

How to Connect MyPBX to NeoGate TA FXS Gateway

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1. Introduction

This application note shows how to connect MyPBX to NeoGate TA FXS gateway. This guide has been tested with NeoGate TA3200 and MyPBX U100.

Two modes are available for NeoGate TA to connect to MyPBX, we call them VoIP trunk mode and Service Provider SIP/IAX trunk mode (SPS/SPX).

***You can simply choose one mode to achieve the connection.**

Target:

After connecting NeoGate TA3200 and MyPBX, FXS extensions will be extended on MyPBX. Once the FXS ports are connected to MyPBX, the phones connected to the FXS ports will be treated as MyPBX FXS extensions. The following features can be achieved:

1. Make calls between the analog phones and MyPBX SIP extensions;
2. Receive inbound calls on the analog phones;
3. Make outbound calls from the analog phones using trunks on MyPBX.

Description:

IP address of MyPBX: 192.168.5.250

IP address of NeoGate TA3200: 192.168.5.45

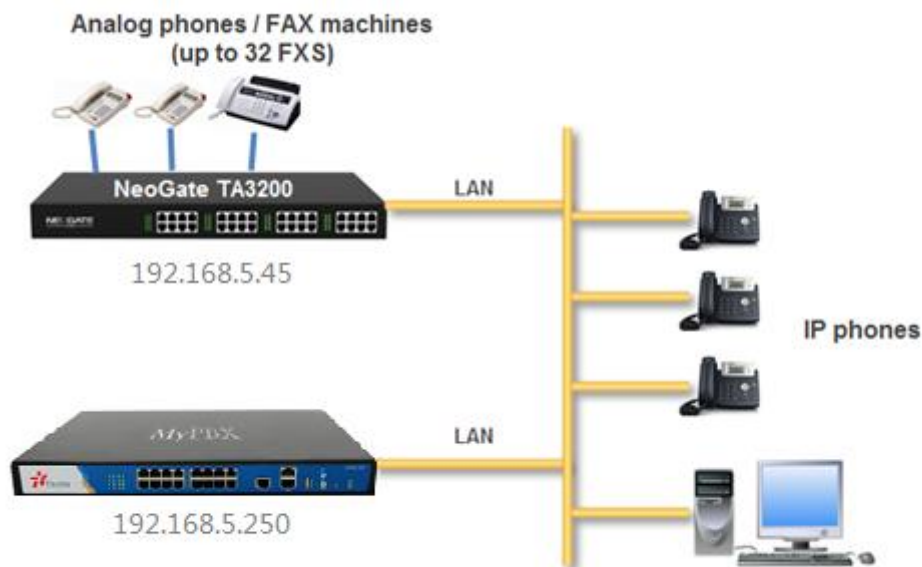


Figure 1. Connect MyPBX and NeoGate TA3200

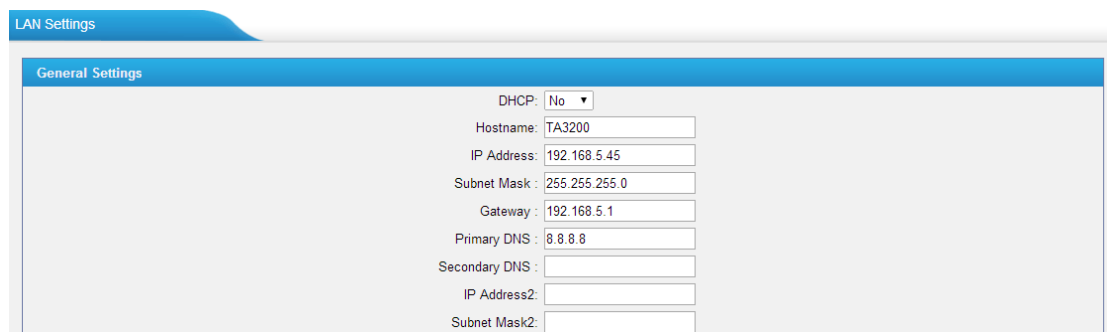
2. Preparation

NeoGate TA3200 attempts to contact a DHCP server in your network to obtain valid network settings (e.g., the IP address, subnet mask, default gateway address and DNS address) by default.

Before connecting NeoGate TA3200 to MyPBX, you need to set a static IP address from the same LAN with the MyPBX.

Steps to set static IP for NeoGate TA3200:

1. Connect one analog phone to one of the FXS ports on NeoGate TA3200;
2. Dial "***" to enter the voice menu;
3. Press "1" to check the IP address;
4. Open the browser and type in the TA3200's IP address to access TA3200;
5. Log in TA3200 and go to System→Network Preferences→LAN Settings, disable DHCP and configure the LAN network, save and apply the changes, reboot NeoGate TA3200 to take effect.



LAN Settings

General Settings

DHCP: No

Hostname: TA3200

IP Address: 192.168.5.45

Subnet Mask: 255.255.255.0

Gateway: 192.168.5.1

Primary DNS: 8.8.8.8

Secondary DNS:

IP Address2:

Subnet Mask2:

Figure 2. Configure LAN Settings on NeoGate TA3200

3. VoIP Mode

If you choose VoIP mode, the FXS ports will be registered as the MyPBX's SIP extensions, which possess the same functions as other SIP extensions on MyPBX.

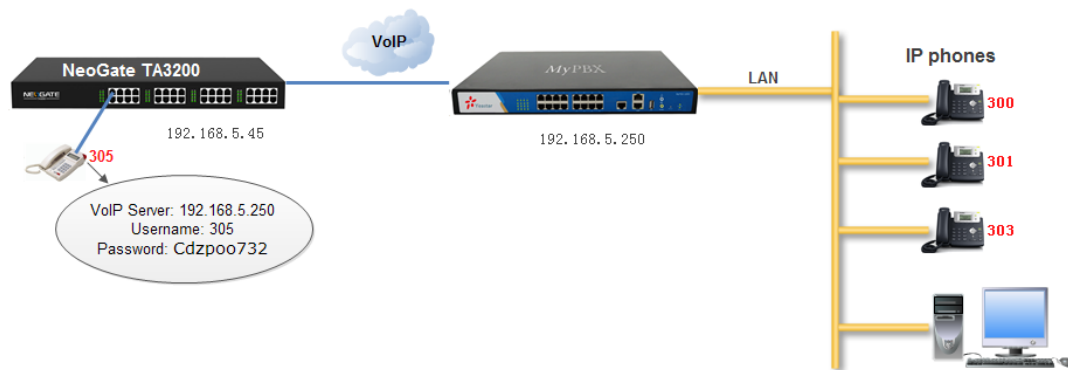


Figure 3. Connect TA3200 and MyPBX via VoIP Mode

Step 1. Create a SIP extension on MyPBX.

