

Intercommunication between two MyPBX (via VoIP Trunking)

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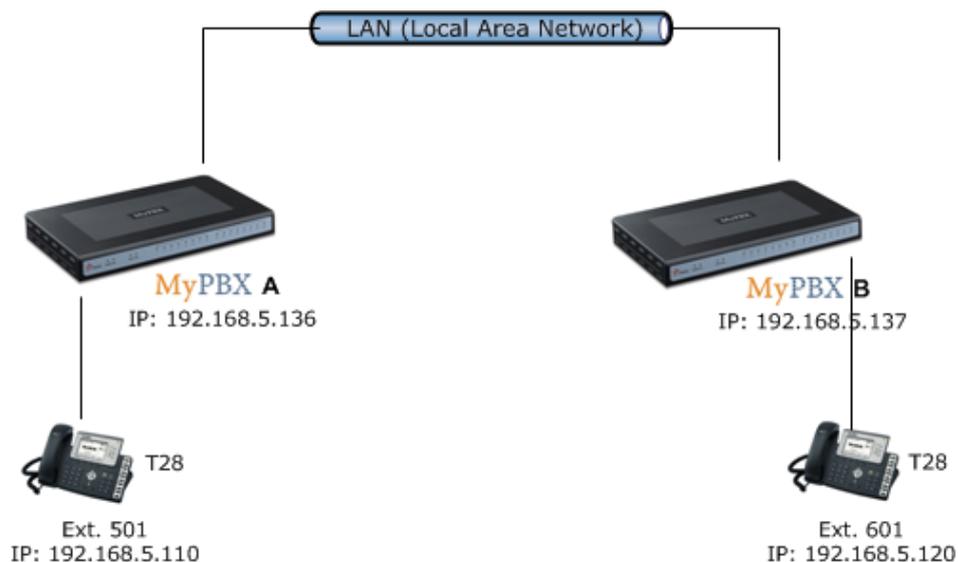
This application note explains how to link two MyPBX in different location. With this function, we can link branches together with MyPBX. Same method can be used when connecting more than 2 MyPBX in different branches.

1. Connect two MyPBX in the same network

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

The simplest case to link two MyPBX together is in the same network. We start from this and then try to expand to different networks. We take MyPBX Standard as the example here, and the method is same 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. Point the MyPBX A to MyPBX B via VOIP (SIP/IAX2) Trunking, 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 point to MyPBX A.

In above structure:

- 1) The two MyPBX link each other via VOIP (SIP/IAX2) Trunking.
- 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 extensions under MyPBX B using format

6xx.

5) Extensions under MyPBX B can make calls to extensions under MyPBX A using 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: Set up a SIP Trunking in **MyPBX A**, connect which to MyPBX B.

Trunks-> Service Provider -> Add Service Provider

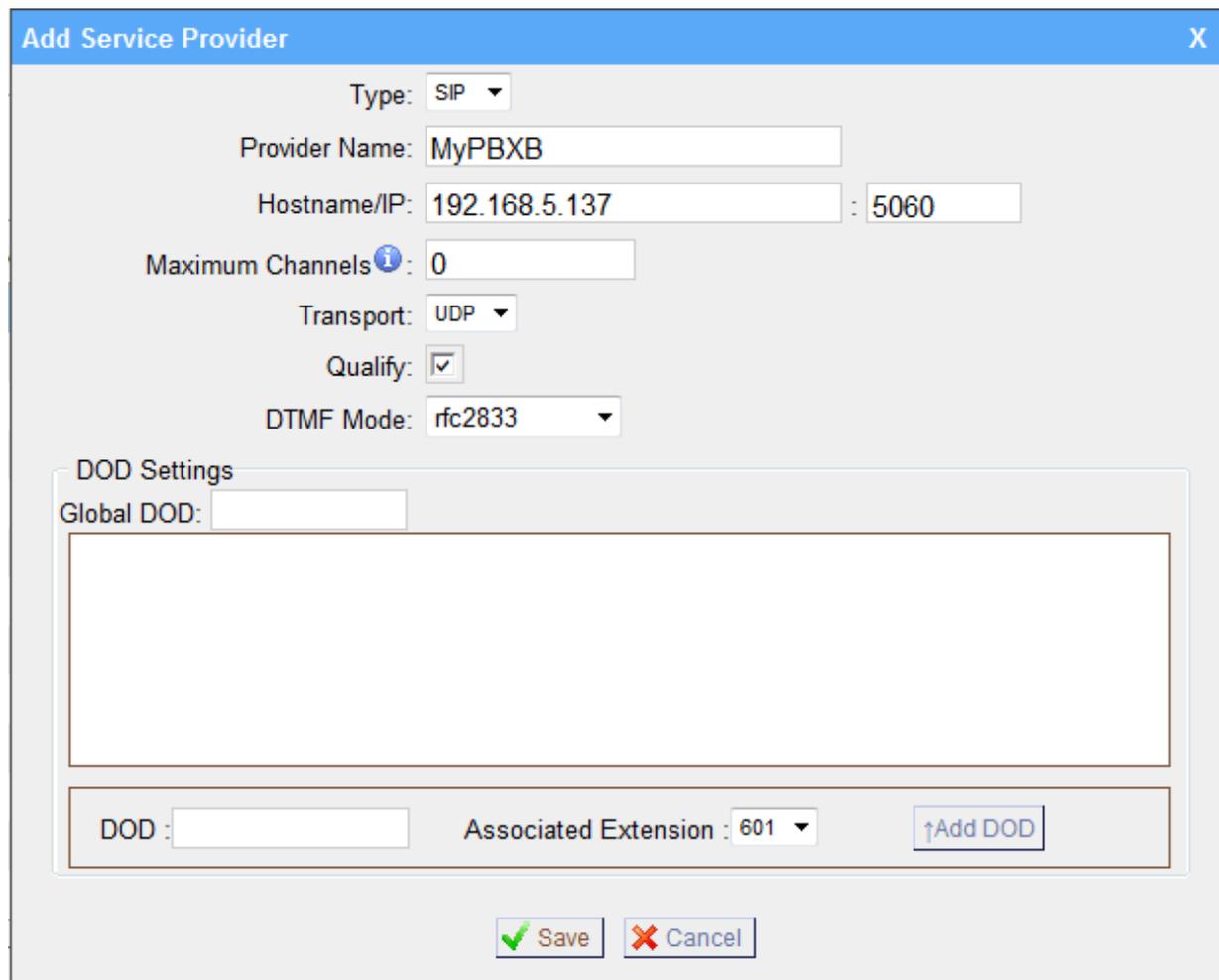


Figure 1-1

Make sure the trunk status is ok on Line status page.

MyPBX A trunk's status:

Trunks					
Status	Signal	Trunk Name	Type	Username	Port/Hostname/IP
OK (2 ms)		MyPBXB	SP-SIP		192.168.5.137

Figure 1-2

Step 2: Set up a SIP Trunking in **MyPBX B**, connect which to MyPBX A.

