



# MyPBX U5 Series Administrator Guide

Version 14.19.0.23

**Yeastar Information Technology Co. Ltd**

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# 1. Introduction

## MyPBX—IP-PBX for Medium Businesses/Home Office

MyPBX U5 series is a standalone embedded hybrid PBX for medium businesses and remote branch offices of larger organizations (1-500 users per site). MyPBX U5 series also offer a hybrid solution (a combination of VoIP applications using E1/T1/J1 equipment) alternative for enterprises who are not yet ready to migrate to a complete VoIP solution.

### FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radiofrequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### FCC Caution

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

### FCC Warning

This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired operation.

## 1.1 Features

• Addons(MyPBX client/Billing/Hotel)
--------------------------------------

• HTTPS
---------

• Alert	• Integrated built-in packet capture tools
• Auto-provision	• Interactive Voice Response (IVR)
• Blacklist	• Intercom/Zone Intercom
• BLF Support	• L2TP
• Blind Transfer	• LDAP
• Call Back	• Mobility Extension
• Call Detail Records(CDR)	• Multiple administrators
• Call Forward	• Music On Hold
• Call Parking	• Music On Transfer
• Call Pickup	• Open VPN
• Call Recording	• Paging/Zone Paging
• Call Routing	• PIN Users
• Call transfer	• PPPoE
• Call Transfer	• QoS
• Call Waiting	• Queue
• Caller ID	• Ring Group
• Conference	• Route by Caller ID
• Database Grant	• Security Center
• DDNS	• Skype Integration (Skype Connect)
• Define Office Time	• Speed Dial
• Dial by Name	• Spy functions
• DIDs	• Static Route
• Direct Inward System Access (DISA)	• T.38
• Distinctive Ringtone	• Three-way Calling
• Do Not Disturb(DND)	• VLAN
• External Storage	• Voicemail
• Firewalls	• WAN
• Follow me	

More info is available here:

MyPBX U500: <http://www.yeostar.com/products/MyPBX-U500.asp>

MyPBX U510: <http://www.yeostar.com/products/MyPBX-U510.asp>

MyPBX U520: <http://www.yeostar.com/Products/MyPBX-U520.asp>

## 1.2 Hardware Specifications

### 1.2.1 Exterior Appearance

#### Front Panel



Figure1-1 MyPBX U5XX Front Panel

No.	Indication
①	16 Green LEDs
②	16 RJ11 ports
③	E1/T1 interface
④	None E1/T1 available in MyPBX U500 1*E1/T1 available in MyPBX U510 2*E1/T1 available in MyPBX U520
⑤	Console port (RJ45)
⑥	WAN port
⑦	LAN port
⑧	USB port
⑨	Reset Button
⑩	Power and Run indicator

## 2. System Setup

### 2.1 Connection Drawing

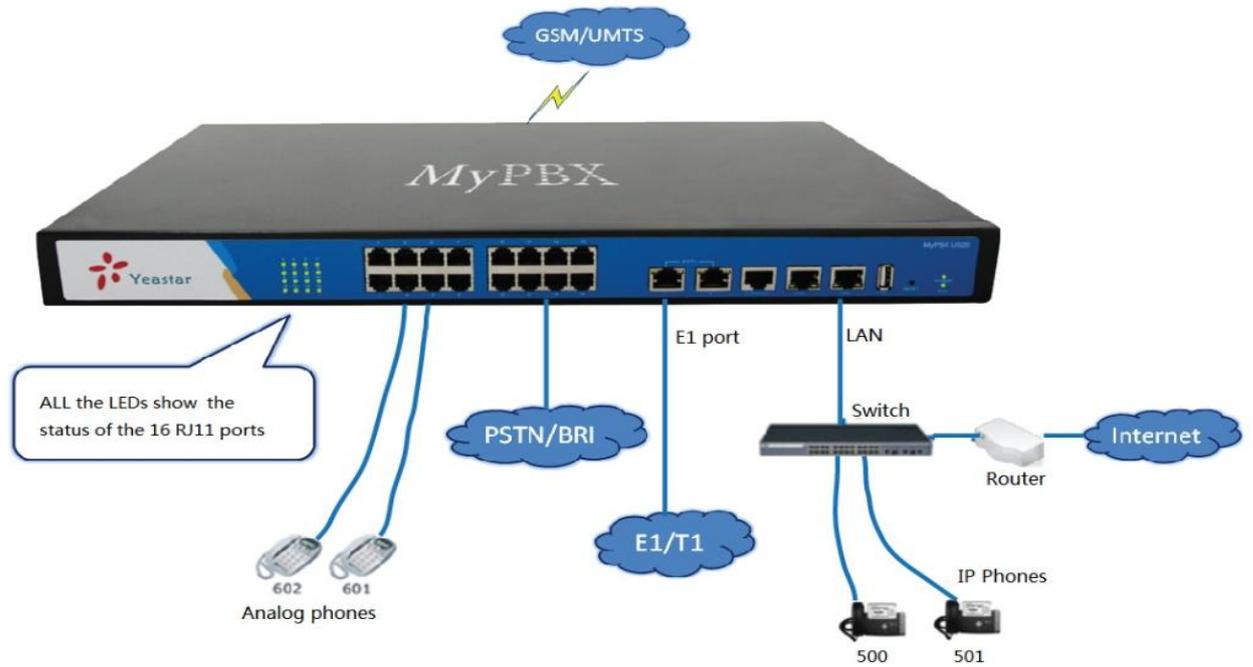


Figure 2-1 U5XX Connection Drawing

## 2.2 Connecting Ethernet Line

MyPBX provides two 1000M Ethernet ports with RJ45 interface and LED indicator. Plug Ethernet line into MyPBX's Ethernet port, and then connect the other end of the Ethernet line with a hub, switch, router, LAN or WAN. Once connected, check the status of the LED indicator. A yellow LED indicates the port is in the connection process, and a green LED indicates the port is properly connected.

## 2.3 Supplying Power

Please follow the steps below to connect the MyPBX unit to a power outlet:

1. Connect the small end of the power cable to the power input port on the MyPBX back panel, and plug the other end of the cable into a 100V~240V AC power outlet.
2. Check the Power LED on the front panel. A solid green LED indicates that power is being supplied correctly.

## 3 Administrator Login

From your web browser, input the IP address of the MyPBX server.

If this is the first time you are configuring MyPBX, please use the default

settings as below (your PC should be in the same local network with MyPBX):

IP Address: <http://192.168.5.150>

**Note:** MyPBX supports multiple administrators in hierarchical mode (Administrator, General Manager, CDR Manager)

**•Administrator**

has all the authority.

Username: **admin**, Password: **password**

**•General Manager**

has basic authority; without the advanced authority to create VoIP trunks, reset, update, backup and restore MyPBX.

Username: **user**, Password: **password**

You should enable this account before you use it.

**•CDR Manager**

only has the authority to check the call recordings.

Username: **cdr**, Password: **password**

In this example, the IP address is 192.168.5.149



Figure 3-1 Login Page

This is the welcome page of MyPBX U5XX after successful login.

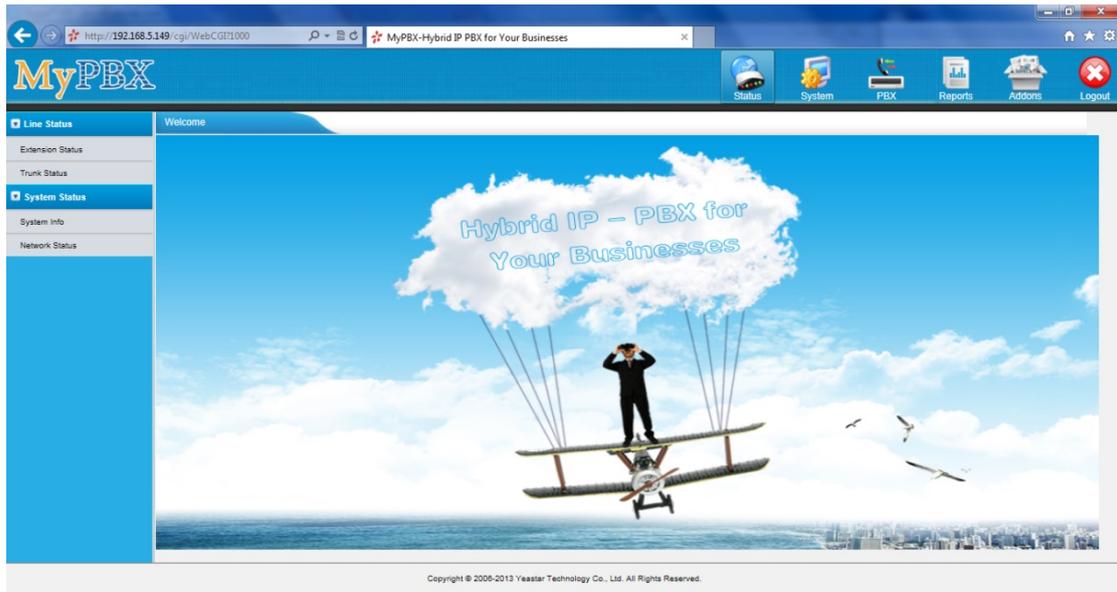


Figure 3-2 Welcome Page

### You can also login via HTTPS protocol

Like `https://192.168.5.147`, you will see a prompt that is a certificate problem. Click "Continue to ...", then you can login after entering user and password. HTTPS is HTTP over SSL, and it is safer than HTTP.

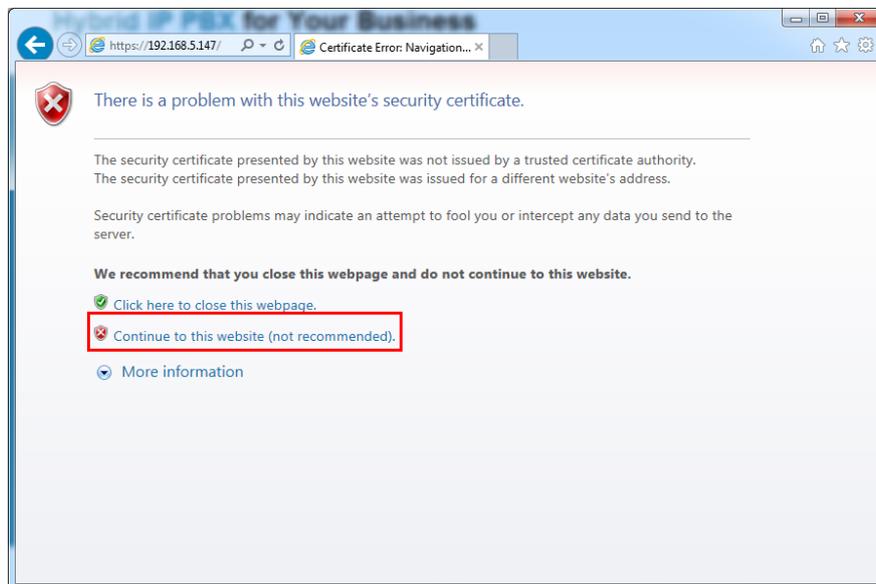


Figure 3-3 HTTPS warning page

#### Note:

MyPBX firmware upgrade follow-up

- Reboot the device twice to make the new firmware take effect
- Clean the cache and cookies of the browser before login.

- There is a compatibility issue with IE11. Configure IE11 browser "Compatibility View Settings", add MyPBX IP address, and check "Display Intranet sites in Compatibility View" and "Use Microsoft compatibility lists". See the following picture. MyPBX IP is 192.168.5.147 in this example.

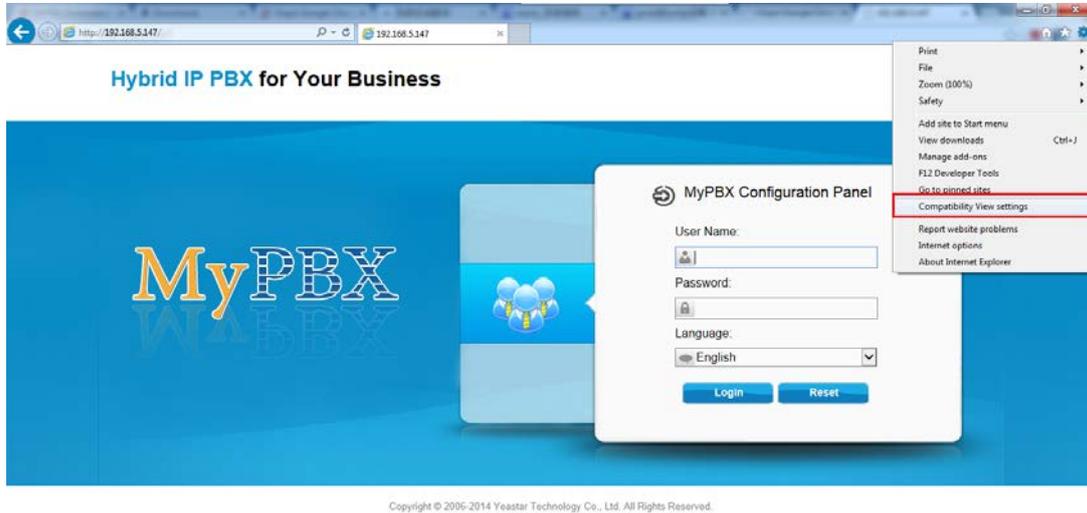


Figure 3-4 Login Page in IE11

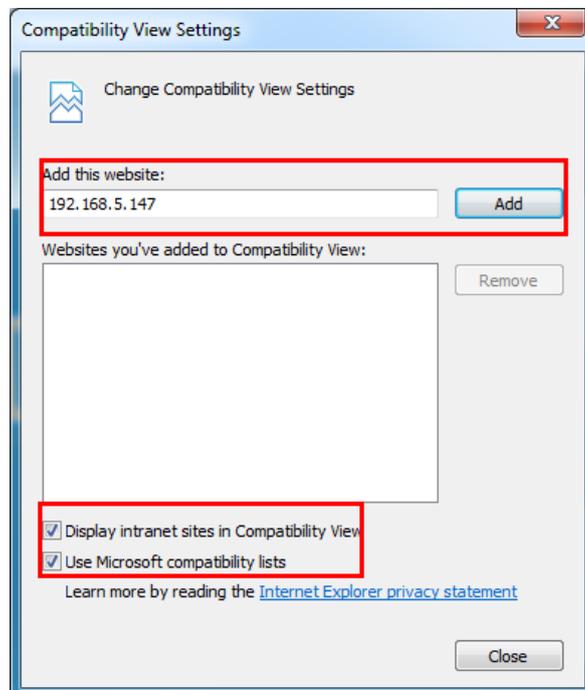


Figure 3-5 Compatibility View Setting

## 4 Status



Click  to start to check the status of MyPBX U5XX, where we can check the status of extensions, trunks, and network and system information.

### 4.1 Line Status

In this page, we can check the status of extensions and trunks

#### 4.1.1 Extension Status

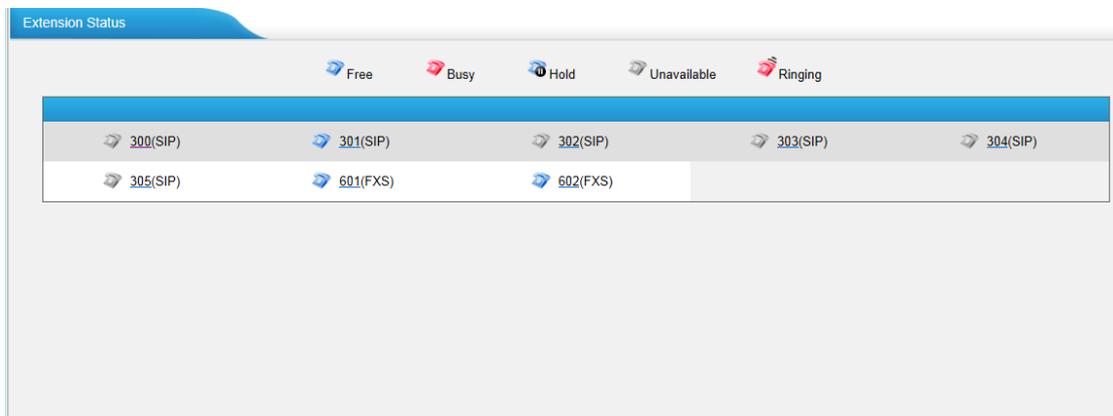


Figure 4-1 Extension Status Page

#### MyPBX Status Description:

##### Extensions:

- 1)  : Extension is unavailable
- 2)  : Extension is idle
- 3)  : Extension is ringing
- 4)  : Extension is busy
- 5)  : Extension is on hold

## 4.1.2 Trunk Status

Status	Signal	Trunk Name	Type	User Name	Port/Hostname/IP	Reachability
Registered		Yeastar	SIP	305	192.168.5.146	OK
OK (7 ms)		Support	SP-SIP		192.168.4.141	OK (7 ms)
Disconnected		psn13	FXO		Port 13	
Disconnected		psn14	FXO		Port 14	
Idle	Y.iil	GSM1	GSM		Port 1	
Disconnected		BriTrunk3	BRI		Port 3	
Disconnected		BriTrunk4	BRI		Port 4	
Disconnected		BriTrunk7	BRI		Port 7	
Disconnected		BriTrunk8	BRI		Port 8	

Trunk Name	Type	Connected	Alarm
E1Trunk1	E1	●	●
E1Trunk2	E1	●	●

Figure 4-2 Trunk Status Page

### Trunks:

#### Note:

#### E1/T1/J1 trunk in MyPBX U5XX

	MyPBX U500	MyPBX U510	MyPBX U520
E1/T1/J1 Ports	0	1	2

### VOIP Trunk:

#### Status

Rejected: Trunk registration failed.

Registered: Successful registration, trunk is ready for use.

Request Send: Registering.

Waiting: Waiting for authentication.

### Service Provider:

#### Status

OK: Successful registration, trunk is ready for use.

Unreachable: The trunk is unreachable.

Failed: Trunk registration failed.

### FXO Trunk:

#### Status

Idle: The port is idle.

Busy: The port is in use.

Disconnected: The port hasn't connected to the PSTN line.

For more details, please refer to the LED indication of front panel.

### GSM Trunk:

**Status**

**Idle:** The port is idle.

**Busy:** The port is in use.

**Signal**

 : No signal.

 : Poor.

 : Average.

 : Good.

 : Excellent.

**BRI Trunk:****Status**

**Ok:** The ports connect correctly.

**Disconnected:** The port hasn't connected to the BRI line or the signaling mismatch.

**E1 Trunk:**

Connect	Alarm	Comment
		The port doesn't have E1 line connected.
		E1 line has been connected to the port; PRI is in corresponding or can't communicate.
		Succeed.

## 4.2 System Status

In this page, we can check the status of MyPBX system, including the hardware, firmware version and the network status of LAN and WAN ports.

### 4.2.1 System Info

In this page, we can check the hardware/firmware version, or the disk usage of MyPBX.



**System Info**

**General**

Product Type:  
MyPBX U520

Hardware Version:  
V1.10 0000-0000

Firmware Version:  
14.19.0.23

Uptime:  
0:36:55 up 3 min

**Disk Usage**

Note: If there is not enough disk space on the system, the oldest voicemail messages, call record files and call log files will be automatically deleted as necessary.

Disk Usage:

	Used/Total (1K-blocks)	use%
flash:	9348/393216	2%
hdd:	195996/312471960	0%

**Memory Usage**

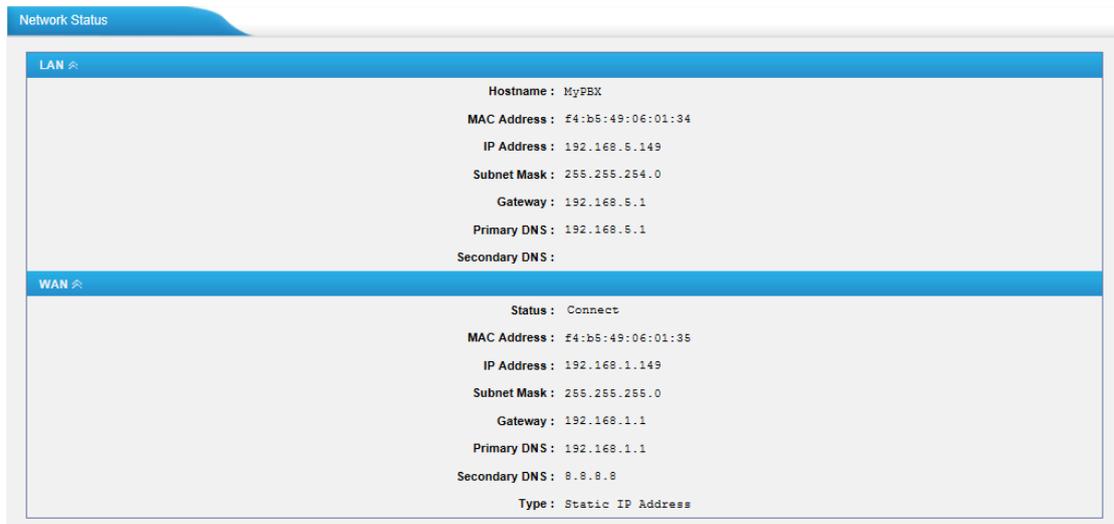
Memory Usage:

	Used/Total (1K-blocks)	use%
Mem:	183824/774316	23%

Figure 4-3 System Information

### 4.2.2 Network Status

In this page, the IP address of LAN and WAN port will appear. If OpenVPN is configured well, the information will be displayed here too.



**Network Status**

**LAN**

Hostname : MyPBX

MAC Address : E4:b5:49:06:01:34

IP Address : 192.168.5.149

Subnet Mask : 255.255.254.0

Gateway : 192.168.5.1

Primary DNS : 192.168.5.1

Secondary DNS :

**WAN**

Status : Connect

MAC Address : E4:b5:49:06:01:35

IP Address : 192.168.1.149

Subnet Mask : 255.255.255.0

Gateway : 192.168.1.1

Primary DNS : 192.168.1.1

Secondary DNS : 8.8.8.8

Type : Static IP Address

Figure 4-4 Network Status

## 5 System



Click  to access.

In this page, we can configure the network settings, security settings, LDAP Server, storage management and system preferences.

### 5.1 Network Preferences

#### 5.1.1 LAN Settings

Figure 5-1 LAN Settings

#### •DHCP

If this option is set, MyPBX will use DHCP to get an available IP address from your local network. Not recommended as without the right IP address you cannot access MyPBX.

#### •Enable SSH

This is the advance way to access the device, you can use the putty software to access the device. In the SSH access, you can do more advanced settings and debug. It's disabled by default.

•**Port:** the default is 8022; you change it to another one.

#### •Enable FTP

Users will be able to log in MyPBX via FTP if FTP is enabled. You can access FTP resource on MyPBX via Windows explorer or Web browser.

FTP default user: **root**, password: **ys123456**

•**Port**: the default is 21; you change it to another one.

•**Hostname**

Set the host name for MyPBX.

•**IP Address**

Set the IP Address for MyPBX.

Configuring a static IP address for MyPBX is recommended.

•**Subnet Mask**

Set the subnet mask for MyPBX.

•**Gateway**

Set the gateway for MyPBX.

•**Primary DNS**

Set the primary DNS for MyPBX.

•**Secondary DNS**

Set the secondary DNS for MyPBX.

•**IP Address2**

Set the second IP Address for MyPBX.

•**Subnet Mask2**

Set the second subnet mask for MyPBX.

## 5.1.2

The screenshot displays the WAN Settings interface. At the top, there's a blue header with 'WAN Settings'. Below it, a form contains several sections:

- Use WAN:** A checked checkbox.
- Connection Type:** Three radio buttons: 'DHCP' (unselected), 'Static IP Address' (selected), and 'PPPoE' (unselected).
- Static IP Address Fields:**
  - IP Address: 192.168.1.149
  - Subnet Mask: 255.255.255.0
  - Default Gateway: 192.168.1.1
  - Primary DNS: 192.168.1.1
  - Secondary DNS: 8.8.8.8
- PPPoE Fields:**
  - User Name: (empty)
  - Password: (empty)

At the bottom of the form, there are two buttons: a green 'Save' button and a red 'Cancel' button.

Figure 5-2 WAN Settings

It supports three connection types: DHCP (obtain an IP automatically), PPPoE, Static IP Address.

### Notes:

1. WAN port is disabled by default.
2. WAN port cannot be used as a router to route the internet packages from WAN port to LAN port.

### •DHCP

If your ISP says that you are connecting through DHCP or a dynamic IP address from your ISP, perform these steps:

- Step1: Select **DHCP** as the WAN Connection Type.
- Step2: Click **Save** button to save the settings.
- Step3: Reboot the device.
- Step4: Check the WAN's Status (Status → Network status).

### •Static IP Address

If your ISP says that you are connecting through a static or fixed IP address from your ISP, perform these steps:

- Step1: Select **Static IP Address** as the WAN Connection Type.
- Step2: Enter the IP Address.
- Step3: Enter the Subnet Mask.
- Step4: Enter the Gateway Address.
- Step5: Enter the Primary DNS and Secondary DNS.
- Step6: Click the **Save** button to save the settings.
- Step7: Reboot the device.
- Step8: Check the WAN's Status (Status → Network status).

## ·PPPoE

If your DSL provider says that you are connecting through PPPoE or if you normally enter a user name and password to access the Internet, perform these steps:

Step1: Select **PPPoE** as the WAN Connection Type.

Step2: Enter the User Name.

Step3: Enter the Password.

Step4: Click the **Save** button to save the settings.

Step5: Reboot the device.

Step6: Check the WAN's Status (Status → Network status)

### 5.1.3

Dynamic Host Configuration Protocol (DHCP) is a network protocol that enables a server to automatically assign an IP address to a computer from a defined range of numbers (i.e., a scope) configured for a given network. You can also set a local network NTP server for MyPBX here.

**Note1:** When using "Phone Provisioning" for Grandstream IP phone, enter the IP address of the server directly, e.g. 192.168.5.150; for other phones use the default configuration.

**Note2:** MyPBX U5XX can work as a DHCP server, but cannot be regarded as a router.

DHCP Server

DHCP Server

DHCP is running

Enable

Router: 192.168.5.1

Subnet Mask: 255.255.255.0

Primary DNS: 192.168.5.1

Secondary DNS:

Allow IP Address From: 192.168.5.2

To: 192.168.5.254

TFTP Server: ftp://192.168.5.149

NTP Server:

Save Cancel

Figure 5-3 DHCP Server Settings

A VLAN (Virtual LAN) is a logical local area network (or LAN) that extends beyond a single traditional LAN to a group of LAN segments, given specific configurations.

**Note:** MyPBX U5XX is not the VLAN server, a 3-layer switch is still needed, please configure the VLAN information there first, then input the details in MyPBX, so that the packages via MyPBX will be added the VLAN label before sending to that switch.

The screenshot shows the 'VLAN Settings' configuration page. It features two main sections: 'VLAN Over LAN' and 'VLAN Over WAN'. Each section contains two entries, 'NO. 1' and 'NO. 2', each with a checkbox and four input fields: 'VLAN Number', 'VLAN IP Address', 'VLAN Subnet Mask', and 'Default Gateway'. At the bottom of the interface, there are 'Save' and 'Cancel' buttons.

Figure 5-4 VLAN Settings

## 1) VLAN Over LAN

### •NO. 1

Click the NO.1 you can edit the first VLAN over LAN.

### •VLAN Number

.The VLAN Number is a unique value you assign to each VLAN on a single device.

### •VLAN IP Address

Set the IP Address for MyPBX VLAN over LAN.

### •VLAN Subnet Mask

Set the Subnet Mask for MyPBX VLAN over LAN.

### •Default Gateway

Set the Default Gateway for MyPBX VLAN over LAN

• **NO.2**

Click the NO.2 you can edit the first VLAN over LAN.

• **VLAN Number**

.The VLAN Number is a unique value you assign to each VLAN on a single device.

• **VLAN IP Address**

Set the IP Address for MyPBX VLAN over LAN.

• **VLAN Subnet Mask**

Set the Subnet Mask for MyPBX VLAN over LAN.

• **Default Gateway**

Set the Default Gateway for MyPBX VLAN over LAN.

2) VLAN Over Wan

• **NO.1**

Click the NO.1 you can edit the first VLAN over WAN.

• **VLAN Number**

.The VLAN Number is a unique value you assign to each VLAN on a single device.

• **VLAN IP Address**

Set the IP Address for MyPBX VLAN over WAN.

• **VLAN Subnet Mask**

Set the Subnet Mask for MyPBX VLAN over WAN.

• **Default Gateway**

Set the Default Gateway for MyPBX VLAN over WAN.

• **NO.2**

Click the NO.2 you can edit the first VLAN over WAN.

• **VLAN Number**

.The VLAN Number is a unique value you assign to each VLAN on a single device.

• **VLAN IP Address**

Set the IP Address for MyPBX VLAN over WAN.

• **VLAN Subnet Mask**

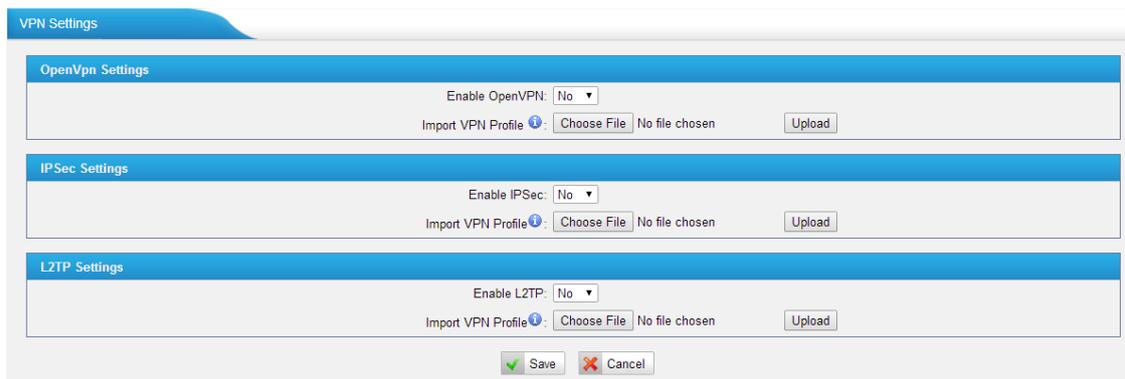
Set the Subnet Mask for MyPBX VLAN over WAN.

• **Default Gateway**

Set the Default Gateway for MyPBX VLAN over WAN.

## 5.1.5 VPN Settings

A virtual private network (VPN) is a method of computer networking—typically using the public internet—that allows users to privately share information between remote locations, or between a remote location and a business home network. A VPN can provide secure information transport by authenticating users, and encrypting data to prevent unauthorized persons from reading the information transmitted. The VPN can be used to send any kind of network traffic securely. MyPBX supports OpenVPN, IPSec and L2TP.



The screenshot shows the 'VPN Settings' page in the MyPBX administrator interface. It is divided into three main sections: 'OpenVpn Settings', 'IPSec Settings', and 'L2TP Settings'. Each section contains an 'Enable' dropdown menu (all set to 'No') and an 'Import VPN Profile' section with a 'Choose File' button, 'No file chosen' text, and an 'Upload' button. At the bottom, there are 'Save' and 'Cancel' buttons.

Figure 5-5 VPN Settings

### • Enable OpenVPN

#### • Import VPN Profile

Import configuration file of OpenVPN. Don't configure "user" and "group" in the "config" file.

### • Enable IPSec

#### • Import VPN Profile

Import configuration file of IPSec. There can be only one "lan" in the "conf" file.

### • Enable L2TP

#### • Import VPN Profile

Import configuration file of L2TP. There can be only one "conn" in the "conf" file.

**Note:** for more details about the above VPN settings, please contact our technical support.

DDNS(Dynamic DNS) is a method/protocol/network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a Domain Name System (DNS) name server to change, in real time, the active DNS configuration of its configured hostnames, addresses or other information.

DDNS Settings

Note: DDNS allows you to access your network using domain names instead of IP address. The service manages changing IP address and updates your domain information dynamically. You must sign up for service through [dyndns.org](http://dyndns.org), [freedns.afraid.org](http://freedns.afraid.org), [www.no-ip.com](http://www.no-ip.com), [www.zoneedit.com](http://www.zoneedit.com)

**DDNS is not running**

Enable DDNS:

DDNS Server:

User Name:

Password:

Host Name:

Figure 5-6 DDNS Settings

• **Enable DDNS**

• **DDNS Server**

Select the DDNS server you sign up for service.

• **User Name**

User name the DDNS server provides to you.

• **Password**

User account's password.

• **Host Name**

**Note:** DDNS allows you to access your network using domain names instead of IP address. The service manages changing IP address and updates your domain information dynamically. You must sign up for service through [dyndns.org](http://dyndns.org), [freedns.afraid.org](http://freedns.afraid.org), [www.no-ip.com](http://www.no-ip.com), [www.zoneedit.com](http://www.zoneedit.com)

MyPBX will have more than one internet connection in some situations but it has only one default gateway. You will need to set some Static Route for MyPBX to force it to go out through different gateway when access to different internet. The default gateway priority of MyPBX from high to low is OpenVPN→WAN port→LAN port.

Destination	Subnet Mask	Gateway	Metric	Interface
192.168.0.0	255.255.254.0	0.0.0.0	0	LAN
192.168.0.0	255.255.254.0	0.0.0.0	0	WAN
224.0.0.0	224.0.0.0	0.0.0.0	0	LAN

Static Route Rules

Destination:  Subnet Mask:  Gateway:  Metric:  Interface: LAN

No Static Routes Defined

Figure 5-7 Static Route Settings Page

## 1) Route table

The current route rules of MyPBX

### •Destination

The destination network to be accessed to by MyPBX

### •Subnet Mask

Specify the destination network portion.

### •Gateway

Define which gateway MyPBX will go through when access to the destination network.

### •Metric

The cost of a route is calculated by using what are called routing metric. Routing metrics are assigned to routes by routing protocols to provide measurable statistic which can be used to judge how useful (how low cost) a route is.

### •Interface

Define which internet port to go through.

## 2) Static Route Rules

You can add new static route rules here.

## 5.2 Security Settings

Firewalls are used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.

### 5.2.1 Security Center

You can check MyPBX security configuration in “Security Center” page. And also, you can enter the relevant security settings page rapidly.

#### Firewall:

Function	Status	Note	Setting
Firewall Switch	Enabled	No rules	Setting
Drop All	Disabled		Setting
Blacklist Rules	Configured	The number of blacklist rules is 3	IP Blacklist
Alert Settings	Configured	Attack Type:IPATTACK   Phone Notification:Yes   E-mail Notification:Yes Attack Type:WEBLOGIN   Phone Notification:Yes   E-mail Notification:Yes	Alert Settings

Figure 5-8 Security Center—Firewall

In the “Firewall” tab, you can check firewall configuration and alert settings. By clicking the relevant button, you can enter the configuration page directly.

#### Service:

Name	Status	Note	Setting
AMI	Disabled		Setting
SSH	Disabled		Setting
FTP	Disabled		Setting
TFTP	Enabled		Disabled
HTTP	Enabled		Setting
HTTPS	Disabled		Setting

Figure 5-9 Security Center—Service

In “Service” tab, you can check AMI/SSH/TFTP status. For AMI/SSH, you can enter the according page by clicking the button in “Setting” column. For TFTP, you can directly disable or enable it.

#### Port:

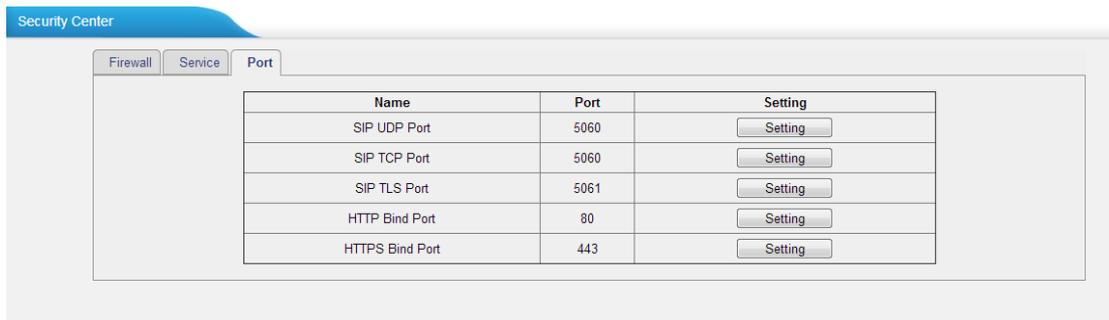


Figure 5-10 Security Center—Port

In “Port” tab, you can check SIP port and HTTP port. You can also enter the relevant page by clicking the button in “Setting” column.

## 5.2.2 Firewall Rules

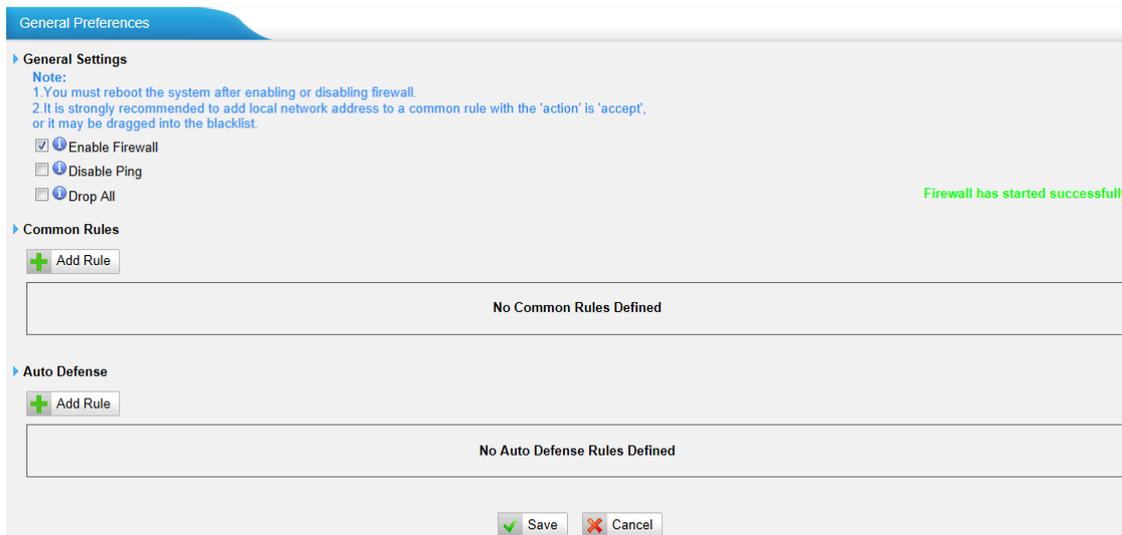


Figure 5-11 Firewall Settings

### 1) General Settings

#### • Enable Firewall

Enable the firewall to protect the device.

#### • Disable Ping

Enable this item, net ping from remote hosts will be dropped.

#### • Drop All

When you enable “Drop All” feature, system will drop all packets or connection from other hosts if there are no other rules defined. To avoid locking the devices, at least one “TCP” accept common rule must be created for port used for SSH access, port used for HTTP access and port sued for CGI access.

## 2) Common Rules

There is no default rule; you can create them as required.

Figure 5-12 Add Common Rules

### •Name

A name for this rule, e.g. "HTTP".

### •Description

Simple description for this rule. E.g. Accept the specific host to access the web interface for configuration.

### •Protocol

The protocols for this rule.

### •Port

Initial port should be on the left and end port should be on the right.

The end port must be equal to or greater than start port.

### •IP

The IP address for this rule. The format of IP address is: IP/mask

E.g. 192.168.5.100/255.255.255.255 for IP 192.168.5.100

E.g. 216.207.245.47/255.255.255.255 for IP 216.207.245.47

E.g. 192.168.5.0/255.255.255.0 for IP from 192.168.5.0 to 192.168.5.255.

### •MAC Address

The format of MAC Address is XX:XX:XX:XX:XX:XX, X means 0~9 or A~F in hex, the A~F are not case sensitive.

**Note:** The MAC address will be changed when it's a remote device, so it will not be working to filter using MAC for remote devices.

### •Action

Accept: Accept the access from remote hosts.

Drop: Drop the access from remote hosts.

Ignore: Ignore the access.

### 3) Auto Defense

By default, there is no rule.

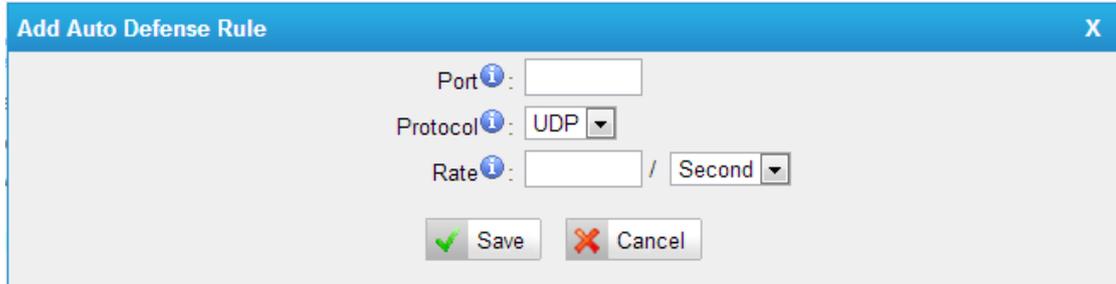


Figure 5-13 Add Auto Defense Rule

#### Port

The port you want to auto defense, for example, 8022.

#### Protocol:

Select the protocol. You can select UDP or TCP.

#### Rate:

The maximum packets or connections can be handled per unit time.

For example, if you configure it as below:

Port: 8022

Protocol: TCP

Rate: 10/min

Then, it means maximum 10 TCP connections can be handled in 1 minute. The 11<sup>th</sup> connection will be dropped.

### 5.2.3 IP Blacklist

You can set some packets accept speed rules here. When a IP address which hasn't been accepted in common rules sends packets faster than the allowed speed, it will be set as black IP address and blocked automatically.

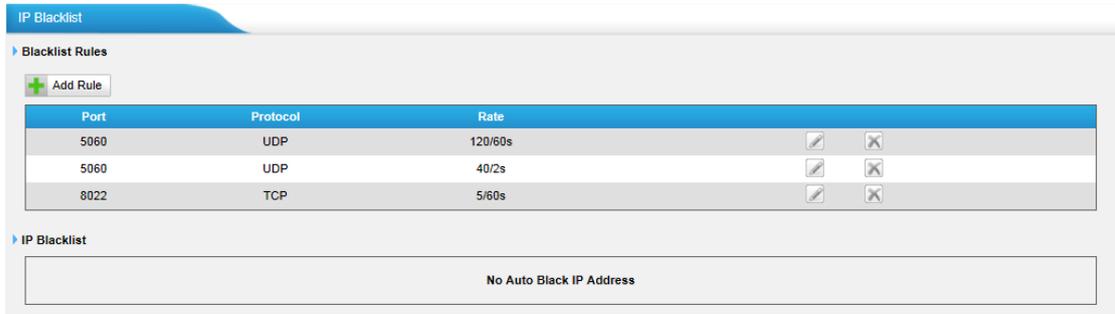


Figure 5-14 IP Blacklist Settings Page

#### 1) Blacklist rules

You can add the rules for IP blacklist rate as you wish.

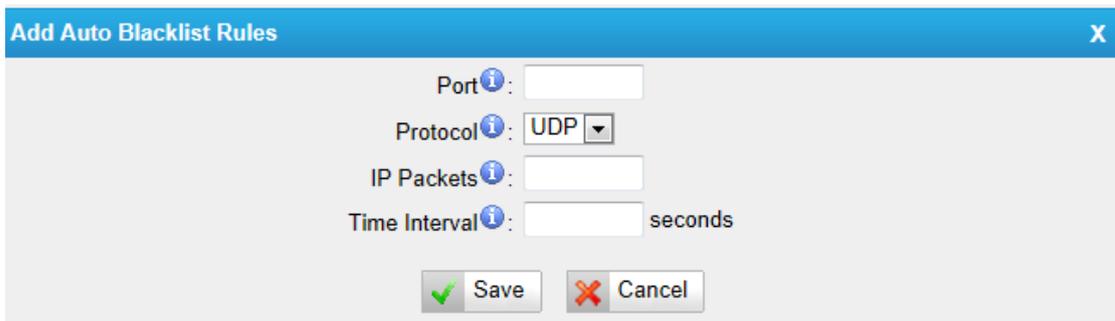


Figure 5-15 Add Blacklist Rule

#### •Port

Auto defense port

#### •Protocol

Auto defense protocol. TCP or UDP.

#### •IP Packets

Allowed IP packets number in the specific time interval.

#### •Time interval

The time interval to receive IP packets. For example, IP packets "90", time interval "60" means 90 IP packets are allowed in 60 seconds.

#### 2) IP blacklist

The blocked IP address will display here, you can delete it as you wish.

## 5.2.4 AMI Settings

The Asterisk Manager Interface (AMI) is a system monitoring and management interface provided by Asterisk. It allows live monitoring of events that occur in the system, as well enabling you to request that Asterisk perform some action. The actions that are available are wide-ranging and include things such as returning status information and originating new calls. Many interesting applications have been developed on top of Asterisk that take advantage of the AMI as their primary interface to Asterisk.

There are two main types of messages on the Asterisk Manager Interface: manager events and manager actions.

The 3<sup>rd</sup> party software can work with MyPBX using AMI interface. It is disabled by default. If necessary, you can enable it.

Figure 5-16 AMI Settings

**Username & password:** after enabling AMI, you can use this username and password to log in MyPBX AMI

**IP Restriction:** you can set which IP can log in MyPBX AMI interface

## 5.2.5 Database Grant

U5XX are using MySQL database from 14.18.0.22. The 3<sup>rd</sup> party software can access MySQL via internet. Before that, you need to grant the authority to the database user.

After entering "Database Grant" page, clicking "Add", you can add a database user, set user password and grant authority.

Figure 5-17 Database Grant

**Username/password:** The 3<sup>rd</sup> party can use this username and password to access the MySQL.

**Database:** there are 2 options, CDR and Record. If you choose CDR, then this user has authority to check CDR database; if you choose Record, then the user has authority to check which call has been recorded automatically.

## 5.2.6 Alert Settings

If the device is attacked, the system will notify users the alert via call or E-mail. The attack modes include IP attack and Web Login.

For more details on the system security configuration please refer to [APPENDIX B MyPBX Security Configuration Guide](#).