Path: PBX→Extensions→FXS/VoIP Extensions→Add Extension

Create an extension on MyPBX for the FXS port on the TA3200 which has connected an analog phone. Here we take extension 305 for example.

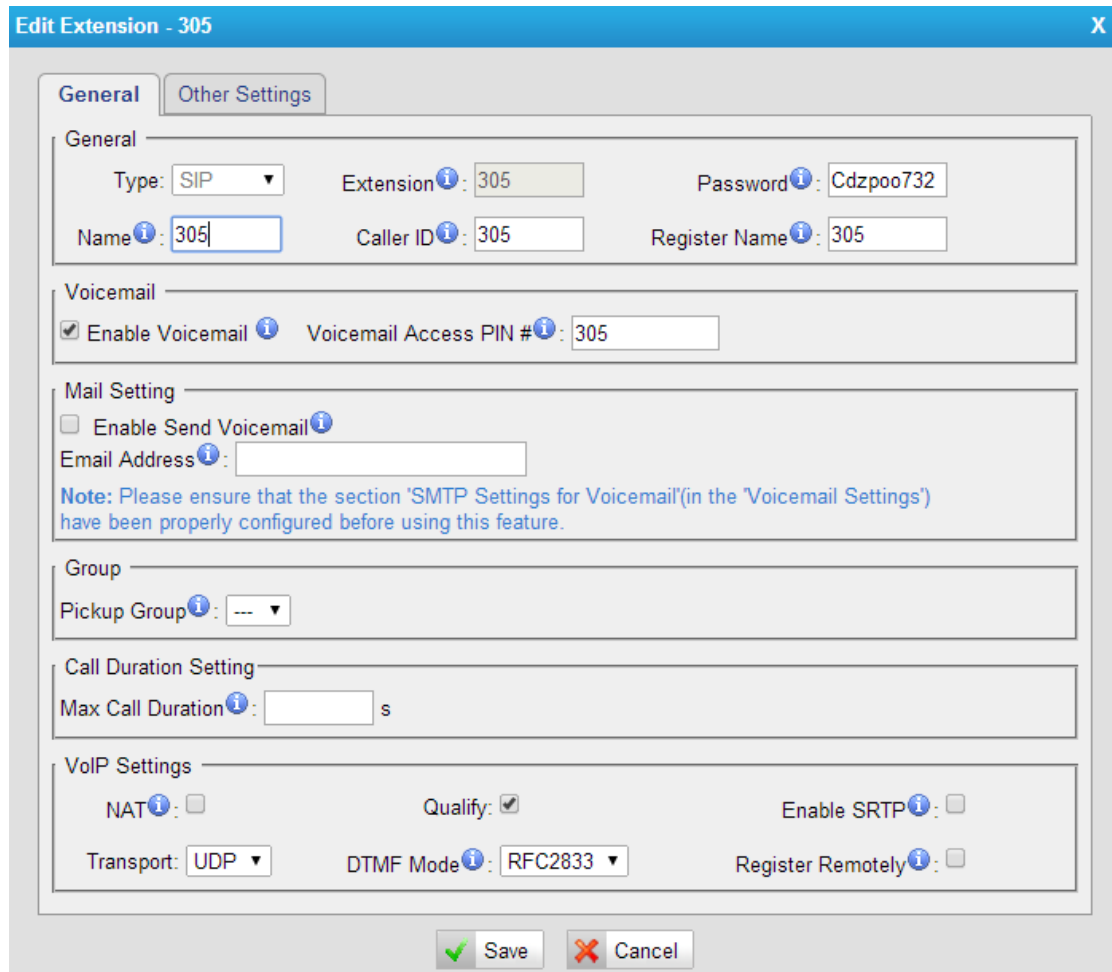


Figure 4. Create Extension 305 on MyPBX

Step 2. Configure one VoIP server template on NeoGate TA3200.

Path: Gateway→VoIP Settings→VoIP Server Settings

Check "Enable Register", fill in the MyPBX's IP address, this VoIP server template will be a VoIP mode template.

