



Figure: ATCOM IPPBX IP04

ATCOM® IPPBX IP04

Product Guide

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Content

CONTACT ATCOM	3
CHAPTER 1 THE INTRODUCTION OF IP04.....	4
CHAPTER 2 ACCESS TO THE IP04.....	7
2.1 WEB PAGE ACCESS BY BROWSER	7
2.2 SSH ACCESS BY PUTTY.....	8
2.3 ACCESS BY BROWSER WITH FALLBACK IP ADDRESS	9
2.4 CONSOLE PORT ACCESS TO IP04	9
CHAPTER 3 CONFIGURE IP04 BY WEB GUI	11
3.1 SYSTEM STATUS.....	11
3.2 CONFIGURE HARDWARE.....	11
3.3 TRUNKS	11
3.3.1 Create Analog Trunks	12
3.3.2 VoIP Trunks	13
3.4 OUTGOING CALLING RULES	13
3.5 DIAL PLANS	15
3.6 USERS	15
3.6.1 Create SIP/IAX User	15
3.6.2 Create Analog User.....	16
3.7 RING GROUPS.....	18
3.8 CALL QUEUES	19
3.9 VOICE MENUS	20
3.10 TIME INTERVALS	21
3.11 INCOMING CALLING RULES	22
3.12 VOICEMAIL.....	23
3.13 CONFERENCING.....	25
3.14 FOLLOW ME.....	26
3.15 VOICEMAIL GROUPS.....	28
3.16 VOICE MENU PROMPTS.....	28
3.17 SYSTEM INFO	30
3.18 BACKUP	32
3.19 ACTIVE CHANNELS	33
3.20 OPTIONS.....	33
3.21 ASTERISK LOGS.....	36
3.22 BULK ADD.....	37
3.23 FILE EDITOR.....	37
3.24 ASTERISK CLI	38
3.25 NETWORK SETTINGS	39
3.26 FIRMWARE UPDATE.....	40
3.26.1 Download the Latest Firmware File and Set up TFTP Server.	40

3.26.2 Update for IP04 from Web Page.....	40
3.27 CALL DETAIL RECORDS	41
CHAPTER 4 AN APPLICATION CASE OF IP04	42
4.1 HOW TO MAKE INTERNAL CALLS THROUGH IP04.....	43
4.1.1 Access to the Web Page of IP04 by Browser.....	43
4.1.2 Add up Users from Web Page of IP04.....	43
4.1.3 Register a SIP user 6001 in AT610	45
4.2 HOW TO MAKE A CALL TO OUTSIDE THROUGH PSTN.....	46
4.2.1 Create an Analog Trunk.....	46
4.2.2 Create an Outgoing Calling Rule	47
4.2.3 Create a Dial Plan	47
4.2.4 Create a User.....	48
4.3 HOW TO GET AN INCOMING CALL FROM OUTSIDE	48
4.3.1 Create an Analog Trunk.....	48
4.3.2 Create an Incoming Calling Rule.....	48
4.3.3 Create a Voice Menu	48
4.4 HOW TO CALL EACH OTHER DIRECTLY FROM DIFFERENT NETWORK SEGMENT.	49
4.5 HOW TO CALL THROUGH VOIP TRUNK.....	52
4.5.1 Call from IP04 to IP08.....	52
4.5.2 Call from IP08 to IP04.....	55
4.6 HOW TO TRANSFER FILES BETWEEN WINDOWS PC AND IP04.....	57
CHAPTER 5 REFERENCE	59

Contact ATCOM

The Introduction of ATCOM

Founded in 1998, ATCOM technology has been always endeavoring in the R&D and manufacturing of the internet communication terminals. The product line of ATCOM includes IP Phone, USB Phone, IP PBX, VoIP gateway and Asterisk Card.

Chapter 1 the Introduction of IP04

Overview of the IP04

The IP04 is a complete Asterisk Appliance with four single port FXO or FXS modules. It is an embedded open source Linux system with built-in SIP/IAX2 proxy server and NAT features. It provides a solid, uniform platform for traditional PSTN communications as well as VoIP communications.

Targeting for SOHO user and SMB market with an easy to use graphical interface, IP04 provides a cost-saving solution on their telecommunication/data needs. With IP04, company with branch offices in different countries can be easily combined together to work like a virtual single office through Internet.

Features

- Open Source Asterisk IP PBX
- High performance OSLEC (Open Source Line Echo Canceller)
- Configurable IVR menu
- Voice Mail, Voicemail to Email
- Call forward, Call waiting, Call transfer
- Call conference
- Call queues, Ring group
- SIP trunk, IAX trunk, PSTN analog trunk
- Call Detail Record
- Access via: SSH/telnet/web
- Firmware upgradable via web page
- 50+ available SIP/IAX2 extensions
- 20 concurrent calls

Applications

- SOHO/SMB telephony system
- Hosted service
- FAX terminal
- IVR system

Interface

- 1 * RJ45 port
- 1 * Power port
- 1 * MMC/SD slot
- 4 * RJ11 port (FXS/FXO interchangeable)
- 4 * Single port FXO/FXS module slot

Hardware

CPU: 400MHz Blackfin 532 Chip
Four analog (FXO/FXS) module interface.
NAND flash 256 MB
SDRAM 64MB

System

Open Source uClinux

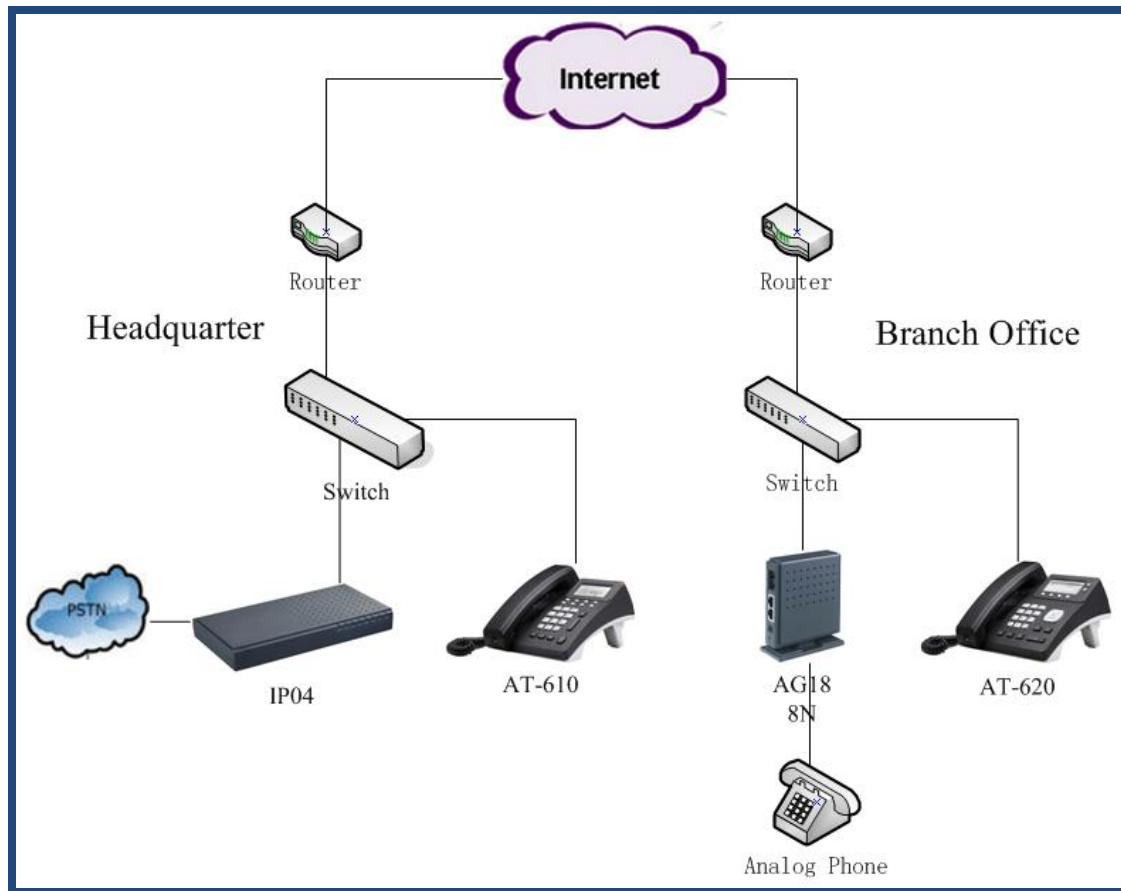
Measurement and Weight

Inner box	225 * 120 * 30mm
G.W./unit	0.765KG
Carton MEAS	456 * 442 * 362 mm
Units per Carton	21 units/ CTN
G.W./CTN	18 KG/CTN

Package

Item	Quantity
IP04	1
RS232 module	1
Power Adapter	1
Manual (disk)	1

For the usage of IP04 in VoIP field, you can refer to the following network topology.



Chapter 2 Access to the IP04

You need a PC to access to the IP04, there are four ways for you to access the IP04:

1. Web page access by browser
2. SSH access by putty
3. Access by browser with Fallback IP Address
4. Console port access by RS232 console cable

In order to access to IP04 by the first three ways, you have to check that if your network connection between IP04 and PC is OK. If you do not have network connection between IP04 and PC, you can try to use the last way to access to IP04 and change the IP address for IP-04.

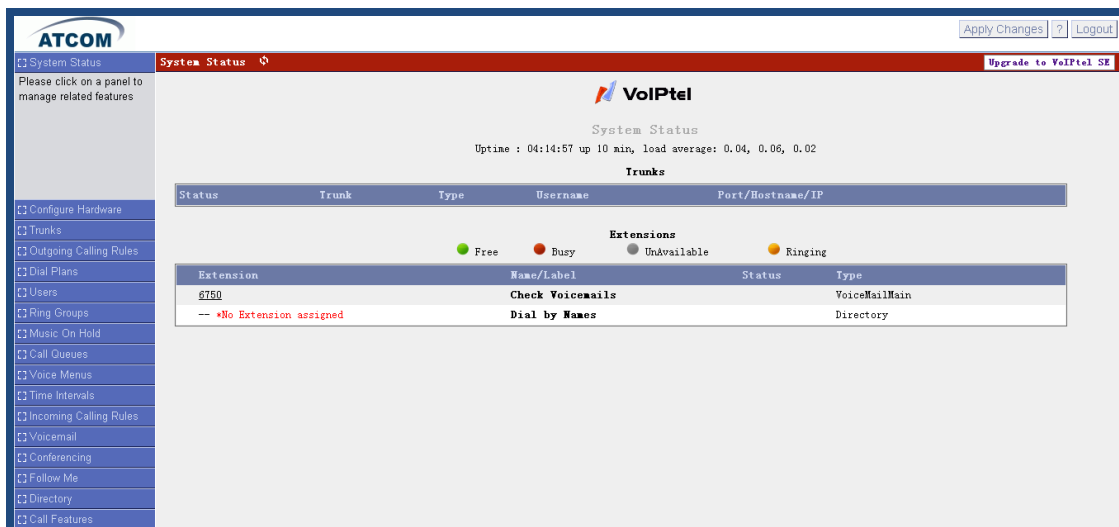
2.1 Web Page Access by Browser

It is the most convenient and common way to access the IP04, you just need to open your browser and input the IP address of IP04 WAN port (the default IP address is 192.168.1.100). You would better use Firefox instead of IE, because there are compatible issues.

Then input the default Username: admin; Password: atcom (the password of old version is mysecret) in the presented screen like the following:



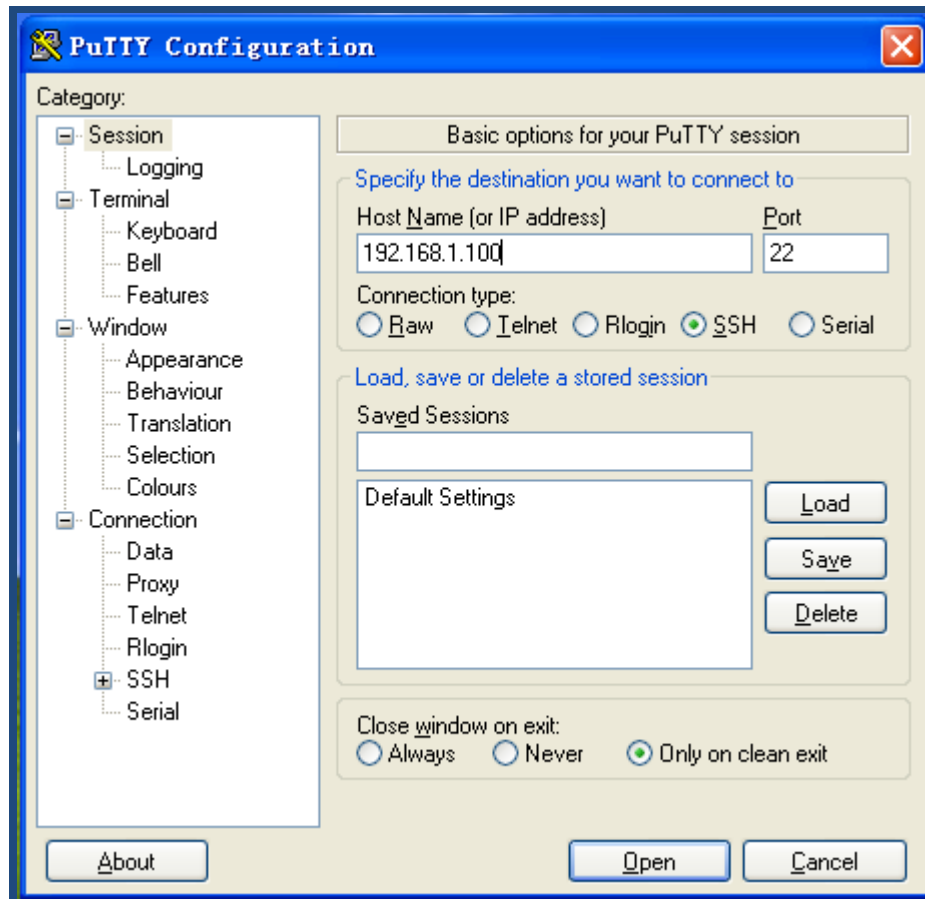
When you login successfully, you can get the configuration web page as below:



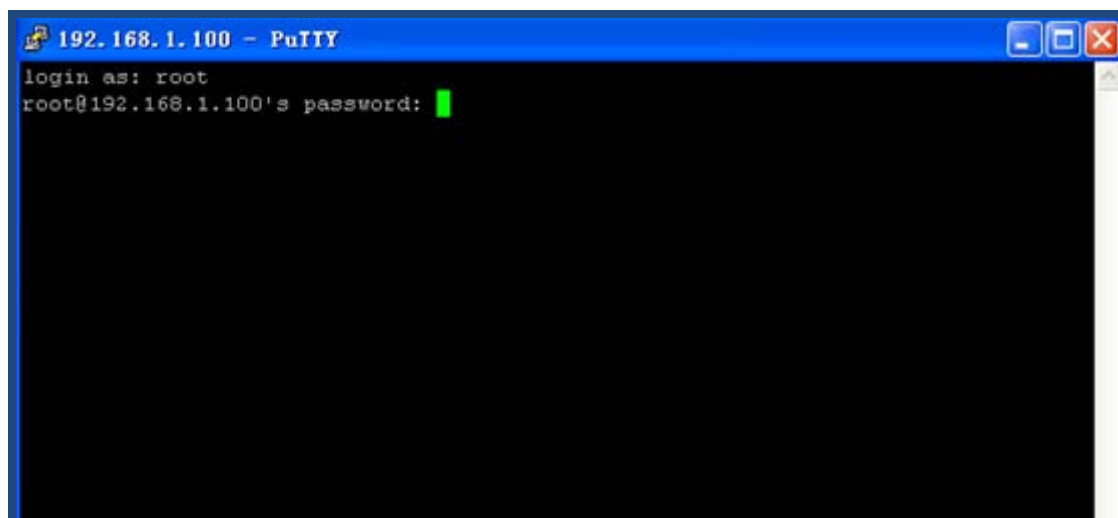
2.2 SSH Access by Putty

Logging into IP04 by SSH, you can configure IP04 by Linux command.

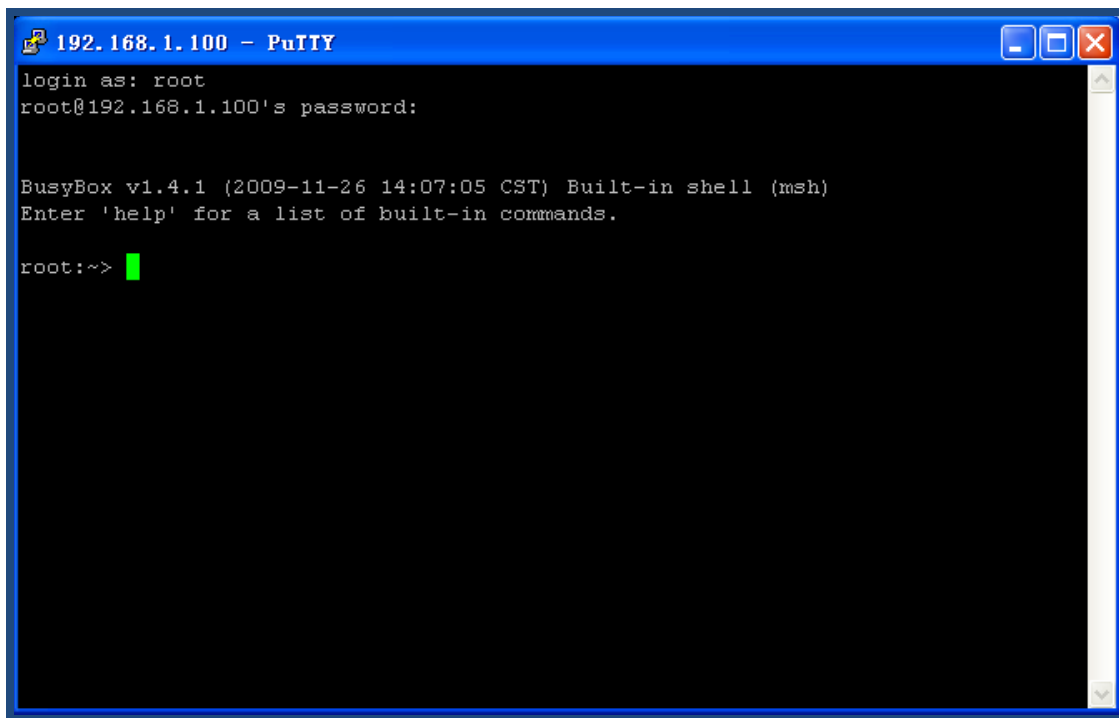
- 1) Please open your putty software, and input the IP04 IP address in the **Host Name** textbox, input port number in the **Port** textbox, click the **SSH** Connection type, then click **open** button. Please refer to the following screen:



- 2) Please input username: root, and the default password: 12xerXes16 in the following screen, you can access to IP04 successfully.



When you log into IP04 successfully, you can get the following illustration:



```
192.168.1.100 - PuTTY
login as: root
root@192.168.1.100's password:

BusyBox v1.4.1 (2009-11-26 14:07:05 CST) Built-in shell (msh)
Enter 'help' for a list of built-in commands.

root:~>
```

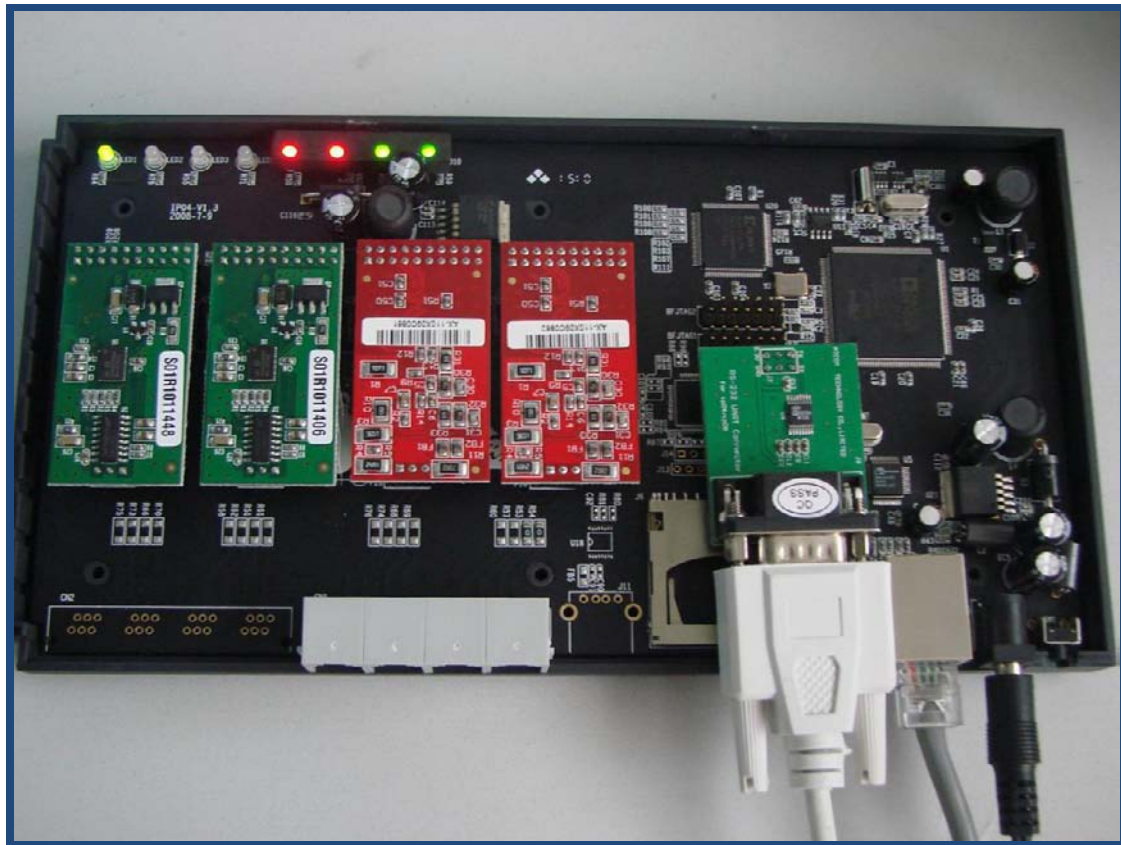
2.3 Access by Browser with Fallback IP Address

This way only be supported by the latest version (voiptel_ce_ip04-0.3.6) of IP04. If you forget the IP Address of IP04 you have set up, you can use the fallback IP Address: 172.31.255.254/30. Before logging into IP04, please set up the IP Address of your PC: 172.31.255.253 and SubMask: 255.255.255.252. At last, you can open your browser and enter:172.31.255.254 to log into the web page of IP04.

2.4 Console Port Access to IP04

If you do not have network connection between IP04 and PC, you can try to access to IP04 by console port. Please try to do as the following steps:

1. Please connect the console port of IP04 to your PC's console port with RS232 console cable, you can refer to the following illustration:



2. Please run your Hyper Terminal, and set up the console port like the following:

Bits per second: 115200

Data bits : 8

Parity: None

Stop bits: 1

Flow control: None

3. Change the IP Address by Hyper Terminal

The default IP address of IP-04 is 192.168.1.100. Your network may have a different IP address range such as 192.168.10.xx. In this situation, you can not access to IP-04 by putty and browser if you do not change the IP-04 IP address. So you have to change the IP address for IP-04 by Hyper Terminal to make it in the same network segment as your LAN.

After you have accessed to IP-04 by Hyper Terminal, please use the following command to change the IP address for IP-04.

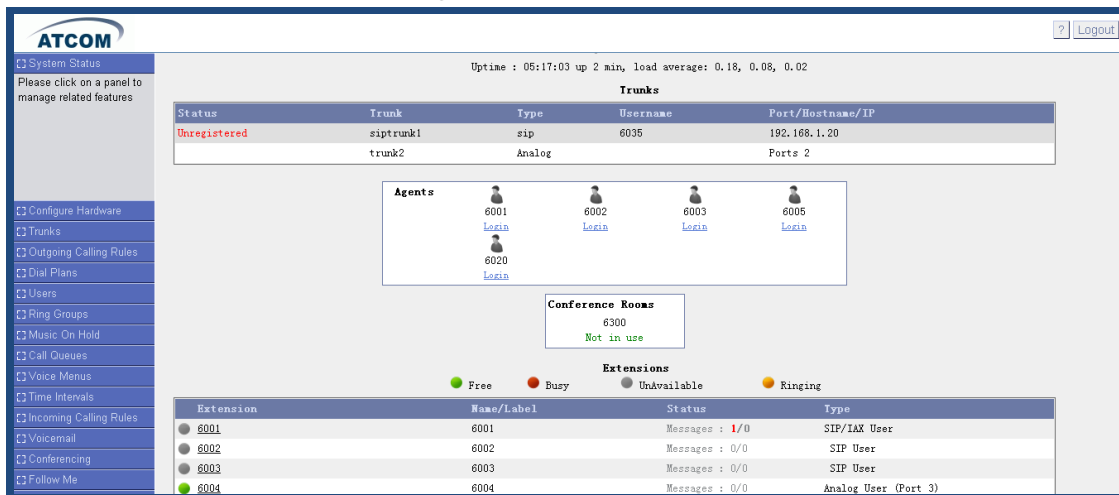
```
root:~> ifconfig eth0 192.168.1.151(the IP address you want to set for IP-04)
```

By this way, the IP address you set for IP-04 is temporary, it will recover to the original default IP address after rebooting. If you want to give a static and permanent IP address for IP-04, you can try to set it in web GUI, for detail steps please refer to chapter 3.