Attack Type	Phone Notification	E-mail Notification	
IPATTACK	Yes	Yes	
WEBLOGIN	Yes	Yes	

Figure 5-18 Alert Settings

### 1. IPATTACK

When the system is attacked by IP address, the firewall will add the IP to auto IP Blacklist and notify the user if it match the protection rule.

#### 1) Phone Notification Settings

##### •PHONE Notification

Whether enable phone notification.

##### •Number

The numbers could be set for alert notification; users can setup multiple extension and outbound phone numbers. Please separate them by ";". Example: "500;9911", if the extension has configured Follow Me Settings, the call would go to the forwarded number directly.

##### •Attempts

The attempts to dial a phone number when there is no answer.

##### •Interval

The interval between each attempt to dial the phone number. Must be greater than 3 seconds, the default value is 10 seconds.

##### •Prompt

Users will hear the prompt while receiving the phone notification.

## 2) E-mail Notification Settings

**Note:** Please ensure that all voicemail settings are properly configured on the System Settings -> Voicemail Settings page before using this feature.

### •E-mail Notification

Whether to enable E-mail Notification or not

### •Recipient's Name

The recipients for the alert notification, and multiple email addresses are allowed, please separate them by ";".

Example: jerry@yeastar.com; jason@yeastar.com, [456@sina.com](mailto:456@sina.com) .

### •Subject

The subject of the alert email.

### •Email Content

Text content supports predefined variables. Variable names and corresponding instructions are as follows:

\$(HOSTNAME)	Host name
\$(LOCALIP)	Local IP address
\$(SOURCEIP)	Attack source IP address
\$(DATETIME)	Occurred
\$(USERNAME)	User name (WEBLOGIN effective)
\$(DESTMAC)	Attacks destination MAC (IPATTACK effective)
\$(DESTPORT)	Attacks destination Port number (IPATTACK effective)
\$(PROTOCOL)	Protocol type (IPATTACK effective)
\$(INTERFACE)	Network interface name (IPATTACK effective)

Figure 5-19 IP Attack Configuration

## 2. WEBLOGIN

Web Login Alert Notification: Enter the password incorrectly five times to login MyPBX Web interface will be considered as an attack, the system will limit the IP login within 10 minutes and notify the user.

Figure 5-20 Web Login Alert Setting

## 5.3 LDAP Server

### 5.3.1 LDAP Server

LDAP is used as a phone book on MyPBX so that you can search a key word from your IP phone. The key word can be a name, a mobile number, an email or other key words in the phonebook.

**Note:**

It requires that the IP phone should support LDAP feature.

#### 1) LDAP Settings

Figure 5-21 LDAP Server page

#### •Enable LDAP

Enable LDAP to use LDAP on your IP phone.

#### •Root Node

A root node for this LDAP, e.g. dc=pbx, dc=com.

#### •PBX Node

A pbx node for this LDAP, e.g. ou=pbx, dc=pbx, dc=com.

#### •User Name

A user for this LDAP, e.g. cn=admin, dc=pbx, dc=com

#### •Password

A password used to access LDAP.

#### 2) Add Contact

In Add Contact you can create them as required.

Figure 5-22 Add Contact

If you want to know how to use LDAP, please refer to [Appendix K](#)

## 5.4 Storage Management

### 5.4.1 Disk Management

You can check the information of the hard disk, manage the disk and do some related configuration. The disk format is EXT3.

#### •Device Information

It's the information of the hard disk.

#### •Disk Management

You can format disk or clean up the disk here.

Note: Please check if you need to back up these files before formatting or clearing up the hard disk. Don't power off the device during the period.

#### •Other Settings

You can:

- a. Save Voicemails in the Disk
- b. Save One Touch Recording Files in the Disk
- c. Save CDR in the Disk

If you want to enable auto recording, please refer to [Appendix J](#)

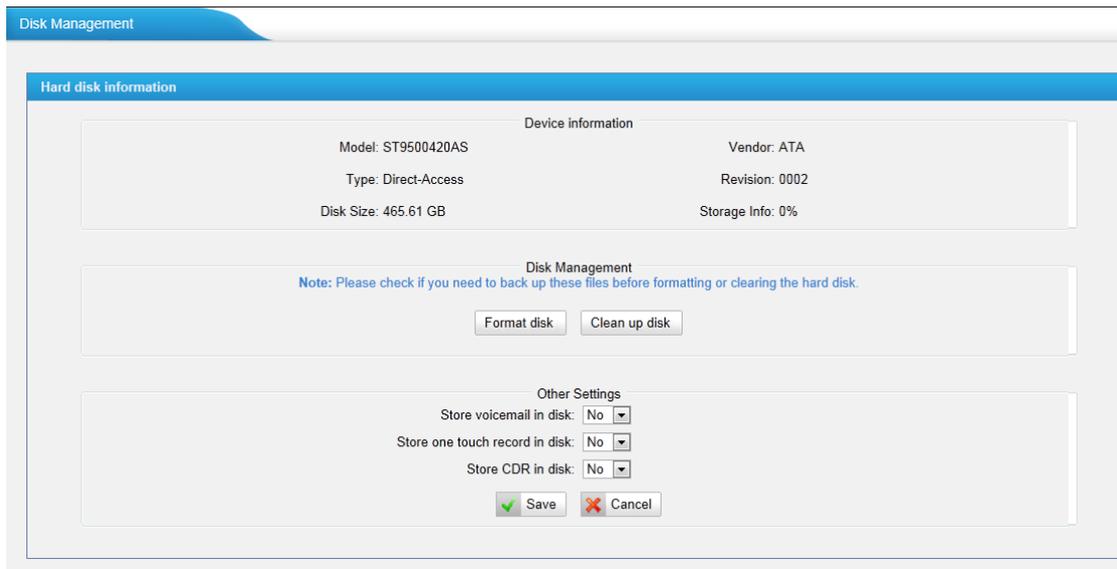


Figure 5-23 Hard disk Information

### 5.4.2

The External Storage feature is used to extend storage space. Once configured, the files (voicemail, call recording files) created before the configured days will be moved to the Net-Disk.

**Note:** The shared folder must be based on Windows Operation System. And if it's windows Vista/2008/7, please add "Everyone" into the shared account list.

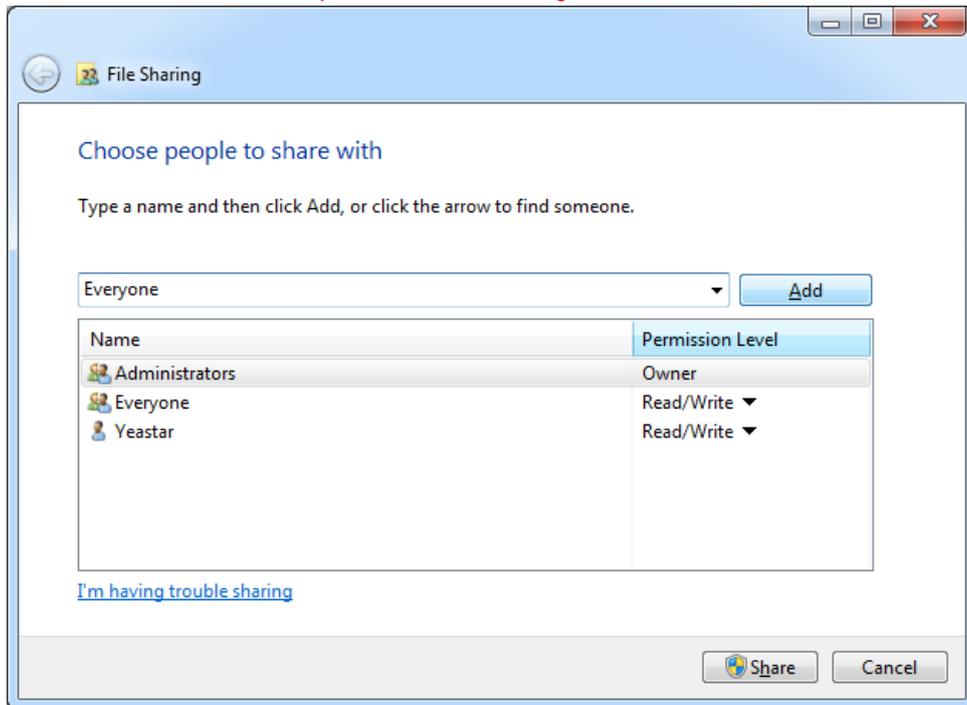


Figure 5-24 File Sharing

Before external storage can be properly configured, an SMB share folder accessible from MyPBX must be set up on a Windows based machine. Once that has been set up, please follow the steps below.

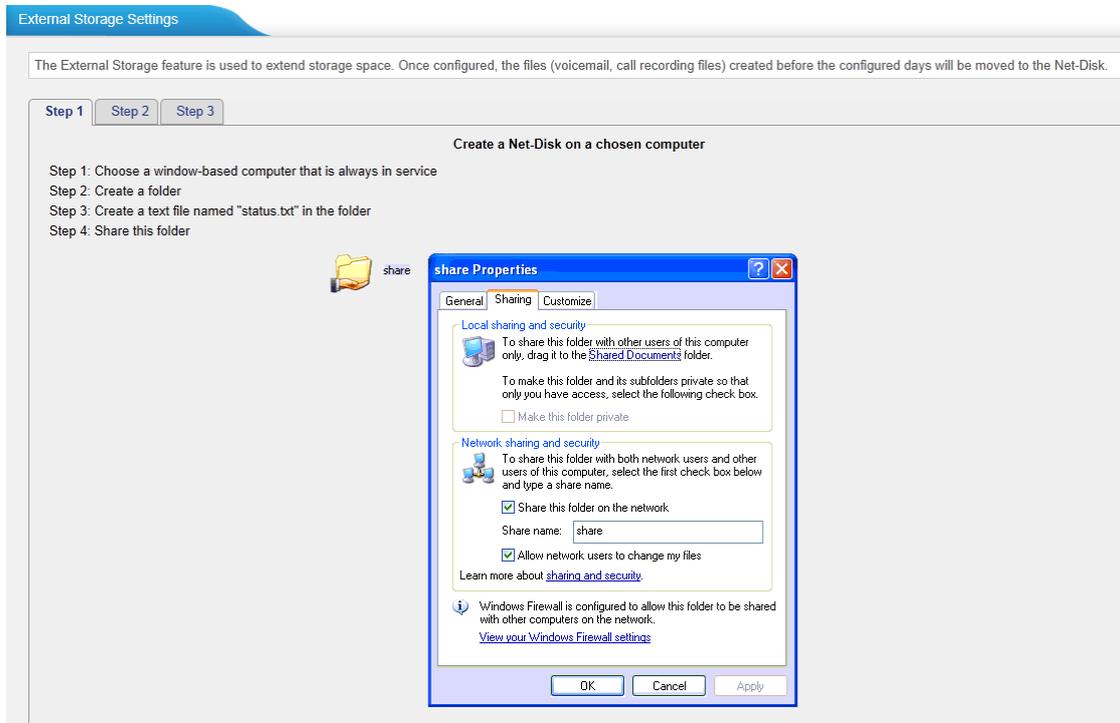


Figure 5-25 External Storage Settings

**Step 1:** Choose a window-based computer that is always in service

**Step 2:** Create a folder

**Step 3:** Create a text file named "status.txt" in the folder

**Step 4:** Share this folder

Then we need input the Net-Disk information in Step2 page.

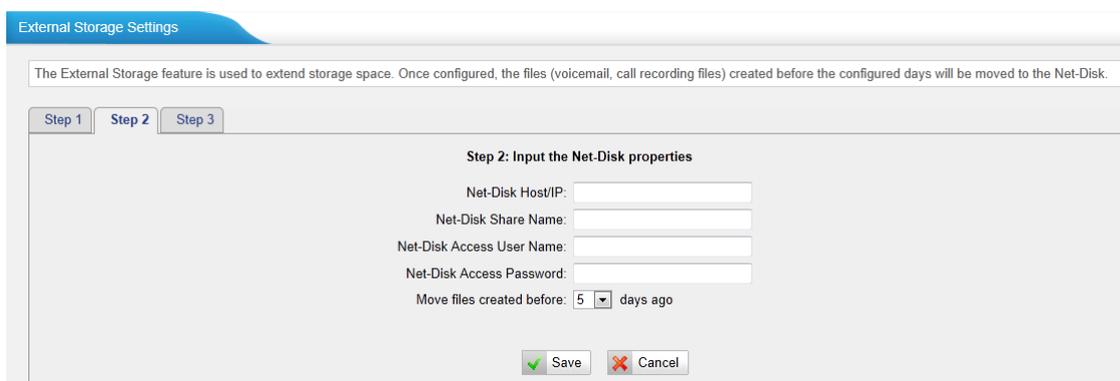


Figure 5-26 Enter the Net-disk information

**Net-Disk Host/IP:** Change this to the IP address of the computer where backup files will be stored.

**Net-Disk Share Name:** Change this to the name of the shared folder where backups will be stored.

**Net-Disk Share Username:** The user name used to log into the network share. Leave this blank if it is not required

**Net-Disk Share Password:** The password used to log into the network share. Leave this blank if it is not required

Open your Windows share folder to see if the MyPBX backup files and folders has been created. If the contents of the backup folder look similar to Step3 page, then you have successfully configured external storage on the MyPBX unit.

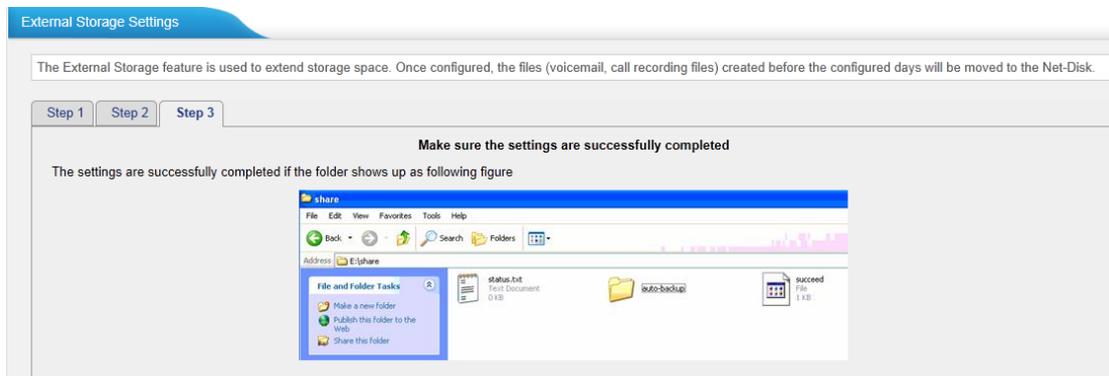


Figure 5-27 Configuring External Storage Successfully

## 5.5 System Preferences

In this page, we can set other system preferences, like the password for admin account, system date and time, firmware update, hot standby, backup and restore, reset and reboot.

### 5.5.1 Password Settings

MyPBX has 3 accounts: admin, user, and cdr. User and cdr account is disabled by default.

#### **Admin account:**

The default password for account "admin" is "**password**". To change the password, select "admin" in "User", enter the old password and new password, and click "Save". The system will then prompt you to re-login using your new password.

After you enter the new password, MyPBX will prompt the password strength. It is recommended that you use numbers, upper-case letters, and lower-case letters to increase the security.

When you log in MyPBX using “admin” account, you can enable “user” and “cdr” account; also, you can change their passwords.

Figure 5-28 Modify admin's Password

### User account:

User account is disabled by default and its default password is “password”. When enabling “user” account for the first time, MyPBX will ask you to change “user” password. If you don't change it, you can't enable “user” account.

To change the password, select “user” in “User”, enter the old password and new password, and click “Save”. The system will then prompt you to re-login using your new password.

After you enter the new password, MyPBX will prompt the password strength. It is recommended that you use numbers, upper-case letters, and lower-case letters to increase the security.

Figure 5-29 Modify user's Password

After enabling “user” account, you can log in MyPBX using “user”. “user” account can change its own password.

### CDR account:

“cdr” account is disabled by default and its default password is “password”. You can enable it after you log in MyPBX using “admin” account.

To change the password, select “cdr” in “User”, enter the old password and new password, and click “Save”. The system will then prompt you to re-login using your new password.

After you enter the new password, MyPBX will prompt the password strength. It is recommended that you use numbers, upper-case letters, and lower-case letters to increase the security.

The screenshot shows the 'Change Password' and 'User Setting' sections of the MyPBX administrator interface. In the 'Change Password' section, the 'User' dropdown is set to 'cdr'. Below it are three password input fields: 'Enter Old Password', 'Enter New Password', and 'Retype New Password'. A green progress bar indicates the new password is 'Strong'. In the 'User Setting' section, both 'Enable User Account' and 'Enable CDR Account' are set to 'Yes'. A 'Save' button is located at the bottom of the form.

Figure 5-30 Modify cdr's Password

After enabling "cdr" account, you can log in MyPBX using "cdr". "cdr" account can change its own password.

## 5.5.2 Date and Time

Set the date and time for MyPBX.

The screenshot displays the 'Date & Time' configuration page. At the top, it shows the 'Server Time' as 'Tue Jul 30 22:51:40 2013'. Below this, the 'Time Zone' is set to '-8 United States - Pacific Time'. The 'Daylight Saving Time' is set to 'Disabled'. There are two main options for time synchronization: 'Automatically Synchronize With An Internet Time Server' (which is selected) and 'Set Date & Time Manually'. Under the selected option, the 'NTP Server' is set to 'pool.ntp.org'. Under the manual option, there are fields for 'Date' and 'Time' (with AM/PM selection). 'Save' and 'Cancel' buttons are at the bottom.

Figure 5-31 Configuring Date &amp; Time

### • Time Zone

You can choose your time zone here.

### • Daylight Saving Time

Set the mode to Automatic or disabled

### • Automatically Synchronize With an Internet Time Server

Input the NTP server so that MyPBX will update the time automatically.

### • Set Date & Time Manually

You can set the time to your local right time manually here.

### 5.5.3 Firmware Update

Upgrading of the firmware is possible through the Administrator Web interface using a TFTP Server or an HTTP URL.

Enter your TFTP Server IP address and firmware file name, then click start to update the firmware

#### Notes:

1. If "Reset configuration to Factory Defaults" is enabled, the system will restore to factory default settings.
2. When update the firmware, please don't turn off the power. Or the system will get damaged.
3. For more information on the steps of updating the firmware, please refer to this link:

[http://www.yeastar.com/download/MyPBX-U5XX/MyPBX\\_U5XX\\_FirmwareUpgrade\\_en.pdf](http://www.yeastar.com/download/MyPBX-U5XX/MyPBX_U5XX_FirmwareUpgrade_en.pdf)

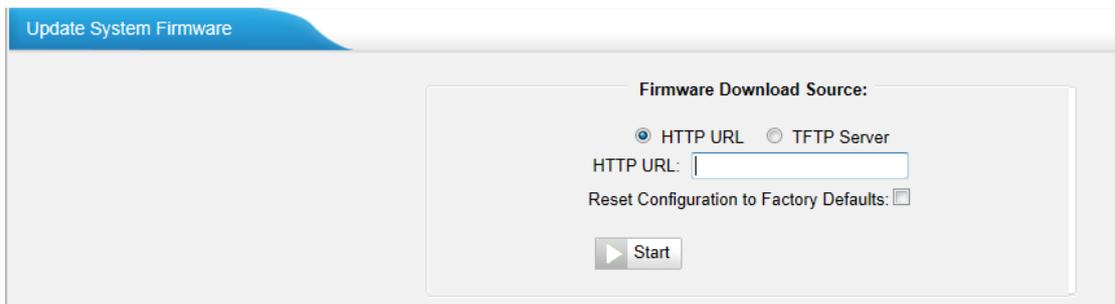


Figure 5-32 Firmware Update Page

### 5.5.4 Backup and Restore

We can back up the configurations before resetting MyPBX U5XX to factory defaults, and then restore it using this package. The backup created on MyPBX is encrypted with file format ".bak".

#### Notes:

1. Only configurations, custom prompts will be backed up, the voicemail and recording files are not included.
2. When you have updated the firmware version, it's not recommended to restore using old package.

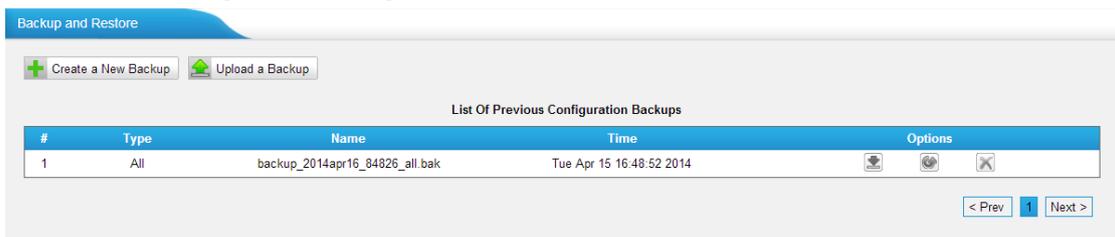


Figure 5-33 Backup and Restore Page

**·Create a New Backup**

Users are able to create a new backup for “All” or for separate extensions.

Figure 5-34 Create a New Backup

**·Upload a Backup**

Users are able to upload backup for “All” or for separate extensions.

Figure 5-35 Upload a Backup

**5.5.5 Reset and Reboot**

We can reset or reboot MyPBX U5XX via web directly in this page.

Figure 5-36 Reset and Reboot Options

**·Reboot System**

**Warning:** Rebooting the system will terminate all active calls!

**·Reset to Factory Defaults**

**Warning:** A factory reset will erase all configuration data on the system. Please do not turn off the system until the RUN light begins blinking. Any power interruption during this time could cause damage to the system.

**5.5.6 Hot Standby**

Redundancy is achieved by using duplicate hardware and software installations and synchronizing data and operating state. Redundancy assures smooth operation even if a system goes down. Essentially a duplicate backup system takes over with virtually no loss of service. This technique assures absolute reliability no matter what failure occurs. In mission critical installations, redundancy is a way to address possibility of any failure.

**Note 1:** Before enabling the Hot Standby feature, please make sure that the two servers in the failover pair are the same model, own the same modules installed in the same slots, the same hardware configurations and firmware version.

**Note 2:** Please configure the primary server first and configure the secondary server only after the running status of primary server becomes "active".

**Note 3:** The virtual IP address inputted in this page will be the one used for registering in each IP phone.

**Note 4:** Before configuring the Email list in this page, please configure the "voicemail settings" in "PBX→Basic settings", and make sure the SMTP test successfully.

**Note 5:** Before configuring the SMS list; please make sure the SIM and GSM/UMTS modules are installed well

Hot Standby

Note 1: Before enabling the Host Standby feature, please make sure that the two servers in the failover pair are the same model, have the same modules installed in the same slots, the same hardware configurations and firmware version.  
 Note 2: Please configure the primary server first and configure the secondary server only after the running status of primary server becomes "active".

Step 1: [Verify the basic information of the server](#)  
 Step 2: [Configure the IP address and hostname of the primary and secondary servers](#)  
 Step 3: [Configure Hot Standby Settings \(Example\)](#)

**Basic**

Running Status: Disabled

Enable: Yes

Mode: Primary

Secondary HostName:

Secondary IP:

Access Code:

Virtual IP Address:

Network Connection Detection:

**Down Notification**

Notification Methods: None

Email List:

SMS List:

**Advanced**

**Heartbeat Options**

Keep Alive: 2 s

Dead Time: 120 s

**Synchronization Options**

Disk Synchronization: Timing Synchronization

Synchronization Time: 02 : 00

Save Cancel

Figure 5-37 Hot Standby Configuration

**Mode:** Primary means the main unit; Secondary means the standby unit;  
**Secondary/Primary Hostname:** If this unit mode is primary, then you need to input the hostname of standby unit; vice versa, if this unit is selected as secondary, then the hostname of primary unit is required. In brief, you need to input each other's host name on this field.

**IP:** You need to input each other's IP address on this field.

**Access code:** To make an identification number to verify each other. The number must be the same to both units.

**Virtual IP address:** To fill in a virtual IP address includes mask, which is always points to the currently activated unit. Customer can register IP phones through this virtual IP address. Please make sure the virtual IP address netmask is the same on both units but different from their former IP address.

**Network Connection Detection:** Generally it requires the IP address of the router or gateway that connects both units. MyPBX will connect another unit through this IP address.

**Down Notification:** The way of informing customer that the system down.

**Keep Alive:** Every 2 seconds, a package will be sent from one unit to another, which can test whether they are working properly.

**Dead Time:** The default setting is 120 seconds. If there's no response within 120s after one receiving a package from the other, then the normal working unit will figure the other unit is dead and send an email or SMS to report the failure.

**Disk Synchronization:** It works for synchronizing the data on hard disk only,

such as the call recording files and CDR files saved in disk. The configurations in MyPBX will not be influenced by this feature. 3 options are available: timing synchronization, real-time synchronization and no.

## 6 PBX



Click  to access.

In this page, we can configure the settings of extension, trunk, inbound call control, outbound call control, audio settings and the others. When configured well, we can make calls as scheduled

### 6.1 Extensions

In this page, we can configure the extensions' details and provision the supported models automatically.

#### 6.1.1

There are three types of extensions supported in MyPBX U5XX: SIP, IAX and analog extension.

FXS/VoIP Extensions					
FXS Extensions					
Port	Extension	Name	Caller ID		
1	601	601	601		
2	602	602	602		

VoIP Extensions					
Add Extension		Add Bulk Extensions		Edit the Selected Extensions	
				Delete The Selected Extension	
Total: 6 Show: 1-6					
<input type="checkbox"/>	Extension	Type	Name	Caller ID	
<input type="checkbox"/>	300	SIP	300	300	
<input type="checkbox"/>	301	SIP	301	301	
<input type="checkbox"/>	302	SIP	302	302	
<input type="checkbox"/>	303	SIP	303	303	
<input type="checkbox"/>	304	SIP	304	304	
<input type="checkbox"/>	305	SIP	305	305	

Figure 6-1 Extension List

### FXS Extensions

FXS Extensions					
Port	Extension	Name	Caller ID		
1	601	601	601		
2	602	602	602		

Figure 6-2 FXS Extension List

There are two analog extensions in MyPBX U5XX if S2 module is installed. To modify the extension number, please delete it first, then recreate it again.

## 1) General

Figure 6-3 Edit FXS Extension

**•Extension**

The numbered extension, e.g. 1234, that will be associated with this particular User/Phone.

**•Port**

The extension correspond port.

**•Name**

A character-based name for this user, e.g. "Bob Jones".

**•Caller ID**

The Caller ID (CID) string will be used when this user calls another internal user.

## 2) Voicemail

**•Enable Voicemail**

Check this box if the user should have a voicemail account.

• **Voicemail Access PIN**

Voicemail Password for this extension, e.g. "1234".

3) Mail Setting

• **Enable Send Voicemail**

Once enabled, the voicemail will be sent to the email address below as an attachment.

• **Send Voicemail to Email Address**

This option defines whether or not voicemails/Fax is sent to the Email address as an attachment.

**Note:** Please ensure that all voicemail settings are properly configured on the System Settings -> Voicemail Settings page before using this feature.

4) Flash

• **Hook Flash Detection**

Sets the amount of time, in milliseconds, that must pass since the last hook-flash event received by MyPBX before it will recognize a second event. If a second event occurs in less time than defined by Hook Flash Detection, then MyPBX will ignore the event. The default value of Flash is 1000ms, and it can be configured in 1ms increments.

5) Group

• **Pickup Group**

If this extension belongs to a pickup group, any calls that ring this extension can be picked up by other extensions in the same pickup group by dialing the Call Pickup feature code (the default is \*4).

**Note:** \*4 is the default setting, it can be changed under Feature Codes -> General -> Call Pickup.

6) Call Duration Settings

Setup the max call duration for every call of this extension, but it's only valid for outbound calls. Enter "0" or leave this blank empty, the value would be equal to the max call duration configured in the Option Settings page.

**Note:** This setting will not be valid for internal calls.

**Other Settings**

**Edit Extension - 601**

**Other Settings**

**Other Options**

Call Waiting ⓘ     DND ⓘ     User Web Interface ⓘ    Ring Out ⓘ : 30

**Follow me**

Follow me:  Always     No answer     When Busy    Transfer to:  Voicemail     Number

**Volume Settings**

Rxgain ⓘ : 40% ▼    Txgain ⓘ : 40% ▼

**Mobility Extension**

Enable Mobility Extension    Mobility Extension Number ⓘ :

Ring Simultaneously ⓘ    Outbound Prefix:

**Caller ID Type**

Caller ID Setting : Default ▼

**Spy Settings**

Allow Being Spied    Spy Modes ⓘ : ----- ▼

Figure 6-4 FXS Extension Other Settings

## 7) Other options

**•Call Waiting**

Check this option if the extension should have Call Waiting capability. If this option is checked, the “When busy” follow me options will not be available.

**•DND**

Don't Disturb.

**•User Web Interface**

Check this option to allow the user to login to the MyPBX User Web interface, which can be used to access voicemail and extension recordings. Users may login the MyPBX User Web interface by using their extension number and voicemail PIN as the login and password respectively.

**•Ring Out**

Check this option if you want to custom the ring time. Tone will stop over the time defined.

## 8) Follow me (Call Forwarding)

This function sets inbound call forwarding on an extension. An administrator can configure Follow Me for this extension.

#### 9) Volume Settings

Rxgain: The Volume sent to FXS extension.

Txgain: The Volume sent out by the FXS extension

#### 10) Mobility Extension

MyPBX allows you to use your mobile phone as an extension. If you set your mobile phone as a mobility extension and then you call MyPBX with this mobility phone, you will hear a dial tone. MyPBX will recognize your call as a call from an extension. You can dial the number of other extensions (your caller ID will be the number of your extension) or dial out via outbound routes just like dialing from your extension.

**Note:** If callback is enabled in the inbound route, the mobility extension function will be disabled.

#### •Enable Mobility Extension

Enable this feature.

#### •Mobility Extension Number

When you dial the server with this number, the mobile phone gets the permission of the extension. For example: dialing the other extensions, playing the voicemail.

#### •Ring Simultaneously

When the extension has an incoming call, it rings its mobility extension simultaneously.

#### •Outbound Prefix

Fill in a proper prefix of mobile number so that it can match an outbound route to dial the mobility extension. For example, if you set the prefix to "9", it will send "9 + mobility extension number" to the outbound route.

#### 11) Call ID type

##### •Call ID Setting

Normally, you choose the "default" option except for using MyPBX in Japan, in which case you should choose "Japan".

#### 12) Spy Settings

MyPBX allows extension to monitor/barge in other conversation. Once this feature is enabled, the extension has the ability to monitor/barge in other calls using the feature codes for each spy mode. Refer to "Feature Codes" section for

more information.

### •spy modes

There are 4 spy modes available:

General spy: you have the permission to use the following 3 modes.

Normal spy: you can only hear the call, but can't talk

Whisper spy: you can hear the call, and can talk with the monitored extension

Barge spy: you can hear the call and talk with them both

**Note:** for example, if 500 want to monitor extension 501, we need to enable the "allow being spied" for 501, and choose the spy mode for extension 500.

Then pick up 500 and dial "feature codes + 501" to start monitoring when 501 is in a call.

If 500 choose "normal spy", it should dial "\*90501" to start monitoring.

If 500 choose "whisper spy", it should dial "\*\*91501" to start monitoring.

If 500 choose "barge spy", it should dial "\*92501" to start monitoring.

If 500 choose "general spy", it can dial "\*90501", "\*91501" or "\*92501" to start monitoring.

## VoIP Extensions

A VOIP extension is a SIP/IAX Account that allows an IP Phone or an IP Soft-Phone client to register on MyPBX.

Extension	Type	Name	Caller ID
300	SIP	300	300
301	SIP	301	301
302	SIP	302	302
303	SIP	303	303
304	SIP	304	304
305	SIP	305	305

Figure 6-5 VOIP Extension List

We can click "Add extension" to start.

Figure 6-6 Add/Edit VOIP Extension

## 1) General

• **Type**

Extension type: SIP, IAX or SIP/IAX.

SIP – The extension sends and receives calls using the VoIP protocol SIP.

IAX – The extension sends and receives calls using the VoIP protocol IAX.

• **Extension**

The numbered extension, e.g. 1234, that will be associated with this particular User/Phone.

• **Password**

The password for this extension, but it is not a fixed one. When you add new extension, a random and robust password will be generated like “Gtwfup642”.

• **Name**

A character-based name for this user, e.g. “Bob Jones”.

• **Caller ID**

The Caller ID will be used when this user calls another internal extension.

•**Register Name**

It is for extension registration validation. Users will not be able register the extension if the authorization name is incorrect even though the username and password are correct.

2) Voicemail

•**Enable Voicemail**

Check this box if the user should have a voicemail account.

•**Voicemail Access PIN**

The voicemail Password for this extension, e.g. "1234".

3) Mail Setting

This option defines whether or not voicemails or faxes are sent to an Email Address as an attachment.

•**Enable Send Voicemail**

Once enabled, the voicemail will be sent to email as an attachment.

•**Email Address**

Email address used to receive the voicemail or Fax.

**Note:** Please ensure that the section "SMTP Settings For Voicemail" (in the "Voicemail Settings") have been properly configured before using this feature.

4) Group

•**Pickup Group**

If this extension belongs to a pickup group, any calls that ring this extension can be picked up by other extensions in the same pickup group by dialing the Call Pickup feature code (the default is \*4).

**Note:** \*4 is the default setting, it can be changed under Feature Codes -> General -> Call Pickup.

5) Call Duration Settings

Setup the max call duration for every call of this extension, but it's only valid for outbound calls. Enter "0" or leave this blank empty, the value would be equal to the max call duration configured in the Option Settings page.

**Note:** This setting will not be valid for internal calls.

6) VoIP Settings

•**NAT**

This setting should be used when the system is using a public IP address to

communicate with devices hidden behind a NAT device (such as a broadband router). If you have one-way audio problems, you usually have problems with your NAT configuration or your firewall's support of SIP and/or RTP ports.

• **Qualify**

Send check alive packets to IP phones

• **Enable SRTP**

Enable extension for SRTP (RTP Encryption).

• **Transport**

This will be the transport method used by the extension. The options are UDP (default) or TCP or TLS.

• **DTMF Mode** – RFC2833, Info, Inband, Auto.

• **Remote Register**

Allow to register remote extensions.

If you enable "Remote Register", the extension password must include uppercase letters, lowercase letters, and digits.

This option is used to enhance the system security, it's disabled by default.

For more details on the system security configuration, please refer to

[APPENDIX B MyPBX Security Configuration Guide](#)

## Other Options

The screenshot shows the 'Add VoIP Extension' dialog box with the 'Other Settings' tab selected. The dialog is divided into several sections:

- Other Options:** Contains checkboxes for 'Call Waiting' (unchecked), 'DND' (unchecked), and 'User Web Interface' (checked). A 'Ring Out' field is set to '30'.
- Follow me:** Includes a 'Follow me' section with 'Always' (unchecked), 'No answer' (checked), and 'When Busy' (checked). A 'Transfer to:' section has 'Voicemail' selected (radio button) and 'Number' (radio button) with an empty text field.
- IP Restriction:** Starts with 'Enable IP Restriction' (unchecked). Below are four 'Permitted IP address/Subnet mask' fields, all empty.
- Mobility Extension:** Includes 'Enable Mobility Extension' (unchecked) and 'Ring Simultaneously' (unchecked). A 'Mobility Extension Number' field is empty, and an 'Outbound Prefix' field is also empty.
- Spy Settings:** Contains 'Allow Being Spied' (unchecked) and a 'Spy Modes' dropdown menu currently set to '-----'.

At the bottom of the dialog are 'Save' and 'Cancel' buttons.

Figure 6-7 VOIP Extension Other Settings

### 7) Other Options

#### **.Call Waiting**

Check this option if the extension should have Call Waiting capability. If this option is checked, the “When busy” follow me options will not be available. The call waiting function of IP phone has higher priority than MyPBX’s call waiting function.

#### **.DND**

Don’t Disturb. When DND is enabled for an extension, the extension will not be available.

#### **.User Web Interface**

Check this option to allow the user to login to the MyPBX User Web interface, which can be used to check voicemail and extension recordings. Users may login MyPBX User Web interface by using their extension number and voicemail PIN as the login and password respectively.

## .Ring Out

Check this option if you want to customize the ring time. Ring tone will stop over the time defined.

### 8) Follow me (Call Forwarding)

Call forwarding for an extension can be configured here. The administrator can configure Follow Me option for this extension. If you want to transfer the call to an outbound number, please follow the dial pattern of outbound route filled in the outbound number.

For example: transferring to your mobile phone number 123456789, the dial pattern of outbound route is "9.", you should fill in 9123456789 here.

### 9) IP Restriction

#### •Enable IP Restriction

Check this option to enhance the VoIP security for MyPBX. If this option is enabled, only the permitted IP/Subnet mask will be able to register this extension number. In this way, the VoIP security will be enhanced.

For more details on the system security configuration, please refer to [APPENDIX B MyPBX Security Configuration Guide](#).

#### •Permitted "IP address/Subnet mask"

The input format should be "IP address" + "/" + "Subnet mask".

e.g."192.168.5.100/255.255.255.255" means only the device whose IP address is 192.168.5.100 is allowed to register this extension number.

e.g."192.168.5.0/255.255.255.0" means only the device whose IP address is 192.168.5.XXX is allowed to register this extension number.

### 10) Mobility Extension

MyPBX allows you to use your mobile phone as an extension. If you set your mobile phone as a mobility extension and then you call MyPBX with this mobility phone, you will hear a dial tone. MyPBX will recognize your call as a call from an extension. You can dial the number of other extensions (your caller ID will be the number of your extension) or dial out via outbound routes just like dialing from your extension.

**Note:** If callback is enabled in the inbound route, the mobility extension function of this inbound route will be disabled.

#### •Enable Mobility Extension

Enable this feature.

#### •Mobility Extension Number

When you dial the server with this number, the mobile phone gets the permission of the extension. For example: dialing the other extensions, playing

the voicemail.

#### •Ring Simultaneously

When the extension has an incoming call, it rings its mobility extension simultaneously.

#### •Outbound Prefix

Fill in proper a prefix of mobile number so that it can match an outbound route to dial the mobility extension. For example, if you set the prefix to "9", it will send "9 + mobility extension number" to the outbound route.

### 11) Spy Settings

MyPBX allows extension to monitor/barge in other conversation. Once this feature is enabled, the extension has the ability to monitor/barge in other calls using the feature codes for each spy mode. Refer to "Feature Codes" section for more information.

#### •spy modes

There are 4 spy modes available:

General spy: you have the permission to use the following 3 modes.

Normal spy: you can only hear the call, but can't talk

Whisper spy: you can hear the call, and can talk with the monitored extension

Barge spy: you can hear the call and talk with them both

**Note:** for example, if 500 want to monitor extension 501, we need to enable the "allow being spied" for 501, and choose the spy mode for extension 500.

Then pick up 500 and dial "feature codes + 501" to start monitoring when 501 is in a call.

If 500 choose "normal spy", it should dial "\*90501" to start monitoring.

If 500 choose "whisper spy", it should dial "\*91501" to start monitoring.

If 500 choose "barge spy", it should dial "\*92501" to start monitoring.

If 500 choose "general spy", it can dial "\*90501", "\*91501" or "\*92501" to start monitoring.

## 6.1.2

The Auto Provision sub menu provides users a method to Auto Provision IP Phone after the Express Setup process.

**Note:** Auto Provision functions fully test with these models:

**Yealink** (T12, T18, T19, T20, T21, T22, T26, T28, T32, T38, T41, T42, T46, W52P, VP530, VP-2009)

**Snom** (300, 320, 360, 370)

**Polycom** (IP 6000, IP 7000, IP 32X, IP33X, IP430, IP450, IP550, IP560, VVX1500)

**Cisco** (IP7940, IP7960)

**Aastra** (9480i, 9480i-CT, 6730i, 6731i, 6737i, 6753i, 6755i, 6757i, 6757i CT)

**GrandStream** (GXP1450, GXP2100, GXP2110, GXP2120)

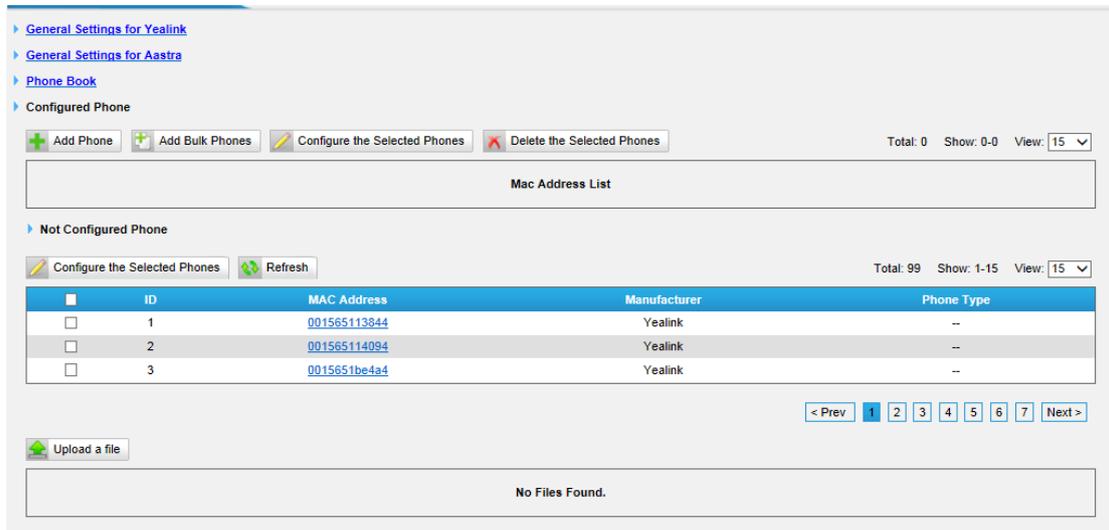
**Escene** (ES220, ES320, ES330, ES410, ES620)

**Fanvil** (C56, C58, C60, C62)

**Panasonic** (UT113, UT123, UT133, UT136, UT248, UT670, TGP500, TGP550)

### News:

**When provisioning Yealink, Grandstream, Fanvil, Snom IP phone, MyPBX is not needed to be set as the only DHCP server any more.**



The screenshot displays the 'Phone Provisioning Page' with the following elements:

- Navigation menu: General Settings for Yealink, General Settings for Aastra, Phone Book, Configured Phone.
- Buttons: Add Phone, Add Bulk Phones, Configure the Selected Phones, Delete the Selected Phones.
- Summary: Total: 0, Show: 0-0, View: 15.
- Section: Mac Address List (empty).
- Section: Not Configured Phone.
 

ID	MAC Address	Manufacturer	Phone Type
1	001565113844	Yealink	--
2	001565114094	Yealink	--
3	0015651be4a4	Yealink	--
- Buttons: Configure the Selected Phones, Refresh.
- Summary: Total: 99, Show: 1-15, View: 15.
- Page navigation: < Prev, 1, 2, 3, 4, 5, 6, 7, Next >
- Section: Upload a file.
 

No Files Found.

Figure 6-8 Phone Provisioning Page

### 6.1.2.1 General Settings for Yealink

In this page, you can configure the general settings before provisioning Yealink IP phones, including the items like general preferences, codecs, remote phone book and firmware upgrade.

**Note:** if firmware download server is enabled, IP phone will update the firmware automatically according to the version and server you have configured during the provision process.

General Settings for Yealink

[Go Back to Phone Provisioning](#)

General Preferences | Codecs | Remote Phone Book | Firmware Download Server

Language: English

Web server Type: HTTP&HTTPS

Admin Password:  Fixed  Prefix  
admin

Time Zone: +8 China(Beijing)

Primary NTP Server: cn.pool.ntp.org

Secondary NTP Server: cn.pool.ntp.org

Daylight Saving Time: Disabled

Time Format: 12 Hour

Date Format: WWW MMM DD

Voicemail: Yes

PNP URL:  Automatic  Custom

Figure 6-9 General Settings for Yealink

### 6.1.2.2 Aastra General Settings

In this page, you can configure the general settings before provisioning Aastra IP phones, including the items like general preferences, program keys configuration, soft keys configuration.

General Settings for Aastra

[Go Back to Phone Provisioning](#)

General Preferences | Programkeys Configuration | Softkeys Configuration

Local Dial Plan: 91x|92xx|4-8|xxxxxxxx|5xx

Send Dial Plan Terminator:  Enable

Time and Date Setting

Time Server1: [ ]

Time Server2: [ ]

Auto-Resync

Resync Mode: none

Resync Time: 00:00

Figure 6-10 General Setting for Aastra

### 6.1.2.3 Phone book

You can add your contacts here and when you use phone provisioning; the IP phone will download the phone book.

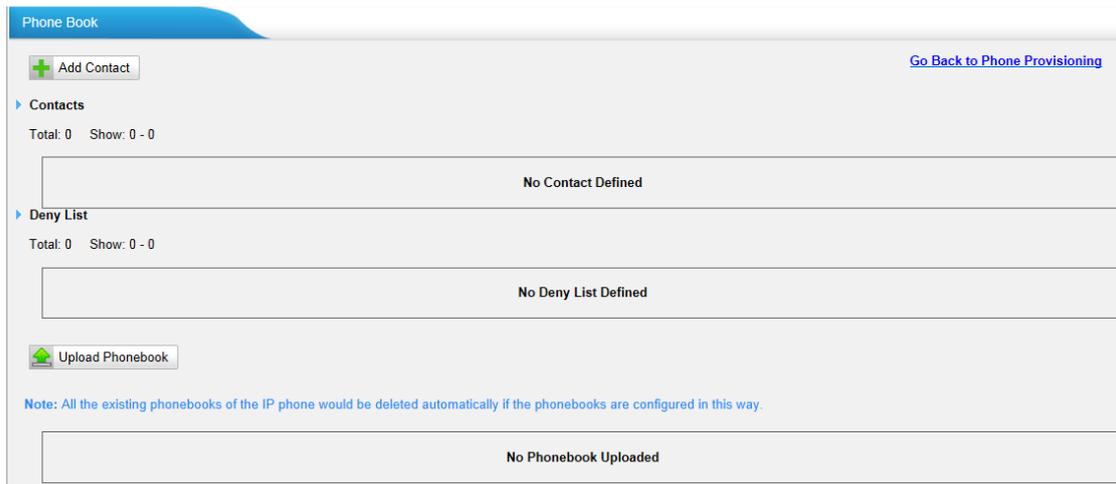


Figure 6-11 Phone Book

## 1) Add Contact

• **Type**

There are three types: None, VIP and Deny list (Blacklist).