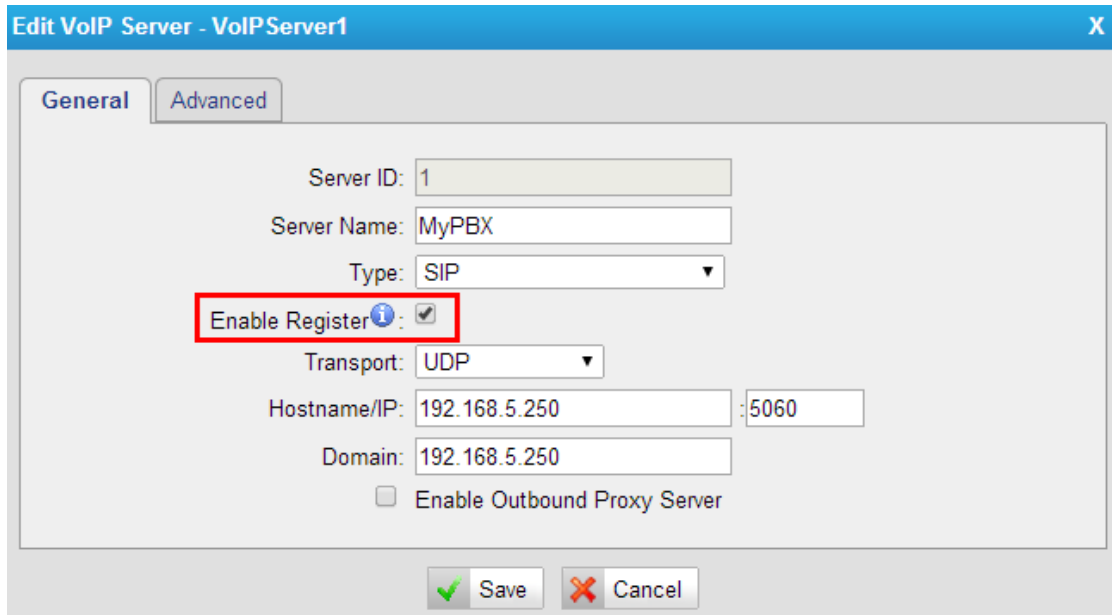


Figure 5. Configure the VoIP Server Template as VoIP Mode

Server Name: MyPBX

Type: SIP

Enable Register: checked

Transport: UDP

Hostname/IP: fill in the MyPBX IP address, 192.168.5.250

Domain: fill in the MyPBX IP address, 192.168.5.250

Step 3. Edit the Dial Pattern Template

Path: Gateway→VoIP Settings→VoIP Server Settings

The default dial pattern is set as ".", which allows you to dial any number out. In this guide, we will remain the default setting. You can change it according to your environment.

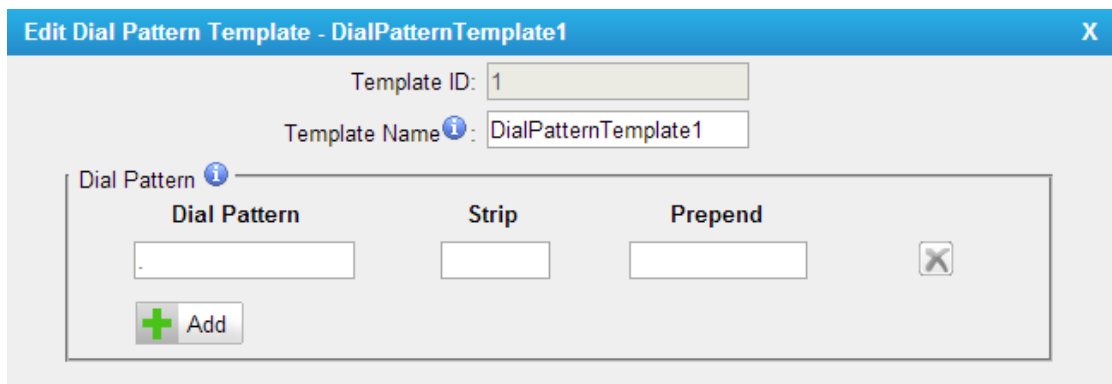


Figure 6. Edit Dial Pattern Template

Step 4. Edit the FXS port

Path: Gateway→FXS Port List→FXS Port List

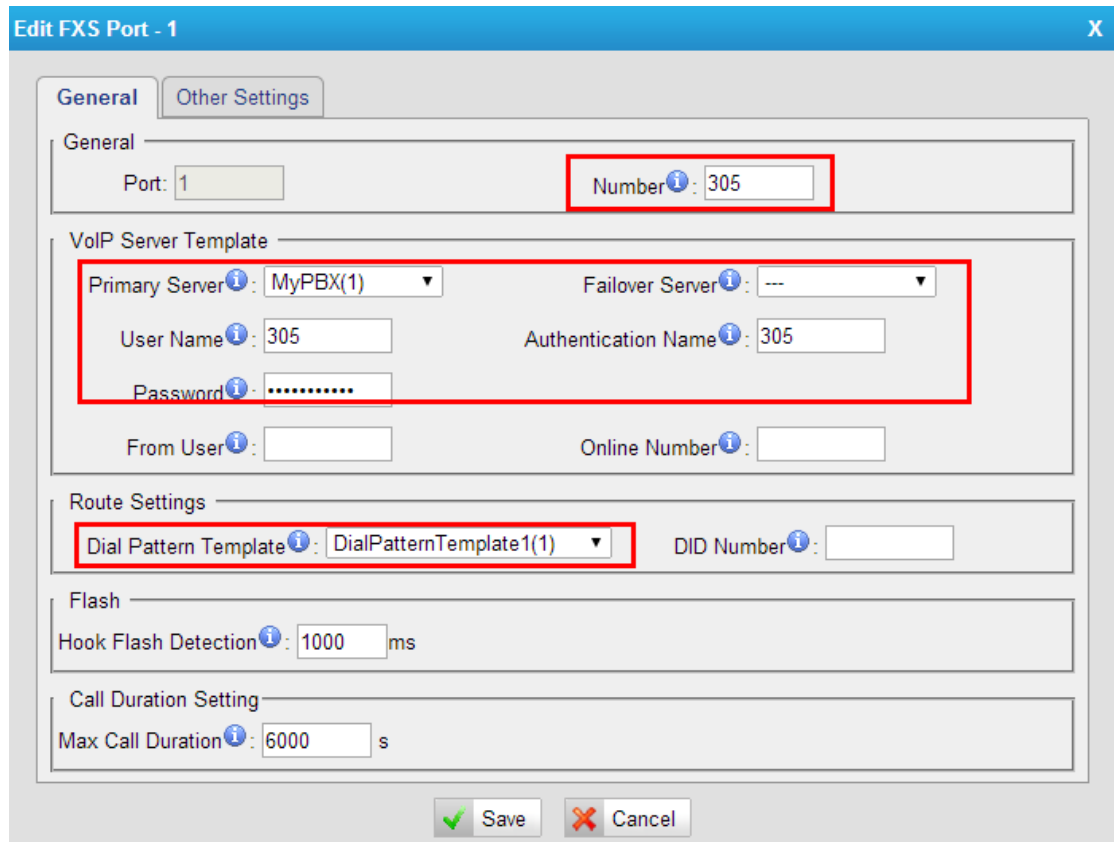
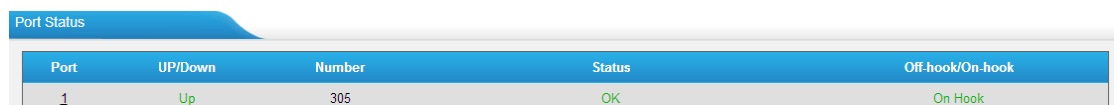


