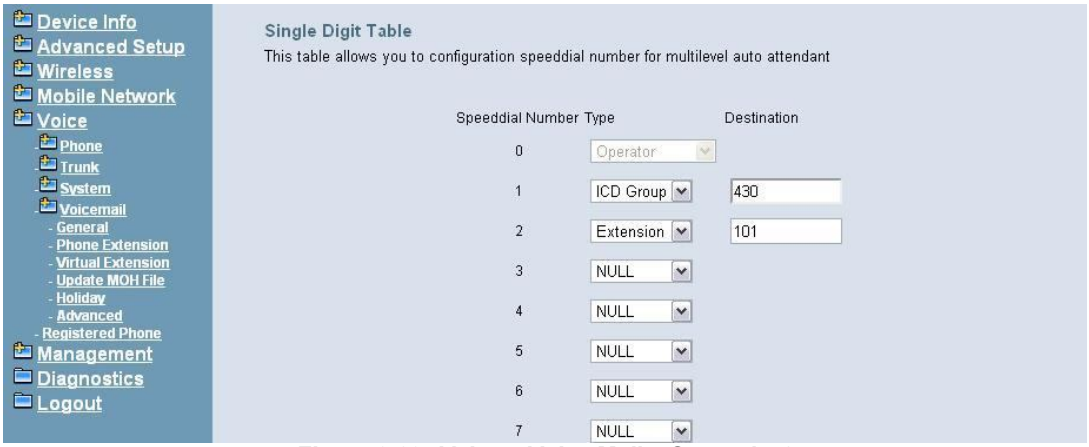


Figure 6-89. Voice – Voice Mail – General – 2

Voice Mail: (**錯誤! 找不到參照來源。**90),

Email Notify with Voice Files: Add attached WAV file in notifying email for leaved message.

Days for Keeping Voice Mail: Keep days for leaving messages. 0 means that the messages are kept until the users delete them.

SMTP Support SSL: Choose “Yes” to support SSL.

SMTP Server: SMTP Mail Server.

SMTP Server Port: SMTP Mail Server port. The default value is 25.

Sender Email Address: Email Address of Sender.

Sender User Name: User Name of Sender’s Email.

Sender Password: Password of Sender’s Email.

Max recording time: The range of recording time is form 1 to 30 minutes.

Silence detection for VM recording: Set “Enable” of this item will do the silence detection in VM recording. If “silence” is detected, IP6600 will terminate the recording and release the line.

Voicemail Tag: Voicemail tag

Email header: Email header

Housekeeping Time: configure the Weekday and Time.

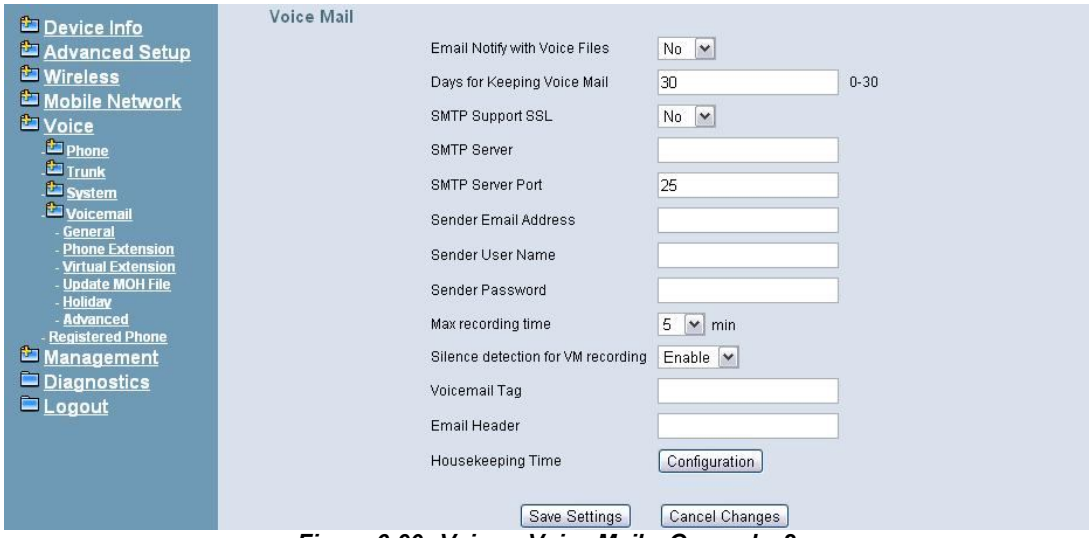


Figure 6-90. Voice – Voice Mail – General – 2

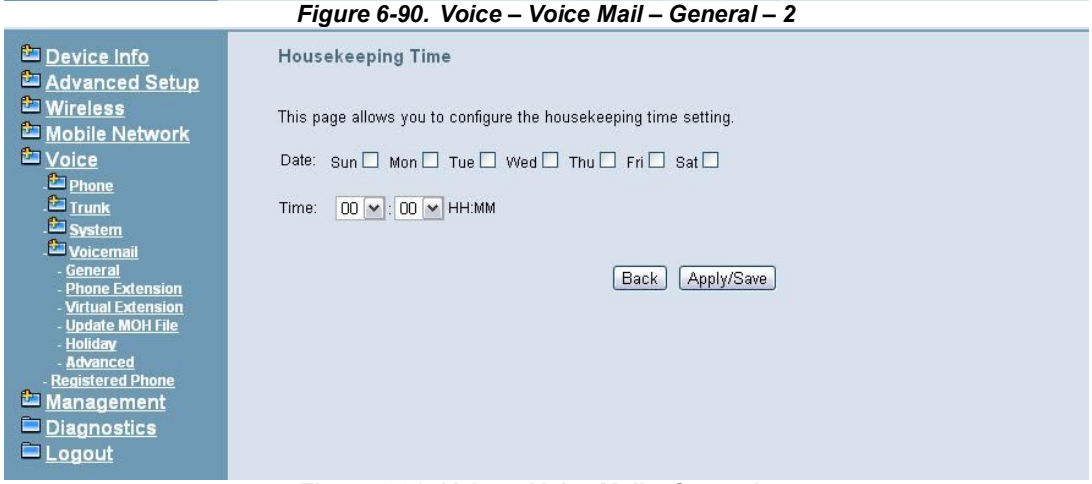


Figure 6-91. Voice – Voice Mail – General – 4

6.7.4.2 Phone Extension

Voice Mail extension configuration allows you to configure voice mail settings for each extension. While pressing “Configure”, it shows Extension Voice Mail Configuration screen. You can enter the user name for each phone. (Figure 6-9292)

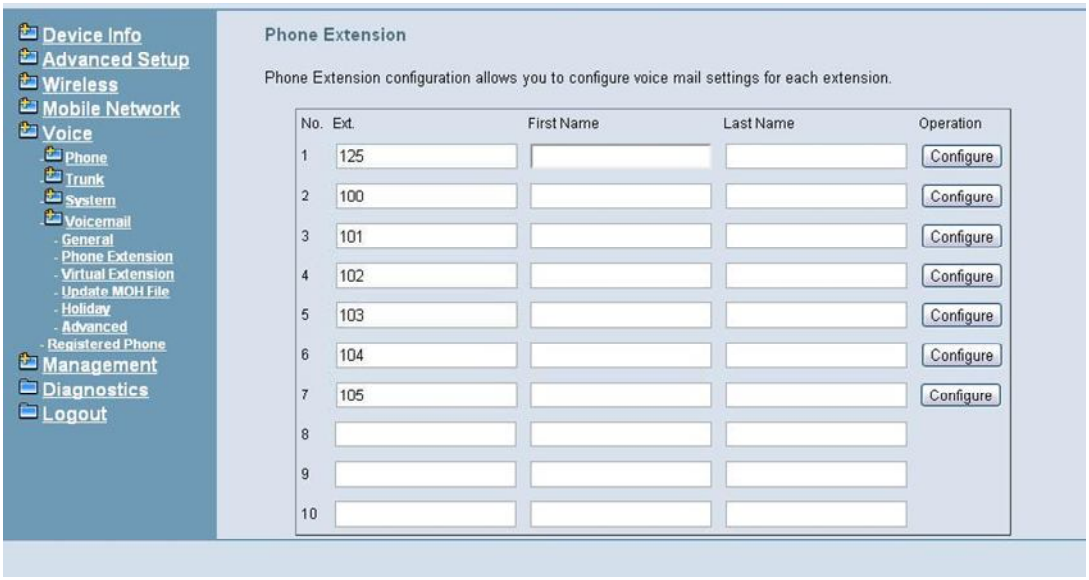


Figure 6-92. Voice – Voice Mail – Phone Extension

The following items will be configured in the Extension Configuration (Figure 6-933):

Voice Mail: Enable/Disable. To disable this item, there is not allowed to listen to the message from outside party. (See Appendix 3.2.3)

Password: Password of voice mailbox of the extension.

E-mail Address: Phone user's E-mail Address.

Prompt Language: Provides one or two language to be chosen.

Distribution Lists: You can configure three contribution lists which can be used when the phone user wants to transfer a message to other IP phones.(Figure 6-944)

Email Message: This item is used when the message file is attached. You can select "Save as New", the message will be displayed as a new message. Select "Save as Old", the message will be a listened message. Select "Delete", the message will be deleted.

Leaving Message: If setting to "Disable", it can't leave the messages in the VM box.

Administrator: If setting to "Disable", the extension won't enter VM's Administrator mode.

Figure 6-93. Voice – Voice Mail – Phone Extension – Extension Configuration

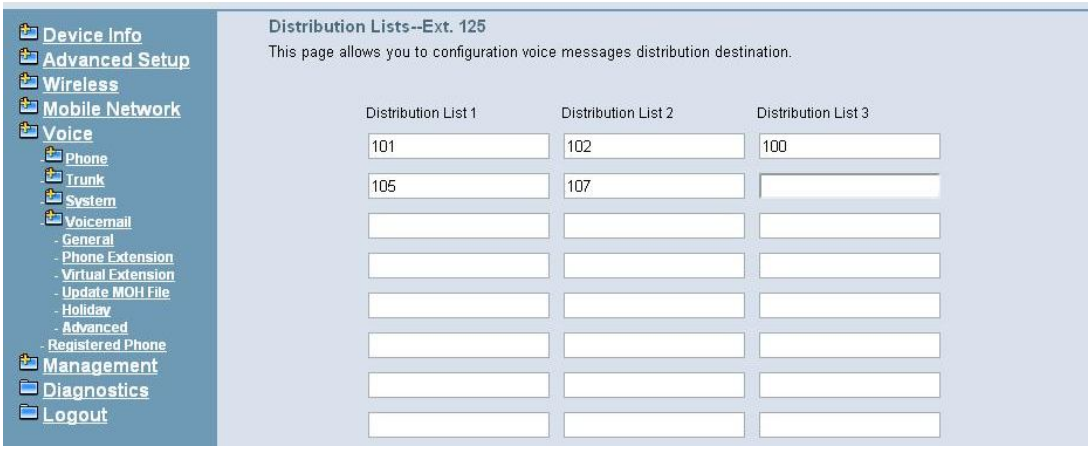


Figure 6-94. Voice – Voice Mail – Phone Extension – Configuration

6.7.4.3 Virtual Extension

IP6600 provides 50 Virtual Mailboxes. These Virtual Mailboxes can be used by the members not works in the office, or as a secondary mailbox (Figure 6-955).

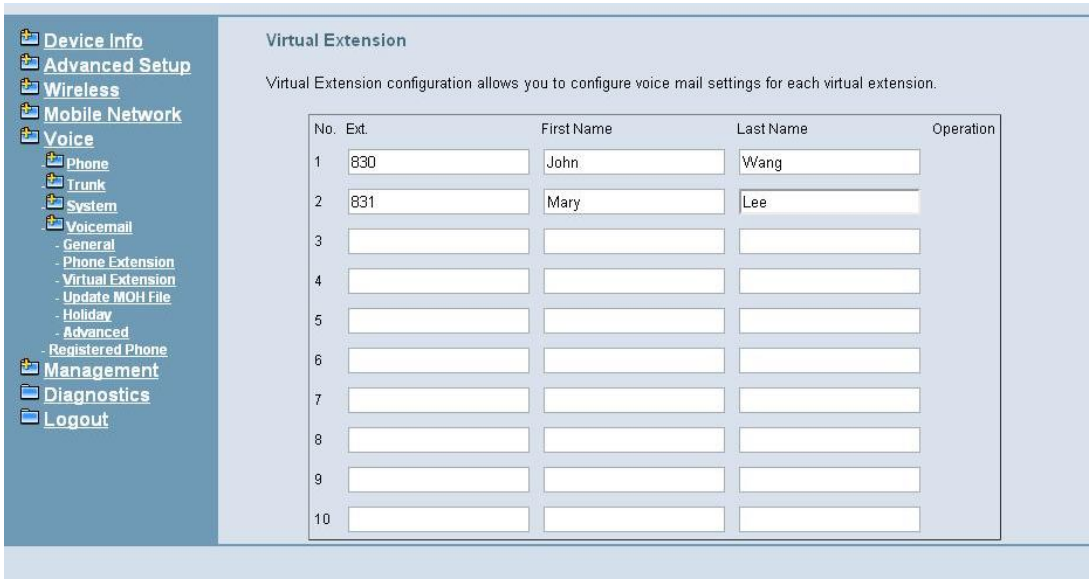


Figure 6-95. Voice – Voice Mail – Virtual Extension

6.7.4.4 Update MOH File

The Music On Hold (MOH) could be upload from the Local PC side. Click the “Browse” to locate the new MOH file in the PC. Then, click “Update File” to process the file upload. NOTE: The device do not allow “stereo” MOH format, please upload a MOH file with “mono” format. (Figure 6-966)

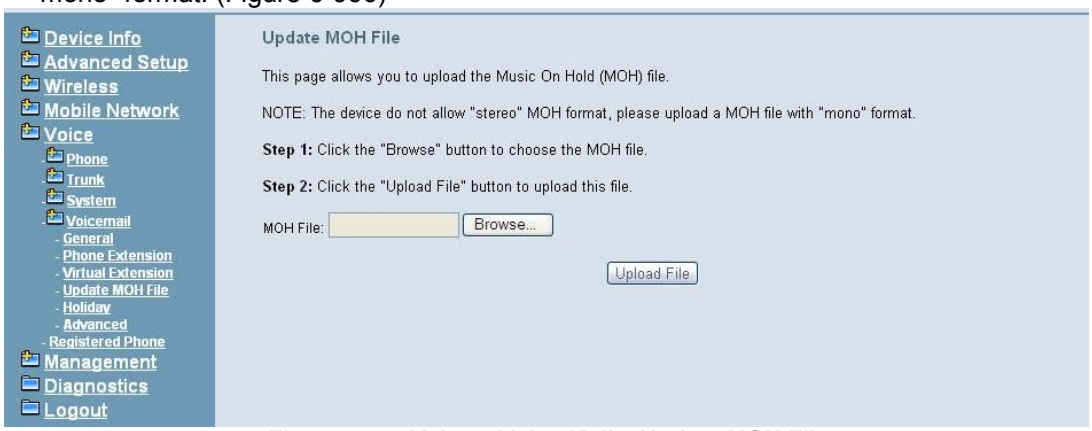


Figure 6-96. Voice – Voice Mail – Update MOH File

6.7.4.5 Holiday

This page allows you to configure the holiday or special off-duty days. You can click the buttons under the table to choose pages. (Figure 6-977)

Figure 6-97. Voice – Voice Mail – Holiday

6.7.4.6 Advanced

This page allows you to browse, upload or download voice files through IP6600's ftp server. (Figure 6-988)

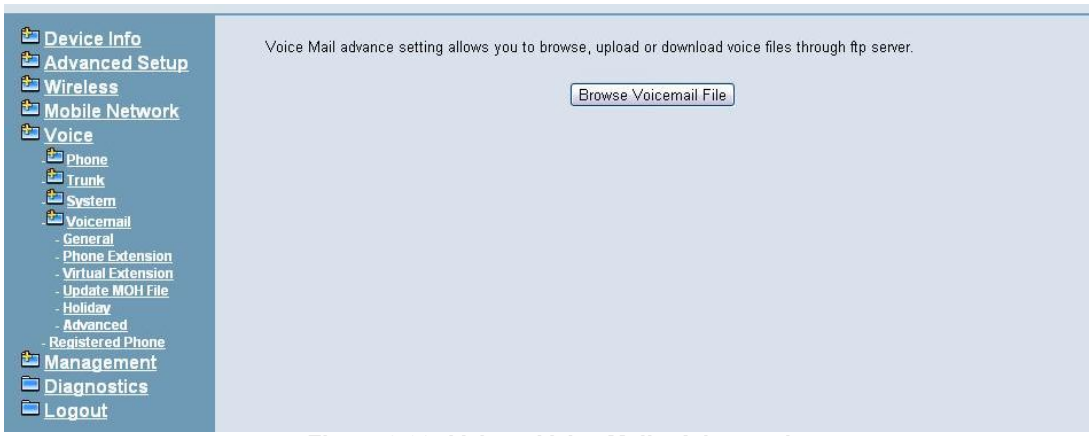


Figure 6-98. Voice – Voice Mail – Advanced

6.7.5 Registered Phone

This page lists the information of registered phones, and provides the link to access the phone's web page. (Figure 6-999)

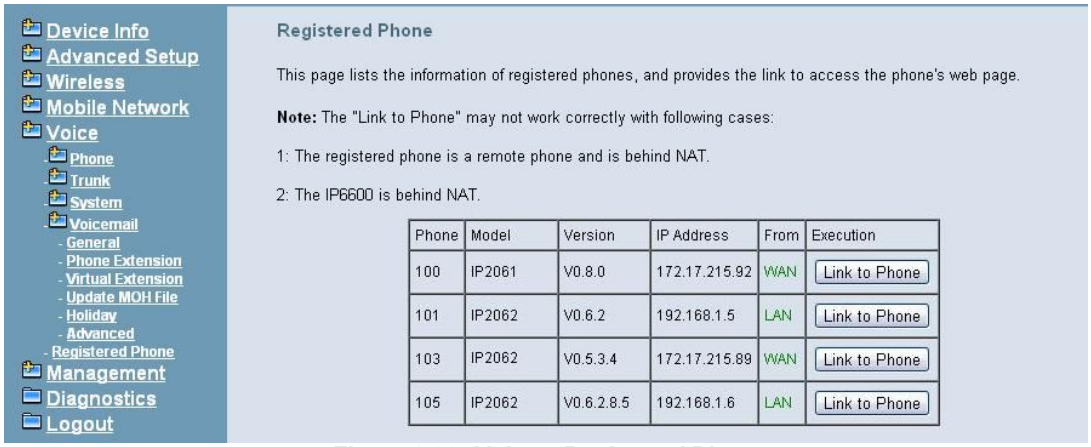


Figure 6-99. Voice – Registered Phone

6.8 Management

The system administrator can do the following functions to manage the configurations, events, and software update of the IP6600.

- Settings
  - Backup
  - Update
  - Restore Default
- System Log
- TR-069 Client
- Time Settings
  - Internet Time
  - Daylight Saving Time
- Access Control
  - Web Port
  - Password
- PTC
- Update Software
- Reboot

6.8.1 Settings

System Administrator can Backup and Update the IP6600's settings. The settings can be saved from IP6600 to PC. The saved setting file can also be loaded from PC to IP6600. These functions can help the system administrator to manage large amount of IP6600s efficiently. Restore Default would set the IP6600 with the factory default configuration.

6.8.1.1 Backup

Click "Backup Settings", you may save your IP6600's configurations to a file on your PC. (Figure 6-100100)

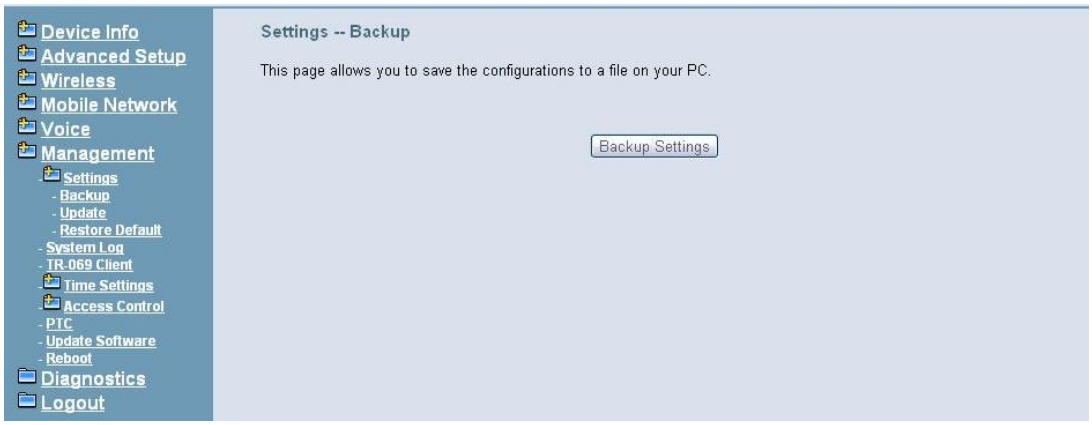


Figure 6-100. Management – Settings – Backup

6.8.1.2 Update

Click “Browse” to locate the setting file saved on the Local PC. Then, click “Update Settings” would apply the settings to the IP6600 according to the configuration file. (Figure 6-101101)

Figure 6-101. Management – Settings – Update

6.8.1.3 Restore Default

Click “Restore Default Settings” to restore the factory default settings. This would be helpful when the settings mass up. After IP6600 returns to factory default settings, the wizard setup is invoked automatically when the administrator accesses to IP6600’s web server. (Figure 6-102102)

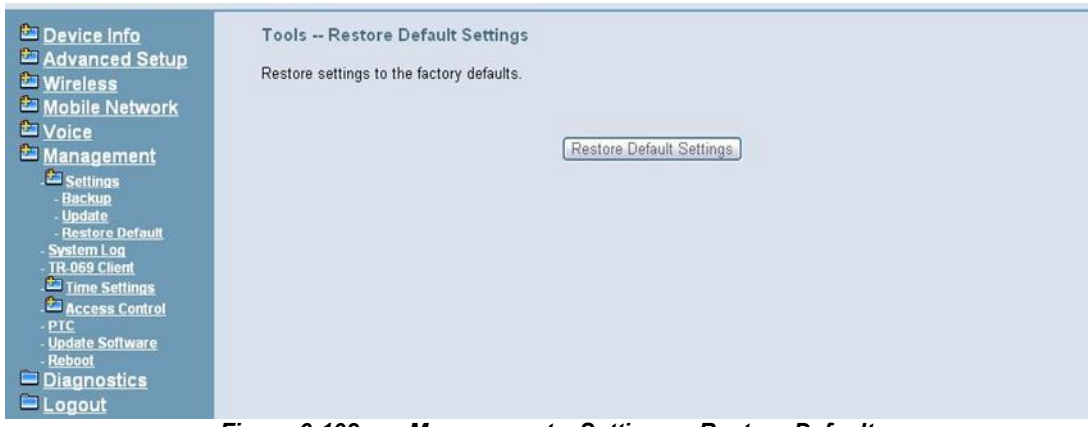


Figure 6-102. Management – Settings – Restore Default

6.8.2 System Log

This allows system administrator to view the system log and configure the system log options. Click "View System Log" to view the system log. Click "Configure System Log" to configure the system log options. (Figure 6-103103,Figure 6-1044)

When you configure the system log options, you can see Log Levels and Display Levels: Emergency, Alert, Critical, Error, Warning, Notice, Informational, and Debugging. The Log Level implies that what log level is applied to IP6600 to record the log. The Display

Level would just show the users the log message that they want to know. As a result, Display Level was just a subset of total log messages. If “Mode” is set to “Remote” or “Both”, the log messages would be sent to the specified UDP port of the specified log server. Click “Apply/Save” button that you can save the new configuration.