Trunks-> Service Provider -> New Service Provider

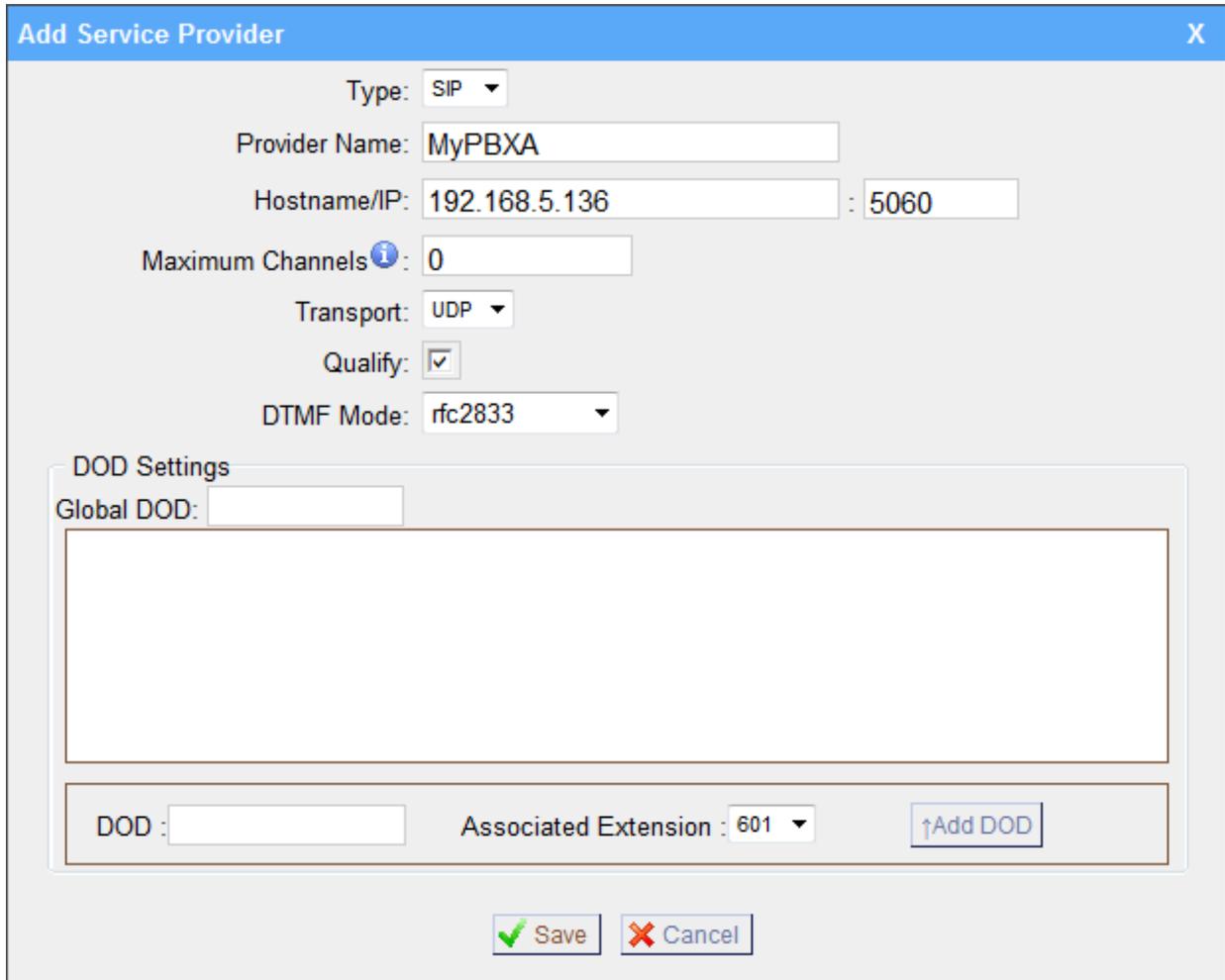


Figure 1-3

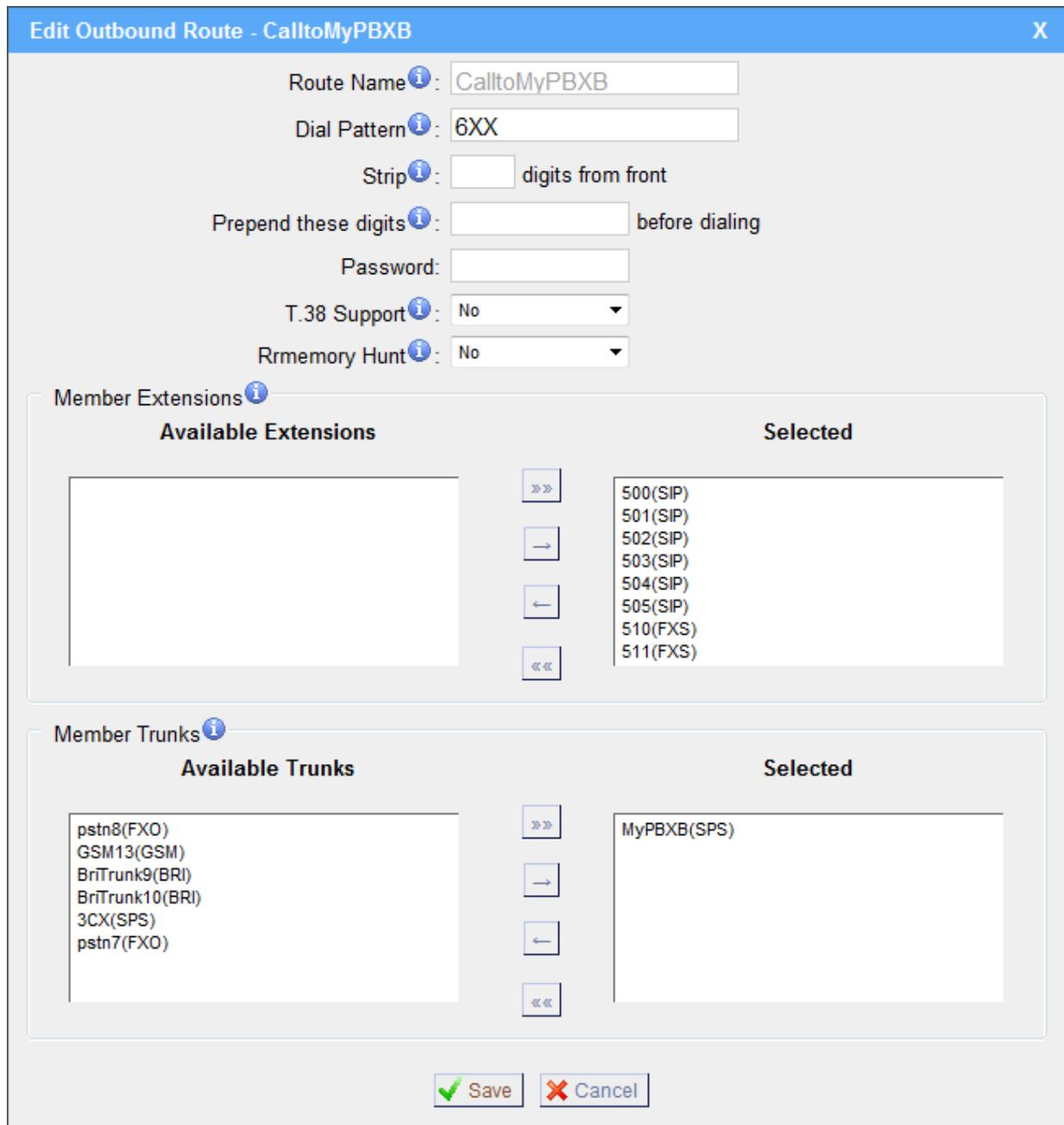
Make sure the trunk status is ok on Line status page.

MyPBX B trunk's status:

Trunks					
Status	Signal	Trunk Name	Type	Username	Port/Hostname/IP
OK (2 ms)		MyPBXA	SP-SIP		192.168.5.136

Figure 1-4

Step 3: Setup an Outbound Route in **MyPBX A**. All calls start with 6 and 3 digits will be sent to MyPBX B, this is the way to route MyPBX A's call to MyPBX B.
In the page: Outbound Routes -> Add Outbound Route.