• **Group**

There are 5 groups: None, Friends, Family, Work, Colleagues list.

• **Nick Name**

You can set a nick name for this number.

• **Favorite**

Only works with snom phone.

• **Organization**

Input the organization of this contact. Only works with snom phone.

• **Title**

Input the title of this contact. Only works with snom phone.

• **Email**

Input the email of this contact. Only works with snom phone.

• **Birthday**

Input the birthday of this contact. Only works with snom phone.

• **First Name**

Input the first name of this contact. Only works with snom phone.

• **Family Name**

Input the family of this contact. Only works with snom phone.

**•Office Number**

Input the office number here

**•Mobile Number**

Input the mobile number here

**•Home Number**

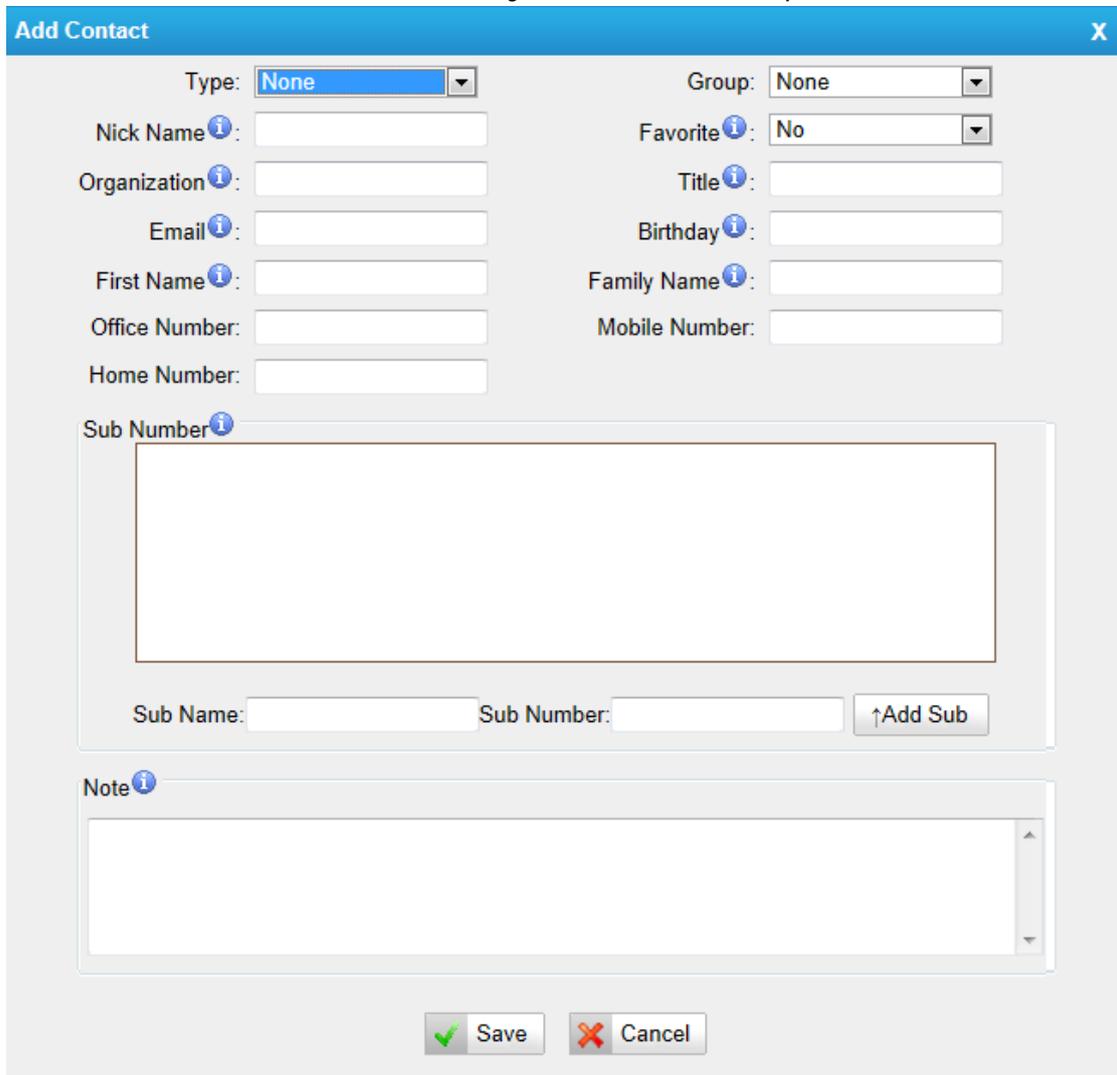
Input the home number here

**•Sub Number**

Add sub number of this contact. Only works with snom phone.

**•Note**

Take some note of this contact. Only works with snom phone.



The screenshot shows a 'Add Contact' dialog box with the following fields and controls:

- Type:** None (dropdown)
- Group:** None (dropdown)
- Nick Name:** [text input]
- Favorite:** No (dropdown)
- Organization:** [text input]
- Title:** [text input]
- Email:** [text input]
- Birthday:** [text input]
- First Name:** [text input]
- Family Name:** [text input]
- Office Number:** [text input]
- Mobile Number:** [text input]
- Home Number:** [text input]
- Sub Number:** [large text area]
- Sub Name:** [text input]
- Sub Number:** [text input]
- ↑Add Sub** (button)
- Note:** [text area]
- Save** (button with green checkmark)
- Cancel** (button with red X)

Figure 6-12 Add a Contact

## 2) Upload Phonebook

You can upload a phonebook before auto provision, which will be provisioned to the IP phone when using auto provision feature to configure your IP phones. The format of phonebook should be \*.xml.

**Note:** All the existing phonebooks of the IP phone will be replaced automatically if the phonebooks are configured in this way.

### 6.1.2.4 Configure phone

Let's take provisioning Yealink as an example.

There are two modes to create new phones: create new phones in webpage and upload the IP Phone's configuration file.

#### Add new phone via webpage

Click "Add Phone" and fill in the corresponding information in the pop-up window.

The screenshot shows the 'Add Phone' configuration window. The 'General' tab is selected. The configuration includes the following fields and values:

- Enabled: Yes
- NewConfig: Yes
- MAC Address: 001565
- Name: (empty)
- Manufacturer: Yealink
- Phone Type: T28
- Call Waiting: Enabled
- Key As Send: #
- Auto Redial: Disabled
- Auto Answer: Disabled
- Phone Book: Enabled

The 'Line' section contains six rows, each with a checkbox for 'Line Active', a dropdown for 'Extension', and a text field for 'Label':

Line	Line Active	Extension	Label
Line1	<input type="checkbox"/>		
Line2	<input type="checkbox"/>		
Line3	<input type="checkbox"/>		
Line4	<input type="checkbox"/>		
Line5	<input type="checkbox"/>		
Line6	<input type="checkbox"/>		

At the bottom of the window are 'Save' and 'Cancel' buttons.

Figure 6-13 Configure Yealink T28

#### 1) General

##### ·Enabled

Choose yes or no to enable or disable this extension

• **New Config**

If your IP phone's firmware version is above x.70.x.x, you should select "Yes". Or else, it should be "No".

• **MAC address**

Input the MAC address of the IP phone

• **Name**

Put the name of this Phone here.

• **Manufacturer**

You can choose the Manufacturer of the IP phone

• **Phone Type**

Choose the model of your phone. Only for snom phone

• **Call Waiting**

This call feature allows your phone to accept other incoming calls to an extension already in an active call.

• **Key as Send**

Configure a key as the send key, you can choose #, \* or disable this feature.

• **Auto redial**

Enable or disable auto redial for the IP Phone

• **Auto answer**

Enable or disable auto answer for the IP phone

• **Phone book**

Enable or disable the feature of phone book for the IP phone

• **Line**

You can set each line of IP phone for the account you want, active or not.

Extension: Selected the extension number for IP Phone.

Label: It is shown on the LCD for users to identify the account.

Line Active: You can choose on/off to enable/disable the account respectively.

**2) Codecs**

In this page, we can set the codecs for the IP phone.

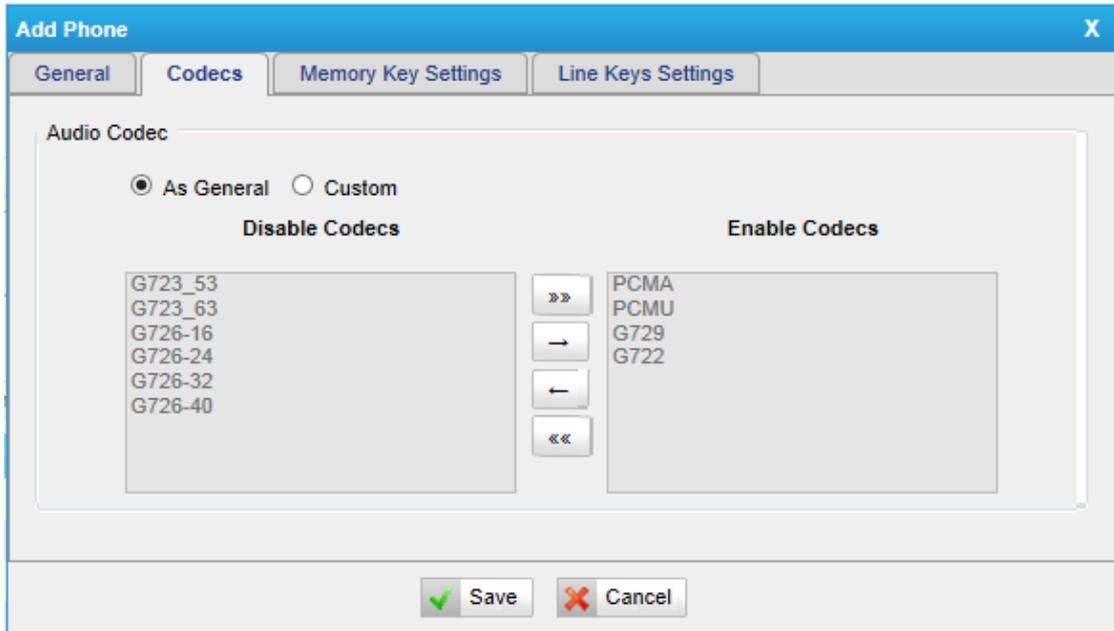


Figure 6-14 Select the Codec

### 3) Memory key settings

In this page, we can configure the DSS keys of the IP phone one by one.

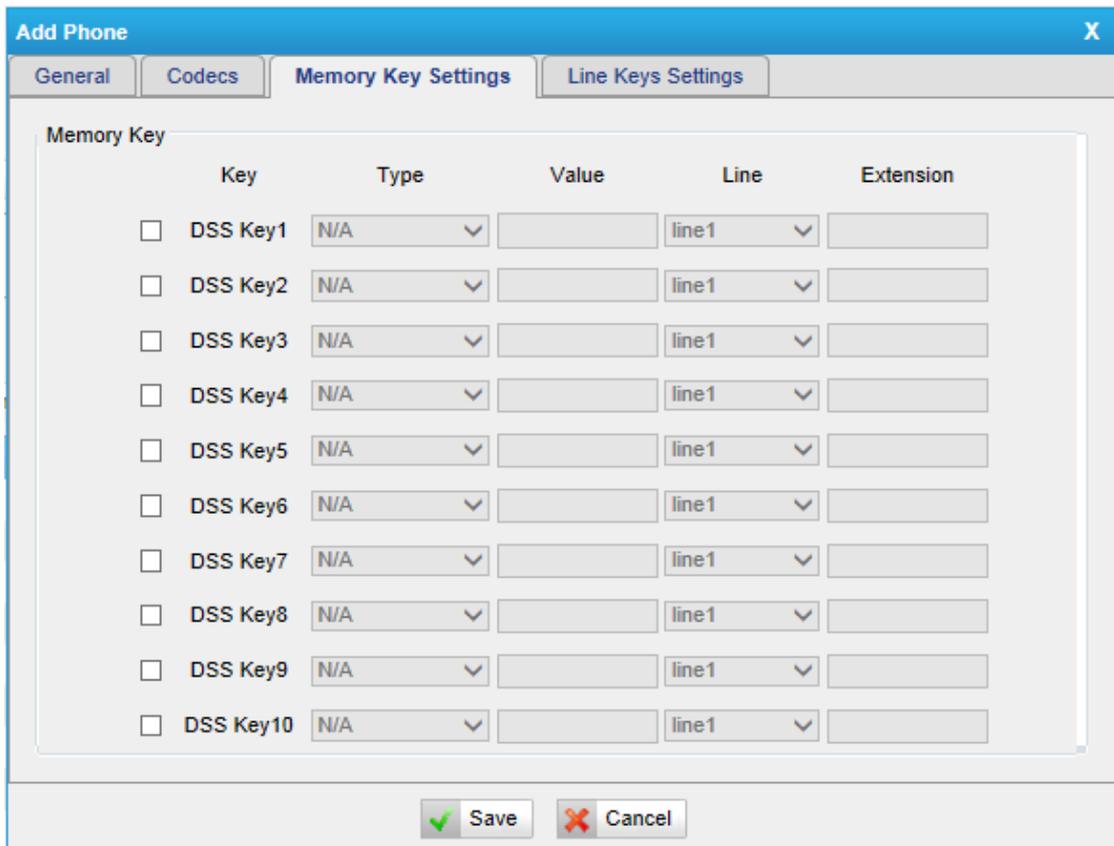


Figure 6-15 Configure Memory Key

### 4) Line keys settings

We can configure the line key settings for this IP phone

Key	Type	Value	Label	Line	Extension
<input type="checkbox"/> Line Key 1	N/A			Line1	
<input type="checkbox"/> Line Key 2	N/A			Line2	
<input type="checkbox"/> Line Key 3	N/A			Line3	
<input type="checkbox"/> Line Key 4	N/A			Line4	
<input type="checkbox"/> Line Key 5	N/A			Line5	
<input type="checkbox"/> Line Key 6	N/A			Line6	

Figure 6-16 Configure Line Key

#### 6.1.2.4 Not configured phone

In this section, MyPBX will scan all the supported IP phones and display them here. We can click the “MAC address” of an IP phone and input the corresponding information in the pop-up window, like figure 6-13.

ID	MAC Address	Manufacturer	Phone Type
1	0015651208d5	Yealink	--
2	001565148155	Yealink	--
3	0015651118bd	Yealink	--
4	0015652c2cc8	Yealink	--
5	00156511189c	Yealink	--
6	0015652991f2	Yealink	T28

Figure 6-17 Not Configured Phone List

#### 6.1.2.5 Upload a file

Click “Upload a file” and choose the configuration file of the IP phone in the popup window.

**Note:** the file format must be

Yealink: .cfg file

Snom: .htm file

Grandstream: .xml file

Please edit the configuration files in advance before uploading.

Figure 6-18 Upload Configuration File

## 6.2 Trunks

### 6.2.1

Multi physical trunks are supported in MyPBX U5XX, like E1, BRI, PSTN, and GSM/UMTS. There will be 2 E1 ports fixed inside, for other trunks, please make sure you have installed the modules inside, BRI trunk requires B2 module, PSTN trunk requires the O2, while GSM/UMTS trunk needs to install the GSM/UMTS modules inside.

**Note:**

**E1/T1/J1 trunk in MyPBX U5XX**

	MyPBX U500	MyPBX U510	MyPBX U520
<b>E1/T1/J1 Ports</b>	<b>0</b>	<b>1</b>	<b>2</b>

Physical Trunk				
▶ E1/T1				
Trunk Name	Mode Type	Signaling	Echo Cancellation	
E1Trunk1	E1	PRI-CPE	On	
E1Trunk2	E1	PRI-CPE	On	
▶ BRI Trunk				
Trunk Name	Port			
BriTrunk3	3			
BriTrunk4	4			
BriTrunk7	7			
BriTrunk8	8			
▶ Analog Trunk				
Trunk Name	Port			
pstn13	13			
pstn14	14			
▶ GSM/UMTS Trunk				
Trunk Name	Port	Type		
GSM1	1	GSM		

Figure 6-19 Physical Trunk List

### E1/T1 trunk

In this page we can configure the details of E1 trunk, before configuring anything, please make sure the cable is fine, and you have got enough information from the ISDN provider.

E1/T1				
▶ E1/T1				
Trunk Name	Mode Type	Signaling	Echo Cancellation	
E1Trunk1	E1	PRI-CPE	On	
E1Trunk2	E1	PRI-CPE	On	

Figure 6-20 E1 Trunk

On the Physical Trunk page, click "Edit" on the selected trunk and modify its properties in the popup window:

Figure 6-21 Edit E1 Trunk

- **Trunk name**

Set the trunk name

- **Signaling**

PRI-NET, PRI-CPE, MFC/R2, SS7

- **Mode Type**

E1/T1/J1

- **Switch Type**

national: National ISDN type2 (common in the US)

ni1: National ISDN type 1

dms100: Nortel DMS100

4ess: AT&T 4ESS

5ess: Lucent 5ESS

euroisdn: EuroISDN

qsig: Minimalistic protocol to build a "network" with two or more PBX of different vendors

#### •Reset interval

Set the time in seconds between restart of unused channels. Some PBXs don't like channel restarts. So set the interval to a very long interval e.g. 100000000 or "never" to disable entirely. If you are in Israel, the following is important: As Bezeq in Israel doesn't like the B-Channel resets happening on the lines, it is best to set the reset interval to "never" when installing a box in Israel. Our past experience also shows that this parameter may also cause issues on local switches in the UK and China.

#### •Over Lap Dial

Define whether MyPBX can dial this switch using overlap digits. If you need Direct Dial-in (DDI; in German "Durchwahl") you should change this to yes, then MyPBX will wait after the last digit it receives.

#### •PRI Indication

Tells how Device should indicate Busy() and Congestion() to the switch/user. Accepted values are:

inband: Device plays indication tones without answering; not available on all PRI/BRI subscription lines .

outofband: Device disconnects with busy/congestion information code so the switch will play the indication tones to the caller. Busy() will now do same as setting PRI\_CAUSE=17 and Hangup().

#### •Enable Facility

To enable transmission of facility-based ISDN supplementary services (such as caller name from CPE over facility).

#### •NSF

Used with AT&T PRIs. If outbound calls are being rejected due to "Mandatory information element missing" and the missing IE is 0x20, then you need this setting.

#### •CRC

CRC Verification

#### •Codec

Default, A-Law, U-Law

#### •Echo Cancellation

Disable or enable echo cancellation; it is recommended not to turn this off.

## 1) Caller ID Prefix

### •ISDN Dialplan

These settings are set to make the caller ID prefix work according to information sent from the E1 provider. ISDN telephony numbering plan Recommendation E.164.

### •International Prefix

When there are international calls coming in via E1 trunk, the International Prefix you have set here will be added before the CID. So you can know this is an international call before you answer it.

### •National Prefix

When there are national calls coming in via this E1 trunk, the National Prefix you have set here will be added before the CID. So you can know this is a national call before you answer it.

### •Local Prefix

When there are Local calls coming in via this E1 trunk, the Local Prefix you have set here will be added before the CID. So you can know this is a local call before you answer it.

### •Private Prefix

When there are Private calls coming in via this E1 trunk, the Private Prefix you have set here will be added before the CID. So you can know this is a Private call before you answer it.

### •Unknown Prefix

When there are calls with unknown number coming via this E1 trunk, the Unknown Prefix you set here will be shown as the caller ID.

## 2) Dialplan

### •Remote Dialplan

Calling number type

### •Remote Number Type

Calling number identification

### •Location Dialplan

Called number type

**•Location Number Type**

Called number identification

**3) DOD Setting**

DOD (Direct Outward Dialing) means the caller ID displayed when dialing out. Before configuring this, please make sure the provider supports this feature

**•Global DOD**

Global Direct Outward Dialing Number

**•DOD**

Direct Outward Dialing Number

**•Associated Extension**

The extension making call out via the E1 trunk will display the associated DOD.

**•Add DOD**

Add DOD for one associated extension.

**•Add Bulk DOD**

Figure 6-22 Add Bulk DOD

Add bulk DOD for bulk extensions in ascending sequence with the “Begin DOD” you fill in. For example, if the Associated Extensions are 100, 101, 102, 103, 104, 105 with “Begin DOD” as 5500100, the corresponding DOD will be 5500100, 5500101, 5500102, 5500103, 5500104, and 5500105.

**BRI Trunk**

Basic Rate Interface (BRI, 2B+D, 2B1D) is an Integrated Services Digital Network (ISDN) configuration intended primarily for use in subscriber lines similar to those that have long been used for plain old telephone service. The BRI configuration provides 2 bearer channels (B channels) at 64 kbit/s each and 1 data channel (D channel) at 16 kbit/s. The B channels are used for voice or user data, and the D channel is used for any combination of data, control/signalling, and X.25 packet networking

Trunk Name	Port	
BriTrunk3	3	
BriTrunk4	4	
BriTrunk7	7	
BriTrunk8	8	

Figure 6-23 BRI Trunk

Click edit to configure the details of BRI trunks.

Edit BRI Trunk - BriTrunk1
X

Trunk Name :

Signaling:

Overlap Dial :

PRI Indication :

Nsf :

Hide Caller ID :

Switch Type :

Reset Interval :  s

Enable Facility :

Echo Cancellation :

Codec:

Caller ID Prefix

ISDN Dialplan :

International Prefix :

Local Prefix :

Unknown Prefix :

National Prefix :

Private Prefix :

Dialplan

Remote Dialplan :

Remote Number Type :

Location Dialplan :

Location Number Type :

DOD Settings

Global DOD:

DOD:  Associated Extension:

Figure 6-24 Edit BRI Trunk

**·Trunk Name**

A unique label used to identify this trunk when listed in outbound rules, incoming rules, etc. E.g. "BriTrunk1".

**·Signaling**

Signaling method

BRI-CPE: ISDN BRI in TE mode and Point to Point.

BRI-CPE-PTMP: ISDN BRI in TE mode and Point to multi Point.

BRI-NET: ISDN BRI in NET mode and Point to Point.

BRI-NET-PTMP: ISDN BRI in NET mode and Point to multi Point.

**·Switch Type**

National: National ISDN type2 (common in the US)

ni1: National ISDN type 1

dms100: Nortel DMS100

4ess: AT&T 4ESS

5ess: Lucent 5ESS

euroisdn: EuroISDN

qsig: D-channel signaling protocol at Q reference point for PBX networking.

**·Over Lap Dial**

Define whether MyPBX can dial this switch using overlap digits or not. If you need Direct Dial-in (DDI; in German "Durchwahl") you should change this to yes, then MyPBX will wait after the last digit it receives.

**·Reset interval**

Set the time in seconds between restart of unused channels. Some PBXs don't like channel restarts. so set the interval to a very long interval e.g. 100000000 or "never" to disable entirely. If you are in Israel, the following is important: As Bezeq in Israel doesn't like the B-Channel resets happening on the lines, it is best to set the reset interval to "never" when installing a box in Israel. Our past experience also shows that this parameter may also cause issues on local switches in the UK and China.

**·PRI Indication**

Tells how Device should indicate Busy() and Congestion() to the switch/user.

Accepted values are:

inband: Device plays indication tones without answering; not available on all PRI/BRI subscription lines .

outofband: Device disconnects with busy/congestion information code so the switch will play the indication tones to the caller. Busy() will now do same as setting PRI\_CAUSE=17 and Hangup().

•**Enable Facility**

To enable transmission of facility-based ISDN supplementary services (such as caller name from CPE over facility).

•**NSF**

Used with AT&T PRIs. If outbound calls are being rejected due to "Mandatory information element missing" and the missing IE is 0x20, then you need this setting.

•**Echo Cancellation**

Disables or enables echo cancellation; it is recommended not to turn this off.

•**Hide Caller ID**

If you want others to see your CID, please disable this option.

•**Codec**

You can choose alaw or ulaw.

1) Caller ID Prefix

•**ISDN Dialplan**

These settings are set to make the caller ID prefix work according to information sent from the E1 provider. ISDN telephony numbering plan Recommendation E.164.

•**International Prefix**

When there are international calls coming in via this BRI trunk, the International Prefix you have set here will be added before the CID. So you can know this is an international call before you answer it.

•**National Prefix**

When there are national calls coming in via this BRI trunk, the National Prefix you have set here will be added before the CID. So you can know this is a national call before you answer it.

•**Local Prefix**

When there are Local calls coming in via this BRI trunk, the Local Prefix you have set here will be added before the CID. So you can know this is a local call before you answer it.

•**Private Prefix**

When there are Private calls coming in via this BRI trunk, the Private Prefix you have set here will be added before the CID. So you can know this is a Private call before you answer it.

• **Unknown Prefix**

When there are calls with unknown number coming via this BRI trunk, the Unknown Prefix you set here will be shown as the caller ID.

2) Dialplan

• **Remote Dialplan**

Calling number type

• **Remote Number Type**

Calling number identification

• **Location Dialplan**

Called number type

• **Location Number Type**

Called number identification

3) DOD Setting

• **Global DOD**

Global Direct Outward Dialing Number

• **DOD**

Direct Outward Dialing Number.

• **Associated Extension**

The extension making call out via BRI Trunk will display the associated DOD.

• **Add DOD**

Add DOD for one associated extension.

• **Add Bulk DOD**

Figure 6-25 Add Bulk DOD

Add bulk DOD for bulk extensions in ascending sequence with the “Begin DOD” you fill in. For example, if the Associated Extensions are 100, 101, 102, 103, 104, 105 with “Begin DOD” as 5500100, the corresponding DOD will be 5500100, 5500101, 5500102, 5500103, 5500104, and 5500105.

## PSTN trunk

The public switched telephone network (PSTN) is the network of the world's public circuit-switched telephone networks.

Analog Trunk	
Trunk Name	Port
pstn8	8

Figure 6-26 PSTN Trunk

Click edit to configure more details.

Trunk Name *i*: pstn8

Volume Setting *i*: 40%

Hangup Detection

Busy Detection *i*: Yes

Busy Count *i*: 4

Busy Interval *i*: 1

Busy Pattern *i*:

Frequency Detection *i*: No

Busy Frequency *i*:

Hangup Polarity Reversal Detection *i*: No

Answer Detection

Answer Detection:

Caller ID Setting

Caller ID Start *i*: Ring    Caller ID Signaling *i*: Bell - USA

Caller ID Detection *i*: Yes

Save    Cancel

Figure 6-27 Edit PSTN Trunk

**•Trunk Name**

A unique label used to identify this trunk when listed in outbound rules, incoming rules, etc. E.g. "pstn5".

**•Volume Setting**

Used to modify the volume level of this trunk. Normally, this setting does not need to be changed.

## 1) Hangup Detection

**•Busy Detection**

Busy Detection is used to detect far end hang-up or for detecting a busy signal. Select "Yes" to turn this feature on.

**•Busy Count**

If Busy Detection is enabled, it is also possible to specify how many busy tones to wait for before disconnecting the call. The default is 4, but better results can be achieved if set to 6 or even 8. Remember, the higher the number, the more time will be required to release a channel. A higher setting lowers the probability that you will encounter random hang-ups.

**•Busy Interval**

The busy detection interval

**•Busy Pattern**

If Busy Detection is enabled, it is also possible to specify the cadence of your busy signal. In many Countries, it is 500msec on, 500msec off. Without Busy Pattern specified, MyPBX will accept any regular sound-silence pattern that repeats <Busy Count> times as a busy signal. If you specify Busy Pattern, then MyPBX will further check the length of the tone and silence, which will further reduce the chance of a false positive disconnection.

**•Frequency Detection**

Used for Frequency Detection (Enable detecting the busy signal frequency or not).

**•Busy Frequency**

If the Frequency Detection is enabled, you must specify the local frequency.

**•Hangup Polarity Reversal Detection**

The call will be considered as "hang up" on a polarity reversal.

## 2) Answer Detection

**•Answer Detection**

Answer Detection settings are configured for accurate billing. If the PSTN trunk sends polarity after answering the call, users can choose "Polarity Detection"; or else choose "Ring Detection", and configure the detailed settings according to the PSTN line ring tone.

## 3) Caller ID setting

**•Caller ID Start**

This option allows you to define the start of a Caller ID signal:

Ring: Start when a ring is received (Caller ID Signaling: Bell\_USA, DTMF).

Polarity: Start when a polarity reversal is started (Caller ID Signaling: V23\_UK, V23\_JP, DTMF).

Before Ring: Start before a ring is received (Caller ID Signaling: DTMF).

**•Caller ID Signaling**

This option defines the type of Caller ID signaling to use. It can be set to one of the following:

Bell: bell202 as used in the United States

v23\_UK: suitable in the UK

v23\_Japan: suitable in Japan

v23-Japan pure: suitable in Japan

DTMF: suitable in Denmark, Sweden, and Holland

### .Caller ID Detection

For FXO trunks, this option forces MyPBX to clarify Caller ID incoming calls.

## GSM/UMTS Trunk

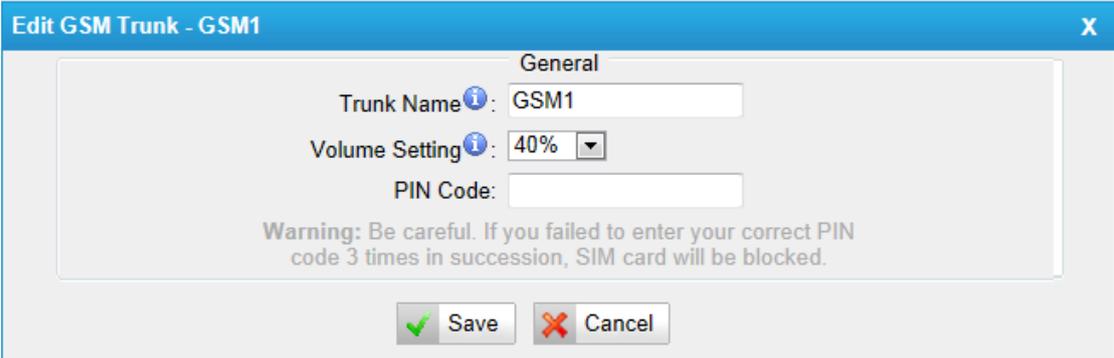
GSM/UMTS trunks are supported in MyPBX U5XX if you have got the GSM/UMTS module and SIM cards installed. One GSM/UMTS trunk supports only one SIM card for one concurrent call.



Trunk Name	Port	Type
GSM1	1	GSM

Figure 6-28 GSM/UMTS Trunk

Click edit to configure more details.



**Edit GSM Trunk - GSM1**

**General**

Trunk Name: GSM1

Volume Setting: 40%

PIN Code:

Warning: Be careful. If you failed to enter your correct PIN code 3 times in succession, SIM card will be blocked.

Save Cancel

Figure 6-29 Edit GSM/UMTS Trunk

### Trunk Name

A unique label used to identify this trunk when listed in outbound rules, incoming rules, etc. E.g. "GSM9".

### .Volume Setting

Used to modify the volume level of this trunk. Normally, this setting does not need to be changed.

### .PIN Code

Please enter your SIM card PIN code here if your card has a Pin code.

## 6.2.2

There are two types of VOIP trunk in MyPBX: SIP and IAX, in this page, we can

also configure the “Service Provider” trunk, which doesn’t need the use name and password for authorization, when you have bought a trunk from provide with IP address only, please choose “Service Provider” trunk .

The screenshot shows the VoIP Trunk configuration interface. At the top right, there is an "Apply Changes" button. Below the header, there are two sections: "VoIP Trunk" and "Service Provider".

**VoIP Trunk Section:**

- Buttons: + Add VoIP Trunk, X Delete the selected Trunk
- Table:

Provider Name	Type	Hostname/IP	User Name
test	SIP	192.168.5.143	103
test2	SIP	192.168.5.146	102

**Service Provider Section:**

- Buttons: + Add Service Provider, X Delete the selected Trunk
- Table:

Provider Name	Type	Hostname/IP
Test	SIP	192.168.4.149
Test2	SIP	192.168.4.150

Figure 6-30 VOIP Trunk

### 6.2.2.1 VoIP Trunk

In this page, we can configure VoIP trunk (SIP/ IAX) you have got from provider with the authorization name and password.

The screenshot shows the VoIP Trunk configuration interface. At the top, there are buttons: + Add VoIP Trunk and X Delete the selected Trunk. Below is a table with the following data:

Provider Name	Type	Hostname/IP	User Name
test	SIP	192.168.5.143	103
test2	SIP	192.168.5.146	102

Figure 6-31 VOIP Trunk

#### 1) Add VoIP Trunk

Input the correct SIP information (provided by VoIP provider). Inaccurate information will prevent the trunk from registering. You can delete multiple trunks at once as required.

Figure 6-32 Add a SIP Trunk

**·Type**

SIP – Identifies whether the trunk sends and receives calls using the VoIP protocol SIP

**·Provider Name**

A unique label to help you identify this trunk when listed in outbound rules, incoming rules etc. E.g. "yeastar".

**·Hostname/IP**

Service provider's hostname or IP address.5060 is the standard port number used by SIP protocol. Don't change this part if it is not required.

**·Domain**

VoIP provider's server domain name.

• **Username**

Username of the SIP account. Used for SIP trunk registration.

• **Authorization name**

Used for SIP authentication. Leave this blank if not required.

• **Password**

Password of the SIP account.

• **From User**

All outgoing calls from this SIP Trunk will use the From User (In this case the account name for SIP Registration) in From Header of the SIP Invite package. Keep this field blank if not needed

• **Online number**

Define the online number that expected by “Skype Connect” and some other SIP service providers. Leave this field blank if not needed.

• **Maximum Channels**

Control the maximum number of outbound channels (simultaneous calls) that can be used on this trunk. Inbound calls are not counted against the maximum. Set as 0 to specify no maximum.

• **Caller ID**

Specify the caller ID to use when making outbound calls over this trunk. The caller ID set in the “Extension” page will override the caller ID set in the “VOIP trunk” page. Please note that not all the service providers support this feature. Contact your service provider for more information.

• **Outbound Proxy Server**

A proxy that receives requests from a client. Even though it may not be the server resolved by the Request-URI.

• **Realm**

Realm is a string to be displayed to users so they know which username and password to use.

• **Codecs**

Define the codec for this sip trunk and its priority

**Note:** To change the codec type and priority of this trunk, please create it first, it will appear when you edit it again.

• **Transport**

This will be the transport method used by the SIP Trunk. This method is given by the SIP trunk provider. The options are UDP (default) or TCP or TLS.

• **Enable SRTP**

Define if SRTP is enabled for this trunk.

• **Qualify**

Send check alive packets to the sip provider.

• **DTMF mode**

Set default mode for sending DTMF of this trunk. Default setting: rfc2833

• **DOD**

DOD (Direct Outward Dialing) means the caller ID displayed when dialing out. Before configuring this, please make sure the provider supports this feature.

• **Associated Extension**

The extension making call out via SIP Trunk will display the associated DOD.

• **Add DOD**

Add DOD for one associated extension.

• **Add Bulk DOD**

Figure 6-33 Add a SIP Trunk

Add bulk DOD for bulk extensions in ascending sequence with the “Begin DOD” you fill in. For example, if the Associated Extensions are 100, 101, 102, 103, 104, 105 with “Begin DOD” as 5500100, the corresponding DOD will be 5500100, 5500101, 5500102, 5500103, 5500104, and 5500105.

## 2) Add IAX trunk

Input the correct IAX information (provided by VOIP provider). Inaccurate information will prevent the trunk from registering.

Figure 6-34 Add an IAX Trunk

### •Type

IAX – Identifies whether the trunk sends and receives calls by using the VoIP protocol IAX.

### •Provider Name

A unique label to help you identify this trunk when listed in outbound rules, incoming rules etc. E.g. "yeastar2"

### •Hostname/IP

Service provider's hostname or IP address. 4569 is the standard port number used by IAX protocol. Don't change this part if it is not required.

### •Username

Username of IAX account; Used for IAX trunk registration.

### •Password

Password of IAX account

**.Online number**

Define the online number that expected by “Skype Connect” and some other SIP service providers. Leave this field blank if it's no required.

**.Maximum Channels**

Control the maximum number of outbound channels (simultaneous calls) that can be used on this trunk. Inbound calls are not counted against the maximum. Set as 0 to specify no maximum.

**.Caller ID**

Specify the caller ID to use when making outbound calls over this trunk. The caller ID set in the “extension” page will override the caller ID setting in the “VOIP trunk” page. Please note that not all the service providers support this feature. Contact your service provider for more information.

**.DOD**

DOD (Direct Outward Dialing) means the caller ID displayed when dialing out. Before configuring this, please make sure the provider supports this feature

**.Associated Extension**

The extension make call out via IAX Trunk will display the associated DOD.

**.Add DOD**

Add DOD for one associated extension.

**.Add Bulk DOD**

The screenshot shows a dialog box titled "Add Bulk DOD" with a close button (X) in the top right corner. The dialog is divided into three main sections: "All Extensions", "Associated Extension", and "DOD".

- All Extensions:** A list box containing the numbers 100, 101, 102, 103, 104, and 105.
- Associated Extension:** An empty list box with a "0" at the bottom right corner.
- DOD:** A label "Begin:" followed by an empty text input field.

Between the "All Extensions" and "Associated Extension" list boxes are four arrow buttons: a double right arrow (»»), a single right arrow (→), a single left arrow (←), and a double left arrow (««).

At the bottom of the dialog are two buttons: "Save" (with a green checkmark icon) and "Cancel" (with a red X icon).

Figure 6-35 Add Bulk DOD

Add bulk DOD for bulk extensions in ascending sequence with the “Begin DOD” you fill in. For example, if the Associated Extensions are 100, 101, 102, 103, 104, 105 with “Begin DOD” as 5500100, the corresponding DOD will be 5500100, 5500101, 5500102, 5500103, 5500104, and 5500105.

### 6.2.2.2 Service Provider

In this page, we can configure Service Provider.

You can add Service Provider as required. And also you can delete multiple trunks at once by ticking the checkbox as required.

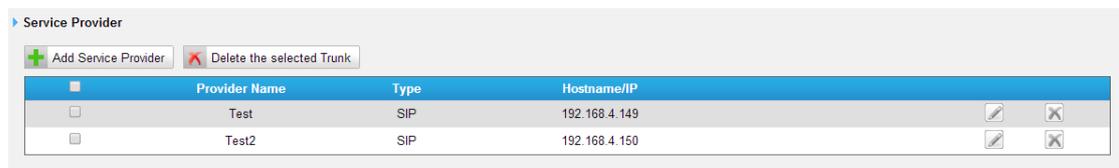


Figure 6-36 Service Provider page

Below is a Service Provider trunk (peer to peer mode), which authorize using IP address only. If you have got a trunk with IP address only, please choose this type.

Type: SIP

Provider Name: Test

Hostname/IP: 192.168.4.149 : 5060

Maximum Channels: 0

Codecs: First: a-law, Second: u-law, Third: GSM, Fourth: None, Fifth: None

Transport: UDP

Qualify:

DTMF Mode: rfc2833

DOD Settings

Global DOD:

DOD:  Associated Extension: 601

Figure 6-37 Service Provider Trunk

•**Type**

SIP or IAX

SIP – Identifies whether the trunk sends and receives calls by using the VoIP protocol SIP.

IAX – Identifies whether the trunk sends and receives calls by using the VoIP protocol IAX.

•**Provider Name**

A unique label would help to you identify this trunk. E.g. "Provider2".

•**Hostname/IP**

Service provider's hostname or IP address.

**Note:** 5060 is the standard port number used by SIP protocol, 4569 is the standard port number used by IAX protocol. Don't change this part if it is not required.

•**Maximum Channels**

Control the maximum number of outbound channels (simultaneous calls) that can be used on this trunk. Inbound calls are not counted against the maximum. Leave blank to specify no maximum.

•**Codecs**

Define the codec for this sip trunk and its priority

**Note:** codec can only display when editing it after creating the trunk.

•**Transport**

This will be the transport method used by the SIP Trunk. This method is given by the SIP trunk provider. The options are UDP (default) or TCP or TLS.

•**Qualify**

Send check alive packets to the sip provider.

•**DTMF mode**

Set default mode for sending DTMF of this trunk. Default setting: rfc2833

•**DOD**

DOD (Direct Outward Dialing) means the caller ID displayed when dialing out. Before configuring this, please make sure the provider supports this feature.

•**Associated Extension**

The extension making call out via this trunk will display the associated DOD.

### •Add DOD

Add DOD for one associated extension.

### •Add Bulk DOD

Figure 6-38 Add Bulk DOD

Add bulk DOD for bulk extensions in ascending sequence with the “Begin DOD” you fill in. For example, if the Associated Extensions are 100, 101, 102, 103, 104, 105 with “Begin DOD” as 5500100, the corresponding DOD will be 5500100, 5500101, 5500102, 5500103, 5500104, and 5500105.

## 6.3 Outbound Call Control

### 6.3.1 Outbound Routes

In this page, we can configure the outbound rules to control the outgoing calls.

#### Notes:

1. The max number of outbound route is 64.
2. If the dial patterns are the same in several routes, MyPBX will choose the available routes from top to the last one.
3. When you have created a new extension, please edit the outbound route so that it can dial out too.

Figure 6-39 Outbound Route Page

We can create outbound route or use the default route “pstnout” (dial 9+numbers to dial out). Also you can delete multiple outbound routes at once as required.

Figure 6-40 Add/Edit Outbound Route

• **Route Name**

Name of this Outbound Route. E.g. “Local” or “Long Distance”.

• **Password**

The route password can be used to protect this route from being accessed without a password. You can choose one of the passwords in the PIN list that you can click the “PIN Settings” to edit it in “PIN Settings” page.

**·T.38 Support:**

Enable T38 fax in this outbound route (Only for SIP Trunk).

**·Rrmemory Hunt**

Round robin with memory remembers which trunk was used last time, and then uses the next available trunk to call out.

**·Office Hours**

When a specific office hour is selected, this outbound route can only be used during this office hour, and can't be used in non-office hours.

**·Dial Pattern**

Outbound calls that match this dial pattern will use this outbound route. There are a number of dial pattern characters that have special meanings:

**X:** Any Digit from 0-9

**Z:** Any Digit from 1-9

**N:** Any Digit from 2-9

**[12345-9]:** Any digit in the brackets (in this example, 1, 2, 3, 4, 5, 6, 7, 8, 9)  
The "." Character will match any remaining digits. For example, "9011." will match any phone number that starts with "9011", excluding "9011" itself.

The "!" will match none remaining digits, and causes the matching process to complete as soon as it can be determined that no other matches are possible.

Example 1: **NXXXXXX** will match any 7-digit phone number.

Example 2: **1NXXNXXXXXX** will match a phone number starting with a 1, followed by a 3-digit area code, and then 6-digit number.

**·Strip**

Allows the user to specify the number of digits that will be stripped from the front of the phone number before the call is placed. For example, if users must press 0 before dialing a phone number, one digit should be stripped from the dial string before the call is placed.

**·Prepend**

These digits will be prepended to the phone number before the call is placed. For example, if a trunk requires 10-digit dialing, but users are more comfortable with 7-digit dialing, this field could be used to prepend a 3-digit area code to all 7-digit phone numbers before calls are placed.

**·Add**

Add multiple dial patterns in this outbound route.

**·Member Extensions**

Define the extensions that will be permitted to use this outbound route.

### •Member Trunks

Define the trunks that can be used for this outbound route.

## 6.3.2

Figure 6-41 Speed Dial Page

### 1) Options

#### •The prefix of speed dial

The prefix should be dialed before the speed dial number. The default is \*99.

Figure 6-42 Speed Dial Settings

### 2) Add new speed dial.

#### •Source Number

The speed dial number.

#### •Destination Number

The number you want to call.

E.g. the source number is "123". The destination number is 5503305. The prefix number is \*99. You can use an extension with any type to dial \*99123, then it will call the number 5503305.

**Note:** Don't forget to add the outbound dial prefix if you would like to dial the speed dial number through trunk.

## 6.4 Inbound Call Control

In this page, we can configure the details of IVR, ring group, queue and inbound routes.

### 6.4.1

When there's an inbound call aims at Auto Attendant, MyPBX will play an IVR recording and route the caller to the requested destination (for example, "Welcome to XX company, for sales press 1, for technical support press 2, for operator press 0", etc). The system will transfer the call to corresponding extension according to DTMF digits input by the user.



Name	Number	Enable Direct Dial		
welcome	660	Yes		

Figure 6-43 IVR Page

There is a default IVR here, we can edit it directly or add IVR by yourself.

Number: 660

Name: welcome

Prompt: default [Custom Prompts](#)

Repeat Count: 3

Key Timeout: 3

Enable Direct Dial

Key	Action	Destination
0	Connect to Extension	Extension -- 300
1	No Action	
2	No Action	
3	No Action	
4	No Action	
5	No Action	
6	No Action	
7	No Action	
8	No Action	
9	No Action	
#	No Action	
*	No Action	
Timeout	Connect to Extension	Extension -- 300
Invalid	Connect to Extension	Extension -- 300

Save Cancel

Figure 6-44 IVR Settings

**•Number**

MyPBX treats IVR as an extension; you can dial this extension number to reach the IVR from internal extensions.

**•Name**

A name for the IVR

**•Prompt**

The prompt recording that will be played when this IVR is reached.

**•Repeat Count**

The number of times that the selected IVR prompt will be played.

**•Key Timeout**

Wait for the user to enter a new extension for a specified number of seconds.

**•Enable Direct Dial**

Allow the caller to dial other extensions number directly.

**•Key Press Events**

A list of actions that can be performed depending on the digit dialed by the user.

**•Key**

The Key pressed when the callers hear the IVR prompt.

**•Action**

When the callers press the corresponding key, the action that MyPBX will execute.

No Action: Do nothing

Connect to Extension: connect the call to an extension.

Connect to Voicemail: connect the call to the voicemail of an extension.

Connect to RingGroup: connect the call to a ringgroup.

Connect to IVR: connect the call to an IVR.

Connect to Conference Room: connect the call to a conference room.

Connect to DISA: connect the call to a DISA.

Connect to Queue: connect the call to a queue.

Connect to Faxes: connect the call to Faxes of extensions.

Dial by Name: the callers can dial the name of an extension to connect to the corresponding extension.

Hung up: hang up the call.

