Intercommunication between two MyPBX (via VoIP Trunk)

This application note shows how to link two MyPBX in different location. With this function, we can link branches together with MyPBX. Same method can be used when connect more than 2 MyPBX in different branches.

1. Link two MyPBX in the same network

The simplest case to link two MyPBX together is in the same network. We start from this and then try to expand to different network. We use MyPBX here, same method for other MyPBX products. Below is the structure of how to link two MyPBX in the same LAN:
Flowchart:
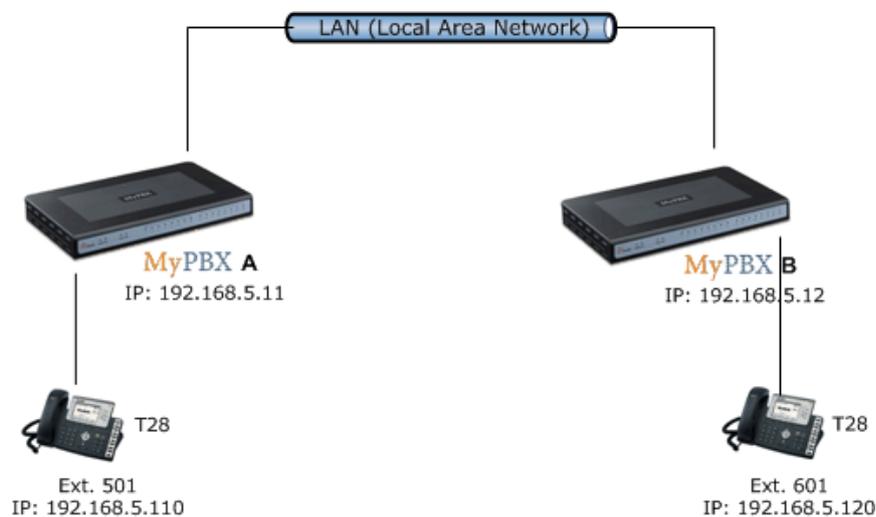
Application:
The method of connecting two MyPBX in the same LAN is:
1. Register the MyPBX A as an extension in MyPBX B via VOIP(SIP/IAX2) Trunk, so the extensions in MyPBX A can make calls to MyPBX B's extensions via this 'Special' trunk.
2. Use the reverse method in MyPBX B to register to MyPBX A.