Chapter 3 Configure IP04 by Web GUI

3.1 System Status

In the system status screen, it displays the functions you configured, such as: trunks, extensions, conference and so on like the following screen:



Uptime : 05:17:03 up 2 min, load average: 0.18, 0.08, 0.02

Status	Trunk	Type	Username	Port/Hostname/IP
Unregistered	siptrunk1	sip	6035	192.168.1.20
	trunk2	Analog		Ports 2

Agents

- 6001 [Login](#)
- 6002 [Login](#)
- 6003 [Login](#)
- 6005 [Login](#)
- 6020 [Login](#)

Conference Rooms

- 6300 Not in use

Extensions

- Free (Green dot)
- Busy (Red dot)
- Unavailable (Grey dot)
- Ringing (Yellow dot)

Extension	Name/Label	Status	Type
6001	6001	Messages : 1/0	SIP/IAX User
6002	6002	Messages : 0/0	SIP User
6003	6003	Messages : 0/0	SIP User
6004	6004	Messages : 0/0	Analog User (Port 3)

3.2 Configure Hardware

In the configure hardware page, it includes the following components: analog hardware, tone region, advanced settings.

Analog Hardware

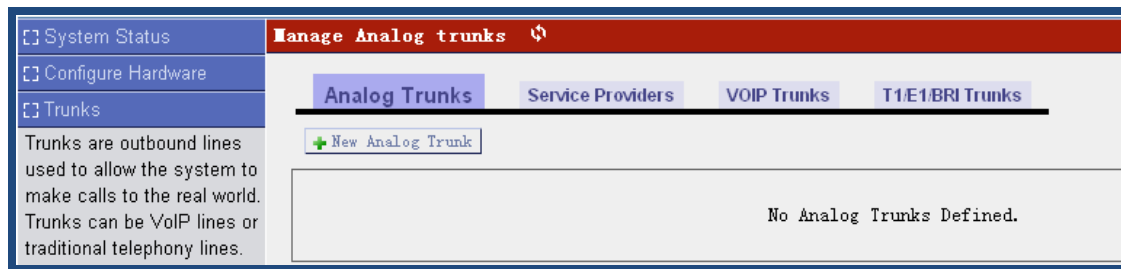
When you boot the IP04, which will detect the FXO and FXS modules automatically, the analog hardware component displays the modules which are detected correctly.

Tone Region

You should select the tone region according to your country, if it does not have your country's name in the dropdown list, please ask your service operator which kind of tone region is used in your area.

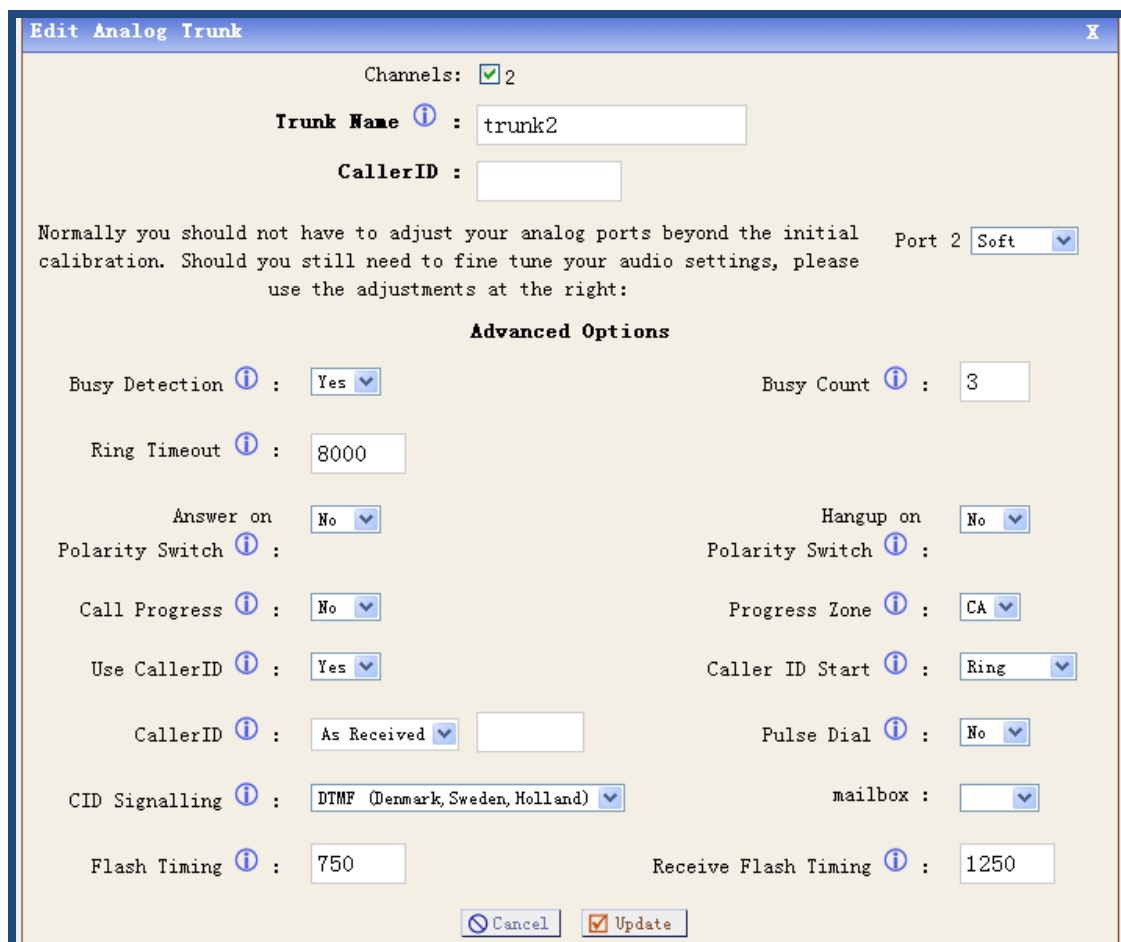
3.3 Trunks

To receive calls from PSTN and make calls to the outside world, you have to use trunk. Please select the **Trunks** option from the vertical menu on the left of the main page, then you can get the following screen:



3.3.1 Create Analog Trunks


Analog trunk is associated with FXO port, and it will call outside by PSTN line. Click on **New Analog Trunk** in the illustration above, the pop-up screen is where you create and set up trunk.



There are many parameters for you to set up, I just set the following two parameters:

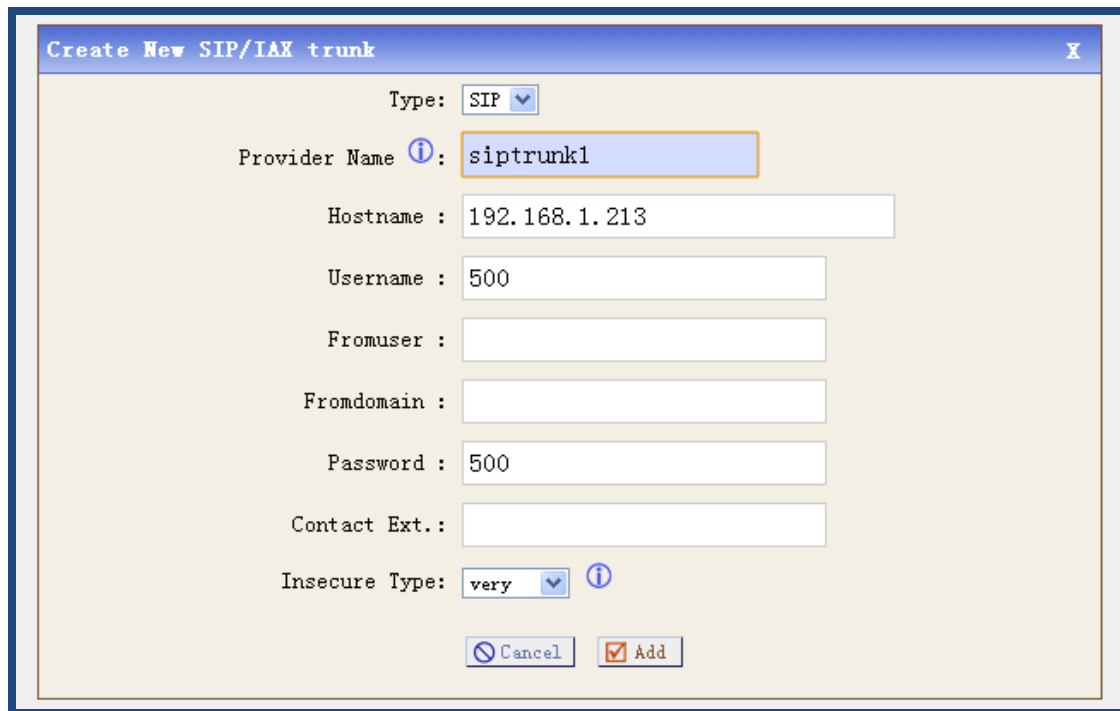
Channels: select the FXO port you want to use. Here I use the port 2.

Trunk Name: a unique label to help you identify the trunk when listed in outgoing calling rules and incoming calling rules. Here I use the trunk2 as my trunk name.

For the advanced options, you can put your cursor on the  label, you can get the information of the parameter, customers have to set these parameters according to your service provider and your need.

3.3.2 VoIP Trunks

A VoIP service provider (VSP) that you have signed up with is also a trunk. Via the VoIP trunk you can dial via the VoIP service to reduce your cost when making international calls. You can set up the VoIP trunk to make calls to the PSTN or other VoIP network depends on the service you use. You can also use the VoIP trunk to link headquarter and branch offices for free internal calls. Click on **New SIP/IAX Trunk**, the following screen is where you create and set up VoIP trunk:



The important parameters are:

Type: You can select SIP or IAX type to meet your need.

Provide Name: a unique label to help you identify the trunk when listed in outgoing calling rules and incoming calling rules.

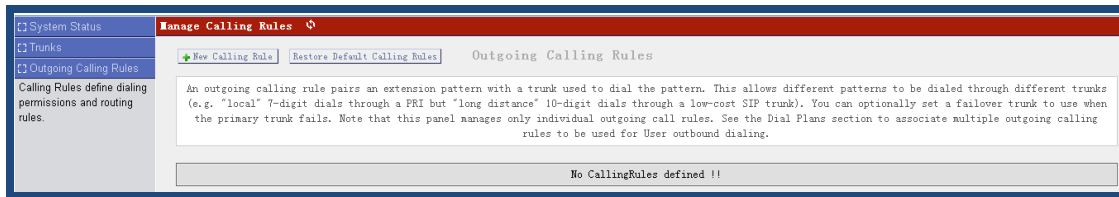
Hostname: the IP address or domain name of your service provider's server.

Username: the username that your service provider configured.

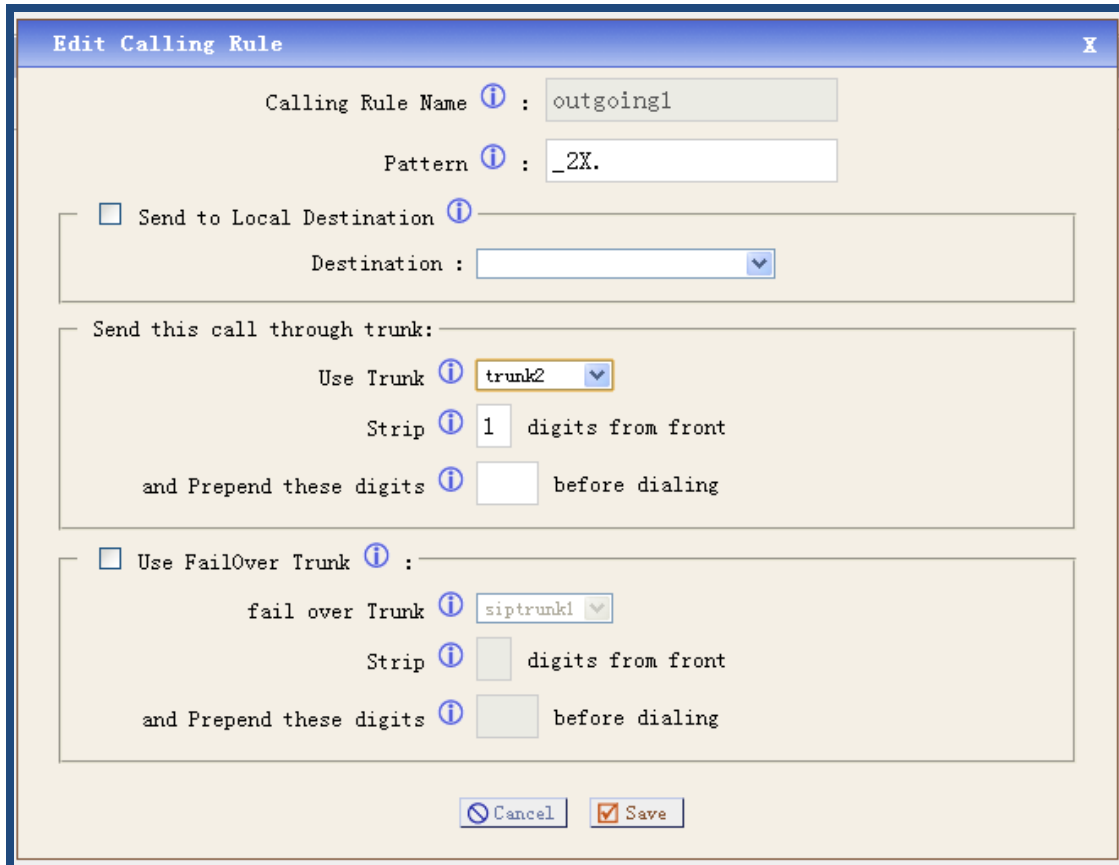
Password: the password that your service provider configured for the user.

3.4 Outgoing Calling Rules

Outgoing calling rules is used to route an outgoing call, when you make an external call, which trunk and what dial-pattern the call used are configured in outgoing calling rules. Please select the Outgoing Calling Rules option from the vertical menu on the left of the main page, then you can get the following screen:



Click on **New Calling Rule** button on the illustration above, the following screen is where you create and set up outgoing calling rule:




The important parameters I configured are below:

Calling Rule Name: a unique label to help you identify the outgoing calling rule when listed in dial plans, I use outgoing1 as the calling rule name here.

Pattern: it acts like a filter for marching numbers you dialed, here I set up _2X., it means any number you dial out with prefix 2 will use this outgoing call rule.

Use Trunk: select the trunk for outgoing calling rule, here I select the trunk2 I set up before.

Strip: I press 1 here, it will strip the first digit of the number string you dialed.

You can get the detail information about every single parameter by putting your cursor on the  label.

At last, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

The way of outgoing calling rules works:

Every time you dial a number, asterisk will do the following in strict order:

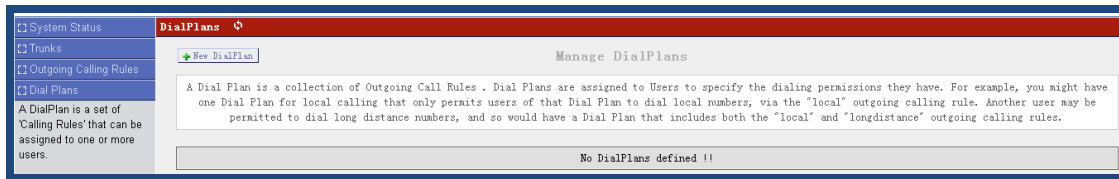
- Examine the number you dialed.
- Compare the number with the pattern that you have defined in your first outgoing rule and if

matches, it will initiate the call using that trunk. If it does not match, it will compare the number with the pattern that you have defined in the second outgoing rule and so on.

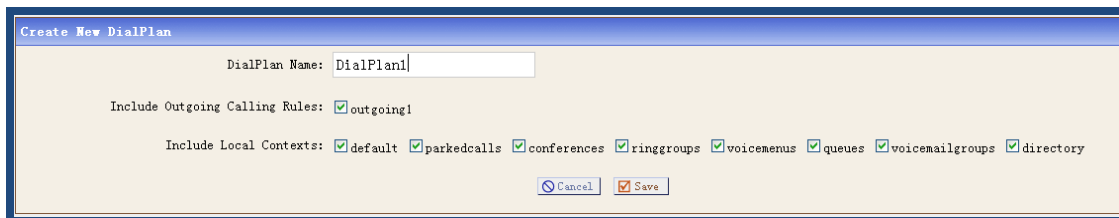
- Pass the number to the appropriate trunk to make the call.

3.5 Dial Plans

A DialPlan is a set of Calling Rules that can be assigned to one or more users. Please select the **Dial Plans** option from the vertical menu on the left of the main page, then you can get the following screen:



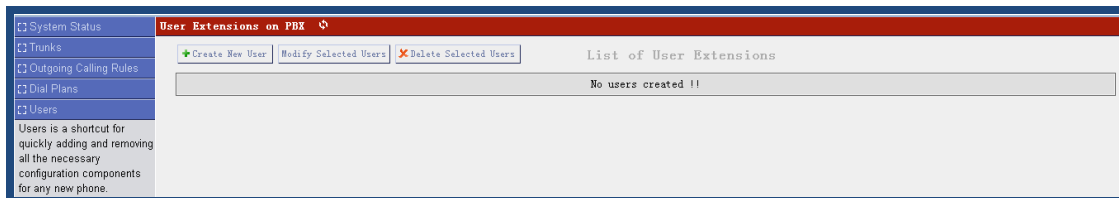
Click on **New DialPlan** button on the illustration above, the following screen is where you create and set up dial plan:



DialPlan Name: a unique label to help you identify the dial plan when listed in user component, you have to set up a dial plan name and select outgoing call rule and local context that you want to use.

3.6 Users

Users component is used to add or remove Analog, SIP, IAX extension. Please select the **Users** option from the vertical menu on the left, then you can get the following screen:



3.6.1 Create SIP/IAX User

Click on **Create New User** button on the illustration above, the following screen is where you create and set up user:

Create New User
X

General :

Extension: ⓘ Name: ⓘ DialPlan: ⓘ

CallerID: ⓘ OutBound CallerID: ⓘ

Enable Voicemail for this User ⓘ

VoiceMail Access PIN code: ⓘ Mailbox: ⓘ Email Address: ⓘ

Technology

SIP ⓘ IAX ⓘ Analog Station: ⓘ flash ⓘ: rxflex ⓘ:

Codec Preference : First : Second : Third : Fourth : Fifth :

VoIP Settings

MAC Address : ⓘ Line Number : ⓘ SIP/IAX Password: ⓘ

NAT: ⓘ Can Reinvite: ⓘ DTMF Mode: ⓘ insecure: ⓘ

Other Options

3-Way Calling ⓘ In Directory ⓘ Call Waiting ⓘ CTI ⓘ Is Agent ⓘ

Enable Call Record ⓘ Pickup Group:

In General component, you have to set up Extension, CallerID, Name, OutBound CallerID parameters, and choose a DialPlan for the extensions. Here I set up user 6001, and select DialPlan1 for the user.

I select **Enable Voicemail for this User option**, so the user has voicemail function.

In the Technology component, you have to select SIP or IAX. Here I want to configure a SIP user, so I select SIP. For the Codec Preference, only the first two types of code you set are available.

In the **Other Options** component, I select **Is Agent** which will be listed in Call Queues as a selectable member for call queue.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

3.6.2 Create Analog User

Click on **Create New User** button, the following screen is where you create and set up user:

Create New User
X

General :

Extension: Name: DialPlan:

CallerID: OutBound CallerID:

Enable Voicemail for this User

VoiceMail Access PIN code: Mailbox: Email Address:

Technology

SIP IAX Analog Station: flash: rxflash:

Codec Preference : First : Second : Third : Fourth : Fifth :

VoIP Settings

MAC Address : Line Number : SIP/IAX Password:

NAT: Can Reinvite: DTMF Mode: insecure:

Other Options

3-Way Calling In Directory Call Waiting CTI Is Agent

Enable Call Record Pickup Group:

In the General component, you have to setup Extension, CallerID, Name, OutBound CallerID parameters, and choose a dialplan for the phone. Here I set up user 6002, and select DialPlan1 for the user.

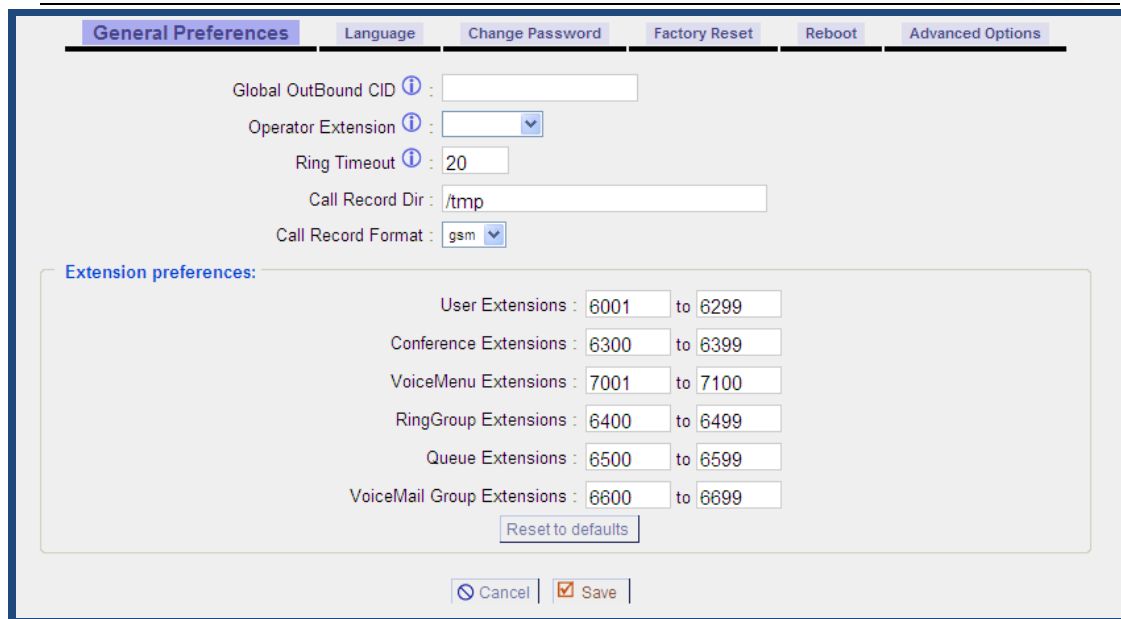
I select **Enable Voicemail for this User option**, so the user has voicemail function.

In the Technology componet, you have to select the port in which the analog phone will be plugged from the drop-down list of **Analog Station**. I select **Enable Voicemail for this User option**, so the user have voicemail function.

In the **Other Options** component, I select **Is Agent** which will be listed in Call Queues as a selectable member for call queue.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

Attention: in the textbox of Extension, the value you set is limited to a range, you can adjust the range in the following screen to meet your requirement. Please select the **Options** option from the vertical menu on the left, then you can get the following screen:



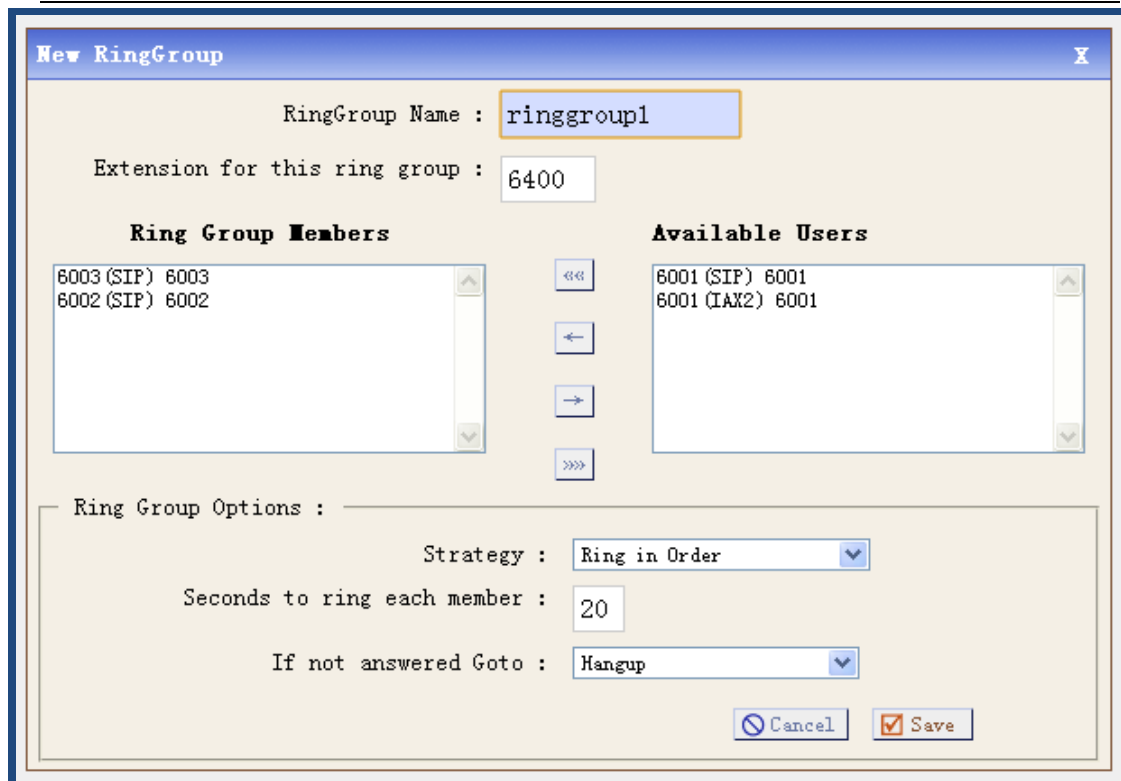
3.7 Ring Groups

Define Ring groups to dial more than one extension simultaneously, or to ring more than one phone sequentially. This feature may also be called Hunt groups.