**•Destination**

Where will MyPBX route the call when the action occurs.

**•Time Out**

Define the timeout action. A timeout occurs after the IVR prompt has finished playing for the number of times specified by the "Repeat Count" field.

**•Invalid**

Define the invalid action. The invalid action is triggered if the user enters a DTMF digit that is not defined for this IVR.

## 6.4.2

Ring groups can be configured to balance the call traffic for multiple users and give callers a higher level of availability for incoming calls. Multiple ring methods and voicemail are supported.

**Note:** follow me feature in extension page will not take effect when it's ringing

as an agent.



Figure 6-45 Ring group Page

There is a default ring group, you can edit it or create a new one

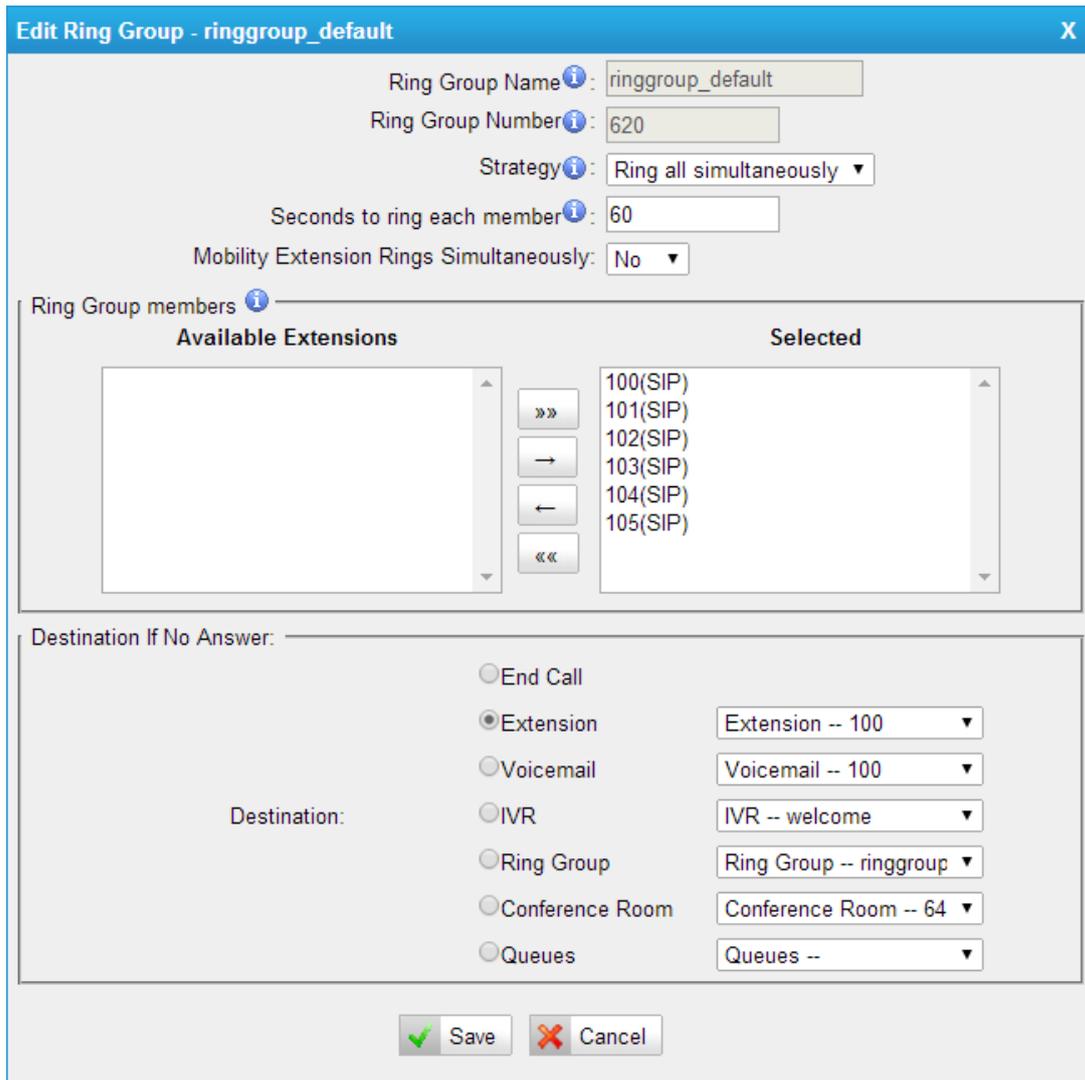


Figure 6-46 Add/Edit Ring group

**•Ring Group Name**

This option defines a name for this group, e.g. "Sales". "Ring Group Name" is a label to help you identify this group in the group list.

**•Ring Group Number**

This option defines the numbered extension that can be dialed to reach this group.

**•Strategy**

This option sets the Ringing Strategy for this Group. The options are as follows:

1. Ring All Simultaneously: Ring all available extensions simultaneously.
2. Ring Sequentially: Ring each extension in the group one at a time.

**•Mobility Extension Rings Simultaneously**

If set to yes, when the extension in the Ring group is called, the associated mobility extension will ring simultaneously. Beforehand, the option of "Rings Simultaneously" should be ticked in the extension settings.

**•Seconds to ring each member**

1. If the strategy is "Ring All Simultaneously", it means the number of seconds to ring this group before routing the call according to the "Destination if No Answer" settings.
2. If the strategy is "Ring Sequentially", it means the number of seconds to ring a single extension before moving on to the next one.

**•Ring Group Members**

An extension can be made a member of this ring group by moving it into the "Selected" box.

**•Destination If No Answer**

When all members on this group fail to answer the call, system will handle the call according to the selected destination.

**6.4.3**

Call Queues give users (e.g. call centers) an efficient means to have their calls answered in the order they were received to deliver top tier customer service.

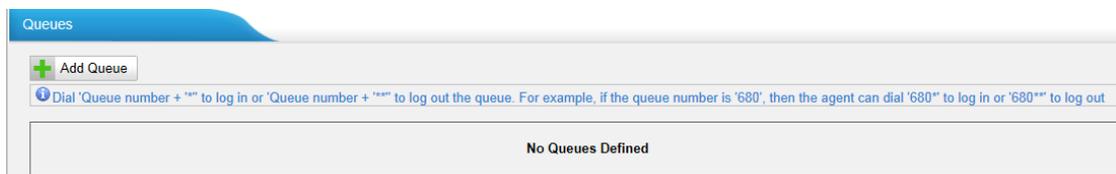


Figure 6-47 Queue Page

Call queues allow calls to be sequenced to one or more agents.

**Notes:**

1. Dial "Queue number + '\*' to log in or "Queue number + '\*"' to log out the queue. For example, if the queue number is "680", then agent can dial "680\*" to log in or "680\*"' to log out.

2. Follow me feature in extension page will not take effect when it's ringing as an agent of queue.

Add Queue
X

Queue Name i:

Queue Number i:

Queue Password i:

Queue Agent Timeout i:

Queue Max Wait Time i:

Queue Ring Strategy i:

**Agents** i

Available Agents		Selected
<div style="border: 1px solid #ccc; padding: 5px; min-height: 100px;">           300(SIP)            301(SIP)            302(SIP)            303(SIP)            304(SIP)            305(SIP)            601(FXS)            602(FXS)         </div>	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	<div style="border: 1px solid #ccc; height: 100px;"></div>

**Caller Position Announcements**

Announce Position i:

Announce Hold Time i:

Frequency i:

**Periodic Announcements**

Prompt i:  [Custom Prompts](#)

Frequency i:

**Events**

Key:

Action:

Destination:

**Failover-Destination**

Action:

Destination:

**Others**

Music On Hold i:  [Music on Hold Prompts](#)

Leave When Empty i:

Join Empty i:

Agent Announcement i:

Join Announcement i:

Retry i:

Wrap-up Time i:

Figure 6-48 Add/Edit Queue

**•Queue Name**

A name for the Queue.

**•Queue Number**

Use this number to dial into the queue, or transfer callers to this number to put them into the queue.

**•Queue Password**

You can require agents to enter a password before they can login to this queue.

**•Queue Agent Timeout**

The number of seconds an agent's phone can ring before we consider it a timeout.

**•Queue Max Wait Time**

The maximum number of seconds a caller can wait in a queue before being pulled out. (0 for unlimited).

**•Queue Ring Strategy**

This option sets the Ringing Strategy for this Queue. The options are

RingAll: ring all available Agents simultaneously until one answers.

LeastRecent: ring the Agent which was least recently called.

FewestCalls: ring the Agent with the fewest completed calls.

Random: ring a random Agent.

RRmemory: Round Robin with Memory, Remembers where it left off in the last ring pass.

**1) Agents**

This selection shows all users. Selecting a user here makes them an agent of the current queue.

**2) Caller Position Announcements****•Announce Position**

Announce position of caller in the queue

**•Announce Hold Time**

Enabling this option causes MyPBX to announce the hold time to the caller periodically based on the frequency timer. Either yes or no; hold time will not be announced if <1 minute.

**•Frequency**

How often to announce queue position and estimated hold time.

**Note:** "0 seconds" means disabling the announcement.

**3) Periodic Announcements**

•**Prompt**

Select a prompt file to play periodically.

•**Frequency**

How often to announce a prompt to the caller.

4) Events

If a caller presses the key while waiting in the queue, this setting selects which action should process the key press.

5) Failover-Destination

Define the failover action. A failover occurs after the user reach the Queue max wait time.

6) Others

•**Music On Hold**

Select the "Music on Hold" Class for this Queue.

•**Leave When Empty**

This option controls whether callers already on hold are forced out of a queue that has no agents. There are two options.

Yes: Callers are forced out of a queue when no agents are logged in.

No: Callers will remain in a queue with no agents.

•**Join Empty**

This option controls whether callers can join a call queue that has no agents.

There are two options,

Yes: Callers can join a call queue with no agents or only unavailable agents

No: Callers cannot join a queue with no agents

The default option is No.

•**Agent Announcement**

Announcement played to the Agent prior to bridging in the caller.

•**Join Announcement**

Announcement played to callers once prior to joining the queue.

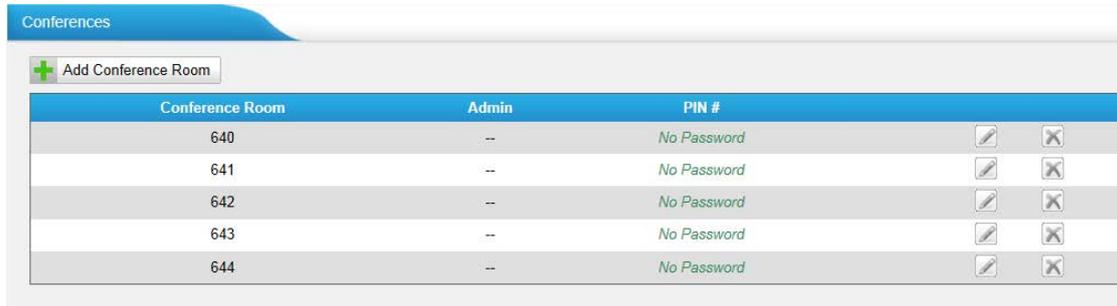
•**Retry**

The number of seconds we wait before trying all the phones again.

•**Wrap-up time**

How many seconds after the completion of a call an Agent will have before the Queue can ring them with a new call. The default is 30.

## 6.4.4



The screenshot shows a web interface titled "Conferences". At the top left, there is a blue tab labeled "Conferences" and a button with a green plus sign and the text "Add Conference Room". Below this is a table with three columns: "Conference Room", "Admin", and "PIN #". The table contains five rows of data, each representing a conference room with its ID, admin status, and PIN, along with edit and delete icons.

Conference Room	Admin	PIN #		
640	--	No Password		
641	--	No Password		
642	--	No Password		
643	--	No Password		
644	--	No Password		

Figure 6-49 Conference Room List

Conference Calls increase employee efficiency and productivity, and provide a more cost-effective way to hold meetings. Conference agents can dial \* to access to the settings options and the admin can kick the last user out and can lock the conference room.

### •Extension

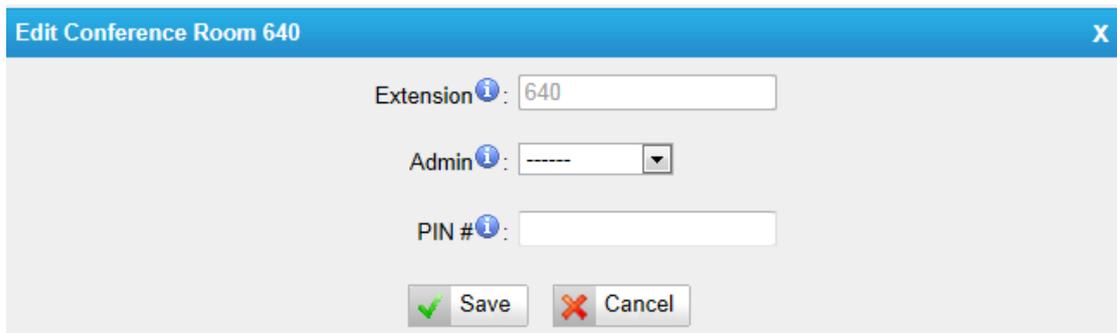
This is the number dialed to reach this Conference Room.

### •Admin

Admin can kick a user out and can lock the conference room.

### •PIN

Set a PIN that must be entered in order to access this conference room (e.g. 1234).



The screenshot shows a form titled "Edit Conference Room 640" with a close button (X) in the top right corner. The form contains three input fields: "Extension" with the value "640", "Admin" with a dropdown menu showing "-----", and "PIN #" which is currently empty. At the bottom of the form are two buttons: "Save" with a green checkmark icon and "Cancel" with a red X icon.

Figure 6-50 Add/Edit Conference Room

### 6.4.5

Inbound routing processes incoming call traffic to destination extensions during office hours or outside office hours.

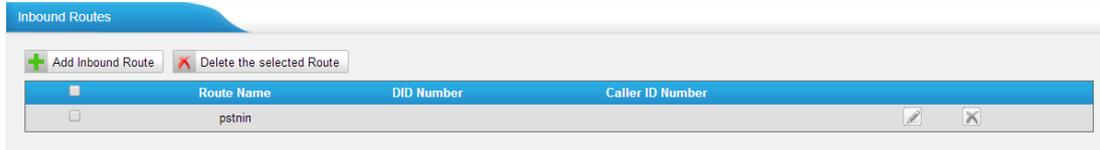


Figure 6-51 Inbound Route List

There is a default inbound route for all the trunks and set IVR as the destination, you can edit it or create a new one for your demands or you can delete multiple outbound routes at once as required. When an incoming call arrives, the system will first check "fax detection", then "Holidays", at last "Business Days".

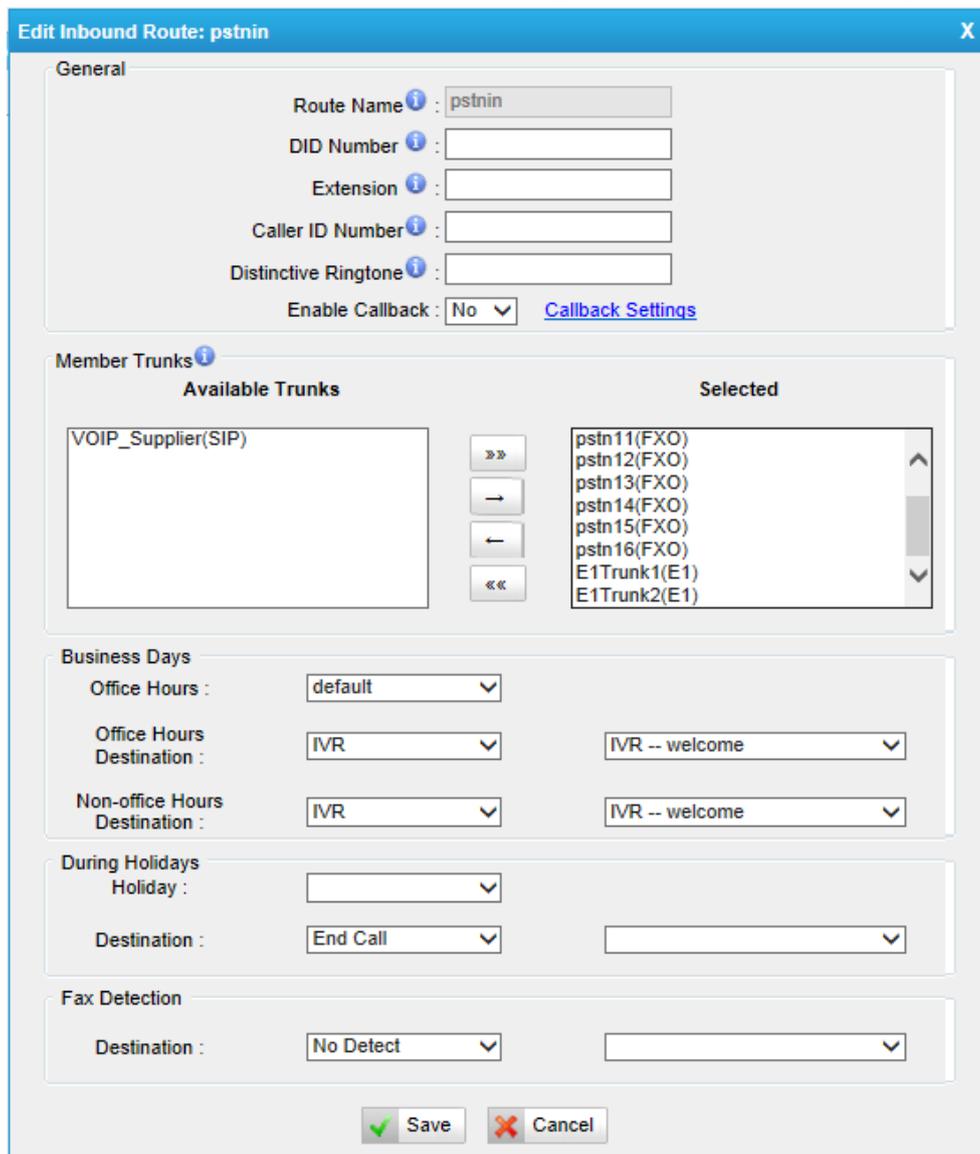


figure 6-52 Add/Edit Inbound Route

## 1) General

**•Route Name**

A name for this inbound route. E.g. "pstnin".

**•DID Number**

Define the expected DID Number if this trunk passes DID on incoming calls. Leave this field blank to match calls with any or no DID info. You can also use pattern matching to match a range of numbers. The following patterns may be used:

**X:** Any Digit from 0-9

**Z:** Any Digit from 1-9

**N:** Any Digit from 2-9

**[12345-9]:** Any digit in the brackets (in this example, 1, 2, 3, 4, 5, 6, 7, 8, 9)

The "." Character will match any remaining digits. For example, "9011." will match any phone number that starts with 9011, excluding 9011 itself.

The "!" will match none remaining digits, and causes the matching process to complete as soon as it can be determined that no other matches are possible.

Example 1: **NXXXXXX** will match any 7-digit phone number.

Example 2: **1NXXNXXXXXX** will match a phone number starting with a 1, followed by a 3-digit area code, and then 6-digit number.

For more information, please refer to [Appendix H How to Use DID.](#)

**•Extension**

Define the extension for DID number. This field is only valid when you use BRI, SIP, SPS or SPX trunk for this inbound router. You can only input number and "-" in this field, and the format can be xxx or xxx-xxx. The count of the number must be only one or equal the count of the DID number.

**•Caller ID Number**

Define the Caller ID Number to be matched on incoming calls. Leave this field blank to match any or no DID info.

You can also use a pattern match (e.g. 2[345]X) to match a range of numbers.

The following patterns may be used:

**X:** Any Digit from 0-9

**Z:** Any Digit from 1-9

**N:** Any Digit from 2-9

**[12345-9]:** Any digit in the brackets (in this example, 1, 2, 3, 4, 5, 6, 7, 8, 9)

The "." Character will match any remaining digits. For example, "9011." will match any phone number that starts with "9011", excluding "9011" itself.

The "!" will match none remaining digits, and causes the matching process to complete as soon as it can be determined that no other matches are possible.

Example 1: **NXXXXXX** will match any 7-digit phone number.

Example 2: **1NXXNXXXXXX** will match a phone number starting with a 1, followed by a 3-digit area code, and then 6-digit number.

•**Distinctive Ringtone**

MyPBX supports mapping to custom ring tone files. For example, if you configure the distinctive ringing for custom ring tone to **"Family"**, the ring tone will be played if the phone receives the incoming call.

•**Enable Callback**

You can enable the callback function of this inbound route. If you want to configure the callback function, please refer to [chapter 6.7.4](#)

How do I configure distinctive ring tones? Please refer to [APPENDIX F](#).

Currently distinctive ringtone can be compatible with Yealink and snom phone.

2) Member Trunks

This area allows you to select which trunks will be member trunks for this route. To make a trunk a member of this route, please move it to the "Selected" box.

3) Business Days

Define where the calls will be routed during Business Days.

•**Office Hours**

Select one defined business days office hours.

•**Office Hours Destination**

Configure where to route the incoming calls during office hours.

•End Calls

Route the incoming calls to end calls, the system will auto hang up the call.

•Extension

Route the incoming calls to a specific extension.

•Voicemail

Route the incoming calls to an extension's voicemail.

•IVR

Route the incoming calls to a specific IVR.

•Ring Group

Route the incoming calls to a specific Ring Group.

·Conference Room

Route the incoming calls to a specific Conference Room.

·DISA

Route the incoming calls to a specific DISA.

·Queues

Route the incoming calls to a specific Queue.

·Faxes

Route the incoming faxes to a specific extension's mail address.

Note: This function only supports T.38 faxes.

·Outbound Routes

Route the incoming calls to a specific outbound route.

This function is mainly used for the connection of two branches.

For example: Company A locates headquarters in the USA with a branch B in China. A and B both have MyPBX phone systems.

Now if staff of A would like to make a call to a telephone or mobile phone in China from the extension of A but via the FXS line of B, that can be done by this configuration.

·**Non-office Hours Destination**

Configure where to route the incoming calls during non-office hours.

4) During Holidays

Define where the calls will be routed during Holidays.

·**Holiday**

Select which defined Holiday to use. When a time is defined in both Business Days and Holidays, it will be treated as Holidays.

·**Destination**

Configure where to route the incoming calls during holidays.

5) Fax Detection

Configure if detecting faxes in this inbound route.

**Note:** Please choose IVR as the destination above before configuring fax detection (recommended).

·**Destination**

Configure where the faxes will be routed when faxes are detected.

• **No detect**

Do not detect faxes.

• **Custom Email**

Customize an E-mail address to receive the faxes. You should first configure the "Voicemail Settings->SMTP Settings for Voicemail" correctly before you use this option.

• **Faxes**

Send faxes to an extension. If choosing a FXS extension here, the fax will be sent to the FXS port selected, you should connect a fax machine to this FXS port. If choosing a VoIP extension, the fax will be sent to the extension's voicemail as an attachment.

**Note:** If you want to receive faxes with custom Email address, the "SMTP Settings" of "Voicemail Settings" should be configured successfully in advance. If you want to receive faxes with E-mail address configured in VOIP extension voicemail, you should first make sure the tested email to your email address works fine.

## 6.5 Audio Settings

Custom prompts are supported in MyPBX, and you can change the system prompts to your local country's prompt.

### 6.5.1

We can record or upload the prompts in this page; you can also play it directly to confirm if it's a valid one, you can also download it and save it as a backup

#	Name	Options
1	default	Record Again Play Download Delete
2	pinuser-entry	Record Again Play Download Delete
3	pinuser-error	Record Again Play Download Delete

Figure 6-53 Custom Prompts List

#### 1. Record new Prompt

Record New Prompt

File Name:

Dial extension: 601 to record a new voice prompt

Record Cancel

Figure 6-54 Record a New Prompt

The administrator can record custom prompts by doing the following:

- 1) Click "Record New Custom Prompt".
- 2) Input the desired file name on the popup window and choose an extension to call for recording (such as 500).
- 3) Click "Record". The selected extension will ring and you can pick up the phone to start recording.

#### 2. Upload Prompt

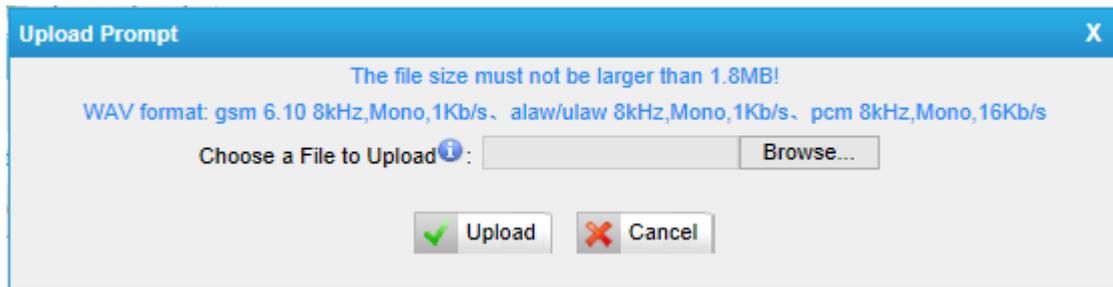


Figure 6-55 Upload a Prompt

The administrator can also upload prompts by doing the following:

- 1) Click "Upload Prompt".
- 2) Click "Browse" to choose the desired prompt.
- 3) Click "Upload" to upload the selected prompt.

**Note:** The file size must not be larger than 1.8 MB, and the file must be WAV format:

GSM 6.10 8 kHz, Mono, 1 Kb/s;  
 Alaw/Ulaw 8 kHz, Mono, 1 Kb/s;  
 PCM 8 kHz, Mono, 16 Kb/s.

## 6.5.2

In this page, we can upload the music on hold prompts.

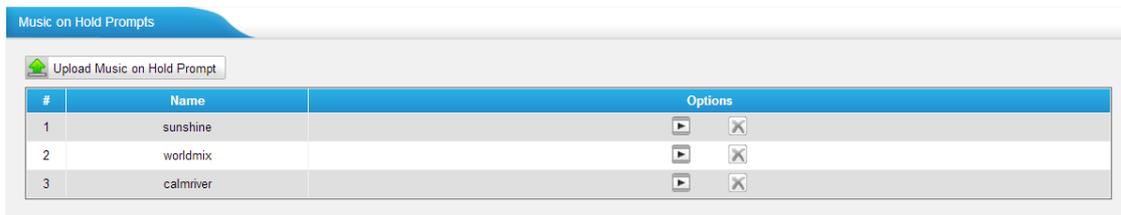


Figure 6-56 Music on Hold List

The administrator can upload on hold music as follows:

- 1) Click "Upload Music on Prompt".
- 2) Click "Browse" to choose the desired audio file.
- 3) Click "Upload" to upload the selected file.

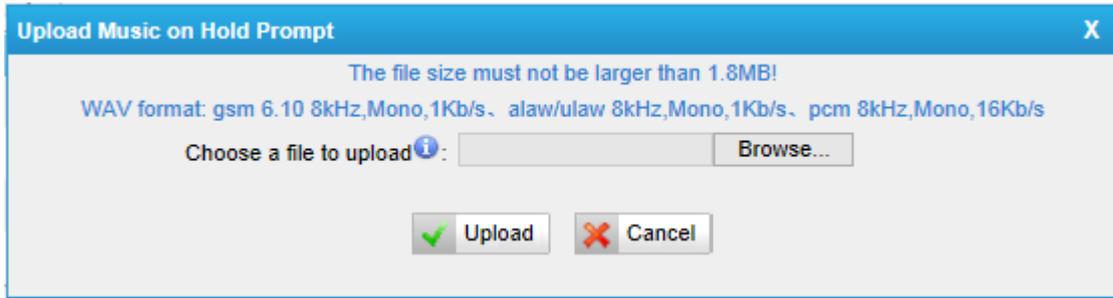


Figure 6-57 Upload Music on Hold

**Note:** The file size must not be larger than 1.8 MB, and the file must be WAV format:

GSM 6.10 8 kHz, Mono, 1 Kb/s;

Alaw/Ulaw 8 kHz, Mono, 1 Kb/s;

PCM 8 kHz, Mono, 16 Kb/s.

### 6.5.3

MyPBX have prompts of many languages. You can download the appropriate language you need. MyPBX can support American English, Australian English, Chinese, Dutch, French, Canadian French, German, Greek, Hungarian, Italian, Polish, Portuguese, Brazilian Portuguese, Russian, Spanish, Mexican Spanish, Turkish, Thai, and Korean currently.

#### Notes:

1. Auto-detection is highly recommended. But if you prefer to download via HTTP or TFTP server, please contact the local dealer for the prompts.
2. When update successfully, just click "Apply Changes" on Web then it will take effect, there is no need to reboot.

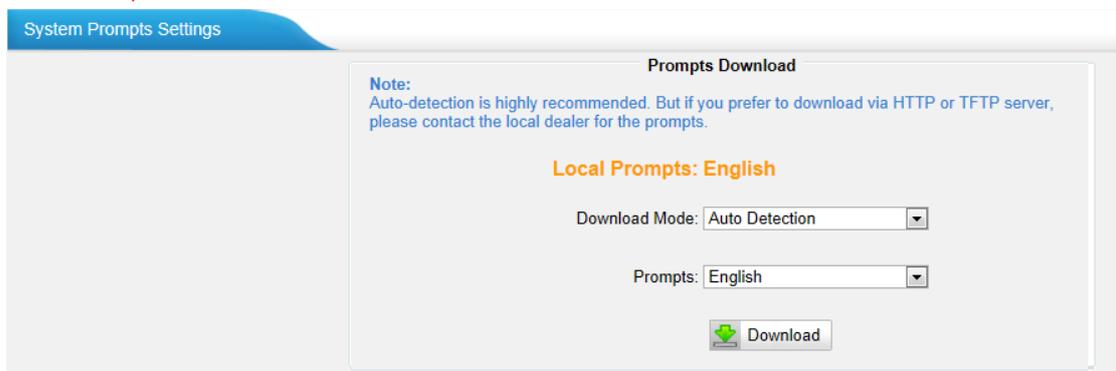


Figure 6-58 System Prompts Settings Page

## 6.6 Basic Settings

There are some basic settings we need to configure MyPBX U5XX, like the General Preferences, Business Hours, Feature Codes, and Voicemail Settings.

### 6.6.1

In this page, there are some general settings of MyPBX.

The screenshot shows the 'General Settings' page in the MyPBX administrator interface. It is organized into three main sections:

- General Preferences:** Contains settings for Ring Timeout (30 s), MAX Call Duration (6000 s), Maximum Concurrent Calls (25), Music On Hold (calmriver), Tone Region (United States/North America), Dsp Fax (Yes), FXO Mode (FCC), Virtual Ring Back Tone (No), Distinctive Caller ID (No), Attended Transfer Caller ID (Transferer), Follow Me Prompt (Yes), Music on hold for Follow Me (Default), Invalid Phone Number Prompt, Busy Line Prompt, and Dial Failure Prompt.
- Web Server:** Contains settings for HTTP (Enabled), HTTP Bind Port (80), HTTPS (Disabled), and HTTPS Bind Port (443).
- Extension Preferences:** Contains settings for User Extensions (300 to 616), Ring Group Extensions (620 to 629), Paging Group Extensions (630 to 639), Conference Extensions (640 to 659), IVR Extensions (660 to 679), and Queue Extensions (680 to 689).

At the bottom of the form, there are buttons for 'Reset to Defaults', 'Save', and 'Cancel'.

Figure 6-59 General Settings

#### 1) General

##### •Ring Timeout

Number of seconds to ring a device before handling the call as per the extension's Follow Me settings. The default value is 30s.

##### •MAX call duration

The absolute maximum amount of time permitted for a call. A setting of 0 disables the timeout. The default value is 6000s.

##### •Maximum concurrent calls

Maximum concurrent calls limits. The default value 0 means no limit.

•**Music on hold**

Used to set hold music for the system.

•**Tone Region**

Please select your country or nearest neighboring country to enable the default dial tone, busy tone, and ring tone for your region.

**Note:** please reboot the system to take effect.

•**Dsp Fax**

Enable Dsp to optimize Fax reception.

•**FXO Mode**

FXO port's operation mode.

•**Virtual Ring Back Tone**

It's only for GSM/UMTS /UMTS trunk. Once enabled, when the caller call out with GSM/UMTS trunks, the caller will only hear the virtual ring back tone generated by the system before callee answers the call.

•**Distinctive Caller ID**

When incoming calls are routed from ring group/queue/IVR, the caller ID displays with the name of ring group/queue/IVR, for example 5503302(ringgroup\_default).

**Note:** To display IVR's name, please press the key instead of the extension number directly.

•**Attended Transfer Caller ID**

When transferring an incoming call using the attended transfer feature code or the transfer key of IP phone, the Caller ID of transferee or transferer displayed on the screen of the callee. The default display is the Caller ID of the initiator. For example, if extension 500 makes a call to extension 501. After 501 picks up the call, 501 makes an attended transfer to extension 502. If selecting "Transferer", 502 will display the Caller ID as 500; if selecting "Transferee", 502 will display the Caller ID as 501.

•**Follow Me Prompt**

When set "Follow me" to "Transfer to number" on the extension page (e.g. when 500 is busy, transfer to 501), while 500 is busy, the call will be transferred to 501. If "Enable Follow Me Prompt" choosing yes, there will be prompt before transferring the call. Otherwise, the call will be transferred directly without any prompt. Default: Yes.

•**Music on Hold for Follow Me Prompt**

Configure whether to play a prompt “please hold while I try to locate the person you are calling” when transfer a call by follow me settings.

•**Invalid Phone Number Prompt**

Configure the prompt when the dialed phone number is invalid.

•**Busy Line Prompt**

Configure the prompt when the dialed phone number is busy.

•**Dial Failure Prompt**

Configure the prompt when dial failed due to conjunction no-available channel.

2) Web Server

•**HTTP**

Enable or disable HTTP session.

•**HTTP Bind Port**

Default port to use for HTTP session is 80.

•**HTTPS**

Enable or disable HTTPS session.

•**HTTPS Bind Port**

Default port to use for HTTPS session is 443.

**Note:** please reboot the system to take effect.

3) Extension Preferences

•**User Extensions**

The default value is 500 to 616

•**Ring Group Extensions**

The default value is 620 to 629

•**Paging Group Extensions**

The default value is 630 to 639

•**Conference Extensions**

The default value is 640 to 659

•**IVR Extensions**

The default value is 660 to 679

## •Queue Extensions

The default value is 680 to 689

### 6.6.2

Business Hours setting including “Holidays” is used to control the incoming calls, we can configure it in this page.

The screenshot shows the 'Business Hours' configuration page. It is organized into four main sections:

- General:** Contains two radio buttons: 'Enable Business Hours' (unselected) and 'Disable Business Hours' (selected).
- Others:** Contains three checkboxes:
  - \*81 Enable Office Closed Timing (checked) - Office Closed Timing State: Disabled
  - \*82 Enable Office Timing (checked) - Office Timing State: Disabled
  - \*081 Disable Office (Closed) Timing (unchecked)
- Business Days:** Features an 'Add Office Hours' button and a table with columns 'Name' and 'Details'. The 'default' row shows business hours: 'Mon 08:30-12:00/14:00-18:00/19:00-22:00 Tue 08:30-12:00/14:00-18:00/19:00-22:00 ... Sat 08:30-12:00/00:00-00:00/00:00-00:00...'.
- Holidays:** Includes an 'Add Holiday' button, a note: 'Note: Besides business days and office hours, public holiday could be set as well. Those holidays would be treated as non-office time.', and a text box containing 'No Holidays Defined'. 'Save' and 'Cancel' buttons are at the bottom.

Figure 6-60 Business Hours Settings

#### 1) General

- Enable Business Hours
- Disable Business Hours

#### 2) Others

##### •Enable Office Closed Timing

By dialing \*81 (\*81 is the default code) on an extension will force the office time closed for the device whatever the general setting is.

##### •Enable Office Timing

By dialing \*82 (\*82 is the default code) on an extension will force the office time to take effect for the device whatever the general setting is.

##### •Disable Office closed timing

By dialing \*081 (\*081 is the default code) on an extension will disable the Office Closed Timing.

#### 3) Add office hours

You can set up the business hours here.

#### 4) Add Holiday

You can set up the holidays here.

If a time period is configured as both Holidays and office hours, it will be treated as Holidays.

### 6.6.3

There are many feature codes available in MyPBX, which allow users to dial from extension side to realize the exact feature.

Feature	Code	Default
<input checked="" type="checkbox"/> One Touch Record	*1	x
<input checked="" type="checkbox"/> Check Extension Voicemail	*2	
<input type="checkbox"/> Voicemail for Extension	#	
<input checked="" type="checkbox"/> Voicemail Main Menu	*02	
<input checked="" type="checkbox"/> Attended Transfer	*3	
<input type="checkbox"/> Attended Transfer Timeout	15	s
<input checked="" type="checkbox"/> Blind Transfer	*03	
<input checked="" type="checkbox"/> Call Pickup	*4	
<input checked="" type="checkbox"/> Extension Pickup	*04	
<input checked="" type="checkbox"/> Intercom	*5	
<input checked="" type="checkbox"/> Normal Spy	*90	
<input checked="" type="checkbox"/> Whisper Spy	*91	
<input checked="" type="checkbox"/> Barge Spy	*92	
<b>Call Parking Preferences</b>		
<input type="checkbox"/> Call Parking	*6	
<input type="checkbox"/> Extension range used to park calls	890-899	(Ex: 690-699)
<input type="checkbox"/> Number of seconds a call can be parked for	60	
<b>Call Forwarding Preferences</b>		
<input checked="" type="checkbox"/> Reset to Defaults	*70	
<input checked="" type="checkbox"/> Enable Forward All Calls	*71	
<input checked="" type="checkbox"/> Disable Forward All Calls	*071	
<input checked="" type="checkbox"/> Enable Forward When Busy	*72	
<input checked="" type="checkbox"/> Disable Forward When Busy	*072	
<input checked="" type="checkbox"/> Enable Forward No Answer	*73	
<input checked="" type="checkbox"/> Disable Forward No Answer	*073	
<input checked="" type="checkbox"/> Forward to Number	*74	
<input checked="" type="checkbox"/> Forward to Voicemail	*074	
<input checked="" type="checkbox"/> Enable Do Not Disturb	*75	
<input checked="" type="checkbox"/> Disable Do Not Disturb	*075	

Figure 6-61 Feature Code Settings Page

#### 1) General

##### •One Touch Record

A user may initiate or stop call recording by dialing \*1 during a call. (\*1 is the default setting).

##### •Extension for Checking Voicemail

Users can check their Voicemail by dialing \*2 on their phone (\*2 is the default setting).

##### •Voicemail for Extension

Users can leave a voicemail to other extensions by dialing # on their phone or the incoming call could be forwarded to an extension's voicemail directly. (# is the default setting).

For example, extension 500 want to leave a message for extension 501, users

can use 500 dial “#501” to enter the voicemail of 501.

• **Voicemail main menu**

Users can go to the main menu by dialing \*02 (\*02 is the default setting).

• **Attended Transfer**

Users may transfer an incoming call by dialing \*3 on their phone (\*3 is the default setting).

• **Attended Transfer Timeout**

The timeout value of transferring a call

• **Blind Transfer**

Users may blind transfer an incoming call by dialing \*03 on their phone (\*03 is the default setting).

• **Call Pickup**

Users may pick up an incoming call by dialing \*4 on their phone (\*4 is the default setting)

• **Extension Pickup**

Users may pick up a specific extension’s incoming call by dialing \*04+extension number on their phone (\*04 is the default setting)

• **Intercom**

Define the feature code that is used to dial an extension in intercom mode. For instance, setting this value to \*5 would allow you to initiate an intercom call with extension 501 by dialing \*5501.

• **Normal Spy**

In this mode, you can only listen to the extension being spied, for example you can dial \*90501 to monitor extension 501

• **Whisper Spy**

In this mode you can listen/whisper to the extension being spied, for example, dialing \*91501 to listen to extension 501, you can also talk with 501 too.

• **Barge Spy**

In this mode, you can barge in both extensions involved in the call, for example dialing \*92501 to barge in and talk with extensions on both sides.

2) Call Park Preferences

• **Call Parking**

User may park an incoming call on his own telephone by pressing “\*6” (\*6 is the

default setting)

• **Extension range used to park calls**

User may park an incoming call on a designated extension at first and then pick up the call again on any other extensions.

• **Number of seconds a call can be parked before it is recalled.**

Define the time (in seconds) that a call can be parked before it is recalled to the station that parked it.

3) Call Forwarding Preferences

• **Reset to Defaults**

Users may reset all call forwarding defaults by calling \*70 on their phone (\*70 is the default setting).

**Note:** When reset to defaults. The call forwarding settings will be configured as follows:

Always forward: Disabled

Busy forward to Voicemail: Enabled

No answer forward to Voicemail: Enabled

Do not disturb: Disabled

• **Enable Forward All Calls**

Users may enable always forward by calling \*71 on their phone (\*71 is the default setting)

• **Disable Forward All Calls**

Users may disable always forward by calling \*071 on their phone (\*071 is the default setting)

• **Enable Forward When Busy**

Users may enable busy forward by dialing \*72 on their phone (\*72 is the default setting)

• **Disable Forward When Busy**

Users may disable busy forward by calling \*072 on their phone (\*072 is the default setting)

• **Enable Forward No Answer**

Users may enable no answer forward by calling \*73 on their phone (\*73 is the default setting)

• **Disable Forward No Answer**

Users may disable no answer forward by calling \*073 on their phone (\*072 is

the default setting)

#### •Forward to number

Users may activate call forwarding by dialing this feature code, followed by the extension or phone number to forward all calls to this number.

**Note:** Users may activate Forward to number by dialing \*74 + phone number. E.g. by dialing \*74501, all calls will be forwarded to extension 501.

#### •Forward to Voicemail

Users may forward the call to Voicemail by calling \*074 on their phone (\*074 is the default setting)

#### •Enable Do Not Disturb

Users may enable Do Not Disturb by calling \*75 on their phone (\*75 is the default setting)

#### •Disable Do Not Disturb

Users may disable Do Not Disturb by calling \*075 on their phone (\*075 is the default setting)

## 6.6.4

In this page, we can configure some settings for voicemail feature, including general voicemail settings and SMTP settings, which is used for “voicemail to email”.

The screenshot displays the 'Voicemail Settings' interface. The main section is titled 'General Voicemail Settings' and contains several sub-sections:

- Message Options:**
  - Max Messages per Folder: 100
  - Max Message Time: 5 Minutes
  - Min Message Time: 5 Seconds
  - Ask Caller to Dial 5:
  - Delete Voicemail:
  - Operator Breakout from Voicemail: No
  - Destination: welcome
- Greeting Settings:**
  - Busy Prompt: Play busy greeting
  - Unavailable Prompt: Play unavailable greetings
  - Leave a Message Prompt: Skip greeting
- Playback Options:**
  - Announce Message Caller ID:
  - Announce Message Duration:
  - Announce Message Arrival Time:
  - Allow Users to Review Messages:

Figure 6-62 General Voicemail Settings

## 1) General Voicemail Settings

### a) Message Options

#### • **Max Messages per Folder**

Set the maximum number of messages that can be stored in a single voicemail box.

#### • **Max Message Time**

Set the maximum length of a single voicemail message.

#### • **Min Message Time**

Set the minimum length of a single voicemail message. Messages below this threshold will be automatically deleted.

#### • **Ask Caller to Dial 5**

If this option is set, the caller will be prompted to press 5 before leaving a message.

#### • **Operator Breakout from Voicemail**

If this option is set, the caller can jump out of the voicemail and go to the destination (IVR) you set by dialing "0".

### b) Greeting Settings

#### • **Busy Prompt**

Greeting played when the extension called is busy.

Skip greeting: Do not play a greeting.

Play busy greeting: play the extension busy greeting.

#### • **Unavailable Prompt**

Greeting played when the extension called is Unavailable.

Skip greeting: Do not play a greeting.

Play Unavailable greeting: play the extension Unavailable greeting.

#### • **Leave a Message Prompt**

Greeting played to ask the caller to dial 5 to leave a message.

Skip greeting: Do not play a greeting.

Play busy greeting: play the extension busy greeting.

Play Unavailable greeting: play the extension Unavailable greeting.

### c) Playback Options

#### • **Announce Message Caller ID**

If this option is enabled, the Caller ID of the party that left the message will be played back before the voicemail message begins playing.

**.Announce Message Duration**

If this option is set, the duration of the message in minutes will be played back before the voicemail message begins playing.

**.Announce Message Arrival Time**

If this option is set, the arrival time of the message will be played back before the voicemail message begins playing.

**.Allow Users to Review Messages**

Allow callers to review their recorded message before sending it to voicemail.

## 2) SMTP Settings for Voicemail

**Note:** If you want to send voicemail messages as email attachments, please configure this section.

Figure 6-63 SMTP Server Settings

**.E-mail Address**

The E-mail Address that MyPBX will use to send voicemail.

**.Password**

The password for the email address used above

**.SMTP Server**

The IP address or hostname of an SMTP server that the MyPBX will connect in order to send voicemail messages via email, e.g. mail.yourcompany.com.

**.Port**

SMTP Port: the default value is 25.

**.Use SSL/TLS to send secure message to server**

If the email sending server needs to authenticate the sender, you need to select the check box.

**Note:** Must be selected for Gmail or exchange server.

After filling out the above information, you can click on the "Test Account

Settings” button to check whether the setup is OK.

- 1) If the test is successful, you can use the email safely.
- 2) If the test failed, please check if the above information is input correctly or if the network is OK.

## 6.7 Advanced Settings

### 6.7.1

#### 1) General

The screenshot displays the 'SIP Settings' configuration page, specifically the 'Advanced Settings' tab. The settings are organized into a list of fields with their current values:

- UDP Port: 5060
- Enable TCP Port: 5060
- Enable TLS Port: 5061
- TLS Verify Server: No
- TLS Verify Client: No
- TLS Ignore Common Name: Yes
- TLS Client Method: sslv2
- RTP Port Start: 10000
- RTP Port End: 12000
- DTMF Mode: rfc2833
- Max Registration/Subscription Time: 3600
- Min Registration/Subscription Time: 60
- Default Incoming/Outgoing Registration Time: 120
- Register Attempts: 0
- Register Timeout: 20
- Calling Channel Codec Priority: Yes
- Video Support: Yes
- Max Bit Rate: 384 kb/s
- DNS SRV Look Up: No
- User Agent: (empty)

At the bottom of the form, there are 'Save' and 'Cancel' buttons.