Edit Outbound Route - CalltoMyPBXB

Route Name: CalltoMyPBXB

Dial Pattern: 6XX

Strip: 0 digits from front

Prepend these digits: before dialing

Password:

T.38 Support: No

Rrmemory Hunt: No

Member Extensions

Available Extensions	Selected
	500(SIP) 501(SIP) 502(SIP) 503(SIP) 504(SIP) 505(SIP) 510(FXS) 511(FXS)

Member Trunks

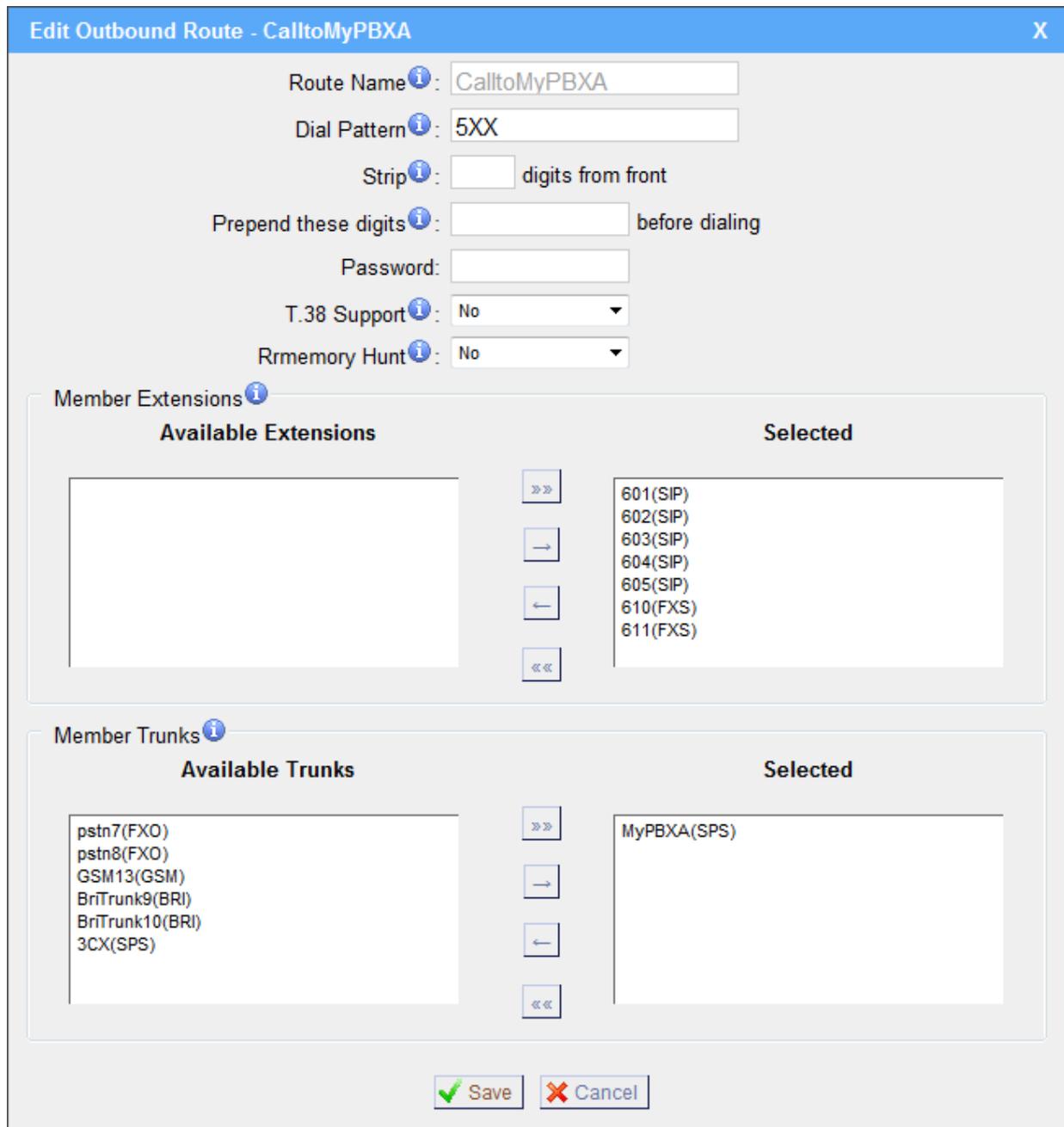
Available Trunks	Selected
pstn8(FXO) GSM13(GSM) BriTrunk9(BRI) BriTrunk10(BRI) 3CX(SPS) pstn7(FXO)	MyPBXB(SPS)

Save Cancel

Figure 1-5

Save and Apply the Changes.

Step 4: Set up an Outbound Route in **MyPBX B**. All calls start with 5 and 3 digits will be sent to MyPBX A, this is the way to route MyPBX B's call to MyPBX A.
In the page: Outbound Routes -> Add Outbound Route.



Edit Outbound Route - CalltoMyPBXA

Route Name ⁱ:

Dial Pattern ⁱ:

Strip ⁱ: digits from front

Prepend these digits ⁱ: before dialing

Password:

T.38 Support ⁱ:

Rrmemory Hunt ⁱ:

Member Extensions ⁱ

Available Extensions		Selected
<input type="text"/>	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	601(SIP) 602(SIP) 603(SIP) 604(SIP) 605(SIP) 610(FXS) 611(FXS)

Member Trunks ⁱ

Available Trunks		Selected
pstn7(FXO) pstn8(FXO) GSM13(GSM) BriTrunk9(BRI) BriTrunk10(BRI) 3CX(SPS)	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	MyPBXA(SPS)

Figure 1-6

Save and Apply the Changes.

Note: For VoIP-Trunking mode connection, there's no need to create inbound routes for MyPBXs, the outbound routes for each MyPBX are enough.

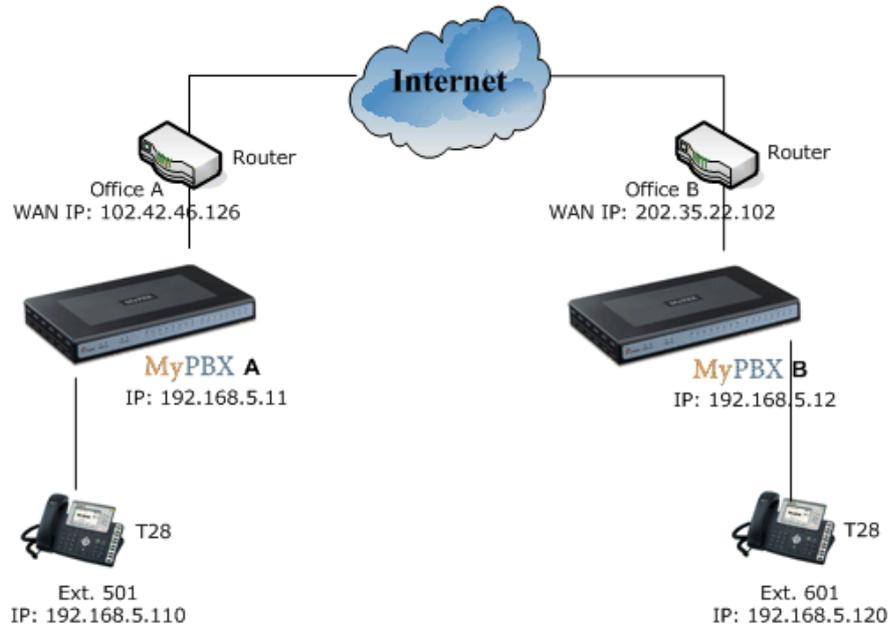
Step 4: Test call.

- 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 answer the calls.
- 4) Use 601 to dial 501. And you can see 501 is ringing and you can answer the calls.

2. Connect two MyPBX in different locations

The other case to link two MyPBX together is in the different network. We also take MyPBX Standard as the example here, and the method is same for other MyPBX products. Below is the structure of how to link two MyPBX in the different LANs:

Flowchart:



Application:

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

The method of connecting two MyPBX in the different location is:

1. Point the MyPBX A to MyPBX B via VOIP (SIP/IAX2) Trunking, 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) trunking.
- 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 extensions under MyPBX B using format 6xx.
- 5) Extensions under MyPBX B can make calls to extensions under MyPBX A using 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 Connect two MyPBX via SIP Trunking

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:

Note1: we must map UDP port 5060 and UDP port 10001-12000.

Note2: 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.