Figure 7. Edit the FXS Port

- Number:** the extension number as the one you created on MyPBX, 305.
- Primary Server:** choose MyPBX(1), the VoIP server template configured in Step 2.
- User Name:** the extension username on MyPBX, 305.
- Authentication Name:** the extension authentication name on MyPBX, 305.
- Password:** the authentication password of the extension on MyPBX, Cdzpoo732.
- Dial Pattern Template:** choose the Dial Pattern Template, DialPatternTemplate1(1).

Save and apply the changes, and you will see the port status is "Registered" on "Port Status" page.

Path: Status→System Status→Port Status



Port	UP/Down	Number	Status	Off-hook/On-hook
1	Up	305	OK	On Hook

Figure 8. Port Status

Now, you are able to use the analog phone which is connected to NeoGate TA's FXS port 1 to make calls and receive calls.

Note: Outgoing calls to MyPBX extensions and to external numbers through trunks on MyPBX all should match the dial pattern, or the calls will fail.

4. SPS/SPX Mode

If you choose this mode to connect NeoGate TA3200 and MyPBX, the FXS port will be registered as a Service Provider SIP/IAX (SPS/SPX) trunk to the MyPBX. One SPS/SPX trunk to NeoGate TA also should also be created on MyPBX. In this guide, we use SIP protocol, configure one VoIP server template as SPS mode on NeoGate TA3200 and create one Service Provider SIP trunk on MyPBX.