Figure 6-64 SIP Settings-General

#### •UDP Port

Port used for SIP registrations. The default is 5060.

#### •TCP Port

Port used for SIP registrations. The default is 5060.

#### •TLS Port

Port used for SIP registrations. The default is 5061.

#### •TLS Verify Server

When using MyPBX as a TLS client, whether or not to verify server's certificate. It is "No" by default.

**·TLS Verify Client**

When using MyPBX as a TLS server, whether or not to verify client's certificate. It is "No" by default.

**·TLS Ignore Common Name**

Set this parameter as "No", then common name must be the same with IP or domain name.

**·TLS Client Method**

When using MyPBX as TLS client, specify the protocol for outbound TLS connections. You can select it as tlsv1, sslv2 or sslv3.

**·RTP Port Start**

Beginning of RTP port range

**·RTP Port End**

End of RTP port range

**·DTMF Mode**

Set default mode for sending DTMF. Default setting: rfc2833

**·Max Registration/Subscription Time**

Maximum duration (in seconds) of a SIP registration. The default is 3600 seconds.

**·Min Registration/Subscription Time**

Minimum duration (in seconds) of a SIP registration. The default is 60 seconds.

**·Default Incoming/Outgoing Registration Time**

Default Incoming/Outgoing Registration Time: Default duration (in seconds) of incoming/outgoing registration.

**·Register Attempts**

The number of SIP REGISTER messages to send to a SIP Registrar before giving up. The default is 0 (no limit).

**·Register Timeout**

Number of seconds to wait for a response from a SIP Registrar before considering the register has timed out. The default is 20 seconds.

**·Calling Channel Codec Priority**

Once enabled, when dialing out via SIP/SPS trunks, the codec of calling channel will be selected in preference. If not, MyPBX will follow the priority in your SIP/SPS trunks.

**·Video Support**

Support for SIP video or no. The default is yes.

**·Max Bit Rate**

Configure the max bit rate for video stream. The default: 384kb/s

**·DNS SRV Look Up**

Please enable this option when your SIP trunk contains more than one IP address.

**·User Agent**

To change the user agent parameter of asterisk, the default is "MyPBX"; you could change it if needed.

## 2) NAT

Figure 6-65 SIP Settings-NAT

**Note:** Configuration of this section is only required when using remote extensions.

**·Enable STUN**

STUN (Simple Traversal of UDP through NATs) is a protocol for assisting devices behind a NAT firewall or router with their packet routing.

**·STUN Address**

The STUN server allows clients to find out their public address, the type of NAT they are behind and the internet side port associated by the NAT with a particular local port. This information is used to set up UDP communication between the client and the VOIP provider and so establish a call.

**·External IP Address**

The IP address that will be associated with outbound SIP messages if the system

is in a NAT environment.

#### •External Host

Alternatively you can specify an external host, and the system will perform DNS queries periodically.

This setting is only required when your public IP address is not static. It is recommended that a static public IP address be used with this system. Please contact your ISP for more information.

#### •External Refresh Interval

If an external host has been supplied, you may specify how often the system will perform a DNS query on this host. This value is specified in seconds.

#### •Local Network Identification

Used to identify the local network using a network number/subnet mask pair when the system is behind a NAT or firewall.

Some examples of this are as follows:

"192.168.0.0/255.255.0.0": All RFC 1918 addresses are local networks;

"10.0.0.0/255.0.0.0": Also RFC1918;

"172.16.0.0/12": Another RFC1918 with CIDR notation;

"169.254.0.0/255.255.0.0": Zero conf local network.

Please refer to RFC1918 for more information.

#### •NAT Mode

Global NAT configuration for the system; the options for this setting are as follows:

Yes = Use NAT. Ignore address information in the SIP/SDP headers and reply to the sender's IP address/port.

No = Use NAT mode only according to RFC3581.

Never = Never attempt NAT mode or RFC3581 support.

Route = Use NAT but do not include rport in headers.

#### •Allow RTP Reinvite

By default, the system will route media streams from SIP endpoints through itself. Enabling this option causes the system to attempt to negotiate the endpoints to route packets to each other directly, bypassing the system. It is not always possible for the system to negotiate endpoint-to-endpoint media routing.

### 3) Codecs

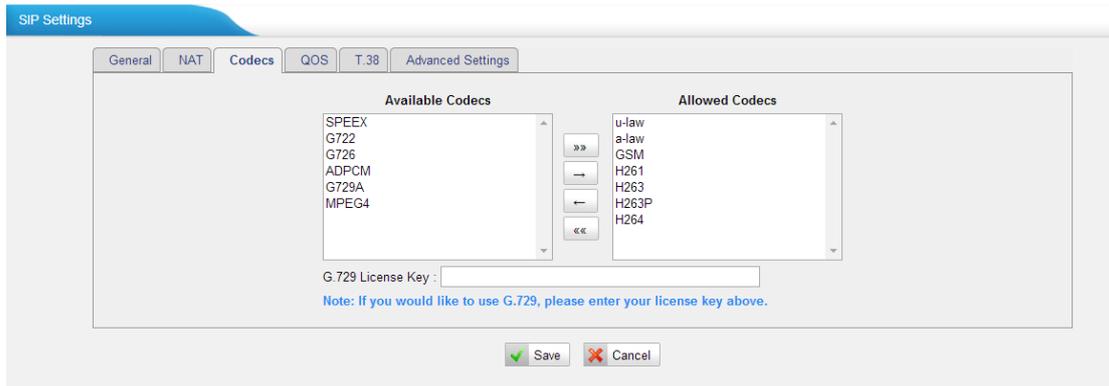


Figure 6-66 SIP Settings-Codecs

A codec is a compression or decompression algorithm that used in the transmission of voice packets over a network or the Internet.

**u-law:** A PSTN standard codec, used in North America, which provides very good voice quality and consumes 64kbit/s in each direction (receiving and transmitting) of a VoIP call.

**a-law:** A PSTN standard codec, used outside of North America, which provides very good voice quality and consumes 64kbit/s in each direction (receiving and transmitting) of a VoIP call.

**GSM:** A wireless standard codec, used worldwide, that provides adequate voice quality and consumes 13.3kbit/s in each direction (receiving and transmitting) of a VoIP call. GSM is supported by many VoIP phones.

**SPEEX:** Speex is an Open Source/Free Software patent-free audio compression format designed for speech. The Speex Project aims to lower the barrier of entry for voice applications by providing a free alternative to expensive proprietary speech codecs. Moreover, Speex is well-adapted to Internet applications and provides useful features that are not present in most other codecs.

**G.722:** G.722 is a wideband speech coding algorithms which supports the bit rate of 64, 56 and 48kbps wideband. It's a broadband voice encoding of G series.

**G.726:** A PSTN codec, used worldwide, that provides good voice quality and consumes 32kbit/s in each direction (receiving and transmitting) of a VoIP call. G.726 is supported by some VoIP phones.

**ADPCM, G.729A, H261, H263, H263p, H264, MPEG4.**

**Note:** If you would like to use G.729, please enter your license.

## 4) QoS

SIP Settings

General NAT Codecs **QoS** T.38 Advanced Settings

Tos SIP: CS3 Cos SIP: 3

Tos Audio: EF Cos Audio: 5

Tos Video: AF41 Cos Video: 4

Save Cancel

Figure 6-67 SIP Settings-QoS

QoS (Quality of Service) is a major issue in VoIP implementations. The issue is how to guarantee that packet traffic for a voice or other media connection will not be delayed or dropped due interference from other lower priority traffic. When the network capacity is insufficient, QoS could provide priority to users by setting the value.

## 5) T.38

SIP Settings

General NAT Codecs QoS **T.38** Advanced Settings

Re-invite SDP Not Add T.38 Attributes: No

Error Correction: FEC

T38 Max BitRate: 14400

Save Cancel

Figure 6-68 SIP Settings-T.38

- **Re-invite SDP Not Add T.38 Attributes**

If set to Yes, SDP in re-invite packet will not add T.38 attributes.

- **Error Correction**

Re-invite SDP T38FaxUdpEc.

- **T38 Max Bit Rate**

Set T38 Max Bit Rate.

## 6) Advanced Settings

SIP Settings

General NAT Codocs QOS T.38 **Advanced Settings**

From Field: From

To Field: INVITE

180 Ringing:

Remote Party ID:  send  trust

Allow Guest: No

Pedantic: No

Alwaysauthreject: Yes

OPTIONS Response 200: No

Session-timers: Accept

Session-expires: 1800 s

Session-minse: 90 s

Session-refresher: Uas

Save Cancel

Figure 6-69 SIP Settings- Advanced Settings

**•From Field**

Where to get the caller ID in SIP packet.

**•To Field**

Where to get the DID in SIP packet.

**•180 Ringing**

It is set when the telecom provider needs. Usually it is not needed.

**•Remote Party ID**

Whether to send Remote-Party-ID on SIP header or not. Default: no.

**•Allow Guest**

Whether to allow anonymous registration extension or not. Default: no.

This option is used to avoid some anonymous calls by hackers. For more details about the system security configuration, please refer to [APPENDIX BMyPBX Security Configuration Guide](#).

**•Pedantic**

Enable pedantic parameter. Default: no.

**•Alwaysauthreject**

If enabled, when MyPBX rejects "Register" or "Invite" packets, MyPBX always respond the packets using "SIP404 NOT FOUND".

**•OPTIONS Response 200**

If set to yes, the response to an OPTIONS is always 200 OK.

**•Session -timers**

Enable session-timer mode, default: yes

**·Session-expires**

The max refresh interval

**·Session-minse**

The min refresh interval, which mustn't be less than 90s.

**·Session-refresher**

Choose session-refresher, the default is Uas.

**6.7.2**

The screenshot shows the 'IAX Settings' window with the 'General' tab selected. The 'UDP Port' is set to 4569, 'Bandwidth' is set to 'Low', 'Minimum Registration/Subscription Time' is 60, and 'Maximum Registration/Subscription Time' is 1200. Under the 'Codecs' section, the following codecs are checked: u-law, a-law, and GSM. The other codecs (SPEEX, G726, ADPCM, G729A, H261, H263, H263P, H264) are unchecked. At the bottom, there are 'Save' and 'Cancel' buttons.

Figure 6-70 IAX Settings

**1) General****·Bind Port**

Port use for IAX2 registrations, Default is 4569.

**·Bandwidth**

Low/medium/high with this option you can control which codec to be used.

**·Min Registration Time**

Minimum duration (in seconds) of an IAX2 registration. The default is 60 seconds.

**·Max Registration Time**

Maximum duration (in seconds) of an IAX2 registration. The default is 1200 seconds.

**2) Codecs**

A codec is a compression or decompression algorithm that used in the transmission of voice packets over a network or the Internet.

**u-law:** A PSTN standard codec, used in North America, which provides very

good voice quality and consumes 64kbit/s in each direction (receiving and transmitting) of a VoIP call.

**a-law:** A PSTN standard codec, used outside of North America, which provides very good voice quality and consumes 64kbit/s in each direction (receiving and transmitting) of a VoIP call.

**GSM:** A wireless standard codec, used worldwide, that provides adequate voice quality and consumes 13.3kbit/s in each direction (receiving and transmitting) of a VoIP call. GSM/UMTS is supported by many VoIP phones.

**SPEEX:** Speex is an Open Source/Free Software patent-free audio compression format designed for speech. The Speex Project aims to lower the barrier of entry for voice applications by providing a free alternative to expensive proprietary speech codecs. Moreover, Speex is well-adapted to Internet applications and provides useful features that are not present in most other codecs.

**G.726:** A PSTN codec, used worldwide, that provides good voice quality and consumes 32kbit/s in each direction (receiving and transmitting) of a VoIP call. G.726 is supported by some VoIP phones.

**ADPCM, G.729A, H261, H263, H263p, H264.**

**Note:** If you would like to use G.729, please enter your license.

### 6.7.3

Blacklist is used to block an incoming/outgoing call. If the number of incoming/outgoing call is registered in the number blacklist, the caller will hear the following prompt: "The number you have dialed is not in service. Please check the number and try again". The system will then disconnect the call.

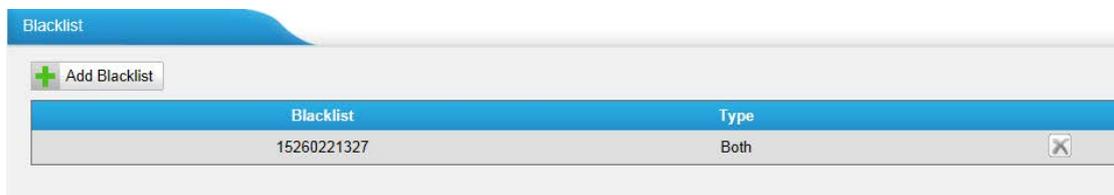


Figure 6-71 Blacklist List

We can add a number with the type: inbound, outbound or both.

Figure 6-72 Add a Number as Blacklist

**Note:** Add a phone number in blacklist, such as "05921234567":

- 1) If the type is "inbound", then this number can't be called.
- 2) If the type is "outbound", then the extensions in MyPBX can't call this number.

## 6.7.4

MyPBX allows caller A to dial an inbound route number, and after hearing the ring, A can hang up the call or wait for MyPBX to cut off the call, then MyPBX will call A with this number. When A picks up the call, A can dial the number he wants to call; MyPBX will call the number with its outbound route.

**Notes:**

1. If you'd like to use callback feature, please make sure it's enabled on the inbound route setting panel.
2. No callback rules needed to be set if the trunk supports call back with the caller ID directly.

Figure 6-73 Callback Settings Page

**• Allow All Numbers**

If you want to apply Callback function to all incoming numbers, please tick Allow All numbers.

Follow the steps below to use this function.

Step 1: Enable Callback.

Inbound Routes – Choose “Yes” on “Enable Callback” to enable this function.

The screenshot shows the 'Edit Inbound Route: pstnin' window. Under the 'General' tab, the following fields are visible:
 

- Route Name: pstnin
- DID Number: [empty]
- Extension: [empty]
- Caller ID Number: [empty]
- Distinctive Ringtone: [empty]
- Enable Callback: Yes (dropdown menu)

 A blue link labeled 'Callback Settings' is located to the right of the 'Enable Callback' dropdown.

Figure 6-74 Enable Callback in Inbound Route

Step 2: Create Callback number

The screenshot shows the 'Add Callback Number' dialog box. It contains a single text input field labeled 'Callback Number:'. Below the input field are two buttons: 'Save' (with a green checkmark icon) and 'Cancel' (with a red X icon).

Figure 6-75 Add a New Callback Number

Step 3: Create Callback Rules

You will need to create callback rules when the system should strip or add digits.

The screenshot shows the 'Add Callback Rules' dialog box. It contains the following fields:
 

- Trunk Name: E1Trunk1(E1) (dropdown menu)
- Strip: [empty] digits before dialing
- Prepend: [empty] before dialing

 At the bottom, there are 'Save' (with a green checkmark) and 'Cancel' (with a red X) buttons.

Figure 6-76 Create Callback Rule

#### • Trunk Name

Choose the trunk with callback rules

#### • Strip digits from front

Define how many digits will be stripped from the call in number before the callback is placed. For example, when you call from number 123456789 into MyPBX, the caller ID is 0123456789, but you can only call 123456789 successfully from MyPBX trunk. You should configure number 0123456789 as

the call back number and strip 1 digit before the callback is placed

#### •Prepend before dialing

Define digits added before a callback number before the callback is placed. For example, the call in number (Caller ID) is 123456789, MyPBX need to send 9123456789 to its trunk when calling this number. You should configure 123456789 as the call back number and add 9 before the callback is placed. You can add "w" for analog trunks for some delay too.

### 6.7.5

DNIS (Dialed Number Identification Service) is a telephone service that identifies for the receiver of a call the number that the caller dialed.

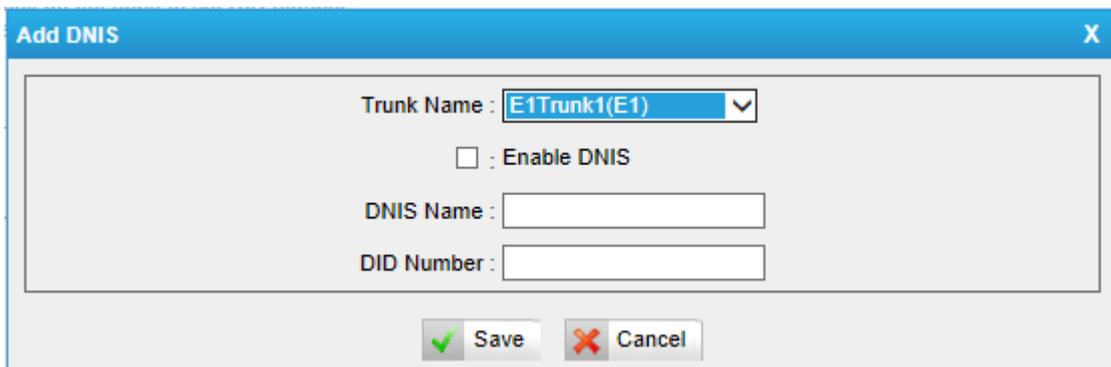


Figure 6-77 Add a New DNIS

**Note:** If DID is not configured here, all the calls via this trunk will show the DNIS instead of the original caller ID.

### 6.7.6

DISA (Direct Inward System Access) allows someone calling in from outside the telephone switch (PBX) to obtain an "internal" system dial tone and make calls as if they were using one of the extensions attached to the telephone switch. To use DISA, a user calls a DISA number, which invokes the DISA application. The DISA application in turn requires the user to enter a PIN number, followed by the pound sign (#). If the PIN number is correct, the user will hear dial tone on which a call may be placed. Obviously, this type of access has serious security implications, and great care must be taken not to compromise your security.

Figure 6-78 Add a New DISA

### 1) General

#### •DISA Name

Give this DISA application a name to help you identify it.

#### •PIN

The password for this DISA

#### •PIN Settings

Click to add, delete or edit PIN list.

#### •Response Timeout

The maximum amount of time the system will wait before hanging up the call if the user has dialed an incomplete or invalid number. The default is 10 seconds.

#### •Digit Timeout

The maximum amount of time permitted between each digit when the user is dialing an extension number. The default is 5 seconds.

### 2) Member Outbound Routes

Used to set the outbound routes that can be accessed from this DISA.

## 6.7.7

PIN User is used to manage lists of PINs that can be used to access restricted features such as Outbound Routes.

Figure 6-79 PIN User Settings Page

## 1) Options

• **Access Code**

.Dial this code to access PIN.

• **Prompt for Entry**

Prompt caller enter the PIN Number.

• **Prompt for Entry Failure**

Prompt the caller when an invalid PIN is entered.

Figure 6-80 Add a New PIN User

## 2) PIN User

MyPBX can store a number of PIN Users. PIN Users may be used to keep track of calls in relation to particular activities or clients. They can also be used to keep track of calls by particular users or sets of users.

- PIN entered is checked against those stored by the system. If an invalid PIN is entered, the PIN is requested again.

- The system administrator can configure certain numbers or types of numbers to require entry of a PIN before you can continue making a call to such a number.
- The system administrator can also configure you to have to enter a PIN before making any external call.

• **Name**

A character-based name for this PIN list, e.g. "YeastarPIN"

• **PIN**

The password for this PIN list

• **PIN Settings**

Click to add, delete or edit PIN list.

• **Member Outbound Route**

PIN User can use those outbound route to make call out.

## 6.7.8

In this page users can manage all the passwords of outbound routes, PIN User, and DISA.

The screenshot shows the 'Add PIN List' dialog box within the 'PIN Settings' page. The dialog box has a blue header with the title 'Add PIN List' and a close button (X). Below the header, there is a 'Name' text input field, a 'Record In CDR' dropdown menu set to 'No', and a large text area labeled 'PIN List'. At the bottom of the dialog box are 'Save' and 'Cancel' buttons.

Figure 6-81 Add PIN List

• **Name**

A character-based name for this PIN list, e.g. "YeastarPIN"

• **Record in CDR**

If set to yes, the PIN code will be displayed in call log.

## •PIN list

PIN list is a numeric field. Letters and punctuation are not allowed in this field. Fill in one PIN and if you end with enter for each PIN, you could create multiple PINs.

### 6.7.9

Paging is used to make an announcement over the speakerphone to a phone or group of phones. Targeted phones will not ring, but instead answer immediately into speakerphone mode. Please note that this section is for configuring paging groups. If you would like to configure Intercom settings, please open the Other Settings -> Feature Codes.

This feature is supported by the following SIP phones:

Yealink's T28, T26, T22, T20, T10T, T9CM. Other SIP devices may also work with this feature but are not officially supported.

**Note:** A paging group can have a maximum of 20 members.

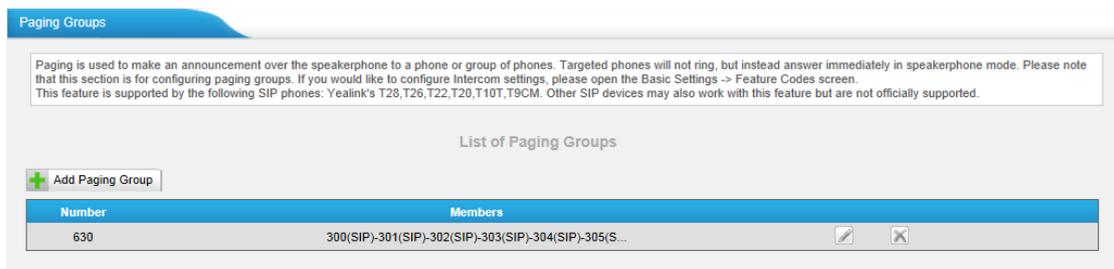


Figure 6-82 Paging Group List

In this mode, if you dial its number, MyPBX will help to pick up those chosen members and you can talk directly without any rings.

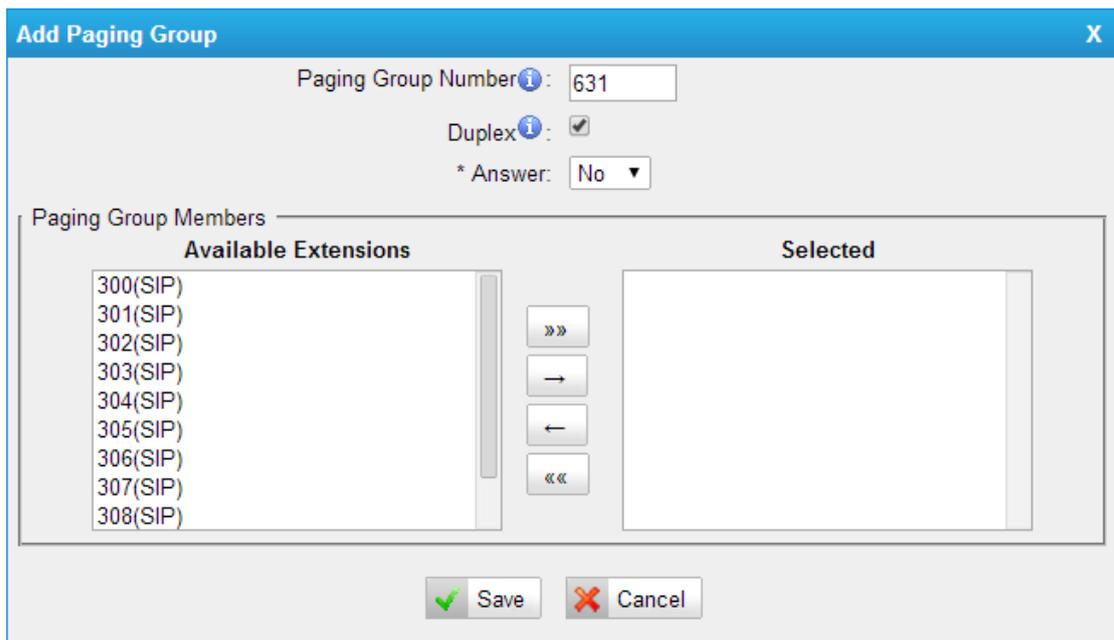


Figure 6-83 Add/Edit Internal Paging Group

**•Paging Group Number**

Define the numbered extension that may be dialed to reach this group.

**•Duplex**

Paging is typically one way for announcements only. Checking this will make paging duplex, allowing all users in the group to talk and be heard by all.

**•\*Answer**

If it sets Yes, any user in the group will talk with the caller when they press "\*". If it sets No, users in the group can talk with each other without pressing "\*".

**6.7.10 SMS Settings**

When GSM/UMTS modules are installed, SMS feature is supported.

## 1) Enable SMS to Email



Figure 6-84 Enable SMS to Email

If you enable this, as soon as the GSM/UMTS trunks receive a short message, MyPBX will send the text of this message to the email addresses listed on the Email List.

You can add email addresses to the Email List.

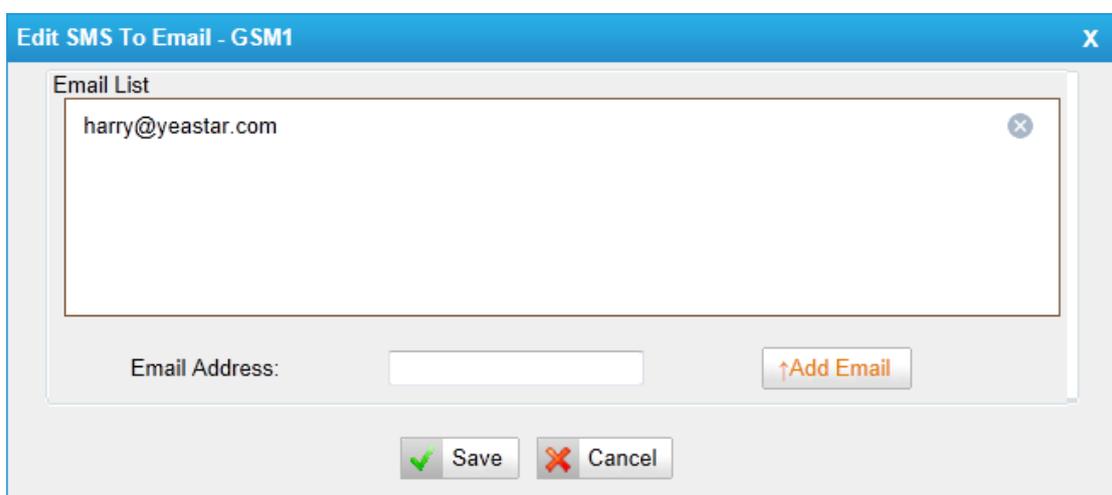


Figure 6-85 SMS to Email Settings

## 2) Enable Email to SMS

If you enable this, you can use MyPBX to send out message by sending an email to the specified address.

Figure 6-86 Email to SMS Settings

### •Enable Country Code

If you want to add country code before the dialed numbers, please tick this.

### •Country Code

If you enable country code, the country code will be added before the numbers which you want to send SMS. Also you can use a custom country code, which makes it more flexible.

### •Receive mails every

The interval time of receiving mails from POP3 server

### •Access Code

This PIN code is used to verify the subject of the emails received. If the form of email passes the verification, it will be send out by SIM card. If not, this email will be deleted immediately.

## 3) Email Settings

Figure 6-87 SMTP/POP Server Settings

Note:

1. If you want to use "SMS to Email", please configure POP3 setting.
2. If you configure the POP3 setting, MyPBX will download emails from the mail server regularly. Once downloaded, the emails will be deleted from the mail server.

**•Email Address**

This email address will be used to:

1. Send email to the addresses listed on "SMS to Email" setting.
2. Receive email and send the text of the email to the target mobile number by SMS.

Note: If you use Gmail, just put your user name here. E.g. email address: test@gmail.com, you just put "test" here.

**•Password**

Input the password of this email here.

**•SMTP Server (SMTP)****•SMTP Server Port****•Receive Server (POP3)****•Receive Server Port**

If you want to know more about Email to SMS, please refer to [APPENDIX G](#)

**6.7.11 Certificates**

MyPBX can support TLS extension. Before you register TLS extension on IP phone, you should upload certificates first.

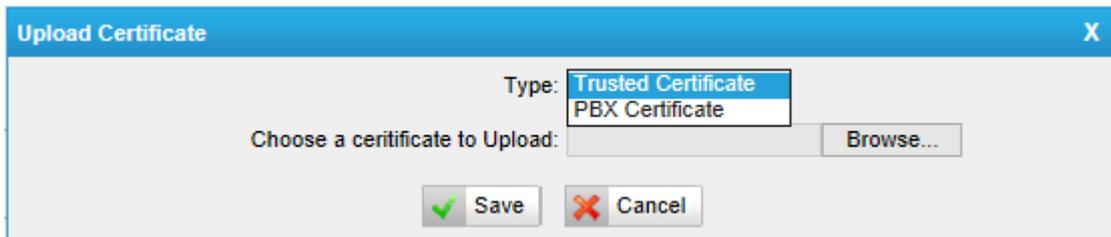


Figure 6-88 Upload Certificate

**Trusted Certificate**

This certificate is a CA certificate. When selecting "TLS Verify Client" as "Yes", you should upload a CA. The relevant IP phone should also have the according server certificate.

**PBX Certificate**

This certificate is server certificate. No matter selecting "TLS Verify Client" as "Yes" or "NO", you should upload this certificate to MyPBX. If IP phone enables "TLS Verify server", you should also upload the according CA certificate on IP phone.

## 7 Reports



Click [Reports](#) to access.

We can check the call detailed logs for counting and system log for debugging.

### 7.1

The call Log captures all call details, including call time, caller number, callee number, call type, call duration, etc. An administrator can search and filter call data by filter the call logs by call date, caller/callee, trunk, duration, billing duration, status, communication type and PIN User.

Figure 7-1 Call Log List

### 7.2

Figure 7-2 System Logs

You can download and delete the system logs of MyPBX.

#### Options

- **Enable Hardware Log**

Save the information of hardware; (up to 4 log files)

•**Enable Normal Log**

Save the prompt information; (up to 16 log files)

•**Enable Web Log**

Save the history of web operations (up to 2 log files)

•**Enable Debug Log**

Save debug information (up to 2 log files)

**Packets Capture Tool**

This feature is used to capture packets for technician. Integrate packet capture tool "Wireshark" in MyPBX.

Users also could specify the destination IP address and port to get the packets.

•**IP**

Specify the destination IP address to get the packets.

•**Port**

Specify the destination Port to get the packets.

•**NIC**

Choose the NIC (LAN or WAN) which you want to capture the packets.

## 8 Addons



Click [Addons](#) to enter "Addons" page.

## 8.1 Addons Settings

MyPBX supports many addons to enhance the function of MyPBX.

In this page, you can install the according addons, including MyPBX Client, Bill System and Hotel Module.

Before you install an addon, you should have a license. You can buy the license from Yeastar.

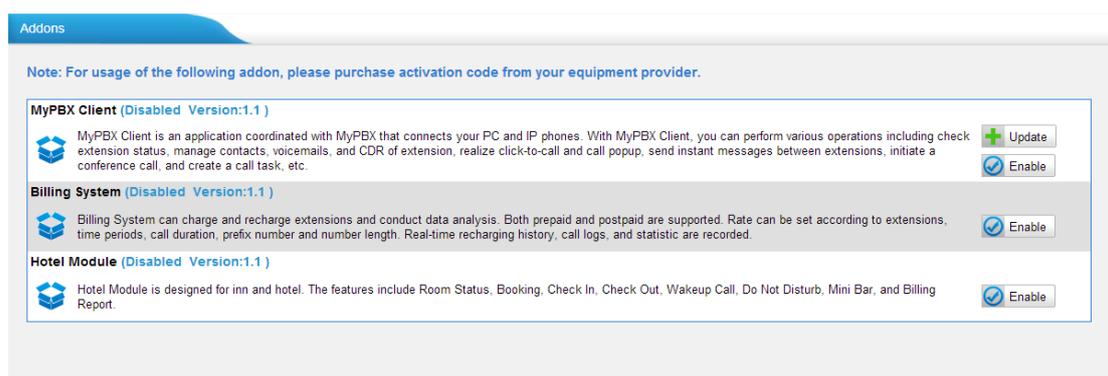


Figure 8-1 Addon Page

### 8.1.1 MyPBX Client

MyPBX Client is an application coordinated with MyPBX that connects your PC and IP phones. With MyPBX Client, you can perform various operations including check extension status, manage contacts, voicemails, and CDR of extension, realize click-to-call and call popup, send instant messages between extensions, initiate a conference call, and create a call task, etc.

For more details about MyPBX client, please refer to the link below:

[http://www.yeastar.com/Solutions/MyPBX\\_Client\\_Solution.asp](http://www.yeastar.com/Solutions/MyPBX_Client_Solution.asp)

### 8.1.2 Billing System

Billing System caters for the growing need of billing solutions that can efficiently monitor the calls and maintain record of each call received/transferred by IP-PBX. Billing System can charge and recharge extensions and conduct analysis on the basis of statistics. Both prepaid and postpaid are supported. Flexible rate settings and detailed records make it extremely easy for enterprise to monitor charges, spot misuse, and enhance efficiency. With Billing System, call accounting are just clicks away.

**Note: If Billing System is enabled, DISA and Callback functions would be disabled.**

For more details about Bill System, please refer to the link below:

[http://www.yeostar.com/Solutions/Billing\\_System\\_Solution.asp](http://www.yeostar.com/Solutions/Billing_System_Solution.asp)

### 8.1.3 Hotel Module

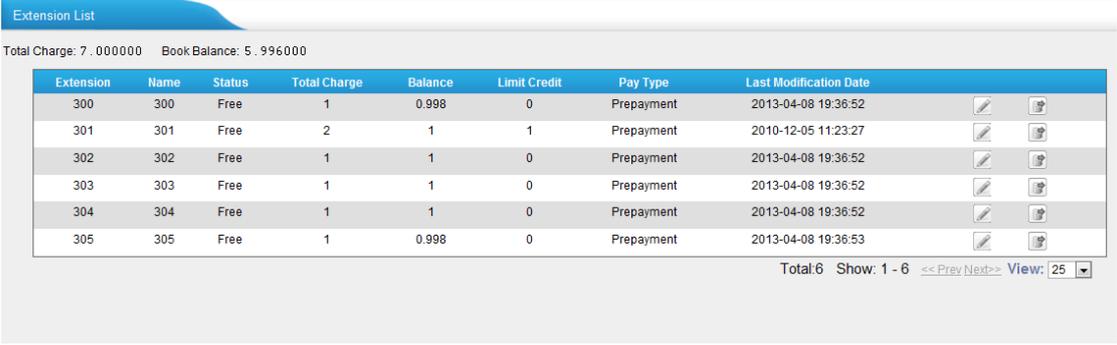
MyPBX Hotel Module is designed for inns and hotels. The features include Room Status, Booking, Check In, Check Out, Wakeup Call, Do Not Disturb, Mini Bar, and Billing Report.

For more details about "Hotel Module", please refer to the link below:

[http://www.yeostar.com/Solutions/Hotel\\_Module\\_Solution.asp](http://www.yeostar.com/Solutions/Hotel_Module_Solution.asp)

## 8.2 Billing Settings

### 8.2.1 Extensions



Extension List

Total Charge: 7.000000 Book Balance: 5.996000

Extension	Name	Status	Total Charge	Balance	Limit Credit	Pay Type	Last Modification Date		
300	300	Free	1	0.998	0	Prepayment	2013-04-08 19:36:52		
301	301	Free	2	1	1	Prepayment	2010-12-05 11:23:27		
302	302	Free	1	1	0	Prepayment	2013-04-08 19:36:52		
303	303	Free	1	1	0	Prepayment	2013-04-08 19:36:52		
304	304	Free	1	1	0	Prepayment	2013-04-08 19:36:52		
305	305	Free	1	0.998	0	Prepayment	2013-04-08 19:36:53		

Total: 6 Show: 1 - 6 << Prev Next >> View: 25

Figure 8-2

#### Total Charge

The total charge of all extensions.

**Note:** The mobility extension will be charged, and the bill is added to the corresponding extension.

#### Book Balance

The total balance of all extensions.

Click  to edit the extension settings.

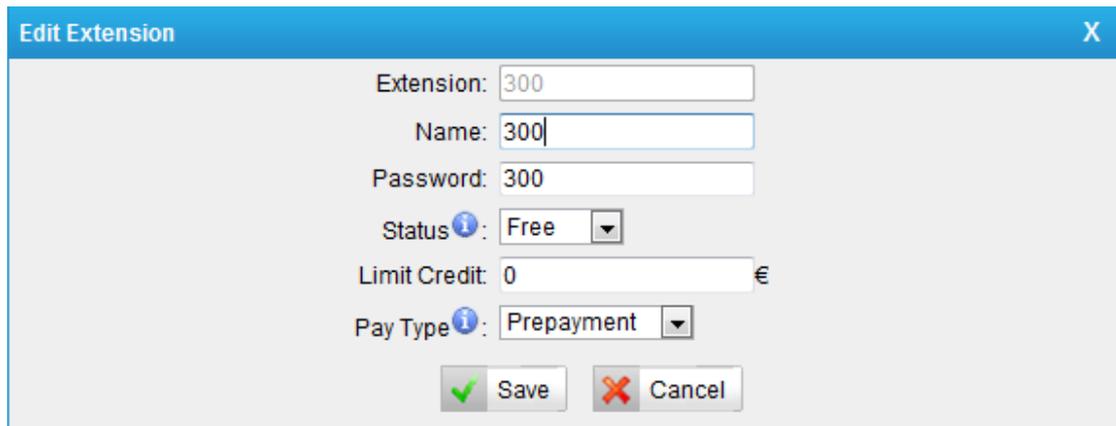


Figure 8-3

**Extension**

Extension number, un-editable.

**Name**

You can rename the extension to whatever you want. The extension name here and the extension name in PBX extension page will be changed to the same whichever changes.

**Password**

The extension's password, which is always the same as the voicemail PIN on extension page.

**Status**

Administrator can set it to Free or Locked. If it's locked, this extension can't make outbound calls.

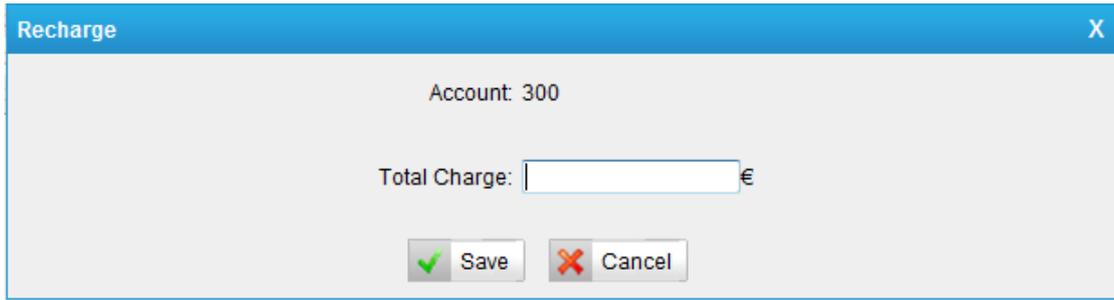
**Limit Credit**

If Prepayment is chosen, when your balance is below the limit of credit, your outbound call will be blocked. If Post-payment is chosen, the limit of credit means the maximum money you can owe.

**Pay Type**

Prepayment or Post-payment.

Click  to recharge this extension.



Recharge

Account: 300

Total Charge:  €

Figure 8-4

## 8.2.2 Rate

Click "Rate" to start editing the rate rules, you can also import the rules you have edited in advance and export the rules. The format is \*.csv.



Prefix Number	Number Length	Rate	From	To	Initial Cost	Initial Time	Billing Unit	Extensions	Last Modification Date
--	0	0.002	00:00	23:59	0	0	60	*	2010-12-05 11:23:35

Figure 8-5

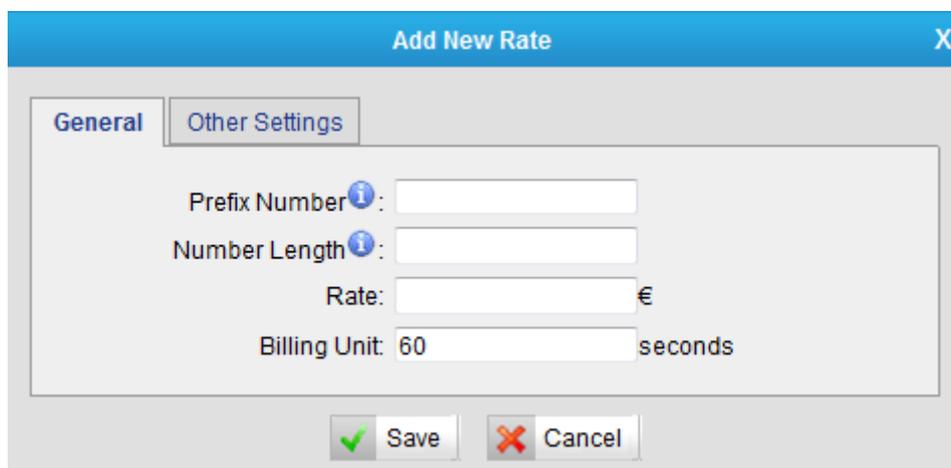
### Import

Import the configuration file of rate.

### Export

Export the configuration of the rate.

Click "Add New Rate" to start editing the details.



Add New Rate

General **Other Settings**

Prefix Number

Number Length

Rate:  €

Billing Unit:  seconds

Figure 8-6

## 1) General

### Prefix number

It's the Prefix of the called number. It must match the dial pattern of the outbound routes in MyPBX. Leave it blank means matching all dial patterns.

### Number Length

It is the total length of the number processed by MyPBX when calling outbound (including the dial pattern and the number stripped by MyPBX). If dial pattern is "9.", Strip "1" digit and there is no prepended number, when you dial "95503305", the number length is "8". If dial pattern is "9.", Strip "1" digit, and prepend "17951", when you dial 95503305, the number length is "13". Put "0" here to apply to numbers of all lengths.

Leave it blank means matching all numbers.

### Rate

The rate of one billing unit. Users are able to enter a rate value that has 4 digits after the decimal point and the billing precision is up to 4 digits after the decimal.

**Note:** the currency symbol can be changed in the General Setting as required.

### Billing Unit

If the rate is €0.2 and billing unit is 60 seconds, the call you make will cost €0.2 per 60 seconds (less than one billing unit will be regarded as one billing unit).

## 2) Other Settings

The screenshot shows the 'Add New Rate' dialog box with the 'Other Settings' tab selected. The 'Days of Week' section has an empty box on the left and a list of days (Sunday through Saturday) on the right, with navigation arrows between them. Below this are 'From' and 'To' time fields set to 00:00 and 23:59 respectively. The 'Initial Cost' is set to 0 € and the 'Initial Time' is set to 0 seconds. The 'Apply to all extensions' checkbox is checked. At the bottom, there is another empty box on the left and a list of extension numbers (300 through 305) on the right, also with navigation arrows. 'Save' and 'Cancel' buttons are at the bottom center.

Figure 8-7

**Days of week**

Choose the days on which this rate takes effect.

**From & To**

The time period of this rate takes effect in a day.

**Initial Cost & Initial time**

If the "Initial Cost" is €0.2 and the "Initial Time" is 120 seconds, it means the first 120 seconds of this call will cost €0.2.

**Apply to all extensions**

Apply this rate to the following extensions or just tick "Apply to all extensions" to apply to all.

## 8.2.3 Emergency Number

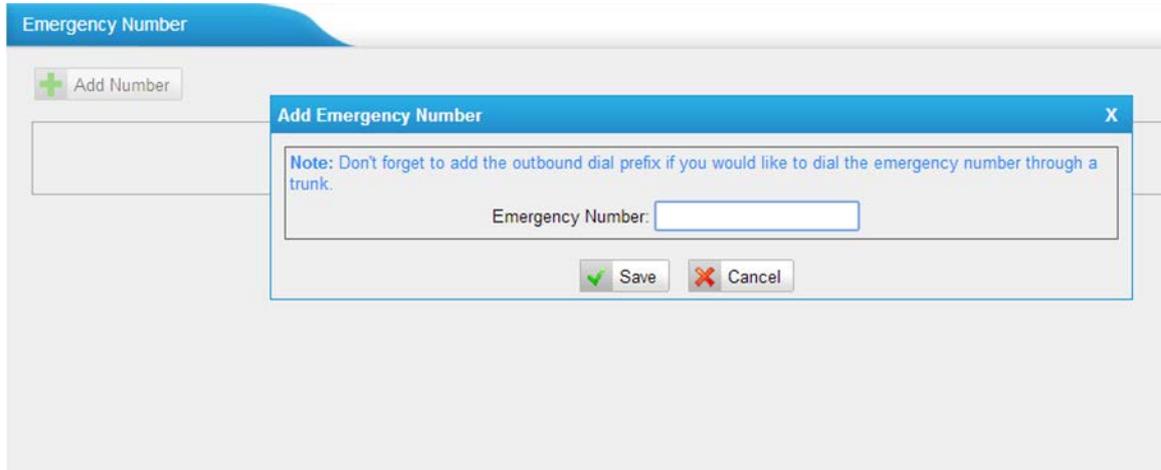


Figure 8-8

Add Emergency Number as required.

**Note:** Don't forget to add the outbound dial prefix if you would like to dial the emergency number through a trunk.

## 8.2.4 Scheduled Task

The task will be operated depending on the time condition and the selected members.