Please select the **Ring Groups** option from the vertical menu on the left of the main page, then you can get the following screen:



Click on **New RingGroup** button on the illustration above, the following screen is where you create and set up ring group:



Set the ring group name and extension for the ring group, select ring group members from available users.

Select strategy for ring group:

Ring in Order: when someone calls the ring group, the ring group member will ring in order.

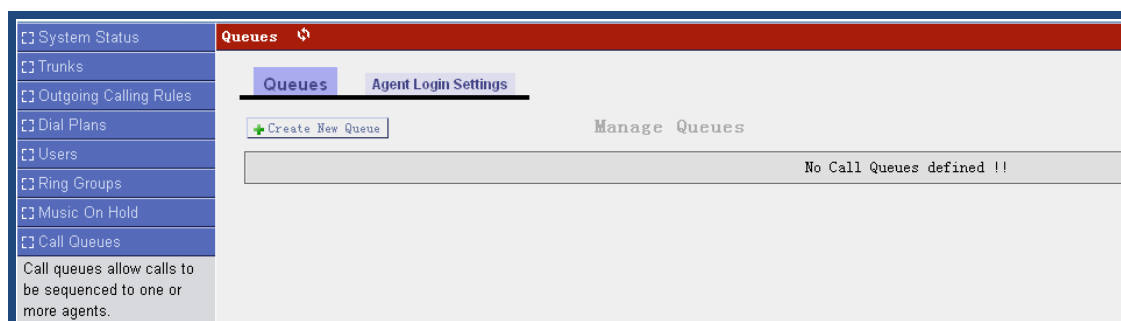
Ring all simultaneously: when someone calls the ring group, all of the ring group member will ring at the same time.

If not answered Goto: choose a destination from the drop-down list, when no one in the ring group answers the call.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

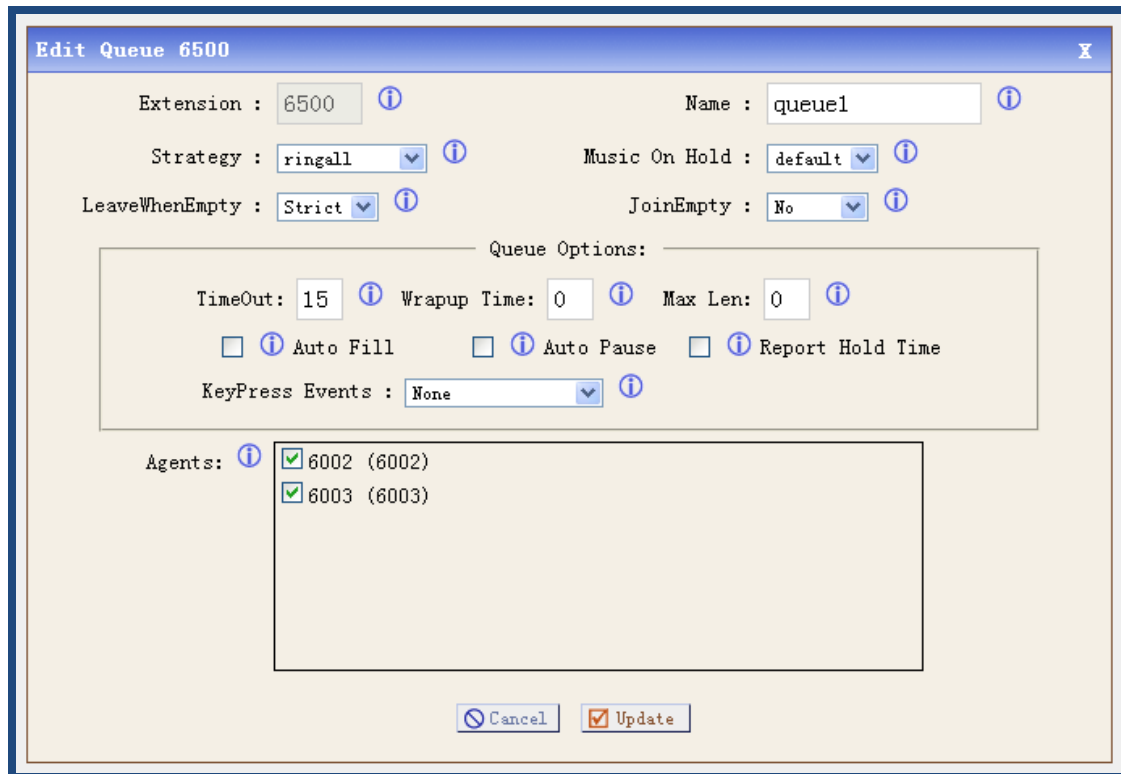
3.8 Call Queues

Please select the **Call Queues** option from the vertical menu on the left of the main page, then you can get the following screen:



Click on **Create New Queue** button on the illustration above, the following screen is where you

create and set up call queue:



Extension: a unique label to help you identify the call queue when listed in **outgoing calling rules** component.

Agents: select the users which you want them to be queue member.

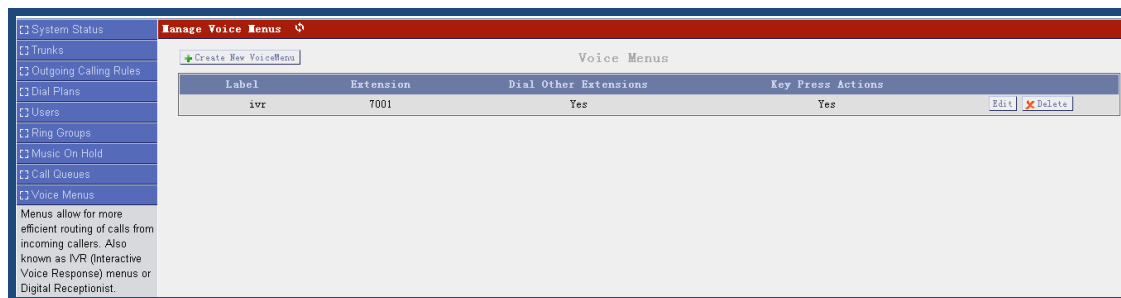
You can get information of other parameters by putting your mouse on the  label.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

3.9 Voice Menus

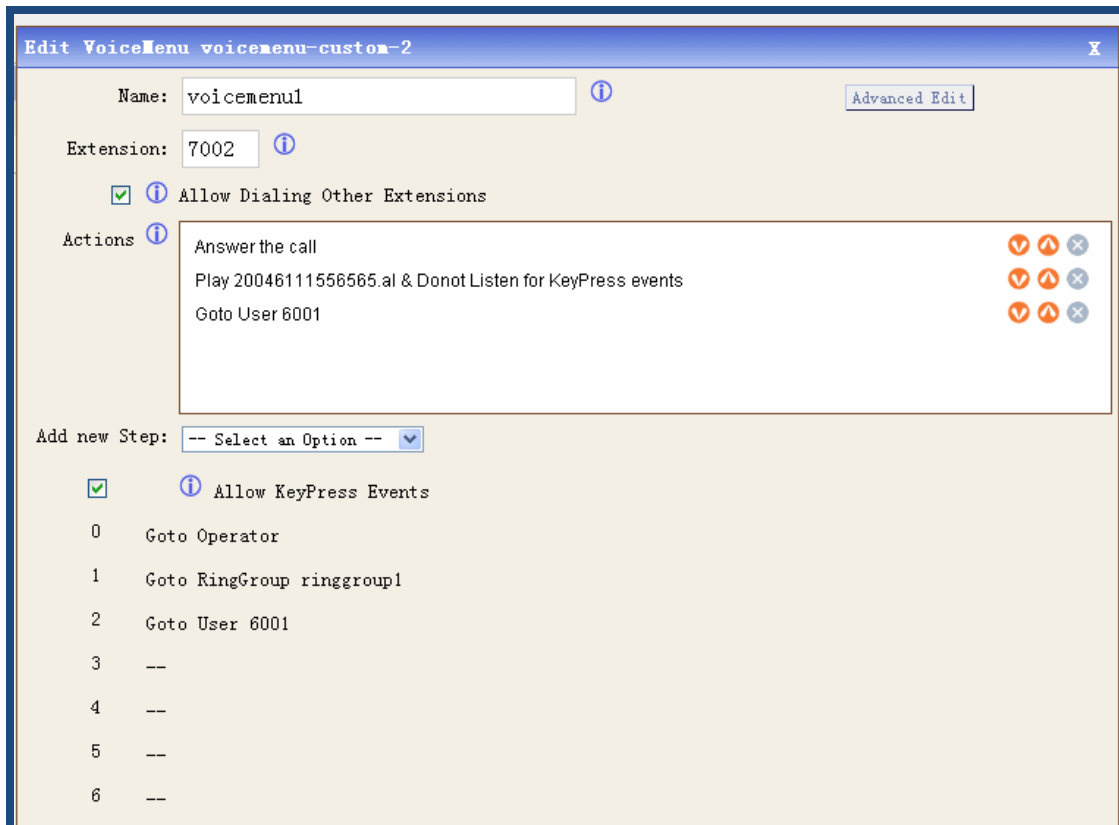
Like most organization, we would like to redirect all of the incoming calls automatically. The voice menu is very handy for these sorts of things. The system should allow callers to make the selection according to the voice menu.

Please select the **Voice Menus** option from the vertical menu on the left, then you can get the following screen:



Label	Extension	Dial Other Extensions	Key Press Actions
ivr	7001	Yes	Yes

Click on **Create New VoiceMenu** button on the illustration above, the following screen is where you create and set up voice menu:



Name: a unique label to help you identify the voice menu when listed in incoming calling rules.

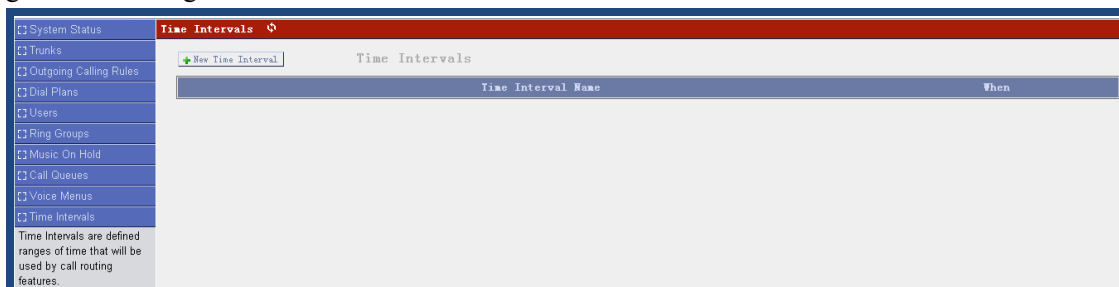
Add new Step: select an action from the drop-down list. I add three steps above, so it will answer the call, and play a sound file, at last go to user 6001.

Click on **Allow KeyPress Events**: when the caller is in voice menu, they can press some specific numbers which are defined here to enter other destination. Here I define three numbers for going to operator, ringgroup, and user respectively.

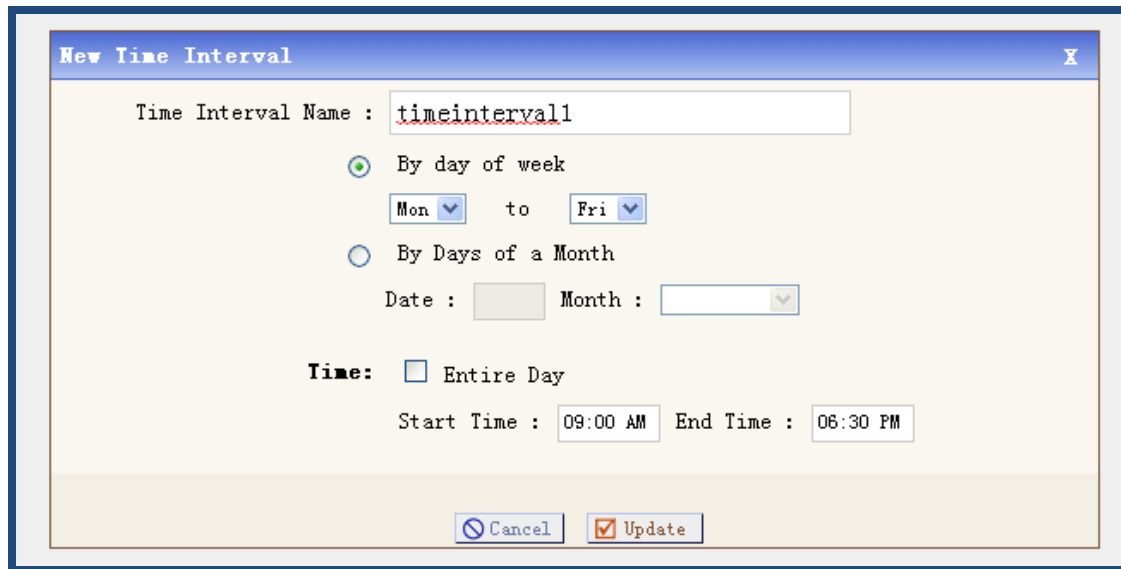
At last, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

3.10 Time Intervals

Time Intervals defines ranges of working time that will be used by call routing features. Please select the **Time Intervals** option from the vertical menu on the left of the main page, then you can get the following screen:



Click on **New Time Interval** button on the illustration above, the following screen is where you create and set up time interval:



Time Interval Name: a unique label to help you identify the time interval when listed in incoming calling rules. I set up timeintervall as time interval name.

By day of week: I select it from Monday to Friday, the incoming call rule only works from Monday to Friday.

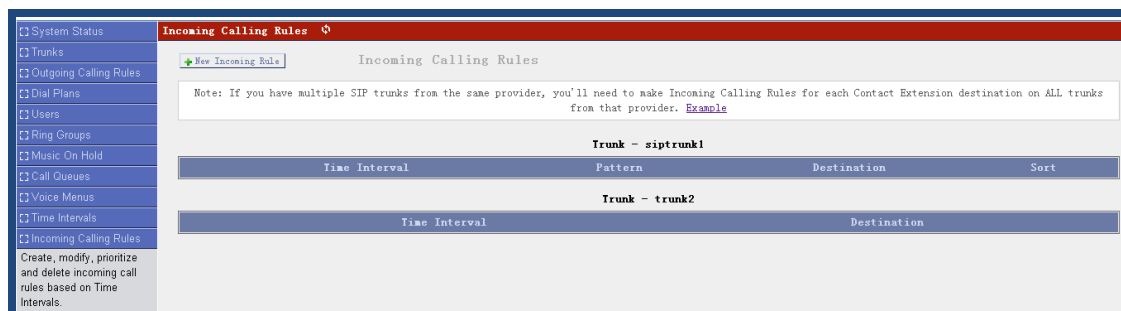
Time: I set up it from 09:00 AM to 06:30 PM, the incoming call rule only works from 09:00 AM to 06:30 PM.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

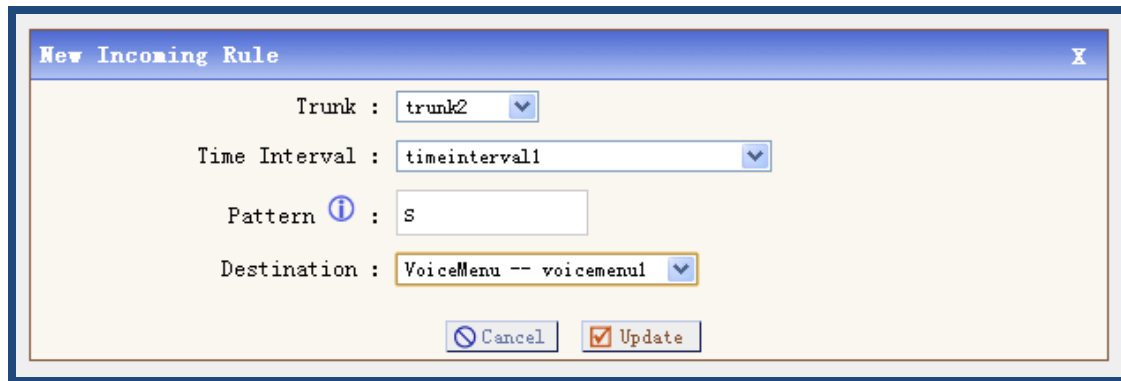
3.11 Incoming Calling Rules

This is where the behavior of incoming calls from all trunks is being handled. When an incoming call from PSTN or VoIP trunk is received, asterisk needs to know where to direct it. It can be directed to a ring group, an extension, digital receptionist, voice menu or queue. For this purpose, Incoming Calling Rules need to be set up.

Please select the **Incoming Calling Rules** option from the vertical menu on the left of the main page, then you can get the following screen:



Click on **New Incoming Rule** button on the illustration above, the following screen is where you create and set up time interval:



The screenshot shows a 'New Incoming Rule' dialog box with the following fields:

- Trunk : trunk2
- Time Interval : timeinterval1
- Pattern : S
- Destination : VoiceMenu -- voicemenul

Buttons at the bottom: Cancel, Update (checked).

Trunk: select trunk for incoming call to use. I select trunk2 I set up before.

Time Interval: determine the time when the incoming call rule works, I select timeinterval1 I set up before.

Pattern: match the destination number, I use S which will match any destination number.

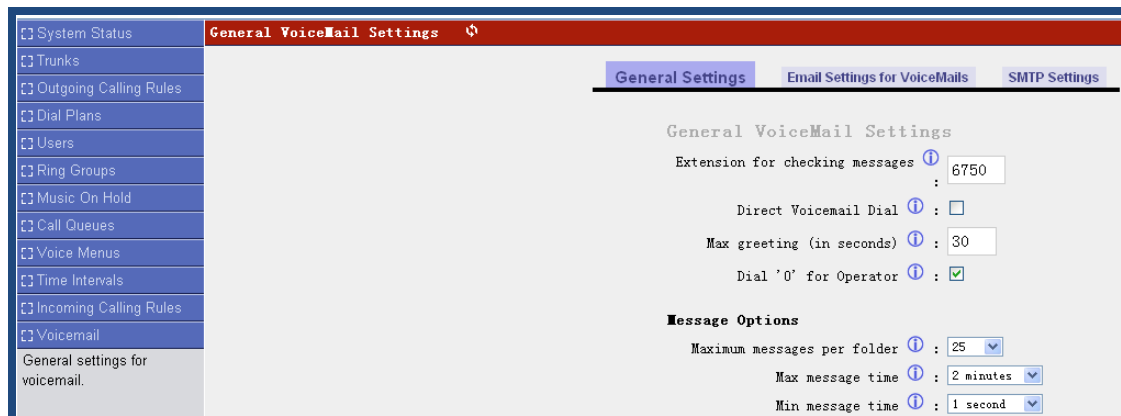
Destination: I select voicemenul, so the call will be ruled to voice menu.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

3.12 Voicemail

When you call someone who does not answer the call, you can leave a voice message for the called party if the called party supports voice mail.

Please select the **Voicemail** option from the vertical menu on the left of the main page, then you can get the following screen:



The screenshot shows the 'General VoiceMail Settings' page with a sidebar menu on the left and a main content area on the right.

General Settings

- Extension for checking messages : 6750
- Direct Voicemail Dial :
- Max greeting (in seconds) : 30
- Dial '0' for Operator :

Message Options

- Maximum messages per folder : 25
- Max message time : 2 minutes
- Min message time : 1 second

Click on **General Settings** button on the illustration above. You can see the following screen:

General Settings | **Email Settings for VoiceMails** | **SMTP Settings**

General VoiceMail Settings

Extension for checking messages ⓘ : 6750

Direct Voicemail Dial ⓘ :

Max greeting (in seconds) ⓘ : 30

Dial '0' for Operator ⓘ :

Message Options

Maximum messages per folder ⓘ : 25

Max message time ⓘ : 2 minutes

Min message time ⓘ : 1 second

Playback Options

Say message Caller-ID ⓘ :

Say message duration ⓘ :

Play envelope ⓘ :

Allow users to review ⓘ :

Extension for checking messages: when you dial 6750, you will hear the voice message other people left for you.

You can get information of parameters by putting your cursor on the ⓘ label. If you want to set voicemail function for the user, you have to enable voicemail component when you set up a user. Please refer to the following illustration:

Create New User
X

General :

Extension: ⓘ Name: ⓘ DialPlan: ⓘ

CallerID: ⓘ OutBound CallerID: ⓘ

Enable Voicemail for this User ⓘ

VoiceMail Access PIN code: ⓘ Mailbox: ⓘ Email Address: ⓘ

Technology

SIP ⓘ IAX ⓘ Analog Station: ⓘ flash ⓘ: rxflex ⓘ:

Codec Preference : First : Second : Third : Fourth : Fifth :

VoIP Settings

MAC Address : ⓘ Line Number : ⓘ SIP/IAX Password: ⓘ

NAT: ⓘ Can Reinvite: ⓘ DTMF Mode: ⓘ insecure: ⓘ

Other Options

3-Way Calling ⓘ In Directory ⓘ Call Waiting ⓘ CTI ⓘ Is Agent ⓘ

Enable Call Record ⓘ Pickup Group:

3.13 Conferencing

The conferencing function of Asterisk is similar to a Tele-conference call where multiple callers can call in and participate in a two-way conference like in a party room where everyone can talk and listen to one another or just to listen to a Tele-presentation.

Please select the **Conferencing** option from the vertical menu on the left of the main page, then you can get the following screen:

System Status
Manage Conference Rooms ⓘ

- System Status
- Trunks
- Outgoing Calling Rules
- Dial Plans
- Users
- Ring Groups
- Music On Hold
- Call Queues
- Voice Menus
- Time Intervals
- Incoming Calling Rules
- Voicemail
- Conferencing

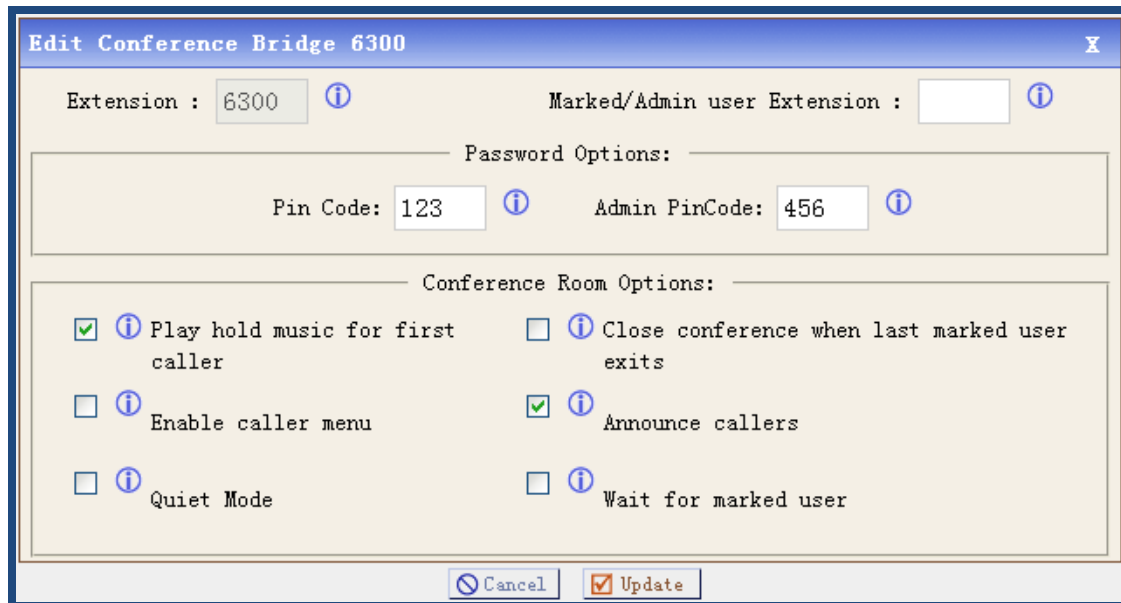
MeetMe conference bridging allows quick, ad-hoc conferences with or without security.


Manage Conference Rooms ⓘ
Conference Rooms

+ New Conference Bridge

No Conference rooms defined !!

Click on **New Conference Bridge** button on the illustration above. Below is what my conference configuration page looks like:



Naturally there are some options that you may wish to have for the conference room. They are entirely up to you. The main important things are for you to create the conference room number and the conference pin code for you to know how to enter into the conference. The rest of the fields are optional. You can get information of other parameters by putting your mouse on the  label.

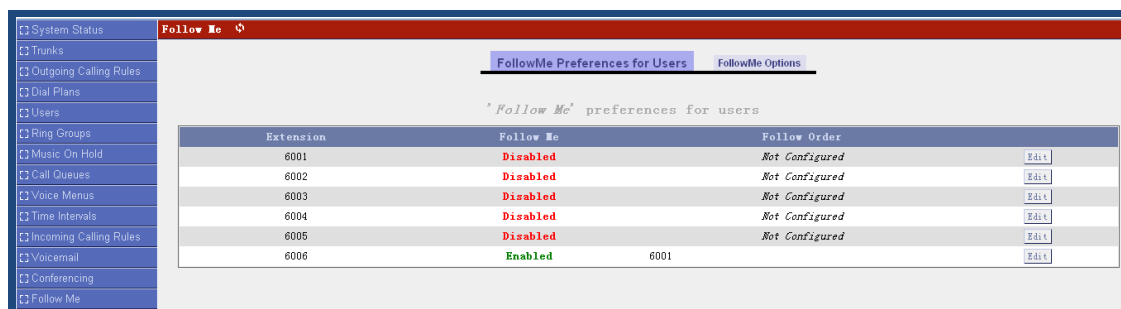
This conference number is 6300, the Pin Code is 123 for common member, the Pin Code is 456 for Admin. So you have to dial 6300 then, press the Pin Code, if you want to enter the conference. I enable the play hold music for option and announce callers option, so the first member who enter the conference will listen to a music and the online members will be informed when someone enter the conference.