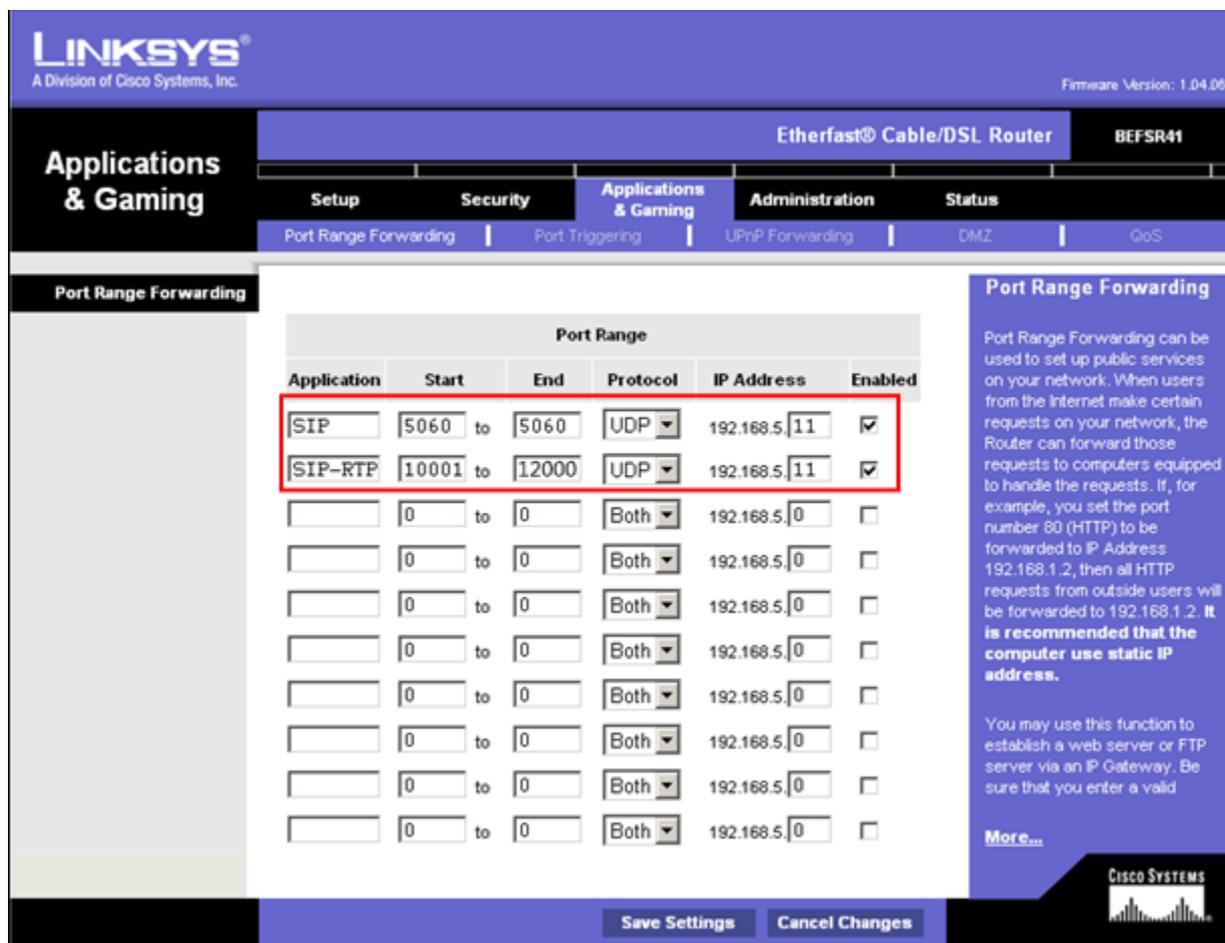


Figure 2-1

Step 2: Use the same method do port forwarding in router B for MyPBX B.

Example: The router's public IP is '202.35.22.102'.

Step 3: Set up a SIP Trunking in **MyPBX A**, connect which to MyPBX B.

Trunks-> Service Provider -> New Service Provider

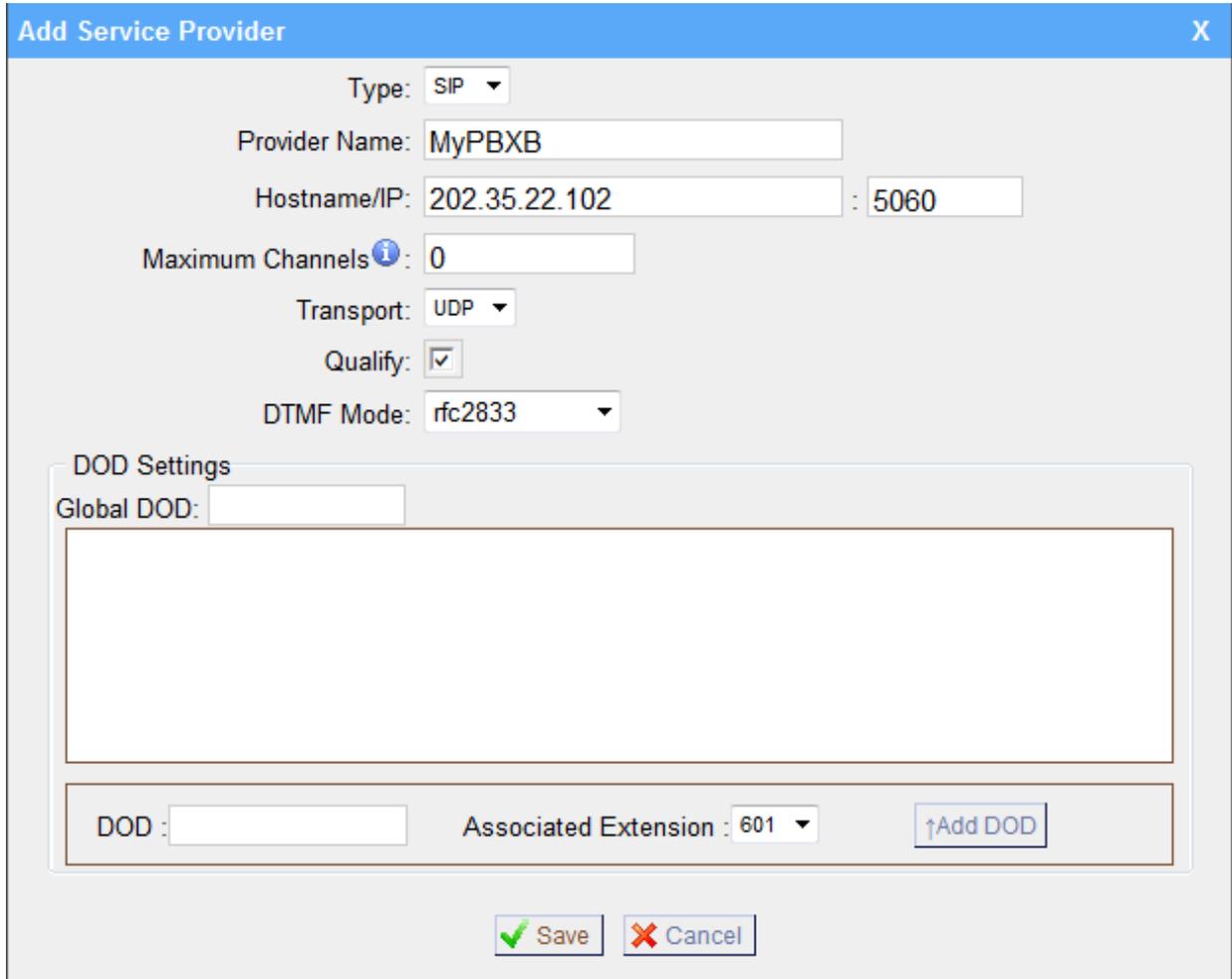


Figure 2-2

Make sure the trunk status is ok on Line status page.

MyPBX A trunk's status:

Trunks					
Status	Signal	Trunk Name	Type	Username	Port/Hostname/IP
OK (2 ms)		<u>MyPBXB</u>	SP-SIP		202.35.22.102

Figure 2-3

Step 4: Setup a SIP Trunking in **MyPBX B**, connect which to MyPBX A.