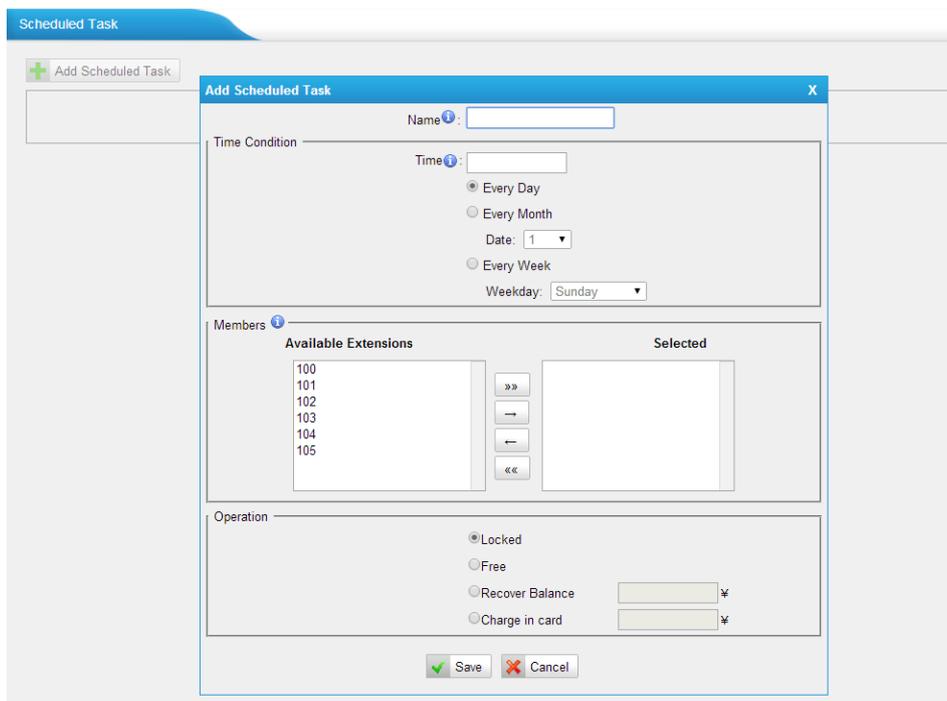


Figure 8-9

**•Name**

Input the task name. You can't use the same name.

## 1) Time Condition

**•Time**

It is the start time of the task. The format is "HH:MM" e.g. 12:00.

Every Day: if checked, task will be operated every day.

Every Month: if checked, task will be operated every month.

Date: it can be from 1 to 31.

Every Week: if checked, task will be operated every week.

Weekly: it can be from Sunday to Saturday.

## 2) Members

Move an extension to the "Selected" box to make the task applicable to it.

## 3) Operation

Locked: if checked, the selected members can't dial out.

Free: if checked, the selected members can dial out.

Recover Balance: if checked, the configured number will become the balance.

Charge in card: if checked, the configured number will be added to the balance.

**8.2.5 General Setting**

Figure 8-10

**•Currency**

It can be changed as required.

**•Dial Emergency Number when out of credit**

If set to yes, you can dial emergency number when you run out of credit.

**•Insufficient Balance Prompt**

If set to Null, the system will use the default voice prompt.

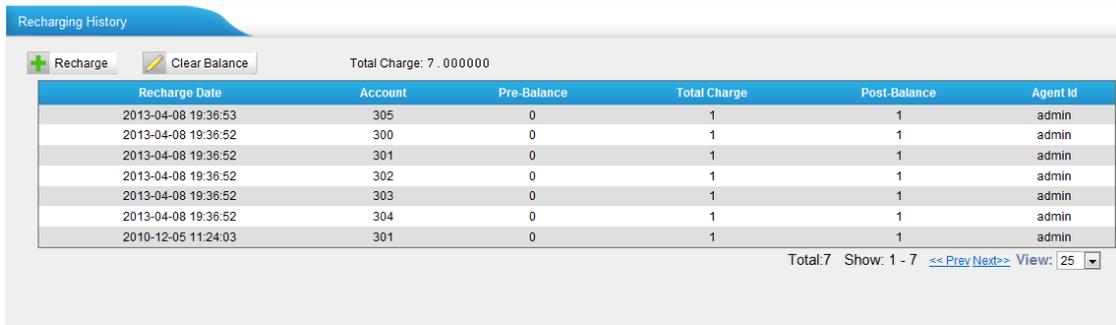
**•Extension Lock Prompt**

If set to Null, the system will use the default voice prompt.

Note: The custom prompt can be chosen if you have uploaded it to MyPBX "Custom Prompts" page.

## 8.2.6 Recharging History

Click "Recharging History" to check the details. You can also clear all balance.



Recharging History

Total Charge: 7.000000

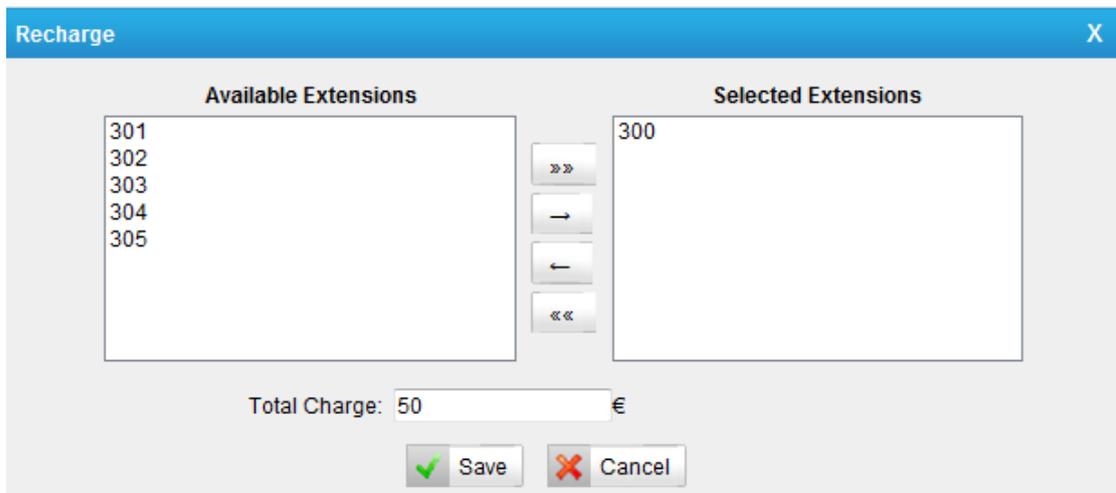
Recharge Date	Account	Pre-Balance	Total Charge	Post-Balance	Agent Id
2013-04-08 19:36:53	305	0	1	1	admin
2013-04-08 19:36:52	300	0	1	1	admin
2013-04-08 19:36:52	301	0	1	1	admin
2013-04-08 19:36:52	302	0	1	1	admin
2013-04-08 19:36:52	303	0	1	1	admin
2013-04-08 19:36:52	304	0	1	1	admin
2010-12-05 11:24:03	301	0	1	1	admin

Total: 7 Show: 1 - 7 << Prev Next >> View: 25

Figure 8-11

### 1) Recharge

Click "Recharge" and then choose the extension and put in the amount.



Recharge

**Available Extensions**

- 301
- 302
- 303
- 304
- 305

**Selected Extensions**

- 300

Total Charge:  €

Figure 8-12

In this example, the recharge amount of the selected extension 300 is €50

### 2) Clear balance

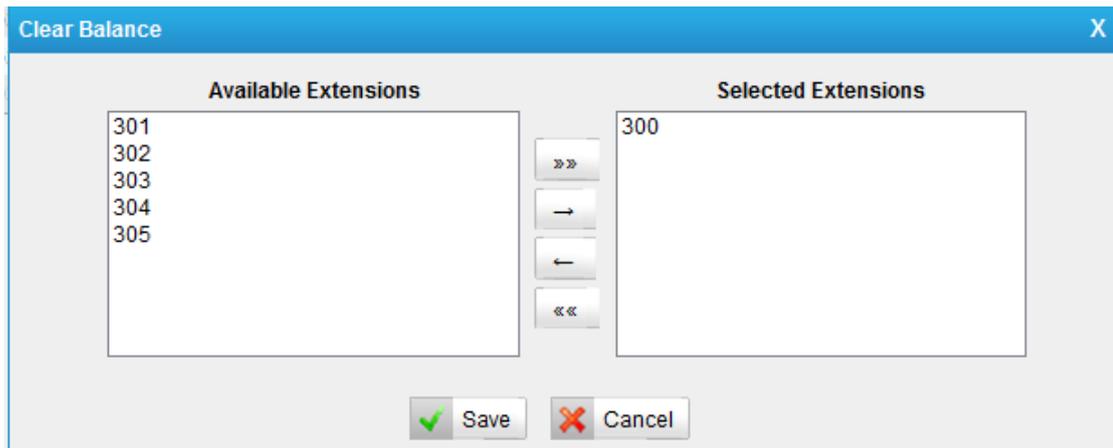


Figure 8-13

In this example, the chosen extension 300's balance will be cleared.

## 8.2.7 Call Logs

It's the history of all calls generated by extensions. You can download, delete and search the records by date and/or extension number.

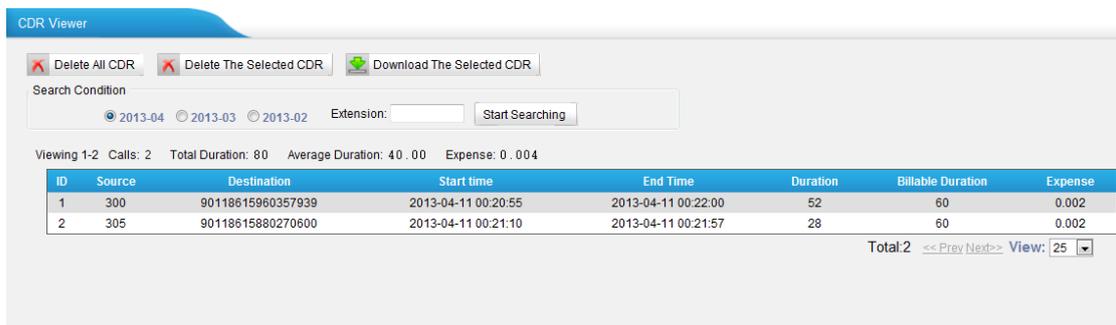


Figure 8-14

### Start Search

When there are a great number of calls, you can query call logs by time and extension number.

### Calls

The total number of the calls.

### Total Duration

The total duration of all calls.

### Average Duration

The average duration of all the calls.

### Expense

The total expense of all calls.

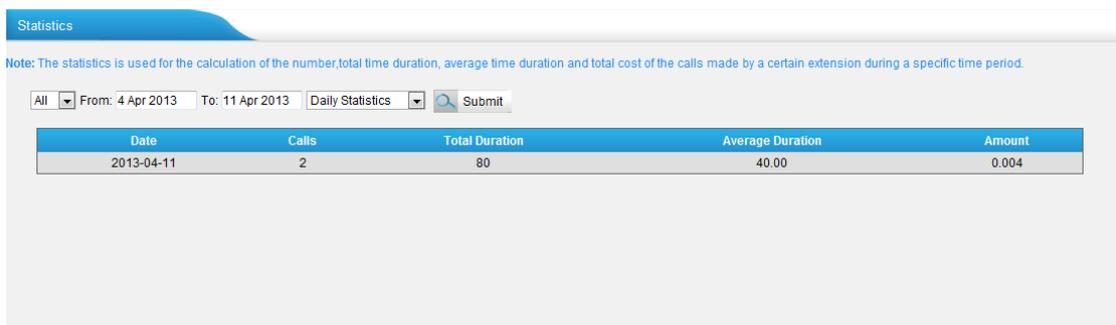
Download and delete CDR.

You can click "Download the Selected CDR" to download CDR to your PC; also you can click "Delete the Selected CDR" or "Delete All CDR" to delete the CDR.

**Note:** Only the logs of the latest 3 months will be saved.

## 8.2.8 Statistics

You can check the statistics here. You can list the statistics by extension number, date, day, month or year.



Date	Calls	Total Duration	Average Duration	Amount
2013-04-11	2	80	40.00	0.004

Figure 8-15

### Date

The date of the call

### Calls

The number of the calls

### Total Duration

The total duration of all the calls

### Average Duration

The average duration of each call

### Amount

The total cost of all the calls

## 9 Logout



Click  to log out safely.

## 10. Use MyPBX

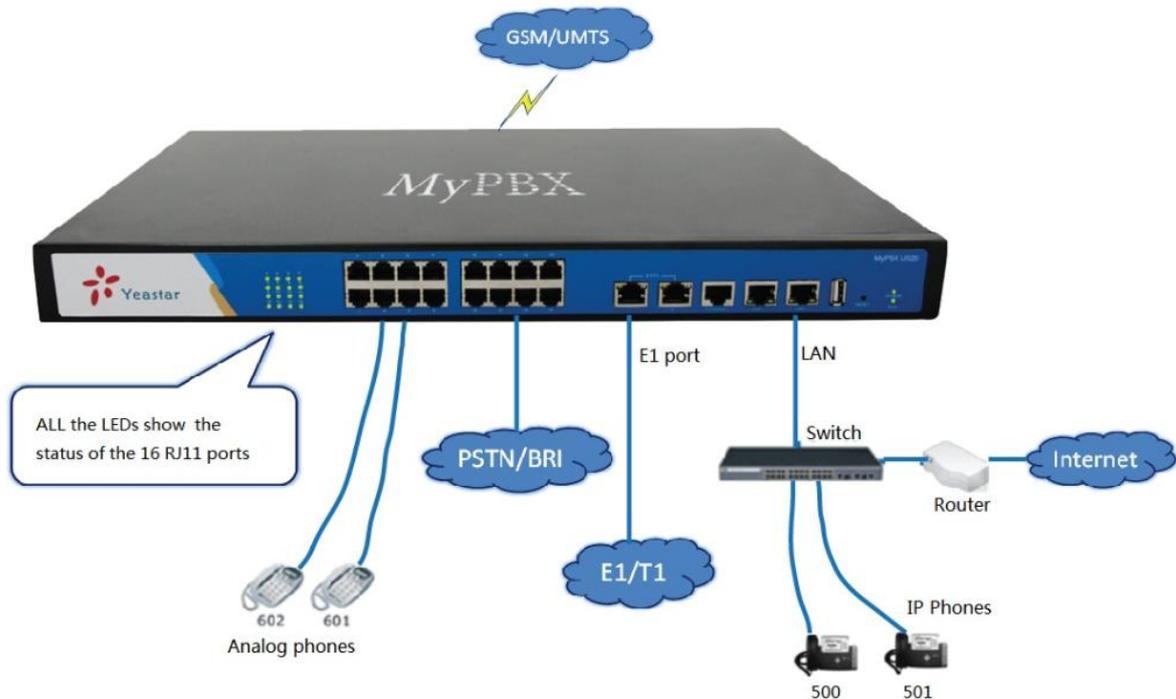


Figure 10-1 U5XX Connection Drawing

### 10.1 Make outbound call

To make an outbound call, we need to add trunk first. There are 3 types of VoIP Trunk.

- **Digital Trunk:** E1/T/J1 ports of MyPBX, connected to the ISDN provider  
You need to get the detailed signaling type from the provider before configuring the E1 trunk.
- **VoIP Trunk:** Connected to remote VOIP service server.  
You should get an IP address with user name/ password from the provider.
- **Service Provider:** Connected to service provider server.  
You will get only IP address for authorization.
- **Analog Trunk:** FXO ports of MyPBX, connected to a local PSTN.
- **GSM/UMTS Trunk:** GSM ports of MyPBX, connected to GSM Network.
- **BRI Trunk:** BRI ports of MyPBX, connected to ISDN provider

What are FXO and FXS?

**FXS** (Foreign Exchange Station) is an interface which drives an analog telephone or FAX machine. FXS interfaces deliver power, provide ringing, and use FXO signaling. FXS interfaces are what allow you to hook telephones and other analog devices to your PBX

**FXO** (Foreign Exchange Office) is an interface that connects to a phone line to supply your PBX with access to a public telephone network. FXO interfaces use

FXS signaling. FXO interfaces allow you to connect your PBX to real analog phone lines.

### 10.1.1 Sample Routing via E1 Trunk

Let's route all inside extensions through an E1 trunk by dialing 9. In Outbound Routes, add a new outbound route as below.

**Edit Outbound Route - pstnout**

Route Name:

Dial Pattern:

Strip:  digits from front

Prepend these digits:  before dialing

Password:

T.38 Support:

Rmemory Hunt:

Office Hours:

**Member Extensions**

Available Extensions	Selected
	300(SIP)
	301(SIP)
	302(SIP)
	303(SIP)
	304(SIP)
	305(SIP)
	601(FXS)
	602(FXS)

**Member Trunks**

Available Trunks	Selected
pstn10(FXO)	E1Trunk1(E1)
pstn11(FXO)	E1Trunk2(E1)
pstn12(FXO)	
pstn13(FXO)	
pstn14(FXO)	
pstn15(FXO)	
pstn16(FXO)	
VOIP_Supplier(SIP)	

Figure10-2 Create Outbound Route for E1 Trunk

As we can see from the outbound route of "pstnout", all phone numbers starting with 9 will have their first digit stripped off (digit 9) and will be sent to the E1.

After we have configured the above, we can dial 9 + local number to dial out via an E1 trunk.

**Note:** Setting number prefix to wild card **X**. and setting Strip to **0** digits from the front will allow all calls to go through this outbound route directly.

## 10.1.2 Sample Routing via VoIP Trunk

Let's configure all inside extensions to dial "0" through the VoIP Trunk.

### 1. Add VoIP service provider

Before we do add this, please make sure you have a VoIP Trunk account.

Trunks → VoIP Trunk → SIP Trunk

Enter your account information on this page, and click Save.

Edit VoIP Trunk - VOIP\_Supplier
X

Provider Name:

Hostname/IP:  x

Domain:

User Name:

Authorization Name:

Password:

From User:

Online Number ?:

Maximum Channels ?:

Caller ID ?:

Realm ?:

Enable Outbound Proxy Server

Outbound Proxy Server:  Port:

Codecs: First:  Second:  Third:

Fourth:  Fifth:

Transport:  Enable SRTP ?:  Qualify:

DTMF Mode:

**DOD Settings**

DOD:  Associated Extension:

Figure10-3 Create an VOIP Trunk

## 2. Add Outbound Routes

As we can see from the Outbound Route of "VOIP\_OUT", all phone numbers starting with 0 will have their first digit stripped off (digit 0) and will be sent to the SIP Trunk.

**Add Outbound Route**

Route Name: VOIP\_OUT

Dial Pattern: 0.

Strip: 0 digits from front

Prepend these digits: before dialing

Password:

T.38 Support: No

Rmemory Hunt: No

Office Hours:

**Member Extensions**

Available Extensions	Selected
	300(SIP)
	301(SIP)
	302(SIP)
	303(SIP)
	304(SIP)
	305(SIP)
	601(FXS)
	602(FXS)

**Member Trunks**

Available Trunks	Selected
pstn11(FXO)	VOIP_Supplier(SIP)
pstn12(FXO)	
pstn13(FXO)	
pstn14(FXO)	
pstn15(FXO)	
pstn16(FXO)	
E1Trunk1(E1)	
E1Trunk2(E1)	

Save Cancel

Figure10-4 Create an Outbound route for VOIP trunk

Now that we have added two outbound dialing rules, any call starting with 9 will be routed to the PSTN, and any number starting with 0 will be routed to the SIP Trunk.

## 10.2 Incoming call

### 10.2.1 Sample Routing to an IVR

Let's configure an incoming call to route to the IVR. In the IVR itself, let's configure digit 0 to route the call to extension 300, and digit 1 to route the call to extension 301.

#### 1. Add IVR

To add a new IVR, go to IVR → Create New IVR

**Edit IVR - welcome** X

Number <sup>i</sup>: 660

Name <sup>i</sup>: welcome

Prompt <sup>i</sup>: default [Custom Prompts](#)

Repeat Count <sup>i</sup>: 3

Key Timeout <sup>i</sup>: 3

<sup>i</sup> Enable Direct Dial

<sup>i</sup> **Keypress Events**

Key	Action	Destination
0	Connect to Extension	Extension -- 300
1	Connect to Extension	Extension -- 301
2	No Action	
3	No Action	
4	No Action	
5	No Action	
6	No Action	
7	No Action	
8	No Action	
9	No Action	
#	No Action	
*	No Action	
Timeout <sup>i</sup>	Connect to Extension	Extension -- 300
Invalid <sup>i</sup>	Connect to Extension	Extension -- 300

Figure10-5 Create IVR

## 2. Add Inbound Routes

As we can see from the Inbound Route of "VOIP\_IN", all incoming calls will be sent to the IVR.

Add Inbound Route
X

**General**

Route Name (i) :

DID Number (i) :

Extension (i) :

Caller ID Number (i) :

Distinctive Ringtone (i) :

Enable Callback :  [Callback Settings](#)

**Member Trunks** (i)

Available Trunks		Selected
<div style="border: 1px solid #ccc; padding: 5px; min-height: 100px;">                     pstn11(FXO)                      pstn12(FXO)                      pstn13(FXO)                      pstn14(FXO)                      pstn15(FXO)                      pstn16(FXO)                      E1Trunk1(E1)                      E1Trunk2(E1)                 </div>	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	<div style="border: 1px solid #ccc; padding: 5px; min-height: 100px;">                     VOIP_Supplier(SIP)                 </div>

**Business Days**

Office Hours :

Office Hours Destination :

Non-office Hours Destination :

**During Holidays**

Holiday :

Destination :

**Fax Detection**

Destination :

Figure10-6 Create Inbound Route for VOIP Trunk

## APPENDIX A FAQ

Q1. How to Register SIP devices?

A1:

## 1) Register SIP softphone

Download the x-lite softphone from CounterPath website

[www.counterpath.com](http://www.counterpath.com)

After installing the x-lite, right click the panel and select the SIP Account setting and then configure it.

**Display Name:** 500

**User Name:** 500

**Password:** 500

**Authorization Name:** 500

**Domain:** 192.168.5.150

## 2) Register IP Phone (for example, Yealink's T28 IP Phone)

a) Connect the T28's Internet port to the switch. And it can get the IP from your route.

b) Press the "OK" key on T28 to get the IP of T28.

c) Put the IP on web browser then you can enter the T28 configure page through this IP.

d) Put the SIP extensions info on the T28 IP phones.

**Display Name:** 501

**User Name:** 501

**Register Name:** 501

**Password:** 501

**SIP Server:** 192.168.5.150

Use the same method register another T28 to other extension.

**Q2. How do I reset MyPBX back to the factory default settings?**

**A2:** To perform a reset, please follow steps below:

**Step 1:** hold down the "Reset" button on the back of the unit for 5 seconds and watch the LEDs on the front of the MyPBX. When the status LED turns red, let go of the reset button.

**Step2:** when the RUN status LED starts blinking, MyPBX will be set back to factory defaults.

**Step 3:** to access the configuration page, navigate to **192.168.5.150** using a web browser. Make sure that you are on the 192.168.5.0 subnet before doing this.

**Step4:** log in to the device with the username "**admin**" and the password "**password**", and reconfigure the device.

**APPENDIX B MyPBX Security****Configuration Guide**

VoIP attacks, although it is not an everyday occurrence, it does exist. While using VoIP, system security is undoubtedly one of the issues we care about most.

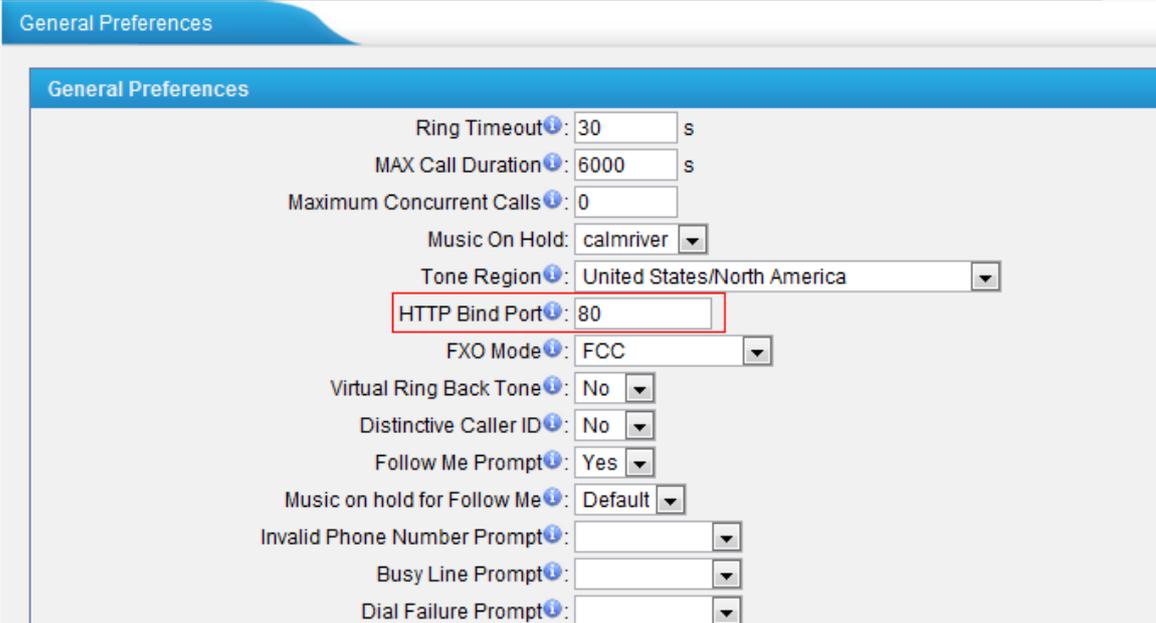
But with the appropriate configuration, and some basic safety habits, we can improve the security of the telephone system. Moreover, the powerful built-in firewall function in MyPBX is adequate to enable the system to run safely and stably.

This guide will introduce the highest defense level in MyPBX, and we strongly recommend that you configure firewall and other security options according to this guide, to prevent the attack fraud and the system failure or calls loss.

## 1. Security Configuration for Web GUI

### 1.1 Change the default access port for HTTP on Options page

PBX→Basic Settings→ General Preferences→HTTP Bind Port



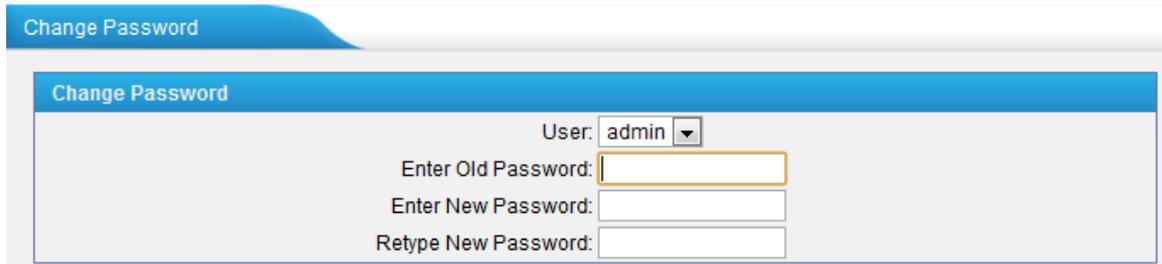
The screenshot shows the 'General Preferences' configuration page in the MyPBX web GUI. The page has a blue header with the text 'General Preferences'. Below the header, there is a list of configuration options, each with a label, a value, and a unit or dropdown menu. The 'HTTP Bind Port' option is highlighted with a red rectangular box. The value '80' is entered in the text box for this option. Other options include Ring Timeout (30 s), MAX Call Duration (6000 s), Maximum Concurrent Calls (0), Music On Hold (calmriver), Tone Region (United States/North America), FXO Mode (FCC), Virtual Ring Back Tone (No), Distinctive Caller ID (No), Follow Me Prompt (Yes), Music on hold for Follow Me (Default), Invalid Phone Number Prompt, Busy Line Prompt, and Dial Failure Prompt.

Option	Value	Unit/Type
Ring Timeout	30	s
MAX Call Duration	6000	s
Maximum Concurrent Calls	0	
Music On Hold	calmriver	Dropdown
Tone Region	United States/North America	Dropdown
HTTP Bind Port	80	Text
FXO Mode	FCC	Dropdown
Virtual Ring Back Tone	No	Dropdown
Distinctive Caller ID	No	Dropdown
Follow Me Prompt	Yes	Dropdown
Music on hold for Follow Me	Default	Dropdown
Invalid Phone Number Prompt		Dropdown
Busy Line Prompt		Dropdown
Dial Failure Prompt		Dropdown

Figure B-1

### 1.2 Change the default password for the web GUI

System→System Preferences→Change Password



Change Password

Change Password

User: admin

Enter Old Password:

Enter New Password:

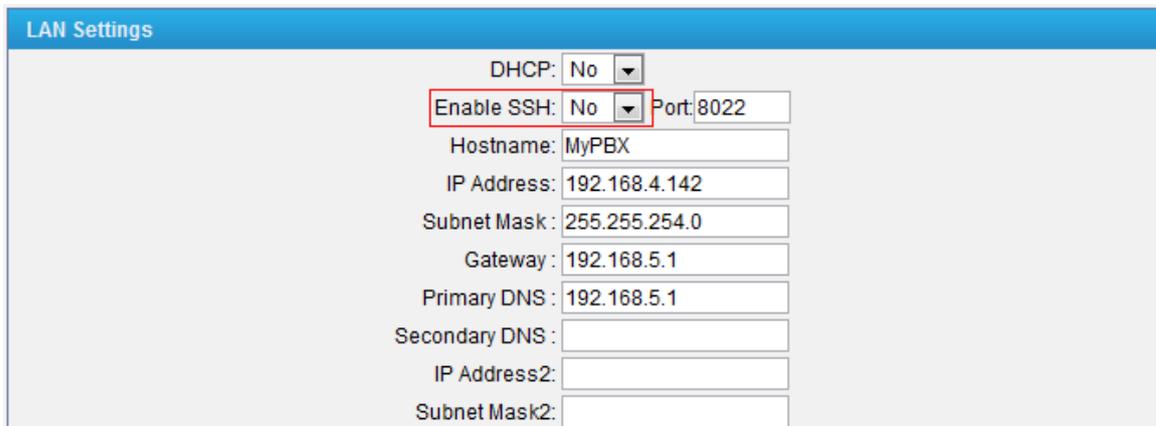
Retype New Password:

Figure B-2

## 2. Disable SSH on LAN Settings Page

### 2.1 Disable SSH

Select LAN Settings→Enable SSH. If external debugging isn't required, please select "No".



LAN Settings

DHCP: No

Enable SSH: No Port: 8022

Hostname: MyPBX

IP Address: 192.168.4.142

Subnet Mask: 255.255.254.0

Gateway: 192.168.5.1

Primary DNS: 192.168.5.1

Secondary DNS:

IP Address2:

Subnet Mask2:

Figure B-3

### 2.2 Change the default password for SSH

We can use the Linux command `passwd` to change root password of MyPBX.

1. Login via putty.exe

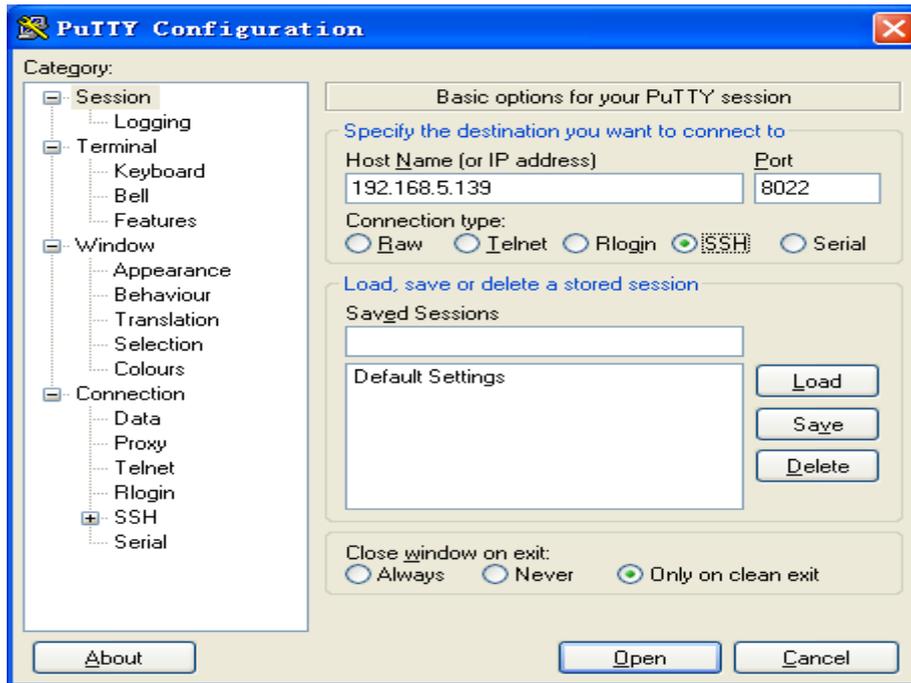


Figure B-4

- The default username is **root** and the default password is **ys123456**.

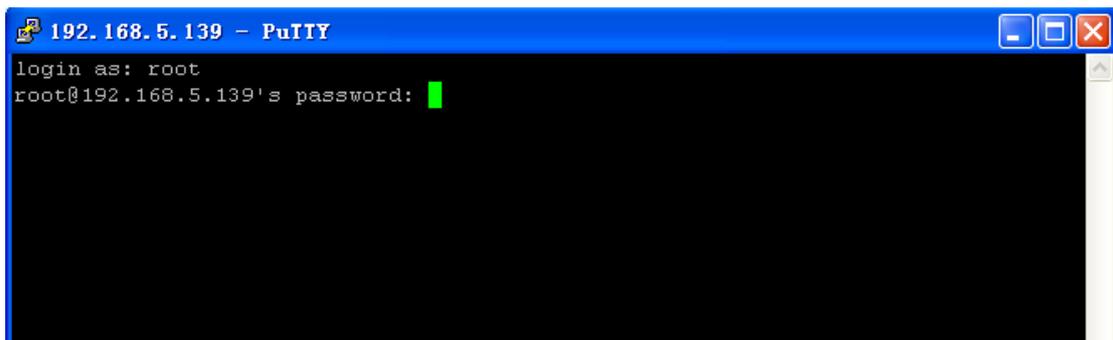


Figure B-5

- Use command **passwd** to change the root's password

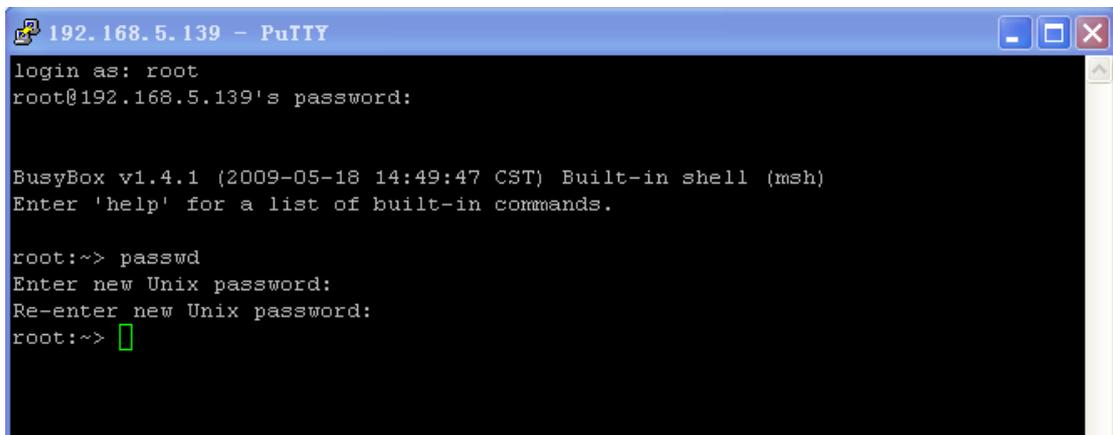


Figure B-6

## 3. Security Configuration for Extensions

### 3.1 Change the default SIP Port

PBX→Basic settings→SIP Settings→General→UDP Port

The screenshot shows the 'SIP Settings' configuration page with the 'General' tab selected. The 'UDP Port' field is highlighted with a red box and contains the value '5060'. Other fields include 'TCP Port' (5060), 'TLS Port' (5061), 'RTP Port Start' (10000), 'RTP Port End' (12000), 'DTMF Mode' (rfc2833), 'Max Registration/Subscription Time' (3600), 'Min Registration/Subscription Time' (60), 'Default Incoming/Outgoing Registration Time' (120), 'Register Attempts' (8), 'Register Timeout' (20), 'Calling Channel Codec Priority' (Yes), 'Video Support' (Yes), 'Max Bit Rate' (384 kb/s), 'DNS SRV Look Up' (No), and 'User Agent'.

Figure B-7

### 3.2 Disable guest calls

PBX→Basic settings→SIP Settings→Advanced Settings→Allow Guest

SIP Settings

General NAT Codecs QOS **Advanced Settings**

From Field: From

To Field: INVITE

180 Ringing:

Remote Party ID:  send  trust

**Allow Guest: No**

Pedantic: No

Session-timers: Accept

Session-expires: 1800 s

Session-minse: 90 s

Session-refresher: Uas

Figure B-8

### 3.3 Security Configuration for remote extensions

If remote registration isn't required, please disable it.

PBX→Extensions→FXS/VoIP Extensions→ VoIP Extensions→General→VoIP Settings

VoIP Settings

NAT:  Quality:  Enable SRTP:

Transport: UDP DTMF Mode: RFC2833 **Register Remotely:**

Figure B-9

### 3.4 Set a robust password and enable IP restriction for extensions

1) Set a new extension password at a higher security level, e.g. AjK5Up1G.

PBX→Extensions→FXS/VoIP Extensions→ VoIP Extensions→General→Password

The screenshot shows the 'Edit Extension - 6010' configuration window with the 'General' tab selected. The 'General' section contains the following fields:

- Type: SIP
- Extension: 6010
- Password: AjK5Up1G (highlighted with a red box)
- Name: 6010
- Caller ID: 6010

Figure B-10

2) Enable IP restriction and enter the permitted "IP address/Subnet mask", e.g. 192.168.5.136.

The screenshot shows the 'Edit Extension - 6010' configuration window with the 'Other Settings' tab selected. The 'IP Restriction' section is highlighted with a red box and contains the following fields:

- Enable IP Restriction
- Permitted 'IP address/Subnet mask' 1: 192.168.5.0/255.255.255.255
- Permitted 'IP address/Subnet mask' 2: (empty)
- Permitted 'IP address/Subnet mask' 3: (empty)
- Permitted 'IP address/Subnet mask' 4: (empty)

Other visible settings in the 'Other Settings' tab include:

- Other Options:  Call Waiting,  DND,  User Web Interface, Ring Out: 30
- Follow me:  Always,  No answer,  When Busy
- Transfer to:  Voicemail,  Number (empty)
- Mobility Extension:  Enable Mobility Extension, Mobility Extension Number: (empty)
- Spy Settings:  Allow Being Spied, Spy Modes: (empty)

Figure B-11

## 4. Setup Proper Firewall Rules

**Note:** Please backup the configurations on backup and restore page before you go ahead. In the case that you lock the device, you can reset to factory default

and restore the previous configurations.

### Step1. Enable firewall on firewall page of MyPBX.

System→Firewall Settings→ Firewall Rules→General Settings

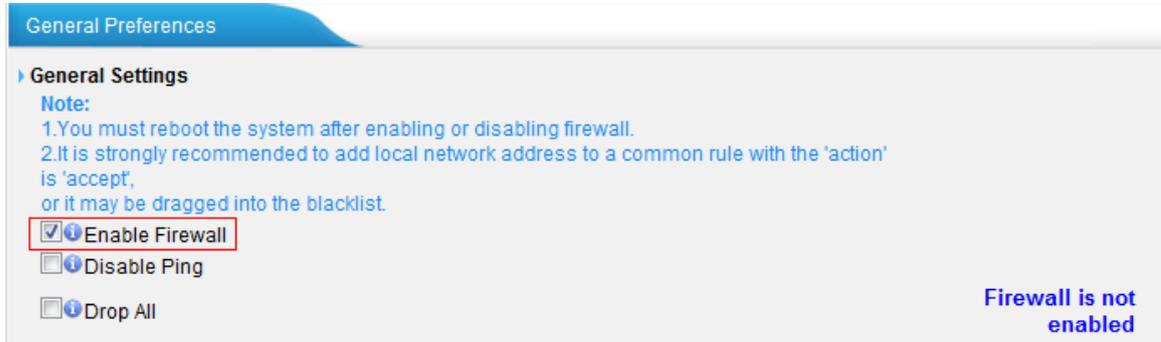


Figure B-12

### Step2. Add a common rule to accept local network access.

Create a common rule to allow the all the IP addresses of the local phones to access MyPBX server. For example, if the IP addresses of the local network are 192.168.5.1-254, the configurations could be as below:

**Name:** LocalNetwork

**Protocol:** BOTH

**Port:** 1:65535

**IP:** 192.168.5.0/255.255.255.0

**Action:** Accept

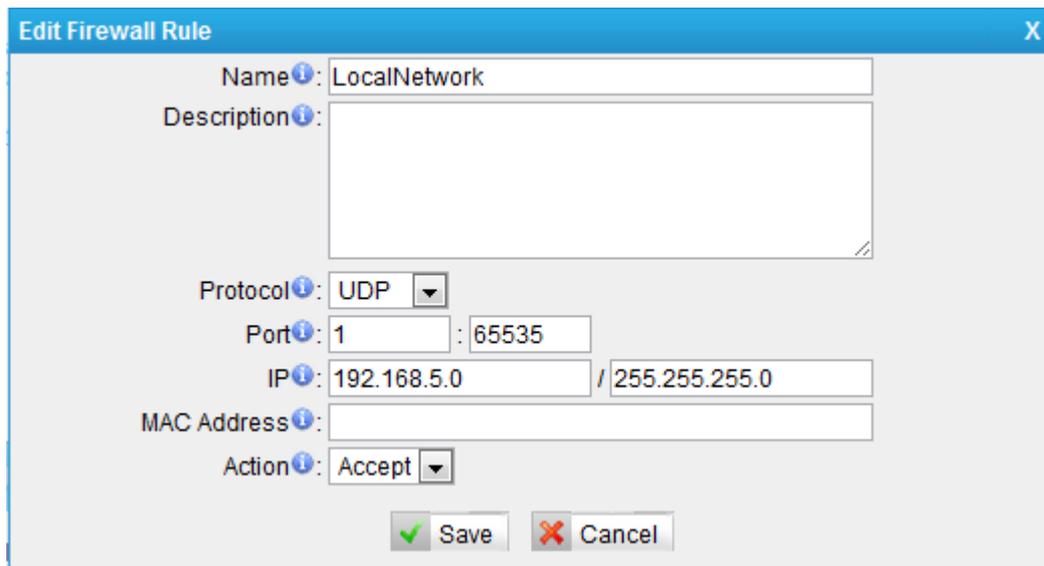


Figure B-13

**Step3.** Create common rules to accept remote extensions or remote

administrators, if you use a SIP trunk, please accept the provider's host as well.

**Note:** If there are no remote extensions, the rule is not required.

Set up the firewall rule to allow the public IP address of remote extensions to access MyPBX server. e.g.110.111.132.6, the configurations could be as below:

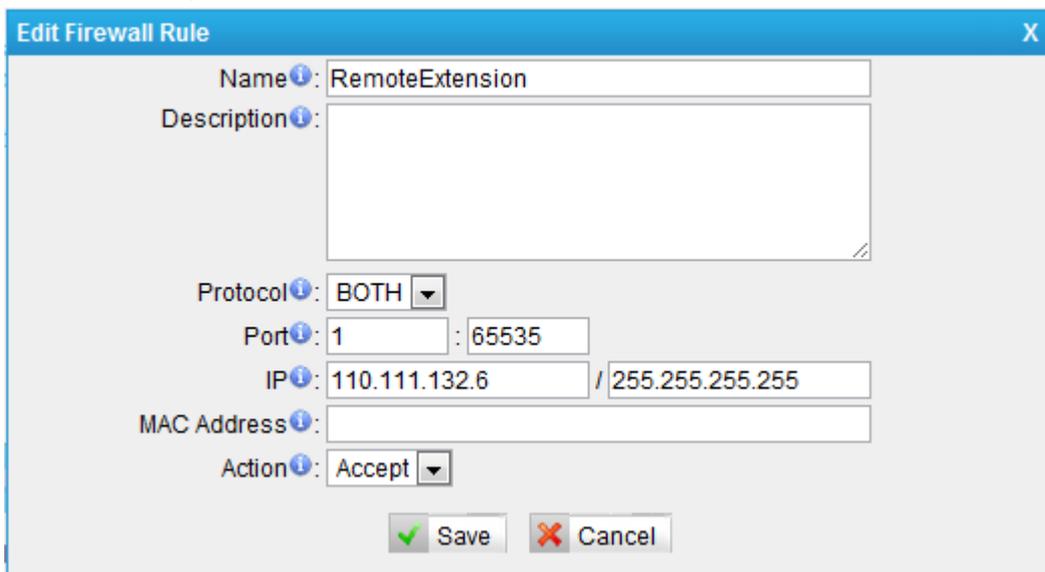
**Name:** Remote Extension

**Protocol:** BOTH

**Port:** 1:65535

**IP:** 110.111.132.6/255.255.255.255

**Action:** Accept



The screenshot shows a window titled "Edit Firewall Rule" with a close button (X) in the top right corner. The window contains the following fields and controls:

- Name:** RemoteExtension
- Description:** (Empty text area)
- Protocol:** BOTH (dropdown menu)
- Port:** 1 (input field)
- Port Range:** 65535 (input field)
- IP:** 110.111.132.6 (input field)
- IP Range:** 255.255.255.255 (input field)
- MAC Address:** (Empty input field)
- Action:** Accept (dropdown menu)
- Buttons:** Save (with a green checkmark icon) and Cancel (with a red X icon)

Figure B-14

#### Step4. Configure auto blacklist rules

Auto blacklist rules: the Server would add the IP address to the blacklist automatically if the number of the packets it sends exceeds the rule you configured.

Add two auto blacklist rules for port: 5060.