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

3.14 Follow Me

If A calls B, B does not answer, the call will be transferred to C who is set up in follow me.

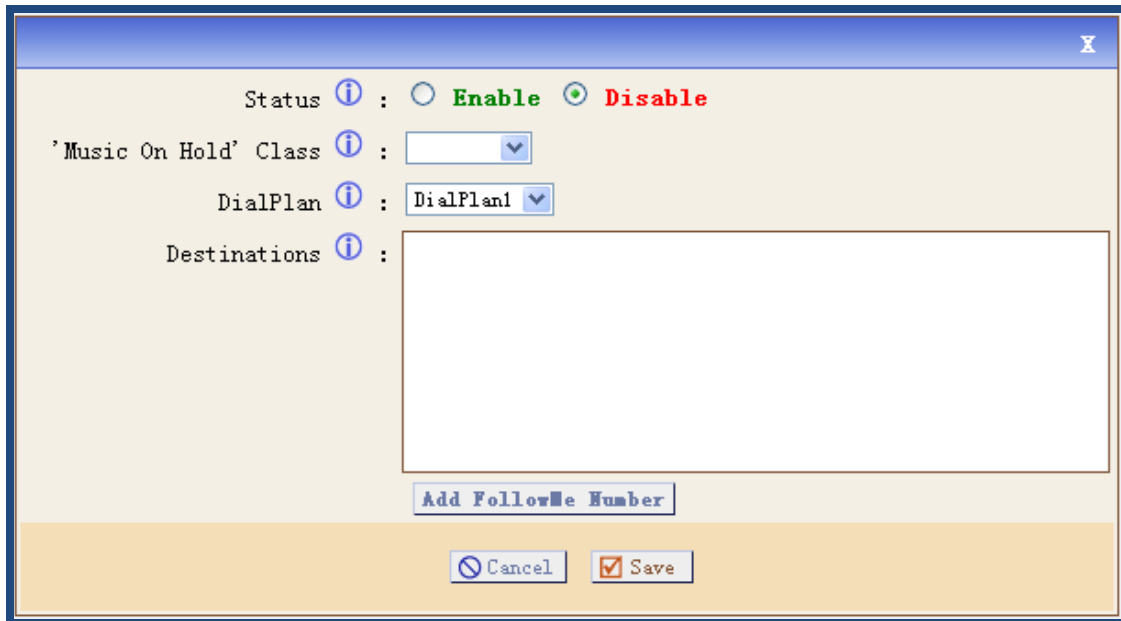
Please select the **Follow Me** option from the vertical menu on the left, then you can get the following screen:







Extension	Follow Me	Follow Order	
6001	Disabled	Not Configured	Edit
6002	Disabled	Not Configured	Edit
6003	Disabled	Not Configured	Edit
6004	Disabled	Not Configured	Edit
6005	Disabled	Not Configured	Edit
6006	Enabled	6001	Edit

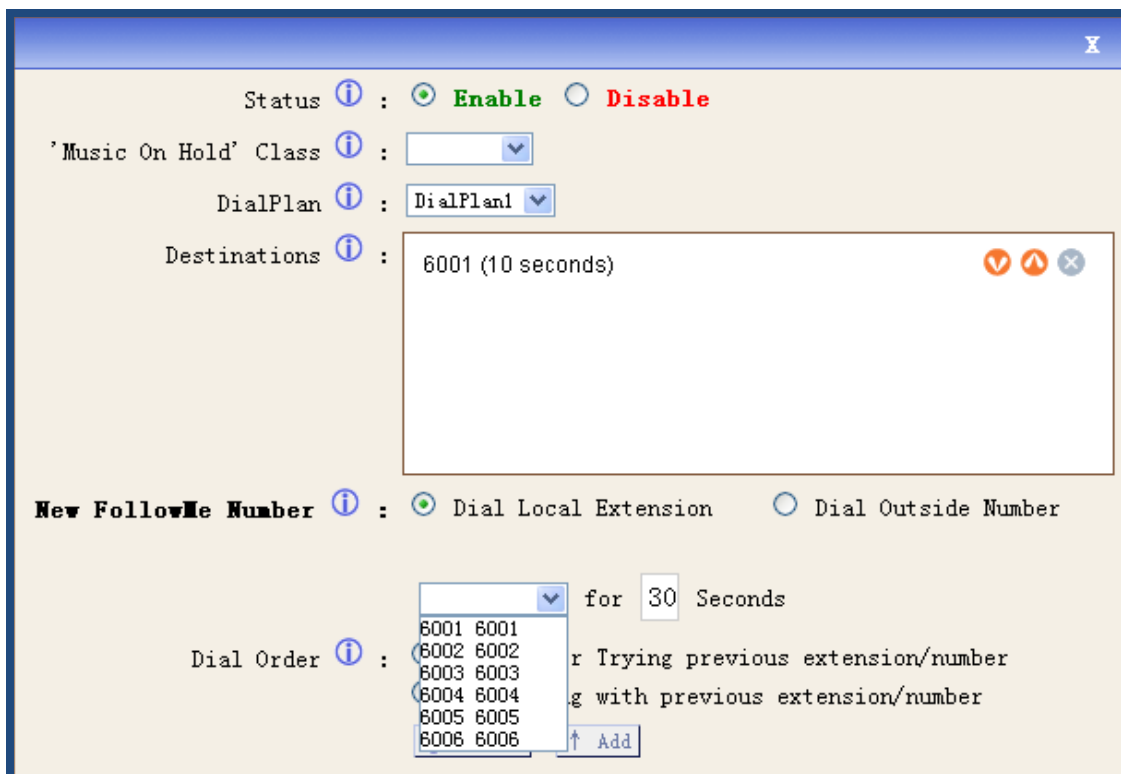
You can choose user for which you want to setup follow me function, Here taking the user 6006





for an example, click on the **edit** button at the same line as 6006, you can get the following screen:








Status  : **Enable** **Disable**
 'Music On Hold' Class  :
 DialPlan  :
 Destinations  :

Select the **enable** status, and click on **Add FollowMe Number** button to add a destination phone.



Status  : **Enable** **Disable**
 'Music On Hold' Class  :
 DialPlan  :
 Destinations  :

6001 (10 seconds)   

New FollowMe Number  : **Dial Local Extension** **Dial Outside Number**
 Dial Order  :

for Seconds
 6001 6001
 6002 6002 r Trying previous extension/number
 6003 6003
 6004 6004 g with previous extension/number
 6005 6005
 6006 6006

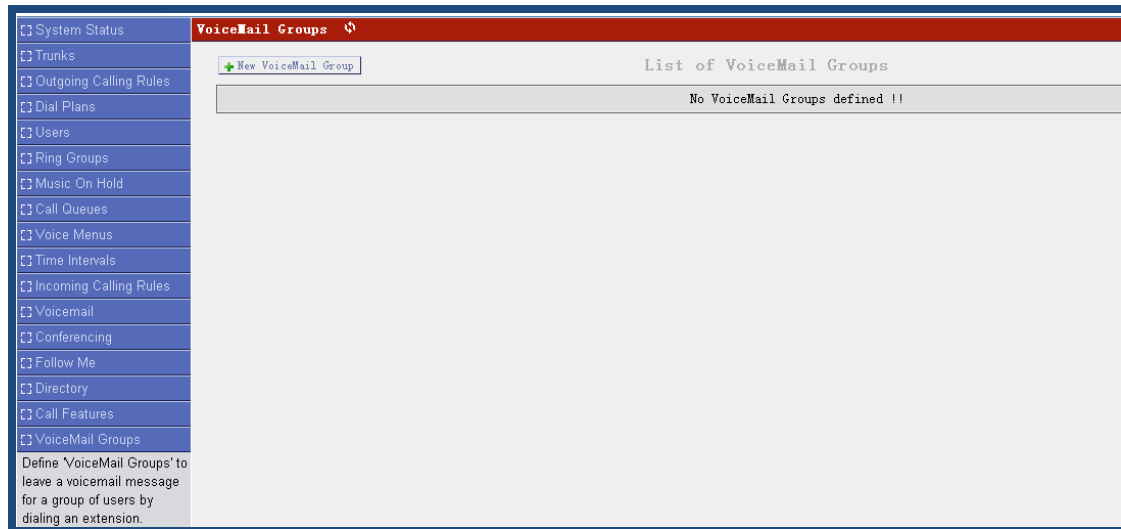
Click on **Dial Local Extension** and select 6001. Click on **Add** button and click on **Apply Changes** button in up right corner of the main page.

Through the above settings, someone calls 6006, but 6006 does not answer, the call will be transferred to 6001 automatically.

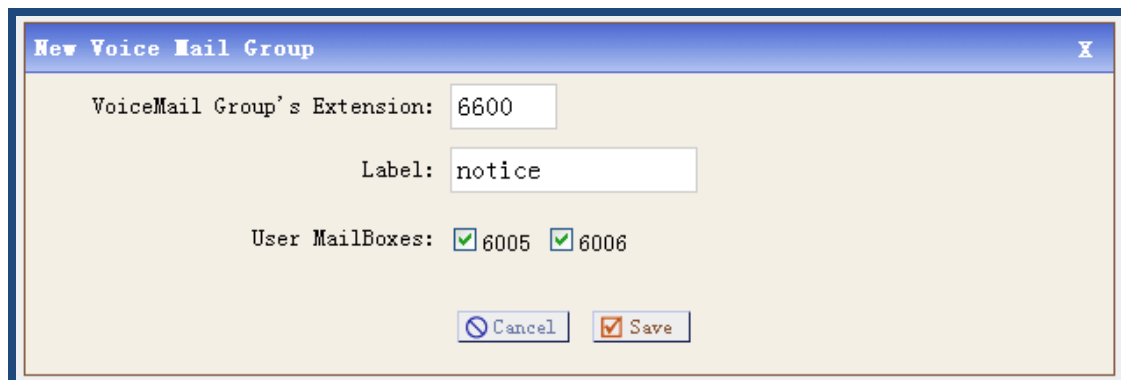
3.15 VoiceMail Groups

Define VoiceMail Groups to leave a voicemail message for a group of users by dialing an extension.

Please select the **VoiceMail Groups** option from the vertical menu on the left of the main page, then you can get the following screen:



Click on **New VoiceMail Group** button on the illustration above. Below is what my VoiceMail Group configuration page looks like:



From the above settings, I can dial 6600 to leave message for user 6005 and 6006.

3.16 Voice Menu Prompts

This component is used for recording custom voice menu.

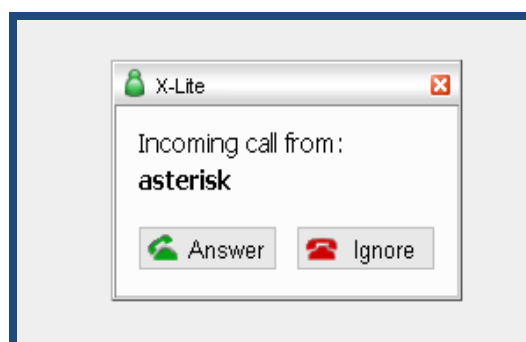
Please select the **Voice Menu Prompts** option from the vertical menu on the left of the main page, then you can get the following screen:



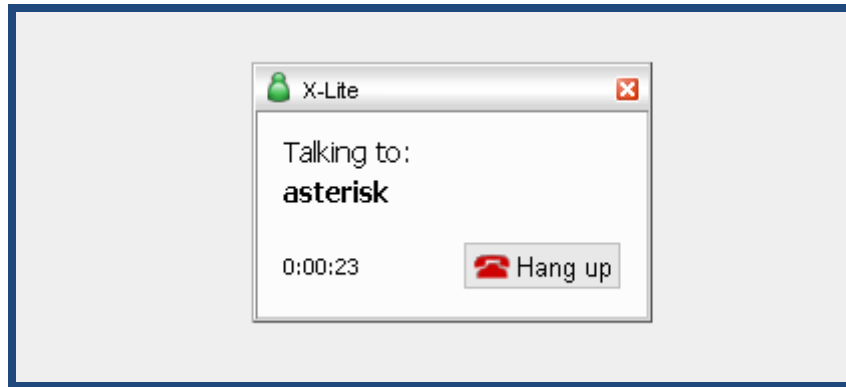
Click on **Record a new Voice Menu prompt** button on the illustration above. Below is what my Record a new Voice Menu prompt configuration page looks like:



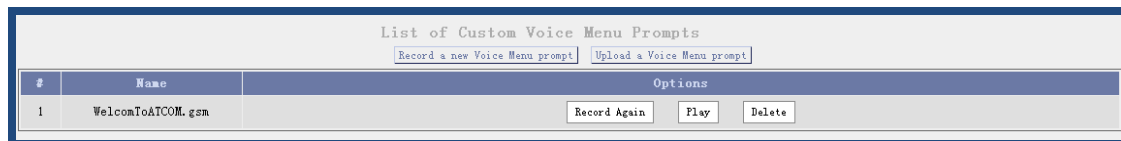
File Name: give a filename for the record sound file, here I give a name: WelcomToATCOM
Dial this User Extension to record a new voice: dial to a user, then the user pick up the phone and speak the voice menu which will be recorded. Here I select 6001 I set up before.
Click on **Record** button, the asterisk will call to 6001, 6001 will show like the following:



Click on **Answer** button, then you call speak and start to record what you say. The following illustration will be presented after you click on the **Answer** button.



When you want to finish the record, please click on **Hang up** button.

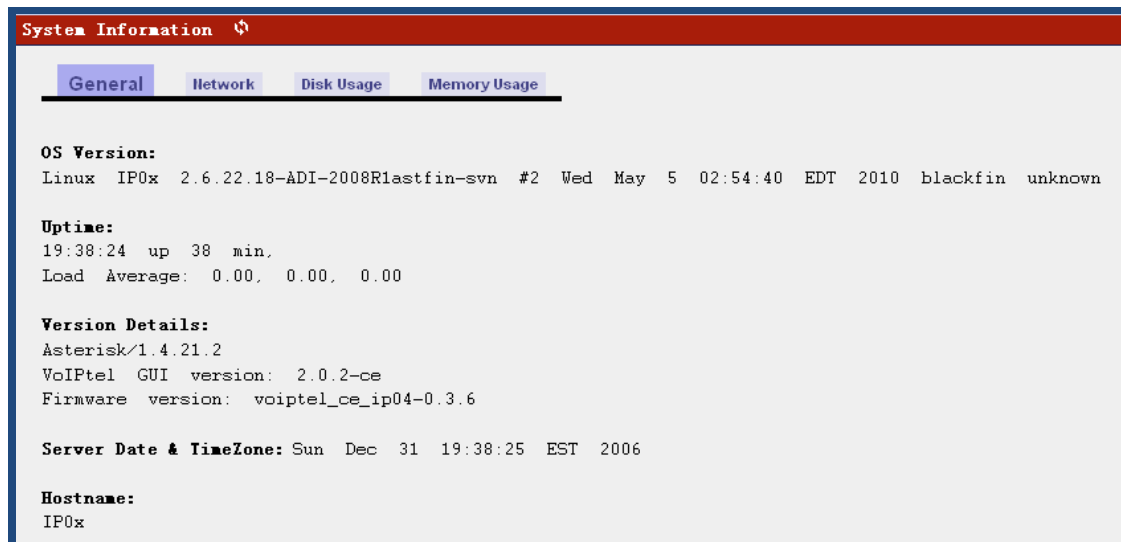


After you finish the recording, please refresh you webpage, and enter into **voice menu prompts** component again, you can see you have had a sound file like the above.

3.17 System Info

From this component, you can easily get the basic system information, it includes:

General Information:



The latest version of IP04 is voiptel_ce_ip04-0.3.6. You can see the version that you are using from **Version Details** in the above illustration.

Network Information:

System Information

General
Network
Disk Usage
Memory Usage

```

eth0      Link encap:Ethernet  HWaddr 00:09:45:54:49:7E
          inet addr:192.168.1.184  Bcast:192.168.1.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:9552 errors:0 dropped:0 overruns:0 frame:0
          TX packets:9427 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1187671 (1.1 MiB)  TX bytes:6930187 (6.6 MiB)
          Interrupt:48

eth0:9    Link encap:Ethernet  HWaddr 00:09:45:54:49:7E
          inet addr:172.31.255.254  Bcast:172.31.255.255  Mask:255.255.255.252
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          Interrupt:48

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:44 errors:0 dropped:0 overruns:0 frame:0
          TX packets:44 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:4607 (4.4 KiB)  TX bytes:4607 (4.4 KiB)
          
```

Disk Usage Information:

System Information

General
Network
Disk Usage
Memory Usage

Disk Usage:

Filesystem	1k-blocks	Used	Available	Use%	Mounted on
/dev/mtdblock0	14327	13874	453	97%	/
/dev/mtdblock2	253952	75960	177992	30%	/persistent

Memory Usage Information:

System Information

General
Network
Disk Usage
Memory Usage

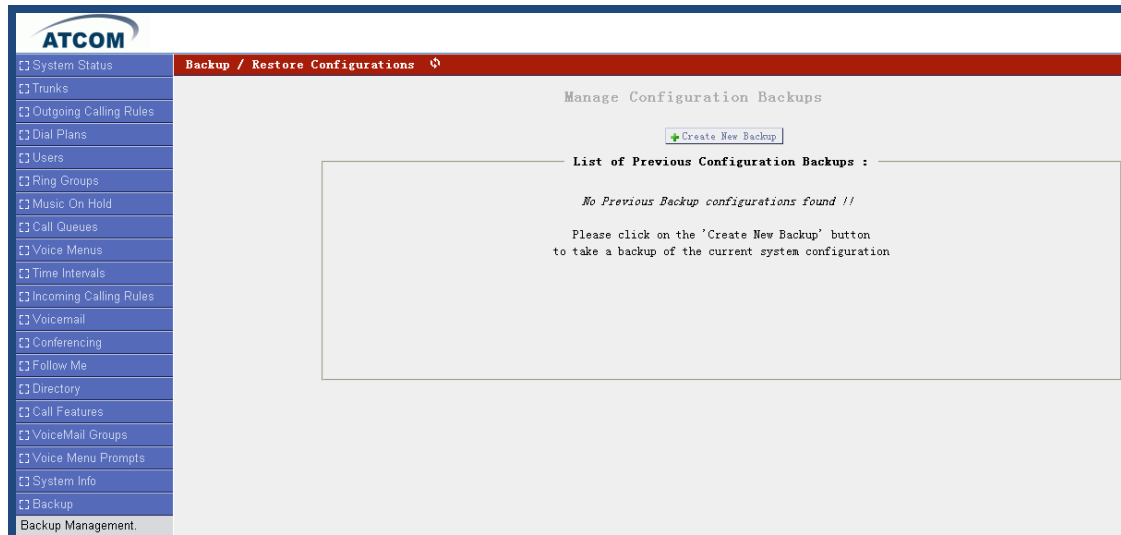
Memory Usage:

	total	used	free	shared	buffers
Mem:	45928	41504	4424	0	812

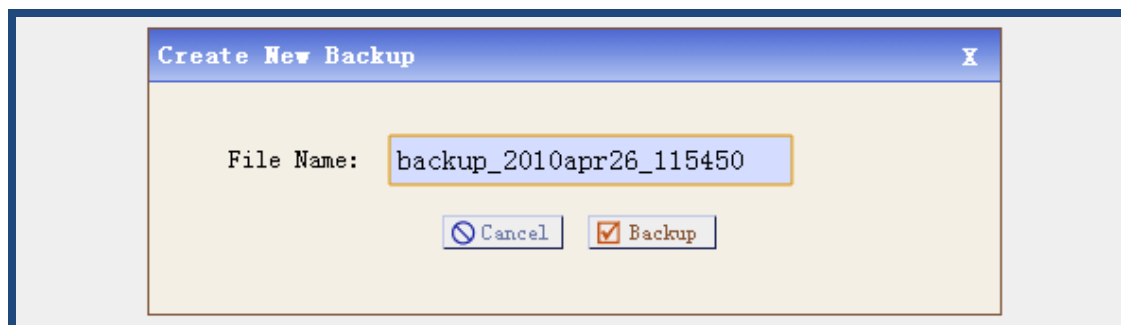
3.18 Backup

Backup and Restore are two of the mandatory functions of any application. IP04 is no exception. Customers can backup all the files under the /etc/asterisk/ directory and restore them.

Please select the **Backup** option from the vertical menu on the left of the main page, then you can get the following screen:

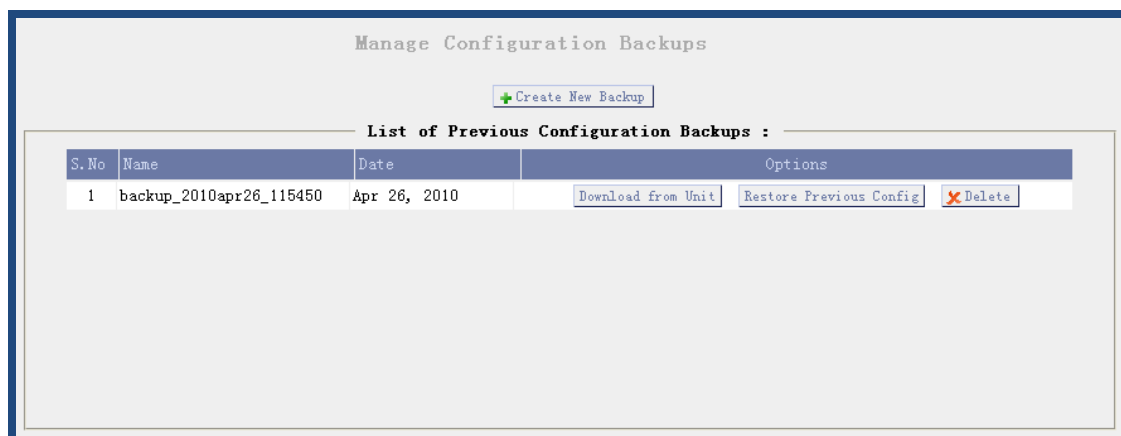


Click on **Create New Backup** button on the illustration above, you can get the following illustration:



File Name: give a file name for the backed up file.

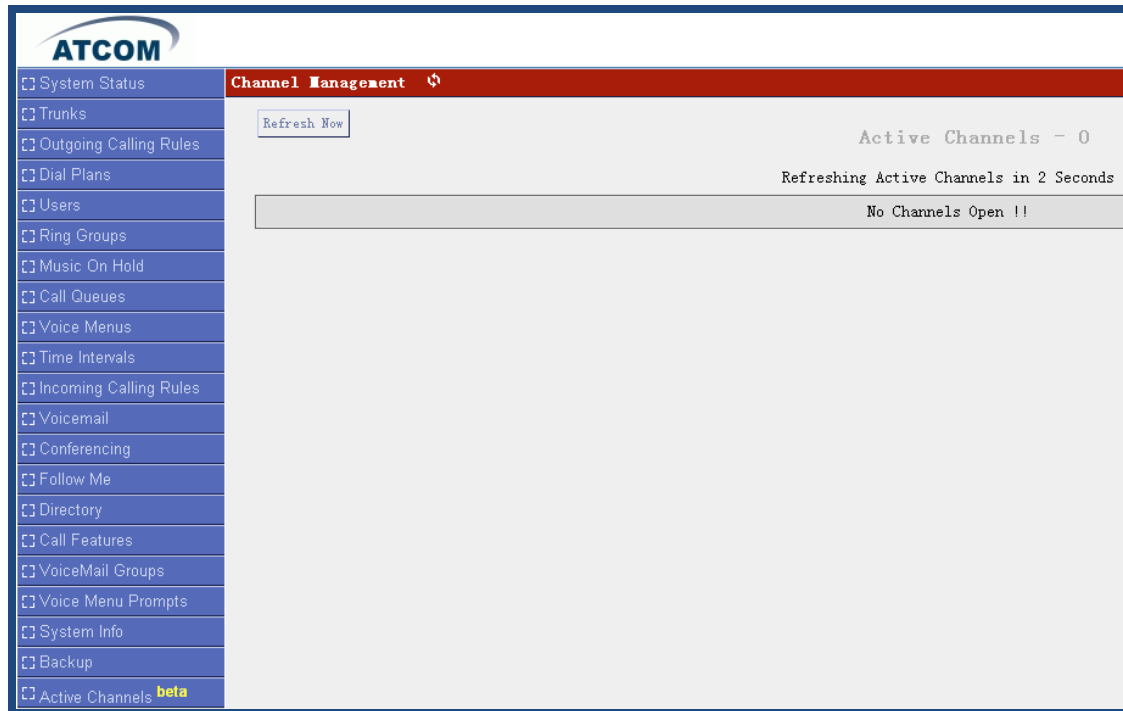
Click on **Backup** button, once the backup process is completed, you will see a screen with the backup filename displayed in illustration below.



Backup itself is not useful if it cannot be restored, IP04 also has this function. This is a very simple procedure. All you need to do is to click on the **Restore Previous Config** option.