Trunks-> Service Provider -> Add Service Provider

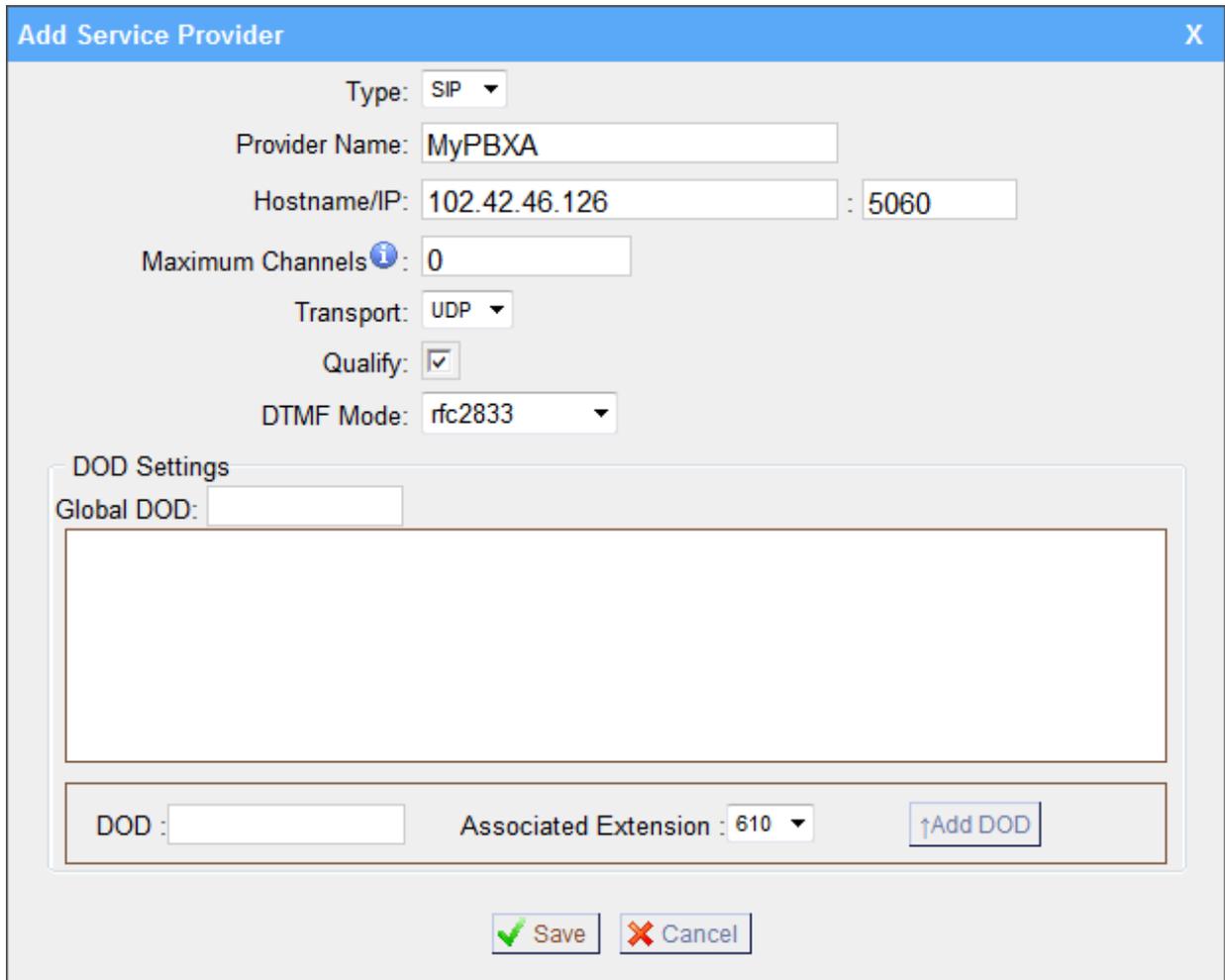


Figure 2-4

Make sure the trunk status is ok on Line status page.

MyPBX B trunk's status:

Trunks					
Status	Signal	Trunk Name	Type	Username	Port/Hostname/IP
OK (2 ms)		MyPBXA	SP-SIP		102.42.46.126

Figure 2-5

Step 5: Set up an Outbound Route in **MyPBX A**. All calls start with 6 and 3 digits will be sent to MyPBX B, this is the way to route MyPBX A's call to MyPBX B.
 In the page: Outbound Routes -> Add Outbound Route.

Edit Outbound Route - CalltoMyPBXB
X

Route Name i:

Dial Pattern i:

Strip i: digits from front

Prepend these digits i: before dialing

Password:

T.38 Support i: No

Rmemory Hunt i: No

Member Extensions i

Available Extensions		Selected
	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	500(SIP) 501(SIP) 502(SIP) 503(SIP) 504(SIP) 505(SIP) 510(FXS) 511(FXS)

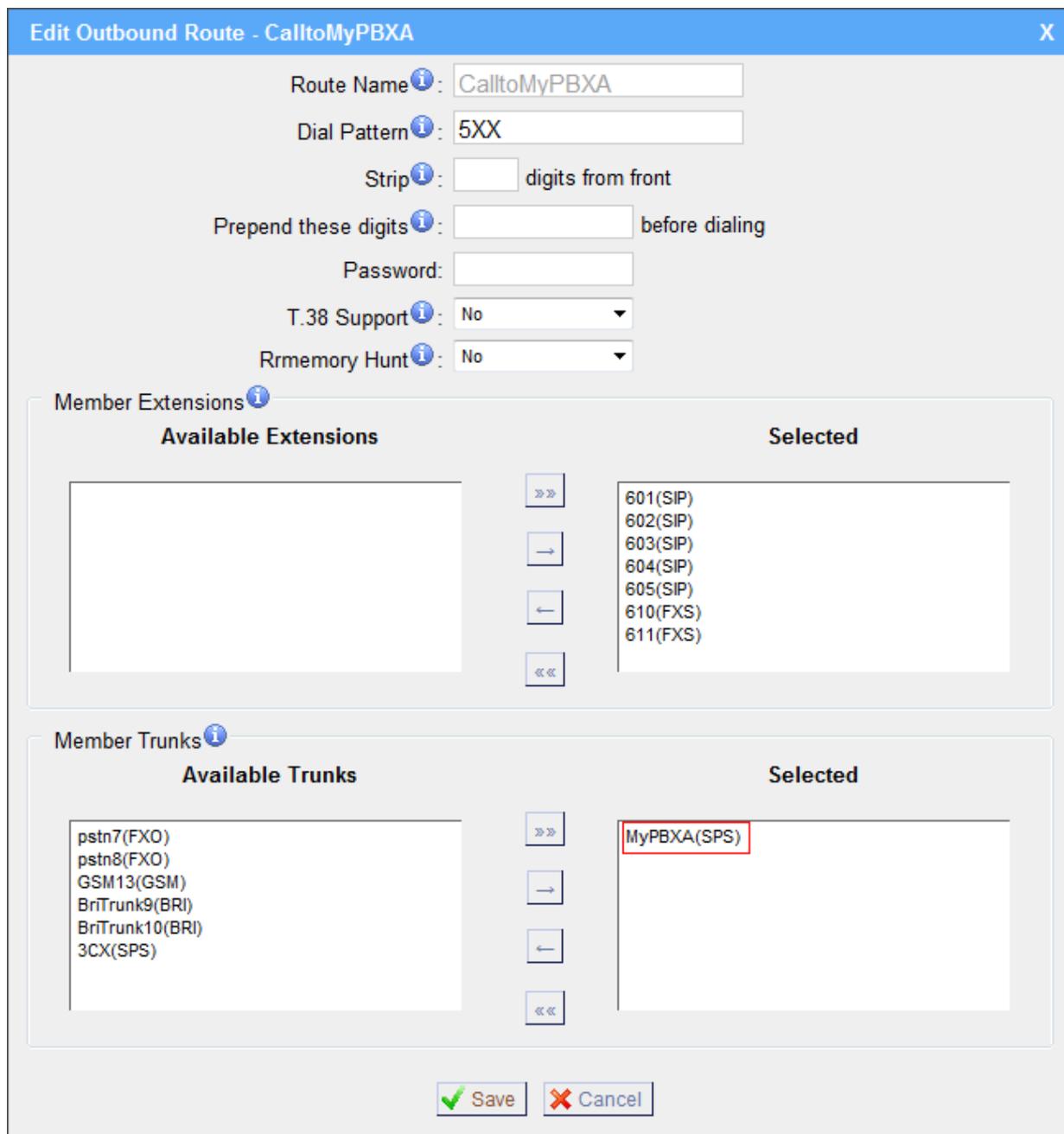
Member Trunks i

Available Trunks		Selected
pstn8(FXO) GSM13(GSM) BriTrunk9(BRI) BriTrunk10(BRI) 3CX(SPS) pstn7(FXO)	<input type="button" value="»»"/> <input type="button" value="→"/> <input type="button" value="←"/> <input type="button" value="««"/>	MyPBXB(SPS)

Figure 2-6

Save and Apply Changes.