In above structure:
1) The two MyPBX links each other via VOIP(SIP/IAX2) trunk.
2) All the extensions under MyPBX A are in the format 5xx.
3) All the extensions under MyPBX B are in the format 6xx.
4) Extensions under MyPBX A can make calls to extension under MyPBX B use format 6xx.
5) Extensions under MyPBX B can make calls to extension under MyPBX A use format 5xx.
6) Yealink-T28 A registers to MyPBX A as an extension 501.
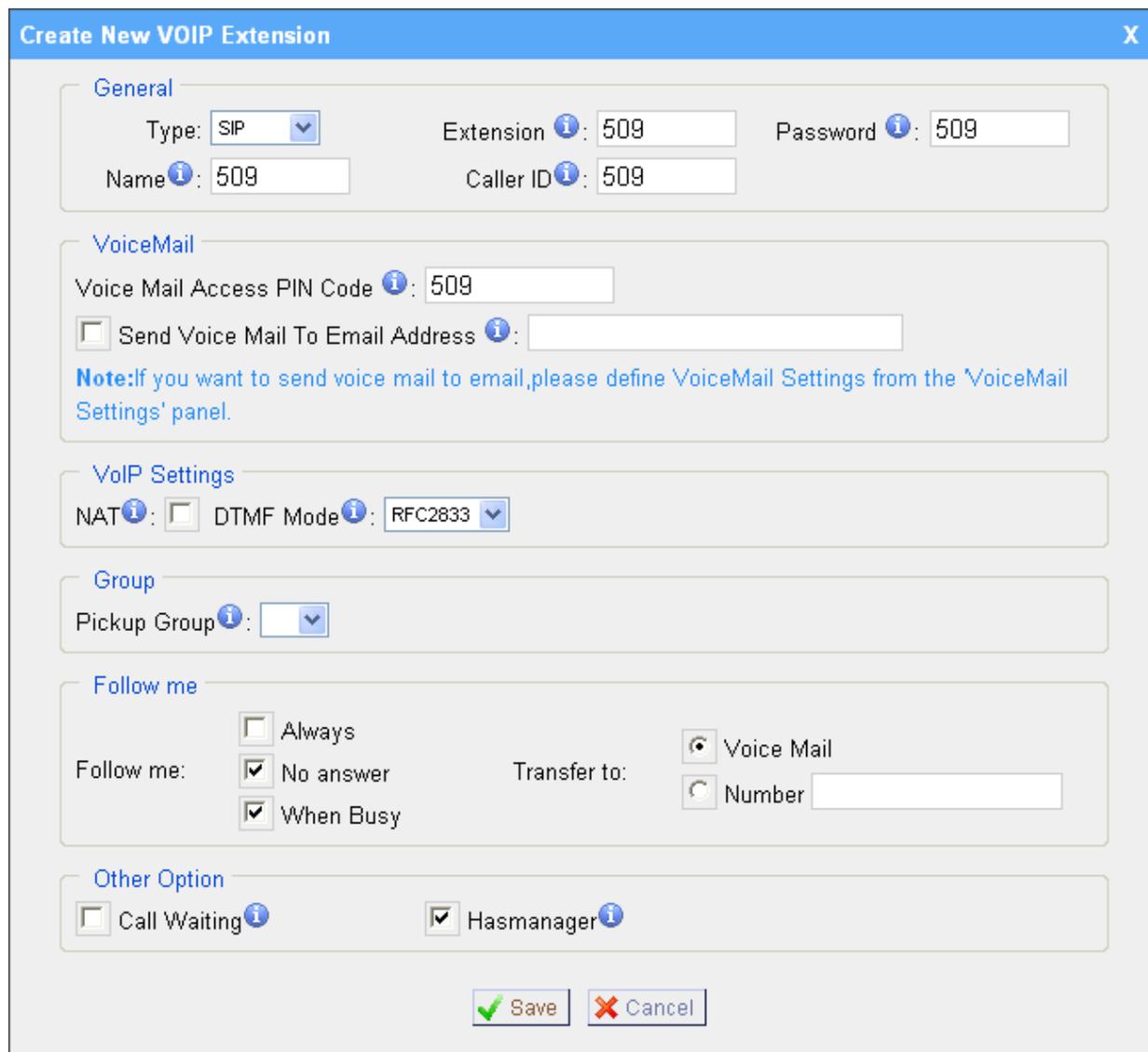7) Yealink-T28 B registers to MyPBX B as an extension 601.

Configure:

Step 1 Setup an extension 509 in MyPBX A.

Extension: 509; Phone number of this extension

Password: 509;

Name: 509;

CallerID: 509;

Figure 1-1

Step 2: Set up an SIP/IAX2 trunk in MyPBX B to link to MyPBX A via this 509 extension. In the page Trunks--> Add VOIP Trunk.

Figure 1-2

Step 3: Set Outbound Route in MyPBX B, all calls start with 5 will be sent to MyPBX A. In the page: Outbound Routes--> Add Outbound Route.

New Outbound Route   X

Route Name ⓘ : CalltoMyPBXA

Dial pattern ⓘ : 5.

Strip ⓘ 0 digits from front

Prepend these digits ⓘ [   ] before dialing

Calls From Extension(s) ⓘ

Available Extensions   Selected

601(Analog FXS)
602(Analog FXS)
603(Analog FXS)
604(Analog FXS)
605(Analog FXS)
606(Analog FXS)
607(Analog FXS)
608(Analog FXS)

