Yeastar TG Gateway Integration Guide

Yeastar P-Series Appliance Edition

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Yeastar TG GSM Gateway Integration Guide

This guide provides a configuration example to show you how to extend GSM/3G/4G trunks for Yeastar P-Series PBX System.

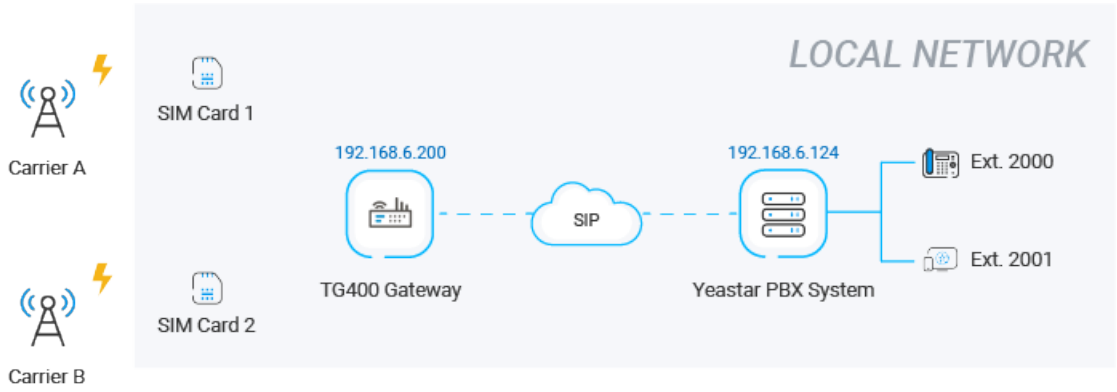
Background information

The instructions provided in this guide are based on the following test environment.

Equipment	Firmware Version	IP Address
Yeastar P560 VoIP PBX	37.2.0.81	192.168.6.124
Yeastar TG400 GSM Gateway	91.3.0.21	192.168.6.200

There are two SIM cards installed in Yeastar TG400 GSM Gateway. The following table shows mobile number prefixes of the two carriers.

SIM Card	Carrier	Mobile Prefix
SIM Card 1	Carrier A	92
SIM Card 2	Carrier B	10



Objectives

This guide provides instructions based on the above scenario to help you achieve the following objectives:

- Connect Yeastar P-Series PBX System and Yeastar TG400 Gateway
- Make Outbound Calls through a Designated GSM Trunk
- Route Calls from Different Carriers to Different Destinations

Connect Yeastar P-Series PBX System and Yeastar TG400 Gateway

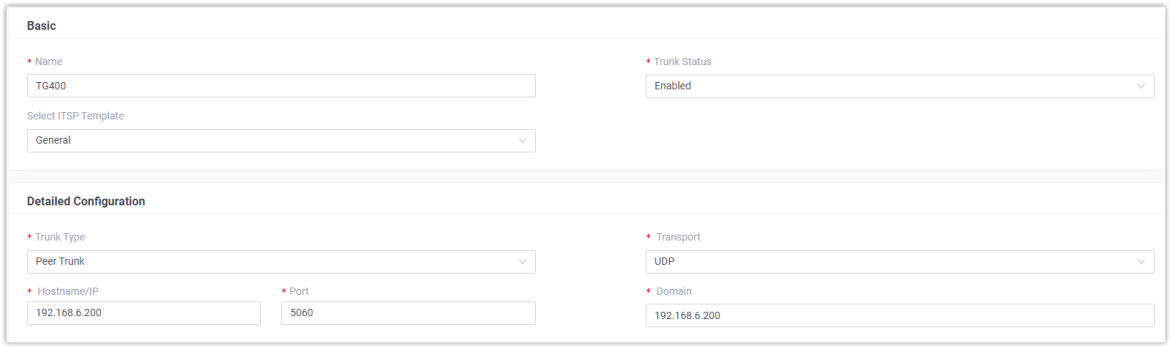
This topic describes how to connect Yeastar P-Series PBX System and Yeastar TG400 gateway, so as to extend GSM/3G/4G trunks on the PBX.