Step 6: Set up an Outbound Route in **MyPBX B**. All calls start with 5 and 3 digits will be sent to MyPBX A, this is the way to route MyPBX B's call to MyPBX A.
In the page: Outbound Routes -> Add Outbound Route.



Edit Outbound Route - CalltoMyPBXA

Route Name: CalltoMyPBXA

Dial Pattern: 5XX

Strip: digits from front

Prepend these digits: before dialing

Password:

T.38 Support: No

Rrmemory Hunt: No

Member Extensions

Available Extensions	Selected
	601(SIP) 602(SIP) 603(SIP) 604(SIP) 605(SIP) 610(FXS) 611(FXS)

Member Trunks

Available Trunks	Selected
pstn7(FXO) pstn8(FXO) GSM13(GSM) BriTrunk9(BRI) BriTrunk10(BRI) 3CX(SPS)	MyPBXA(SPS)

Save Cancel

Figure 2-7

Save and Apply Changes.

Note: For VoIP-Trunking mode connection, there's no need to create inbound routes for MyPBXs, the outbound routes for each MyPBX are enough.

Step 7: 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 answer the calls.
- 4) Use 601 to dial 501. And you can see 501 is ringing and you can answer the calls.

2.2 Connect two MyPBX via IAX Trunking

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:

Note1: we must map UDP port 4569.

Note2: 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.

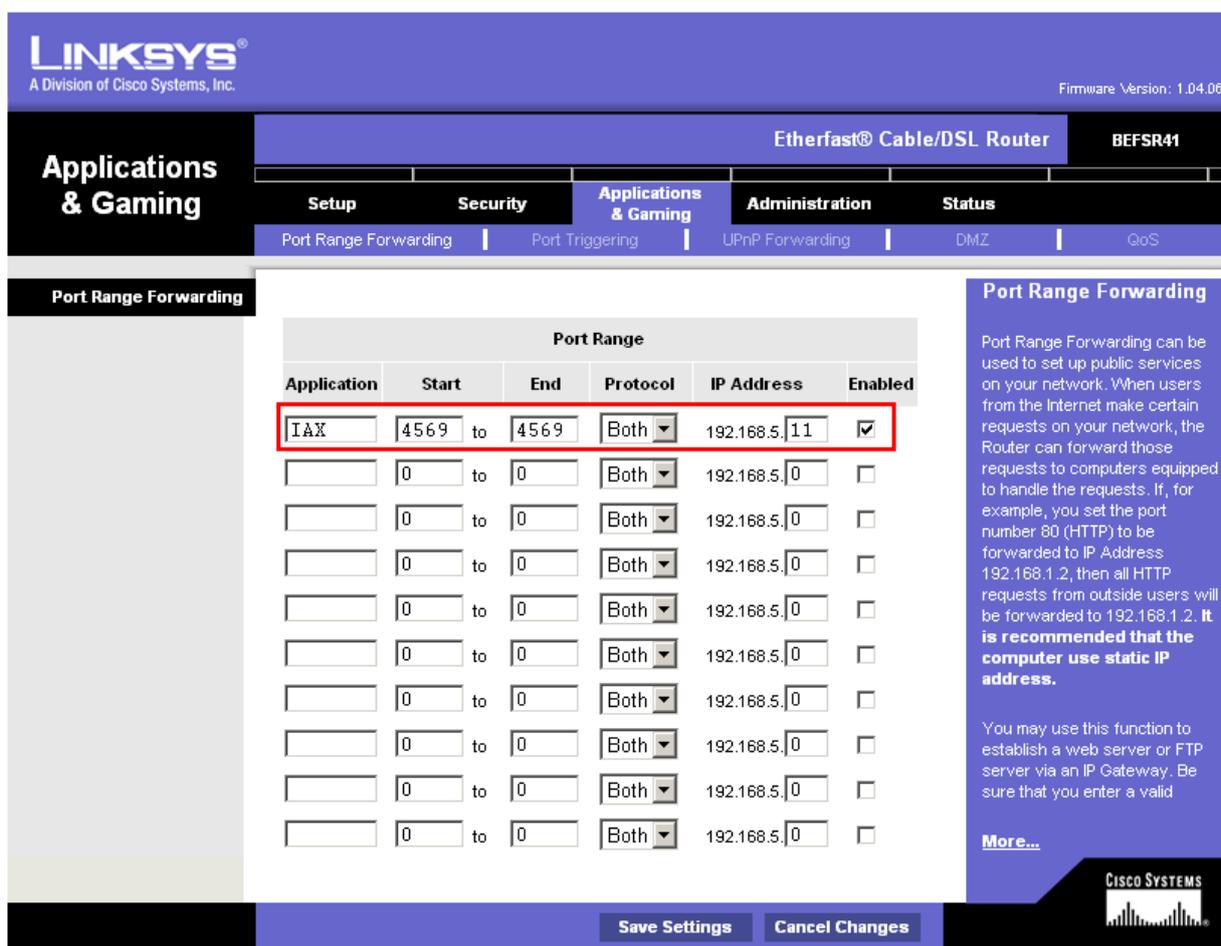


Figure 2-6

Step 2: Use the same method do port forwarding in router B for MyPBX B.

Example: The router's public IP is '202.35.22.102'.

Step 3: Set up an IAX Trunking in **MyPBX A**, connect which to MyPBX B.
 Trunks-> Service Provider -> Add Service Provider