3.19 Active Channels

The channels which are in communication status will be displayed in this component. Please select the **Active Channels** option from the vertical menu on the left, then you can get the following screen:



Here my IP04 is using 2,3,4 channels, so I get the following information :

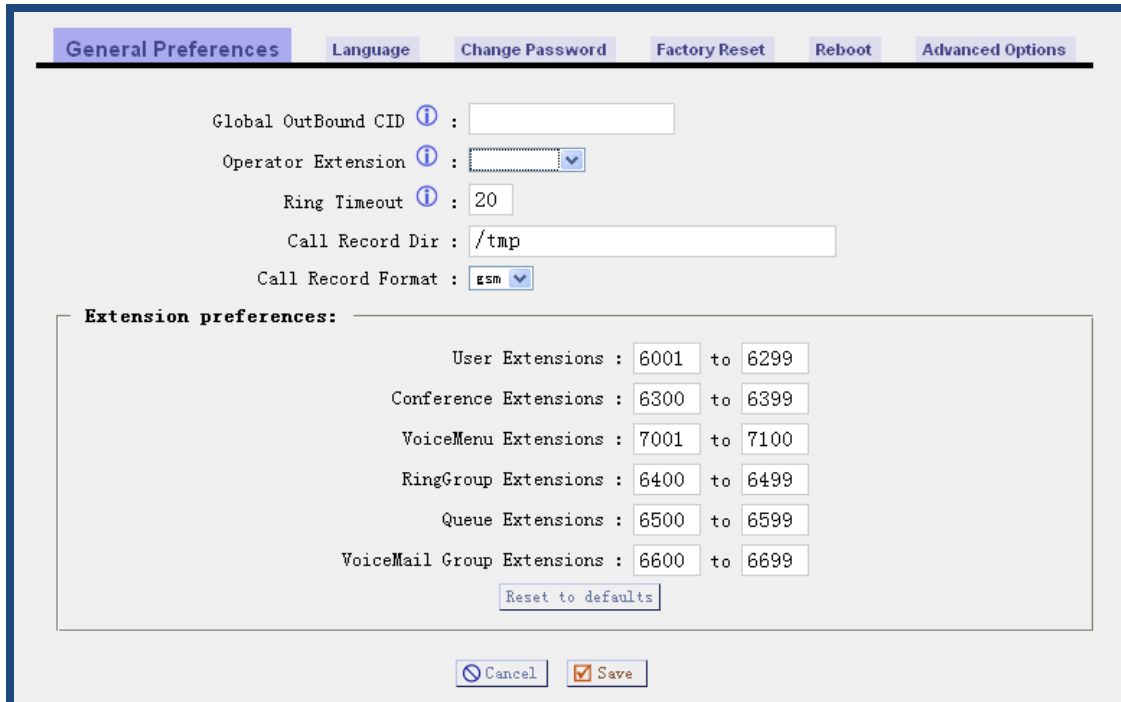


3.20 Options

This component is used for administrator to manage the system, it includes the following modules:

- General Preferences
- Language
- Change Password
- Factory Reset
- Reboot
- Advanced Options

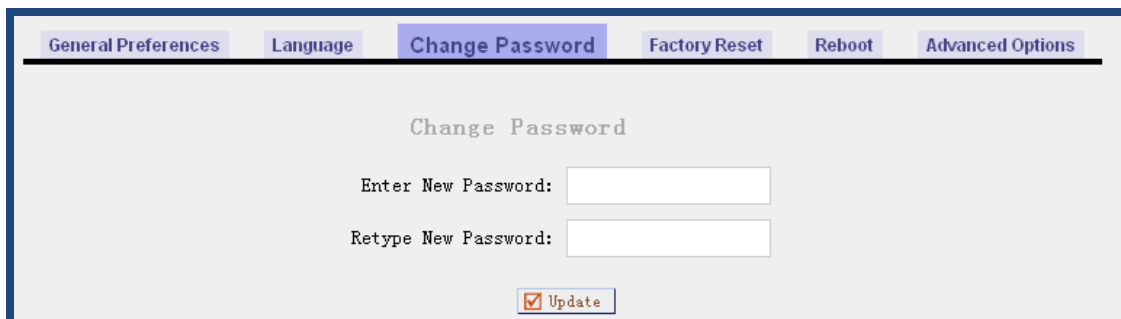
General Preferences: you can set up a user to be the operator and the range of extension number for different types' extensions like the following screen:



Language: change the sound file language in which they play.

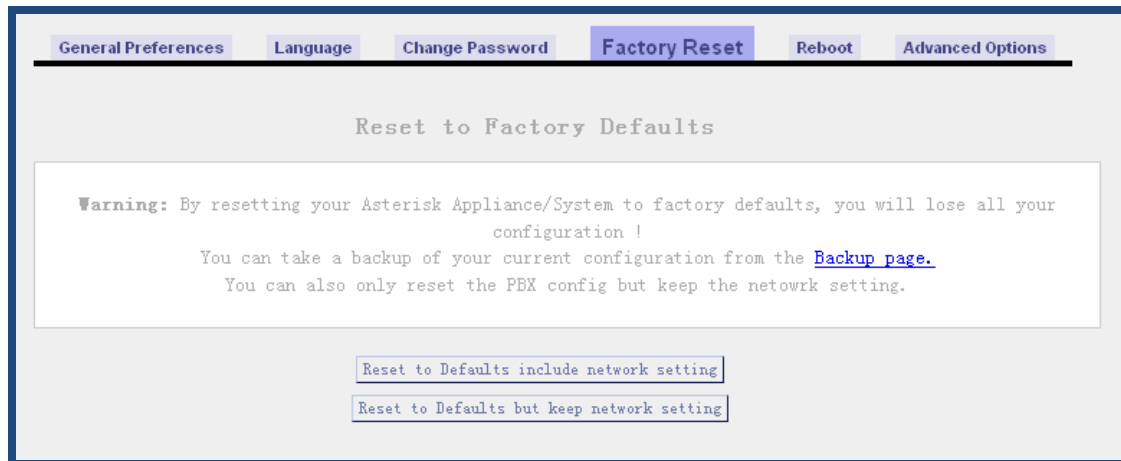


Change Password: it is used for customers to change the admin password, click on the **Change Password** button, the following illustration will be presented below:



After inputting your new password, please click on **Update** button, then click on **Apply Changes** button on the up right corner of the main page.

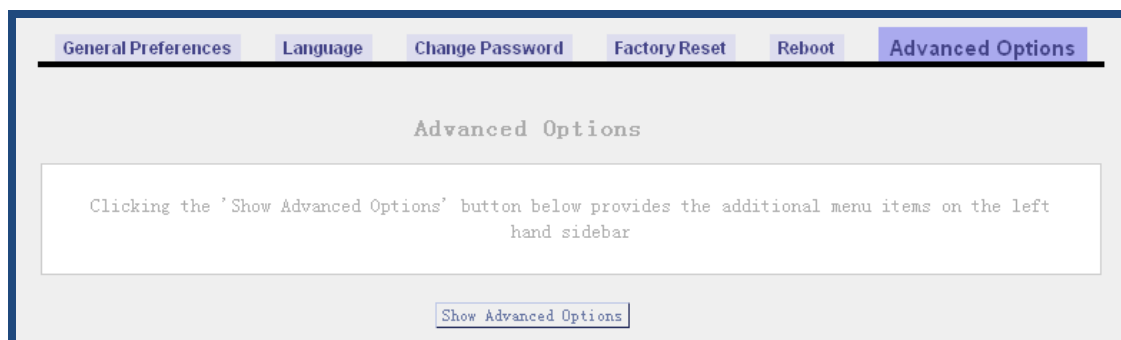
Factory Reset: it will help you to recover to the default factory settings. Click on **Factory Reset** button, the following illustration will be presented below:



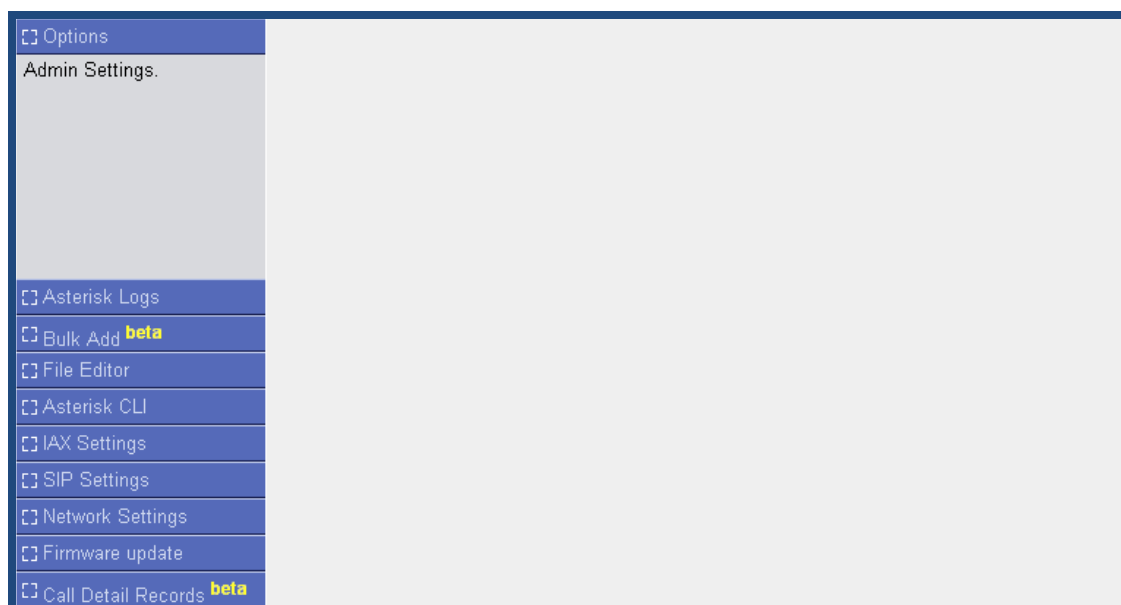
Please click on **Reset to Defaults** button to recover to default factory setting, then click on **Apply Changes** button on the up right corner of the main page.

Reboot: you can click on **Reboot** button → **Reboot Now** button to reboot your system.

Advanced Options: in default, IP04 web page hides several advanced options in the vertical menu on the left, if you need to use them, you have to display the options by clicking on **Show Advanced Options** in the following illustration:



After click on **Show Advanced Options** in the illustration above, you can see the advanced options in the vertical menu on the left of the main page like the following:

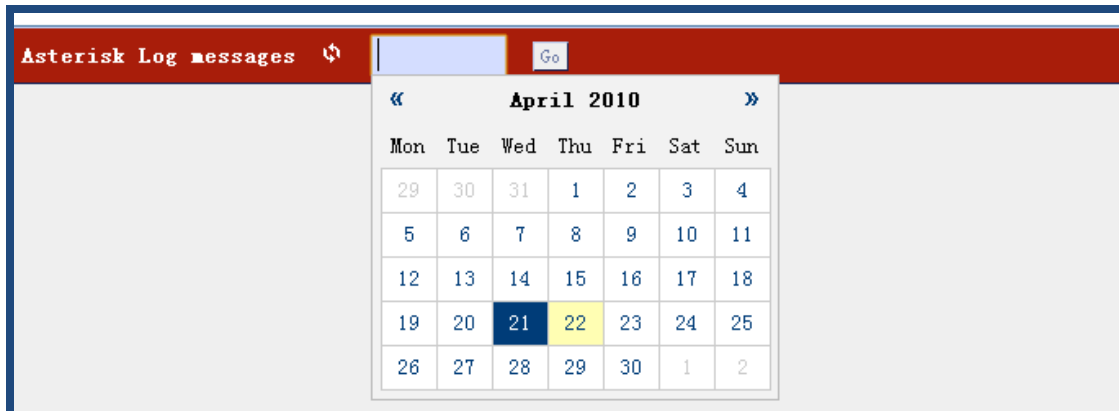


3.21 Asterisk Logs

After click on **Options→Advanced Options→Show Advanced Options**, please select the **Asterisk Logs** option from the vertical menu on the left of the main page, then you can get the following screen:



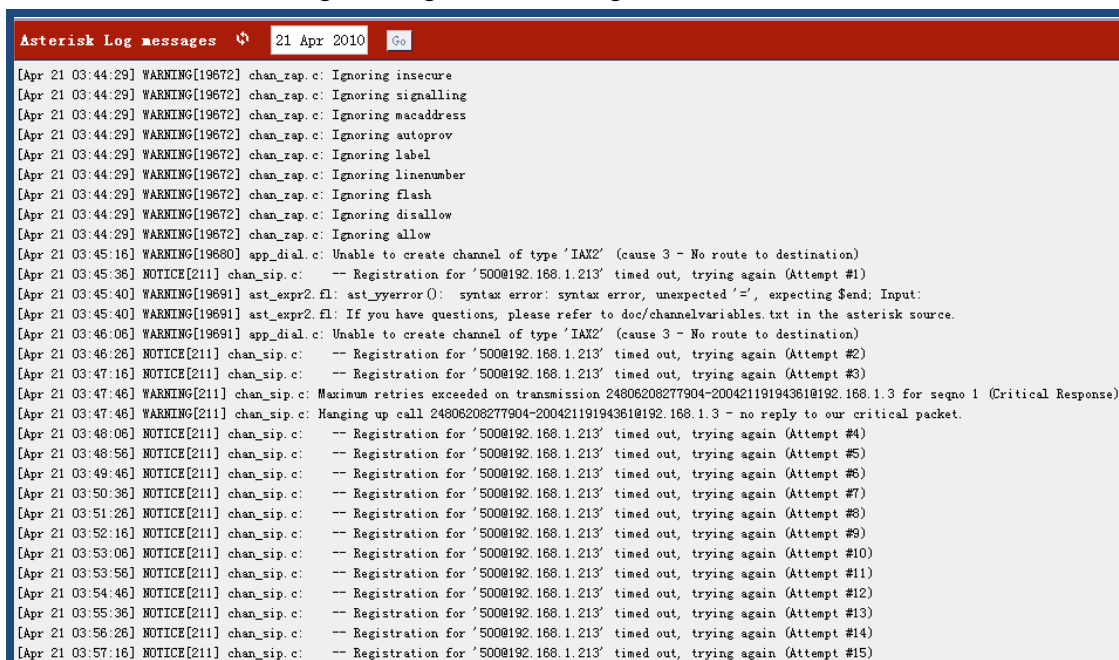
Click on the textbox, you can get the following screen:



You can see a date table, and you can select the log to watch by clicking on the date. After choosing the date, please click on **Go** button, you can see the asterisk log of the day you choosed. Here I need to see the asterisk log of April 21st,2010, I click on 21 in the date table, I get the following screen:



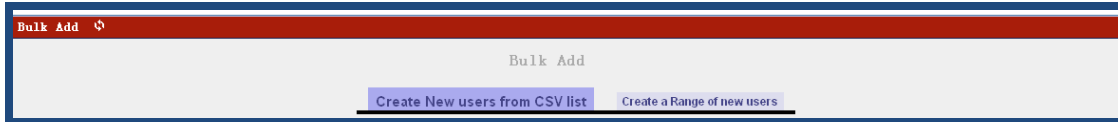
I click on **Go** button, then I get the log in the following screen:



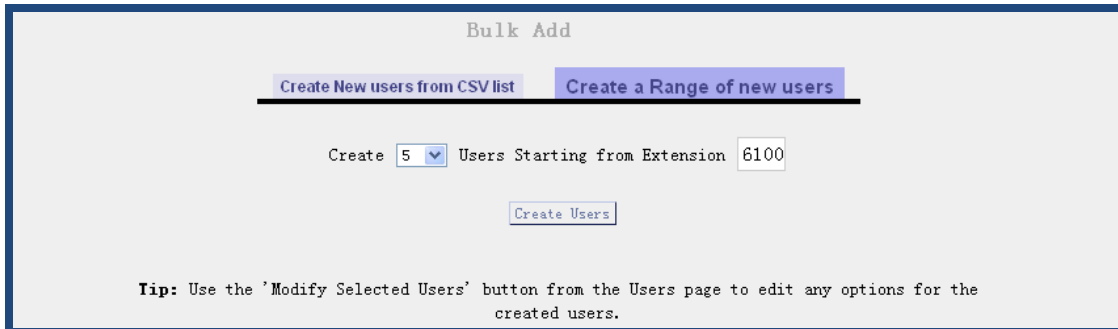
3.22 Bulk Add

Using bulk add, you can add multi-users one time. You can define the number of the users you want to create.

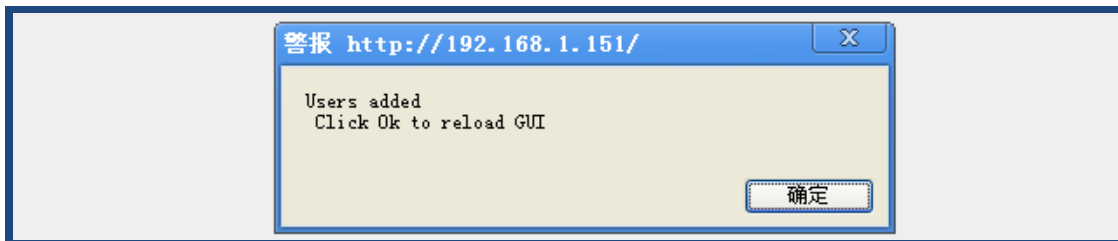
After click on **Options**→**Advanced Options**→**Show Advanced Options**, please select the **Bulk Add** option from the vertical menu on the left, then you can get the following screen:



Click on the **Create a Range of new users** button in the illustration above, the following screen is where you create bulk users.



Here I want to create five users, and the extensions starts from 6100, so I select 5 in the **Create** drop-down list, and I set 6100 in the textbox of **User Starting from Extension**.



At last, click on **确定** button in the pop-up screen, then click on **Apply Changes** button on the up right corner of the main page.

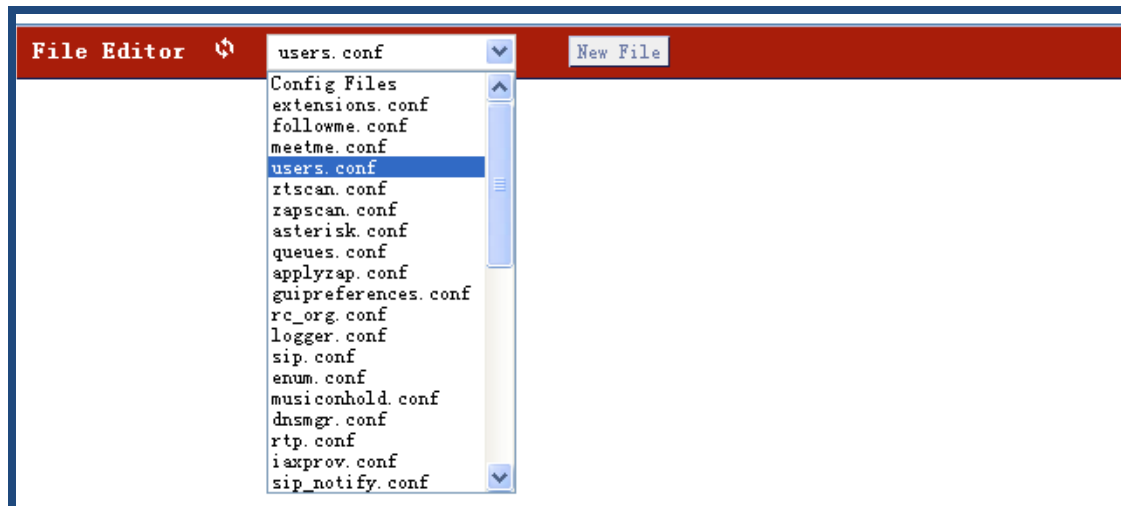
Please select the **System Status** option in the vertical menu on the left of the main page, you can see you have added five users: 6100, 6101, 6102, 6103, 6104.

3.23 File Editor

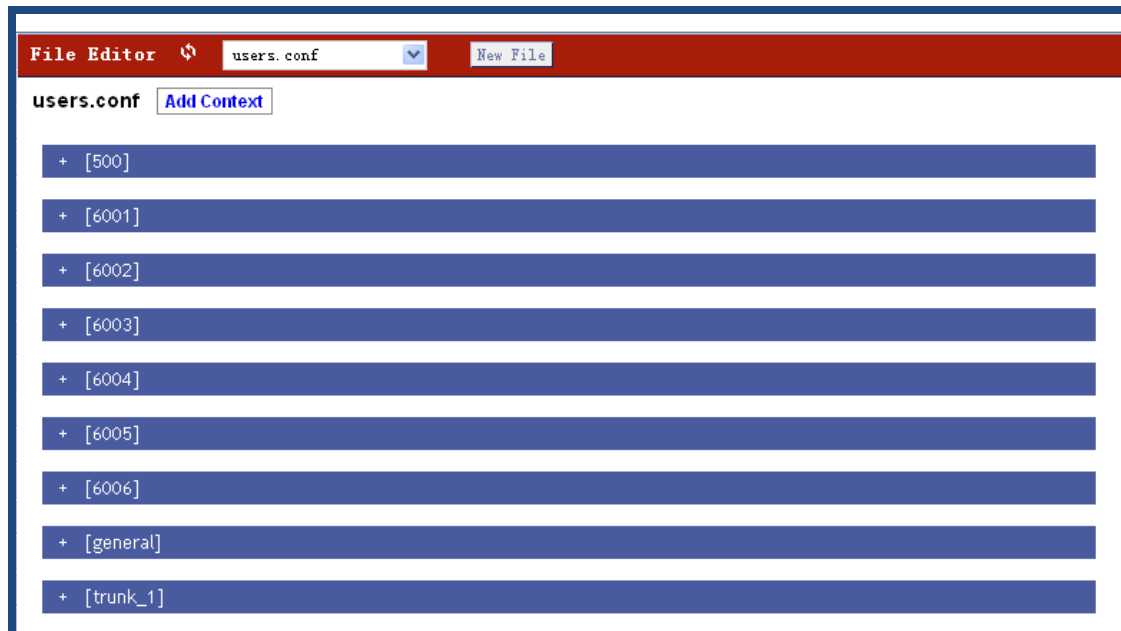
After click on **Options**→**Advanced Options**→**Show Advanced Options**, please select the **File Editor** option from the vertical menu on the left, then you can get the following screen:



From the drop-down list of config files, you can select the file you want to edit or read.



Here I select users.conf file, so I can see the file and edit to meet my requirement.



3.24 Asterisk CLI

These are some of the available CLI commands that can be executed from the console, you can input the asterisk CLI commands from the web page directly.

After click on **Options→Advanced Options→Show Advanced Options**, please select the **Asterisk CLI** option from the vertical menu on the left, then you can get the following screen:

```

Asterisk CLI> help
Command>help

! Execute a shell command
abort halt Cancel a running halt
agent logoff Sets an agent offline
agent show Show status of agents
agent show online Show all online agents
agi debug Enable AGI debugging
agi debug off Disable AGI debugging
agi dumhtml Dumps a list of agi commands in html format
agi show List AGI commands or specific help
cdr status Display the CDR status
core set debug channel Enable/disable debugging on a channel
core set debug Set level of debug chattiness
core set debug off Turns off debug chattiness

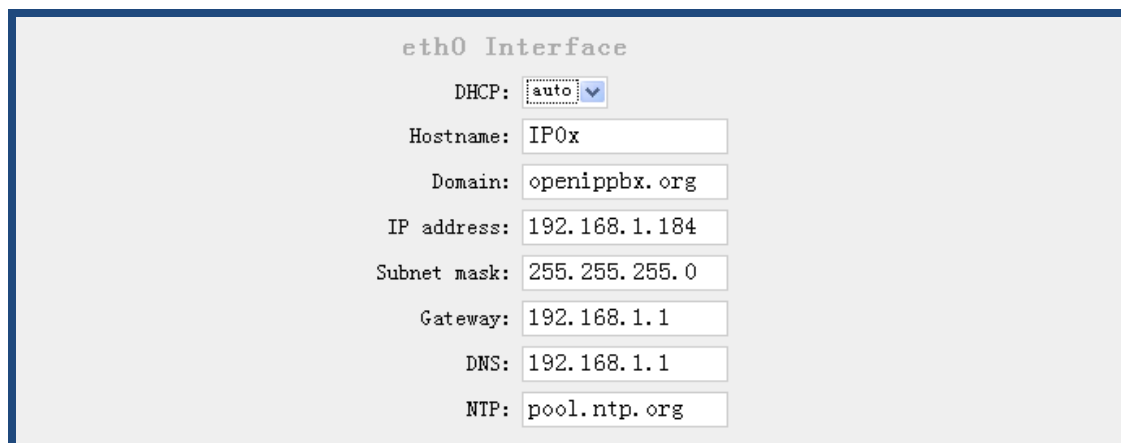
```

Here I input help command in the textbox, so I can get all the command which I can use in CLI mode.

3.25 Network Settings

In order to give a static and permanent IP address for IP-04, you have to set it in web GUI. After you enter into the web GUI of IP-04, you can try to configure IP address according to the following steps:

After click on **Options**→**Advanced Options**→**Show Advanced Options**, please select **Network Settings** option from the vertical menu on the left of main page, the following screen is where you configure the network:



eth0 Interface

DHCP:

Hostname:

Domain:

IP address:

Subnet mask:

Gateway:

DNS:

NTP:

In the drop-down list of **DHCP**, you can see the following three options:

1. DHCP: yes: IP04 will obtain the dynamic IP address from your router.
2. DHCP: auto: IP04 will use the static IP specified below and ping the default gateway. When there is no response from the default gateway, the IP-04 will switch to dynamically obtain the IP address from your router.
3. DHCP: no: IP04 will use the static IP address set below.