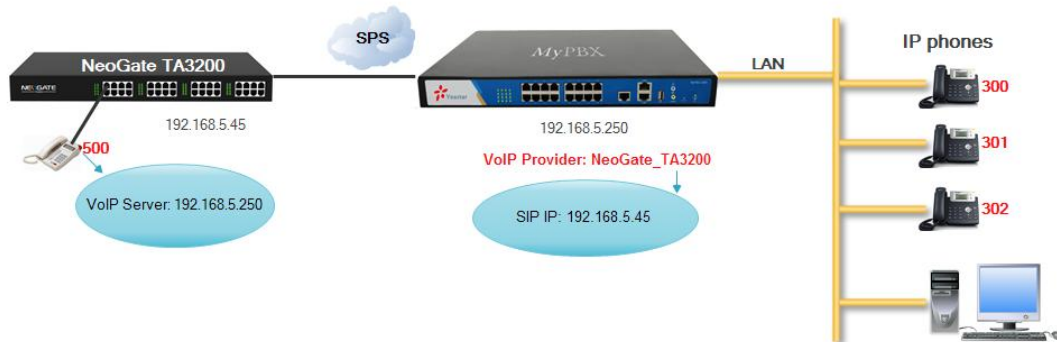


Figure 9. Connect TA3200 and MyPBX via SPS Mode

Step 1. Create a Service Provider SIP Trunk on MyPBX

Path: PBX→Trunks→VoIP Trunk→Service Provider

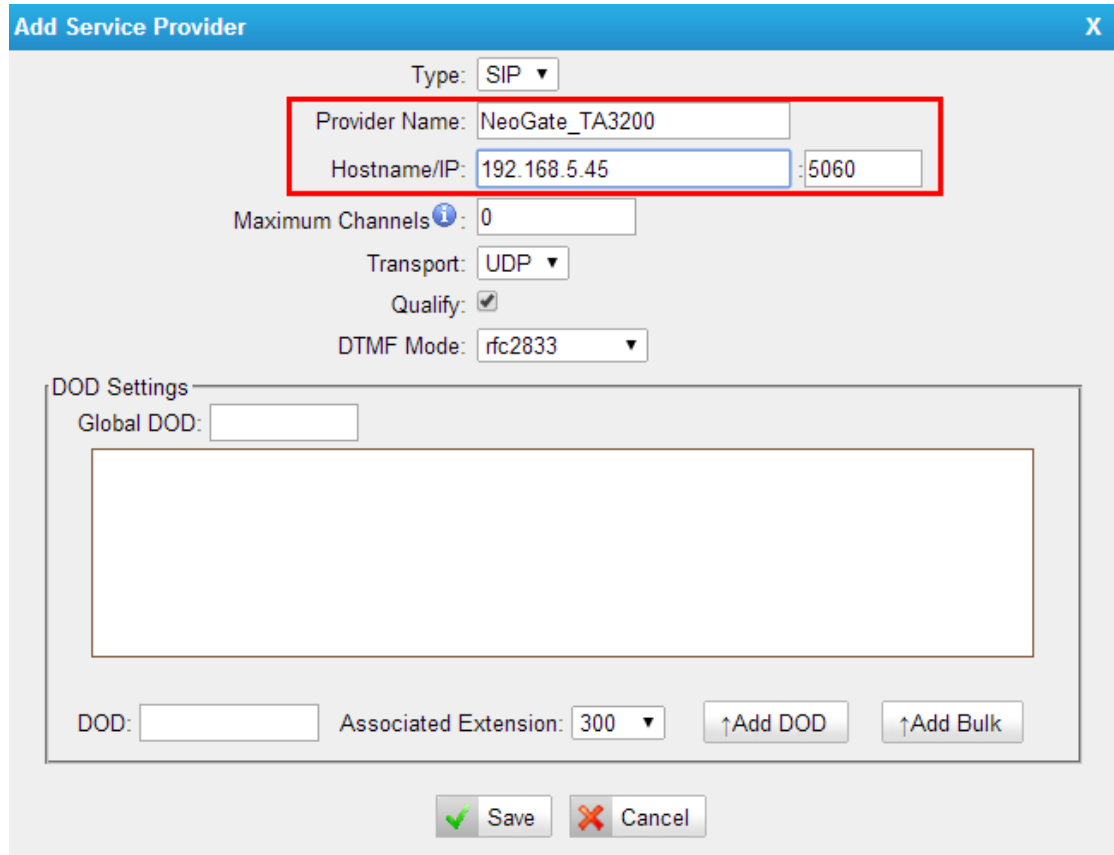


Figure 10. Add a SIP Trunk

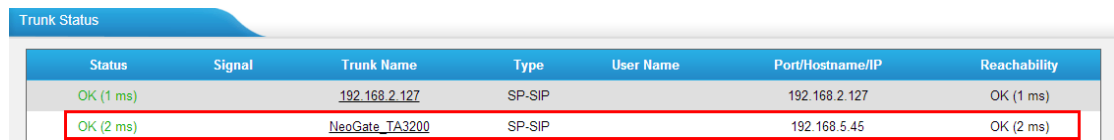
Type: SIP

Provider Name: NeoGate_TA3200

Hostname/IP: fill in NeoGate TA3200's IP address, 192.168.5.45.

Save and apply the changes, we can check the status of this trunk, it should be OK.

Path: Status→Line Status→Trunk Status



Status	Signal	Trunk Name	Type	User Name	Port/Hostname/IP	Reachability
OK (1 ms)		192.168.2.127	SP-SIP		192.168.2.127	OK (1 ms)
OK (2 ms)		NeoGate_TA3200	SP-SIP		192.168.5.45	OK (2 ms)

Figure 11. SIP Trunk Status

Step 2. Edit one VoIP Server template as SPS mode.

Path: Gateway→VoIP Settings→VoIP Server Settings

Do not check "Enable Register", choose SIP protocol, and fill in the MyPBX IP address, the VoIP server template will be configured as SPS mode.

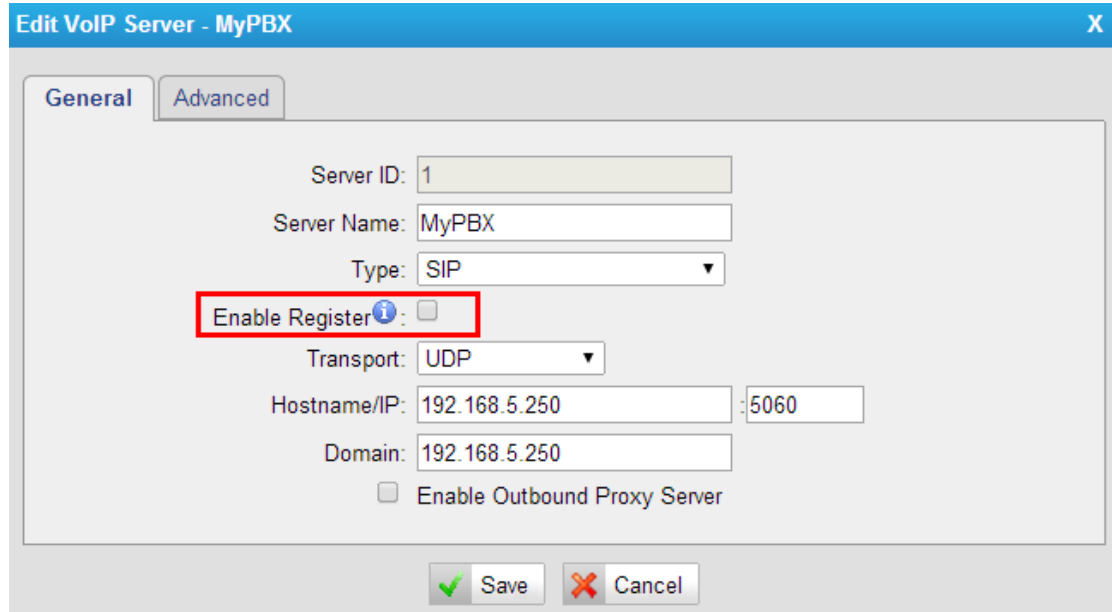


Figure 12. Configure the VoIP Server Template as SPS Mode

Server Name: MyPBX

Type: SIP

Enable Register: DO NOT check

Transport: UDP

Hostname/IP: fill in MyPBX's IP address, 192.168.5.250

Domain: fill in MyPBX's IP address, 192.168.5.250

Step 3. Edit the Dial Pattern Template

Path: Gateway→VoIP Settings→VoIP Server Settings

The default dial pattern is set as ".", which allows you to dial any number out. In this guide, we will remain the default setting. You can change it according to your environment.