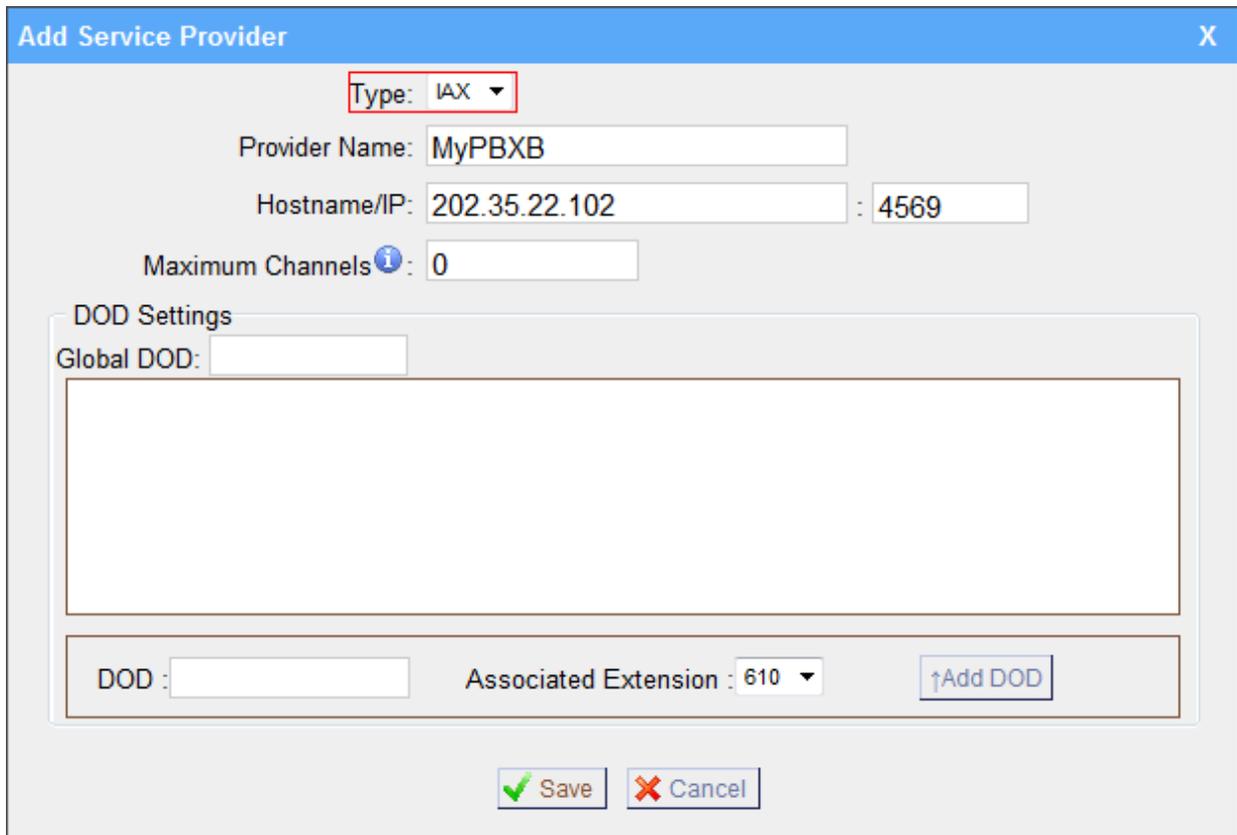


Figure 2-2

Make sure the trunk status is ok on Line status page.
 MyPBX A trunk's status:

Trunks					
Status	Signal	Trunk Name	Type	Username	Port/Hostname/IP
OK (2 ms)		MyPBXB	SP- IAX		202.35.22.102

Figure 2-3

Step 4: Set up an IAX Trunking in **MyPBX B**, connect which to MyPBX A.
Trunks-> Service Provider -> New Service Provider