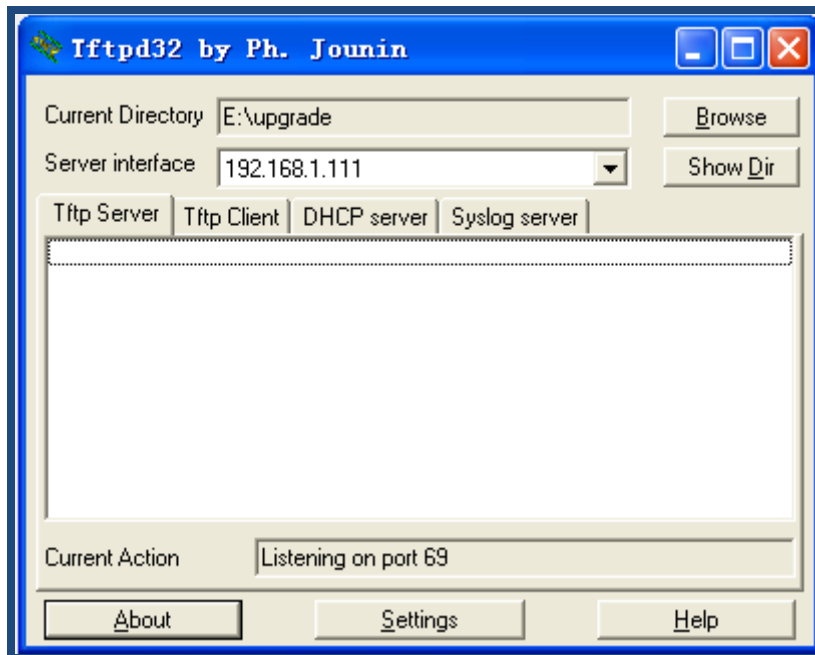
If you want to get static and permanent IP address, please do not select “yes”, after configure other parameters, please click “save” in the bottom of your page to save your setting.

3.26 Firmware Update

You can update to the latest version for IP04 by TFTP.

3.26.1 Download the Latest Firmware File and Set up TFTP Server.

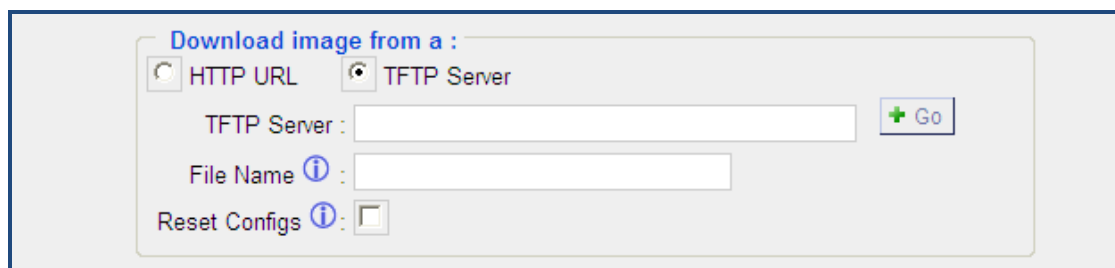
- 1) Download the md5 file from <http://www.atcom.cn/downloads/IPPBX/Firmware/IP04-v0.3.6-100506.md5>, then put it in your TFTP server root directory.
- 2) Run your TFTP server, and I set up it like the following:



“E:\upgrade” is the root directory of my TFTP server, “192.168.1.111” is the IP Address of my TFTP server.

3.26.2 Update for IP04 from Web Page

After click on **Options**→**Advanced Options**→**Show Advanced Options**, please select **Firmware update** option from the vertical menu on the left of main page, the following screen is where you update for IP04:



TFTP Server: enter the IP Address of your TFTP server in this textbox.

File Name: enter the update file name

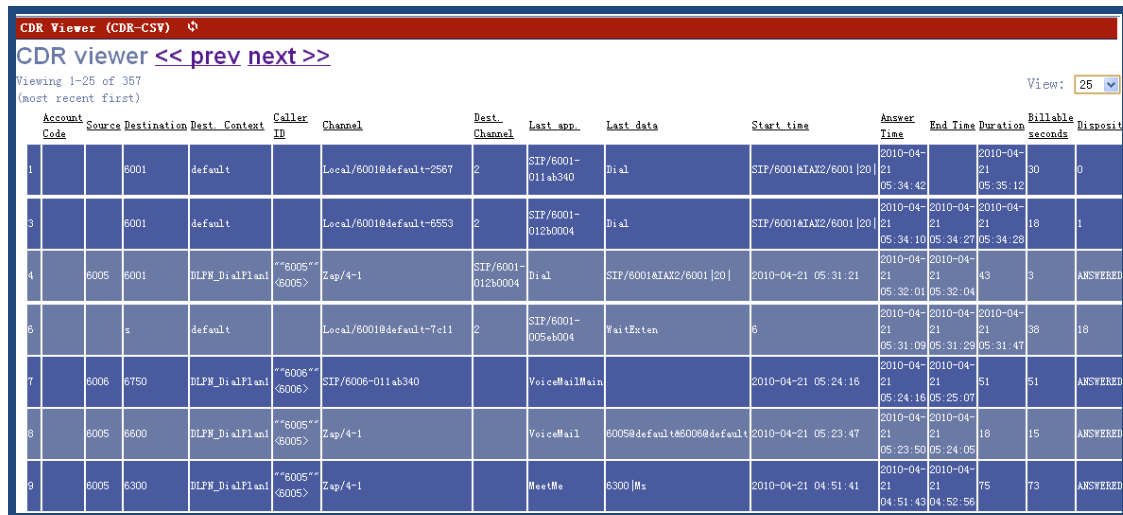
Reset Configs: if you choose reset Configs, it will delete all of your configuration you have done before.

After setting up, please click on **Go** button to update for IP04.

Power off and power on the IP-04, wait for several minutes. When the TEL port LEDs light up, it means the update is finished and you have the latest firmware.

3.27 Call Detail Records

This component provides the record of all incoming and outgoing calls including the channels used and duration of calls. After click on **Options→Advanced Options→Show Advanced Options**, please select the **Call Detail Records** option from the vertical menu on the left, then you can get the following screen:



CDR viewer << prev next >>

Viewing 1-25 of 357 (most recent first) View: 25

Account Code	Source	Destination	Dest_Context	Caller ID	Channel	Dest_Channel	Last_app.	Last_data	Start_time	Answer Time	End Time	Duration	Billable seconds	Disposit	
1		6001	default		Local/6001@default-2567	2	SIP/6001-011ab340	Dial	SIP/6001@AX2/6001 20	2010-04-21 05:34:42	2010-04-21 05:35:12	30	0		
3		6001	default		Local/6001@default-6553	2	SIP/6001-012b0004	Dial	SIP/6001@AX2/6001 20	2010-04-21 05:34:10	2010-04-21 05:34:27	18	1		
4	6005	6001	DLPN_DialPlan	6005	Zsp/4-1	SIP/6001-012b0004	Dial	SIP/6001@AX2/6001 20	2010-04-21 05:31:21	2010-04-21 05:32:01	2010-04-21 05:32:04	43	3	ANSWERED	
6		s	default		Local/6001@default-Tel1	2	SIP/6001-005el004	WaitExten	6	2010-04-21 05:31:09	2010-04-21 05:31:29	2010-04-21 05:31:47	38	18	
7	6006	6750	DLPN_DialPlan	6006	SIP/6006-011ab340		VoiceMailMain		2010-04-21 05:24:16	2010-04-21 05:24:16	2010-04-21 05:25:07	51	51	ANSWERED	
8	6005	6600	DLPN_DialPlan	6005	Zsp/4-1		VoiceMail	6005@default@6006@default	2010-04-21 05:23:47	2010-04-21 05:23:50	2010-04-21 05:24:05	18	15	ANSWERED	
9	6005	6300	DLPN_DialPlan	6005	Zsp/4-1		MeetMe	6300 Ms	2010-04-21 04:51:41	2010-04-21 04:51:43	2010-04-21 04:52:56	75	73	ANSWERED	

You can click on the **prev** to look up the last page for call record, and click on the **next** to look up the **next** page for call record, you can also set the value from the drop-down list of **view** which means how many calls will be displayed in one page.

Chapter 4 an Application Case of IP04

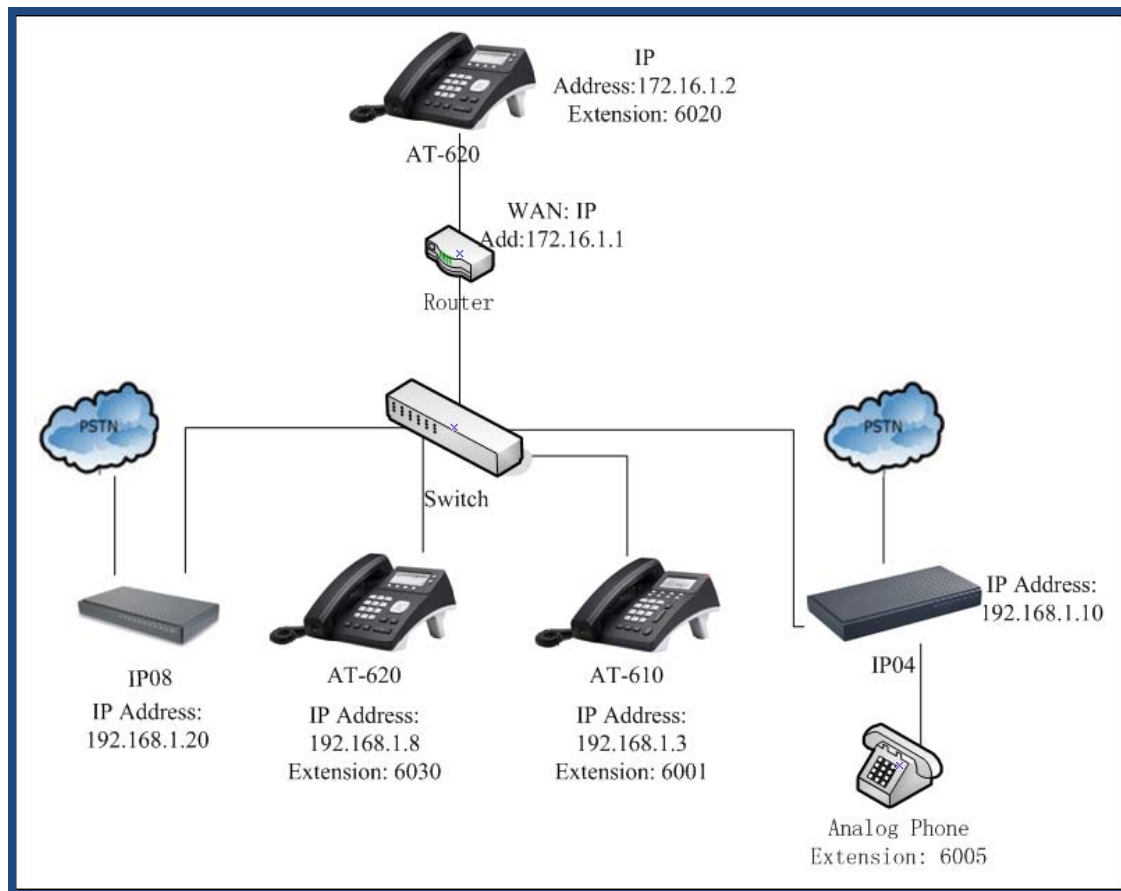


Figure: Network Topology

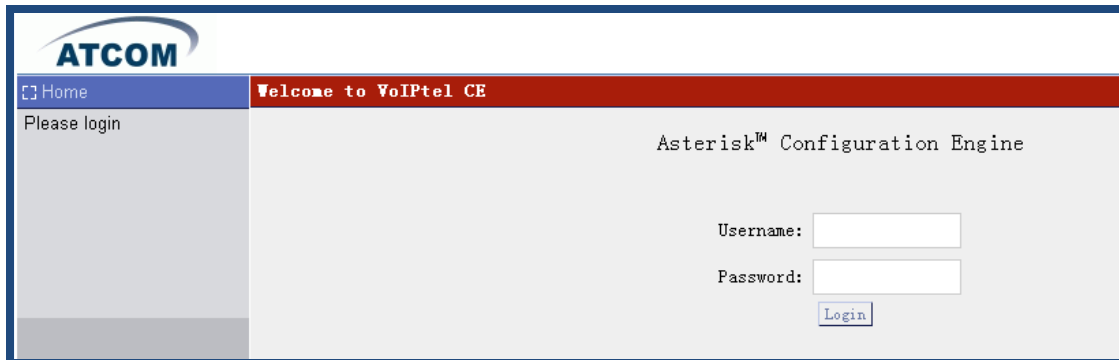
In the network topology above: user 6020 and user 6001 will be registered to IP04, user 6030 will be registered to IP04, analog phone 6005 is connected to FXS port of IP04. After configuration, it will realize the following function:

- 1) The internal user 6005 and user 6001 can call each other directly.
- 2) 6005 and 6001 can dial-out through IP04 to PSTN.
- 3) 6005 and 6001 can get incoming calls from PSTN by IP04.
- 4) 6030 can call-out to PSTN and get incoming call from PSTN through IP04.
- 5) User 6001 and 6030 can call each other through VoIP trunk, although they are registered to different IP PBX.
- 6) User 6020, 6005 and 6001 can call each other directly, although they are not in the same network segment.

4.1 How to Make Internal Calls through IP04

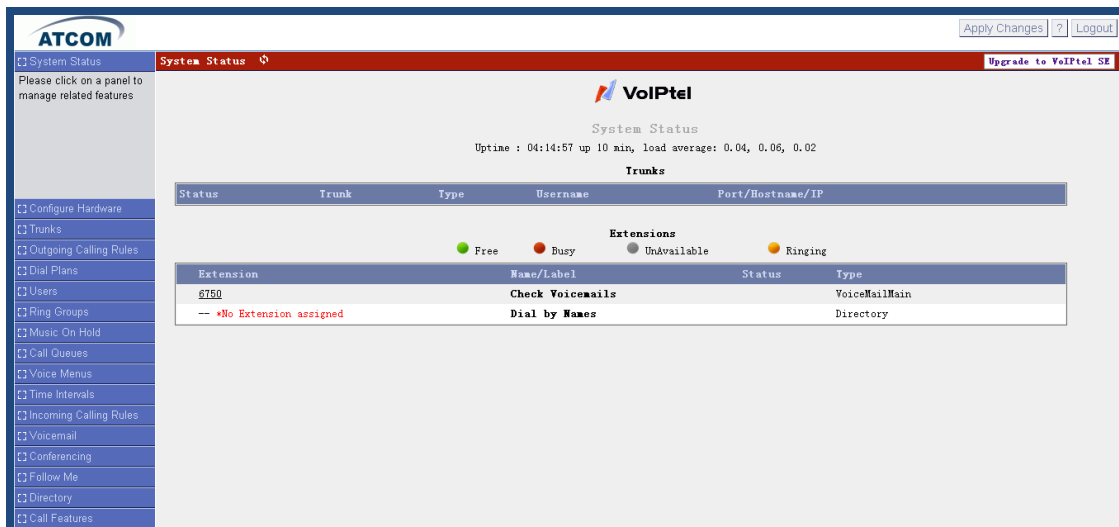
4.1.1 Access to the Web Page of IP04 by Browser

After connecting IP04 to LAN, please open your browser of PC with windows OS and input the IP Address of IP04 (the default IP address is 192.168.1.100), then you can get the following screen:



Please input the default Username: admin; Password: atcom in the presented screen above.

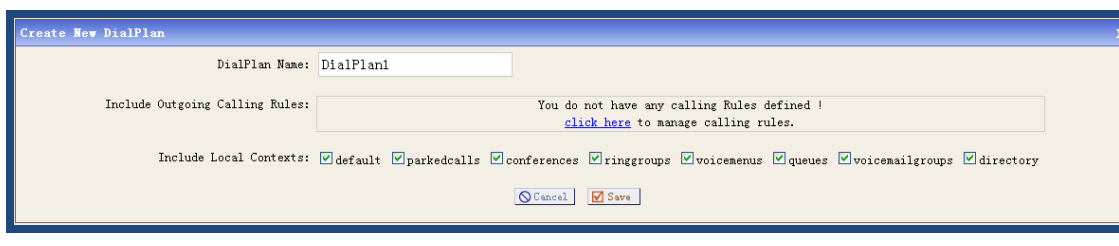
When you login successfully, you can get the configuration web page as below:



4.1.2 Add up Users from Web Page of IP04

1) Add up a DialPlan

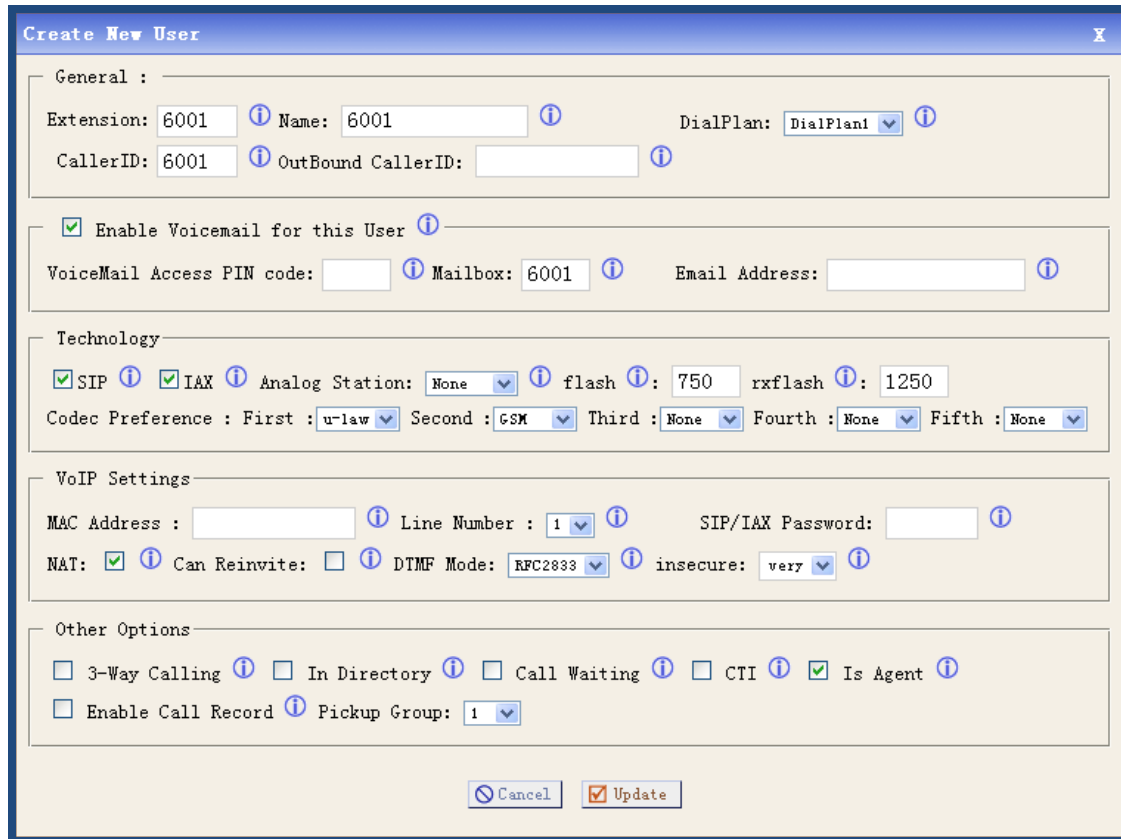
Before you add up user, you have to add up a DialPlan, please click on **Dial Plans**→**New DialPlan**, I add up a DialPlan like the following:



After configuring, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

2) Add up SIP user 6001

After logging into the web page of IP04, please click on **Users** → **Create New User**, I configure user 6001 like the following:



The screenshot shows a web form titled "Create New User" with the following sections and fields:

- General :**
 - Extension: 6001
 - Name: 6001
 - DialPlan: DialPlan
 - CallerID: 6001
 - OutBound CallerID: (empty)
- Enable Voicemail for this User**
 - VoiceMail Access PIN code: (empty)
 - Mailbox: 6001
 - Email Address: (empty)
- Technology**
 - SIP
 - IAX
 - Analog Station: None
 - flash: 750
 - rxflash: 1250
 - Codec Preference : First : u-law, Second : GSM, Third : None, Fourth : None, Fifth : None
- VoIP Settings**
 - MAC Address : (empty)
 - Line Number : 1
 - SIP/IAX Password: (empty)
 - NAT:
 - Can Reinvite:
 - DTMF Mode: RFC2833
 - insecure: very
- Other Options**
 - 3-Way Calling
 - In Directory
 - Call Waiting
 - CTI
 - Is Agent
 - Enable Call Record
 - Pickup Group: 1

Buttons:

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

3) Add up an Analog user 6005

After logging into the web page of IP04, please click on **Users** → **Create New User**, I add a user 6005 like the following:

Create New User
X

General :

Extension: Name: DialPlan:

CallerID: OutBound CallerID:

Enable Voicemail for this User

VoiceMail Access PIN code: Mailbox: Email Address:

Technology

SIP IAX Analog Station: flash: rxflash:

Codec Preference : First : Second : Third : Fourth : Fifth :

VoIP Settings

MAC Address : Line Number : SIP/IAX Password:

NAT: Can Reininvite: DTMF Mode: insecure:

Other Options

3-Way Calling In Directory Call Waiting CTI Is Agent


Enable Call Record Pickup Group:

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

Please pay attention to the **Technology** component, there is an **Analog Station** drop-down list, I choose port 1 in which port the analog phone plugs.

4.1.3 Register a SIP user 6001 in AT610

After logging into the web page of IP Phone AT-610, please select VOIP option, I register the 6001 as the following illustration:


IP Phone

[Current Status](#) [Network](#) [VOIP](#) [Advanced](#) [Dial-peer](#) [Config Manage](#) [Update](#) [System Manage](#)

Public SIP Configuration

Basic Setting			
Register status	Registered	Proxy Server Address	<input type="text"/>
Server Address	<input type="text" value="192.168.1.10"/>	Proxy Server Port	<input type="text"/>
Server Port	<input type="text" value="5060"/>	Proxy Username	<input type="text"/>
Account Name	<input type="text" value="6001"/>	Proxy Password	<input type="text"/>
Password	<input type="text" value="****"/>	Domain Realm	<input type="text"/>
Phone Number	<input type="text" value="6001"/>	Enable Register	<input checked="" type="checkbox"/>
Display Name	<input type="text" value="6001"/>		

After configuring, please click on the **APPLY** button.

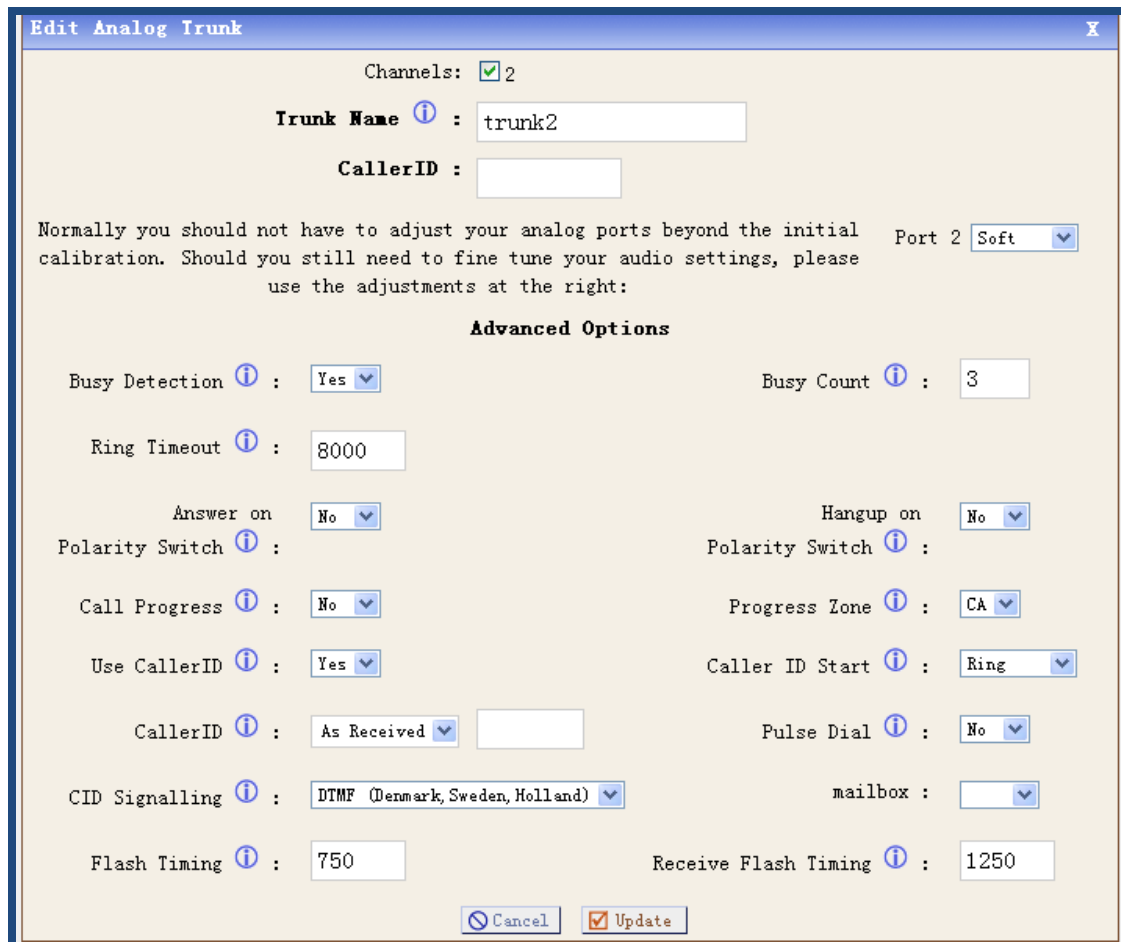
Now you can call each other directly between user 6001 and 6005.