Make Outbound Calls On ⓘ

Available Trunks   Selected

pstn1(Analog FXO)   509(SIP)
pstn2(Analog FXO)
pstn3(Analog FXO)
pstn4(Analog FXO)
pstn5(Analog FXO)
pstn6(Analog FXO)
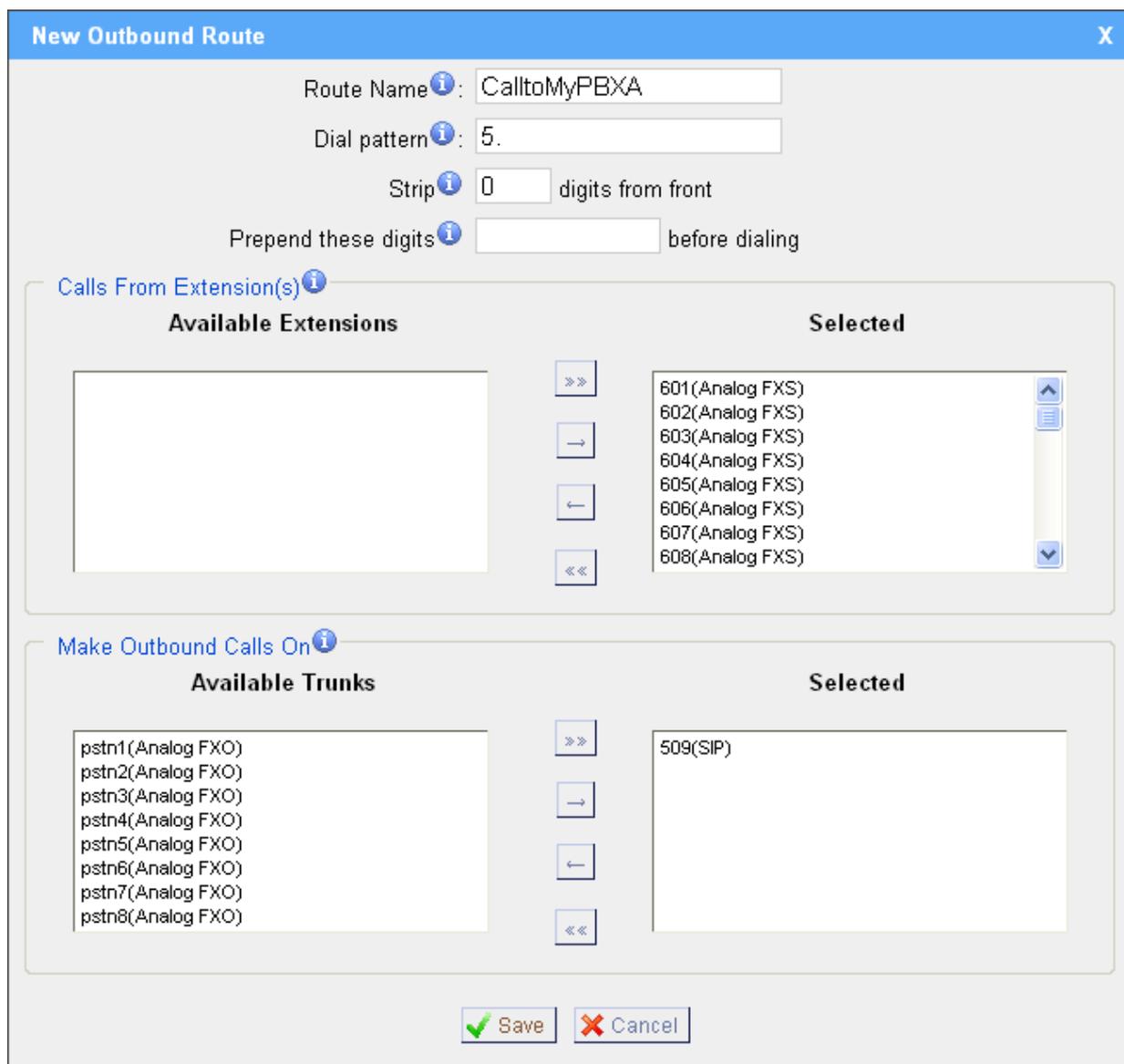pstn7(Analog FXO)
pstn8(Analog FXO)

✔ Save   ✖ Cancel

Figure 1-3

Save and Apply Changes.

Test Call:
1) Register an IP phone T28 to MyPBX A with 501 extension.
2) Register an IP phone T28 to MyPBX B with 601 extension.
3) Use 501 to dial 601. And you can see 601 is ringing and you can pick up the calls.

Above is the way to router MyPBX B's call to MyPBX A, the method to link MyPBX A to MyPBX B is the same as above.

2. Link two MyPBX in different location

The generally environment for two MyPBX in different location is: two MyPBX are both behind router and using the private IP.