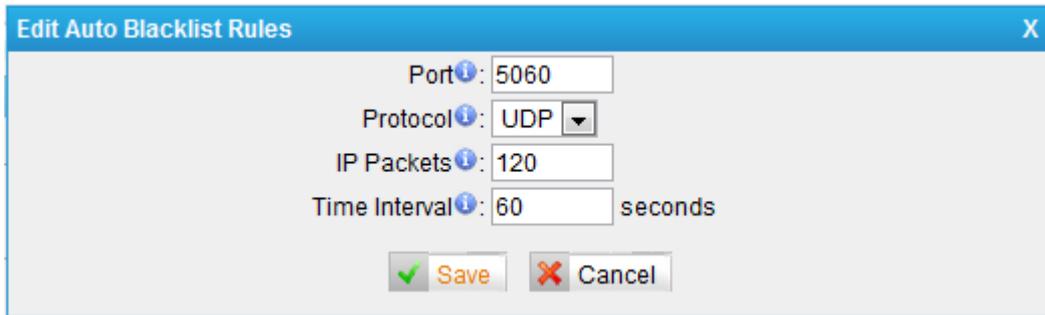
**Rule No.1:**

**Port:** 5060

**Protocol:** UDP

**IP Packets:** 120

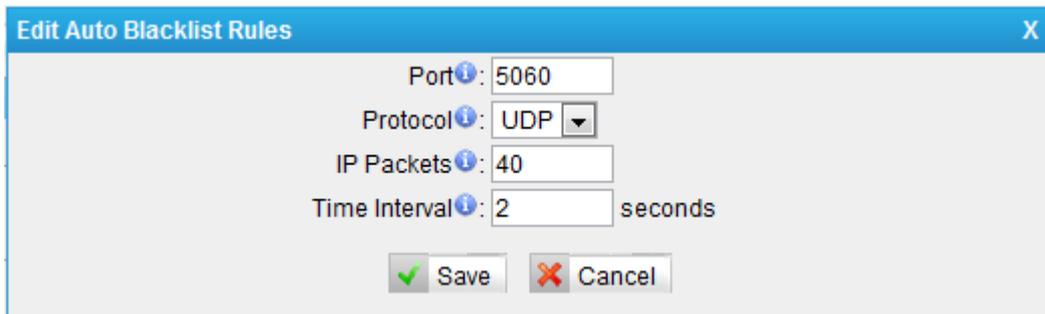
**Time Interval:** 60 seconds



Port: 5060  
Protocol: UDP  
IP Packets: 120  
Time Interval: 60 seconds

Save Cancel

Figure B-15

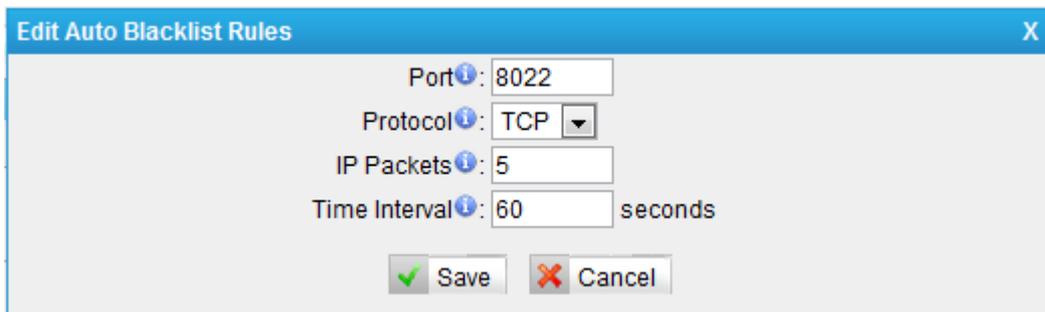
**Rule No.2:****Port:** 5060**Protocol:** UDP**IP Packets:** 40**Time Interval:** 2 seconds

Port: 5060  
Protocol: UDP  
IP Packets: 40  
Time Interval: 2 seconds

Save Cancel

Figure B-16

Add an auto blacklist rule for Port: 8022

**Rule No.3****Port:** 8022**Protocol:** TCP**IP Packets:** 5**Time Interval:** 60 seconds

Port: 8022  
Protocol: TCP  
IP Packets: 5  
Time Interval: 60 seconds

Save Cancel

Figure B-17

**Step 5.** Add a Firewall Rule for VoIP trunk registration

**Note:** If there is no VoIP trunk, this rule is not required. And if the RTP IP address of VoIP trunk and Registration IP address of the VoIP trunk are different, we need to create a rule to accept the RTP IP address too.

Add a rule to accept the IP address of the VoIP trunk to access MyPBX server. For example: If the IP address of the VoIP trunk is 110.5.14.6, Protocol is UDP and Port is 5060, the configuration could be as below:

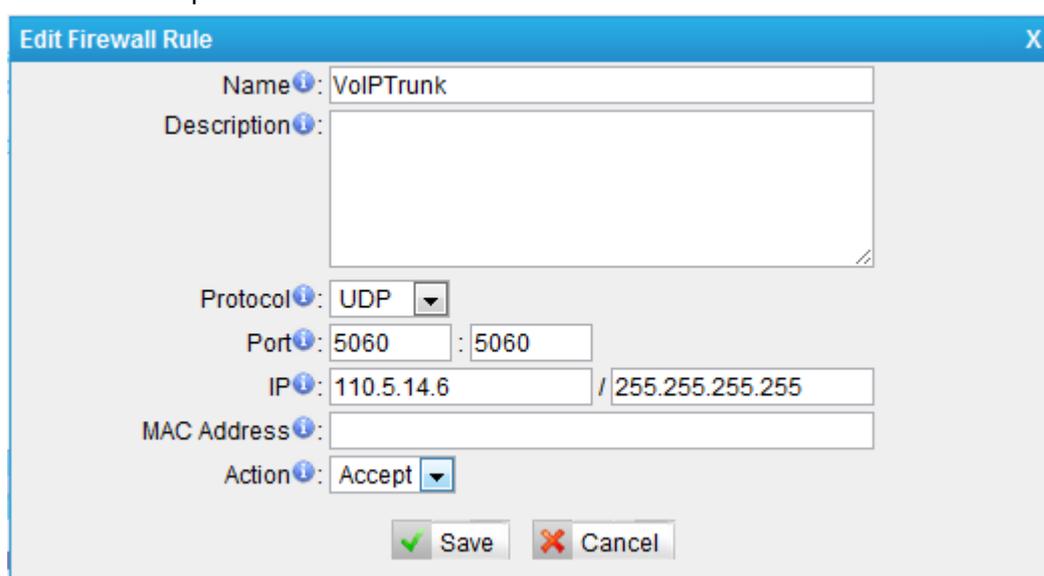
**Name:** VoIPTrunk

**Protocol:** UDP

**Port:** 5060: 5060

**IP:** 110.5.14.6/255.255.255.255

**Action:** Accept



The screenshot shows a window titled "Edit Firewall Rule" with a close button (X) in the top right corner. The window contains the following fields and controls:

- Name:** VoIPTrunk
- Description:** (Empty text area)
- Protocol:** UDP (dropdown menu)
- Port:** 5060 : 5060
- IP:** 110.5.14.6 / 255.255.255.255
- MAC Address:** (Empty text field)
- Action:** Accept (dropdown menu)
- Buttons:** Save (with a green checkmark icon) and Cancel (with a red X icon)

Figure B-18

**Step 6.** Add a firewall rule to accept remote access of HTTP port. For example, if the remote access IP is 110.5.14.6, and the port is 80, the configuration could be as below.

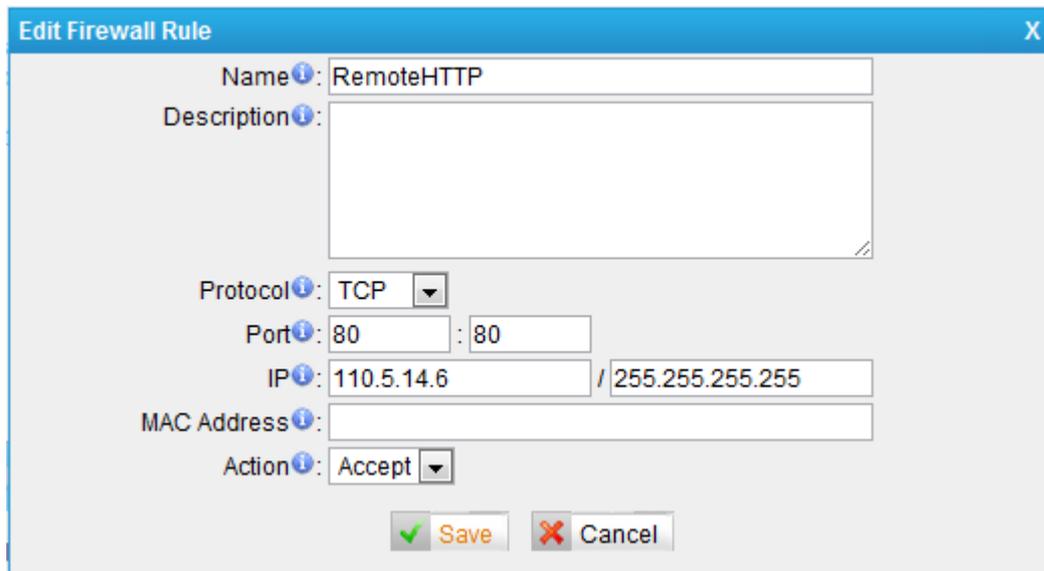
**Name:** RemoteHTTP

**Protocol:** TCP

**Port:** 80:80

**IP:** 110.5.14.6/255.255.255.255

**Action:** Accept



The screenshot shows a window titled "Edit Firewall Rule" with the following fields and values:

- Name: RemoteHTTP
- Description: (empty text area)
- Protocol: TCP
- Port: 80 : 80
- IP: 110.5.14.6 / 255.255.255.255
- MAC Address: (empty text field)
- Action: Accept

At the bottom, there are "Save" and "Cancel" buttons.

Figure B-19

**Step 7.** Add a firewall rule to accept remote access of SSH port. For example: if the remote access IP is 110.5.14.6 and the port is 8022.

**Note:** If the remote access of SSH port is not needed, this rule is not required.

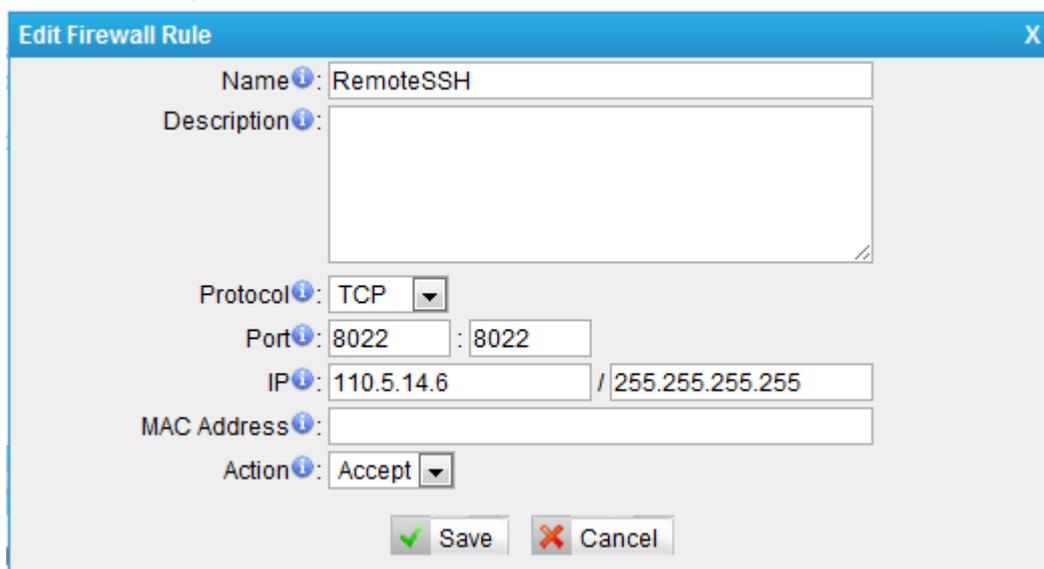
**Name:** RemoteSSH

**Protocol:** TCP

**Port:** 8022:8022

**IP:** 110.5.14.6/255.255.255.255

**Action:** Accept



The screenshot shows a window titled "Edit Firewall Rule" with the following fields and values:

- Name: RemoteSSH
- Description: (empty text area)
- Protocol: TCP
- Port: 8022 : 8022
- IP: 110.5.14.6 / 255.255.255.255
- MAC Address: (empty text field)
- Action: Accept

At the bottom, there are "Save" and "Cancel" buttons.

Figure B-20

**Step 8.** Add other firewall rules by yourself. For example, if you are using

features related to email, you should add the firewall rules for the SMTP server and POP3 server.

**Step 9.** Enable Drop all (If this feature is enabled, all the packets and connection that do not match the rules would be dropped.)

**Note:** Before enable this feature, please add a rule to accept the local network access, or the server might not be accessed.

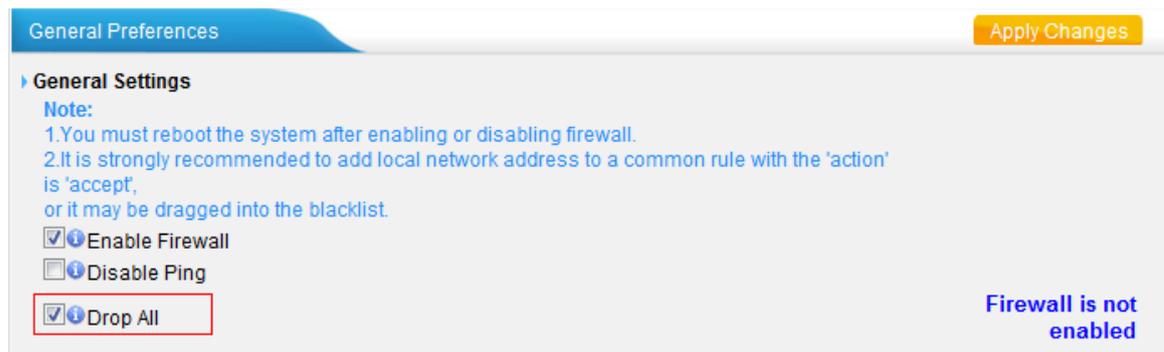


Figure B-21

**Step 10.** The Configuration of firewall settings is completed. See the figures below.

General Preferences Apply Changes

**General Settings**

**Note:**  
 1. You must reboot the system after enabling or disabling firewall.  
 2. It is strongly recommended to add local network address to a common rule with the 'action' is 'accept', or it may be dragged into the blacklist.

Enable Firewall  
 Disable Ping  
 Drop All

Firewall is not enabled

**Common Rules**

+ Add Rule

Action	Name	Protocol	IP	MAC Address	Port		
ACCEPT	LocalNetwork	UDP	192.168.5.0/255.255.255.0	--	1:65535		
ACCEPT	RemoteExtension	BOTH	110.111.132.6/255.255.255.255	--	1:65535		
ACCEPT	VoIPTrunk	UDP	110.5.14.6/255.255.255.255	--	5060:5060		
ACCEPT	RemoteHTTP	TCP	110.5.14.6/255.255.255.255	--	80:80		
ACCEPT	RemoteSSH	TCP	110.5.14.6/255.255.255.255	--	8022:8022		

**Auto Defense**

+ Add Rule

No Auto Defense Rules Defined

Figure B-22

IP Blacklist Apply Changes

**Blacklist Rules**

+ Add Rule

Port	Protocol	Rate		
5060	UDP	120/60s		
5060	UDP	40/2s		
8022	TCP	5/60s		

**IP Blacklist**

No Auto Black IP Address

Figure B-23

**Step 11.** Define the authorized data transmitting rate and drop all other unauthorized hosts.

**Note:** If we setup IP blacklist rules here, those unauthorized hosts will still be able to send SIP packets into MyPBX if the packets transmitting rate is under the rate defined. But as soon as the transmitting beyond the define rate, the IP will

be added into blacklist automatically.

This is useful for remote extension who is using dynamic IP address.

Remove all the IP blacklist rules if you don't allowed any other unauthorized hosts access MyPBX. See as below figure.

**Note:** If "drop all" is not enabled, please don't remove the IP blacklist rules in case the system security hole.

**General Preferences** Apply Changes

**General Settings**

Note:  
 1. You must reboot the system after enabling or disabling firewall.  
 2. It is strongly recommended to add local network address to a common rule with the 'action' is 'accept', or it may be dragged into the blacklist.

Enable Firewall  
 Disable Ping  
 Drop All

Firewall is not enabled

**Common Rules**

+ Add Rule

Action	Name	Protocol	IP	MAC Address	Port		
ACCEPT	LocalNetwork	UDP	192.168.5.0/255.255.255.0	--	1:65535		
ACCEPT	RemoteExtension	BOTH	110.111.132.6/255.255.255.255	--	1:65535		
ACCEPT	VoIPTrunk	UDP	110.5.14.6/255.255.255.255	--	5060:5060		
ACCEPT	RemoteHTTP	TCP	110.5.14.6/255.255.255.255	--	80:80		
ACCEPT	RemoteSSH	TCP	110.5.14.6/255.255.255.255	--	8022:8022		

**Auto Defense**

+ Add Rule

No Auto Defense Rules Defined

Figure B-24

**IP Blacklist** Apply Changes

**Blacklist Rules**

+ Add Rule

No Auto Defense Rules Defined

**IP Blacklist**

No Auto Black IP Address

Figure B-25

## 5. Alert Settings

After enabling alert settings, if the device is attacked, the system will alert the users via call or e-mail. The attack modes include IP attack and Web Login.

### 5.1 IPATTACK

When the system is attacked by some IP addresses, the firewall will add the IP to auto IP Blacklist and notify the user if it match the protection rule.

Example: Configure to notify extension 500, outbound number 5503301 and E-mail alert@yeastar.com.

configuration could be as below.

Phone Notification Settings:

**Phone Notification:** Yes

**Number:** 500;5503301

**Attempts:** 1

**Interval:** 60s

**Prompt:** default

**Note:** If there is an outbound number to notify, the number should fit the dial pattern of the outbound route.

E-mail Notification Settings:

**E-mail Notification:** Yes

**To:** alert@yeastar.com

**Subject:** IPAttack

The screenshot shows a window titled "IPATTACK" with two sections: "Phone Notification Settings" and "E-mail Notification Settings".

**Phone Notification Settings:**

- Phone Notification: Yes (dropdown)
- Number: 500;5503301 (text input)
- Attempts: 1 (dropdown)
- Interval: 60 s (text input)
- Prompt: default (dropdown) with a link to "Custom Prompts"

**E-mail Notification Settings:**

- E-mail Notification: Yes (dropdown)
- To: alert@yeastar.com (text input)
- Subject: IPAttack (text input)
- Template text area:
 

```

pbx hostname:$(HOSTNAME)
attack source ip address:$(SOURCEIP)
attack dest mac:$(DESTMAC)
attack source port:$(DESTPORT)
attack source protocol:$(PROTOCOL)
attack occurred:$(DATETIME)
      
```

At the bottom are "Save" and "Cancel" buttons.

Figure B-26

## 5.2 WEBLOGIN

Enter the password incorrectly five times when logging in MyPBX Web interface will be deemed as attack, the system will limit the IP login within 10 minutes and notify the user.

Example: Configure to notify extension 500, outbound number 5503301 and E-mail alert@yeastar.com.

configuration could be as below.

Phone Notification Settings:

**Phone Notification:** Yes

**Number:** 500;5503301

**Attempts:** 1

**Interval:** 60s

**Prompt:** default

**Note:** If there is an outbound number to notify, the number should fit the dial pattern of the outbound route.

E-mail Notification Settings:

**E-mail Notification:** Yes

**To:** alert@yeastar.com

**Subject:** WebLogin

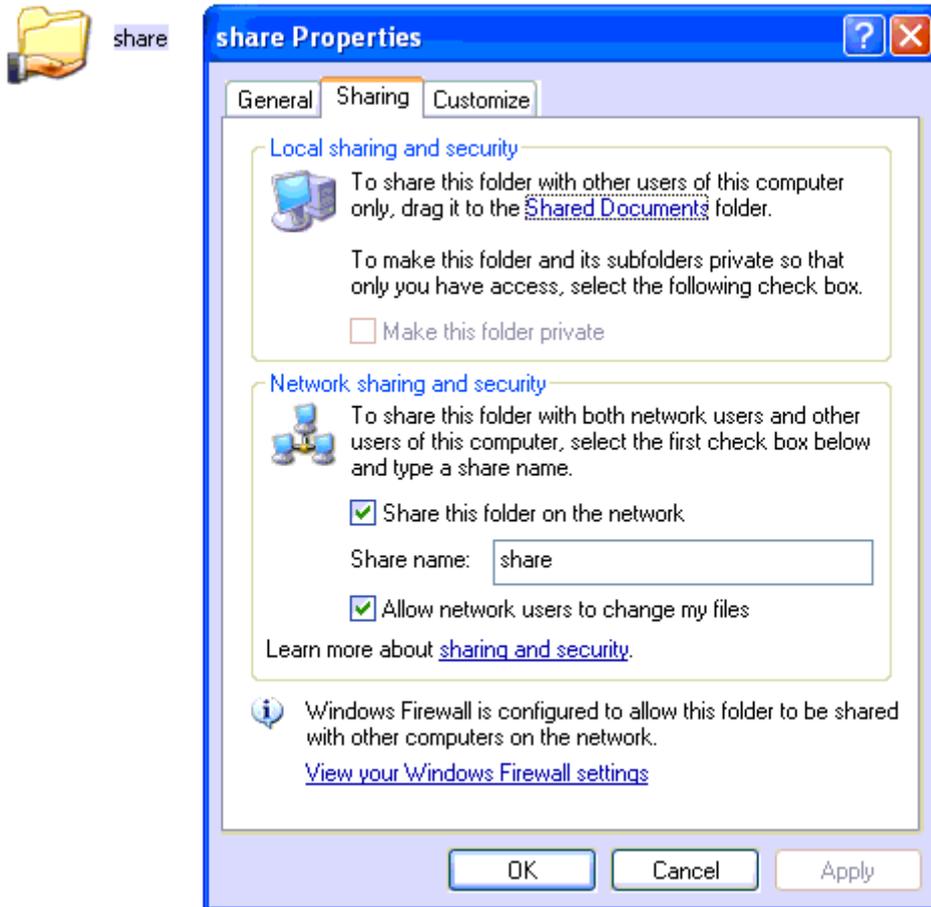
The screenshot shows a window titled "WEBLOGIN" with two sections for notification settings. The "Phone Notification Settings" section includes a "Phone Notification" dropdown set to "Yes", a "Number" field with "500;5503301", "Attempts" set to "1", "Interval" set to "60" seconds, and a "Prompt" dropdown set to "default" with a link to "Custom Prompts". The "E-mail Notification Settings" section includes an "E-mail Notification" dropdown set to "Yes", a "To" field with "alert@yeastar.com", and a "Subject" field with "WebLogin". A text area below contains the following template text: "pbx hostname:\$(HOSTNAME)", "login ip address:\$(SOURCEIP)", "login username:\$(USERNAME)", and "login occurred:\$(DATETIME)". At the bottom are "Save" and "Cancel" buttons.

Figure B-27

## APPENDIX C How to Configure External Storage

Before External storage can be properly configured, an SMB share folder accessible from MyPBX must be set up on a Windows based machine. Once that has been set up, please follow the steps below.

**Step 1** Add a new folder, rename it, and set this new folder's share Properties according to Figure C-1.



FigureC-1 Set up share Properties

**Step 2** Enter the new folder and create a new text file, then rename this file to status.txt. This step is very important, DO NOT forget to create the status.txt file.

**Step 3** Configure external storage settings on MyPBX to Figure C-2.

The screenshot shows the 'External Storage Settings' configuration page. It is currently on 'Step 2: Input the Net-Disk properties'. The form includes input fields for 'Net-Disk Host/IP', 'Net-Disk Share Name', 'Net-Disk Access User Name', and 'Net-Disk Access Password'. There is also a dropdown menu for 'Move files created before' set to '5 days ago'. 'Save' and 'Cancel' buttons are located at the bottom of the form.

FigureC-2 External Storage Setting

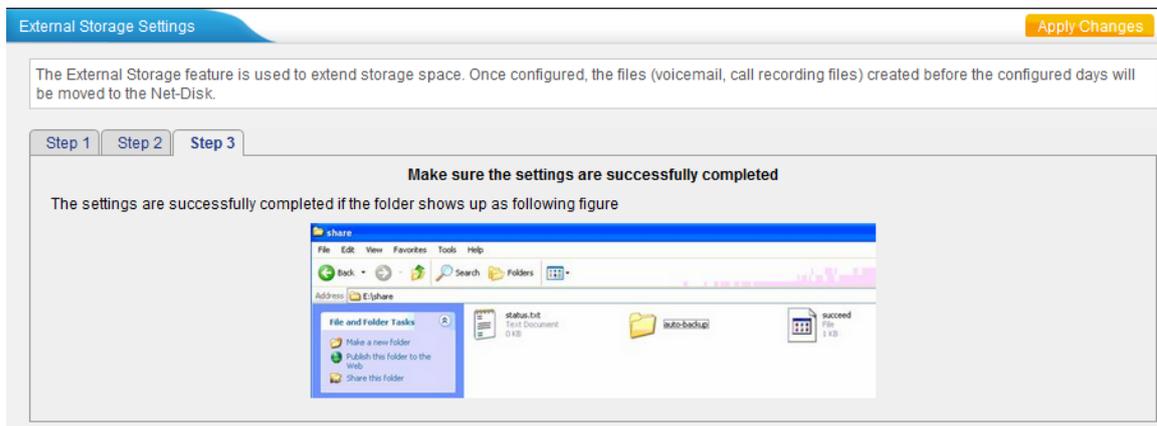
**Net-Disk Host/IP:** Change this to the IP address of the computer where backup files will be stored.

**Net-Disk Share Name:** Change this to the name of the shared folder where backups will be stored.

**Net-Disk Share Username:** The user name used to log into the network share. Leave this blank if it is not required

**Net-Disk Share Password:** The password used to log into the network share. Leave this blank if it is not required

Open your Windows share folder to see if the MyPBX backup files and folders has been created. If the contents of the backup folder look similar to Figure C-3, then you have successfully configured External storage on the MyPBX unit.



FigureC-3 External Storage Setting Succeed

## APPENDIX D How to Configure NAT Setting

**When MyPBX is behind a NAT (firewall), you need to configure NAT setting on MyPBX if you want to use a remote extension.**

Please follow section 1 or 2 below depending on your network configuration.

1. If MyPBX is connected to a local network, you must set up port forwarding on your router. Specifically, you must map port 5060 (default SIP port) and port 10001-10200 (default RTP port range) as UDP ports.

Next, log in MyPBX Web GUI, go to "PBX" -> "Advanced Settings" -> "SIP Settings" -> "NAT".

**External IP Address:** your router's public IP address

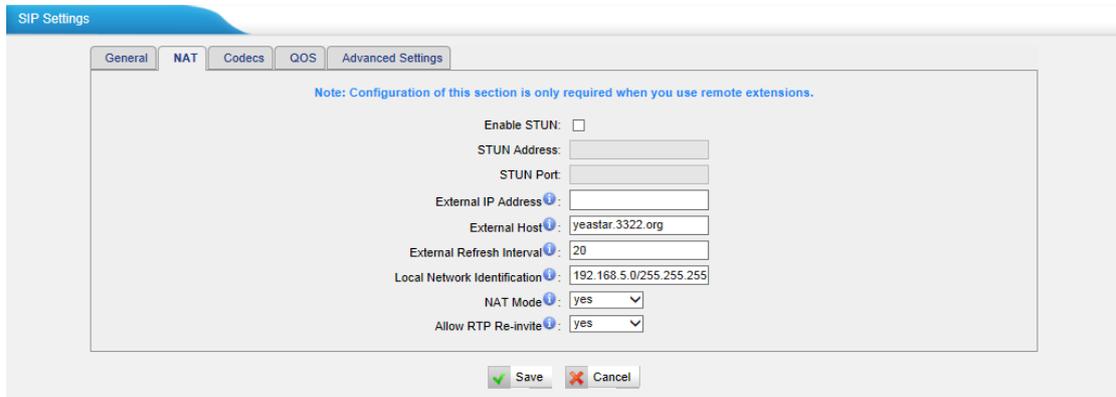
**External Host:** your router's domain

**External Refresh Interval:** 20 seconds

**Local Network Identification:** 192.168.5.0/255.255.255.0 (change this according to your network configuration)

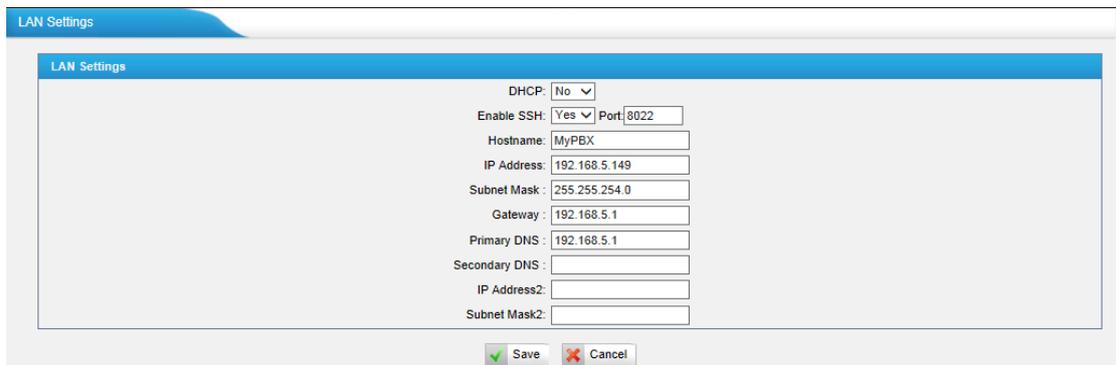
**NAT mode:** Yes

**Allow RTP Reinvite:** Yes



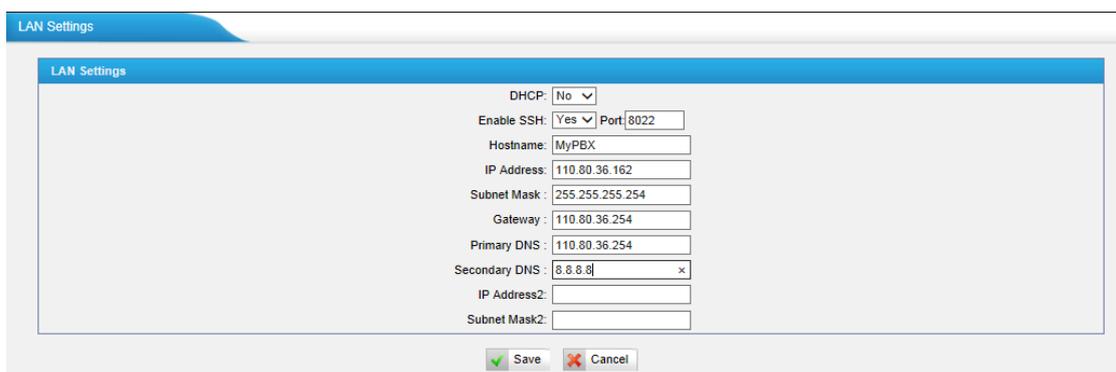
FigureD-1

Assuming that your router's host address is yeastar.3322.org, your local network is from 192.168.5.1-192.168.5.254, and the subnet Mask is 255.255.255.0, the MyPBX network settings should be configured like Figure D-2.



FigureD-2 MyPBX Network setting

2. If MyPBX has a public IP (i.e. is connected directly to your internet service provider), the network settings should be configured according to Figure D-3:



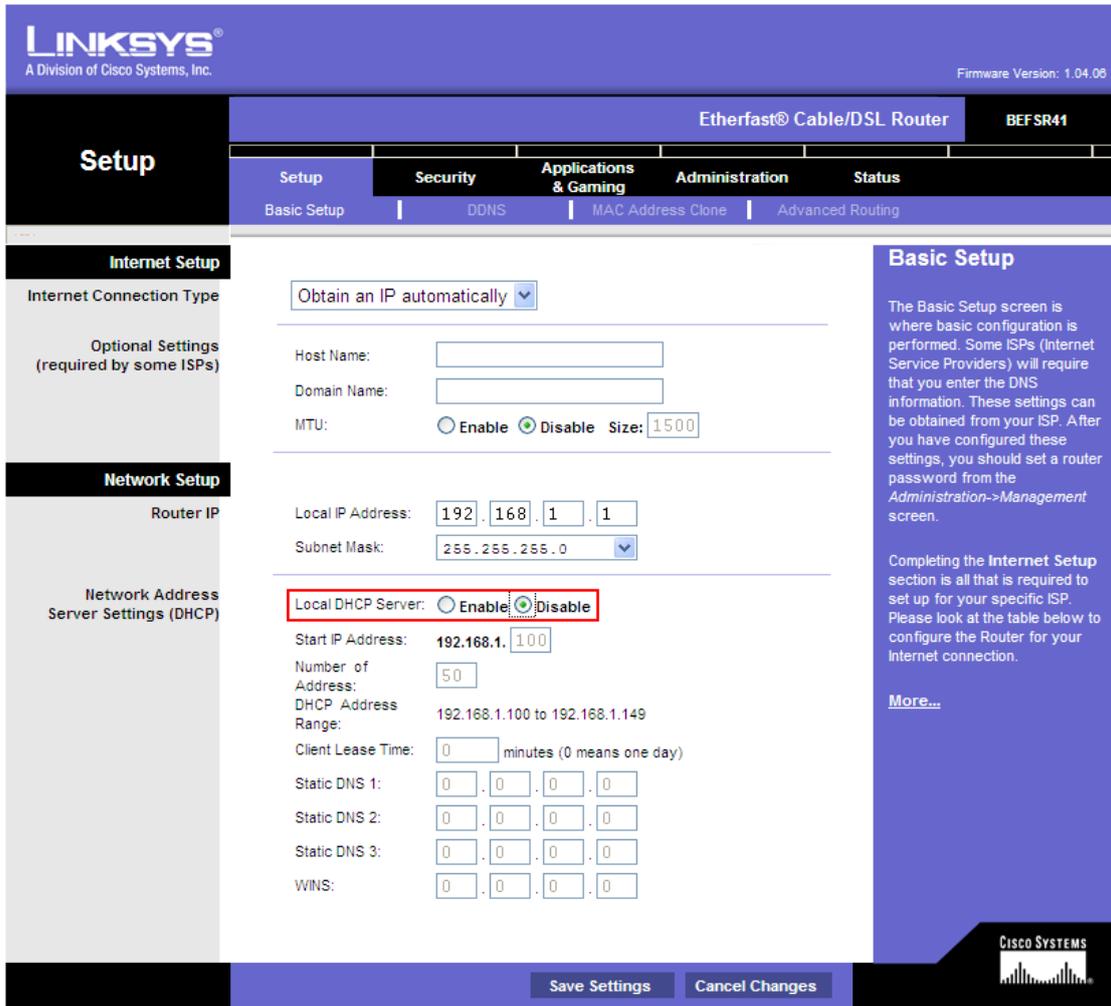
FigureD-3

Now, MyPBX has been configured as a public IP, so there is no need to configure NAT again, just leave all settings in "NAT" blank.

## **APPENDIX E How to Use Auto Provision**

**Step1.** Disable DHCP Server on your local network.

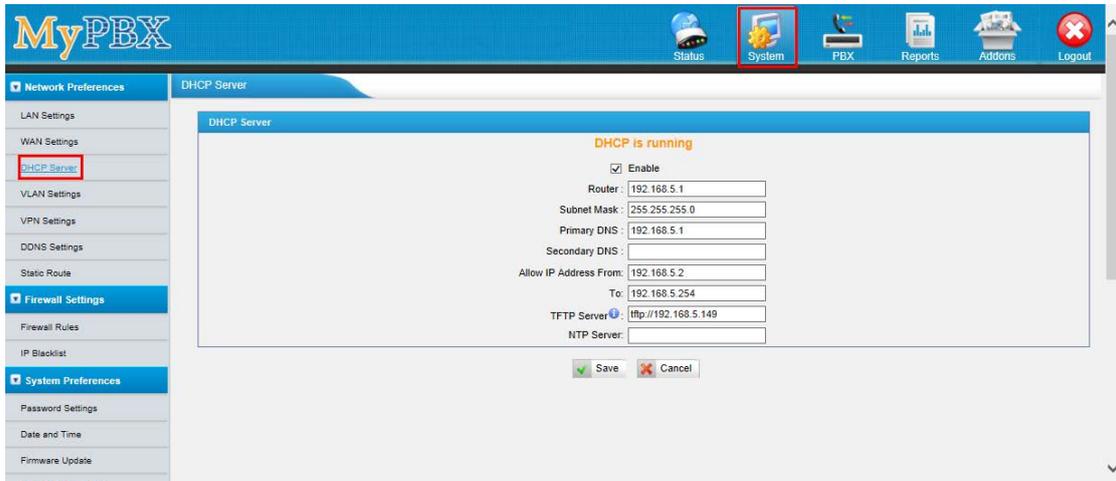
E.g. Disable DHCP Server on Linksys Router.



FigureE-1

**Step2.** Enable DHCP Server on MyPBX.

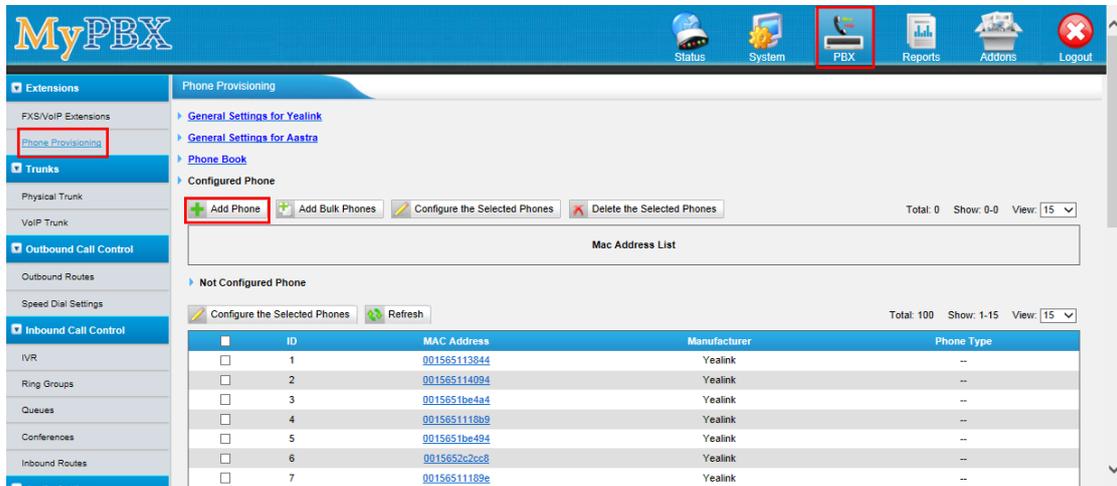
Login MyPBX web interface, "System"→"Network Preferences" ->"DHCP Server"→"Enable DHCP Server".



FigureE-2

**Step3.** Configure phones on MyPBX auto-provision page.

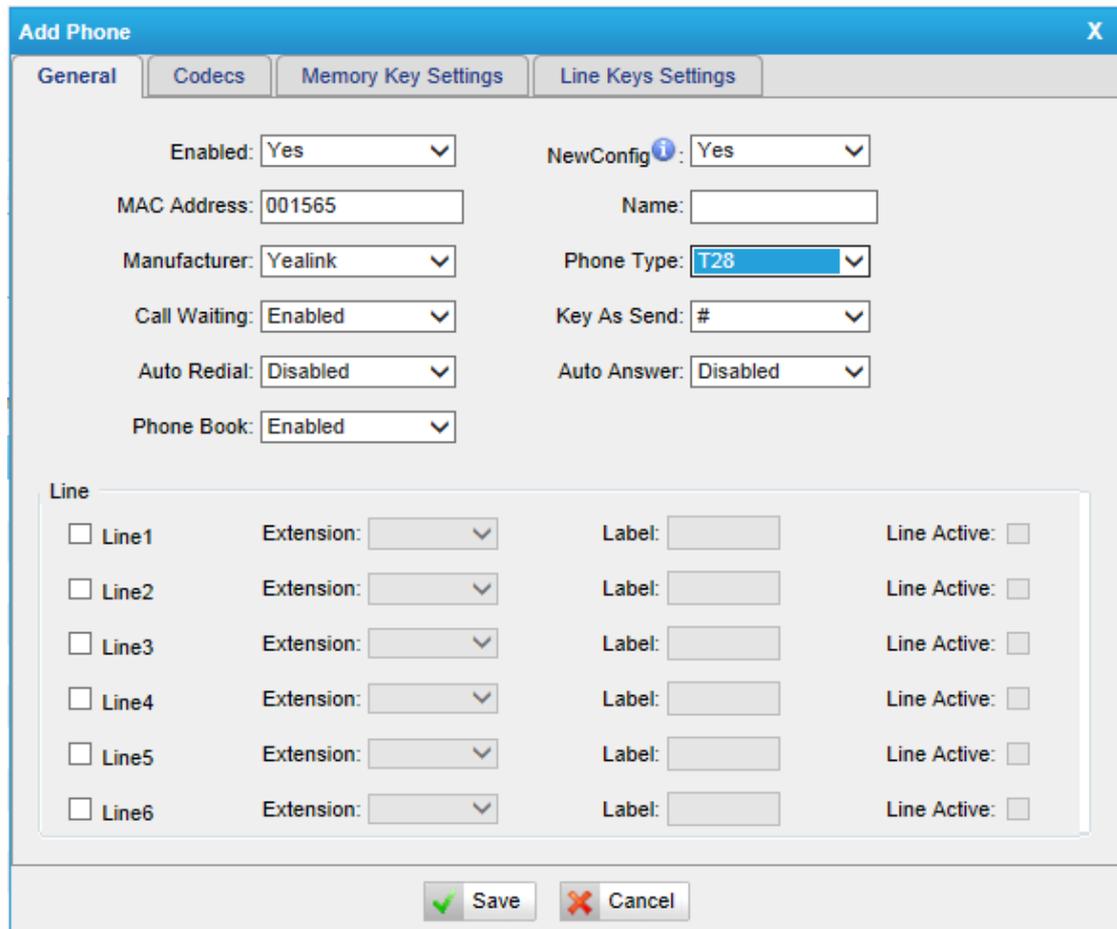
1. Login MyPBX web interface, "PBX" ->"Extensions" ->"Phone Provisioning" ->"Add Phone".



FigureE-3

2. Fill in the phone detail message on the pop-up windows.

Input IP Phone's MAC address, configure Name, Call waiting, Line, Extension, Label, Line active for the phone. And also you can configure other features on the phone, like codecs, memory keys etc.



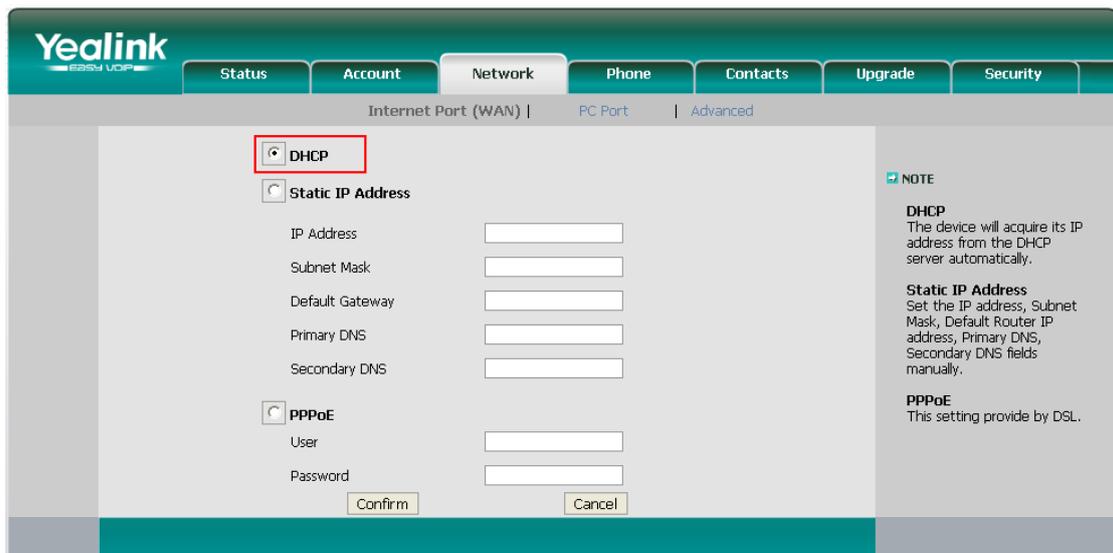
FigureE-4

**Step4.** Turn on the power and connect the network cable to IP Phone.

**Remark:** The factory default setting of DHCP for IP Phone is enabled, so you can skip this step to step 5.

If the DHCP is disabled, please follow the steps below to enable it (e.g. Yealink's IP Phone).

1. Login IP phone's Web page.
2. Enable DHCP.



FigureE-5

**Step5.** Finish.

## APPENDIX F How Do I Configure Distinctive Ring Tones

**Step1:** On your IP phone, navigate to the Phone settings web configuration page and find the Distinctive Ring Tone section.

For each custom ring tone, enter the Internal Ringer Text (can be digits or text) to trigger the ring tone. For example, you may enter "Family".

E.g. Yealink's IP phone.

Index	Internal Ringer Text	Internal Ringer File
1	Family	Ring1.wav
2		Ring2.wav
3		Ring3.wav
4		Ring4.wav
5		Ring5.wav
6		Ring6.wav
7		Ring7.wav
8		Ring8.wav
9		Ring1.wav
10		Ring1.wav

Buttons: Confirm, Cancel

NOTE

FigureF-1

**Step2.** Configure the "Distinctive Ringtone" on MyPBX.

Log in MyPBX web interface, "PBX" -> "Inbound Call Control" -> "Inbound Routes" -> Edit Inbound Route, fill in the Internal Ringer Text on "Distinctive Ringtone".

**Edit Inbound Route: VOIP\_IN** X

**General**

Route Name ⓘ : VOIP\_IN

DID Number ⓘ :

Extension ⓘ :

Caller ID Number ⓘ :

**Distinctive Ringtone ⓘ : family**

Enable Callback : No ▾ [Callback Settings](#)

**Member Trunks ⓘ**

Available Trunks		Selected
E1Trunk1(E1) 192.168.4.147(SPS)	»» → ← ««	VOIP_Supplier(SIP)

**Business Days**

Office Hours : default ▾

Office Hours Destination : IVR ▾ IVR -- welcome ▾

Non-office Hours Destination : End Call ▾

**During Holidays**

Holiday :

Destination : End Call ▾

**Fax Detection**

Destination : No Detect ▾

Figure F-2

**Step3.** Finish.

# APPENDIX G How to Use Email to SMS

## How to use Email to SMS

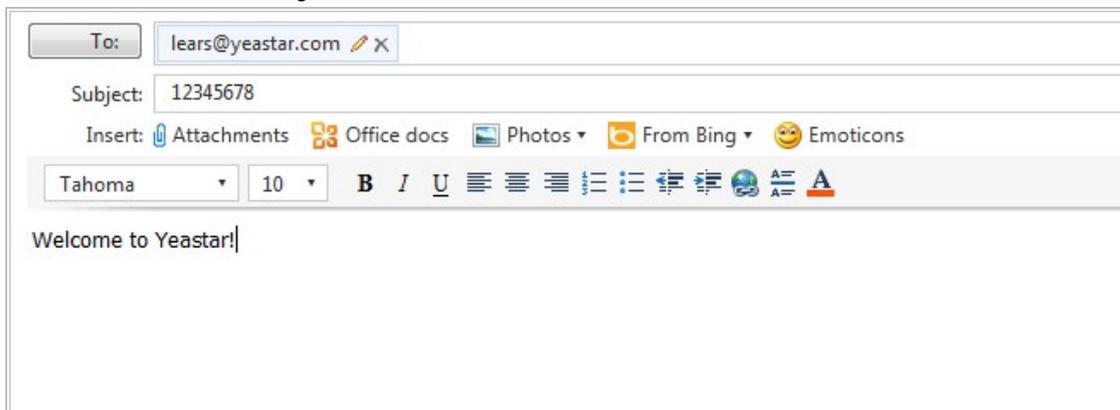
You need to send an email to the specified email address (you set in Email Settings. In this case, it is `lears@yeastar.com`). The content of this email will be sent to the number you want as a message. The subject (title) of the email will determine the number. Here are some examples of the formats to the subject of the email.