Procedure

- Step 1. Create a SIP peer trunk on Yeastar PBX system
- Step 2. Create a SIP peer trunk on Yeastar TG400 gateway

Step 1. Create a SIP peer trunk on Yeastar PBX system

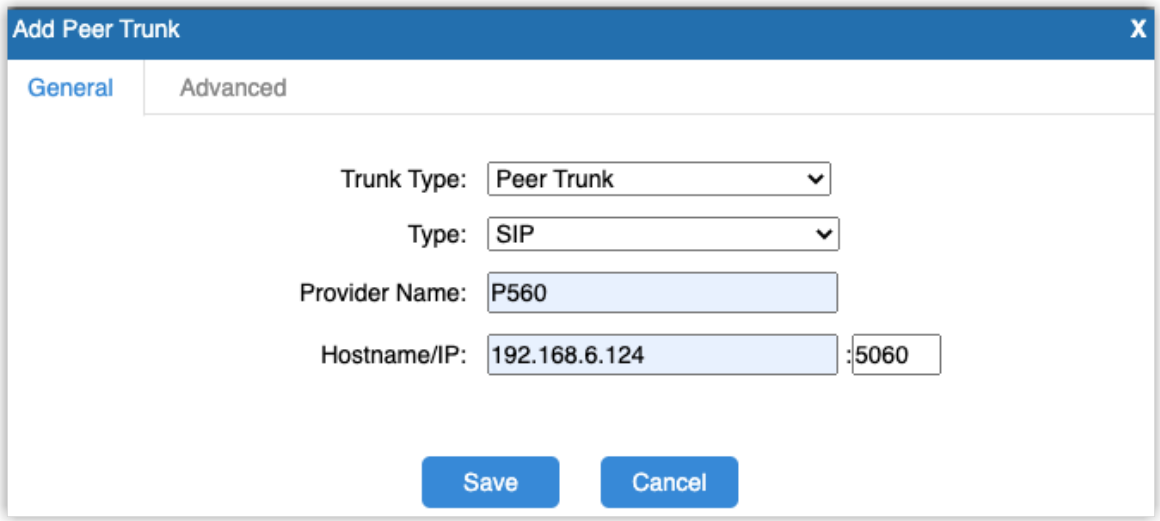
1. Log in to PBX web portal, go to **Extension and Trunk > Trunk**, click **Add**.
2. Configure the trunk settings.



   - **Name**: Enter a name to help you identify it. For example, `TG400`.
   - **Trunk Status**: Select **Enabled**.
   - **Select ITSP Template**: Select **General**.
   - **Trunk Type**: Select **Peer Trunk**.
   - **Transport**: Select **UDP**.
   - **Hostname/IP**: Enter the IP address of Yeastar TG400 gateway. In this example, enter `192.168.6.200`.
   - **Port**: Enter the SIP port of Yeastar TG400 gateway. In this example, enter the default port `5060`.
   - **Domain**: Enter the IP address of Yeastar TG400 gateway. In this example, enter `192.168.6.200`.
3. Click **Save** and **Apply**.

Step 2. Create a SIP peer trunk on Yeastar TG400 gateway

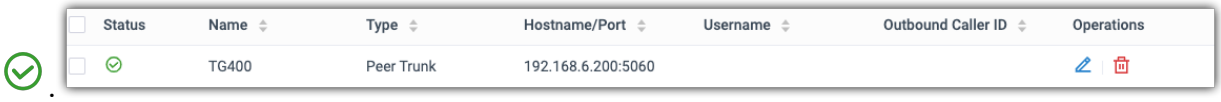
1. Log in to gateway web interface, go to **Gateway > VoIP Settings > VoIP Trunk**, click **Add VoIP Trunk**.
2. In the pop-up window, configure the trunk settings:



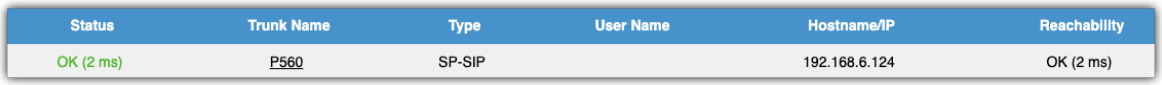
   - **Trunk Type**: Select **Peer Trunk**.
   - **Type**: Select **SIP**.
   - **Provider Name**: Enter a name to help you identify it.
   - **Hostname/IP**: Enter the IP address of Yeastar PBX system and the SIP port. In this example, enter `192.168.6.124` and the default SIP port `5060`.
3. Click **Save** and **Apply Changes**.

Result

- On PBX web portal (**Extension and Trunk > Trunk**), the trunk status displays



- On TG400 gateway web interface (**Status > System Status > Trunk Status**), the trunk status displays "OK".



It is concluded that Yeastar PBX system is connected to Yeastar TG400 gateway; 4 GSM trunks are extended on Yeastar PBX system.

What to do next

- To make outbound calls through the extended GSM trunk, see Make Outbound Calls through a Designated GSM Trunk.
- To receive inbound calls through the extended GSM trunk, see Route Calls from Different Carriers to Different Destinations.