Flowchart:
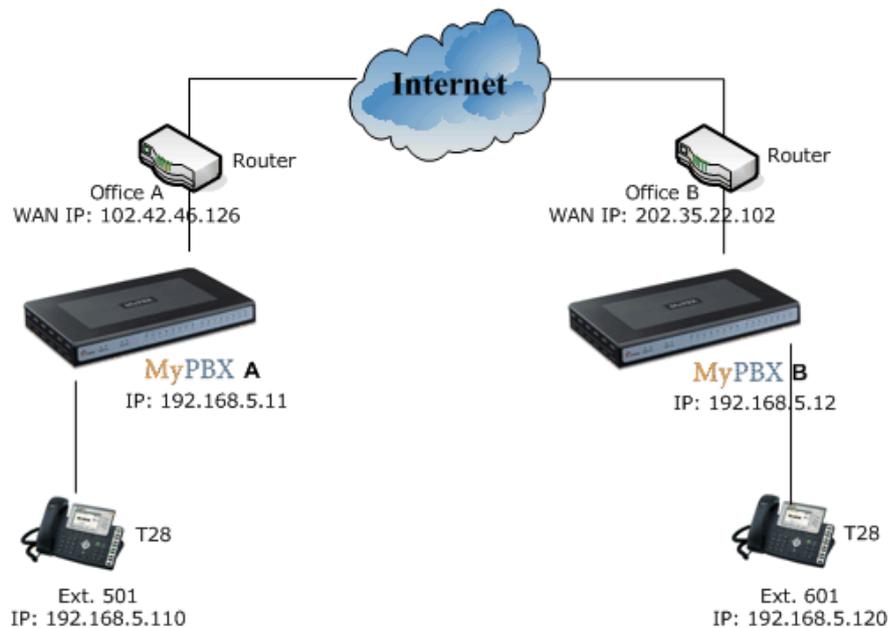
Application:
Note: Since the MyPBX doesn't have the public IP, we need to do port forwarding in the router and make MyPBX is reachable to others.

The method of connecting two MyPBX in the different location is:
1. Register the MyPBX A as an extension in MyPBX B via VOIP (SIP/IAX2) Trunk, so the extensions in MyPBX A can make calls to MyPBX B's extensions via this 'Special' trunk.
2. Use the reverse method in MyPBX B to register to MyPBX A.

In above structure:
1) The two MyPBX links each other via VOIP (SIP/IAX2) trunk.
2) All the extensions under MyPBX A are in the format 5xx.
3) All the extensions under MyPBX B are in the format 6xx.
4) Extensions under MyPBX A can make calls to extension under MyPBX B use format 6xx.
5) Extensions under MyPBX B can make calls to extension under MyPBX A use format 5xx.
6) Yealink-T28 A registers to MyPBX A as an extension 501.
7) Yealink-T28 B registers to MyPBX B as an extension 601.

2.1 Link two MyPBX via IAX Trunk

Step 1 Set port forwarding in the router for MyPBX A.

Example: The router's public IP is '102.42.46.126'.

The MyPBX A is behind the router, to register to MyPBX A via the internet, you need to forward the IAX port in your router, so all the packets received on the router WAN port (102.42.46.126:4569) will be forwarded to the MyPBX A (192.168.5.11:4569). Below is the setting page in a Linksys router:
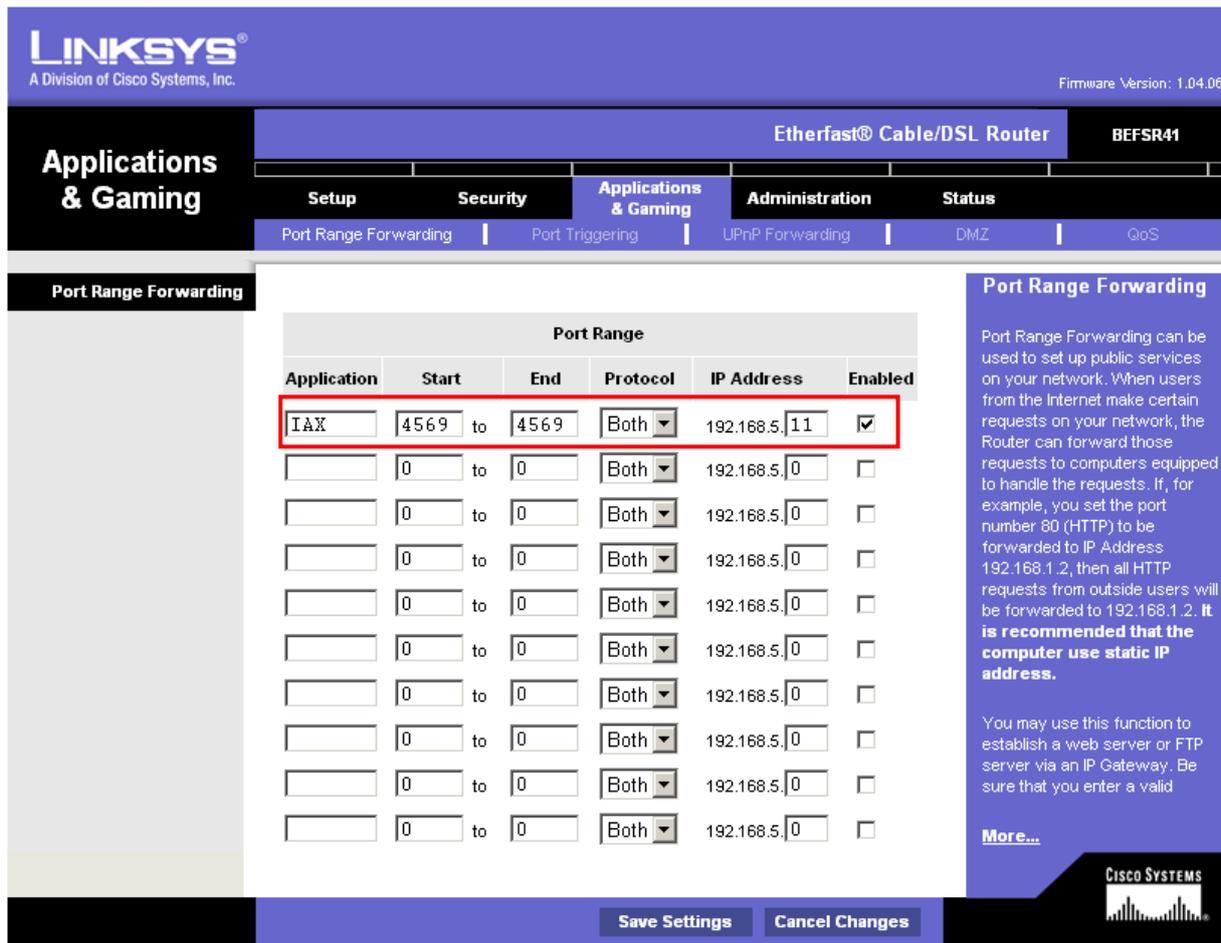