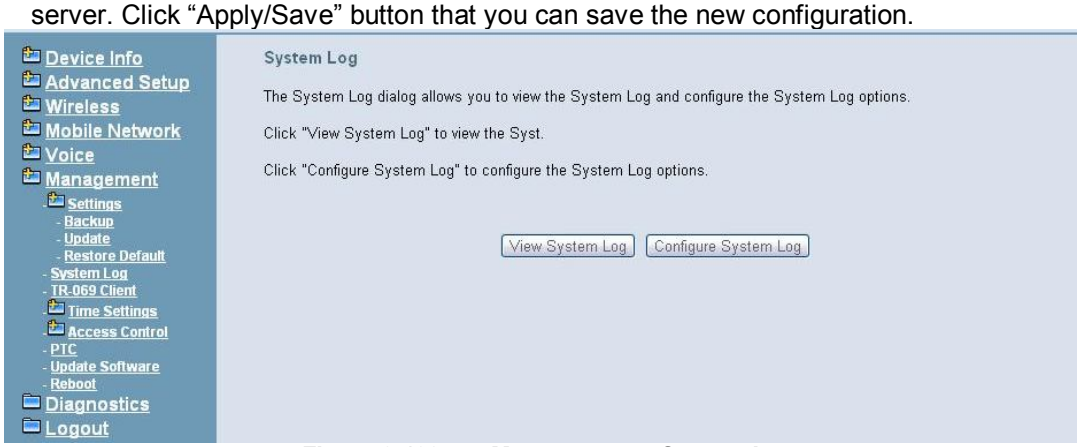


Figure 6-103. Management – System Log

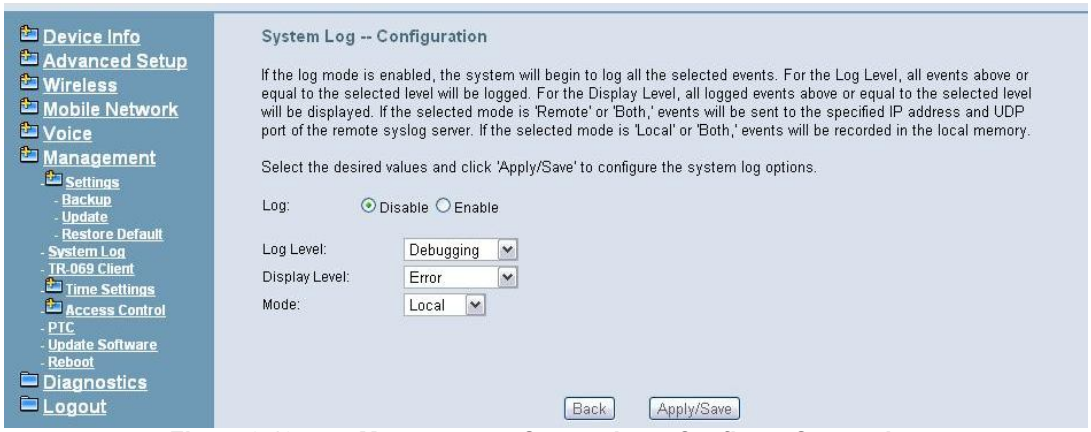


Figure 6-104. Management –System Log –Configure System Log

6.8.3 TR-069 Client

WAN Management Protocol (TR-069) allows an Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device. Firmware upgrade or vendor configuration file backup can be done remotely on ACS server. Select the desired values and click "Save Settings" to configure the TR-069 client options. (Figure 6-105105)

Inform: It can be set to Disable or Enable for periodically inform every Inform Interval. Fill the correct ACS URL, ACS username/password and select Interface, the TR-069 client is able to connect to ACS server.

Display SOAP message on serial console: Disable/Enable.

Connection Request Authentication: The “Connection Request User Name” and “Connection Request User Password” are used for the server to initiate an ACS initiation connection.

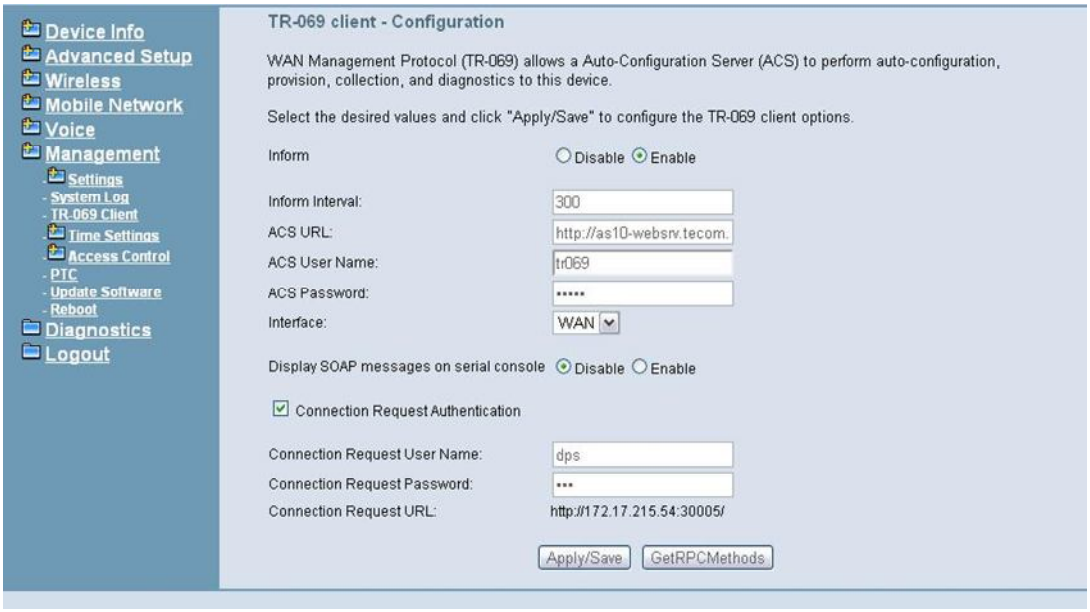


Figure 6-105. Management – TR-069 Client

6.8.4 Time Setting

This item allows you to configure system's time and the Daylight Saving Time.

6.8.4.1 Internet Time

This page allows you to configure the Internet time setting. You can choose the "Automatically synchronize with internet time servers". So the IP6600 can synchronize its system time with NTP time server automatically (Figure 6-1066). When you choose "Manual Date and Time Settings", you can manually configure the date and time settings (Figure 6-1067).

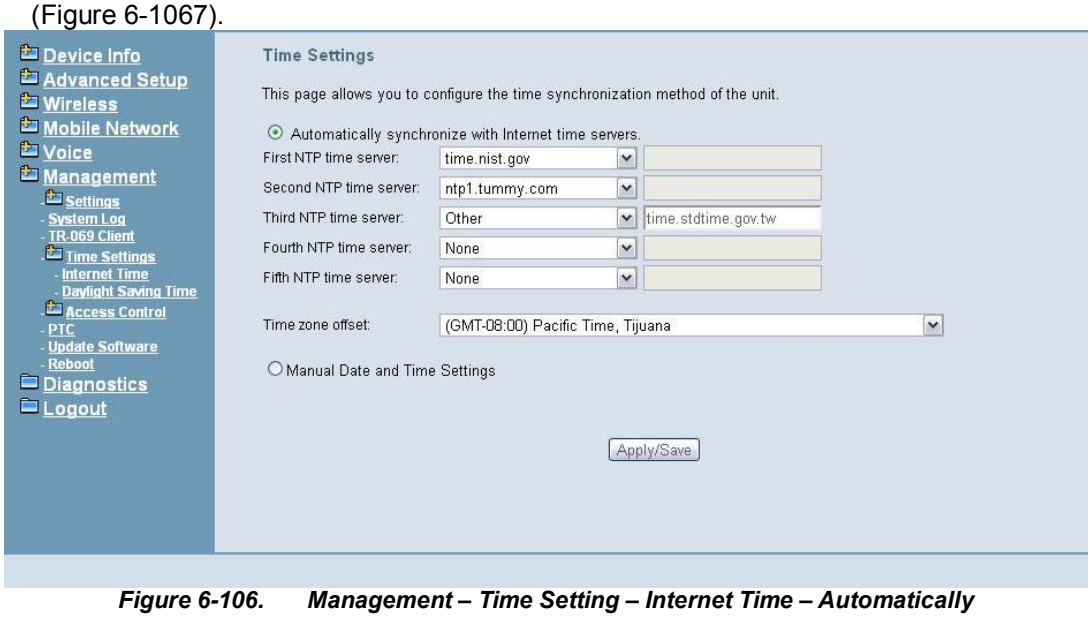


Figure 6-106. Management – Time Setting – Internet Time – Automatically

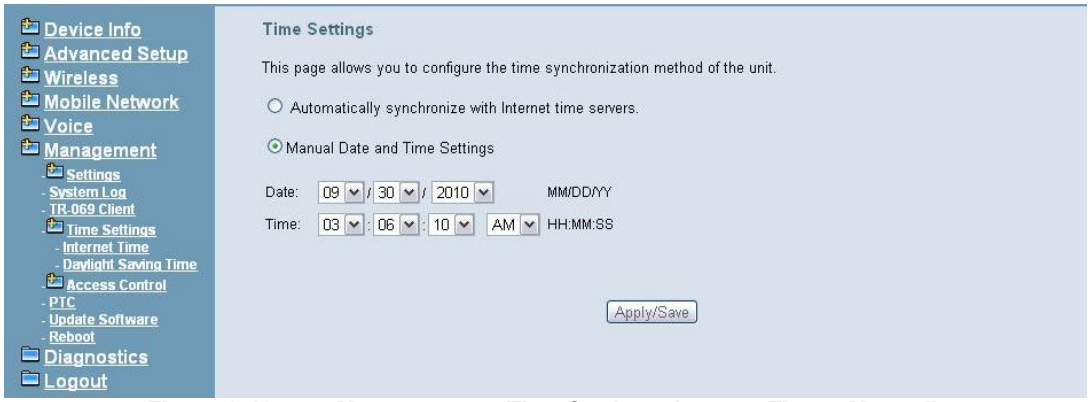


Figure 6-107. Management – Time Setting – Internet Time – Manually

6.8.4.2 Daylight Saving Time

This page allows you to configure the Daylight Saving Time (DST) which supports auto adjustment for daylight saving time. Click “Save Settings” button that you can save the new configuration. Click “Cancel Changes” button that you can cancel the changes. (Figure 6-1088,Figure 6-1099)

Figure 6-108. Management – Time Settings – Daylight Saving Time

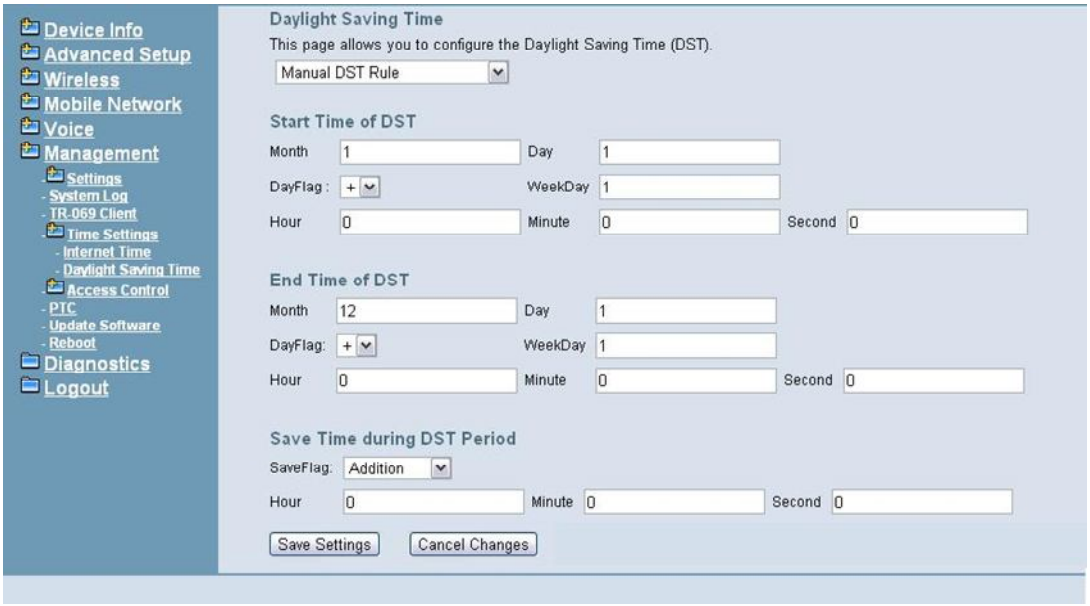


Figure 6-109. Management –Time Settings – Day Light Saving Time – Manual DST Rule

Default International DST Rule*:* Default DST Rule obey international standard rule.

Manual DST Rule*:* Define your own DST Rule.

Start Time of DST: The date and time to start daylight saving.
If "Weekday" is 0, it means the date to start daylight saving is at exactly the given date. If "Weekday" is not 0, the DST starts on the "Weekday" on or after the given date.

End Time of DST: The date and time to end daylight saving.
If "Weekday" is 0, it means the date to end daylight saving is at exactly the given date. If "Weekday" is not 0, the DST ends on the "Weekday" on or before the given date.

Save Time during DST Period: The amount of hour/min/sec to add to the current time during daylight saving period.

6.8.5 Access Control

This item allows you to configure Web Port and password for user, support, and administrator.

6.8.5.1 Web Port

This page allows you to change the IP6600's web port. And it will take effect after reboot. (Figure 6-110)

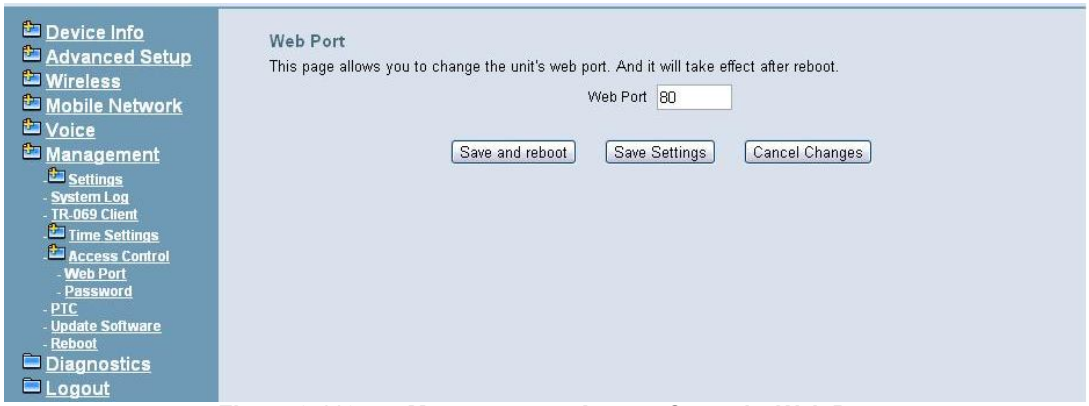


Figure 6-110. Management – Access Control – Web Port

6.8.5.2 Password

In this page you can define the passwords for administrator, support, and user. The Administrator has unrestricted access to change and view configuration of your IP6600. The Support is used to allow an ISP technician to access your IP6600 for maintenance and to run diagnostics. The User can access the IP6600, view configuration settings and statistics, as well as, update the router's software.

Use the password field to enter up to 16 characters. Note: Password cannot contain a space. (Figure 6-11111)

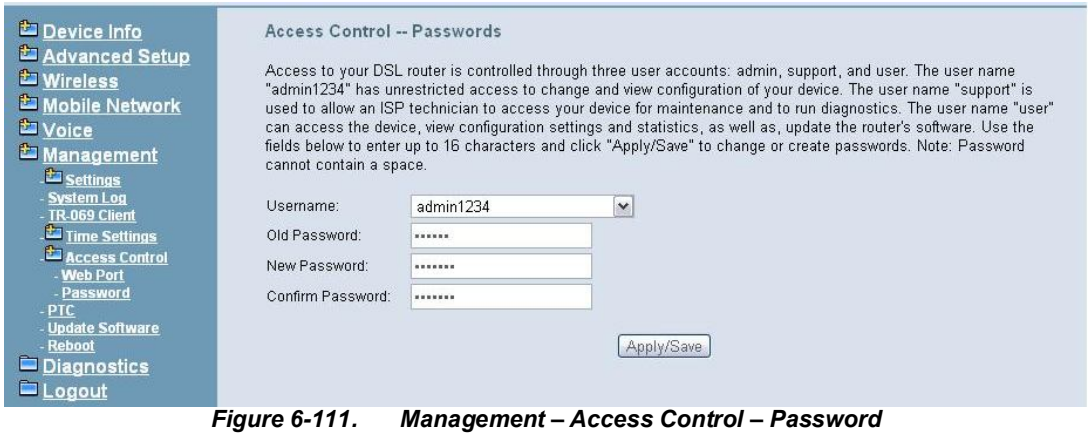


Figure 6-111. Management – Access Control – Password

6.8.6 PTC

IP6600 can connect to a PTS for upgrade firmware. You can configure IP6600 name, PTS server URL and Time interval for check new firmware version. (Figure 6-11212)

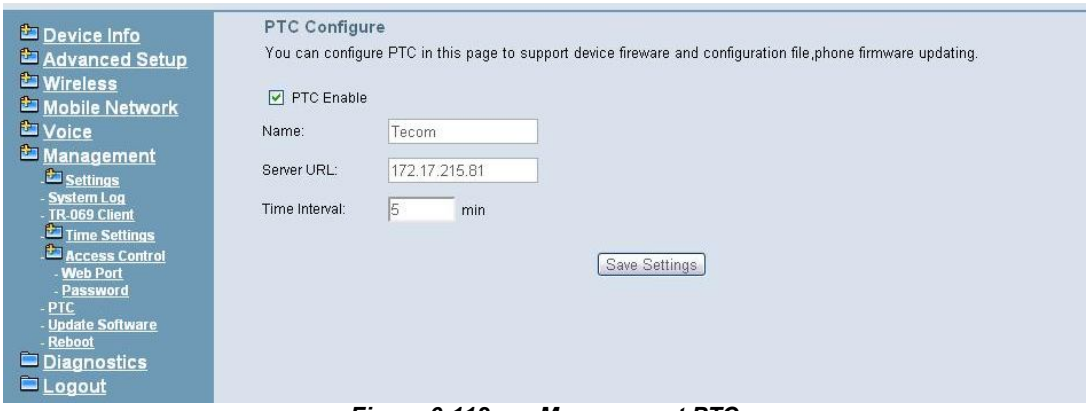


Figure 6-112. Management-PTC

6.8.7 Update Software

The new released software could be upgraded from the Local PC side or remotely. Click the “Browse” to locate the new software image file in the PC. Then, click “Update Software” to process the software update. NOTE: The upgrade process takes about 5 minutes to complete, and your IP6600 will reboot. (Figure 6-11313)

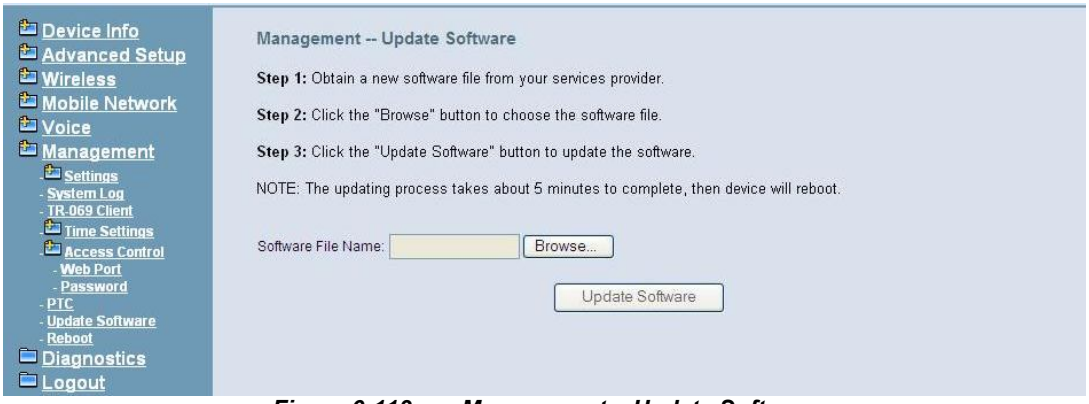


Figure 6-113. Management – Update Software

6.8.8 Reboot

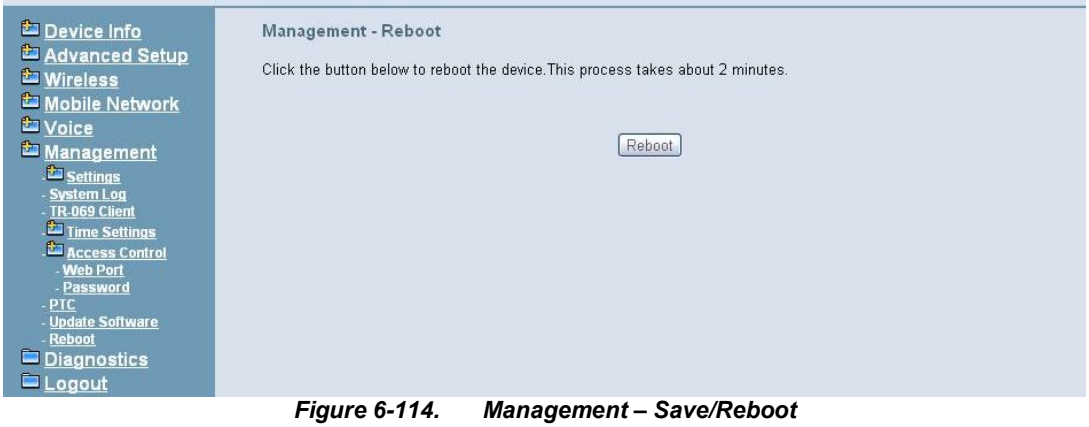


Figure 6-114. Management – Save/Reboot

Click “Reboot” to reboot the IP6600. The IP6600 would automatically save the configuration before reboot, so that modified settings would take effect after reboot. (Figure 6-11414)

6.9 Diagnostics

This page provides the following information to users: (Figure 6-11515,Figure 6-11616)

- The network connection information on the net.
- The status of IP6600's PSTN Line.
- The status of IP6600's IP Trunk Line.
- The status of IP6600's AA Line.
- The status of IP6600's FXS.

1) Network Connection

PASS: Normally connected

FAIL: Connecting fail

DOWN: No connection

2) PSTN Line / IP Trunk Line / AA / FXS

FAILED: Connecting fail or registering failure

IDLE: The line is idle

N/A: The line is not available

Busy: The line is in use

For Refresh Mode, if user select automatically refresh, the web page will automatically refresh for every 20 seconds.

Click "Disconnect" button will allow you release the selected trunk line or rescue the blocked one.