Example:

### 1. Send message with no PIN code and default GSM port.

**Format:** `phonenumber`

If the subject is "12345678", the text of this email ("Welcome to Yeastar!") will be sent to number "12345678" through the first available GSM trunk (No PIN code should be set by administrator).

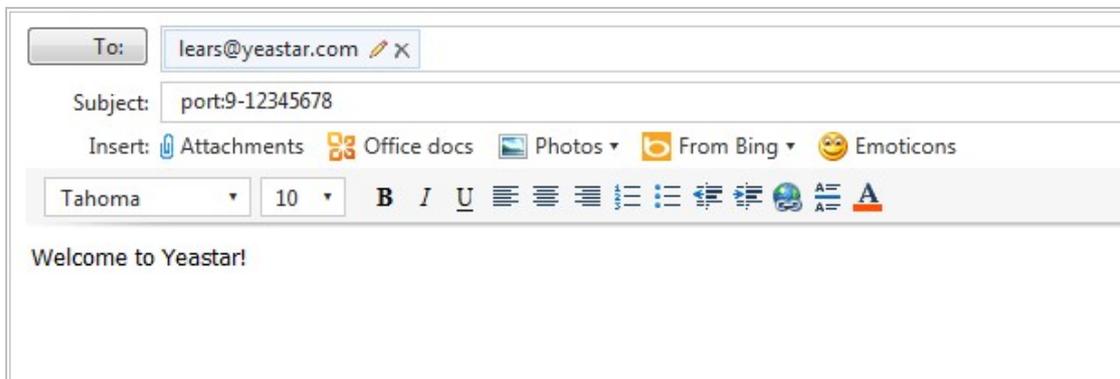


FigureG-1

### 2. Send message with no PIN code and specified GSM port.

**Format:** `port:portnumber-phonenumber`

If the subject is "port:9-12345678", the text of this email ("Welcome to Yeastar!") will be sent to the number "12345678" through GSM trunk 9 (No PIN code should be set by administrator).

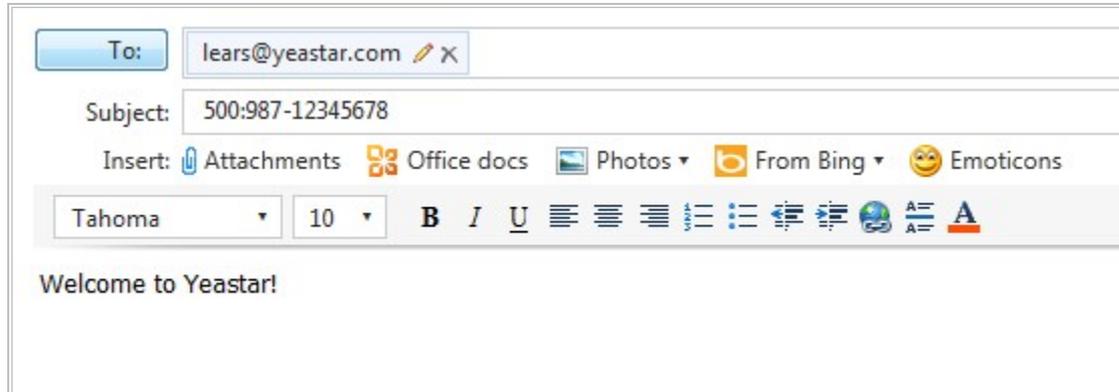


FigureG-2

### 3. Send message with PIN code and default GSM port.

**Format:** 500:pincodenumber-phonenumber

If the subject is "500:987-12345678", the text of this email ("Welcome to Yeastar!") will be sent to number "12345678" through the first available GSM trunk ("987" is the PIN code set by administrator).

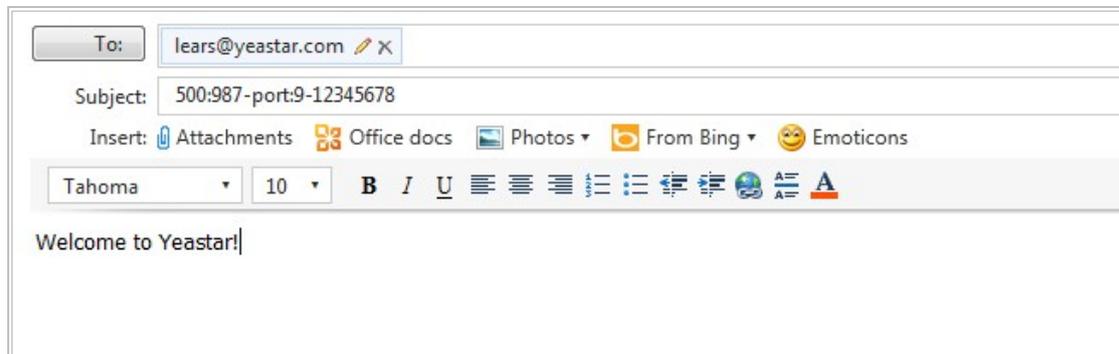


FigureG-3

### 4. Send message with PIN code and specified GSM port.

**Format:** 500:pincodenumber-port:portnumber-phonenumber

If the subject is "500:987-port:9-12345678", the text of this email ("Welcome to Yeastar!") will be sent to number "12345678" through GSM trunk 9 ("987" is the PIN code set by administrator).



FigureG-4

## APPENDIX H How to Use DID

Direct inward dialing (DID), also called direct dial-in (DDI) in Europe and

Oceania, is a feature offered by telephone companies for use with their customers' private branch exchange (PBX) systems. In DID service the telephone company provides one or more trunk lines to the customer for connection to the customer's PBX and allocates a range of telephone numbers to this line (or group of lines) and forwards all calls to such numbers via the trunk.

MyPBX support DID, you can configure DID in inbound route. Related settings: **DID Number, Extension, Destination.**

The screenshot shows the 'Edit Inbound Route: VOIP\_IN' configuration window. The 'General' section includes the following fields:

- Route Name: VOIP\_IN
- DID Number: (empty field, highlighted with a red box)
- Extension: (empty field, highlighted with a red box)
- Caller ID Number: (empty field)
- Distinctive Ringtone: (empty field)
- Enable Callback: No (dropdown menu) with a link to 'Callback Settings'

The 'Member Trunks' section is divided into two columns:

- Available Trunks:** E1Trunk1(E1) 192.168.4.147(SPS)
- Selected:** VOIP\_Supplier(SIP)

Navigation buttons between the columns include: »», →, ←, and ««.

Figure H-1

### •DID Number

Define the expected DID Number if this trunk passes DID on incoming calls. Leave this field blank to match calls with any or no DID info. Only service provider, E1 trunks, BRI trunks or SIP trunks need to be configured with this setting.

You can also use pattern matching to match a range of numbers. The following patterns may be used:

**X:** Any Digit from 0-9

**Z:** Any Digit from 1-9

**N:** Any Digit from 2-9

**[12345-9]:** Any digit in the brackets (in this example, 1, 2, 3, 4, 5, 6, 7, 8, 9)

The "." Character will match any remaining digits. For example, "9011." will match any phone number that starts with "9011", excluding "9011" itself.

The "!" will match none remaining digits, and causes the matching process to complete as soon as it can be determined that no other matches are possible.

**•Extension**

Define the extension for DID number, this field only valid when use E1 trunk for this inbound router. You can only input number and "-" in this field, and the format can be xxx or xxx-xxx. The count of the number must be only one or equal the count of the DID number.

**•Destination**

If you don't set the extension, you can set the destination of the call here.

**Example 1:**

Step1: You set the DID number (5503XXX in this example).

Step2: You choose the destination (IVR in this example).

The configuration of this example means when the incoming call with DID number 5503XXX (7-digit numbers starting with 5503) will go to the destination IVR.

If you choose the destination, please leave the Extension form blank.

**Edit Inbound Route: pstnin**

**General**

Route Name *i* : pstnin

DID Number *i* : 5503XXX

Extension *i* :

Caller ID Number *i* :

Distinctive Ringtone *i* :

Enable Callback : No  [Callback Settings](#)

**Member Trunks *i***

Available Trunks		Selected
VOIP_Supplier(SIP) 192.168.4.147(SPS)	»» → ← ««	E1Trunk1(E1)

**Business Days**

Office Hours : default

Office Hours Destination : IVR  IVR -- welcome

Non-office Hours Destination : IVR  IVR -- welcome

**During Holidays**

Holiday :

Destination : End Call

**Fax Detection**

Destination : No Detect

Figure H-2

**Example 2:**

Step1: You set the DID number (6001-6099 in this example).

Step2: You set the Extension (6001-6099 in this example).

The configuration of this example means when the incoming call with DID number 6001 to 6099 will go to the destination 6001 to 6099 (number 6001 to extension 6001, number 6002 to extension 6002).

The destination you set below will be disabled if you set the Extension.

Edit Inbound Route: VOIP\_IN
X

**General**

Route Name ⓘ : VOIP\_IN

DID Number ⓘ : 6001-6099

Extension ⓘ : 6001-6099

Caller ID Number ⓘ :

Distinctive Ringtone ⓘ :

Enable Callback : No  [Callback Settings](#)

---

**Member Trunks ⓘ**

Available Trunks		Selected
E1Trunk1(E1) 192.168.4.147(SPS)	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	VOIP_Supplier(SIP)

---

**Business Days**

Office Hours : default

Office Hours Destination : IVR  IVR -- welcome

Non-office Hours Destination : End Call

---

**During Holidays**

Holiday :

Destination : End Call

---

**Fax Detection**

Destination : No Detect

Figure H-3

## APPENDIX I How to Use BLF Key to

## Choose the PSTN Line

MyPBX allows you to choose the specific PSTN line to make outbound call by pressing the BLF key on the IP Phone.

Follow the steps to do the configuration with your Yealink phone.

1. We want to choose pstn1 or pstn2 to call out.



Status	Signal	Trunk Name	Type	User Name	Port/Hostname/IP	Reachability
Disconnected		<u>pstn5</u>	FXO		Port 5	
Disconnected		<u>pstn6</u>	FXO		Port 6	
Disconnected		<u>pstn15</u>	FXO		Port 15	
Disconnected		<u>pstn16</u>	FXO		Port 16	

Figure I-1

2. Configure the IP Phone:



Key	Type	Value	Line	Extension
DSS Key 1	BLF	pstn1	Line 1	pstn1
DSS Key 2	BLF	pstn2	Line 1	pstn2

Figure I-2

### Test

When you press DSS Key 1/2, the phone will connect to pstn1/pstn2 line. If pstn1/pstn2 is not busy, you will hear the dial tone. You can dial the number you want and use this line to call out then.

# APPENDIX J How to Set up Auto Recording

MyPBX U5XX allows you to record the calls automatically. Here is the guide for you to use it.

## 1. Login

From your web browser, input the IP address of the MyPBX server. Login the system with the monitor account:

User Name: monitor

Password: password



Figure J-1

**Note:**

MyPBX firmware upgrade follow-up

- Reboot the device twice to make the new firmware take effect
- Clean the cache and cookies of the browser before login.
- There is a compatibility issue with IE11. Configure IE11 browser "Compatibility View Settings", add MyPBX IP address, and check "Display Intranet sites in Compatibility View" and "Use Microsoft compatibility lists".

See the following picture. MyPBX IP is 192.168.5.250 in this example.



Figure J-2

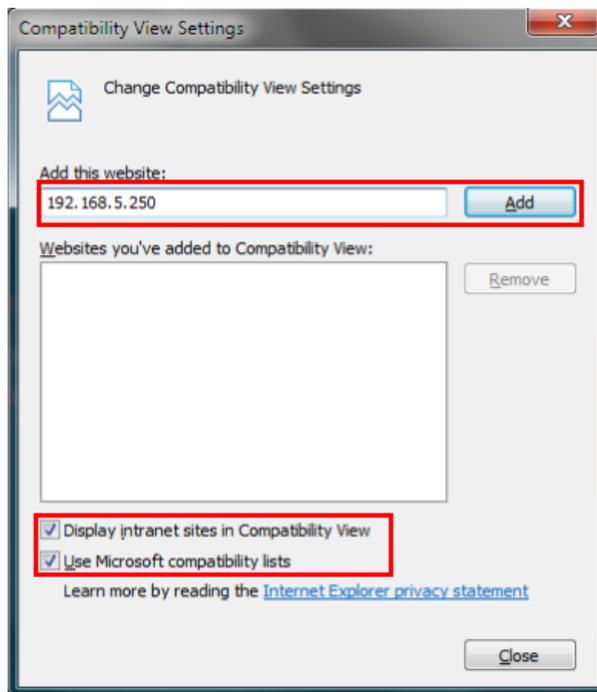


Figure J-3

## 2. Recording Settings

### 1) General Preferences

**Note:** Before enabling call recording, please make sure that the USB storage or the Net Disk performs well.

#### •Enable Call Recording

Enable this function here. You can tick:

- a. Record Inbound calls

- b. Record Outbound calls
- c. Record Internal calls
- d. Record Callback calls
- e. Record Conferences calls.

• **Storage Location**

After enabling Call recording, you can choose where to store the recordings, in the Network Disk or in the USB..

• **Record Outbound Prompt**

If call recording is enabled, the callee of outbound calls will hear the preconfigured prompt reminding them that the conversation is being recorded. If you tick the option "Written to the Recording file", the prompt will be written in the recording file.

2) Apply To

• **Trunks Recording**

When ticked, all calls through the selected trunks will be recorded.

• **Extensions Recording**

When ticked, all calls made by the selected extensions will be recorded.

**Conferences Recording**

When ticked, all conversations through the selected conferences will be recorded.

**Records Settings**

**General Preferences**

Note: if you want to configure call recording settings, you should confirm that the disk (network disk) exists and the format of the disk (the setting of network disks) is right.

Enable Call Recording:

Storage Location:  Status: Mounted

Allow Record Inbound  
 Allow Record Outbound  
 Allow Record Internal  
 Allow Record Callback  
 Allow Record Conferences

Record Outbound Prompt:   Written to the Recording file

**Apply To:**

Record Trunks  All Trunks  Customized

**Trunks**

Trunks	Selected
E1(trunk1)(E1)	
E11(trunk2)(E1)	
110(SP5)	

Record Extensions  All Extensions  Customized

**Extensions**

Extensions	Selected
100(SIP)	
101(SIP)	
102(SIP)	
103(SIP)	
104(SIP)	
105(SIP)	

Record Conferences  All Conferences  Customized

**Conference**

Conference	Selected
640	
641	
642	
643	
644	

Figure J-4

## 3. Advanced Settings

### 3.1 Share settings

Configure this setting to share the recording file on the network.

• **User Name**

The user name to access the files

• **Password**

The password for the user name

• **Share Name**

The name of the folder showed on the network.

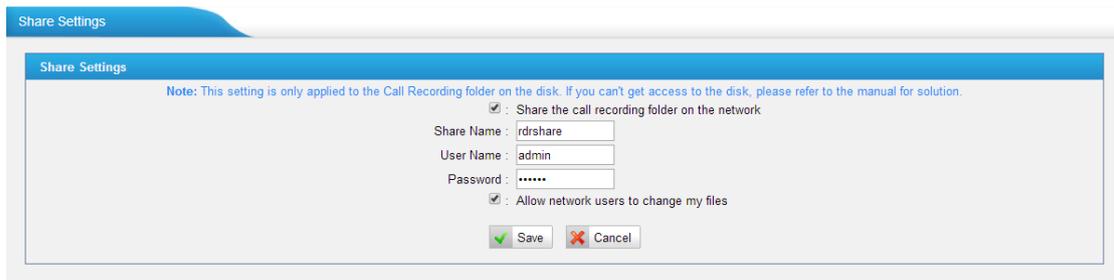


Figure J-5

For WIN 7/Vista user. please modify the registry before checking the shared file :

Step1: Start->Run->regedit

Step2: Modify the value of

"HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\LmCompatibilityLevel " to "1".

If "LmCompatibilityLevel" doesn't exit, create a Dword value  
"LmCompatibilityLevel " = 1

You can check the recording file on the network by Explorer/Resource Manager  
Run: \\ IP of MyPBX

In the picture below, the IP is 192.168.5.149

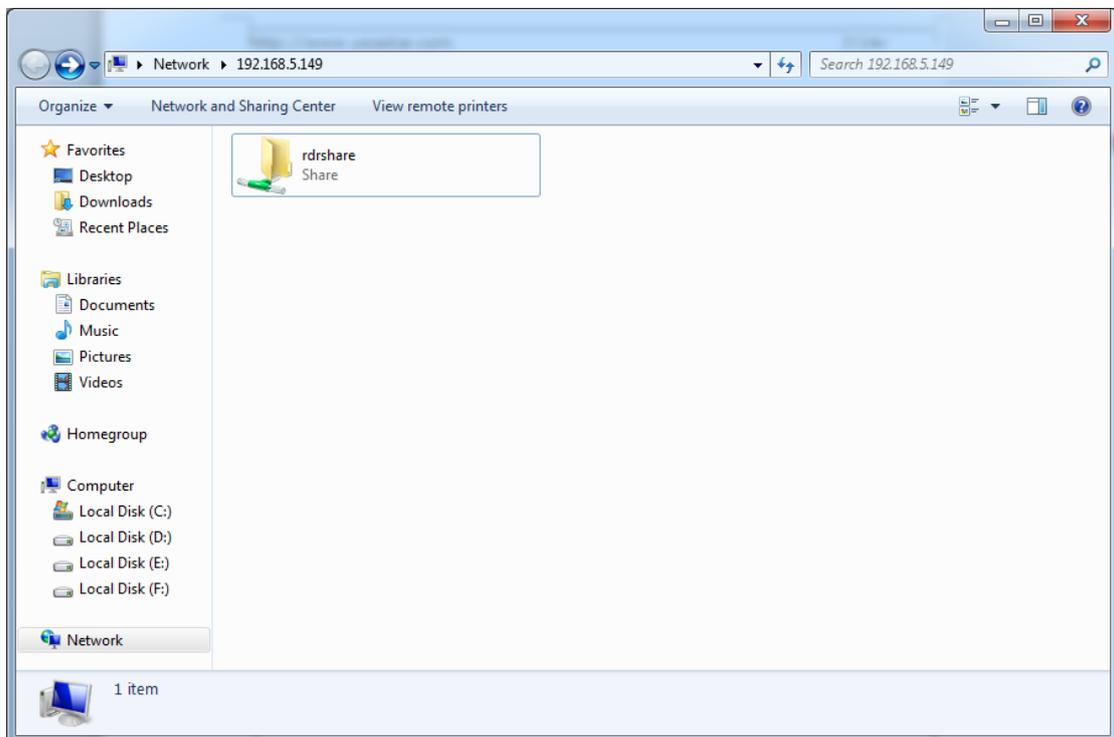


Figure J-6

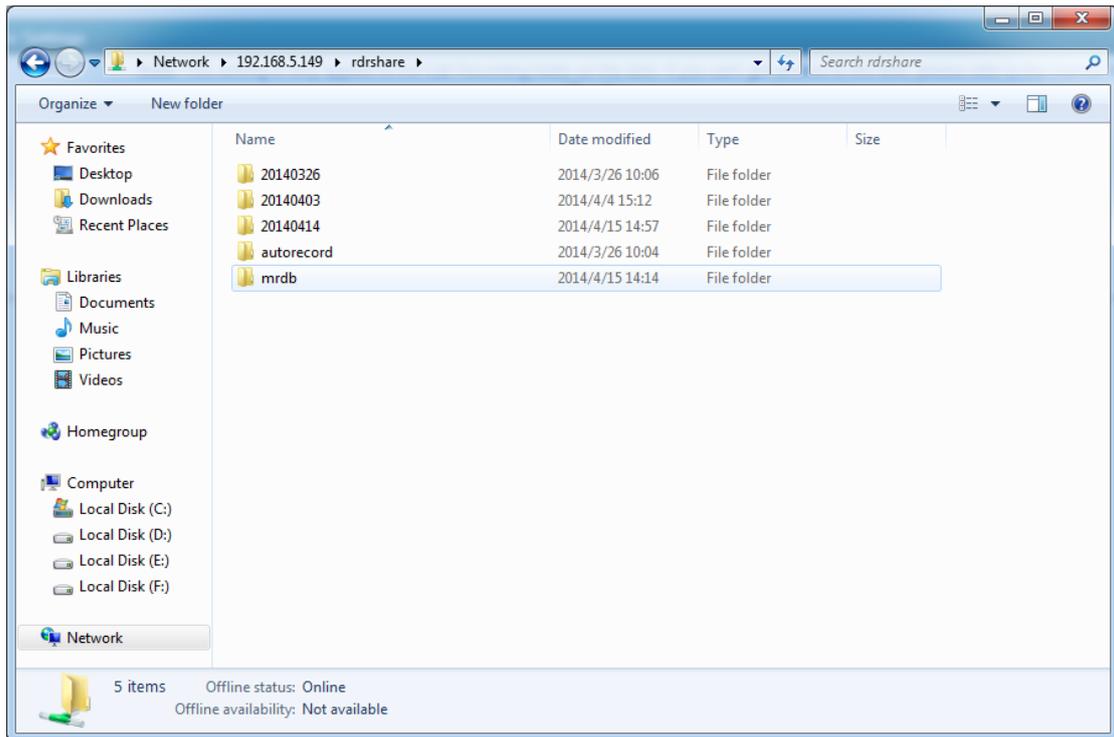


Figure J-7

If you change the password of the share folder, the network users may not be able to check the shared files then.

Please ask the network user to try:

step1: Start-> Run -> cmd

step2: net use \* /del (there is a space behind \*)

step3: Visit the device again with the new password

### 3.2 Password Setting

You can change the password of the account "monitor" here.

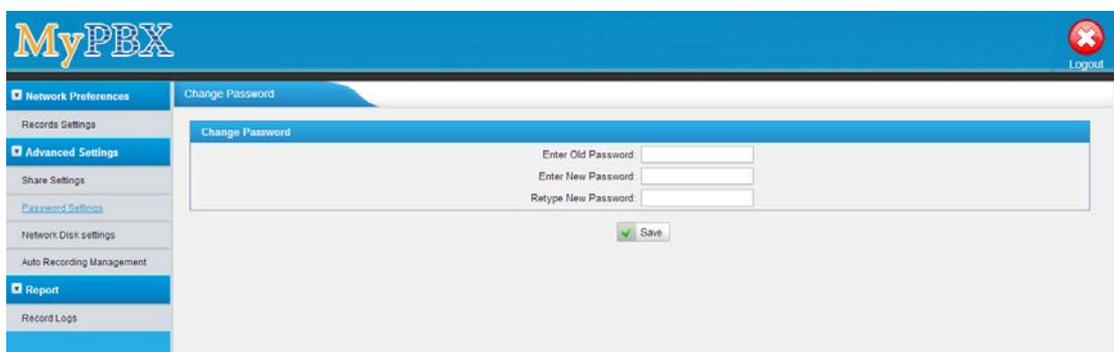


Figure J-8

### 3.3 Network Disk Settings

The Network Disk feature is used to extend storage space. If "Storage Location" is set to Network Disk, the call recording files created will be moved to the Net Disk.

**Note:** The shared folder must be based on Windows Operation System. And if it's windows Vista/2008/7, please add "Everyone" into the shared account list. After that you should ensure that the permission of "Everyone" is checked.

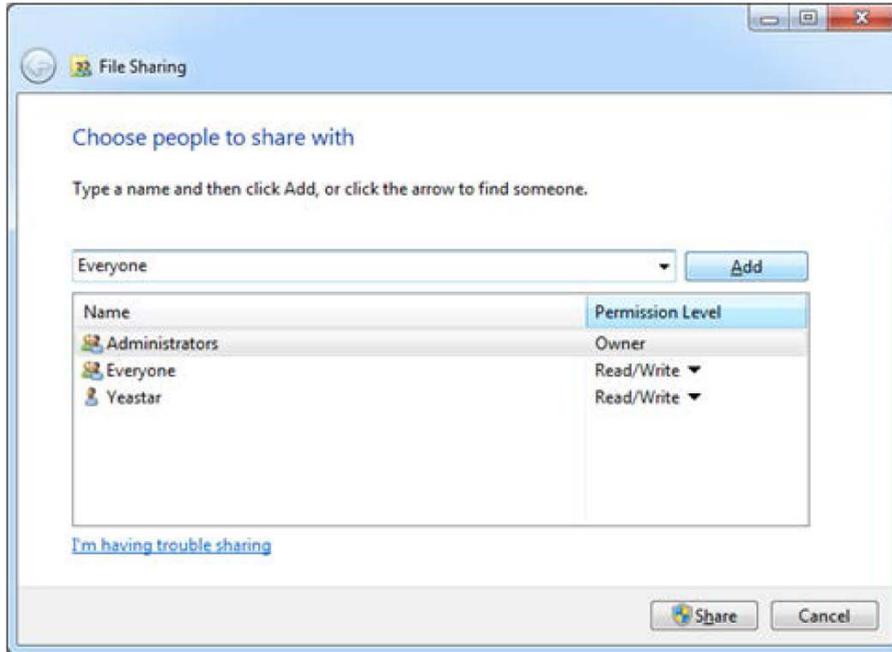


Figure J-9

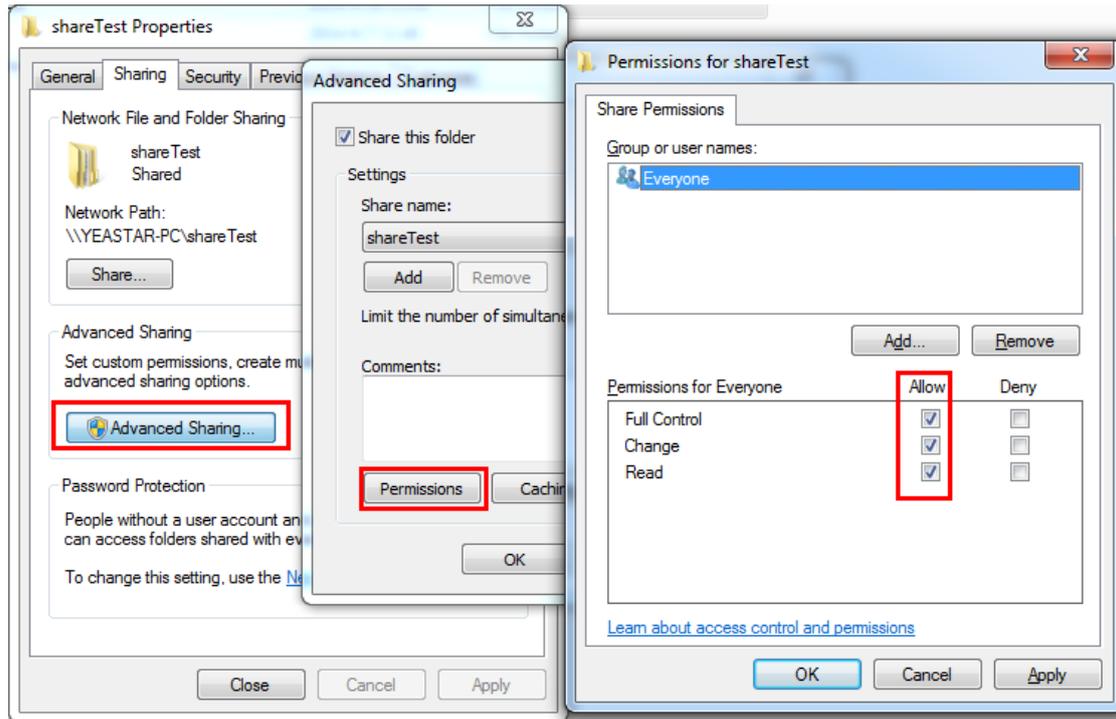


Figure J-10

Before network disk can be properly configured, an SMB share folder accessible from MyPBX must be set up on a Windows based machine. Once that has been set up, please follow the steps below.

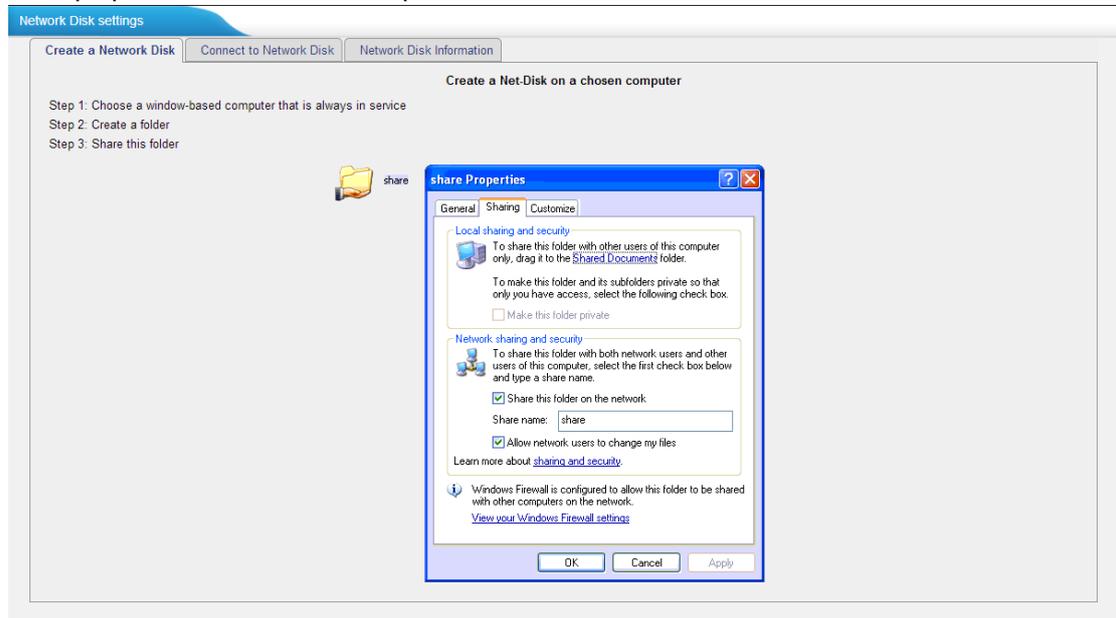


Figure J-11

- Step 1:** Choose a window-based computer that is always in service
- Step 2:** Create a folder
- Step 3:** Share this folder

Then we need input the Net-Disk information in “Connect to Network Disk” tab.

Network Disk settings

Create a Network Disk Connect to Network Disk Network Disk Information

Running Status: Mounted

Enable: Yes

Net-Disk Host/IP: 192.168.5.159

Net-Disk Share Name: shareTest

Net-Disk Access User Name: admin

Net-Disk Access Password: .....

Save Cancel

Figure J-12

**Running Status:** It will show the status of Network disk.

**Net-Disk Host/IP:** Change this to the IP address of the computer where files will be stored.

**Net-Disk Share Name:** Change this to the name of the shared folder where files will be stored.

**Net-Disk Share Username:** The user name used to log into the network share. Leave this blank if it is not required. In general, you use the administrator account on PC as a user name here.

**Net-Disk Share Password:** The password used to log into the network share. Leave this blank if it is not required.

If the configuration is correct, you will see the Network Disk information.

Network Disk settings

Create a Network Disk Connect to Network Disk Network Disk Information

Device information

Location: /media/Network-Disk

Disk Size: 199.75 GB Storage Info: 0%

Figure J-13

Then make some calls through trunks or extensions. After that, you can see the recordings in the sharing folder.

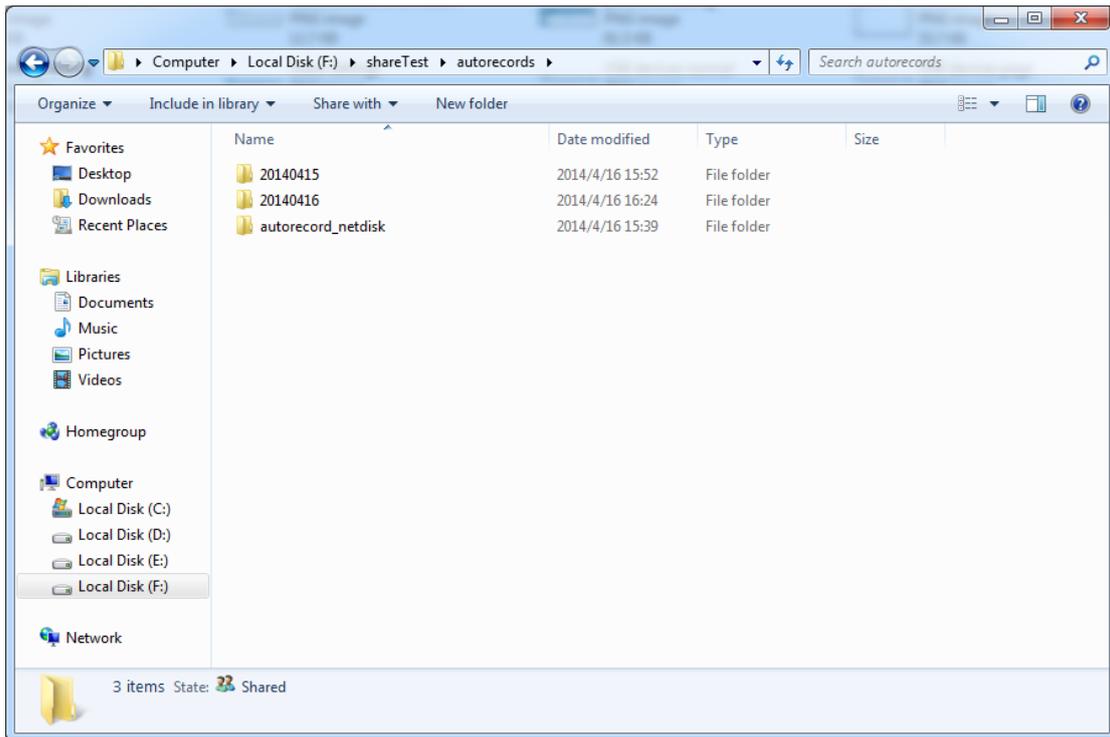


Figure J-14

### 3.4 Auto Recording Management

This feature defines whether extensions can check the call recordings or not when log into MyPBX’s web interface using its extension number and the voicemail PIN, we can also set the permissions for call recording management.

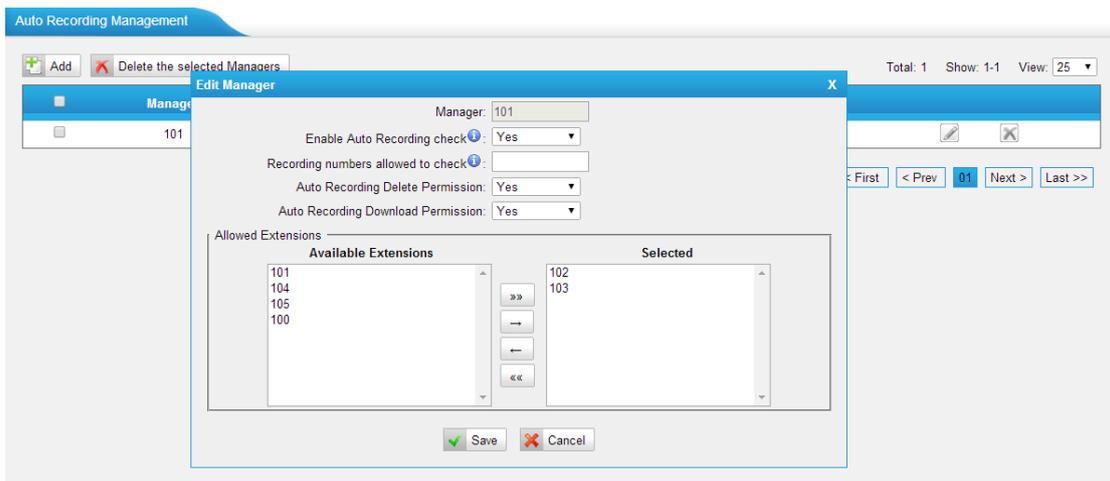


Figure J-15

**•Manager**

Choose extension number of the manager. Manager can check the call recordings of the selected extensions in the “Allowed Extensions” on the Web User Interface.

**•Enable Auto Recording check**

The permission to view recordings

**•Recording numbers allowed to check**

The number of recordings that users can check. If enter "0" or leave this blank empty, the number will not be limited. Enter "3", for example, the manager can check the latest 3 recordings at most.

**Note:** The oldest recording will be covered by the latest recording.

**•Auto Recording Delete Permission**

The permission of deleting recording

**•Auto Recording Download Permission**

The permission of downloading recording

**•Allowed Extensions**

You can decide which extension's call will be recorded.

For example, we set the extension 101 as a manager and set yes for "Enable Auto Recording check". And select 102,103 as allowed extensions. Then tick "Allow Record Internal". Finally, we make a call from 102 to 103. As a result, if you log in Web User Interface of extension 101, you can check recording logs in "Auto Recording" page. But if you login by 102 or 103, you can't find the auto recordings since it doesn't have the permission.

The screenshot displays the MyPBX interface for viewing recording logs. The search criteria are set to Start Date: 14 Apr 2014, End Date: 14 Apr 2014, Trunk: All, and Communication Type: All. A single record is shown in the table below:

ID	Time	Caller	Callee	Trunk	Duration(second)	Communication Type	Options
1	2014-04-14 22:57:49	102	103		93	Internal	[Play] [Download] [Delete]

Figure J-16

## 4. Report

### 4.1 Record Logs

You can check all of the recordings of calls made through MyPBX when you log in by "Monitor" account.

**•Attention**

The system will detect old CDR files after CDR system update. If there exists old CDR files, system will give you the prompt that whether you want to import the old files or not. If selection is done, this "Attention" will disappear.

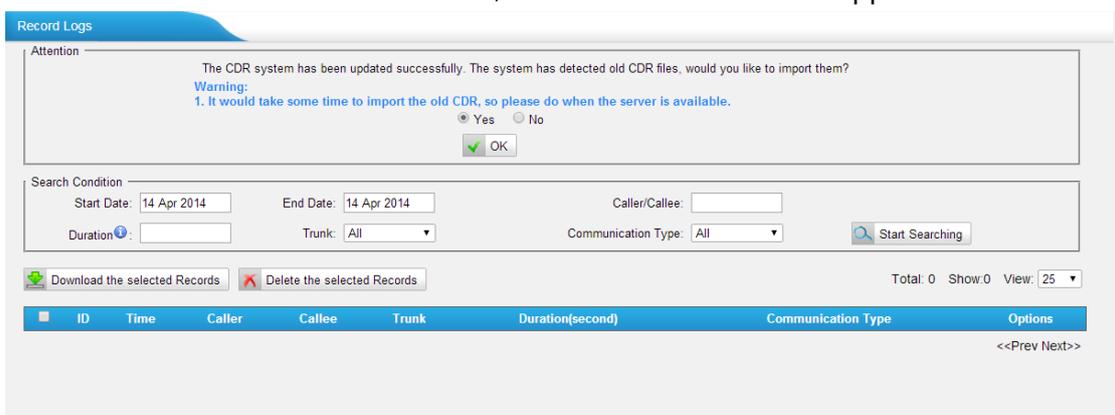


Figure J-17

**•Start Search**

You are able to search the recording by Start Date to End Date, Extension, Trunk, Duration and Communication Type.

**•The Recording List**

You can check the ID, Time, Callee, Caller, Trunk, Duration (second), Communication Type of each recording.

You can play, download or delete the recording files.

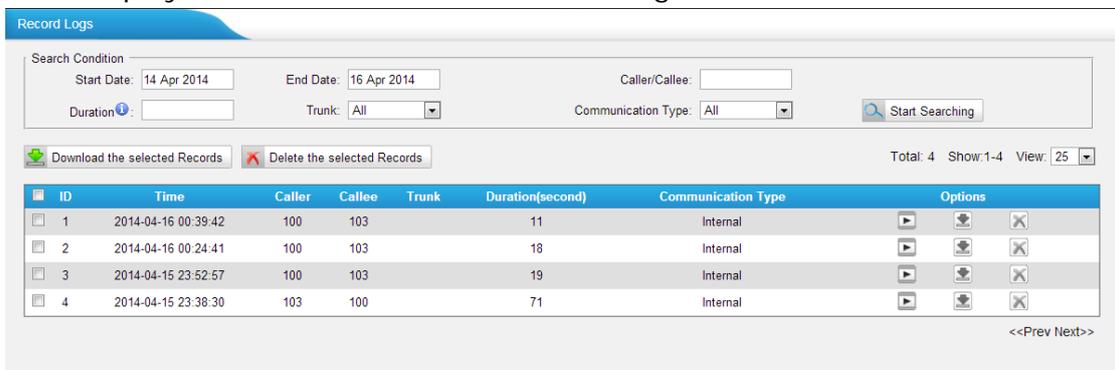


Figure J-18

## APPENDIX K How to use LDAP

LDAP stands for Lightweight Directory Access Protocol, which is a client-server protocol for accessing a directory service. Normally, it is used as a phone book on MyPBX so that you can search a key word from your IP phone.

Here we take Yealink T-28 IP phone as an example.

### 1. Configuration on MyPBX.

Tick the option of "Enable LDAP", and use default configuration in the other fields.

**Default configuration as below:**

Root Node: dc=pbx,dc=com

PBX Node: ou=pbx,dc=pbx,dc=com

User Name: cn=admin,dc=pbx,dc=com

Password: (fill in as required)

Then you can add contacts as required.

The screenshot displays the LDAP configuration interface. The 'LDAP Settings' section is active, showing 'LDAP is running' and 'Enable LDAP' checked. The configuration fields are as follows:

- Root Node: dc=pbx,dc=com
- PBX Node: ou=pbx,dc=pbx,dc=com
- User Name: cn=admin,dc=pbx,dc=com
- Password: password

An 'Add Contact' dialog box is open, showing the following fields:

- Nick Name: Bill
- Email: bill@yeastar.com
- Department: TS
- First Name: Billi
- Family Name: Gate
- Office Number: (empty)
- Home Number: (empty)
- Mobile Number: 14586214458

The dialog box has 'Save' and 'Cancel' buttons. The background shows a table with 'Total: 0', 'Show: 0', and 'View: 25'.

Figure K-1

### 2. Configuration on Yealink T-28 IP phone

Figure K-2

**First fill the fields as the configuration as below:**

LDAP Name Filter:    (|(cn=\*)(sn=\*))  
 LDAP Number Filter:  (|(telephoneNumber=\*)(homePhone=\*)(mobile=\*))  
 Server Address:     192.168.5.142    /the IP of MyPBX/  
 Port:                389  
 Base:                dc= yeastar,dc=cn  
 User Name:          cn=admin,dc=yeastar,dc=com  
 Password:           \*\*\*\*\*    /the password you have set on MyPBX/  
 Max.Hits:           50  
 LDAP Name Attributes:    cn sn displayName  
 LDAP Number Attributes:   telephoneNumber homePhone mobile mail  
                           departmentNumber  
 LDAP Display Name:     %cn  
 Protocol:             Version 3  
 Search Delay(ms)(0~2000):   0  
 LDAP Lookup for Incoming Call:   Enabled  
 LDAP Sorting Results:    Enabled  
 LDAP Lookup for PreDial/Dial:   Enabled

Click the "confirm" button, and the LDAP will take effect.

**Then configure the DSS Key for linking to the LDAP setting.**

The screenshot shows the 'Memory Keys' configuration page in the Yealink MyPBX U5 Series Administrator. The page has a navigation bar with tabs for Status, Account, Network, Phone, Contacts, Upgrade, and Security. Below the navigation bar, there are sub-tabs for Preference, Features, Softkey Layout, DSS Keys, EXT Key, Action URL, Voice, Ring, Tones, Dial Plan, and SMS. The main content area is titled 'Memory Keys >>' and contains a table with 10 rows, each representing a DSS Key. The table has columns for Key, Type, Value, Line, and Extension. The first row is 'DSS Key 1' with Type 'LDAP', and the remaining rows are 'DSS Key 2' through 'DSS Key 10' with Type 'N/A'. To the right of the table is a 'NOTE' section with definitions for Key Type, BLF, Key Event, Intercom, and URL. At the bottom of the page, there are 'Confirm' and 'Cancel' buttons.

Key	Type	Value	Line	Extension
DSS Key 1	LDAP		Auto	
DSS Key 2	N/A		Auto	
DSS Key 3	N/A		Auto	
DSS Key 4	N/A		Auto	
DSS Key 5	N/A		Auto	
DSS Key 6	N/A		Auto	
DSS Key 7	N/A		Auto	
DSS Key 8	N/A		Auto	
DSS Key 9	N/A		Auto	
DSS Key 10	N/A		Auto	

**NOTE**

**Key Type**  
The free function key 'Types' Speed Dial, BLF, Key Event, Intercom, URL.

**BLF**  
The button can be configured Busy Line Field function with specified account. This feature must be supported by the sip server.

**Key Event**  
Key events are predefined shortcuts to phone and call functions.

**Intercom**  
Enable the 'Intercom' mode and it is useful in an office environment as a quick access to connect to the operator or the secretary.

**URL**  
This key function allows you to send HTTP requests to a web server.

Line Keys >> ?  
Programmable Keys >> ?

Confirm Cancel

Figure K-3

If you enable the “LDAP Lookup for PreDial/Dial”, you can use LDAP feature either in PreDial/Dial page or by pressing DSS Key.

<END>