Figure 2-1

Step 2 Setup an extension 509 in MyPBX A.

Type: IAX

Extension: 509; Phone number of this extension

Password: 509;

Name: 509;

Caller ID: 509;

Figure 2-2

Step 3: Set up an IAX trunk in MyPBX B to link to MyPBX A via this 509 extension. In the page Trunks → Add VOIP Trunk → IAX Trunk.

Figure 2-3

Step 4: Set Outbound Route in MyPBX B, all calls start with 5 will be sent to MyPBX A. In
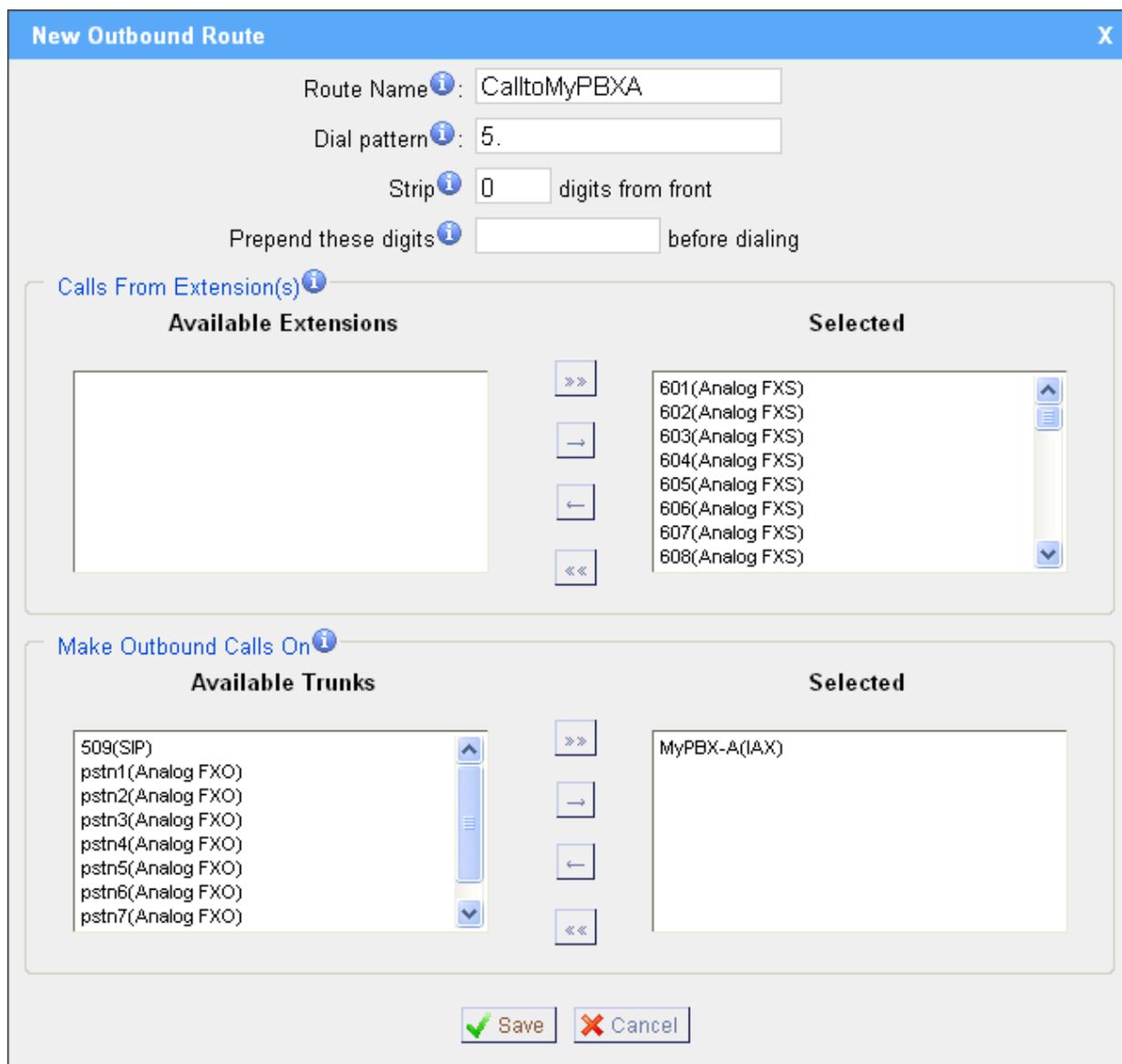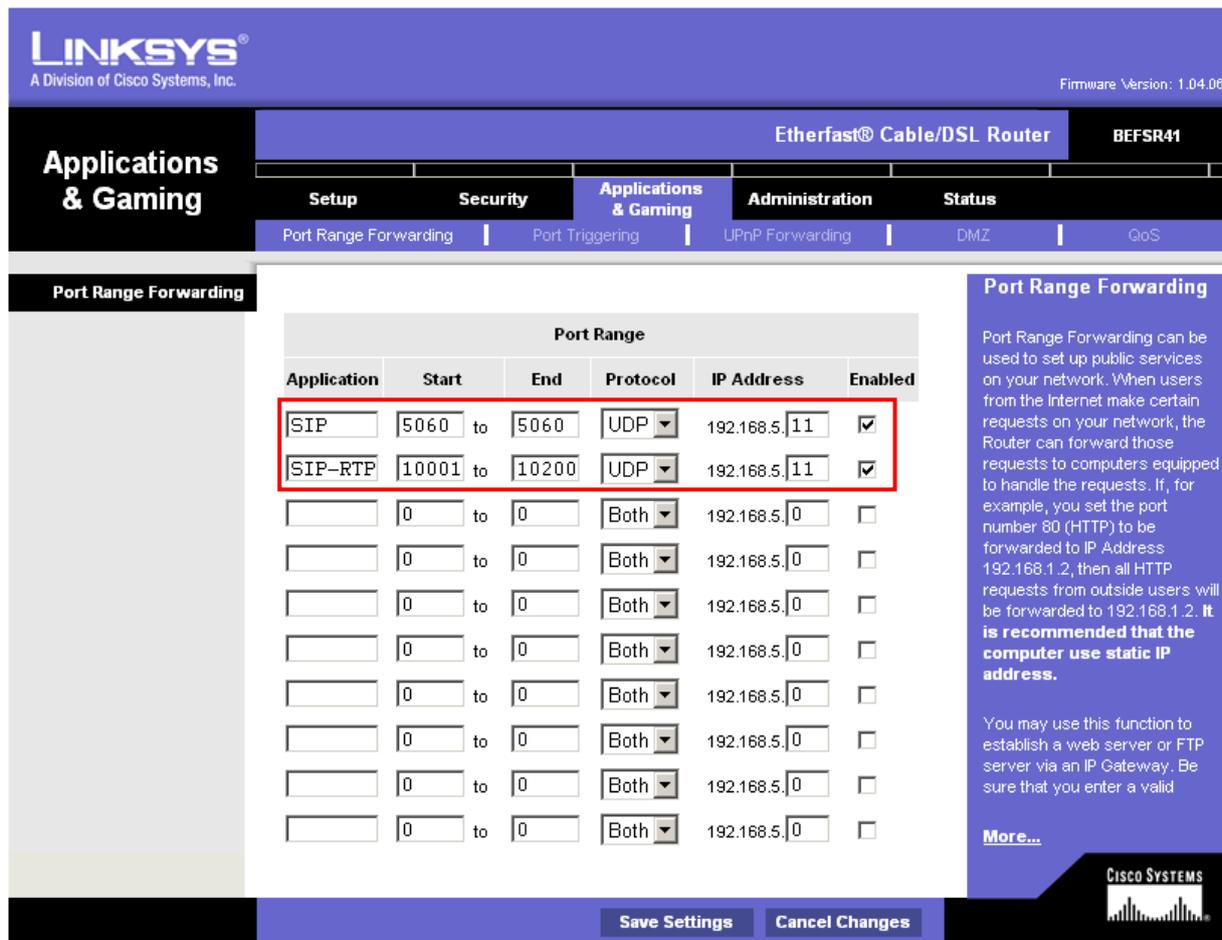
the page: Outbound Routes--> Add Outbound Route.