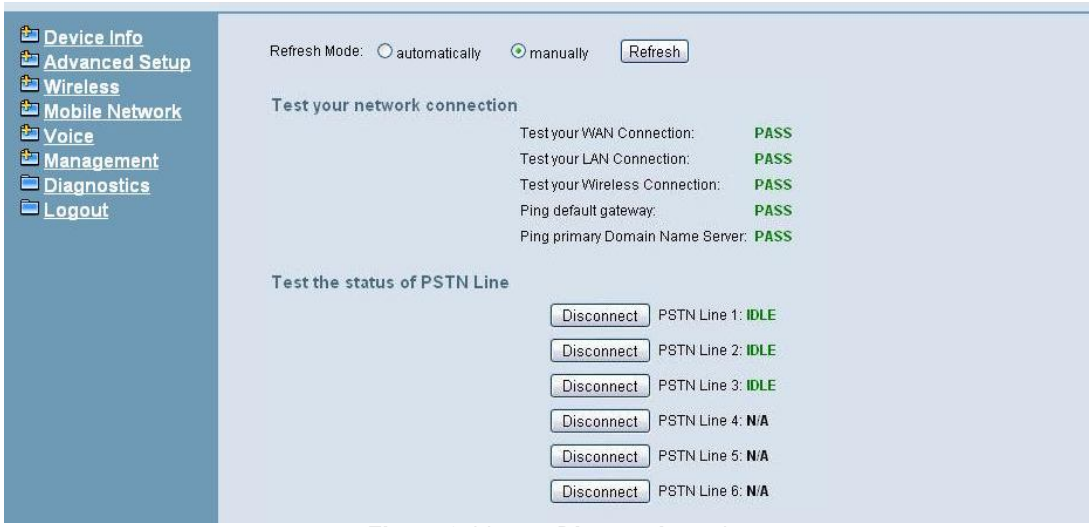


Figure 6-115. Diagnostics – 1

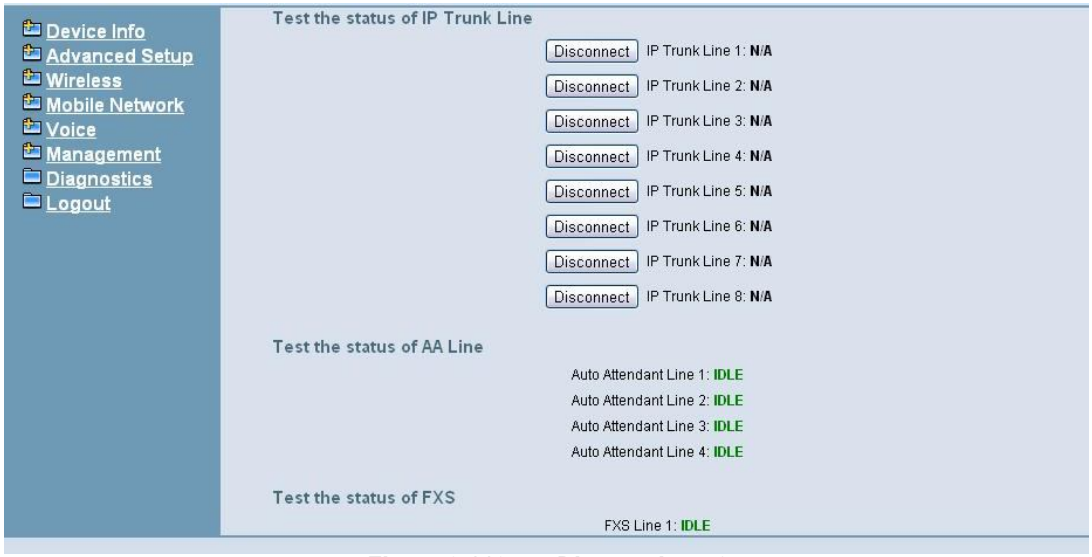


Figure 6-116. Diagnostics – 2

6.9 Logout

Press “Logout”, you can logout the IP6600 web configuration page.

Appendix 1: Product Summary

TCP/IP Protocols

- IP Protocol (791)
- ARP (RFC 826) / RARP (RFC 903)
- ICMP (RFC792)
- TCP (RFC 793)
- UDP (RFC 768)
- SNTP
- DNS
- HTTP
- Telnet
- TFTP
- RTP
- Static Routing
- NAT with ALGs
- VLAN Tagging

IP Address Assignment

- Static
- Dynamic
- Subnet Mask
- PPPoE Client (RFC 2516)
- Primary and Secondary DNS
- DHCP Server (RFC 2131-2132)
- DHCP Client (RFC 2132)

Routing

- RIP v1/v2
- Static routing
- DHCP Server/Relay/Client
- DNS Relay
- NAT/NAPT

Virtual Server

- Virtual Server
- Port Trigger
- DMZ

QoS

- IP ToS function (RFC 1349)
- Priority queues for upstream traffic based on ToS field.
- IP Precedence
- Bandwidth Control

3G

- 3G HSDPA dongles for WAN backup and 3G interface
- Bandrich, Huawei, ZTE and D-Link dongles will be supported by default, other dongles will be supported upon request

VoIP Protocols

- SIP (RFC 3261)
- SDP(RFC2327, RFC3264)
- Real Time Protocol (RTP ; RFC 1889)
- MD5 (RFC3261 HTTP) digest authentication
- G.168 Echo Cancellation

- Voice Codec: G.711u, G.711a, G726-16, G726-24, G726-32 and G.726-40 (G.729a optional)
- Support FAX/modem tone detection and auto-fallback to G.711
- T.38

IP Trunk

- Support up to 12 IP Trunks
- SIP message, including INVITE, re-INVITE, ACK, CANCEL, OPTIONS, BYE, REGISTER, INFO, REFER, SUSCRIBE/NOTIFY and REPLACE messages.
- SIP Outbound Proxy, SIP Proxy and Registrar
- Auto-Registration when power-on or period
- Session Timer support
- Support IP address, domain name, user name, display name for SIP URL

Digital Audio

- Codec: G.711 a-law/μ-law 64Kbps, G.726-16/24/32/40
- SIP Call Offer /Answer: Codec auto capacity exchange
- Echo Cancellation: G.168 for each voice line
- Silence Detection/Suppression
- Comfort Noise Generation
- Adaptive jitter buffer
- Different frame size support (10,20,30,40, 50, and 60ms)
- Packet loss concealment
- Out-band (RFC2833) and In-band DTMF

Security

- Password protected system management
- User authentication for PPP (PAP/CHAP/MSCHAP)
- Firewall
- Packet Filtering
- Access Control List
- Wireless Security:
  Support WEP (64, 128-bit) encryption
  802.1x and WPA/WAP2 authentication
  MAC Address-based access control
  WDS support

Configuration Management

- LAN/WAN management via Telnet interface or Web-based browser interface
- Firmware upgrade available by TFTP/ HTTP
- Status display and event report from Web-based management
- Configuration Save and Restore
- Reset to factory default

Radio - WLAN

- Standard : IEEE 802.11b/g/n
- Media Access Control : CSMA/CA with ACK
- Modulation : OFDM/CCK
- Frequency Range (Range depends on different country)

Remote Diagnostic

- Syslog
- Device Diagnostic, Enable remote test following:
  Test the connection to your local network,
  The connection to your Internet service provider,
  The status of PSTN Line,
  The status of IP Trunk Line,
  The status of VAA Line,
  The status of FXS

Physical Interfaces

- One 10/100/1000BaseT Ethernet port (RJ-45) for WAN interface
- One 10/100BaseT Ethernet port (RJ-45) for LAN interface
- One Telephone interface (RJ-11)
- Six PSTN Line interface (RJ-11)
- One USB Host interface

LED Status

LED Name	Color	Status	Description
POWER	Red/Blue	Red On	Firmware updating
		Blue Flashing	System booting up
		Blue On	System initialized and running
		Off	Power off
WIRELESS	Blue	On	Wireless LAN is active
		Off	Wireless LAN is idle
LINE (1-6)	Blue	Off	PSTN Line is idle
		On	PSTN Line is active
TEL	Blue	Off	Phone is idle
		On	Phone is active
LAN	Blue	On	LAN is connected
		Off	LAN is not connected
		Flashing	LAN activity present (traffic in either direction)
WAN	Red/Blue	Blue On	WAN is connected and IP is obtained
		Red On	WAN is not conneced or no IP assigned
		Flashing	WAN activity present (traffic in either direction)

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Power Requirement

- Input : Voltage Range 90~230 VAC
- Output : 12V DC / 1.5A

Operating Environment

- Temperature : 0~40℃
- Humidity : 10 to 90%, non-condensing

Physical Specification

- Dimension : 190(W) x 280(L) x 34(D) (mm)

Appendix 2: Feature Access Codes

The Feature Access Codes are applied in IP2032/2061Phones and FXS phone only. It's to activate/cancel some IP6600 user-specified functions.

These Feature Access Codes are used when the phone is at idle state.

Direct Call Forward

Forward all of the calls without regard to the extension status.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*21 + Type + Ext/VAA/UCD No.
*21 + Type + * + (PSWD) + * + Outside Number

To Cancel

**21

Busy Call Forward

Forward the calls if the extension is busy.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*22 + Type + Ext/VAA/UCD No.
*22 + Type + * + (PSWD) + * + Outside Number

To Cancel

**22

No Answer Call Forward

Forward the calls if the extension doesn't answer the call within No Answer Time.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*23 + Type + Ext/VAA/UCD No + * + Time.
*23 + Type + * + (PSWD) + * + Outside Number + * + Time.

To Cancel

**23

DND Call Forward

Forward the calls if the extension enables DND.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*24 + Type + Ext/VAA/UCD No
*24 + Type + * + (PSWD) + * + Outside Number

To Cancel

**24

Follow Me Call Forward:

Forwards calls at your extension to the extension where you are currently working.
(Type: 0 – ICM, 1 – Outside, 2 – Both)

To Activate

*25 + Type + Ext No + * + Password

To Cancel

To disable, dial **25 + Ext No + * + Password

Call Fork

When extension gets an incoming call, the extension gets ringing. It rings another extension or rings an outside destination simultaneously.
(Type: 0 – ICM; 1 – Outside; 2 – Both)

To Activate

*26 + 1/2 + Type + Ext No
*26 + Type + * + (PSWD) + * + Outside Number

To Cancel

**26 → cancel the both forking destination
**261 → cancel the first forking destination only
**262 → cancel the second forking destination only

Do Not Disturb

Extension users can enable DND to stop incoming calls from ringing at their phone.

To Activate

*4

To Cancel

**4

Call Pickup

Users can answer the calls at another extension. The feature allows you to easily access calls ringing via the feature access code.

*53 + Ext No.

COS Following

It changes the individual COS of the extension temporarily.

*55 + (phone number) + (password)

Call Back Busy (for IP20xx only)

When remote party is busy, press 6 to wait call back. Press *66 to delete the record.

To Activate

6

To Cancel

*66

Reset Feature Buttons

Reset all feature buttons to IP6600's setting.

*68 + (Password)

Reset To Default

Selected IP6600 extension features can be returned to default setting.

*69+(Extension/Administrator password)

Feature Key Programming

To program the line keys as a PSTN, IP Trunk, Trunk Group number, Call-Park number or Extension number.

*70 + (Feature Key number: 01 – 28(*)) + (Feature Key Type: 00 – 06) + Number

Feature Key Type:

0: Null; Number should be null.

1: Extension; Number can be an Extension or Virtual number.

2: Trunk; Number can be a PSTN, IP Trunk or Trunk Group number.

3: Call-Park; Number can be a Park number.

4: Feature Key; Number can be a feature access code

5: Others; Number could be an outside phone number.

6. Do Not Disturb; Number should be null.

Note: IP2032 provides 2 keys for feature access.

IP2061 supports EDM module, it provides 24 more (total 28) keys for feature access.

Service Mode Selection

Change Service Mode from Operator

*79 + (Service Mode, 0 – 3)

(Service Mode:

0. Change the Service Mode

1: Day Mode

2: Night Mode

3: Time Mode)

Agent Log On/Off

It can control the status in an UCD group.

To Activate (Log On)

*91

To Cancel (Log Off)

**91

Phone Lock/Unlock

You can use the Lock feature to prevent unauthorized trunk calls from being made from extension.

To Activate Phone Lock

*97 + (password)

To Cancel Phone Lock

**97 + (password)

Call Waiting

If disabled, it returns busy response while getting second call at non-idle state

To Activate

*98

To Cancel

**98

Page Allow/Deny

Block one-way paging (group and all page) over the IP phone speaker

To Activate Page Deny

*99

To Cancel Page Deny

**99

Hot line

Allow the user to access any number simply by going off hook.

To Activate

9 + (any Number) + * + Time //Time: 0~8 seconds; 0: immediately

To Cancel

**9*

Appendix 3: Auto Attendant and Voicemail System

The IP6600 Auto Attendant can greatly enhance business productivity by providing either a full-time automated attendant to handle all incoming system calls or part-time automated attendant to handle overflow traffic. The Voice Mail Module provides up to 32 hours recording time that are shared by all extensions. The system can handle four simultaneous calls

Appendix 3.1 Functions

Appendix 3.1.2 Auto Attendant Functions

The Auto Attendant provides an incoming caller with a customized welcome greeting and specific prompts that will describe the options available to the caller.

A. AA Service Mode

The Auto Attendant supports 3 different Service Mode: Working, Holiday and Temporary; each Service Mode plays the different Greeting Messages.

At Working mode, it follows the working time setting to play the greeting.

- "Working Time": it's to program the working time per weekday. If the current time is in the programming Time, it plays Day Greeting message. If the current time is out of the programming time, it plays Night Greeting message.
- "Lunch Break Time": It will be applied on Day time only. It plays Lunch Greeting message.
- "Holiday": It allows you to configure 20 off-duty holidays on "Holiday" mode. On-duty holiday will be seen as "Working" time.

At Holiday mode, it plays Holiday Greeting message always.

At Temporary mode, it plays Temporary Greeting message. If the greeting message does not exist, it follows Working mode to play the Greeting messages.

The system administrator can change the system's greeting remotely. Press refer 3.1.3.A ("Change the Greeting Mode")

B. AA Service Menus

Support 10 AA menus that can answer calls. Each Menu supports to have 5 Greeting messages: Day, Night, Lunch, Holiday and Temporary.

AA menus can be programmed to answer calls from specific DID/DNIS numbers and trunks.

- Answering Position of every trunk.
- The Destination in DID Table

Each attendant menu is also fully programmable to each key on the dial pad 0-9 to initiate a specific option (Single Digit Table).

C. Advertised Message

Support a message to be like an advertisement.

a. Add a Virtual mailbox.

b. Record the advertisement as the Greeting message of the mailbox.
c. Disable “Leaving Message” of the Virtual Mailbox.

Program the Virtual Mailbox as Answering Position of the trunk, or the Destination of the specified phone number in DID Table, it plays the advertisement. After finishing the playing, the call will be released.
It also allows programming the virtual mailbox in Single Digit Table of AA Menu. After listening to the message, it’s back to AA Menu.

D. Direct Inward System Access (DISA)

AA allows you to remotely access IP6600 lines to make the outside calls. Press “#” when AA plays the Welcome message. AA will ask the caller to input the extension number and the extension’s VM password. After verifying, the caller dials the outside phone number. AA will use the extension’s COS (Class Of Service) to check the phone number in Call Restriction Table. Then, the phone number will be dialed out via Call Routing Table.

The DISA function is disabled by default.

E. Dial By Name

In each extension’s mailbox setting, it allows the user to program the First Name and Last Name. In each extension’s mailbox, it allows the user to record the personal name (press “5” when entering the mailbox). When the Name setting is programmed and the Name file exists, the setting will be activated.

At the Main Greeting, user can press the “Dial by Name” digit to enter the Dial by Name process.

In Dial by Name process, a voice prompt (10230.vox) will be played to ask the caller to input the name. The dialed name will be finished when the caller presses “#” or stops the digit dialing in 5 seconds,

After the caller inputs the name, AA compares the dialed name with these activated First Name and Last Name. Then AA starts to play the matched extension’s name file. If it matches two or more extensions’ names, these extensions’ name files will be played one by one following by the extension number. The interval between two name files is 5 seconds.

When hearing the matched name, the caller dials “1”. AA will transfer the call to the extension of the matched name (if it’s a Virtual Extension, the call will be answered by the mailbox of the Virtual Extension directly). If the caller dials a non-“1” digit, the digit will be ignored.

If it has no matched name or the caller doesn’t dial “1” after playing the all matched name, AA will play a warning message (10232.vox), then play a voice prompt (10234.vox) to ask the caller to select the next operation. Press “1”, it will ask the caller to input a name again. Press 2, back to AA greeting.

F. DTMF Digit Receiving

AA supports to receive DTMF digits by using RFC2833, In-Band DTMF and SIP-INFO.

G. Multilevel Auto Attendant

Support dialing the specified digit to ring the specified destination.

The specified digit could be from 0 to 9. One of them is reserved for Operator code. Another one of them is reserved for “Dial by Name” if “Dial by Name” is enabled. The other digits can be programmed to null, extension number, virtual extension number or an UCD group number as the destination.

When adding the setting, the administrator may need to update the Greeting messages.

H. Route the Call to the Appropriate Destination

When AA answers the call, the caller can dial one or more digits to the destination.

- Extension Number
- Virtual Extension Number: it’s to leave a message in the Virtual VM box.
- UCD Group Number
- Operator Code
- “Dial by Name” code: it’s valid when “Dial by Name” code is programmed.
- “Single Digit” code
- Digit “*”: it’s to enter personal VM box.
- Digit “#”: it’s to make a DISA call.

Appendix 3.1.2 Voice Mail Functions

A. 32 Hours Recording Time

The Voice Mail Module provides up to 32 hours recording time that are shared by all extensions. When 90% of the VM size is used, it shows “Message Full” on the all IP20xx’s LCD.

When VM size is full, the call will be released when the caller asks to leave the message.

B. 50 Extension Voice Mail Boxes

IP6600 support 49 IP extensions and 1 SLT extension. Each extension has a voice mail box. For IP extension, the voice mail box is formed automatically when the extension number is added in Phone Extension Table.

C. 50 Virtual Voice Mail Boxes

These Virtual Mailboxes can be used by the members not works in the office, or as a secondary mailbox, or as a guest mailbox.

The virtual VM boxes also can be programmed as the Destination for the specified DID Phone Number. The personal greeting can be used as the appropriate Main Greeting to be played.

D. 200 VM Messages per Mailbox

For each VM box, the maximum number of Voice Mail is 200. The maximum recording length for each message is 30 minutes. For each leaving message, it can be saved 1 - 30 days or infinite.

When the mailbox has no room to store the new messages, VM will play a warning message, then release the call.

E. Email Notification

When a new message is left, VM supports to send a notification via email. VM also supports to add the message as the attachment in WAV format (for PCMU and PCMA format).

Envelop information indicates

- Time and date of the message received
- Sender information (Caller ID and Contact Number)
- Mailbox status (the count of the new and old messages)
- Email header. can be programmed. The default is “You have a new voice mail message in your mailbox!)
- Voicemail Tag

When the email with leaving message is transmitted successfully, the leaving message could be “Save as New”, “Save as Old” or “Delete” in the VM box. The choice is programmable per mailbox.

F. Enter Voice Mail Box

The VM user can enter its own VM box through the followings way

a. Press the VM button on its own IP20xx phone. Then enter the VM password.
b. Dial VM number (default: 200) on its own IP20xx phone. Then enter the VM password.
c. Dial VM number (or press the VM button) on another extension’s phone. The press “*”. VM will ask the user to enter the Mailbox number and password.
d. Enter VM box from outside through AA. Press “*” when hearing AA’s greeting message. Then, VM will ask the user to enter the Mailbox number and password.
e. Enter VM box from outside through the answering extension. Press “*” when the answering extension forwards/transfers the call to VM box. VM will ask the user to enter the Mailbox number and password.
f. The virtual Mailbox user can enter its own VM box on any IP20xx extension. Press the VM button, then press “*”, VM will ask the user to enter the Mailbox ID and password.

G. Expert Mode Support When Reviewing Messages

The leaving messages will be played one by one continuously. At the end of every leaving message, it plays 10542.vox (“end of the message”) to remind the user.

When listening to the leaving messages, the VM user can press the specified digit to delete or skip messages.

"0": In DELETE folder, it recovers the message back to SAVED folder. In other Folders, it plays the instruction message (10516.vox)

"1": listen the playing the message again

"2": listen the next message

"3": delete the message

"4": forward the message to other mailboxes

"5": listen the previous message

"6": reply the message

"*": it plays the instruction message (10516.vox)

If the VM user dials an unadapted number ("7/8/9*), it will play the instruction message (10516.vox).

H. Forward Messages to Other Mailboxes

When listening to the leaving messages, the VM user can press "4" (10516.vox) to transfer the message to other mailboxes. It will ask the user to input the Destination (10501.vox). The Destination can be

- a Mailbox number
- Distribution List 1 (press "1")
- Distribution List 2 (press "2")
- Distribution List 3 (press "3")
- All other mailboxes (press "0")

After entering the Destination, it will ask whether the user would like to add a comment for the forwarding message (10540.vox). If Yes, the user can record a comment. When the Destination listens to the leaving message, the comment will be played before the leaving message.

I. Leave a Message to Other Extension(s)

Every VM user can record a voice mail message and send to distribution list or all mailboxes when entering the VM box (press "6"). The destination could be another mailbox, Distribution List, or the all mailboxes.

J. Message Folder

Divide the leaving messages into URGENT, NEW, SAVED, and DELETE folders.

URGENT Folder + NEW Folder:

a. Leave a new message. If the caller presses "*" to end the recording, the message will be saved into URGENT folder. If the caller presses "#" or hang up to end the recording, the message will be saved into NEW folder.
b. Enter VM box to listen the messages. Press "1" when playing 10508 ("To listen to new messages, press 1"). It plays the total of URGENT and NEW messages ("You have xx new message(s)") first. Then play URGENT messages before playing NEW messages.
c. Press "0" or "*" when listening to the messages. It plays 10516.
d. Hang up the call when listening to the messages. If the message starts to be played, it's moved to Old folder.

SAVED Folder:

a. After reading the message in URGENT or NEW folder, it will be moved to SAVED folder.
b. Enter VM box to listen the messages. Press “2” when playing 10508 (“To listen to saved messages press 2”). It plays the total of SAVED messages (“You have xx message(s)”) first. Then play the messages.
c. Press “0” or “*” when listening to the messages. It plays 10516.

DELETE Folder:

a. Delete the message in URGENT, NEW, or SAVED folder, it will be moved to DELETE folder.
b. Enter VM box to listen the messages. Press “3” when playing 10508 (“To recover a previously deleted message press 3”). It plays the total of DELETE messages (“You have xx message(s)”) first. Then play the messages.
c. Press “*” when listening to the messages. It plays 10520+10516.
d. Press “0” when listening 10520+10516. The message will be recovered to Saved folder.
e. When deleting message in DELETE folder, the message will be deleted permanently.
f. The all messages will be deleted permanently at Housekeeping Time.

K. Personal Greeting

Every VM user can record its own VM Greeting message when entering the VM box (press “3”). Before entering the VM box to leave the message, the caller will hear the personal greeting of the VM box first.

L. Personal VM Password

The personal VM password is 4 digits fixed (default: “0000”). It will be used when entering VM box.

The personal VM password can also be used in some other IG6600’s functions

- DISA function via AA
- Some IG6600’s feature access codes (for IP20xx phones)

Every VM user can update its own VM password when entering the VM box (press “4”). The personal VM password can also updated by Administrator in Management Menu.

M. Reply Message

When listening to the leaving messages, the VM user can press “6” (10516.vox) to reply a message to the mailbox of the extension that left the original message. The extension must be an internal Phone extension or a virtual extension.

Appendix 3.1.3 Management Menu

It can be used by Administrator only. The Administrator meets the two conditions.

- The “Administrator” setting of the Administrator’s mailbox is enabled.
- Know the Administrator’s password.

A. Change the Greeting Mode

Press “0” after entering Management Menu (19011.vox). It plays a message (10920.vox”) to ask Administrator to select the Greeting Mode.

- Press “1” to select Working mode.
- Press “2” to select Holiday mode.
- Press “3” to select Temporary mode Record the Greeting Message

B. Record the Greeting Messages

Press “1” or “2” after entering Management Menu (19011.vox). It selects the language type in the recording.