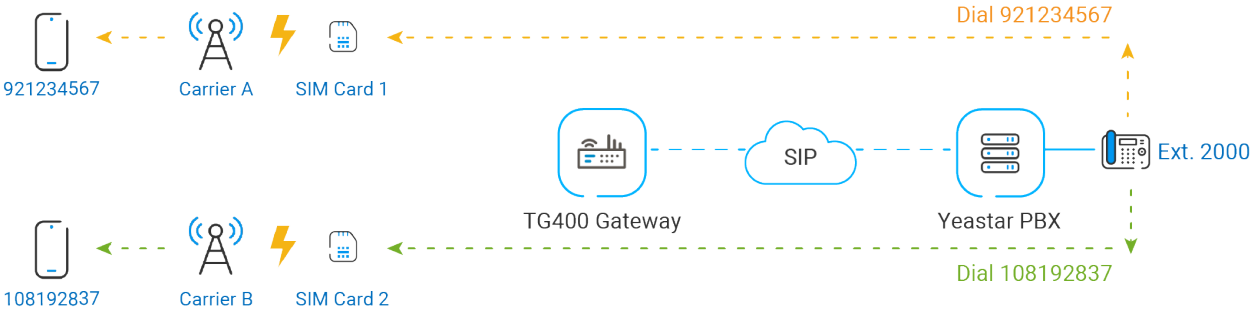
Make Outbound Calls through a Designated GSM Trunk

Many carriers have call plans that let you make free or low-cost calls between other numbers through the same carrier network. This topic describes how to make outbound calls through designated GSM trunks to save call charges.

Scenario

The instructions provided in this topic are based on the following scenario:

Outbound Number Format	Trunk	Carrier
Number with prefix 92	GSM trunk 1	Carrier A
Number with prefix 10	GSM trunk 2	Carrier B



Procedure

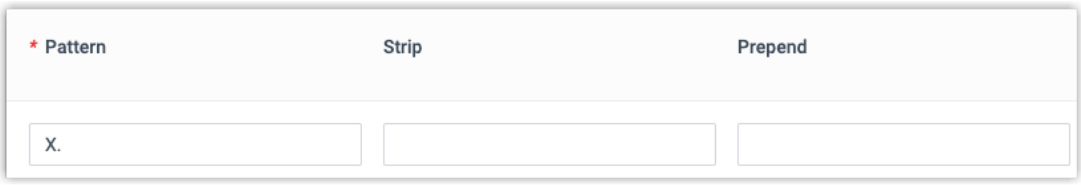
- Step 1. Create an outbound route on Yeastar PBX system
- Step 2. Create two 'IP to Mobile' routes on Yeastar TG400 gateway

- Step 3. Make test calls from Yeastar PBX system

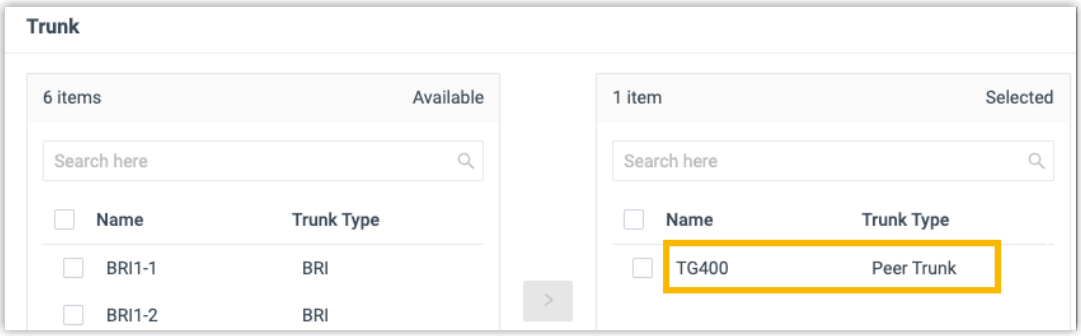
Step 1. Create an outbound route on Yeastar PBX system

On Yeastar PBX system, create an outbound route to allow PBX users to call through Yeastar TG400 gateway.