Figure 2-4

Save and Apply Changes.

Test Call:
1) Register an IP phone T28 to MyPBX A with 501 extension.
2) Register an IP phone T28 to MyPBX B with 601 extension.
3) Use 601 to dial 501. And you can see 501 is ringing and you can pick up the calls.

Above is the way to router MyPBX B's call to MyPBX A.

Step 5: Use the same method do port forwarding in router B for MyPBX B. Your public address from network provider maybe a dynamic ip which will be changed periodically. To overcome the problem of dynamic ip, you may need to use the DDNS service , for more info please Google via internet.

2.2 Link two MyPBX via SIP Trunk

Step 1 Set port forwarding in the router for MyPBX A.

Example: The router's public IP is '102.42.46.126'.

The MyPBX A is behind the router, to register to MyPBX A via the internet, you need to forward the SIP port in your router, so all the packets received on the router WAN port (102.42.46.126:5060) will be forwarded to the MyPBX A (192.168.5.11:5060). Below is the setting page in a Linksys router:

Note: we must map UDP port 5060 and UDP port 10001-10200.

Figure 2-5

Step 2 Configure NAT settings in MyPBX A.

MyPBX -> SIP Settings -> NAT, configure the NAT settings according to below page.
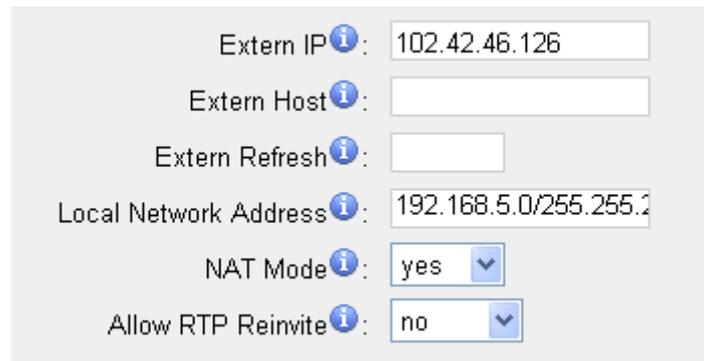
External IP: your router's public IP address

External Host:

External refresh:

Local Network Address:192.168.5.0/255.255.255.0 (change this according to your network configuration)

NAT mode: Yes

Allow RTP Reinvite: No

Figure 2-6

Step 3 Setup an extension 509 in MyPBX A.
General
Type: SIP;
Extension: 509; Phone number of this extension
Password: 509;
Name: 509;
Caller ID: 509;

VoIP Settins
NAT: yes
Note: please enable NAT.

Figure 2-7

Step 4: Set up an SIP trunk in MyPBX B to link to MyPBX A via this 509 extension. In the page Trunks--> Add VOIP Trunk.