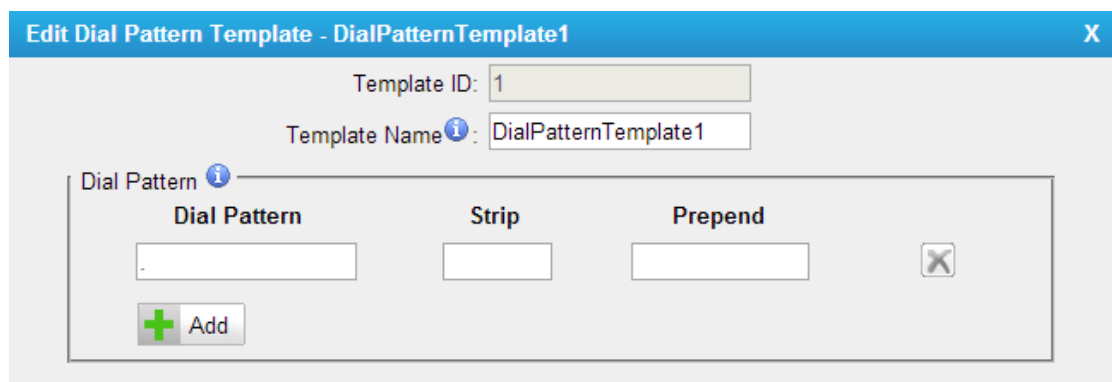


Figure 13. Edit the Dial Pattern Template

Step 4. Edit the FXS port

Path: Gateway→FXS Port List→FXS Port List

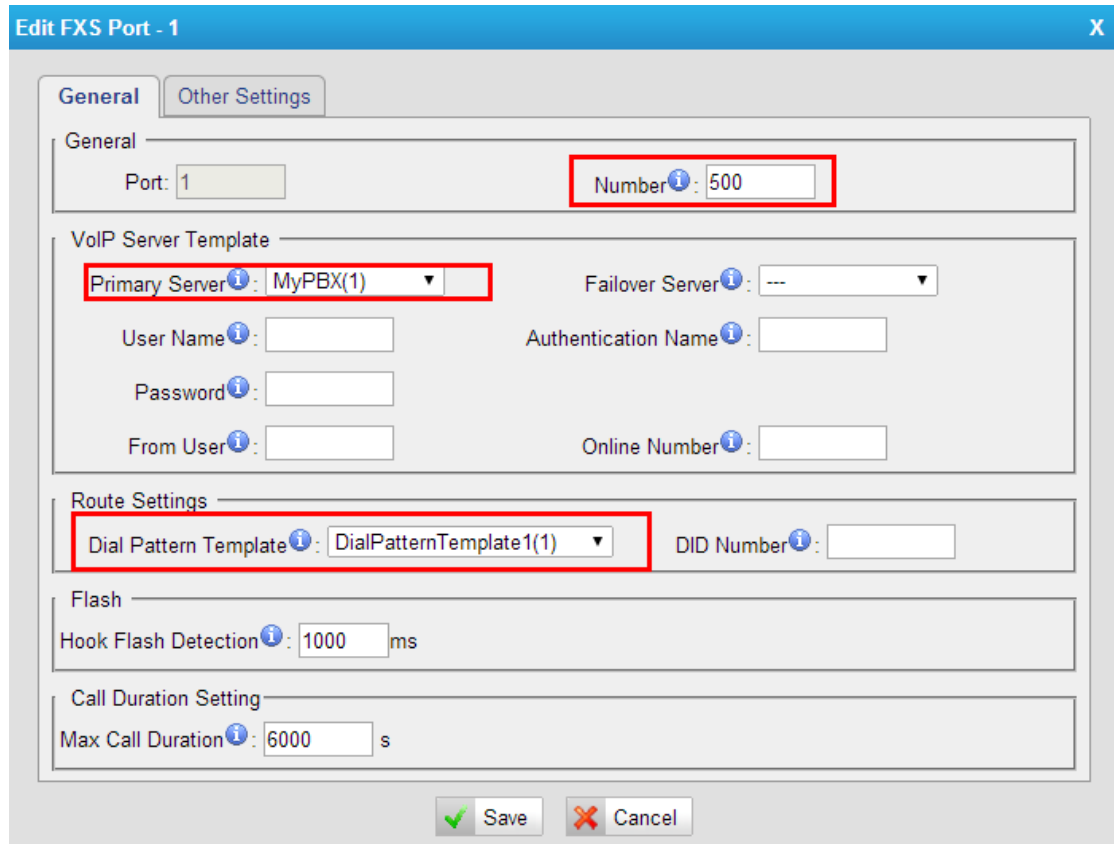


Figure 14. Edit the FXS Port

Number: set a number for the FXS port. The number should be different from the extension numbers on MyPBX. Here we set number 500 for FXS port 1.

Primary Server: choose MyPBX(1), the VoIP server template configured on Step 2.

Dial Pattern Template: choose the Dial Pattern Template, DialPatternTemplate1(1).

Note: You don't need to fill in any authentication name and authentication password on the FXS port edit page if you choose SPS/SPX mode.

After saving and applying the changes, you will see the trunk is "OK" in "Line Status".

Path: Status→System Status→Port Status



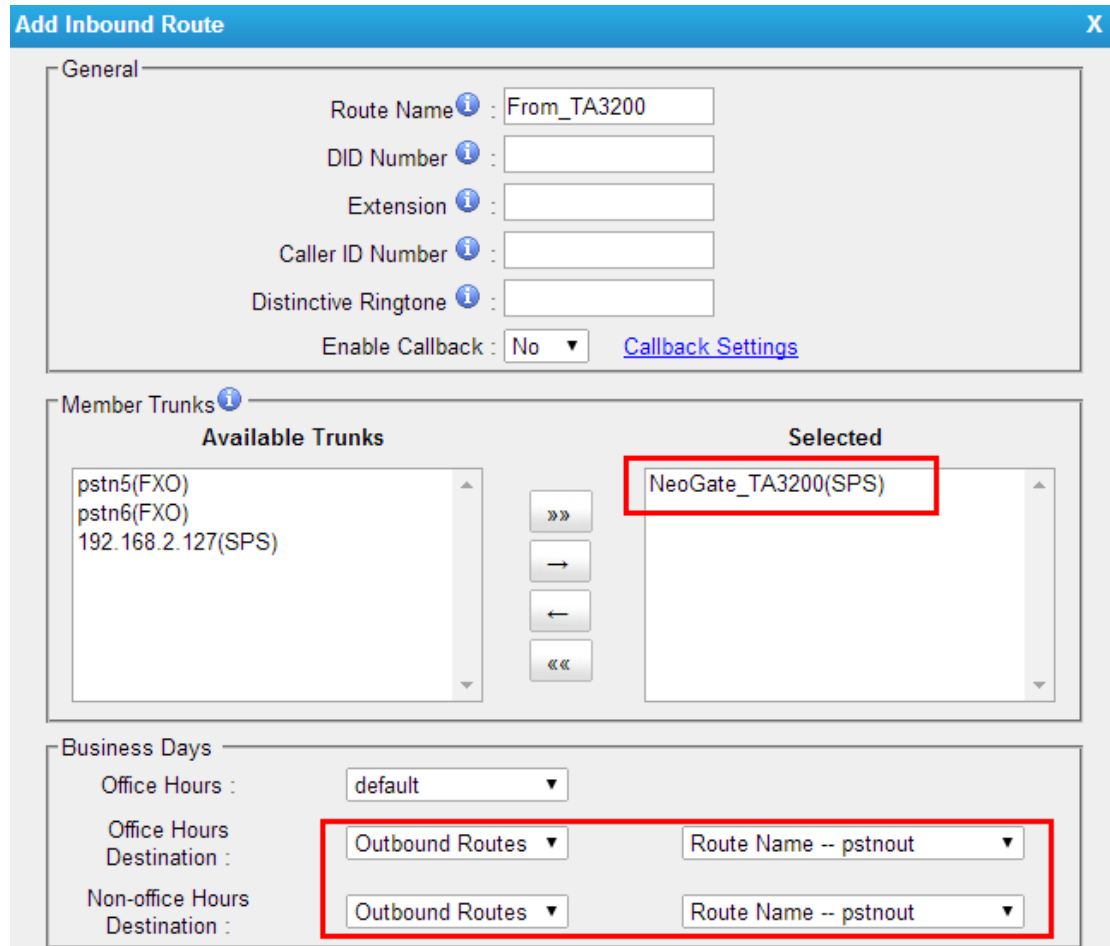
Port	UP/Down	Number	Status	Off-hook/On-hook
1	Up	500	OK	On Hook

Figure 15. FXS Port Status

Now, you can call MyPBX extensions directly.

Step 4. Make external calls from TA3200.

If you want to make external calls from TA3200 through the trunk on MyPBX, you should create an inbound route on MyPBX.



The screenshot shows the 'Add Inbound Route' configuration interface. It is divided into three main sections: General, Member Trunks, and Business Days. In the General section, the Route Name is 'From_TA3200'. In the Member Trunks section, 'NeoGate_TA3200(SPS)' is selected in the 'Selected' list. In the Business Days section, both 'Office Hours Destination' and 'Non-office Hours Destination' are set to 'Outbound Routes', and the 'Route Name' for both is 'pstnout'.

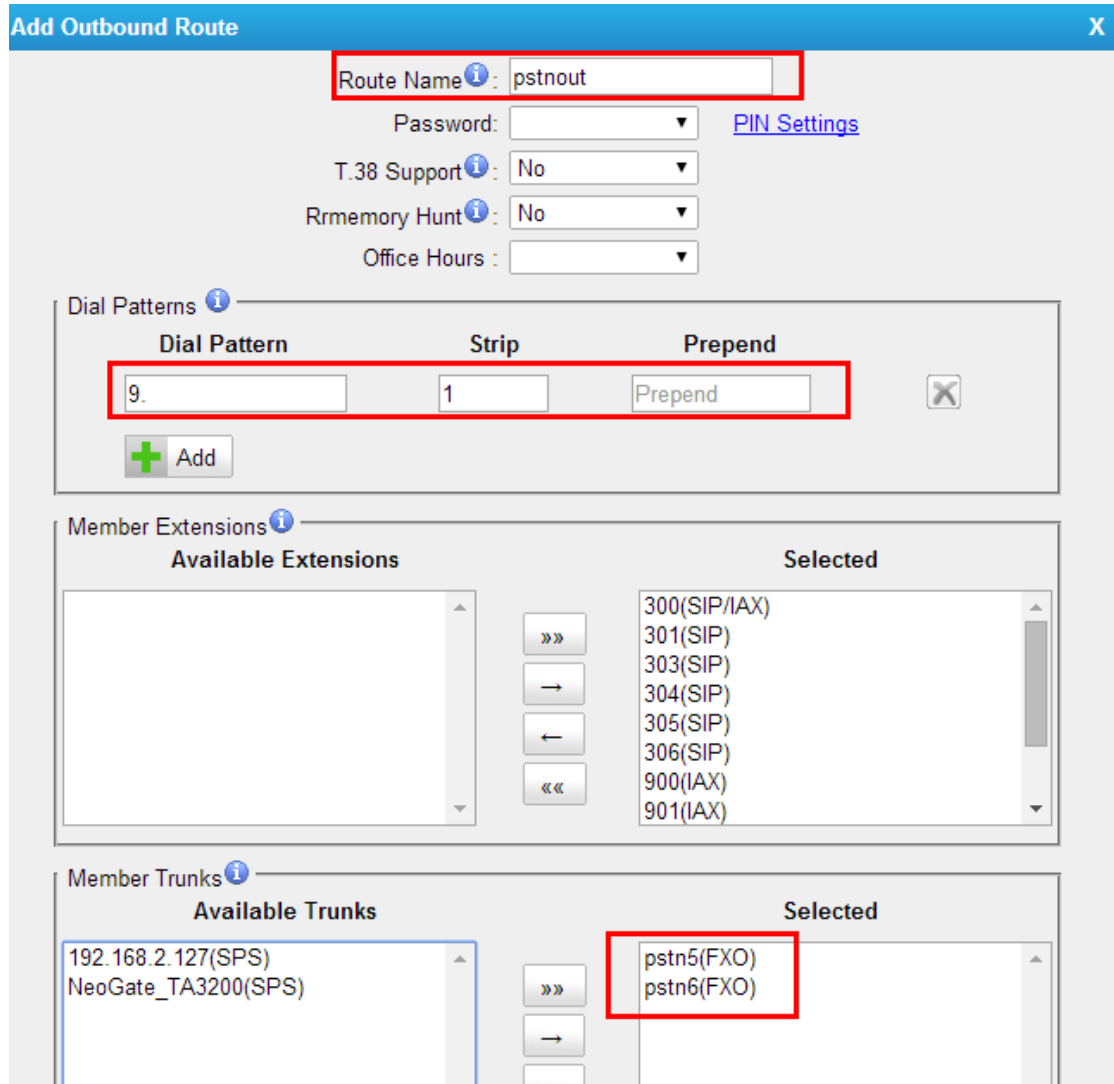
Figure 16. Add an Outbound Route

Route Name: define a name for the inbound route, From_TA3200.

Selected Trunks: select the trunk connected to TA3200, which is created on step 1, NeoGate_TA3200.

Office Hours Destination: choose "Outbound Routes", and select one outbound route, here we choose outbound route "pstnout" to allow the external call goes through the PSTN line.

Non-office Hours Destination: choose "Outbound Routes", and select one outbound route, here we choose outbound route "pstnout" to allow the external call goes through the PSTN line.



Add Outbound Route

Route Name: pstnout

Password: [PIN Settings](#)

T.38 Support: No

Rmemory Hunt: No

Office Hours:

Dial Patterns

Dial Pattern	Strip	Prepend
9.	1	Prepend

[+ Add](#)

Member Extensions

Available Extensions	Selected
	300(SIP/IAX)
	301(SIP)
	303(SIP)
	304(SIP)
	305(SIP)
	306(SIP)
	900(IAX)
	901(IAX)

Member Trunks

Available Trunks	Selected
192.168.2.127(SPS)	pstn5(FXO)
NeoGate_TA3200(SPS)	pstn6(FXO)

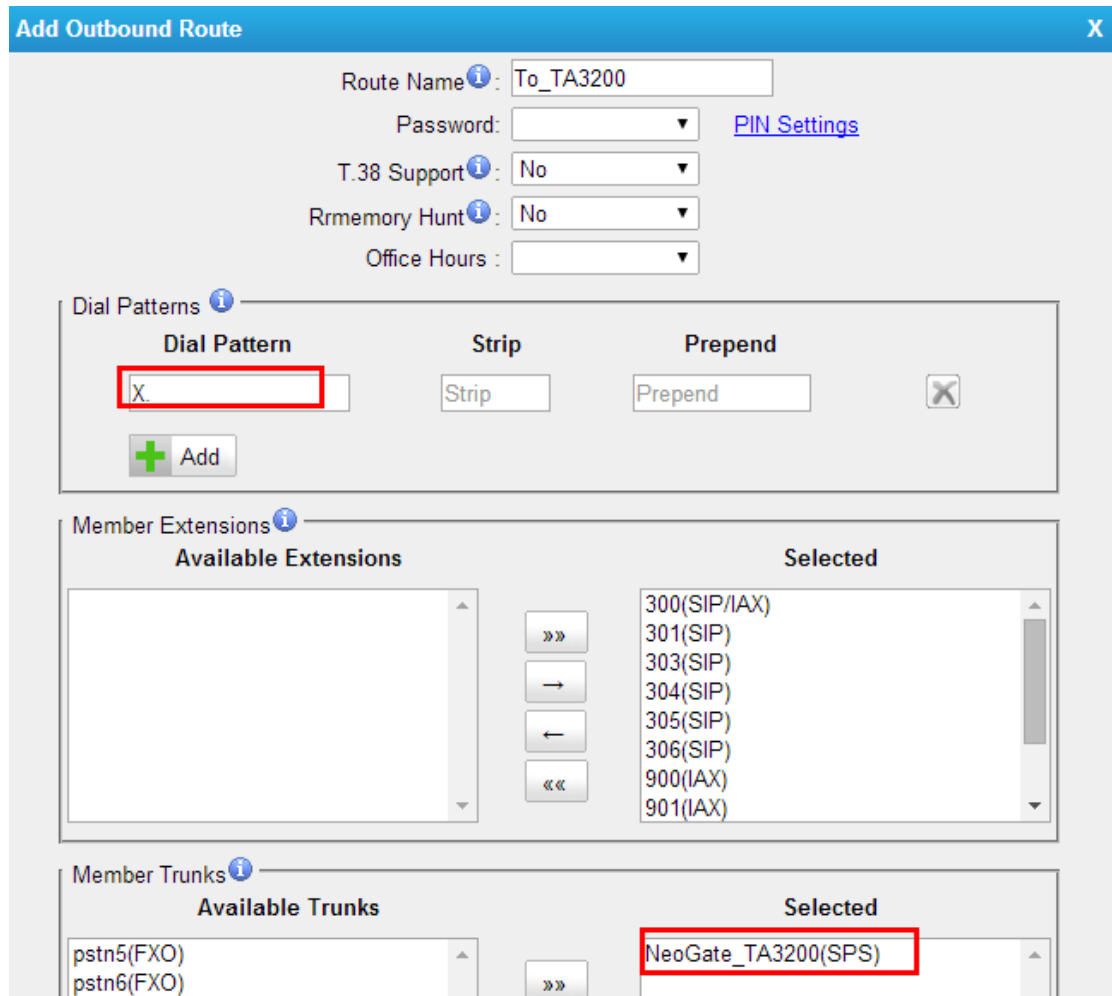
Figure 17. Outbound Route "pstnout"

To make outbound calls from TA3200, you should dial the number which matches the dial pattern on TA3200 and the dial pattern on MyPBX outbound route. In this guide, the dial pattern on TA3200 is ".", which allows any number; the dial pattern on MyPBX outbound route is "9.". So you need to dial "9" before the phone number to make a successful outbound call through the PSTN line.

Step 5. Make calls from MyPBX to TA3200.

To make calls from MyPBX to NeoGate TA3200, you need to create one outbound route on MyPBX.

Path: PBX→Outbound Call Control→Outbound Routes



Add Outbound Route X

Route Name ⁱ: To_TA3200

Password: [PIN Settings](#)

T.38 Support ⁱ: No

Rrmemory Hunt ⁱ: No

Office Hours:

Dial Patterns ⁱ

Dial Pattern	Strip	Prepend	
X.	Strip	Prepend	X

[+](#) Add

Member Extensions ⁱ

Available Extensions		Selected
	»»	300(SIP/IAX)
	→	301(SIP)
	←	303(SIP)
	««	304(SIP)
		305(SIP)
		306(SIP)
		900(IAX)
		901(IAX)

Member Trunks ⁱ

Available Trunks		Selected
pstn5(FXO)	»»	NeoGate_TA3200(SPS)
pstn6(FXO)		

Figure 18. Add Outbound Route

Set the dial pattern as X., choose the trunk "NeoGate_TA3200" which is created above. In this guide, you should dial 500 to call the phone which is connected to TA3200 FXS port 1.

<End>