Then press “0” ~ “9” (19010.vox). It selects the AA Menu number. (“0” is for AA Menu 1. “1” is for “AA Menu 2. …)

Then press “1” ~ “5” to select the Greeting type (“1” is for Day message; “2” is for Night message; “3” is for Lunch message; “4” is for Holiday message; “5” is for Temporary message.).

C. Add a Mailbox

Press “3” after entering Management Menu (19011.vox). It will ask the Administrator to input a Virtual mailbox number. If the mailbox exists previously, it plays a warning message (19016.vox). Otherwise, it builds the new virtual mailbox.

D. Delete a Mailbox

Press “4” after entering Management Menu (19011.vox). It will ask the Administrator to input a Phone extension number or a Virtual extension number.

If it’s a Phone extension number, it deletes the greeting message and the all leaving messages of the mailbox. The mailbox keeps alive.

If it’s a Virtual extension number, the mailbox will be removed.

E. Change the Personal Password

Press “5” after entering Management Menu (19011.vox). It will ask the Administrator to input a Phone extension number or a Virtual extension number. If the mailbox exists, it will ask the Administrator to input the new password.

F. Record the Greeting Message

Press “*” after entering Management Menu (19011.vox). Then type 5 digits file number to directly record prompt/greeting into the respective file name.

Appendix 3.2 Voice Messages

The all voice files serviced for Auto Attendant and Voice Mail are saved in vox folder.

Appendix 3.2.1 File Format

A. Two Language Service

The file names of the all voice files for AA and VM are 5 digits length. For Language 1, the leading digit of the file name is “1”. For Language 2, the leading digit of the file

name is 2.

For Auto Attendant, when the both languages are enabled, AA will play 91000.vox before playing the Welcome message. It asks the caller to select the language.

For Voice Mail, every VM user can select one of the both languages in Web setting.

B. Codec Type: G711-ulaw, G711-alaw, G.729

When changing the codec type, the previous leaving messages, personal greeting message of all VM Box will be deleted automatically. The Administrator should update the all voice files to the selected codec type by itself.

When the type is “G.729”, it won’t attach the leaving message to the mailbox user in the email transmission.

It has three sub-folder under vox folder: pcmu, pcma, and g729. When changing the codec type, the previous VOX files will be overwritten by the VOX files in the sub-folder.

C. Record the Voice Files

You can change Voice Prompts by two ways:

Through IP Phone Client

a. Enter VM box.
b. Press "*" key right here, to enter the Administrator mode.
c. Type in Voicemail Administrator password (“000000” at default)
d. Listen to the prompt. Press “1” to record the first language greeting. Press “2” to record the second language greeting. After the selection, it will play 19010.vox to ask Administrator to input AA Menu number. It allows inputting 0~9 for AA Menu 1~10. After inputting the digit, it plays 19012.vox. Administrator inputs 1~5 to record the respective greeting message.
e. Or press "3" directly, then type 5 digits file number to directly record prompt/greeting into the respective file name

Through FTP Server directly

a. All prompt/greeting files are saved in vox folder in PCM u-law format or PCM a-law. You can record your prompt in wav format first and then convert to the selected PCM format. There are many free audio convert software on the internet.
b. Login IP6600 embedded FTP server: ftp://IG6600 IP address (Or in IP6600-Web, select “Voice” – “Voicemail” – “Advanced”, then press “Browser Voicemail file” button.).
c. Save the new prompt to vox folder with the same file number to replace the old prompt. (Suggest you to save all old prompts before updating the new files.)

D. Upload MOH File

IP6600 supports to upload the MOH (Music On Hold) file through Web. In web (Voice - Voicemail - Update MOH File), upload a MOH file with "mono" format (PCM signed, 16 bit, mono). IP6600 will convert it to MOH files with PCMU and PCMA format, and save them into IP6600.

E. Preset Voice Prompts

File#	Contents	Application
10001	Hello, please dial the extension number directly or press zero for the operator	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in working hours.
10002	Hello. You have reached us after hours. If you know the extension number you may dial it now.	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in off hours.
10003	Hello,You have reached us during lunch. If you know the extension number you may dial it now.	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in lunch hours.
10004	Hello. Our office is closed today for the holiday. If you know the extension number you may dial it now.	It's a Welcome Message. It's played while getting an incoming FXO/IP line call in holidays.
10005	Automated Attendant Temporary Greeting	Default Temporary greeting for Automated Attendant Menu 1. Customized by end user.
10006	Automated Attendant Menu 2 Day Greeting	Default DAY greeting for Automated Attendant Menu 2. Customized by end user.
10007	Automated Attendant Menu 2 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 2. Customized by end user.
10008	Automated Attendant Menu 2 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 2. Customized by end user.
10009	Automated Attendant Menu 2 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 2. Customized by end user.
10010	Automated Attendant Menu 2 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 2. Customized by end user.
10011	Automated Attendant Menu 3 Day Greeting	Default DAY greeting for Automated Attendant Menu 3. Customized by end user.
10012	Automated Attendant Menu 3 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 3. Customized by end user.
10013	Automated Attendant Menu 3 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 3. Customized by end user.
10014	Automated Attendant Menu 3 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 3. Customized by end user.
10015	Automated Attendant Menu 3 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 3. Customized by end user.
10016	Automated Attendant Menu 4 Day Greeting	Default DAY greeting for Automated Attendant Menu 4. Customized by end user.
10017	Automated Attendant Menu 4 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 4. Customized by end user.
10018	Automated Attendant Menu 4 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 4. Customized by end user.
10019	Automated Attendant Menu 4 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 4. Customized by end user.
10020	Automated Attendant Menu 4 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 4. Customized by end user.
10021	Automated Attendant Menu 5 Day Greeting	Default DAY greeting for Automated Attendant Menu 4. Customized by end user.
10022	Automated Attendant Menu 5 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 4. Customized by end user.
10023	Automated Attendant Menu 5 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 4. Customized by end user.
10024	Automated Attendant Menu 5 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 4. Customized by end user.
10025	Automated Attendant Menu 5 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 4. Customized by end user.
10026	Automated Attendant Menu 6 Day Greeting	Default DAY greeting for Automated Attendant Menu 6 Customized by end user.
10027	Automated Attendant Menu 6 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 6 Customized by end user.
10028	Automated Attendant Menu 6 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 6 Customized by end user.
10029	Automated Attendant Menu 6 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 6 Customized by end user.
10030	Automated Attendant Menu 6 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 6 Customized by end user.
10031	Automated Attendant Menu 7 Day Greeting	Default DAY greeting for Automated Attendant Menu 7 Customized by end user.

10032	Automated Attendant Menu 7 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 7 Customized by end user.
10033	Automated Attendant Menu 7 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 7 Customized by end user.
10034	Automated Attendant Menu 7 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 7 Customized by end user.
10035	Automated Attendant Menu 7 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 7 Customized by end user.
10036	Automated Attendant Menu 8 Day Greeting	Default DAY greeting for Automated Attendant Menu 8 Customized by end user.
10037	Automated Attendant Menu 8 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 8 Customized by end user.
10038	Automated Attendant Menu 8 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 8 Customized by end user.
10039	Automated Attendant Menu 8 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 8 Customized by end user.
10040	Automated Attendant Menu 8 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 8 Customized by end user.
10041	Automated Attendant Menu 9 Day Greeting	Default DAY greeting for Automated Attendant Menu 9 Customized by end user.
10042	Automated Attendant Menu 9 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 9 Customized by end user.
10043	Automated Attendant Menu 9 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 9 Customized by end user.
10044	Automated Attendant Menu 9 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 9 Customized by end user.
10045	Automated Attendant Menu 9 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 9 Customized by end user.
10046	Automated Attendant Menu 10 Day Greeting	Default DAY greeting for Automated Attendant Menu 10 Customized by end user.
10047	Automated Attendant Menu 10 Night Greeting	Default NIGHT greeting for Automated Attendant Menu 10 Customized by end user.
10048	Automated Attendant Menu 10 Lunch Greeting	Default LUNCH greeting for Automated Attendant Menu 10 Customized by end user.
10049	Automated Attendant Menu 10 Holiday Greeting	Default HOLIDAY greeting for Automated Attendant Menu 10 Customized by end user.
10050	Automated Attendant Menu 10 Temporary Greeting	Default TEMPORARY greeting for Automated Attendant Menu 10 Customized by end user.
10051	Please dial the phone number followed by the pound key	It's used in DISA function. IG6600 asks the caller to input an outside phone number.
10097	This mailbox is full. There is no room for more messages.	It talks to the Caller it has no room to store the leaving messages.
10102	The number is incorrect. Your call will be transferred to the operator	AA gets non-existed extension number input many times. AA will transfer the call to Operator.
10103	The number is incorrect	It's played while the user makes an incorrect input
10104	Please check your number and dial again	It's played before AA hangs up the call.
10106	The number you dialed in incorrect. Please check the number and dial again.	AA gets non-existed extension number input andallows the caller to redial.
10107	The number you entered is not correct. Please check the number and dial again. Goodbye.	AA gets non-existed extension number input many times. AA will drop the call.
10201	Your call is being transferred. Please hold.	It's played before AA transfers the call to the transferred party.
10205	The extension you are trying to reach is busy. Press the star key to retry the busy extension.	The transferred destination is busy. AA provides some choices for the user.
10206	The extension you dialed is not available. Press the star key to retry the extension.	The transferred destination doesn't answer the call in 30 seconds. AA provides some choices for the user.
10207	To leave a message press the pound key	Same as 10205 or 10206, another choice.
10210	You may dial another extension number, or press zero for the operator	Same as 10205 or 10206, another choice
10221	We're sorry. The number you dialed is not available. Please dial another number or press zero for the operator.	It's played while transferring a call to an extension set "Reject" of dial in.
10230	Please enter the first x letters of the first or last name of the person you are trying to reach. When finished press the	Prompt to use the company directory from AA menu.

	pound key.	
10231	When you hear the name that matches your selection please press 1	Prompt for company directory
10232	Sorry, we could not find a name that matches your selection.	Prompt for company directory
10233	Please record your name after the tone. When you are finished recording press the pound key.	Prompt to use the company directory from AA menu.
10234	To search for another name press 1. To return to the main greeting press 2.	Plays if no match found in the company directory
10301	Please leave your message after the tone. When you are finished press the pound key.	It reminds the user how to leave messages.
10302	Your message has been recorded	Finish leaving message.
10303	To confirm recording, press one. To listening to your recording, press two. To record your message again, press three. To cancel your recording, press four. When finishing, press the pound key.	It's played after finishing leaving message.
10304	Your message has been saved	The leaving message is recorded.
10305	End of messages	Notity that all leaving messages are played
10306	Thank You. Goodbye.	It's played while finishing Voicemail System service.
10501	Please input your mailbox number	It's played first while the user gets into Voice Mail Box through the FXO/IP trunks.
10502	Sorry, no such mailbox number exists. Please try again	It's played if the user dials an invalid mailbox ID
10503	The mailbox you selected has not been enabled. Please dial another number	It's played if the user dials a valid, but disabled mailbox ID.
10504	Please enter your password	It requests the user to enter the password of the mailbox.
10505	The password you entered is incorrect. Please try again	The user dials an incorrect password. It allows the user to try again.
10506	The password you entered is incorrect. Goodbye.	The user dials incorrect password over 3 times. It disallows the user to try again.
10507	To listen to your messages, press one. To delete all messages, press two. To record your personal greeting, press three. To change your password, press four. To record your name press 5. To leave a message to other extensions, press 6.	It's played after entering Voice Mail Box.
10508	To listen to new messages, press 1, To listen to saved messages press 2. To recover a previously deleted message press 3.	Selects the message folder
10510	You have no messages	No leaving message in the mailbox.
10511	You have	It will report how many leaving messages in the mailbox.
10512	messages	It reports how many leaving messages in the mailbox. "xx messages"
10513	message	"x message"
10515	new	
10516	To listen to this message again, press one. To listen to next message, press two. To delete this message, press three. To forward this message to another mailbox, press four. To listen to the previous message, press five. To reply to the message press 6. To rewind the message five seconds press seven. To pause message playback press eight. To fast forward the message five seconds press nine. When finished, press the pound key.	This message is played when user dial a digit other than 1~5 and # during message listening.
10517	This is the last message	It's played if it has played the all messages.
10518	To confirm deletion press star.	
10519	This is the first message	Press 5 when listening to the messages. It will skip to the previous message. When pressing 5 when listening to the first message, it plays 10519.vox.
10520	To recover this message press zero	Plays when in the deleted folder to restore a message to the Saved folder.
10521	Your message has been sucessfully transferred	It's played when the mailbox user leaves a message or transfer a message to another mailbox successfully.
10522	Your transfer has failed.	Fail to transfer the leaving message to another mailbox.
10523	Deleting, please wait	Voicemail system is deleting the all leaving messages.

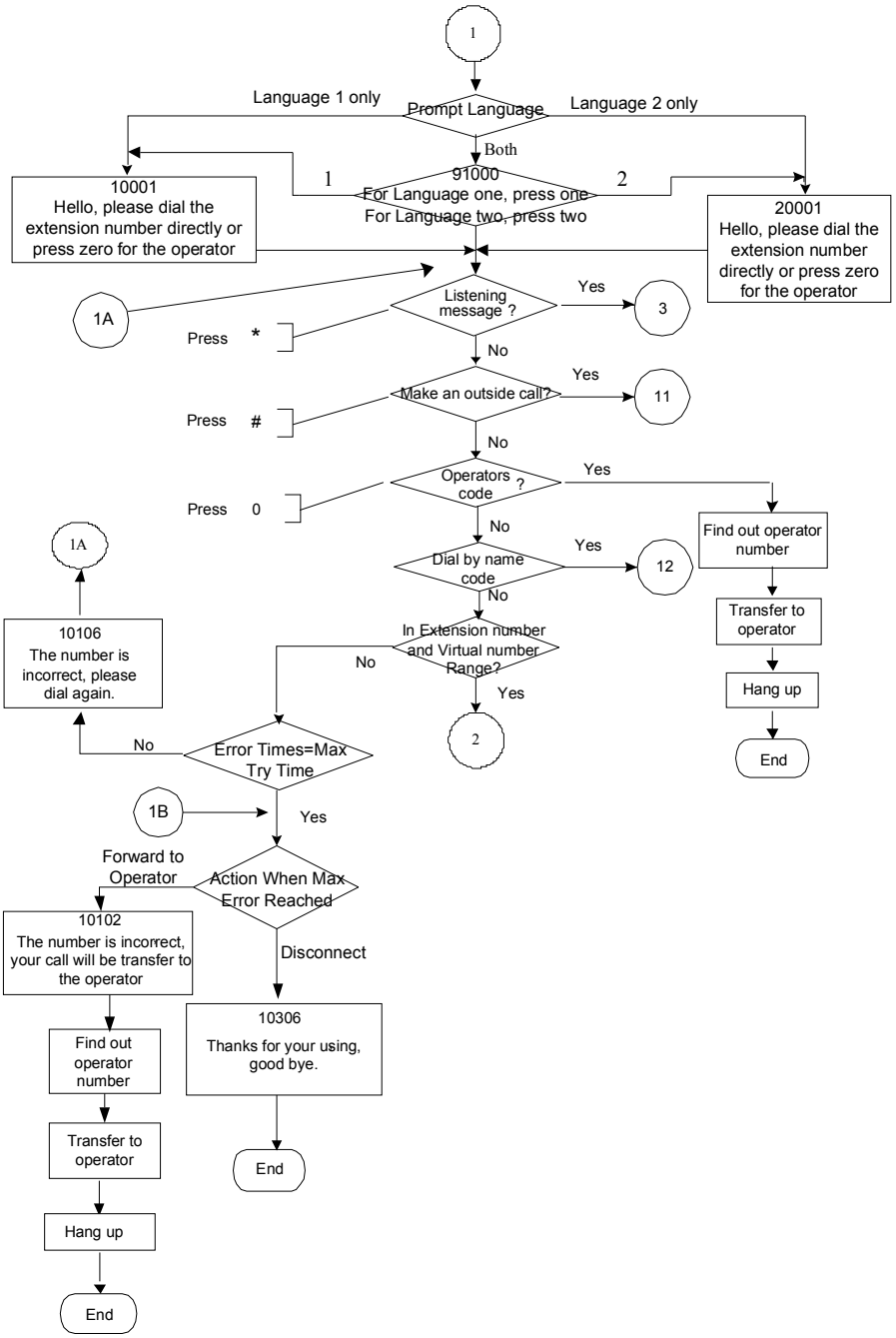
10524	All messages are deleted	All leaving message are deleted.
10526	Please input your new four digit password	It's played when the mailbox user asks to change the password.
10527	The new password you entered is	It plays what the new input password is.
10528	To confirm the new password, press one To re-enter, press two To cancel and return to the previous menu, press pound.	It's to ask whether the new input password is correct.
10529	Your password has been changed	It's to report the password is changed successfully.
10531	To listen to your greeting, press one. To record a new greeting, press two. To delete the current greeting, press three. When finished press the pound key	It's for recording a user's temporally greeting.
10532	You have no greeting recorded	It's played if having no greeting message.
10533	Record your greeting after the tone. When finished press the pound key.	It reminds the user how to record the greeting message.
10534	Your recording is finished	It's played after finishing recording.
10537	NOT USED	
10538	NOT USED	
10540	To add comments press 1, to forward without comments press 2	Plays when user chooses to forward a message
10541	This feature is not available for messages left by outside callers.	
10542	End of message	Plays at the end of leaving a message
10547	Setup is now complete.	Finish setup.
10549	Deletion completed	It reports the leaving message is deleted successfully.
10550	Deletion failed	It fails to delete the leaving message.
10580	Sorry, the mailbox is in use	The mailbox is in use.
10601	Please begin to record after the tone. When finished press the pound key.	It reminds the administrator how to record the voice files.
10700	first	
10701	second	
10702	third	
10703	fourth	
10704	fifth	
10705	sixth	
10706	seventh	
10707	eighth	
10708	ninth	
10709	tenth	
10710	eleventh	
10711	twelfth	
10712	thirteenth	
10713	fourteenth	
10714	fifteenth	
10715	sixteenth	
10716	seventeenth	
10717	eighteenth	
10718	nineteenth	
10719	twentieth	
10720	twenty-first	
10721	twenty-second	
10722	twenty-third	
10723	twenty-fourth	
10724	twenty-fifth	
10725	twenty-sixth	
10726	twenty-seventh	
10727	twenty-eighth	
10728	twenty-ninth	
10729	thirtieth	
10730	thirty-first	
10731	AM	ante meridiem
10732	PM	post meridiem
10733	Oh	Zero. Ex. February 3rd two oh two a.m. (Feb 03 2:02

		a.m. = 2:02)
10760	January	
10761	February	
10762	March	
10763	April	
10764	May	
10765	June	
10766	July	
10767	August	
10768	September	
10769	October	
10770	November	
10771	December	
10870	0	zero
10871	1	one
10872	2	two
10873	3	three
10874	4	four
10875	5	five
10876	6	six
10877	7	seven
10878	8	eight
10879	9	nine
10880	10	ten
10881	11	eleven
10882	12	twelve
10883	13	thirteen
10884	14	fourteen
10885	15	fifteen
10886	16	sixteen
10887	17	seventeen
10888	18	eighteen
10889	19	nineteen
10890	10890	10890
10891	10891	10891
10892	10892	10892
10893	10893	10893
10894	10894	10894
10895	10895	10895
10896	10896	10896
10897	10897	10897
19001	Please input the administrator password	It requests administrator to enter the mailbox password.
19010	Please select the automated attendant greeting number zero through nine.	
19011	To change the greeting mode, press 0. To record the first language greeting, press one. To record the second language greeting, press two. To add a virtual mailbox press 3. To delete a virtual mailbox or delete the messages in a mailbox press 4. To change your mailbox password press 5. When finished, press the pound key.	It's for recording system greeting message.
19012	To record the greeting for regular office hours, press one. To record the greeting for out of office hours, press two. To record the greeting for lunch break, press three. To record a holiday greeting press four. To record a temporary greeting press 5. When finished, press the pound key.	It's to choose what kind of greeting message will be recorded.
19013	To listen to your current voice file, press one. To record the voice file, press two. When finished, press the pound key.	It's for recording voice files.
19015	There is no recording.	The voice message is not yet recorded.
19016	This mailbox exists or is unavailable.	Plays if trying to add a virtaul mb that already exists.
19017	The mailbox number is	Plays to report the mailbox number
19020	Press 1 to make the day greeting the active greeting. Press 2 to make holiday the active greeting, press 3 to make the	Used to select the greeting message

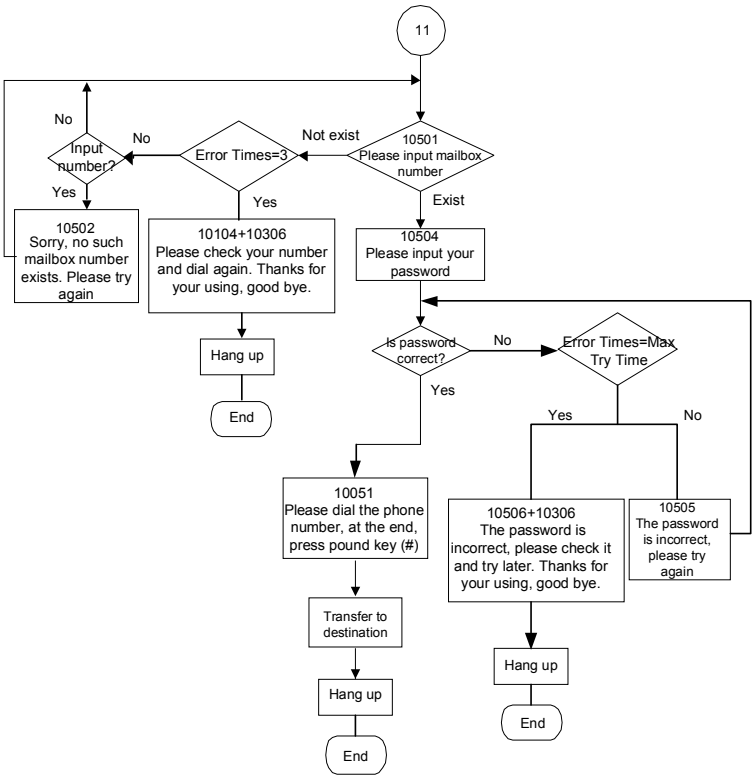
	temporary greeting the active greeting	
19073	The extension number you entered is not valid.	It plays if entering a wrong extension number.
19200	Please input your five-digit voice code. To cancel the input press the pound key.	It's for entering voice file name.
19201	The voice file code you entered is	It's to play what voice file name is entered.
91000	For language one press one, for language two press two	If setting "Two Languages", it's played before Welcome message.
91100		Beep tone
g726dial		
g726rb		
g729dial		
g729rb		G729
mohg726		G726
mohg729		G729
mohpcma		PCMA
mohpcmu		PCMU
Pcmadial		PCMA
pcmarb		PCMA
Pcmudial		PCMU
pcmurb		PCMU

Appendix 3.3 Flowchart

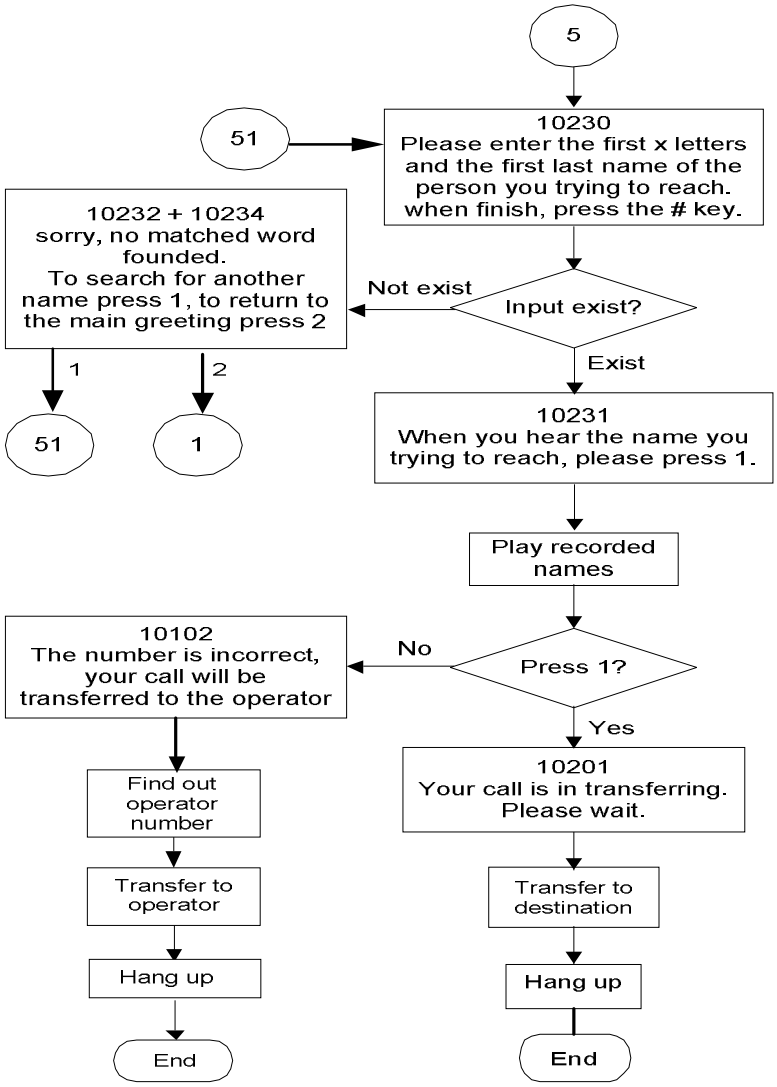
Appendix 3.3.1 Automated Attendant



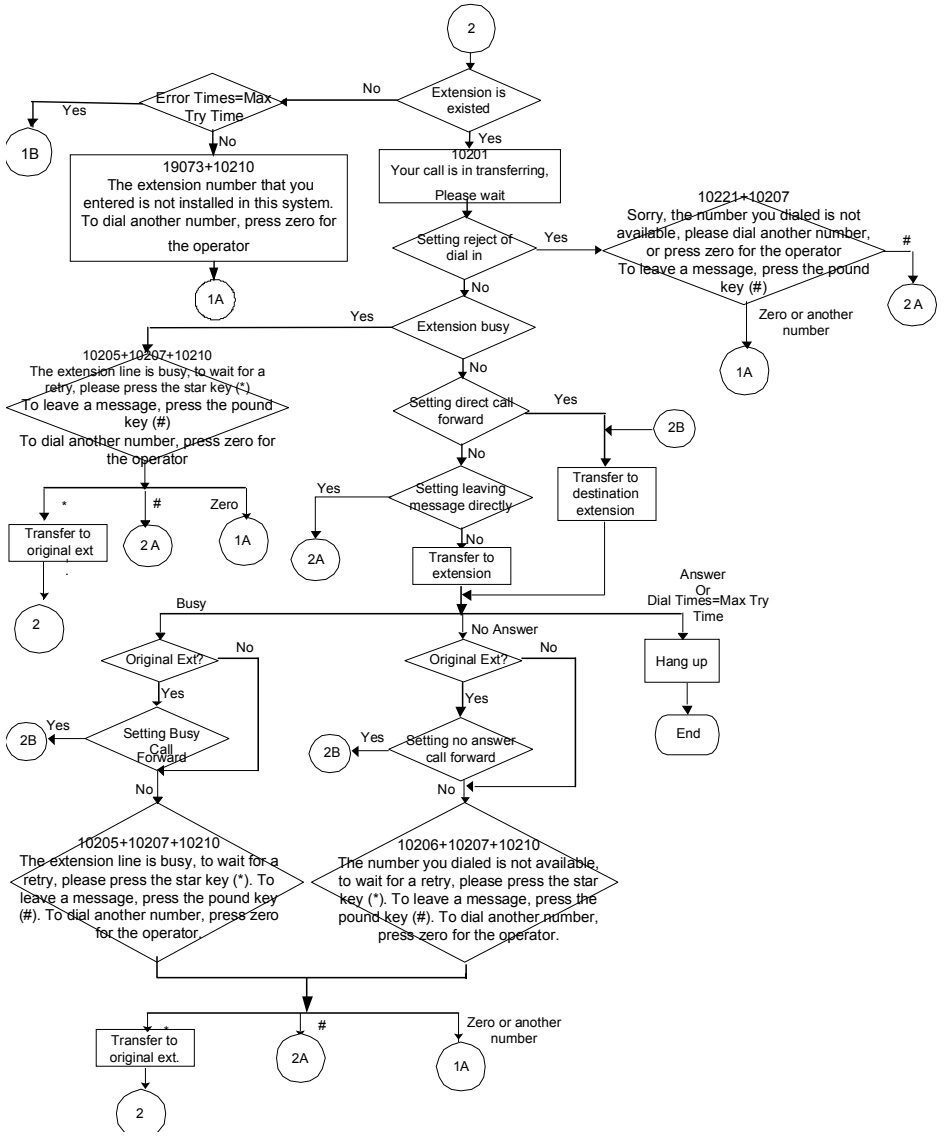
Appendix 3.3.1.1 Make an Outside Call



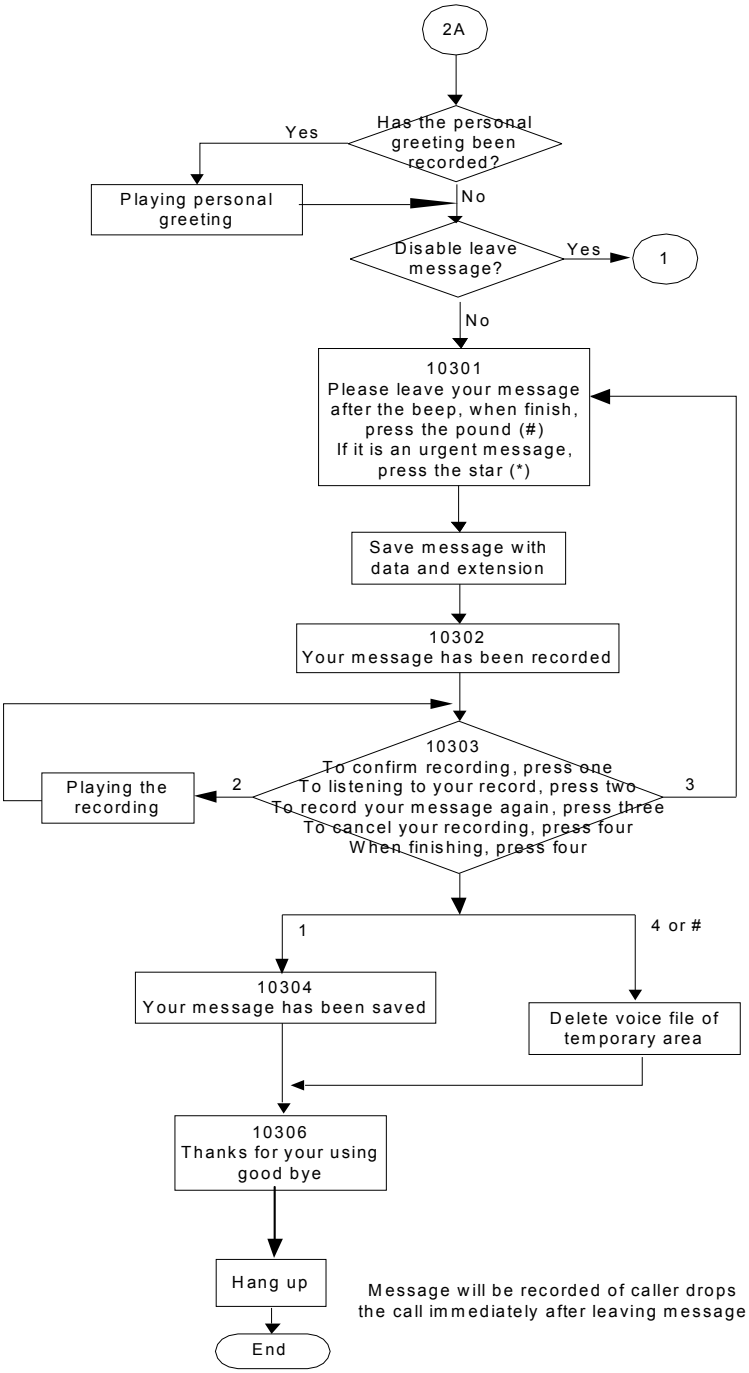
Appendix 3.3.1.2 Dial by Name



Appendix 3.3.2 Subscriber Voicemail Flowchart

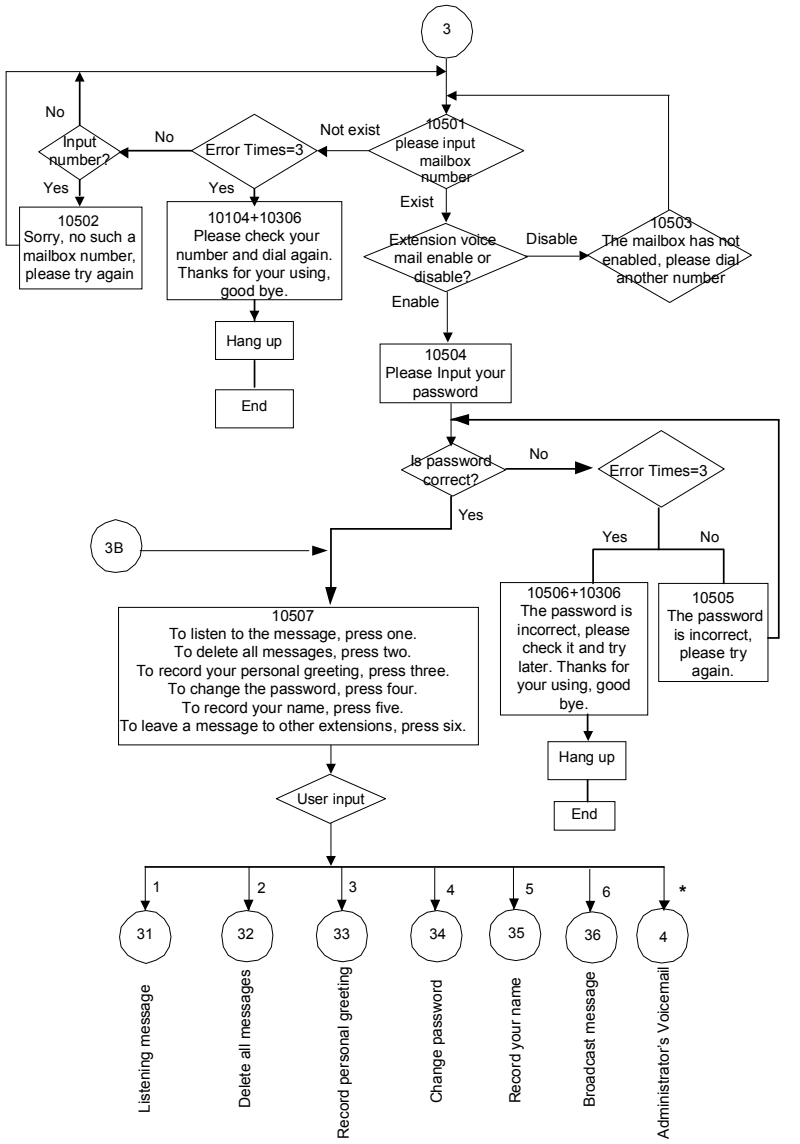


Appendix 3.3.2.1 Leaving messages

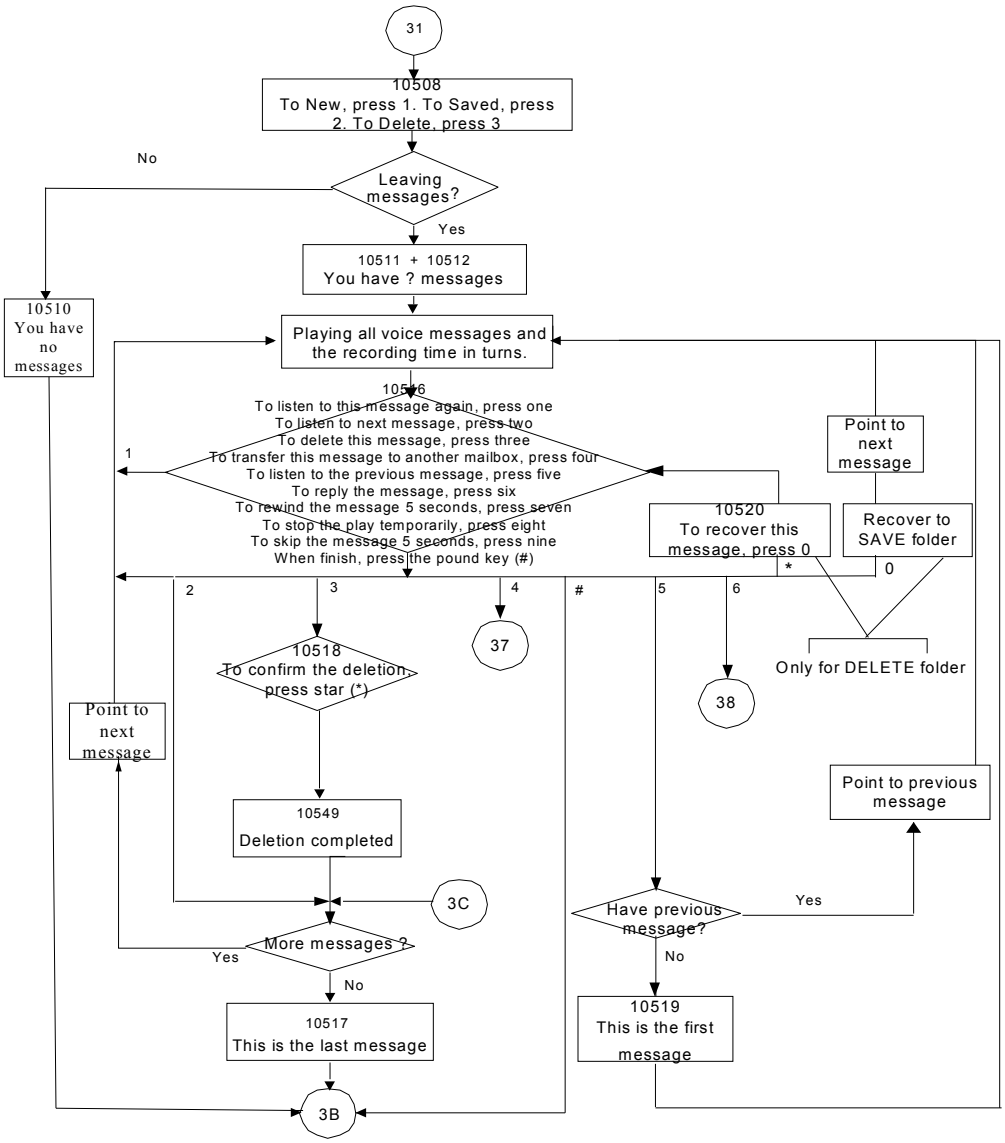


Note: Press the pound (“#”), the message will be saved in New Message Folder. If pressing the start (“*”), the message will be saved in Urgent Message Folder.

Appendix 3.3.3 Mailbox Administer Flowchart

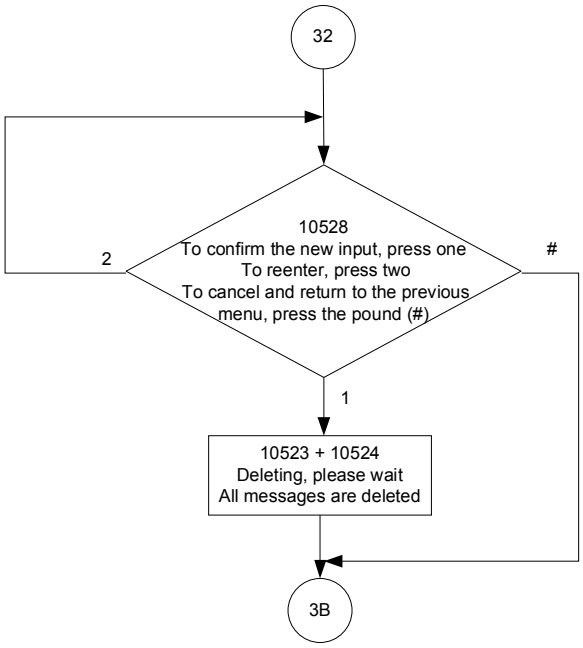


Appendix 3.3.3.1 Listening message

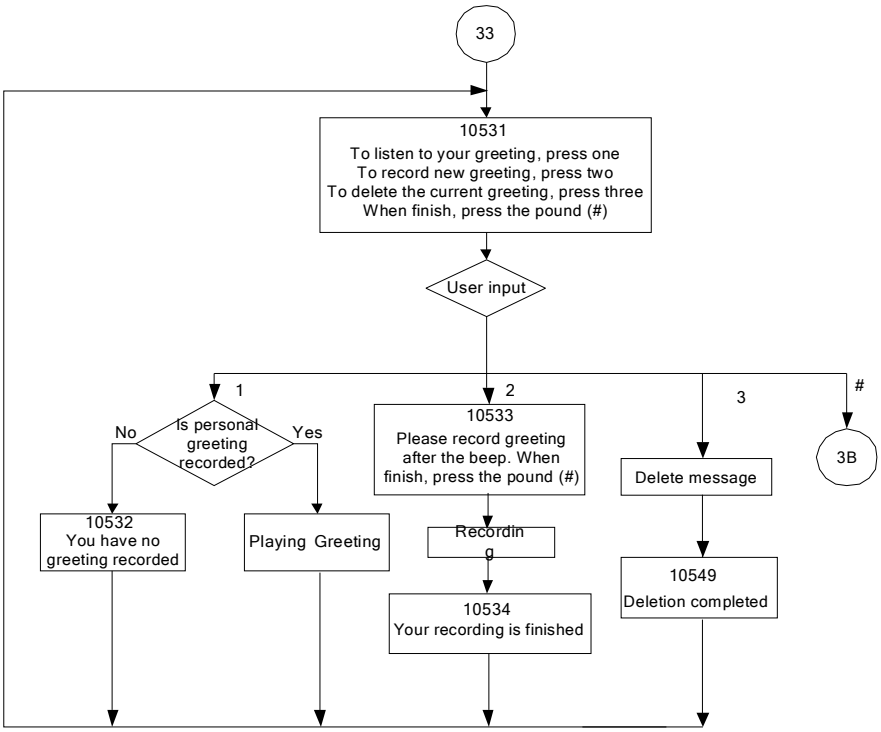


Note: In the flow, the operation if the user dials 7, 8 and 9 will be added in next version.

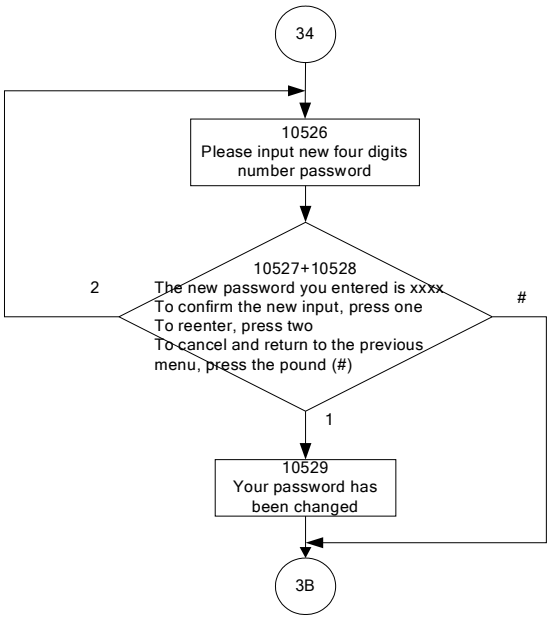
Appendix 3.3.3.2 Delete all Messages



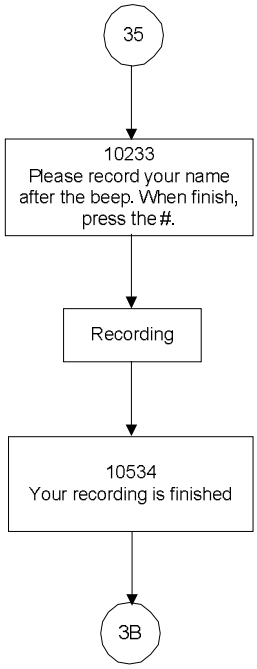
Appendix 3.3.3.3 Recording Personal Greeting



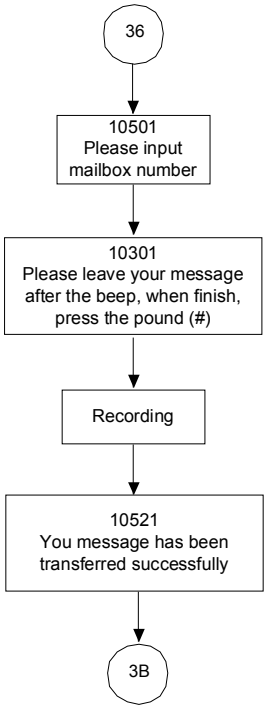
Appendix 3.3.3.4 Changing Mailbox Password



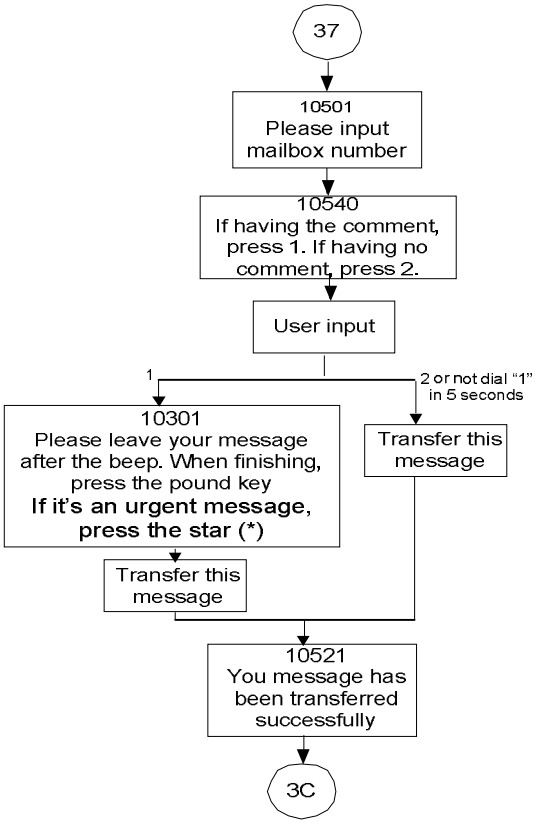
Appendix 3.3.3.5 Record your name



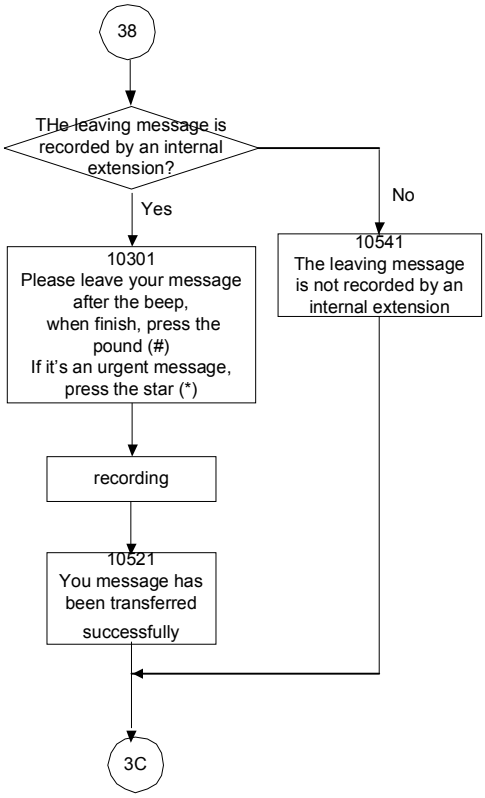
Appendix 3.3.3.6 Leave a Message to Other Extension(s)



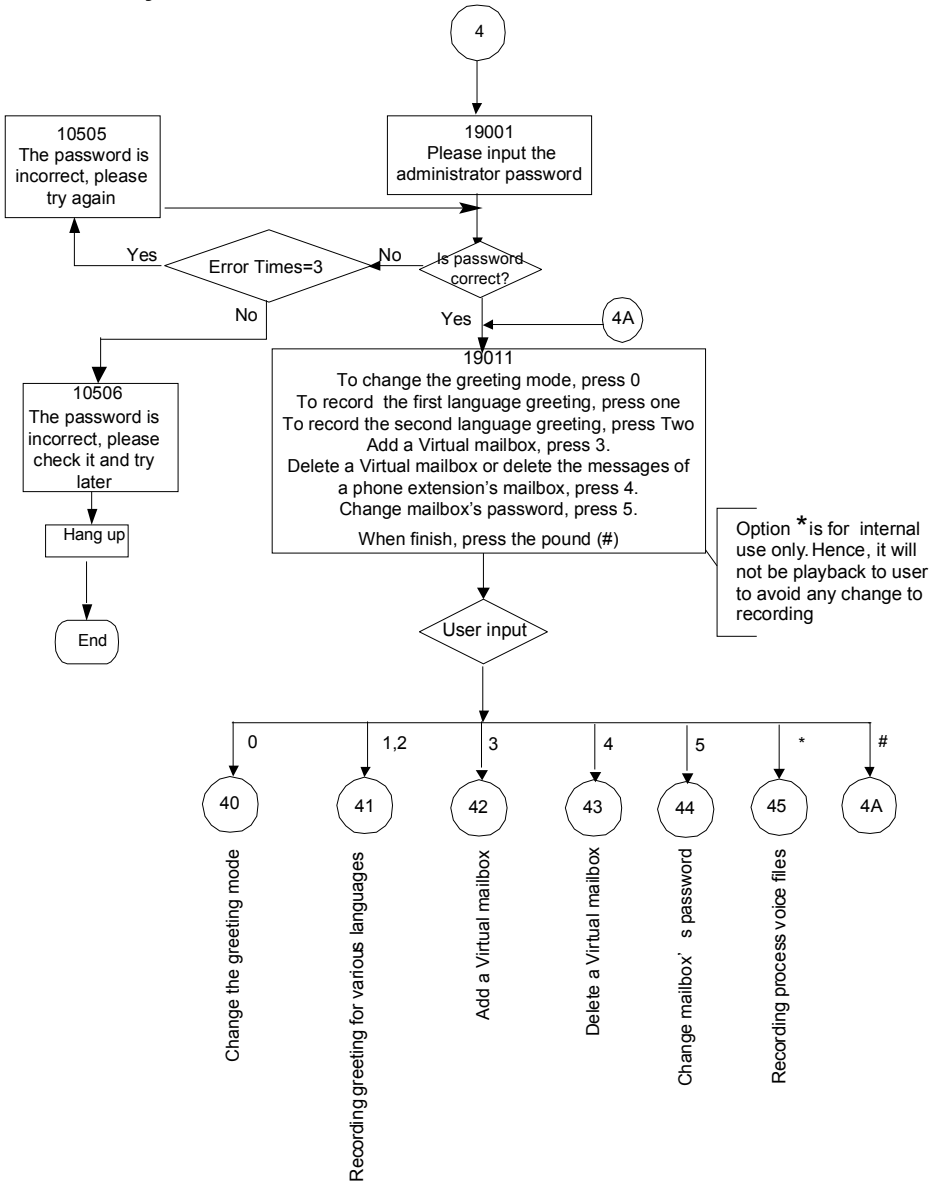
Appendix 3.3.3.7 Transfer a Message to another Mailbox



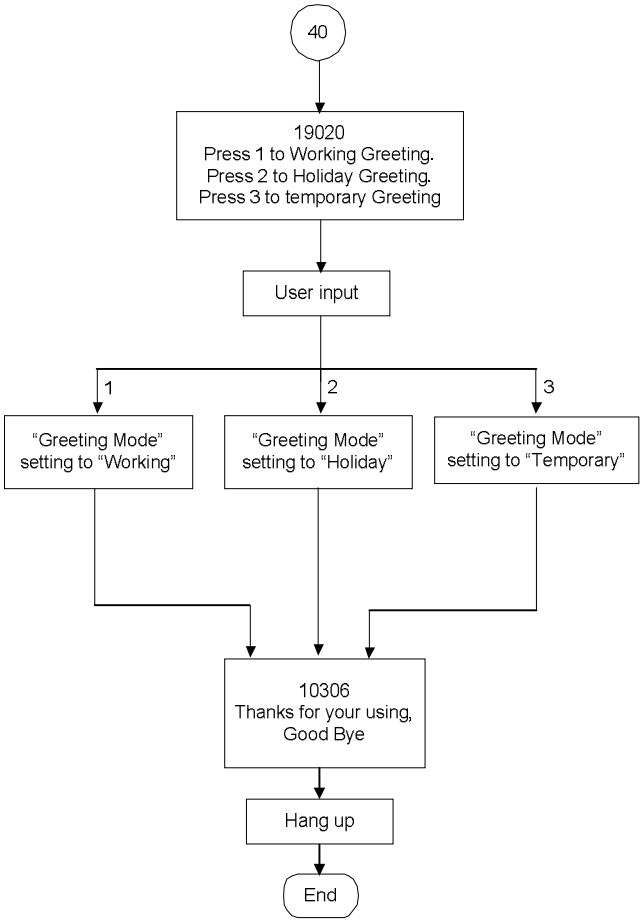
Appendix 3.3.3.8 Message Reply



Appendix 3.3.4 System Administrator's Voicemail Flowchart

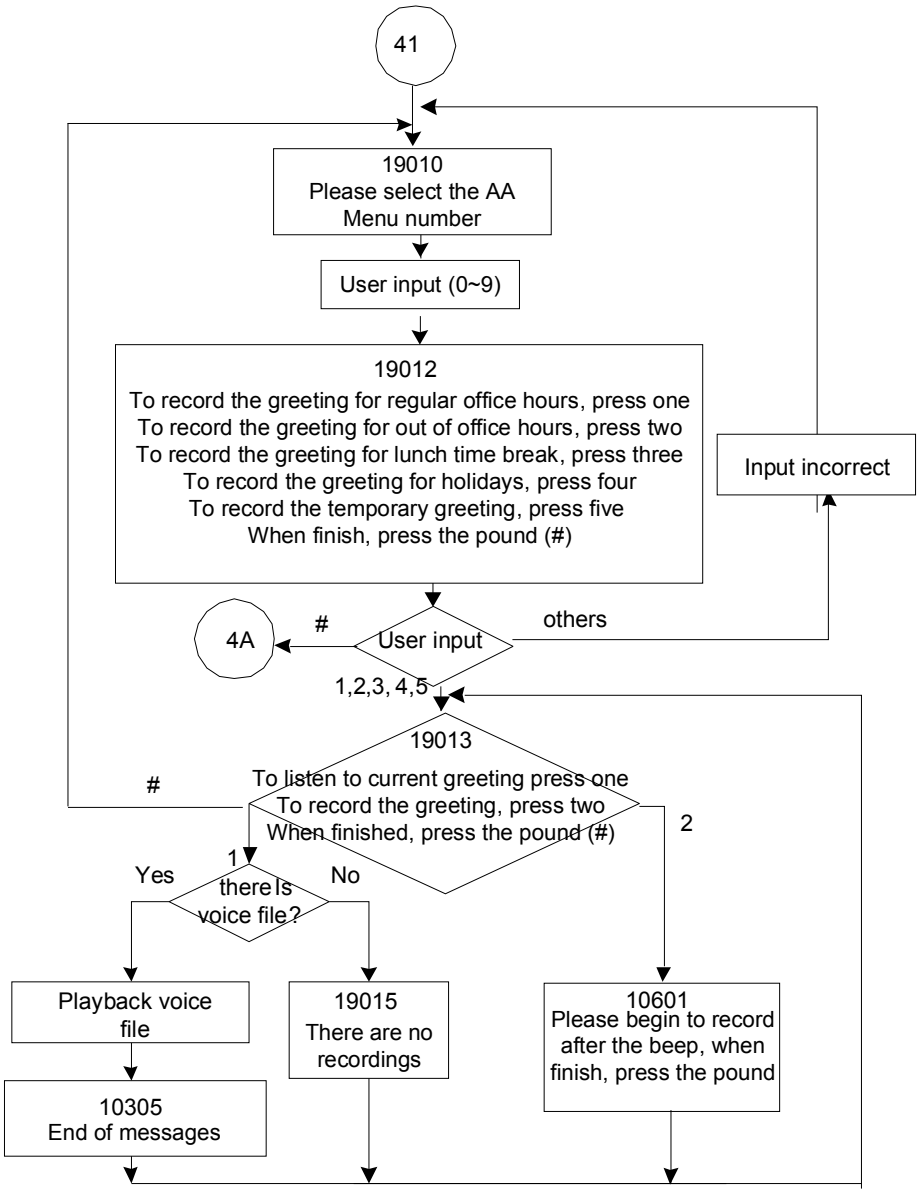


Appendix 3.3.4.1 Change the Greeting Mode

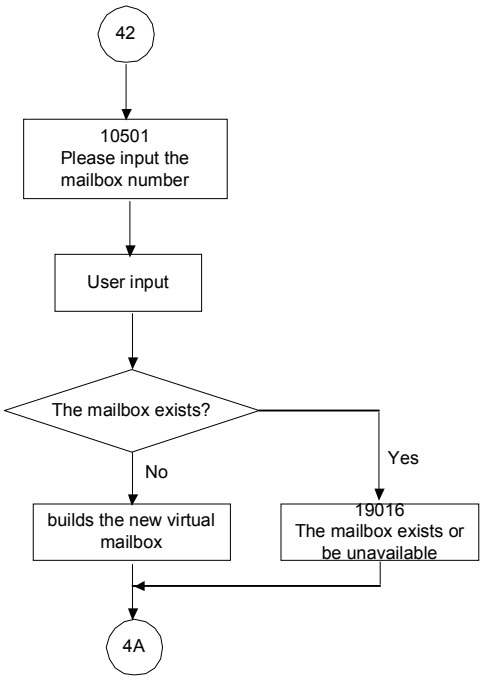


Note: At Temporary Greeting mode, it plays Temporary Greeting message. If the file is non-existed, it follows Working mode to play the Greeting messages.

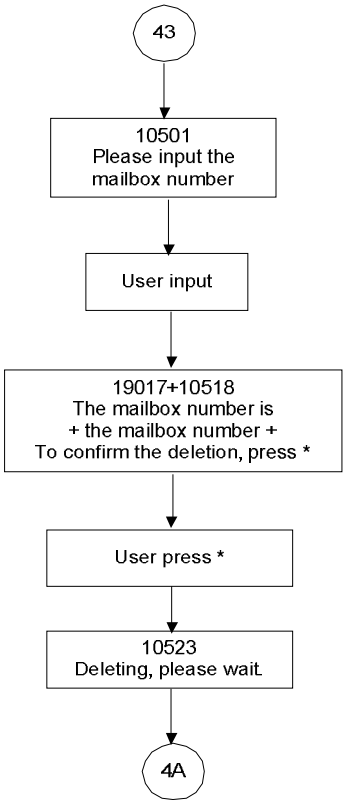
Appendix 3.3.4.2 Recording Various Greeting



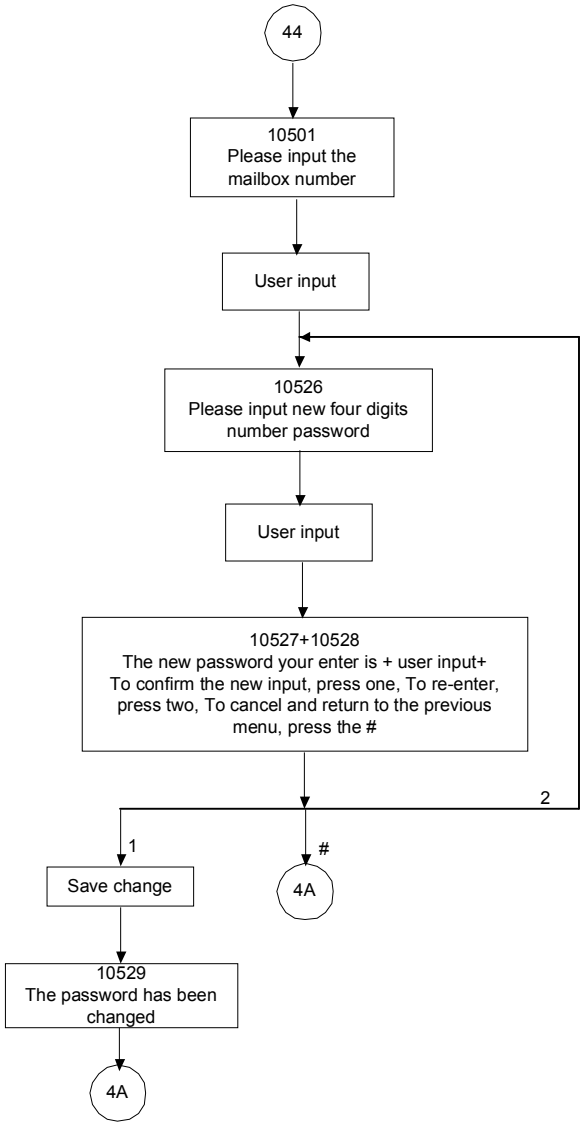
Appendix 3.3.4.3 Add a Virtual mailbox



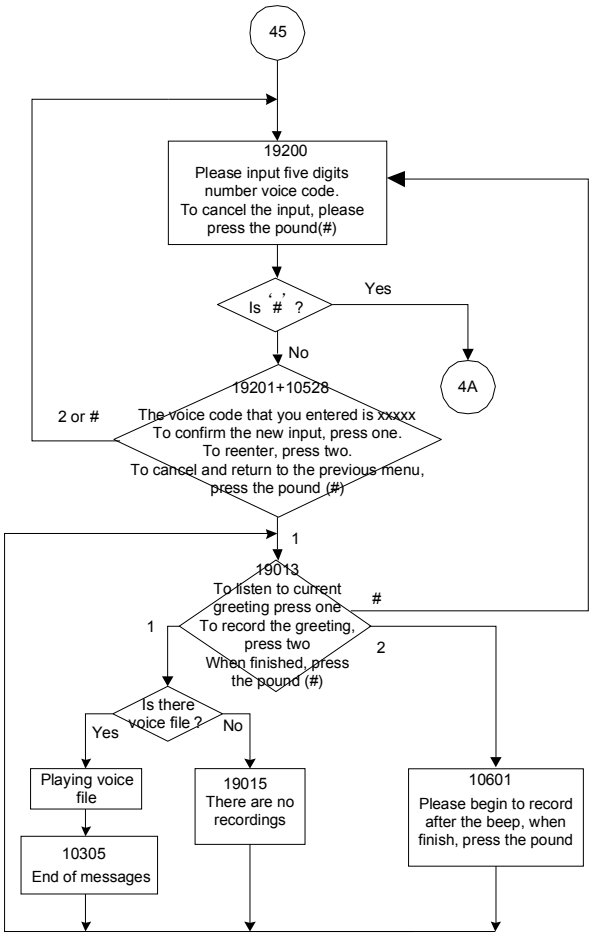
Appendix 3.3.4.4 Delete a Mailbox



Appendix 3.3.4.5 Change Mailbox's Password



Appendix 3.3.4.6 Recording Process Voice Files



Appendix 4: APS

APS is the remote Management for IP6600. The APS system consists of 2 components: APS and PTC.

APS is a Windows application that allows you to manage the system (Firmware and configuration update for IP6600 and firmware update for IP phones registered to the IP6600).

PTC is a client software that is embedded in the IP6600.

Appendix 4.1 Install APS on Windows

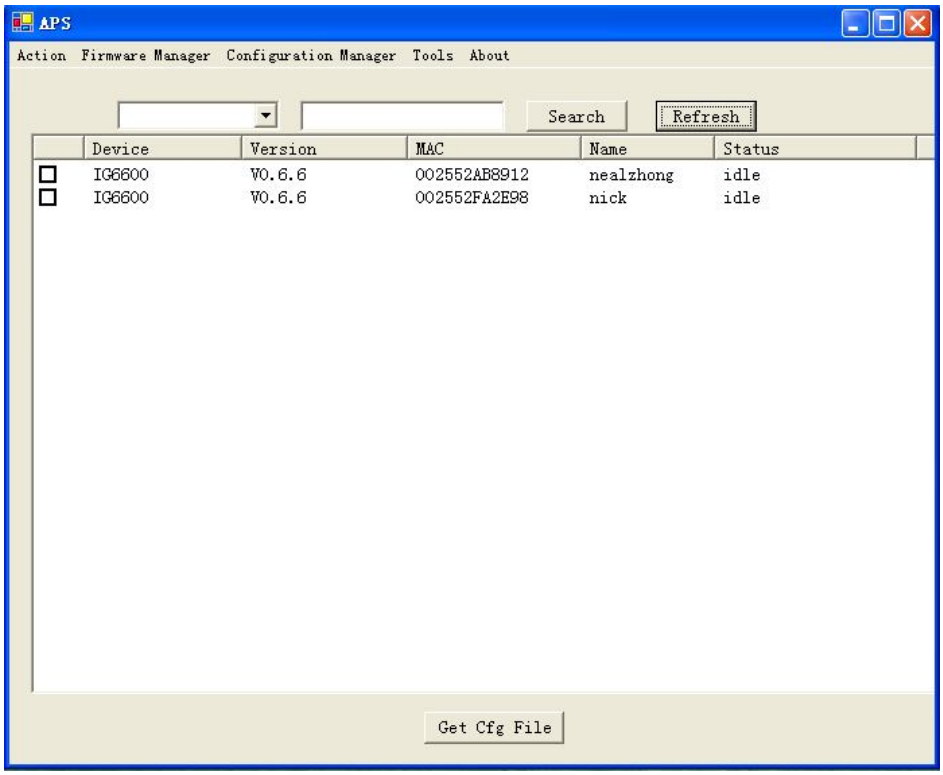
APS is a program that can be executed on MS Windows.

Typically you can get a tarball of APS, like APS-V0.6.9.rar, from your supplier.

When you get it, please unzip it on your PC, then you can get a directory named “Release”, then please run the Setup.Exe file which makes an executable binary file “APS” installed on your PC.

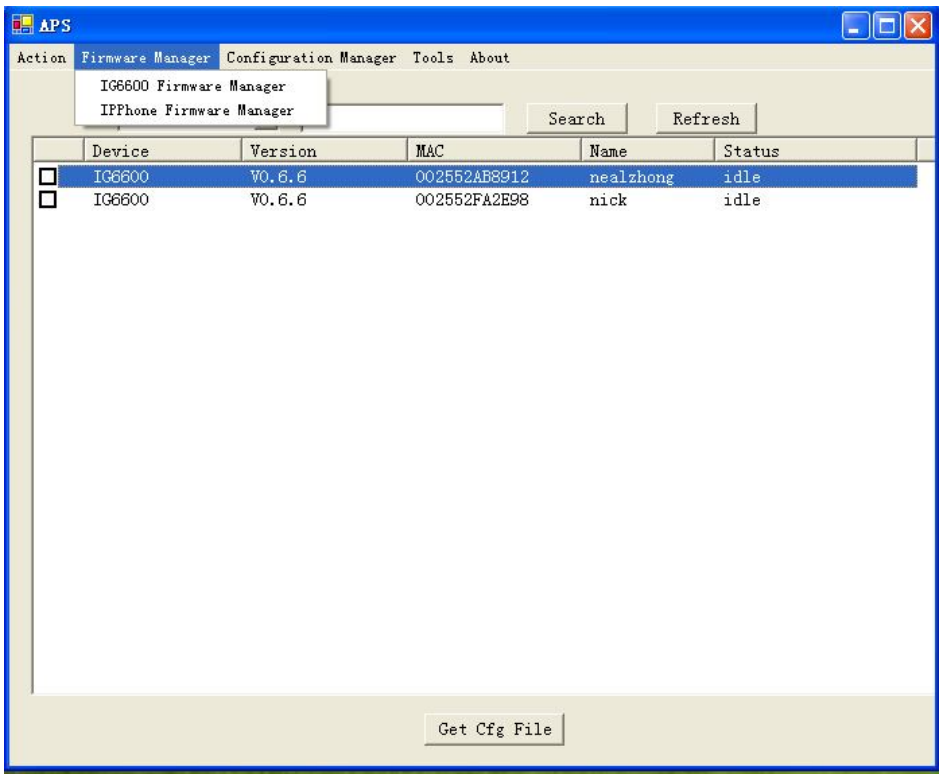
After APS is installed on your PC, you can use it to upgrade the firmware or configuration of IP6600 or IPPhones, and you can also reset all IP Phones to defalt with it.

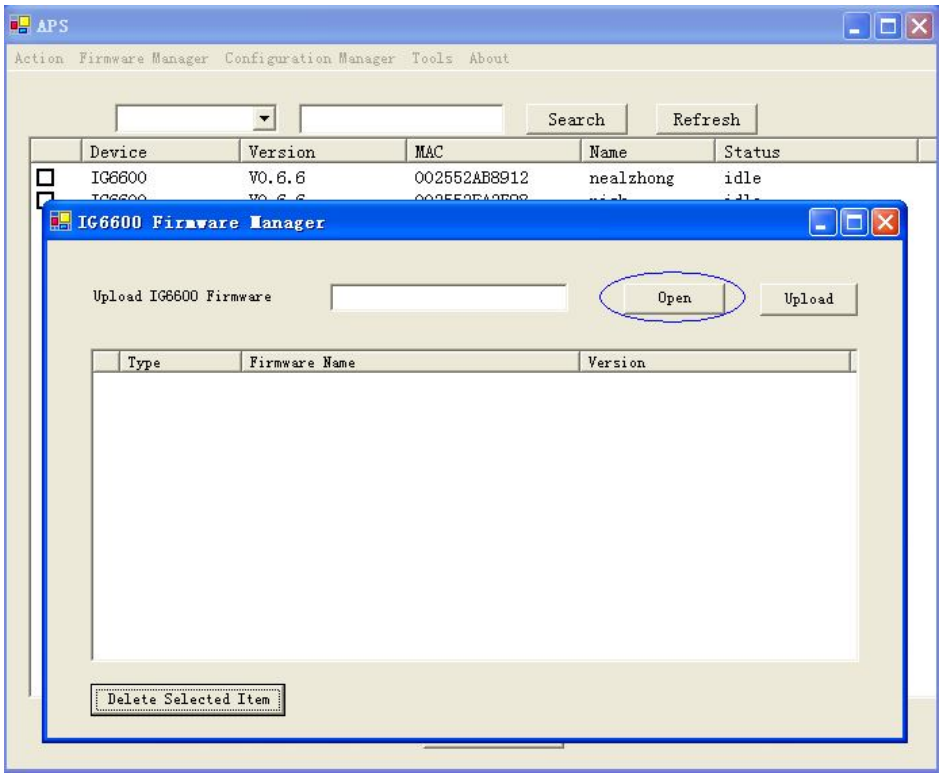
If you execute the APS program, you can see the main window of APS is as following:



Appendix 4.2 Managing IP6600 Firmware

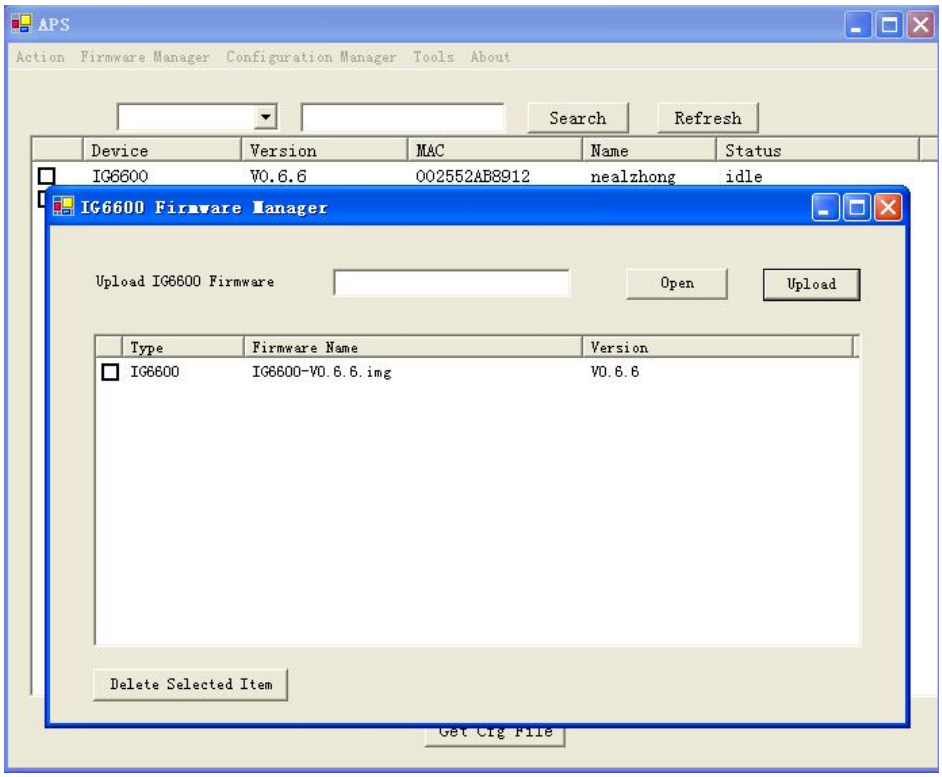
Press Firmware Manager -> IP6600, a new window will be popped up.





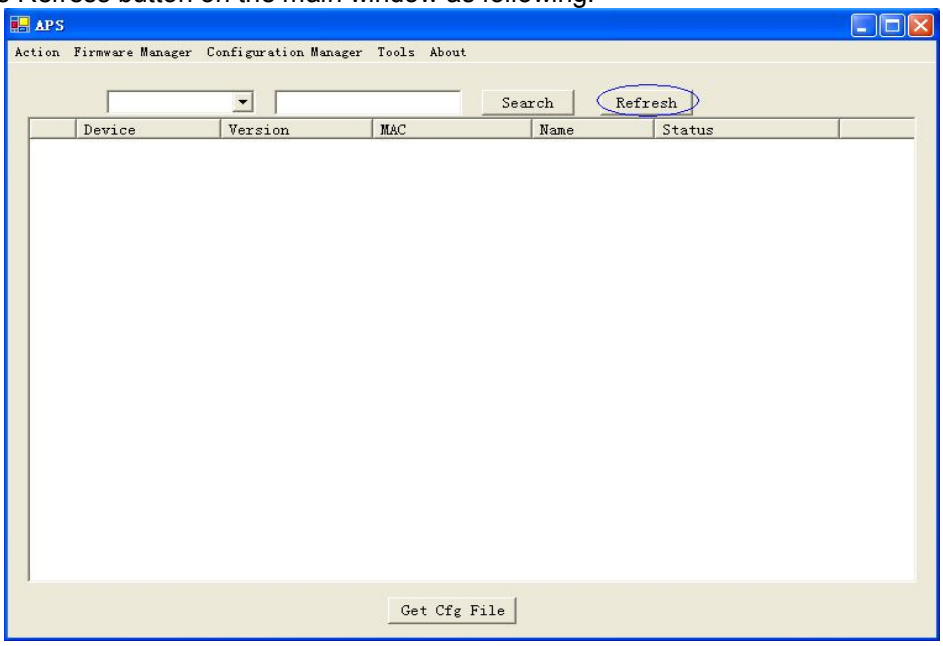
a. Press Open button to select available firmware of IP6600 on your PC.

b. Press Upload button to load available firmware to APS. After the loading is finished, you can see the following window:

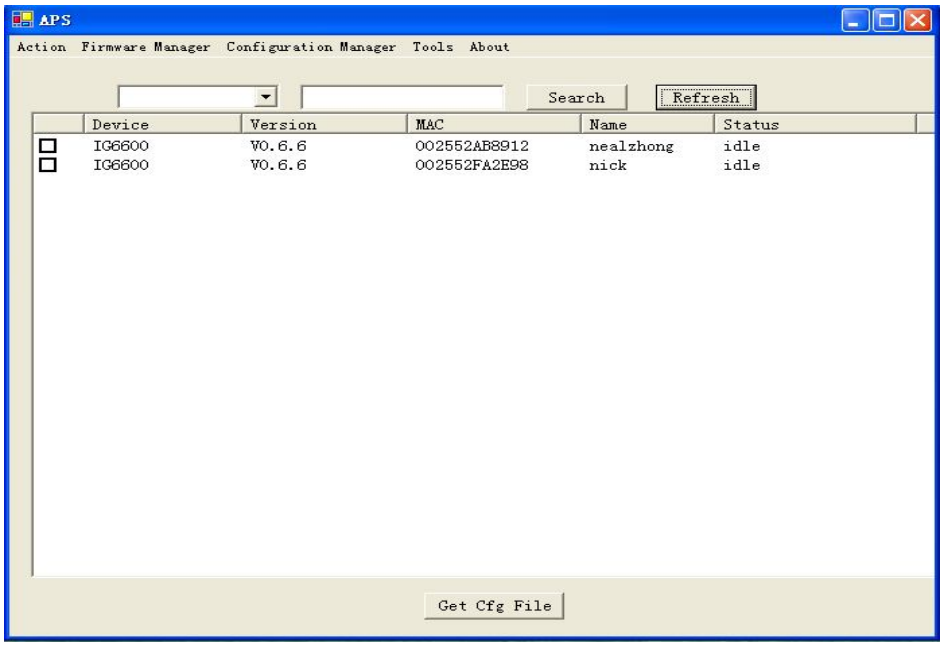


Appendix 4.3 Show all IP6600 managed

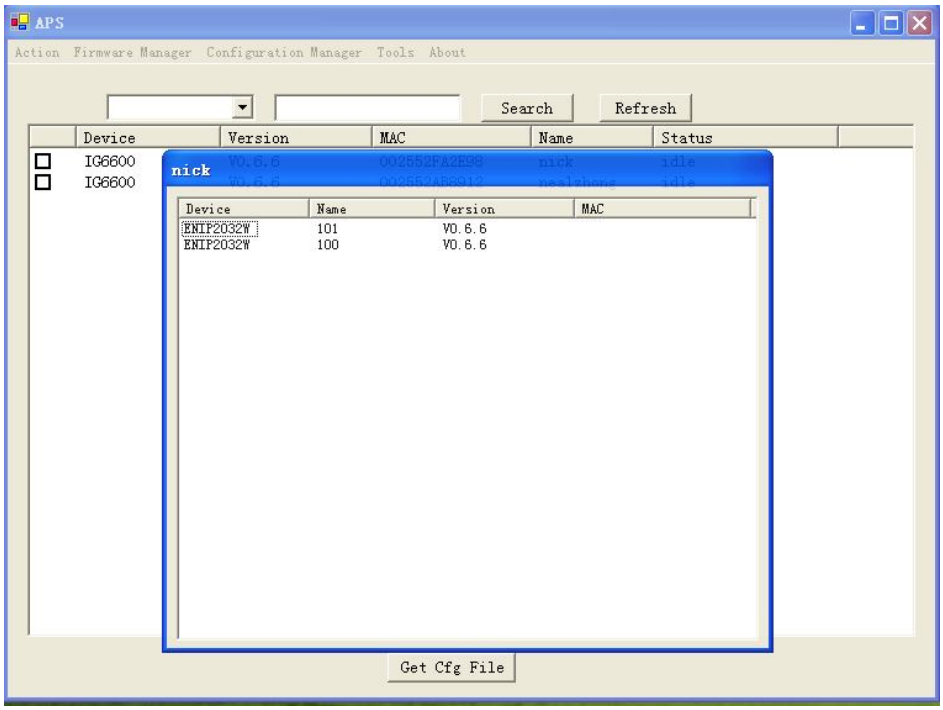
Press Refress button on the main window as following:



All available IP6600 managed will be shown as following:

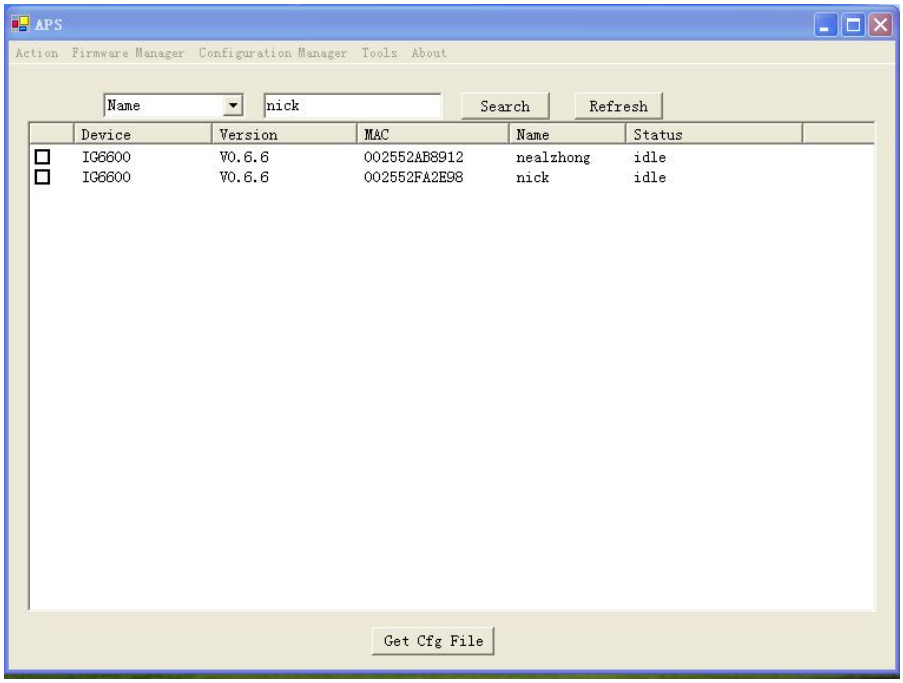


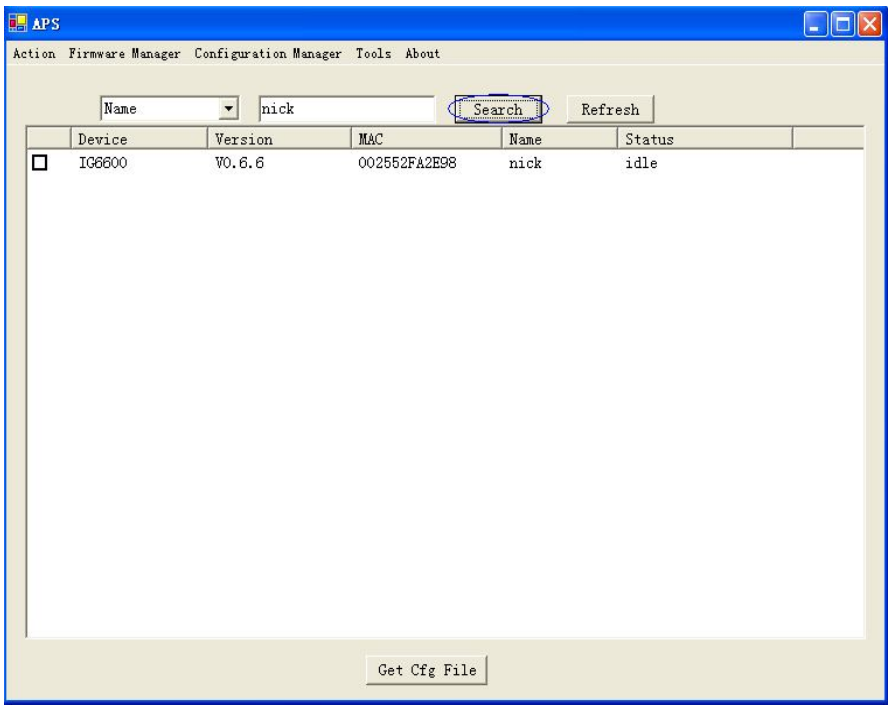
If you click on any one of them, all IP Phones that registered on it will be shown as following:



a. If you press this new window, the window will be closed.

b. If choose one searching type in down list, and put searching keys on text box, then press search button, the devices which meet the keys will be displayed.

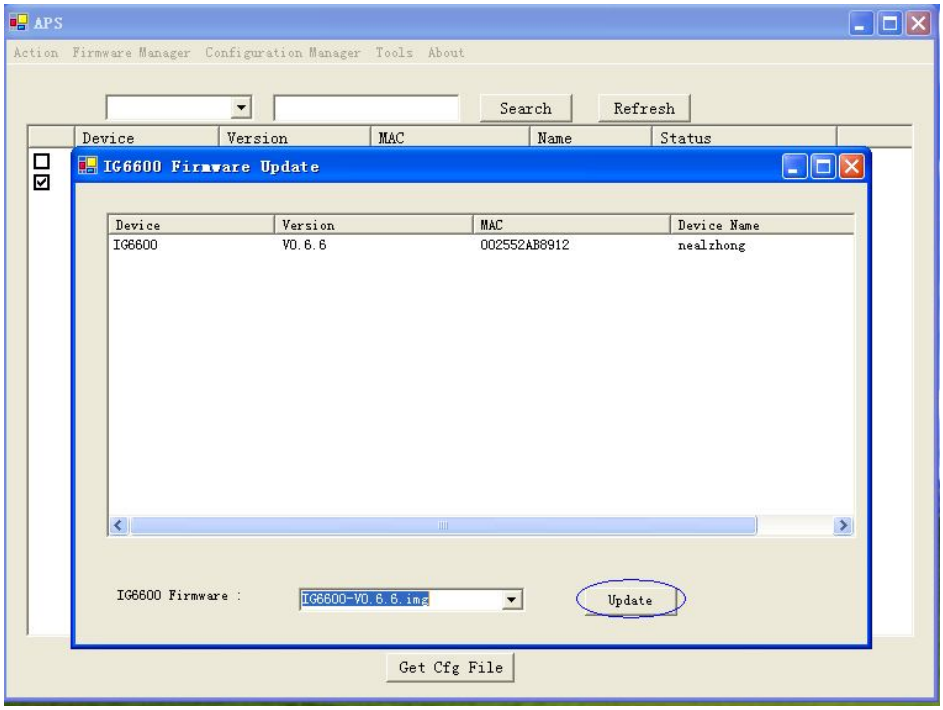




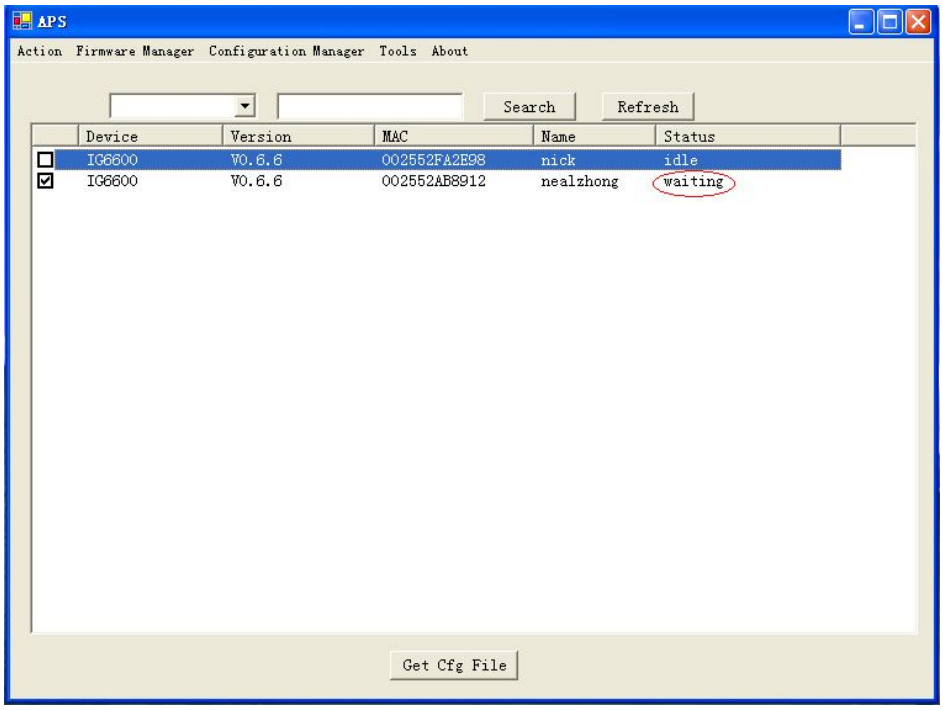
Appendix 4.4 Upgrrading IP6600 Firmware

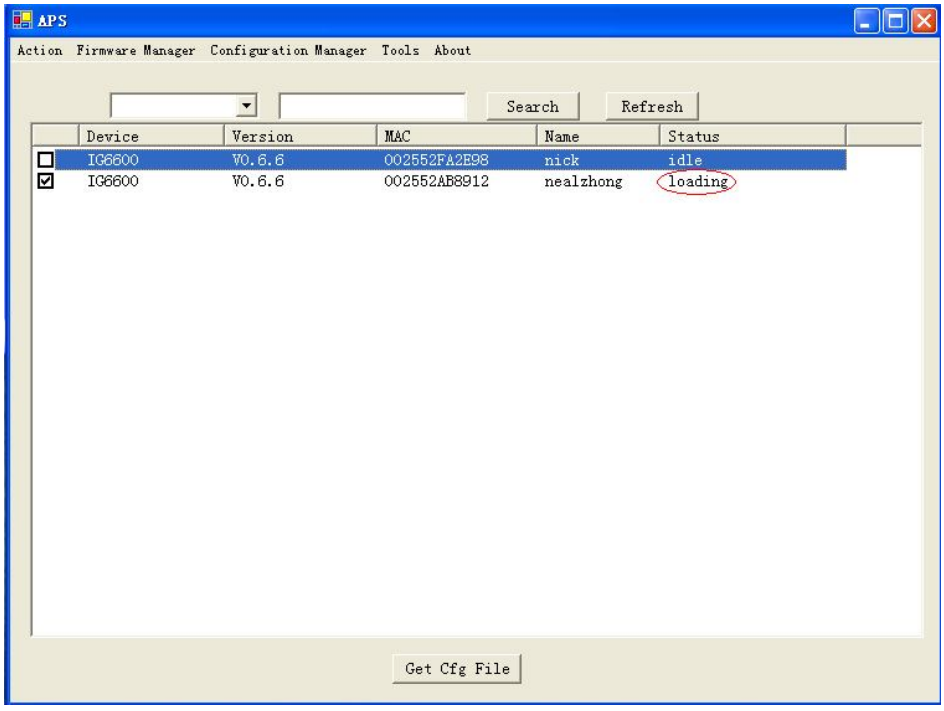
Select the IP6600 that you want to upgrade.

Press Action->IP6600 Firmware Update, then you can choose the firmware to upgrade to this IP6600.



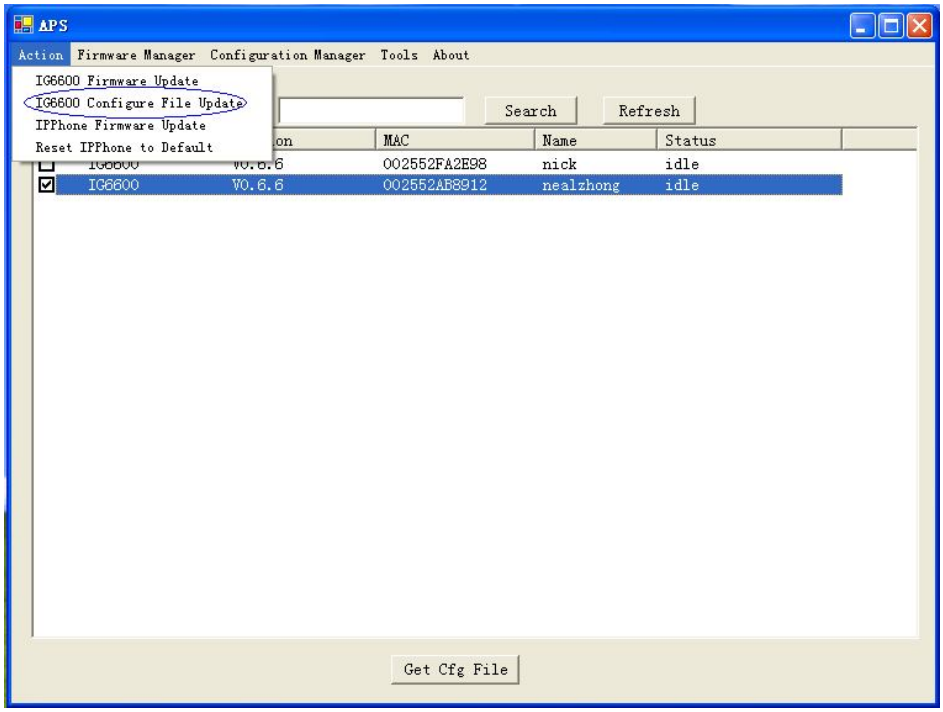
After you press Update button, the upgrading procedure begins, and the status of IP6600 will become “waiting” or “loading” before the upgrading procedure finishes.


APS
Action Firmware Manager Configuration Manager Tools About
Search
Refresh
Device Version MAC Name Status
IG6600 V0.6.6 002552FA2E98 nick idle
IG6600 V0.6.6 002552AB8912 nealzhong waiting
Get Cfg File

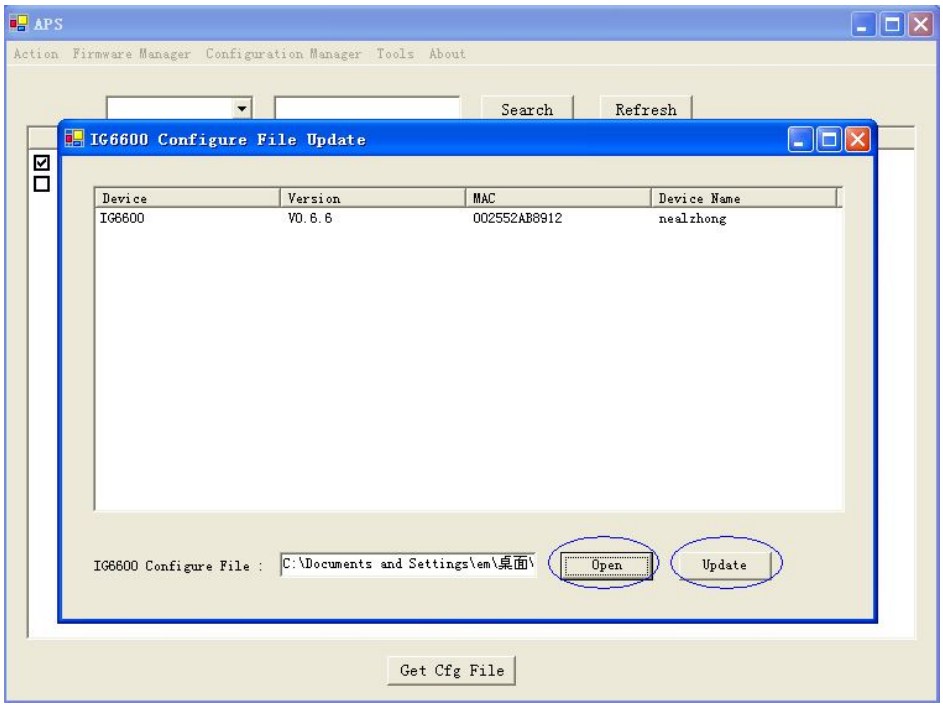

APS
Action Firmware Manager Configuration Manager Tools About
Search
Refresh
Device Version MAC Name Status
IG6600 V0.6.6 002552FA2E98 nick idle
IG6600 V0.6.6 002552AB8912 nealzhong loading
Get Cfg File

Appendix 4.5 IP6600 Configuration File Update

Press Action->IP6600 Configuration File Update.

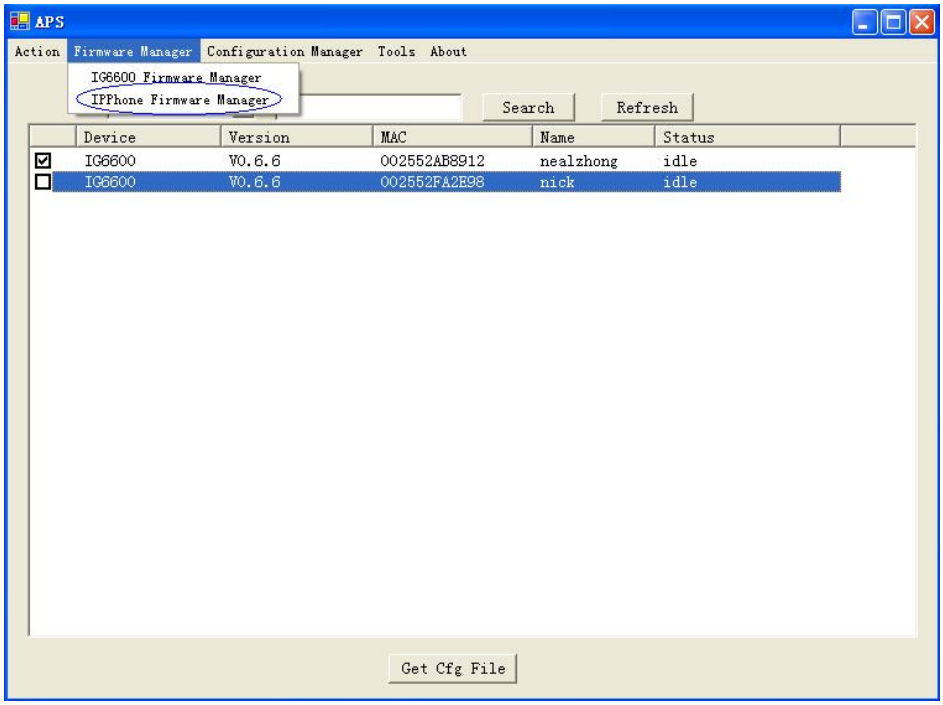


You can upgrade more than one IP6600 at one time.

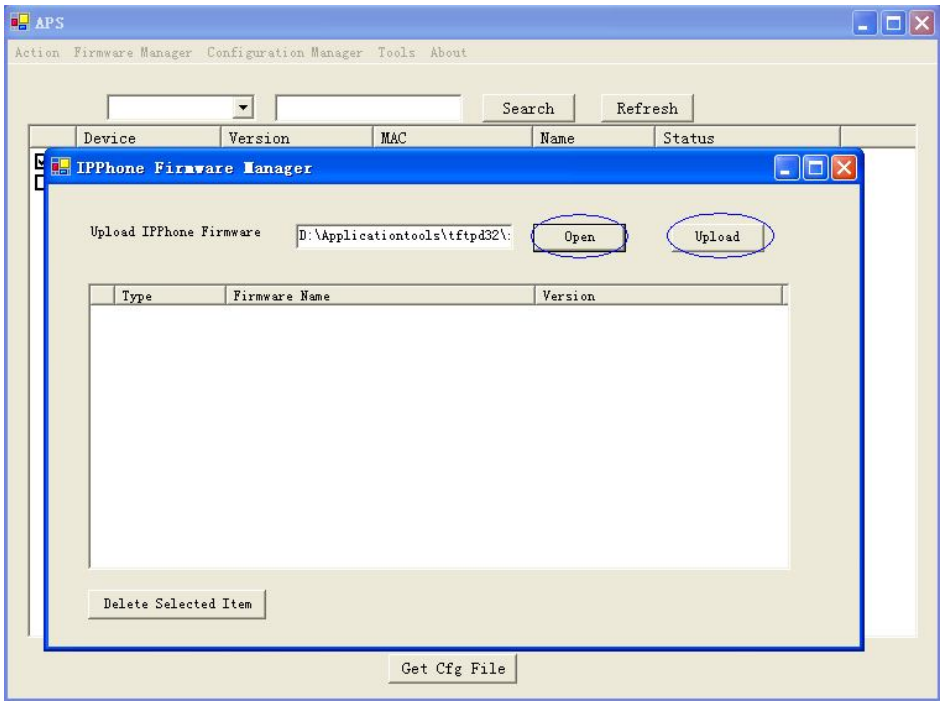


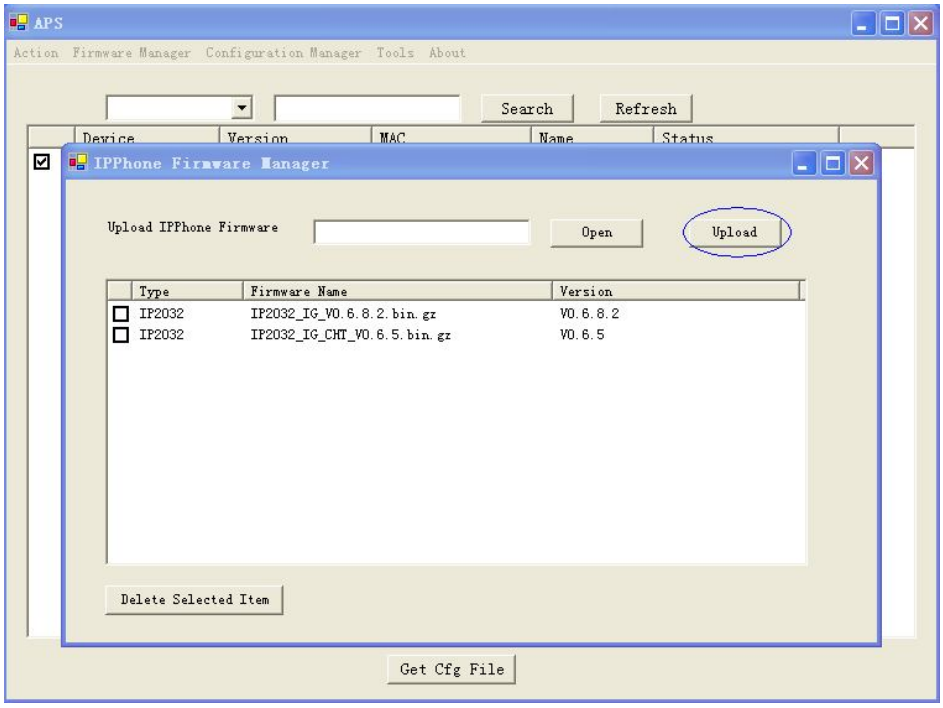
Appendix 4.5 Managing IP Phone Firmware

Press Firmware Manage->IP Phone Firmware Manage



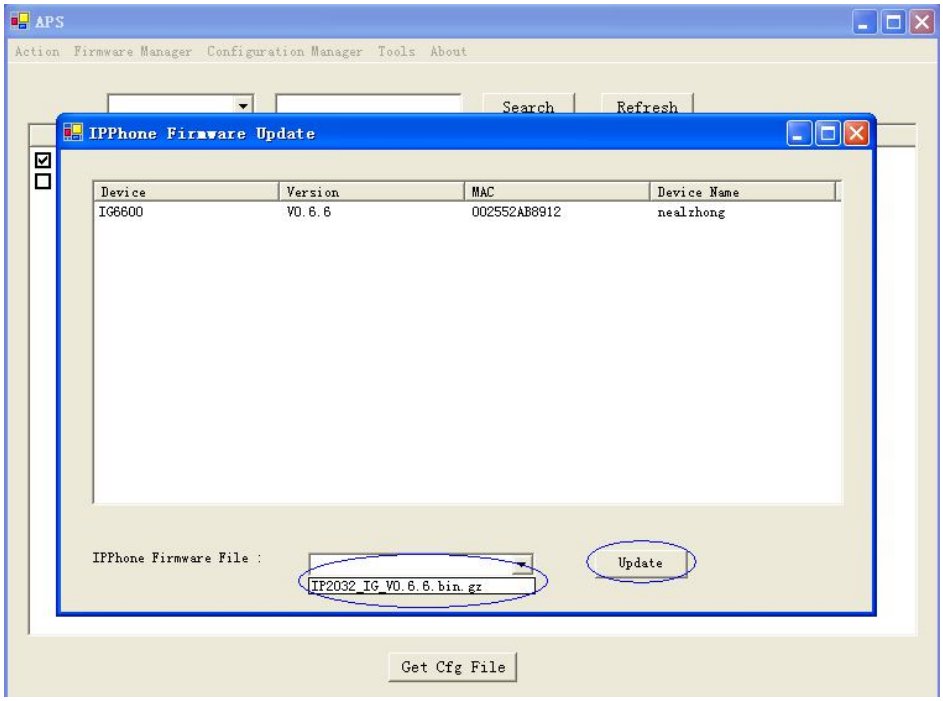
Press Open button to choose available IP Phone firmwares on PC and press Upload button to load it to APS.





Appendix 4.6 Upgrading IP Phone Firmware

Choose one IP Phone Firmware file and press Update button to load it to IP6600.

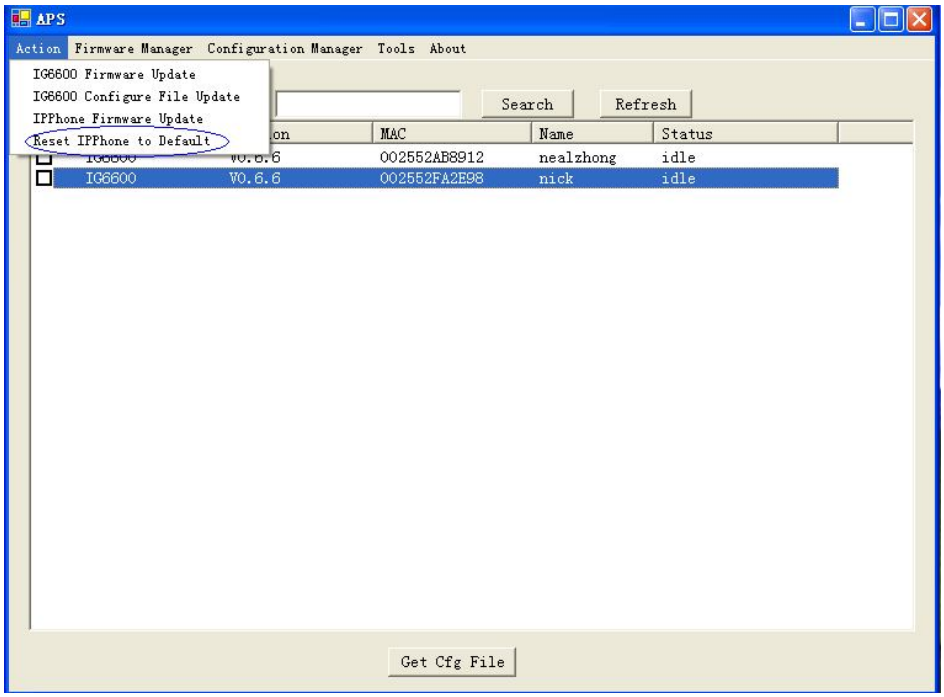


After the IP Phone firmware is uploaded to IP6600, all IP Phones with that model that register to this IP6600 will be upgraded with this firmware within 30 minutes (IP6600 will notify every IP Phone after a delay with a random time between 0 to 30 minutes).

Appendix 4.7 Reset IP Phone to Default

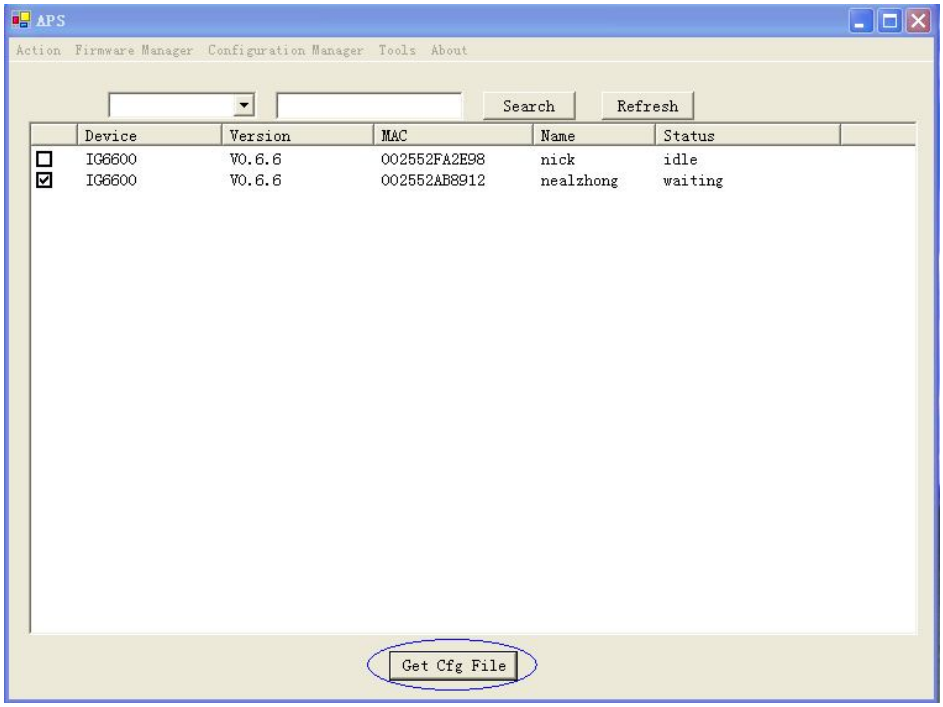
Press Action->Reset IP Phone to Default.

Then all IP Phones that register to this IP6600 will be reset to default.



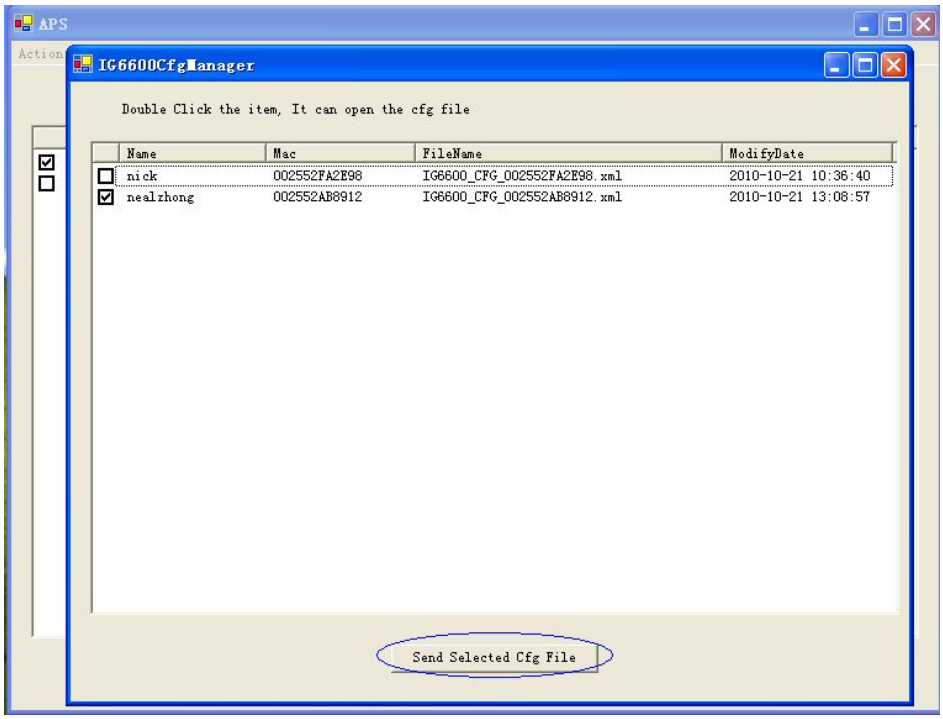
Appendix 4.8 Configuration Manager

Press Get Cfg File button on the main window, then the configuration file on the specific IP6600 is downloaded to your PC.



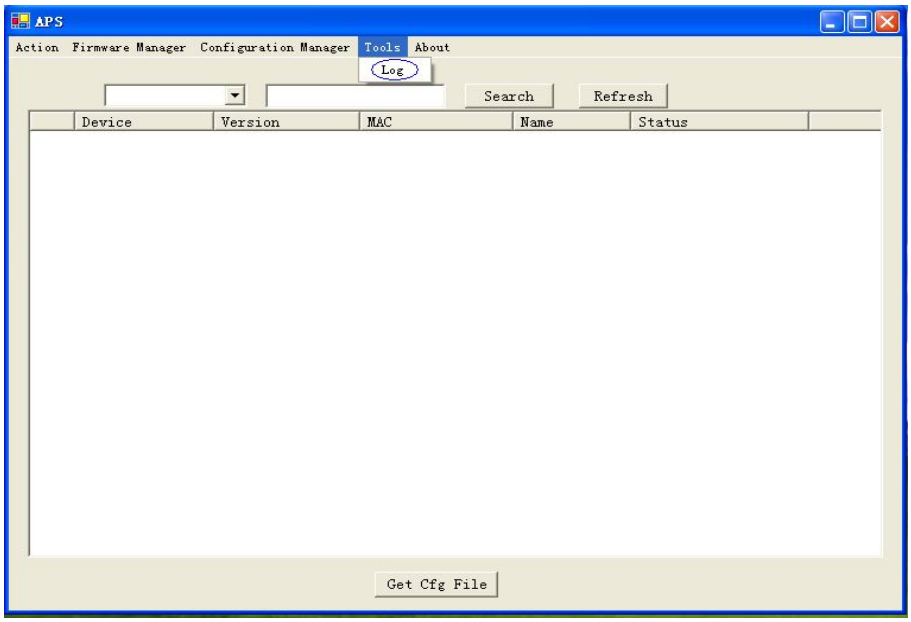
Press Configuration Manage button, then you can edit this configuration file.

After you modify the configuration and save it, you can send it back to this IP6600, then this IP6600 will use this file as its configuration file and reboot itself to let it take effect.

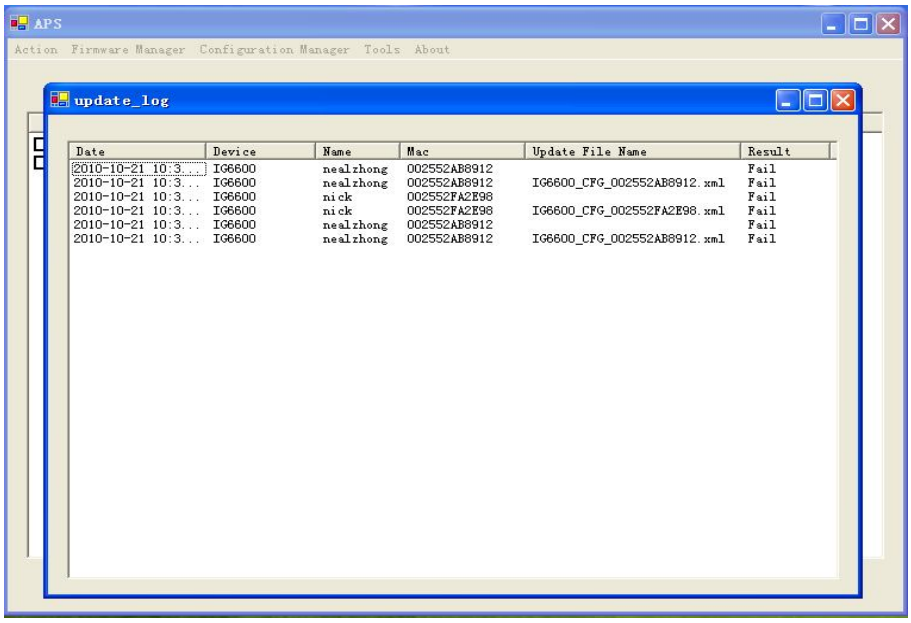


Appendix 4.9 Show Update Log

Press Tools->Log

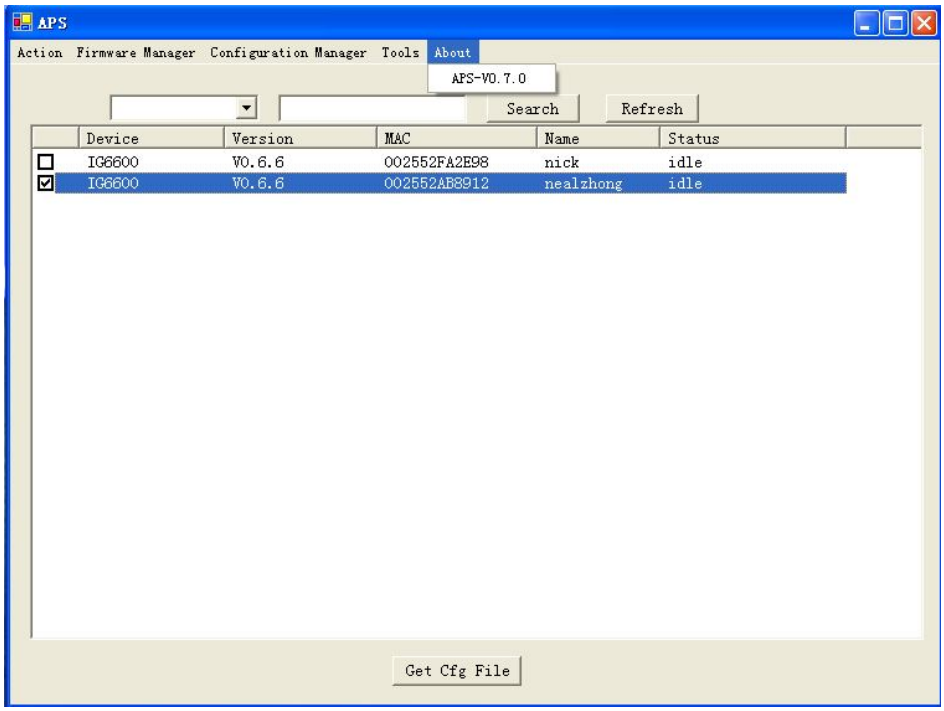


A window showing all the log for operations will display.



Appendix 4.10 About

Show APS version info here.


APS
Action
Firmware Manager
Configuration Manager
Tools
About
APS-V0.7.0
Search
Refresh
Device
Version
MAC
Name
Status
IG6600
V0.6.6
002552FA2E98
nick
idle
IG6600
V0.6.6
002552AB8912
nealzhong
idle
Get Cfg File