4.2 How to Make a Call to Outside through PSTN

In order to dial out to PSTN with IP04, you need an analog trunk, an outgoing calling rule, a dial plan and a user. Here I will give the simple configuration steps which show how to make a call to outside, for detail configuration, you can refer to chapter 3.

4.2.1 Create an Analog Trunk

After logging into the web page of IP04, please click on **Trunks** → **Analog Trunks**, I configure an analog trunk like the following:



Channels: 2

Trunk Name ⓘ : trunk2

CallerID :

Normally you should not have to adjust your analog ports beyond the initial calibration. Should you still need to fine tune your audio settings, please use the adjustments at the right: Port 2

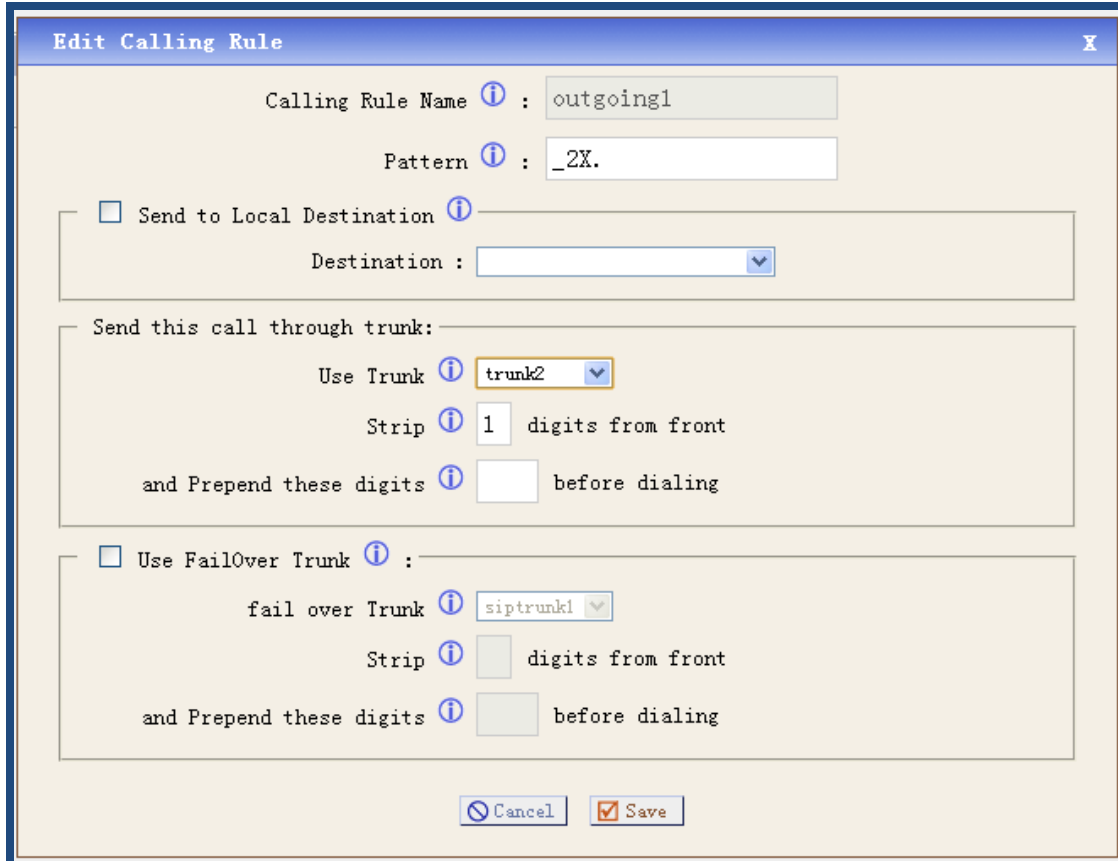
Advanced Options

Busy Detection ⓘ : <input type="text" value="Yes"/>	Busy Count ⓘ : <input type="text" value="3"/>
Ring Timeout ⓘ : <input type="text" value="8000"/>	
Answer on <input type="text" value="No"/>	Hangup on <input type="text" value="No"/>
Polarity Switch ⓘ : <input type="text" value="No"/>	Polarity Switch ⓘ : <input type="text" value="No"/>
Call Progress ⓘ : <input type="text" value="No"/>	Progress Zone ⓘ : <input type="text" value="CA"/>
Use CallerID ⓘ : <input type="text" value="Yes"/>	Caller ID Start ⓘ : <input type="text" value="Ring"/>
CallerID ⓘ : <input type="text" value="As Received"/>	Pulse Dial ⓘ : <input type="text" value="No"/>
CID Signalling ⓘ : <input type="text" value="DTMF (Denmark, Sweden, Holland)"/>	mailbox : <input type="text"/>
Flash Timing ⓘ : <input type="text" value="750"/>	Receive Flash Timing ⓘ : <input type="text" value="1250"/>

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

4.2.2 Create an Outgoing Calling Rule

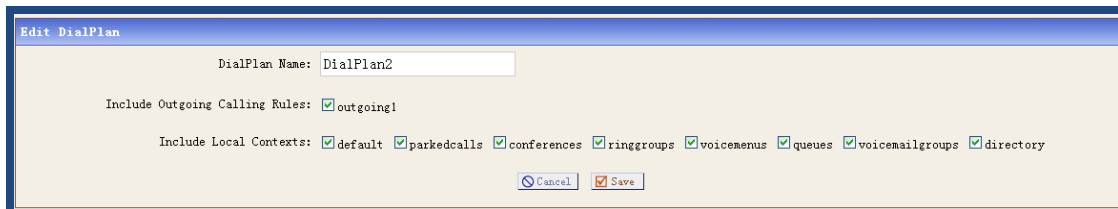
After logging into the web page of IP04, please click on **Outgoing Calling Rules**→ **New Calling Rule**, I configure an outgoing calling rule like the following:



At last, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

4.2.3 Create a Dial Plan

After logging into the web page of IP04, please click on **Dial Plans**→ **New DialPlan**, I configure a dial plan like the following:



At last, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

4.2.4 Create a User

I will use the user 6001 I created before, here I need to reselect a dial plan for 6001, here I need to use DialPlan2, so I select DialPlan2 in the DialPlan drop-down list.

Now I can call out with prefix 2, if the caller number is 10086, I will dial 210086.

4.3 How to Get an Incoming Call from outside

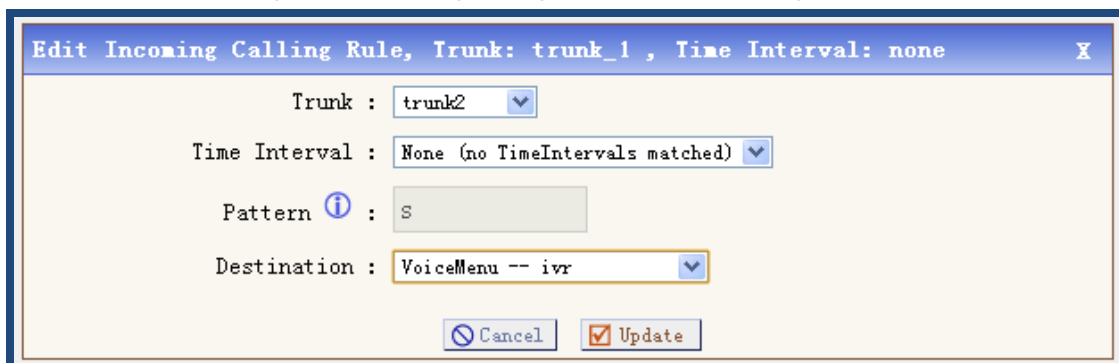
In order to get an incoming call from outside with IP04, you need an analog trunk, an incoming calling rule, a destination (here I use IVR). Here I will give the simple configuration steps which show how to get an incoming call from outside, for detail configuration, you can refer to chapter 3.

4.3.1 Create an Analog Trunk

I use the trunk2 I created in 4.2.1

4.3.2 Create an Incoming Calling Rule

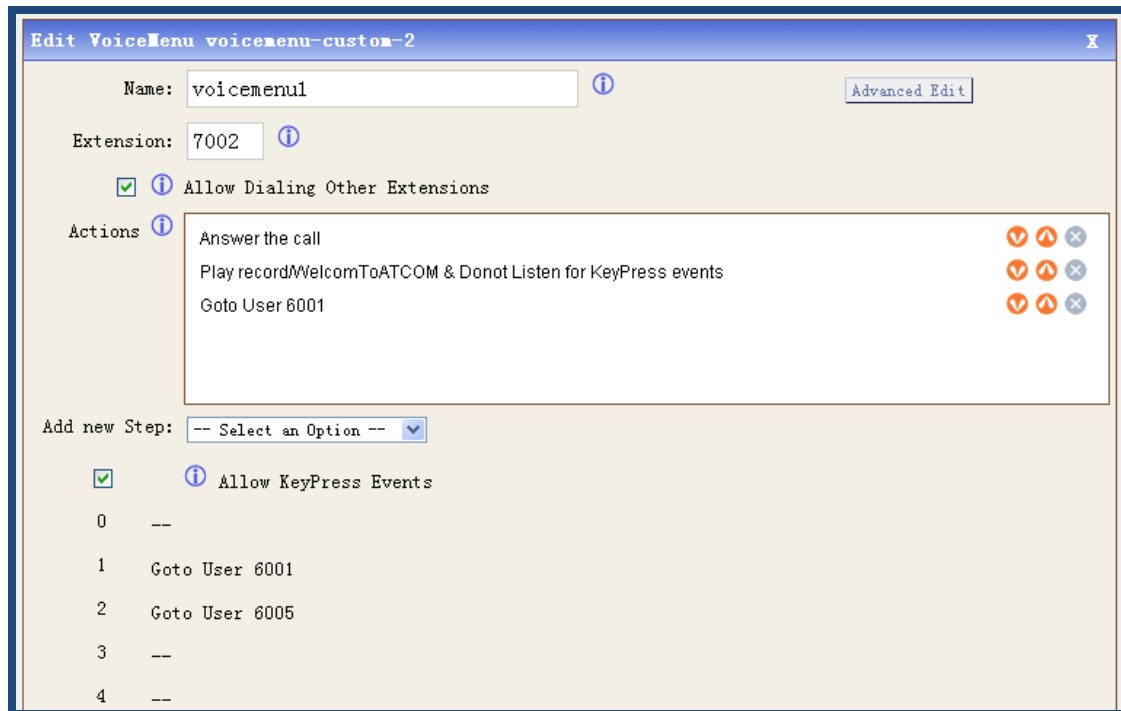
After logging into the web page of IP04, please click on **Incoming Calling Rules** → **New Incoming Rule**, I configure an incoming calling rule like the following:



At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

4.3.3 Create a Voice Menu

After logging into the web page of IP04, please click on **Voice Menus** → **Create New VoiceMenu**, I create a voice menu like the following:



When the call comes from port 2, the system will play a record sound file, if the caller presses 1, user 6001 will ring, if the caller presses 2, user 6005 will ring. If the caller does not press any key, the call will go to 6001.

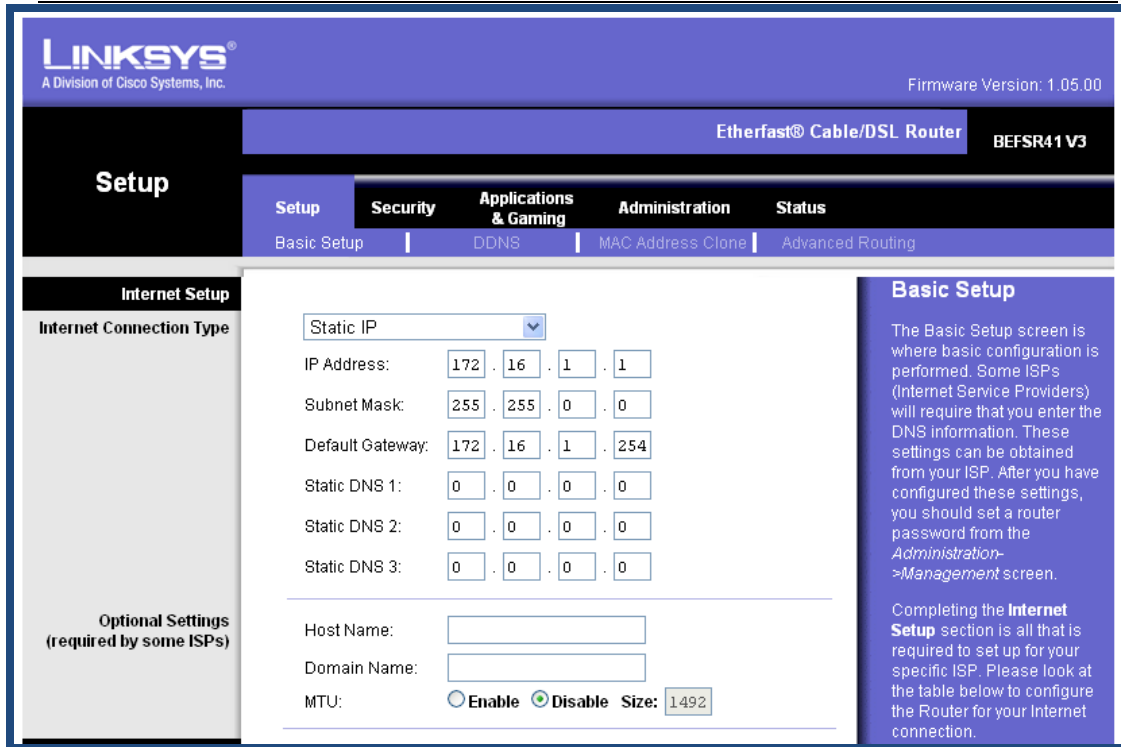
You can also configure IP04 to let 6030 call outside and get incoming call by IP04, the steps are the same as IP04, you can refer to configuration of IP04.

4.4 How to Call Each Other Directly from Different Network Segment.

Take the user 6020, 6005 and 6001 for example, I will configure router, users and IP04, then the three users can call each other directly.

1) Set up router

From the web page of your router, please configure the IP address, subnet mask and default gateway of WAN port, I configured a static IP Address 172.16.1.1; Subnet Mask: 255.255.0.0; Default Gateway: 172.16.1.254. You can refer to the following:



LINKSYS
A Division of Cisco Systems, Inc.

Firmware Version: 1.05.00

Setup | Etherfast® Cable/DSL Router | BEFSR41 V3

Setup | Security | Applications & Gaming | Administration | Status

Basic Setup | DDNS | MAC Address Clone | Advanced Routing

Internet Setup

Internet Connection Type: Static IP

IP Address: 172 . 16 . 1 . 1

Subnet Mask: 255 . 255 . 0 . 0

Default Gateway: 172 . 16 . 1 . 254

Static DNS 1: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Static DNS 3: 0 . 0 . 0 . 0

Host Name:

Domain Name:

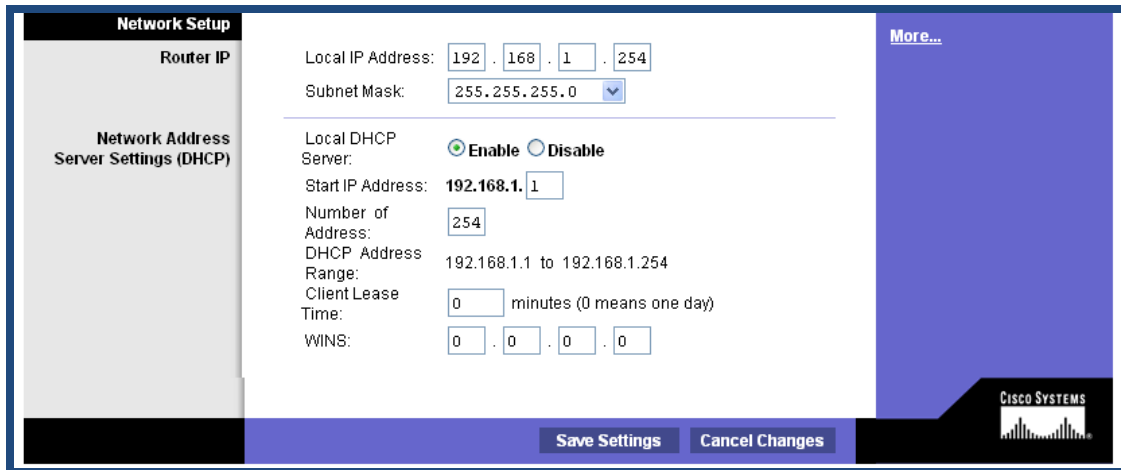
MTU: Enable Disable Size:

Basic Setup

The Basic Setup screen is where basic configuration is performed. Some ISPs (Internet Service Providers) will require that you enter the DNS information. These settings can be obtained from your ISP. After you have configured these settings, you should set a router password from the Administration->Management screen.

Completing the **Internet Setup** section is all that is required to set up for your specific ISP. Please look at the table below to configure the Router for your Internet connection.

From the web page of your router, please configure the IP address, subnet mask and DHCP, I configure them like the following:



LINKSYS
A Division of Cisco Systems, Inc.

Firmware Version: 1.05.00

Network Setup | Router IP | Network Address Server Settings (DHCP)

Local IP Address: 192 . 168 . 1 . 254

Subnet Mask: 255 . 255 . 255 . 0

Local DHCP Server: Enable Disable

Start IP Address: 192.168.1.1

Number of Address: 254

DHCP Address Range: 192.168.1.1 to 192.168.1.254

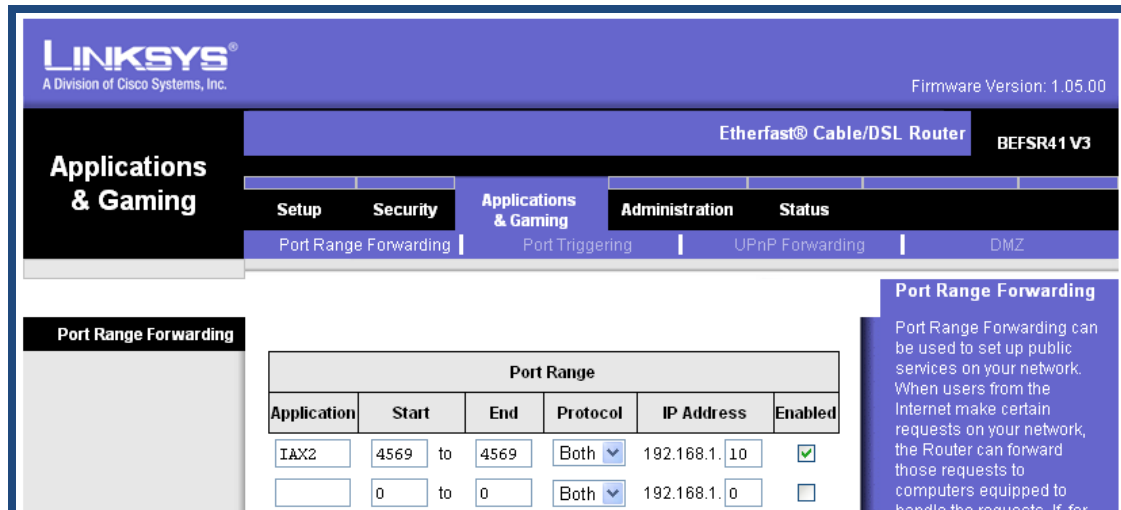
Client Lease Time: 0 minutes (0 means one day)

WINS: 0 . 0 . 0 . 0

[More...](#)

CISCO SYSTEMS

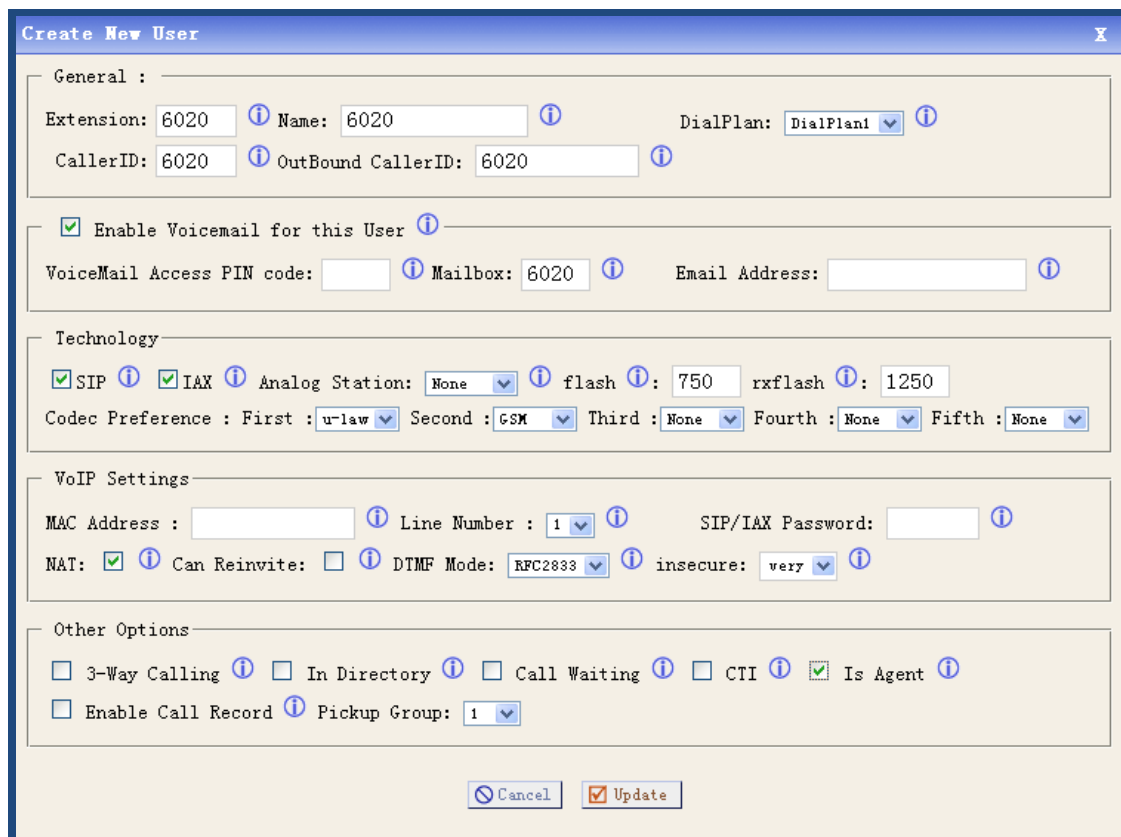
From the webpage of your router, please configure port range forwarding like the following:



The user 6020 uses IAX2, the port number is 4569, 192.168.1.10 is the IP address of IP04.

2) Add an IAX user 6020 in IP04

After logging into the web page of IP04, please click on **Users** → **Create New User**, I configure 6020 like the following:



At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

3) Set up AT-620 and register an IAX2 user 6020

After logging into web page of IP Phone AT-620, please select **Network** option to enter the screen of configuring IP Address. I set up a static IP Address: 172.16.1.2; Netmask: 255.255.0.0; Gateway: 172.16.1.254. After finishing the configuration, please click on the **Apply** button. You

can refer to the following screen:

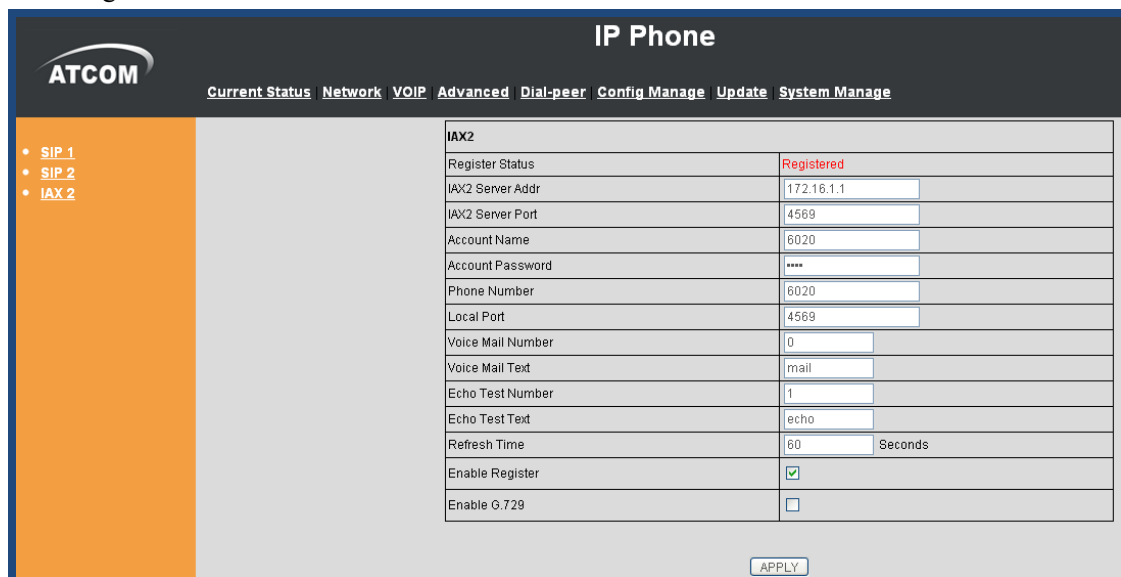


The screenshot shows the ATCOM IP Phone configuration interface. The 'WAN Status' section is active, displaying the following information:

WAN Status	
Active IP	172.16.1.2
Current Netmask	255.255.0.0
Current Gateway	172.16.1.254
MAC Address	00:09:45:56:fd:ce
Get MAC Time	20090915
WAN Setting	
Static <input checked="" type="radio"/>	DHCP <input type="radio"/> PPPOE <input type="radio"/>
Auto DNS	<input checked="" type="checkbox"/>
Static IP Address	<input type="text" value="172.16.1.2"/>
Netmask	<input type="text" value="255.255.0.0"/>
Gateway	<input type="text" value="172.16.1.254"/>
DNS Domain	<input type="text"/>
Primary DNS	<input type="text" value="202.96.134.133"/>
Alter DNS	<input type="text" value="202.96.128.68"/>

An 'APPLY' button is located at the bottom right of the configuration area.