Figure 2-8

Step 5: Set Outbound Route in MyPBX B, all calls start with 5 will be sent to MyPBX A. In the page: Outbound Routes--> Add Outbound Route.
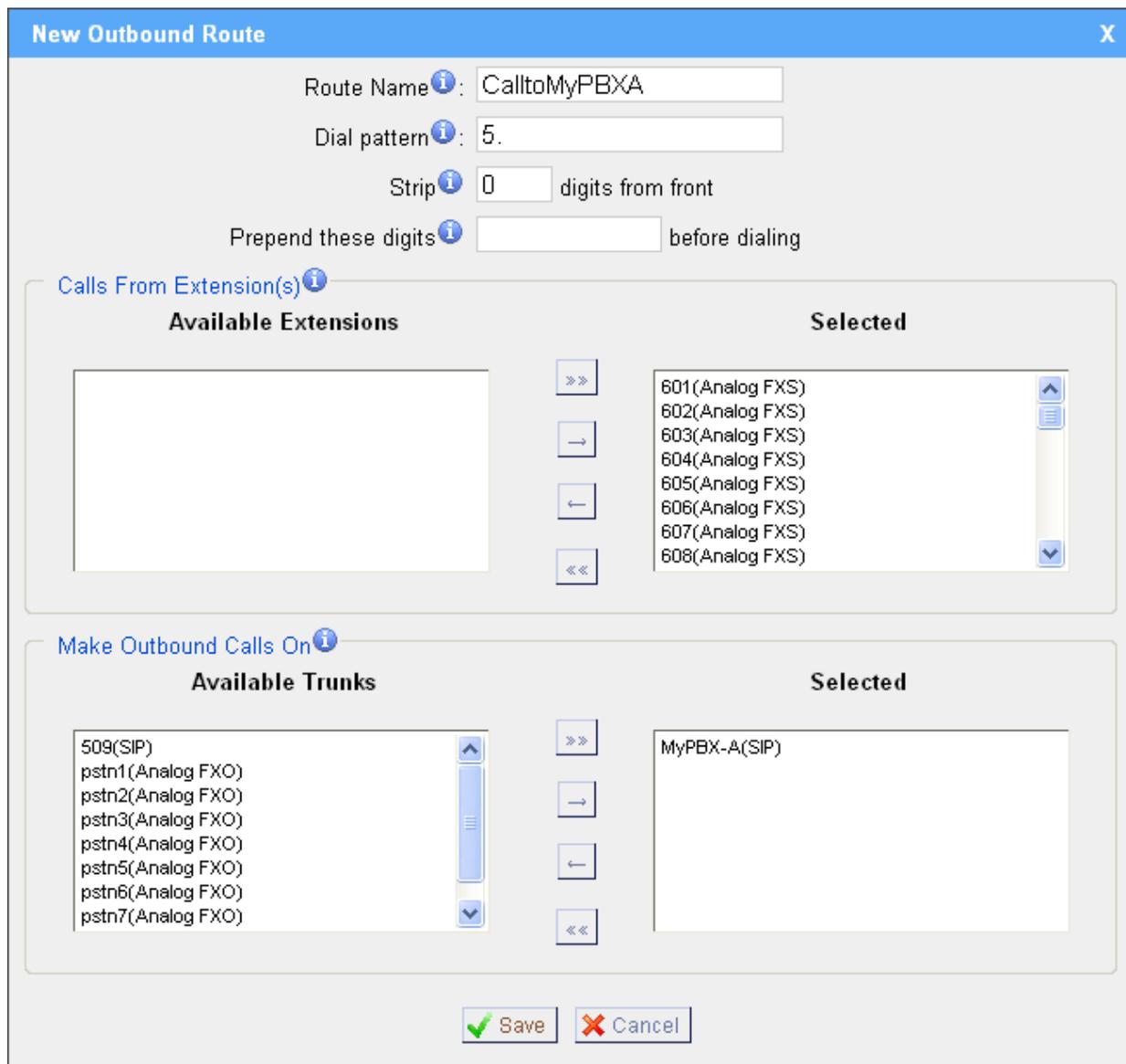
Figure 2-9

Save and Apply Changes.

Test Call:

1) Register an IP phone T28 to MyPBX A with 501 extension.

2) Register an IP phone T28 to MyPBX B with 601 extension.

3) Use 601 to dial 501. And you can see 501 is ringing and you can pick up the calls.

Above is the way to router MyPBX B's call to MyPBX A.

Step 6: Use the same method do port forwarding in router B for MyPBX B. Your public address from network provider maybe a dynamic ip which will be changed periodically. To overcome the problem of dynamic ip, you may need to use the DDNS service , for more info please Google via internet.

<Finish>