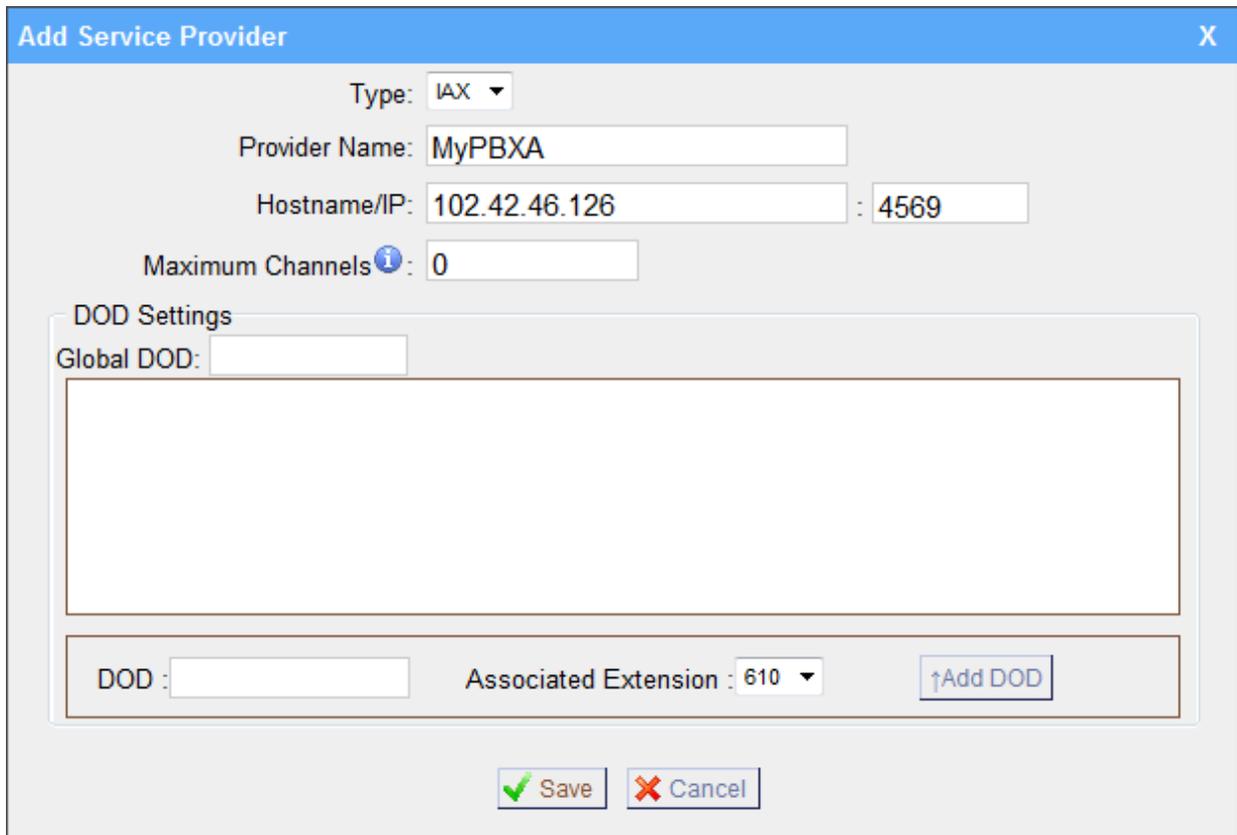


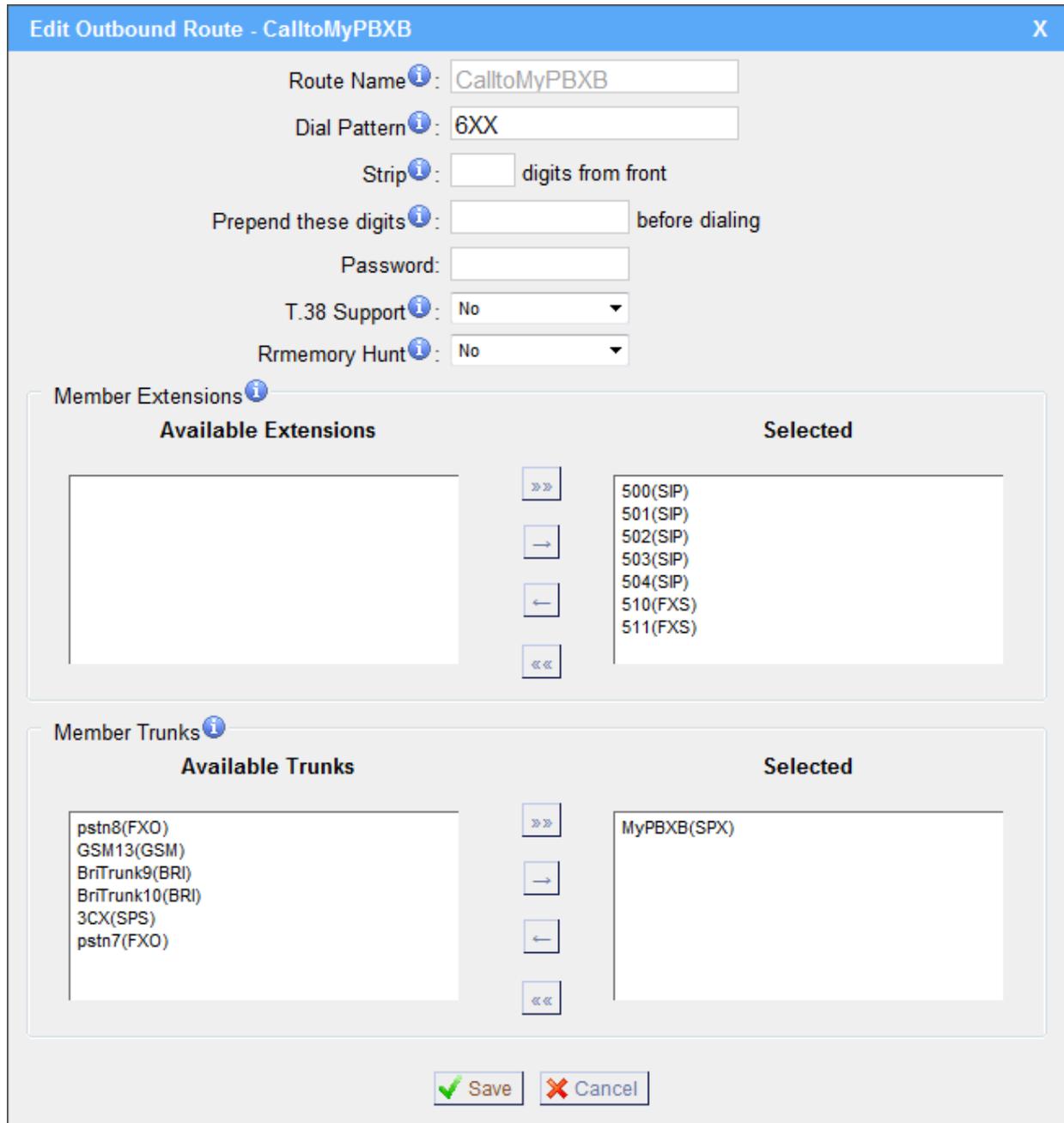
Figure 2-4

Make sure the trunk status is ok on Line status page.
MyPBX B trunk's status:

Trunks					
Status	Signal	Trunk Name	Type	Username	Port/Hostname/IP
OK (2 ms)		MyPBXA	SP-IAX		102.42.46.126

Figure 2-5

Step 5: Setup an Outbound Route in **MyPBX A**. All calls start with 6 and 3 digits will be sent to MyPBX B, this is the way to route MyPBX A's call to MyPBX B.
In the page: Outbound Routes -> Add Outbound Route.



Edit Outbound Route - CalltoMyPBXB

Route Name: CalltoMyPBXB

Dial Pattern: 6XX

Strip: 0 digits from front

Prepend these digits: before dialing

Password:

T.38 Support: No

Rmemory Hunt: No

Member Extensions

Available Extensions	Selected
	500(SIP) 501(SIP) 502(SIP) 503(SIP) 504(SIP) 510(FXS) 511(FXS)

Member Trunks

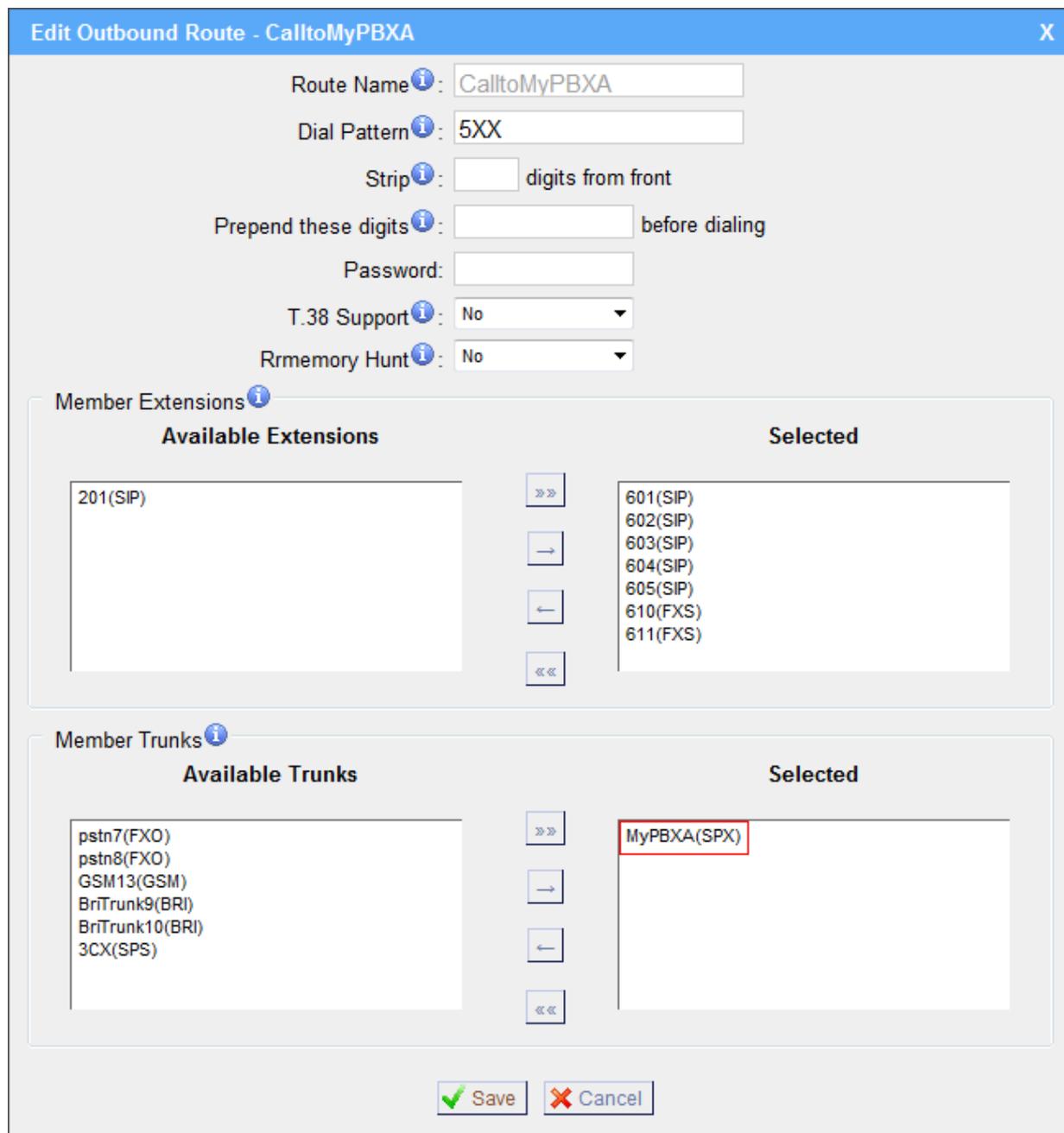
Available Trunks	Selected
pstn8(FXO) GSM13(GSM) BriTrunk9(BRI) BriTrunk10(BRI) 3CX(SPS) pstn7(FXO)	MyPBXB(SPX)

Figure 2-6

Save and Apply the Changes.

Step 6: Setup an Outbound Route in **MyPBX B**. All calls start with 5 and 3 digits will be sent to MyPBX A, this is the way to route MyPBX B's call to MyPBX A.

In the page: Outbound Routes -> Add Outbound Route.



Edit Outbound Route - CalltoMyPBXA

Route Name: CalltoMyPBXA

Dial Pattern: 5XX

Strip: 0 digits from front

Prepend these digits: before dialing

Password:

T.38 Support: No

Rrmemory Hunt: No

Member Extensions

Available Extensions	Selected
201(SIP)	601(SIP) 602(SIP) 603(SIP) 604(SIP) 605(SIP) 610(FXS) 611(FXS)

Member Trunks

Available Trunks	Selected
pstn7(FXO) pstn8(FXO) GSM13(GSM) BriTrunk9(BRI) BriTrunk10(BRI) 3CX(SPS)	MyPBXA(SPX)

Save Cancel

Figure 2-7

Save and Apply the Changes.

Note: For IAX-Trunking mode connection, there's no need to create inbound routes for MyPBXs, the outbound routes for each MyPBX are enough.

Step 7: 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 answer the calls.
- 4) Use 601 to dial 501. And you can see 501 is ringing and you can answer the calls.

<The End>