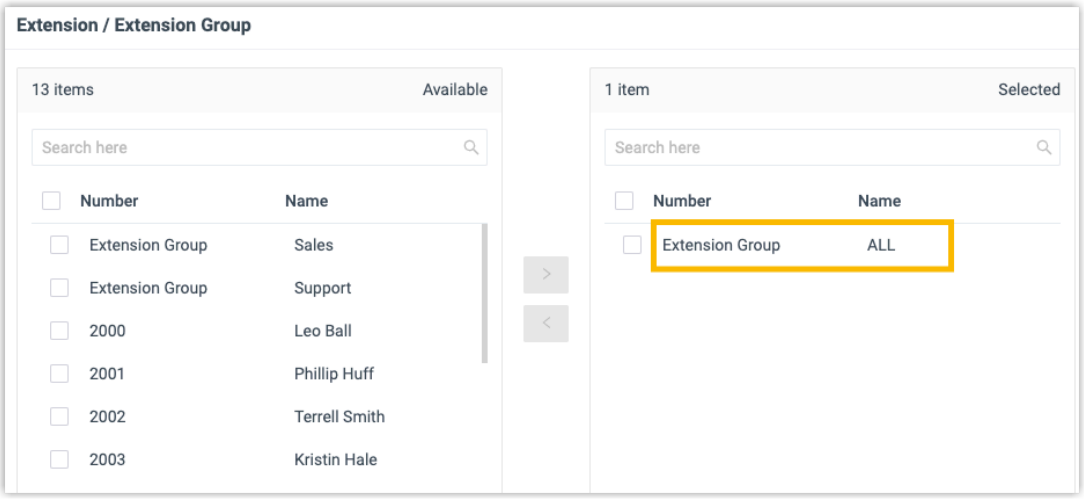
1. Log in to PBX web portal, go to **Call Control > Outbound Route**, click **Add**.
2. Configure the following settings for the outbound route and leave other settings as default.
   - **Name**: Enter a name to help you identify it.
   - **Dial Pattern**: Set the dial patterns according to your needs. In this example, set **Pattern** to `X.`, which means that users can dial any number without limitation.



   - **Trunk**: Select the SIP peer trunk that is connected to the Yeastar TG400 gateway. In this example, select the trunk `TG400`.



   - **Extension/Extension Group**: Select the extensions that are allowed to make calls through this outbound route. In this example, select all the extensions.



3. Click **Save** and **Apply**.

Step 2. Create two 'IP to Mobile' routes on Yeastar TG400 gateway

On Yeastar TG400 gateway, create an 'IP to Mobile' route for carrier A, and create another one for carrier B. These two routes will match the dialed numbers from PBX, and send numbers out through designated GSM trunks.

1. Log in to gateway web interface, go to **Gateway > Route Settings > IP to Mobile**, click **Add IP to Mobile Route**.
2. In the pop-up window, configure the route, then click **Save** and **Apply Changes**.

   The following table shows the required configurations for carrier A and carrier B.

Setting	Description	For Carrier A	For Carrier B
Simple Mode	To keep simple mode with basic settings or to expand more settings.	No	No
Route Name	Enter a name to help you identify it.	To-CarrierA	To-CarrierB
Call Source	Select the SIP trunk that is connected to Yeastar PBX system.	SPS – P560	SPS – P560
DID Number	Enter the pattern or number to match dialed numbers from Yeastar PBX system. **Note:**	Enter `92.` to allow the numbers with prefix 92.	Enter `10.` to allow the numbers with prefix 10.

Setting	Description	For Carrier A	For Carrier B
	If you want to match any incoming calls, you need to set **DID Number** to .(dot), or outbound calls would fail.		
Call Destination	Select the GSM trunk that will be used to call out.	Mobile – Trunk1	Mobile – Trunk2

Figure 1. 'IP to Mobile' route for carrier A

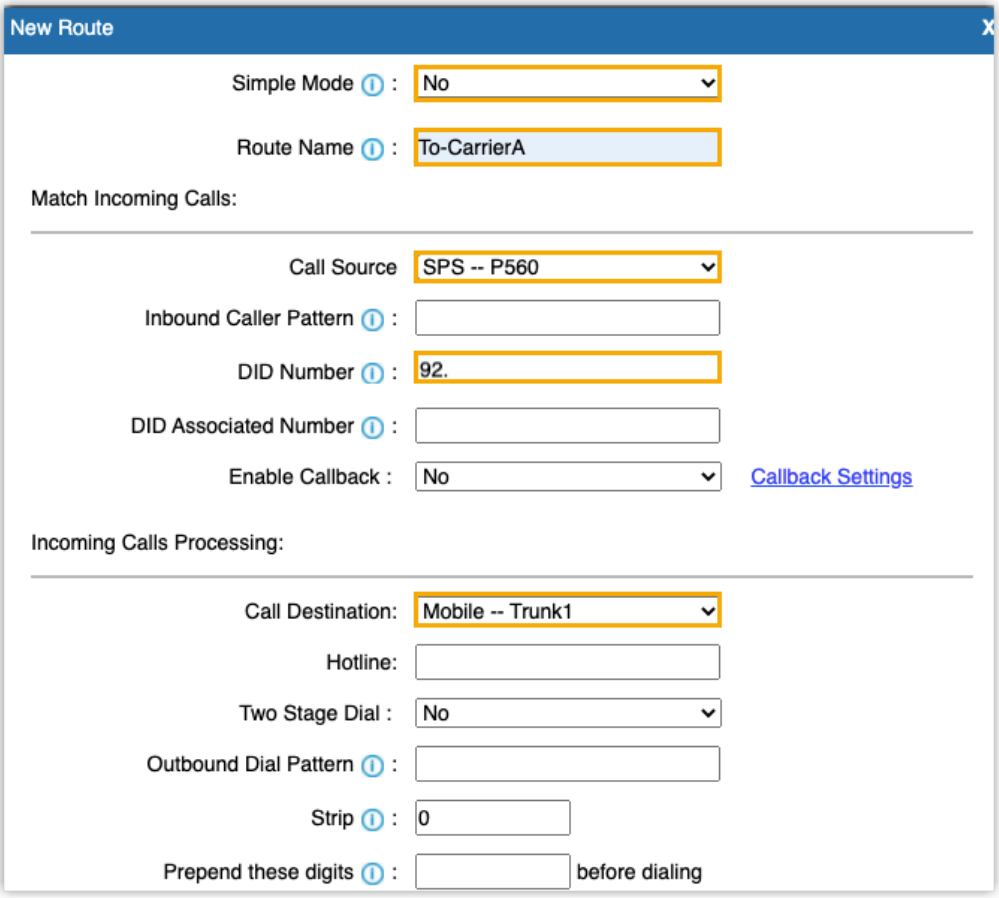
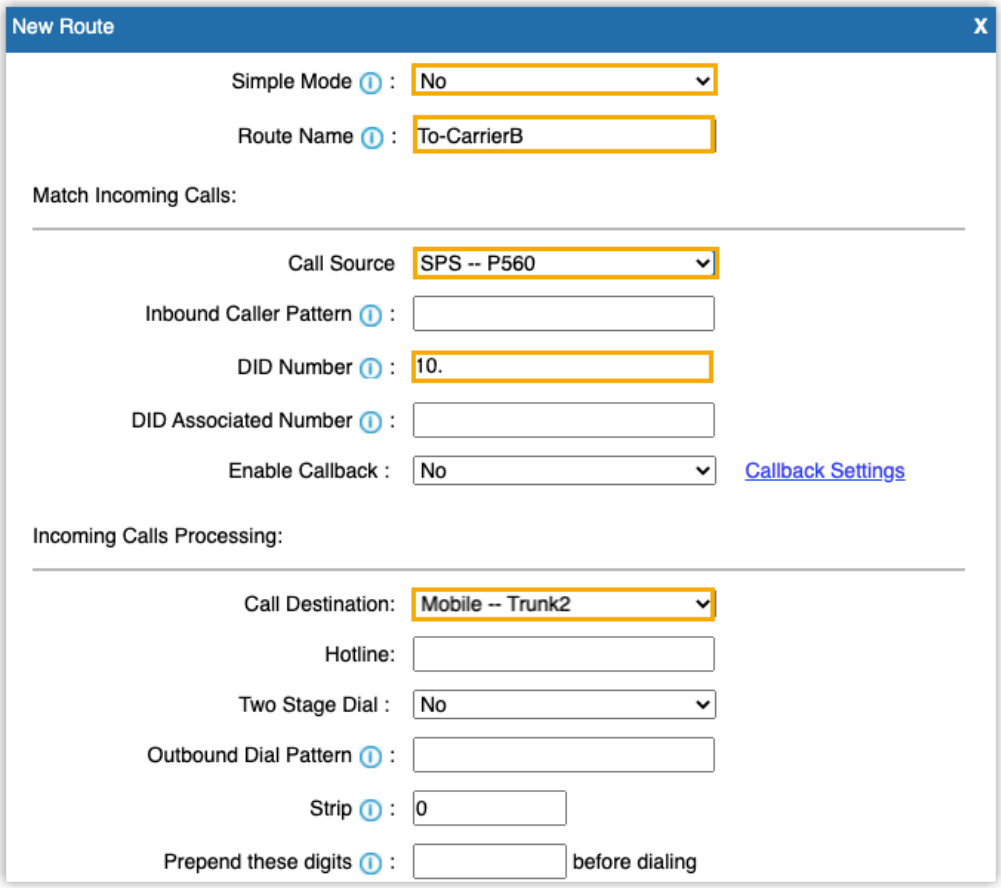


Figure 2. 'IP to Mobile' route for carrier B



Step 3. Make test calls from Yeastar PBX system

Examples:

- Dial number 921234567, the call will be made through GSM trunk1.
- Dial number 108192837, the call will be made through GSM trunk 2.

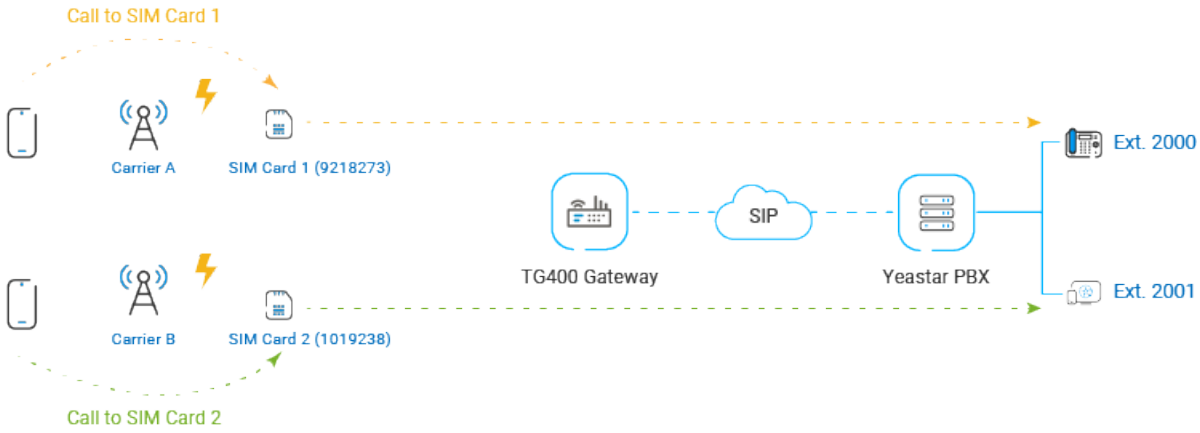
Route Calls from Different Carriers to Different Destinations

When external users call to GSM trunks of different carriers, the calls will reach different destinations. This topic describes how to route calls from different carriers to different destinations.

Scenario

The instructions provided in this topic are based on the following scenario:

Carrier	Trunk	Destination
Carrier A	GSM trunk 1: 9218273	Extension 2000
Carrier B	GSM trunk 2: 1019238	Extension 2001



Procedure

- Step 1. Create two 'Mobile to IP' routes on Yeastar TG400 gateway
- Step 2. Create two inbound routes on Yeastar PBX system
- Step 3. Make test calls to the GSM trunks

Step 1. Create two 'Mobile to IP' routes on Yeastar TG400 gateway

On Yeastar TG400 gateway, create an 'Mobile to IP' route for carrier A, and create another one for carrier B, so as to route incoming calls to Yeastar PBX system.

1. Log in to gateway web interface, go to **Gateway > Route Settings > Mobile to IP**, click **Add Mobile to IP Route**.
2. In the pop-up window, configure the route, then click **Save** and **Apply Changes**.

   The following table shows the required configurations for carrier A and carrier B.

Setting	Description	For Carrier A	For Carrier B
Simple Mode	To keep simple mode with basic settings or to expand more settings.	Yes	Yes

Setting	Description	For Carrier A	For Carrier B
Route Name	Enter a name to help you identify it.	CarrierA-To-P560	CarrierB-To-P560
Call Source	Select which trunk the call comes from.	Mobile -- Trunk 1	Mobile -- Trunk 2
Call Destination	Select the SIP trunk that is connected to Yeastar PBX system.	SPS – P560	SPS – P560
Hotline	Enter a hotline number to avoid two-stage dialing. **Note:** The hotline number will be sent to the PBX as a DID number, which can be configured on PBX's inbound route to distinguish calls from different carriers.	888888	999999

Figure 3. 'Mobile to IP' route for carrier A

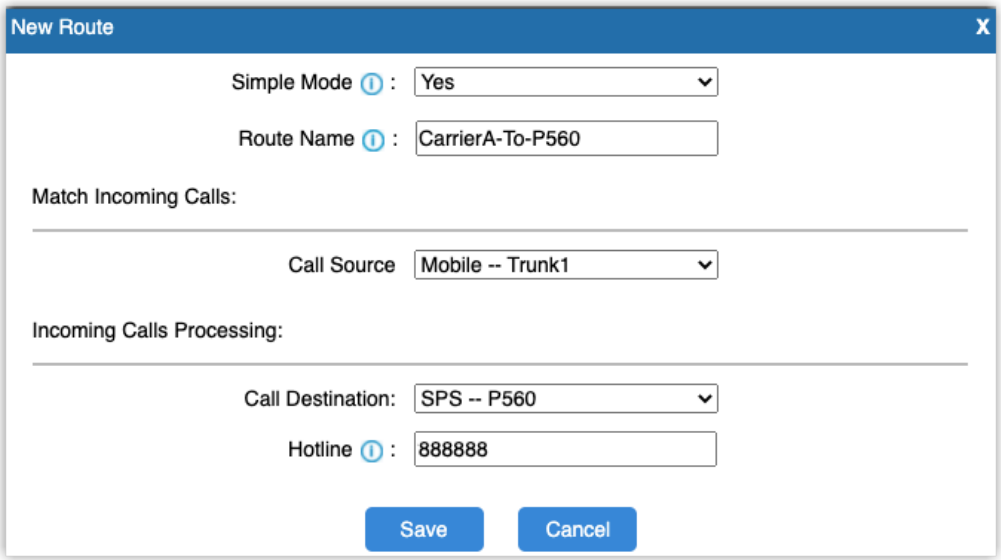
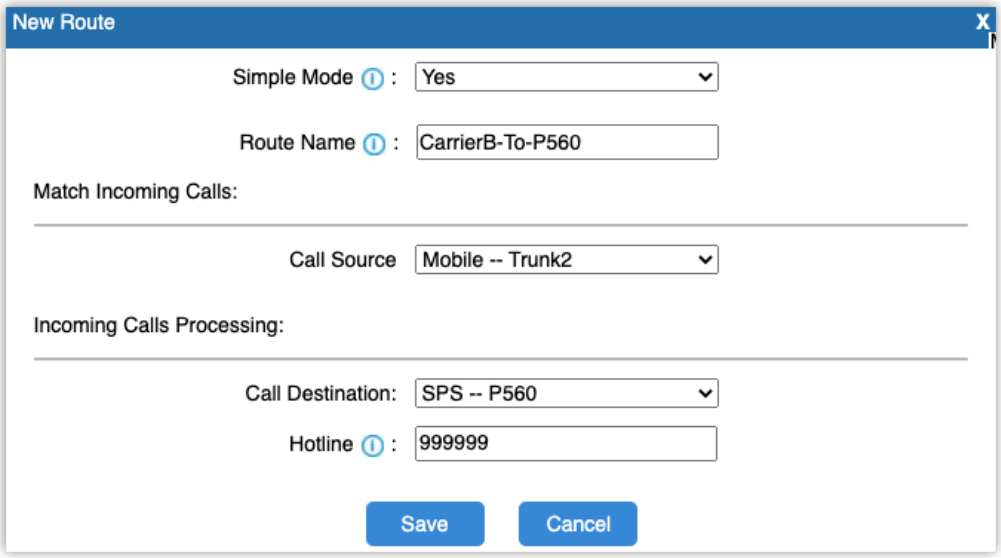


Figure 4. 'Mobile to IP' route for carrier B



Step 2. Create two inbound routes on Yeastar PBX system

On Yeastar PBX system, create two inbound routes to distinguish calls from carrier A and carrier B, and route calls to different destinations.

1. Log in to PBX web portal, go to **Call Control > Inbound Route**, click **Add**.
2. Configure the following settings for the inbound route and leave other settings as default, then click **Save** and **Apply**.

   The following table shows the required configurations for carrier A and carrier B.

Setting	Description	For Carrier A	For Carrier B
Name	Enter a name to help you identify it.	From-CarrierA	From-CarrierB
DID Matching Mode	Select a mode according to the rule of DID numbers.	DID Pattern	DID Pattern
Pattern	Enter a DID number to match the incoming calls. **Note:** Enter the same hotline number that is set on	888888	999999

Setting	Description	For Carrier A	For Carrier B
	Yeastar TG400 gateway.		
Trunk	Select the SIP peer trunk that is connected to Yeastar TG400 gateway.	TG400	TG400
Default Destination	Select a destination for the inbound route.	Extension 2000	Extension 2001

Figure 5.'IP to Mobile' route for carrier A

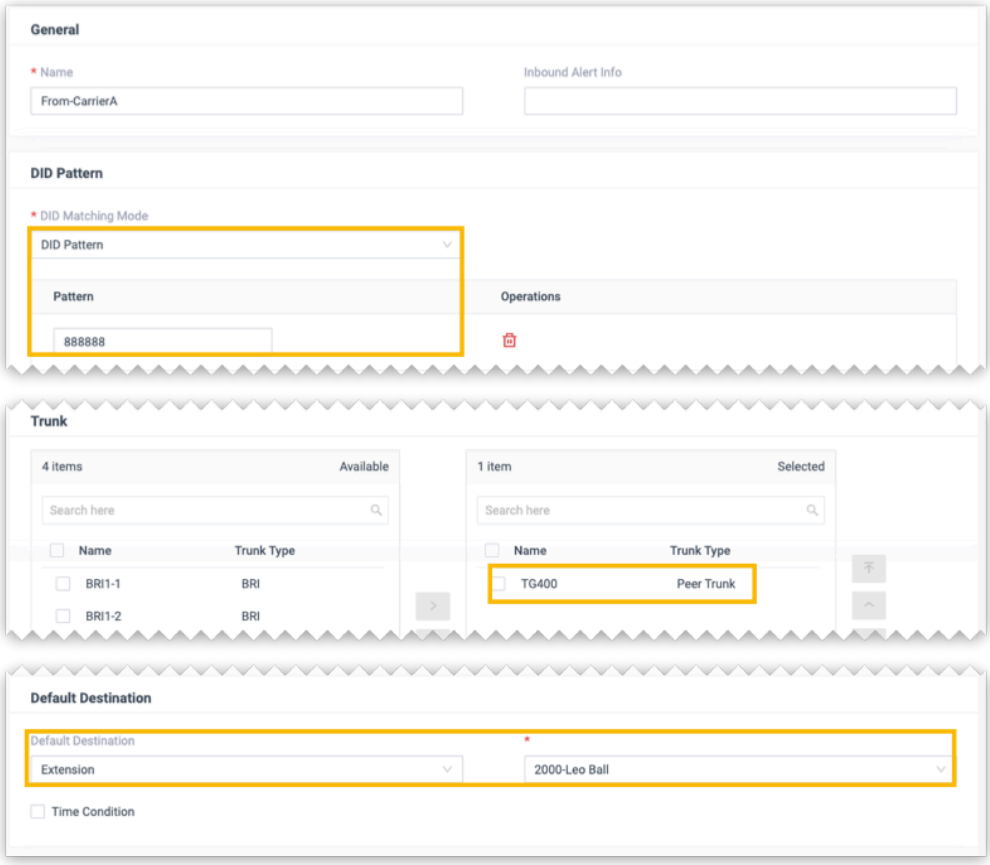
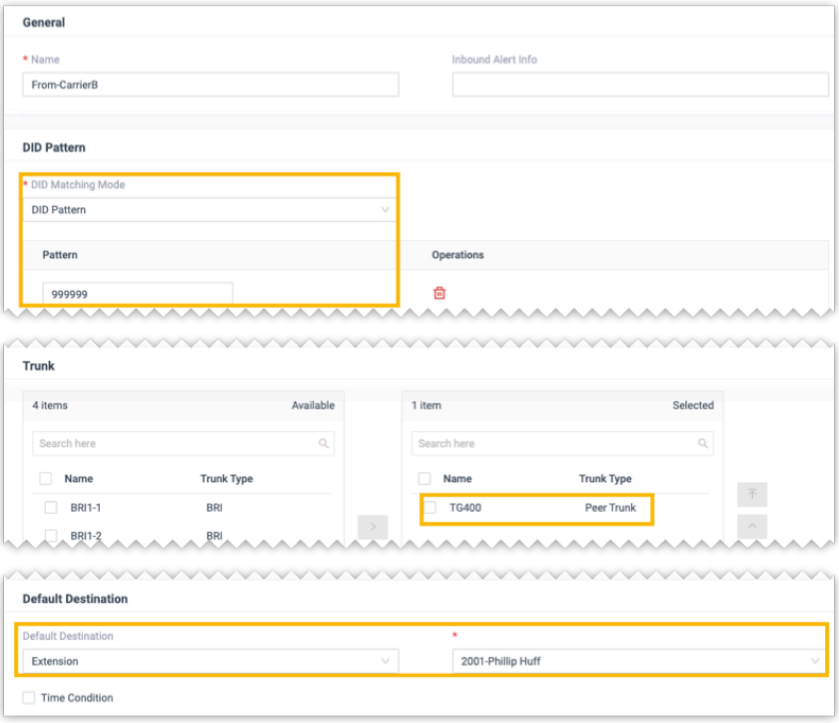


Figure 6.Inbound route for carrier B



Step 3. Make test calls to the GSM trunks

Examples:

- Dial the number of GSM trunk1 (9218273), the call will be routed to extension 2000.
- Dial the number of GSM trunk 2 (1019238), the call will be routed to extension 2001.