Please select the **VOIP** option, then select the **IAX2** option, I register the IAX2 user 6020 as the following illustration:



The screenshot shows the ATCOM IP Phone configuration interface with the 'IAX2' section selected. The configuration details are as follows:

IAX2	
Register Status	Registered
IAX2 Server Addr	<input type="text" value="172.16.1.1"/>
IAX2 Server Port	<input type="text" value="4569"/>
Account Name	<input type="text" value="6020"/>
Account Password	<input type="text" value="****"/>
Phone Number	<input type="text" value="6020"/>
Local Port	<input type="text" value="4569"/>
Voice Mail Number	<input type="text" value="0"/>
Voice Mail Text	<input type="text" value="mail"/>
Echo Test Number	<input type="text" value="1"/>
Echo Test Text	<input type="text" value="echo"/>
Refresh Time	<input type="text" value="60"/> Seconds
Enable Register	<input checked="" type="checkbox"/>
Enable G.729	<input type="checkbox"/>

An 'APPLY' button is located at the bottom right of the configuration area.

After configuring, please click on the **APPLY** button.

Attention: here you must register IAX2 user instead of SIP user, because the user 6020 is not in the same network segment as IP04. If you use SIP user, you can not get sound when the communication is established.

Now you can call each other among 6020,6001 and 6005 directly.

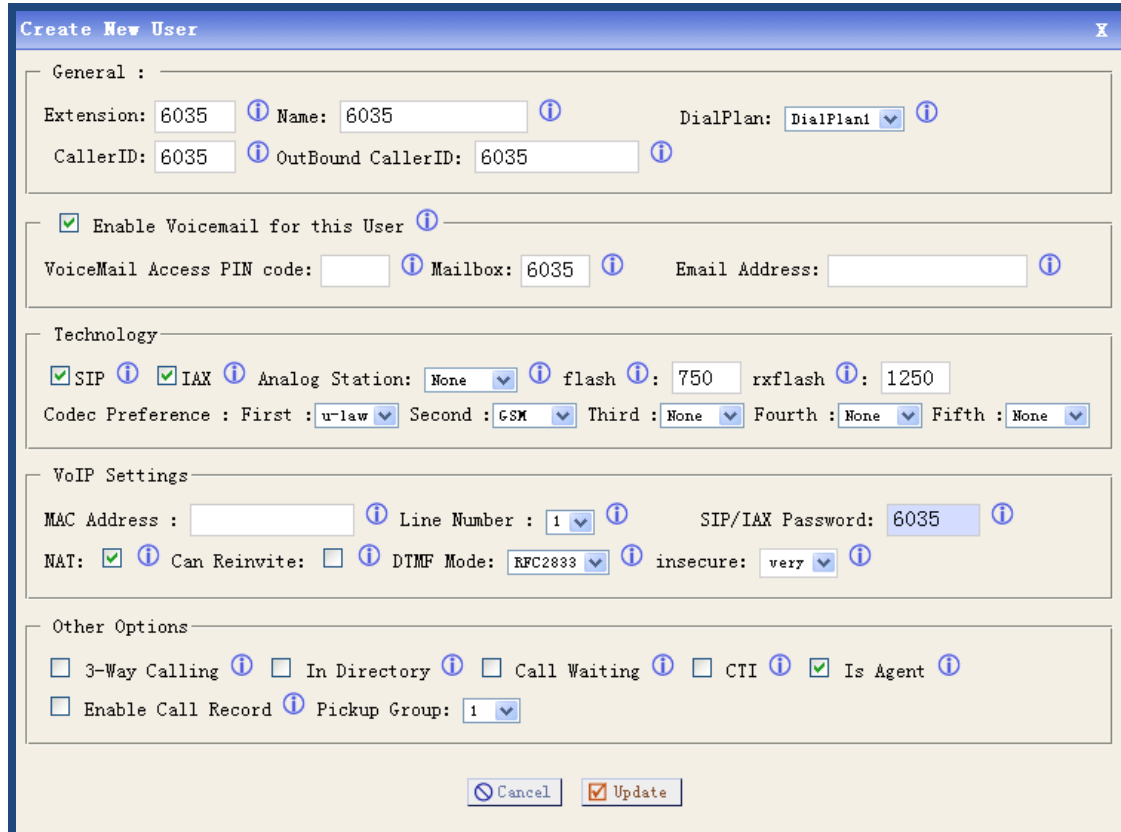
4.5 How to Call through VoIP Trunk

4.5.1 Call from IP04 to IP08

In order to call from IP04 to IP08, I will create a SIP user in IP08 for the SIP trunk in IP04, create

a SIP trunk, an outgoing call rule and a dial plan in IP04.

- 1) Add an SIP user 6035(it will be used as SIP trunk in IP04) in IP08, after logging into the web page of IP08, please click on **Users**→ **Create New User**, I add the user 6035 like the following:



The screenshot shows the 'Create New User' form with the following fields and values:

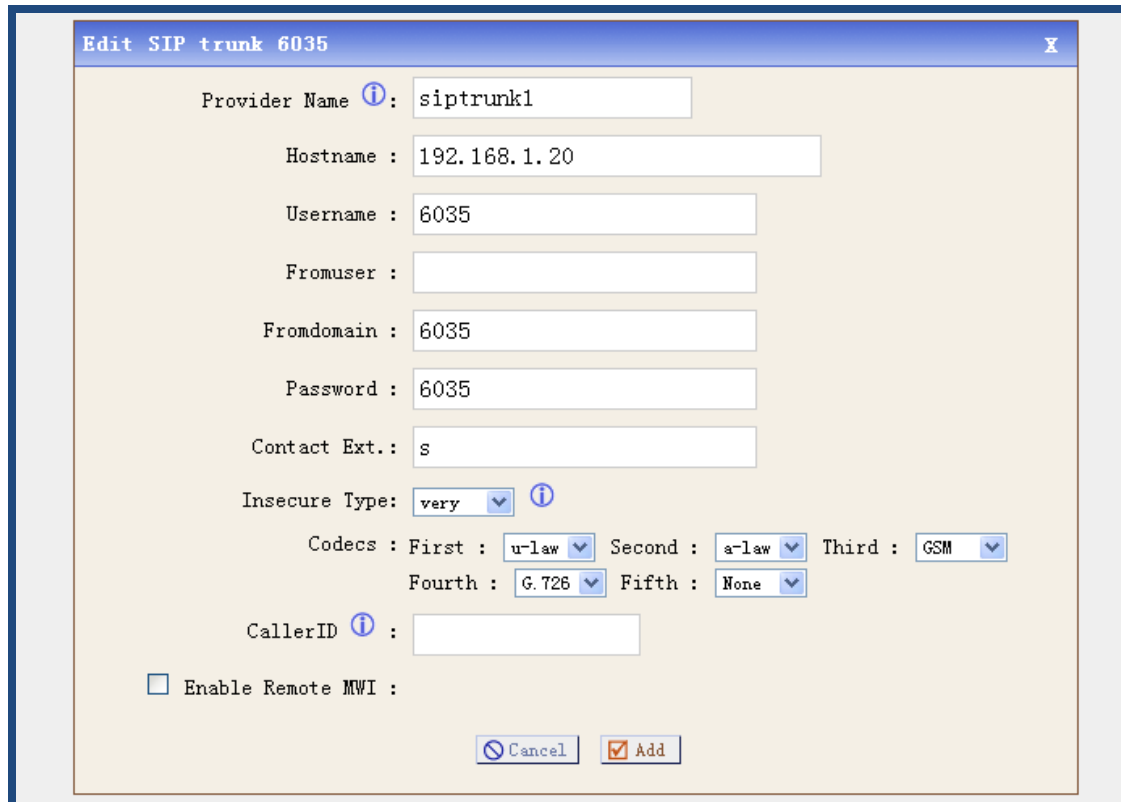
- General :**
 - Extension: 6035
 - Name: 6035
 - DialPlan: DialPlan1
 - CallerID: 6035
 - OutBound CallerID: 6035
- Enable Voicemail for this User**
 - VoiceMail Access PIN code: [empty]
 - Mailbox: 6035
 - Email Address: [empty]
- Technology**
 - SIP
 - IAX
 - Analog Station: None
 - flash: 750
 - rxflash: 1250
 - Codec Preference : First : u-law, Second : GSM, Third : None, Fourth : None, Fifth : None
- VoIP Settings**
 - MAC Address : [empty]
 - Line Number : 1
 - SIP/IAX Password: 6035
 - NAT:
 - Can Reinvite:
 - DTMF Mode: RFC2833
 - insecure: very
- Other Options**
 - 3-Way Calling
 - In Directory
 - Call Waiting
 - CTI
 - Is Agent
 - Enable Call Record
 - Pickup Group: 1

Buttons:

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

Add a SIP user 6030 in IP08 for AT-620, the way is the same as adding 6035.

- 2) Add a VoIP trunk in IP04, after logging into the webpage of IP04, please click on **Trunks**→**VOIP Trunks**→**New SIP/IAX Trunk**, I configure a SIP trunk1 like the following:



Provider Name ⓘ: siptrunk1

Hostname : 192.168.1.20

Username : 6035

Fromuser :

Fromdomain : 6035

Password : 6035

Contact Ext.: s

Insecure Type: very ⓘ

Codecs : First : u-law Second : a-law Third : GSM

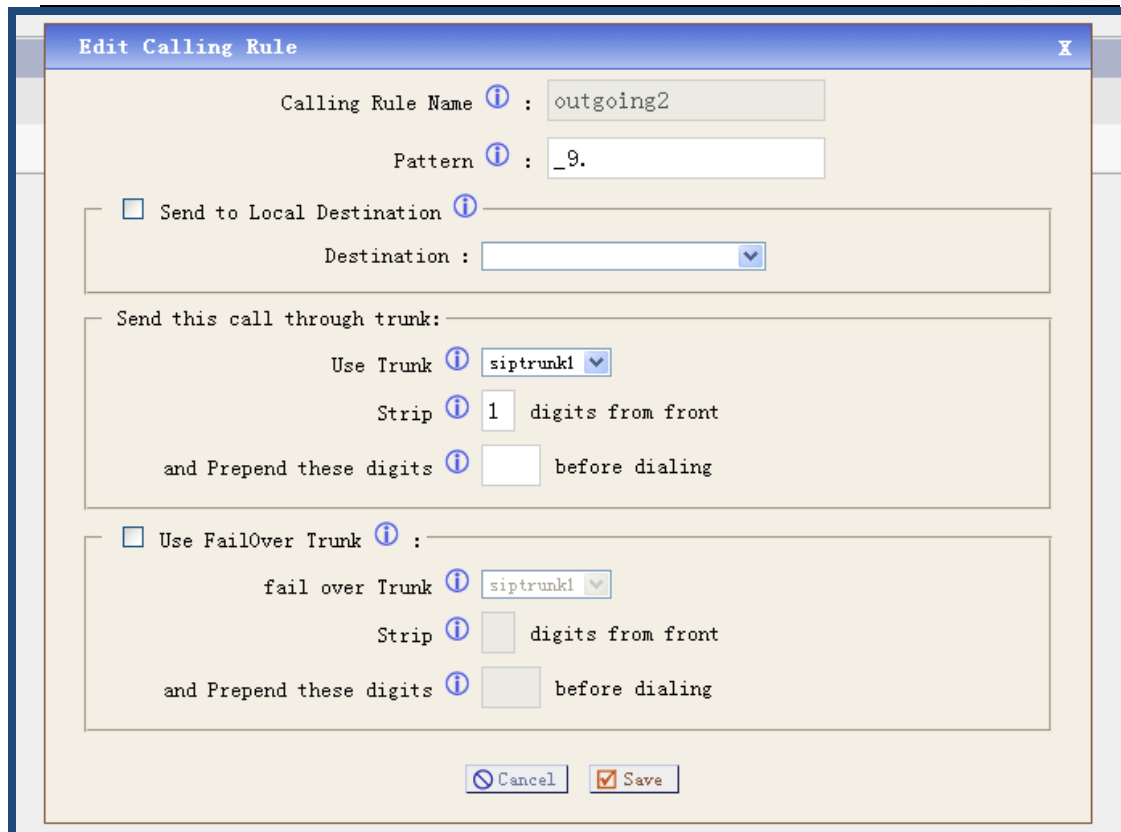
Fourth : G.726 Fifth : None

CallerID ⓘ :

Enable Remote MWI :

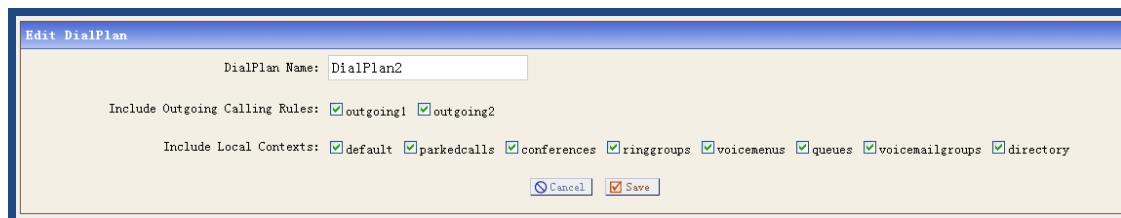
After configuring, please click on **Add** button, and click on **Apply Changes** button in up right corner of the main page.

- 3) Create an outgoing calling rule in IP04, after logging into the webpage of IP04, please click on **Outgoing Calling Rules**→**New Calling Rule**, I configure an outgoing2 rule like the following:



After configuring, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

- 4) Create a dial plan in IP04, after logging into the webpage of IP04, please click on **Dial Plans**→**New DialPlan**, I configure a dialplan2 like the following:



After configuring, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

In configuration screens of 6001 and 6005, please select dialplan2 in the **DialPlan** drop-down list
Now you can call from 6001 and 6005 to 6030 by dialing 96030

4.5.2 Call from IP08 to IP04

In order to call from IP08 to IP04, I will create a SIP user in IP04 for the SIP trunk in IP08, create a SIP trunk, an outgoing call rule and a dial plan in IP08.

- 1) Add a user 6008 in IP04

Add a SIP user: 6008, after logging into the web page of IP04, please click on **Users**→ **Create New User**, I add a user 6008 like the following:

Create New User
X

General :

Extension: Name: DialPlan:

CallerID: OutBound CallerID:

Enable Voicemail for this User

VoiceMail Access PIN code: Mailbox: Email Address:

Technology

SIP IAX Analog Station: flash: rxflash:

Codec Preference : First : Second : Third : Fourth : Fifth :

VoIP Settings

MAC Address : Line Number : SIP/IAX Password:

NAT: Can Reinvite: DTMF Mode: insecure:

Other Options

3-Way Calling In Directory Call Waiting CTI Is Agent

Enable Call Record Pickup Group:

At last, please click on **Update** button, and click on **Apply Changes** button in up right corner of the main page.

2) Create a SIP trunk in IP08

Add a VoIP trunk in IP08, after logging into the webpage of IP08, please click on **Trunks**→**VOIP Trunks**→**New SIP/IAX Trunk**, I configure a SIP trunk like the following:

Create New SIP/IAX trunk
X

Type:

Provider Name:

Hostname:

Username:

Fromuser:

Fromdomain:

Password:

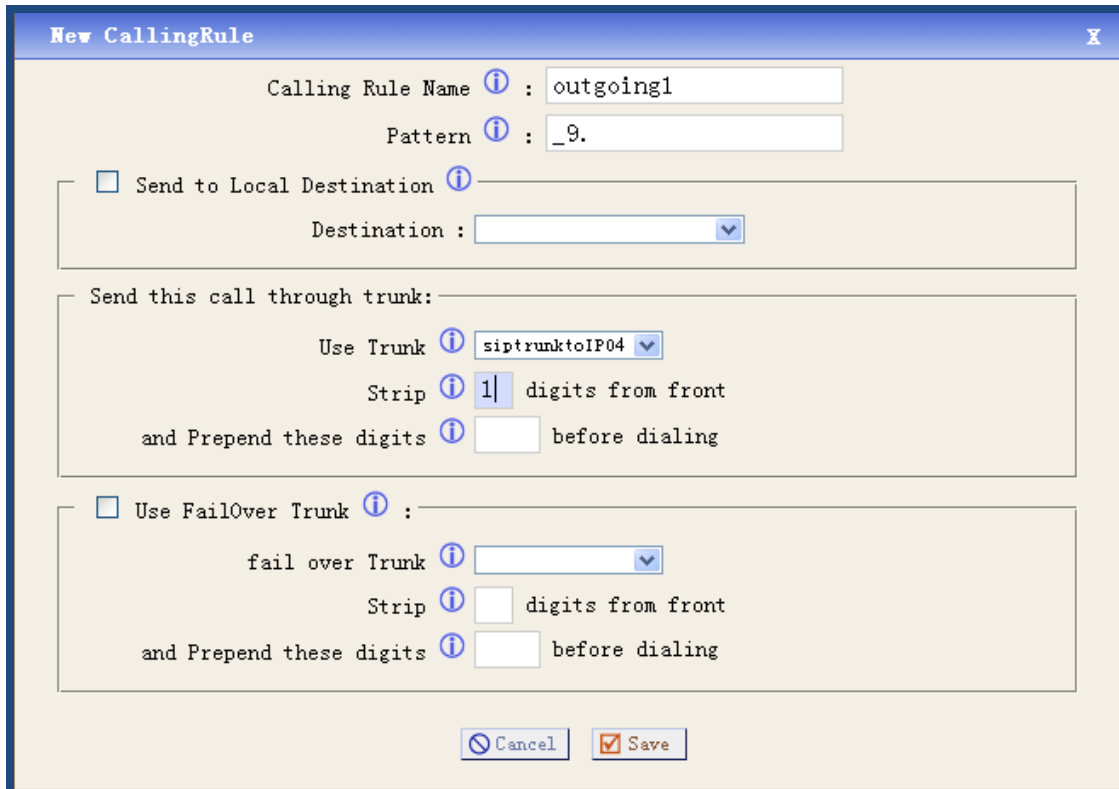
Contact Ext.:

Insecure Type:

After configuring, please click on **Add** button, and click on **Apply Changes** button in up right corner of the main page.

3) Create an outgoing calling rule in IP08

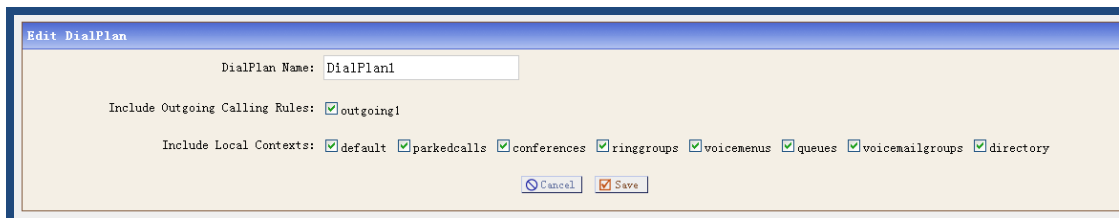
After logging into the webpage of IP08, please click on **Outgoing Calling Rules**→**New Calling Rule**, I configure an outgoing1 rule like the following:



After configuring, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

4) Create a dial plan in IP08

After logging into the webpage of IP08, please click on **Dial Plans**→**New DialPlan**, I configure a dialplan1 like the following:



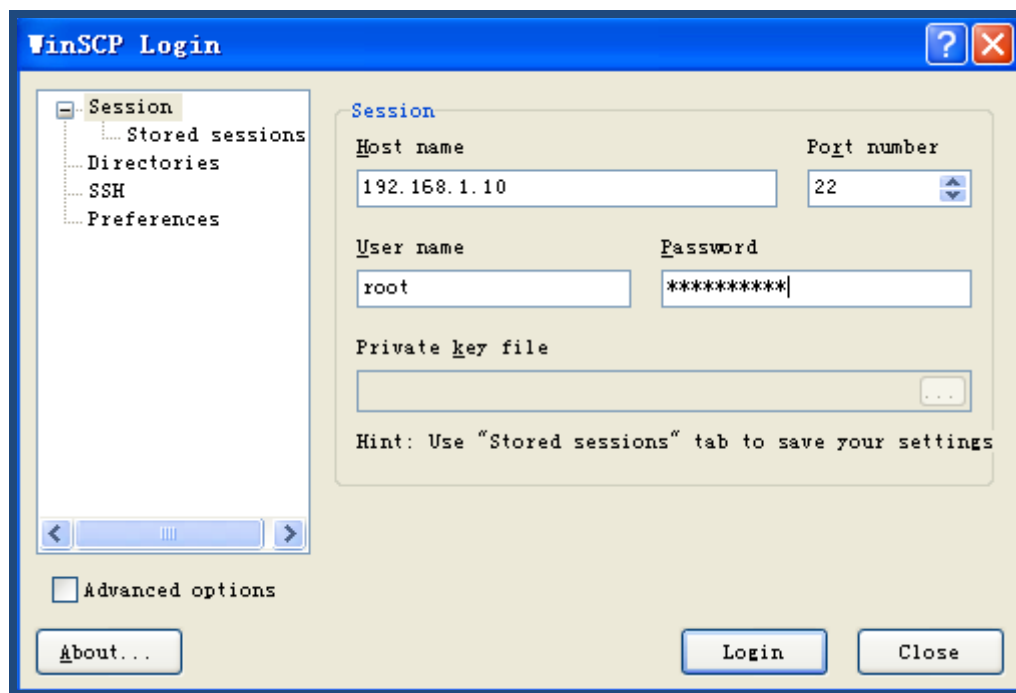
After configuring, please click on **Save** button, and click on **Apply Changes** button in up right corner of the main page.

In configuration screens of 6030, please select dialplan1 in the **DialPlan** drop-down list.

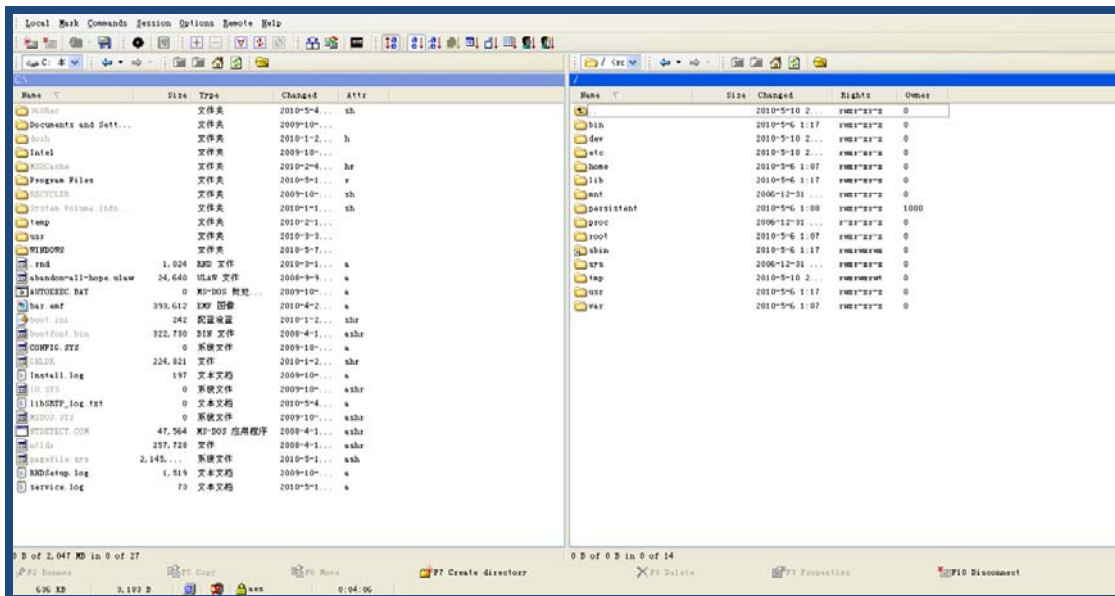
Now you can call from 6030 to 6001 and 6005 by dialing with prefix 9.

4.6 How to Transfer Files between Windows PC and IP04

Using WinSCP software, it is the most convenient way to transfer files between windows PC and IP04. Open your WinSCP software, enter the IP Address, username, password of IP04 like the following screen:



At last, click on **Login** button, then you can get the following screen:



The left part of the screen displays directories and files of your windows PC, the right part of the screen displays directories of IP04.

If you want to transfer a file from windows PC to IP04, you just need to choose the file and drag it to the directory of IP04, at last, click on **copy** button in the popping-up screen like the following:

