



# How to connect Elastix to MyPBX via SIP Trunking

Version 1.0

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This application note shows how to connect Elastix to MyPBX using SIP Trunking, which will be working fine for:

1. Intercommunication between Elastix and MyPBX
2. Make calls using Elastix's extension through the GSM/PSTN/BRI trunks of MyPBX.
3. Receive calls from GSM/PSTN/BRI trunks of MyPBX at Elastix

**Description:**

IP address of MyPBX: 192.168.5.146

IP address of Elastix: 192.168.5.210

# 1. Intercommunication between Elastix and MyPBX

## Description:

All the extensions under MyPBX are in the format 5XX

All the extensions under Elastix are in the format 3XX

**Note:** For SIP Trunking mode connection, you don't need to setup inbound routes for any side.

## 1.1 MyPBX Configuration

**Step1:** Setup SIP Trunking in MyPBX, connect to Elastix.

Basic → Trunks → Add Service Provider.

The screenshot displays the MyPBX web interface. The main navigation menu on the left includes sections like 'Status Monitor', 'Basic', 'Inbound Call Control', and 'Internal Settings'. Under the 'Basic' section, 'Trunks' is highlighted. The 'Trunks' section in the main content area shows various trunk types: BRI, Analog, GSM/UMTS, and VoIP. The 'Service Provider' section is expanded, and the '+ Add Service Provider' button is highlighted. The 'Add Service Provider' dialog box is open, showing configuration options for a SIP trunk. The 'Type' is set to 'SIP', 'Provider Name' is 'Elastix', 'Hostname/IP' is '192.168.5.203', and the port is '5060'. Other settings include 'Maximum Channels' (0), 'Transport' (UDP), 'Qualify' (checked), and 'DTMF Mode' (rfc2833). The 'DOD Settings' section is also visible, with a 'Global DOD' field and a table for adding DODs. The table has columns for 'DOD' and 'Associated Extension'. The 'Associated Extension' is set to 510. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

Figure 1-1 Create a SIP Trunking in MyPBX

After creating SIP Trunking, we can check the status of this trunk, it should be OK(green).

Status Monitor → Line Status → Trunks.

**Line Status**

**Extensions**

Free Busy Hold Unavailable Ringing

500 (SIP) 502 (SIP) 504 (SIP) 510 (FXS) 511 (FXS)

**Trunks**

Status	Signal	Trunk Name	Type	User Name	Port/Hostname/IP	Reachability
OK (103 ms)		3CX	SP-SIP		192.168.5.243	OK (103 ms)
OK (2 ms)		Elastix	SP-SIP		192.168.5.203	OK (2 ms)
Idle		pstn7	FXO		Port 7	
Disconnected		pstn8	FXO		Port 8	
Idle	📶	GSM13	GSM		Port 13	
OK		BriTrunk9	BRI		Port 9	
OK		BriTrunk10	BRI		Port 10	

Figure 1-2 Trunks Status in MyPBX

**Step2:** Setup Outbound Route in MyPBX. Dial pattern:3XX, which means all calls start with 3 and 3digits will be sent to Elastix via this SIP Trunking. Basic → Outbound Routes → Add Outbound Route.

**Outbound Routes**

**Add Outbound Route**

Route Name: To\_Elastix

Dial Pattern: 2XX

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) 502 (SIP) 504 (SIP) 510 (FXS) 511 (FXS)

**Member Trunks**

Available Trunks	Selected
pstn7 (FXO) pstn8 (FXO) GSM13 (GSM) BriTrunk9 (BRI) BriTrunk10 (BRI) 3CX (SFS)	Elastix (SFS)

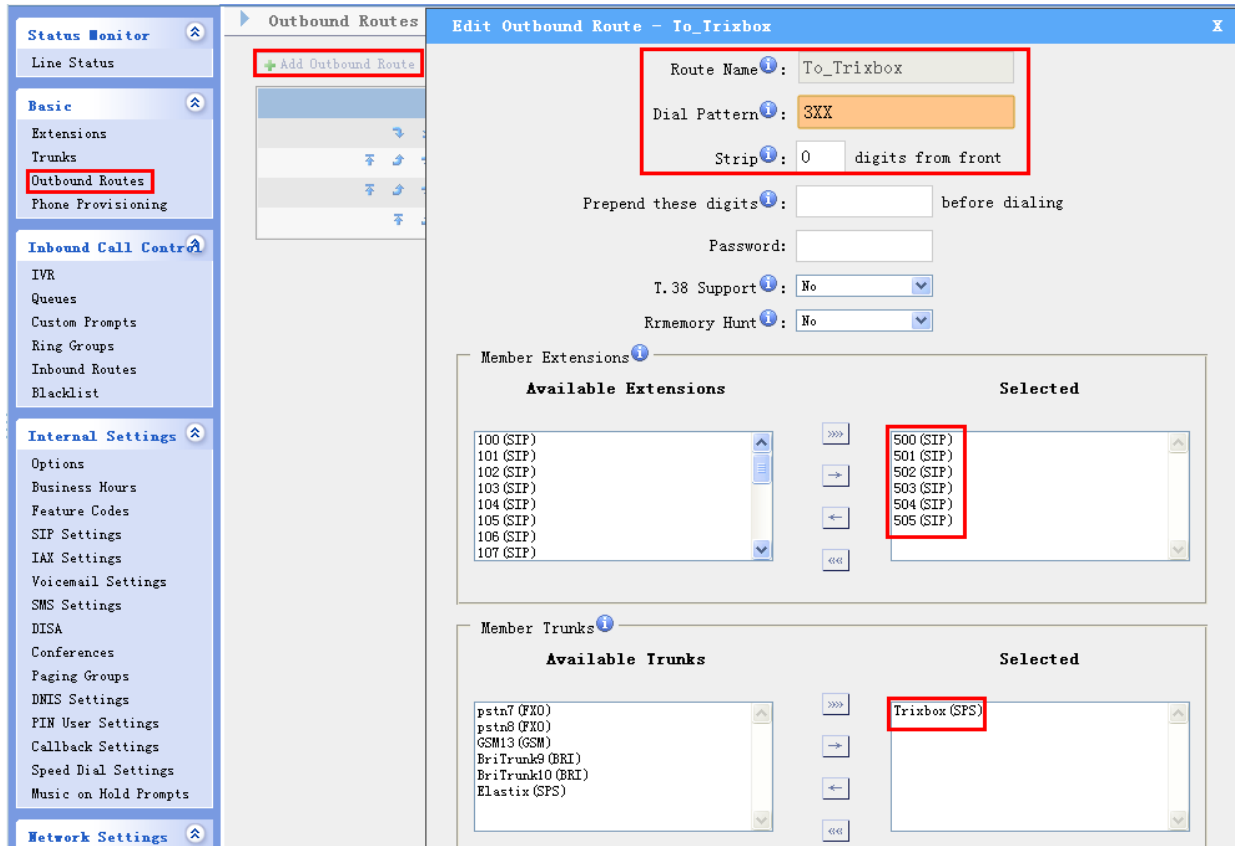
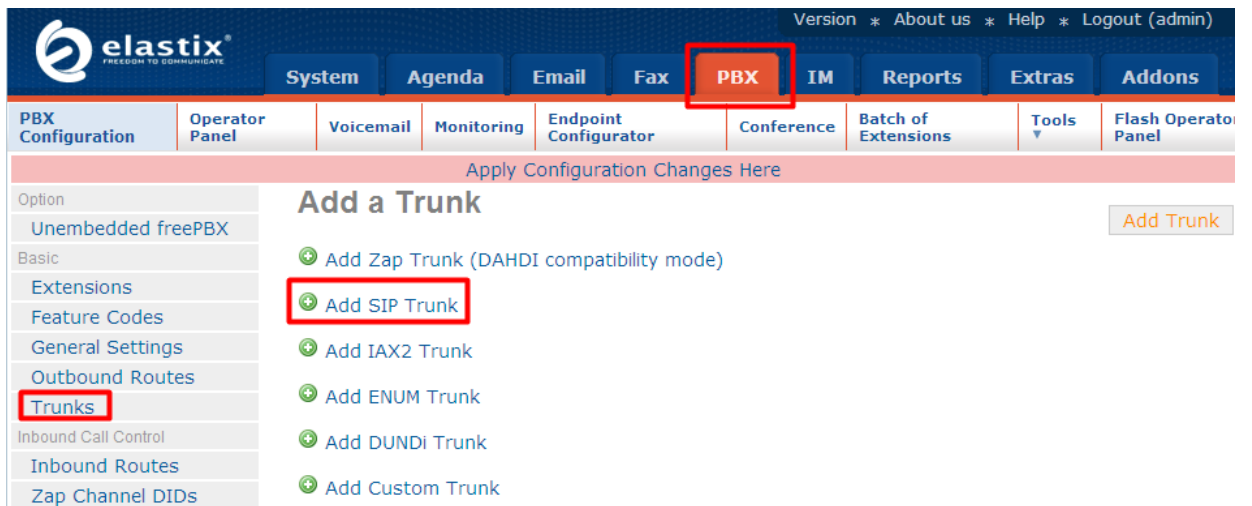


Figure 1-3 Outbound route for SIP Trunking in MyPBX

## 1.2 Elastix Configuration

**Step1:** Setup SIP Trunking in Elastix, connect to MyPBX

1) PBX -> Trunks -> Add SIP Trunk



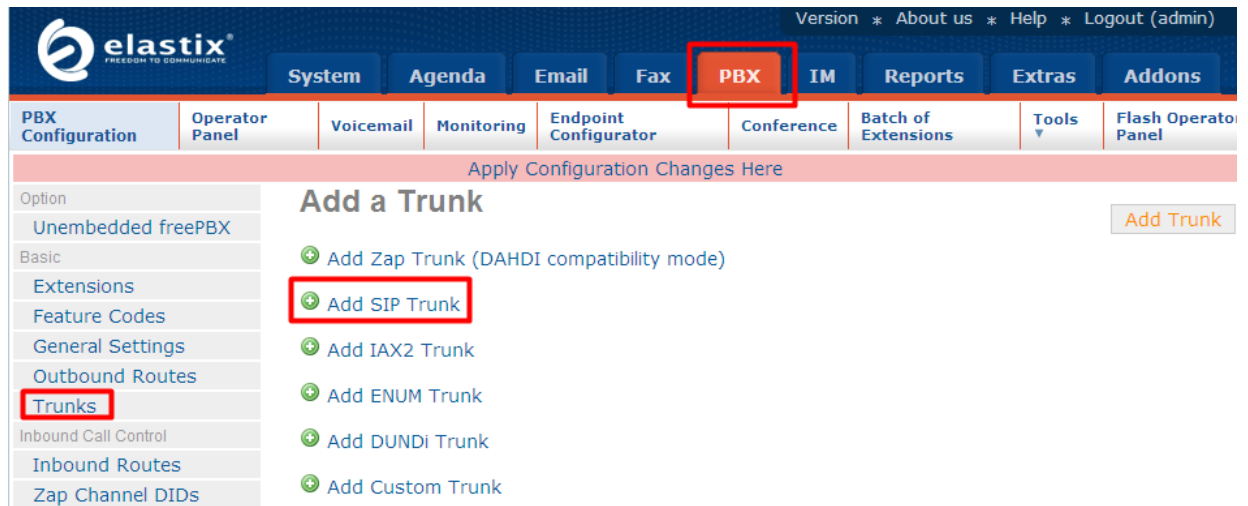


Figure 1-4 Add SIP Trunking

2) Enter the info of trunk for PEER Details :

host=192.168.4.146

type=peer

qualify=yes

disallow=all

allow=ulaw,alaw,gsm

## Add SIP Trunk

### General Settings

Trunk Description:

Outbound Caller ID:

CID Options:

Maximum Channels:

Disable Trunk:  Disable

Monitor Trunk Failures:  Enable

### Outgoing Dial Rules

Dial Rules:

Dial Rules Wizards:

Outbound Dial Prefix:

### Outgoing Settings

Trunk Name:

PEER Details:

```
host=192.168.4.146
type=peer
qualify=yes
disallow=all
allow=ulaw,alaw,gsm
```

Figure 1-5 Enter PEER Details

5)After creating SIP Trunking, we can check the status of this trunk, it should be OK.

PBX → Option → Unembedded freePBX

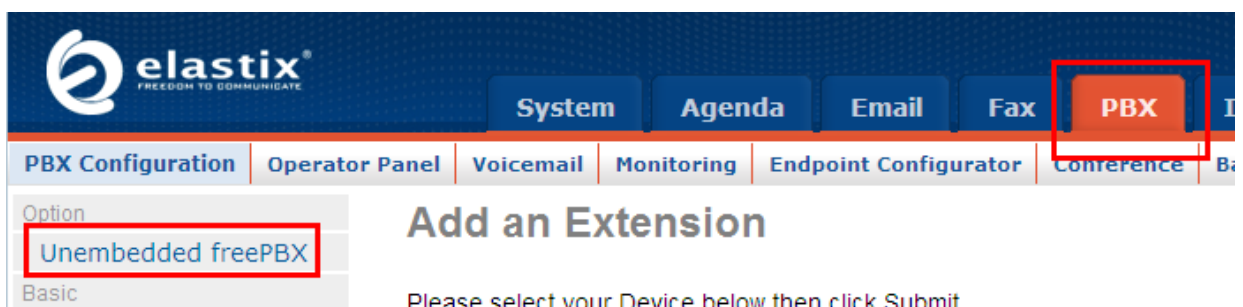


Figure 1-6

Admin → Tools → Asterisk CLI → Enter the command 'sip show peers' and click 'Execute'

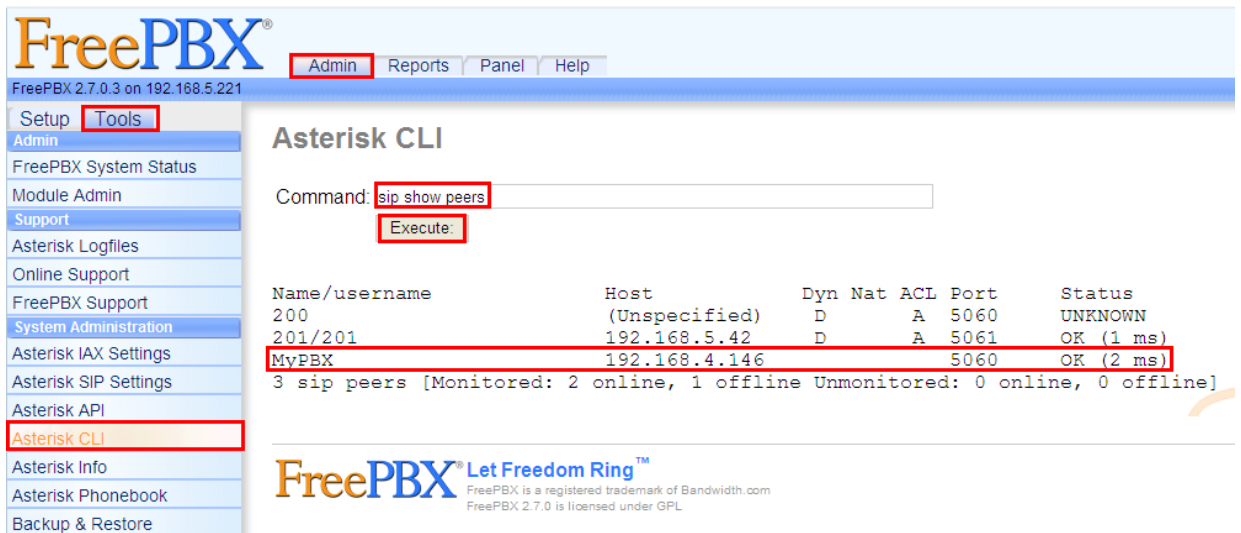


Figure 1-7 The status of SIP Trunking in Elastix

**Step2:** Setup outbound routes in Elastix. Dial pattern:3XX, which means all calls start with 5 and 3 digits will be sent to MyPBX via the SIP Trunking.  
PBX → Admin -> Setup → Outbound Routes.

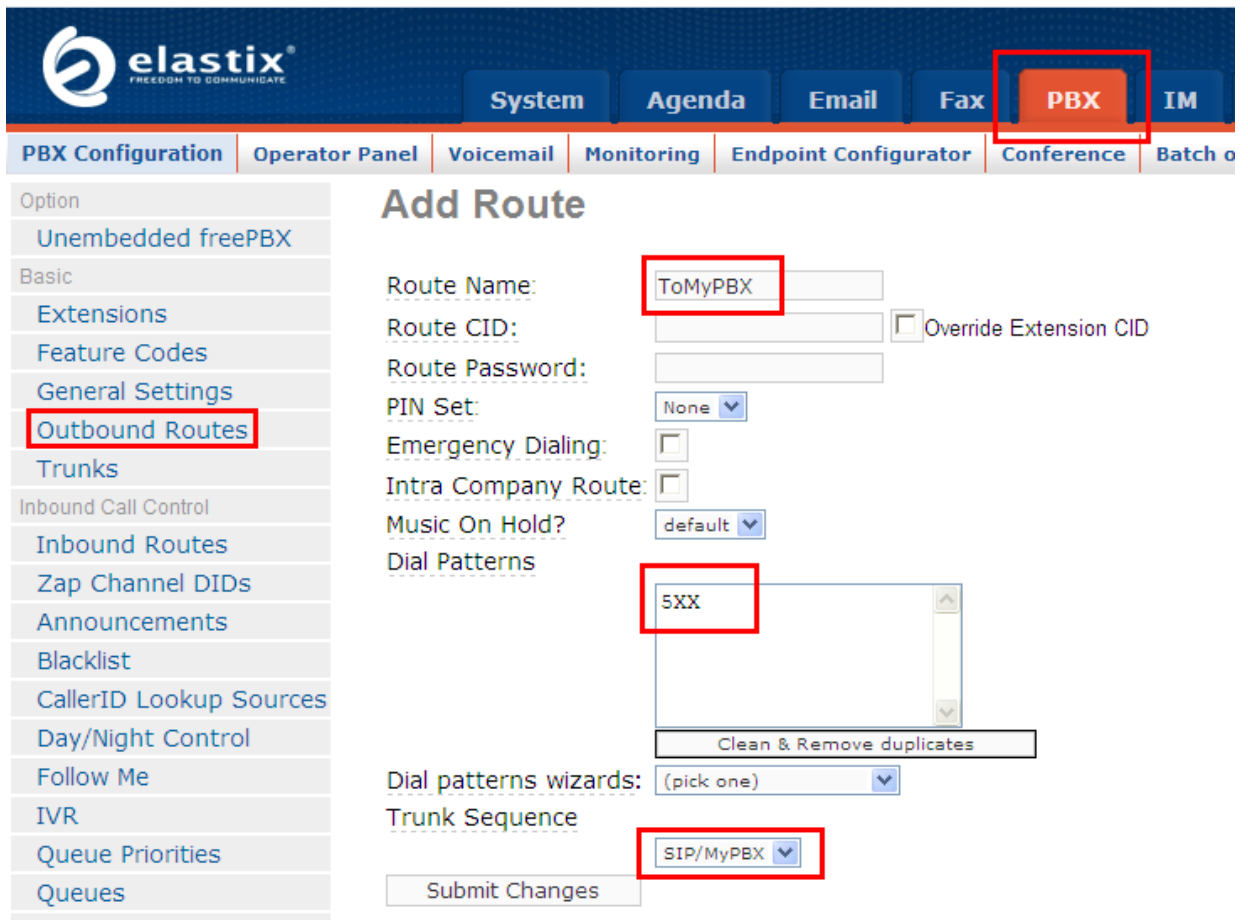


Figure 1-8 Outbound route for SIP Trunking in Elastix

Click 'Submit Changes' and 'Apply Configuration Changes Here'



### 1.3 Test call

Register an IP phone to MyPBX with extension 500.

Register an IP phone to Elastix with extension 300.

Use 500 to dial 300. You can see 300 is ringing and you can answer the calls

Use 300 to dial 500. You can see 500 is ringing and you can answer the calls

## 2. Make calls using Elastix’s extension via SIP Trunking

The SIP Trunking connection is finished in the last step, so we can start to configure rule to make calls via PSTN/GSM/BRI trunks of MyPBX using Elastix’s extension.

**Description:**

PSTN trunk of MyPBX: 5503301  
 GSM trunk of MyPBX: 15060748304  
 BRI trunk of MyPBX: 5503300

### 2.1 MyPBX Configuration

**Step1:** Check the status of GSM/PSTN/BRI trunk.

Status Monitor → Line Status → Trunks


Idle		pstn7	FXO	Port 7
Disconnected		pstn8	FXO	Port 8
Idle		GSM13	GSM	Port 13
OK		BriTrunk9	BRI	Port 9
OK		BriTrunk10	BRI	Port 10

Figure 2-1 Trunks Status

**Step2:** Setup Outbound Route for GSM/PSTN/BRI trunk to make calls in MyPBX.  
 Basic → Outbound Routes → Add Outbound Route.

1) Create a outbound route for GSM/PSTN/BRI trunk. In this example, all calls start with 9 will be sent out via the GSM/PSTN/BRI trunk of MyPBX.

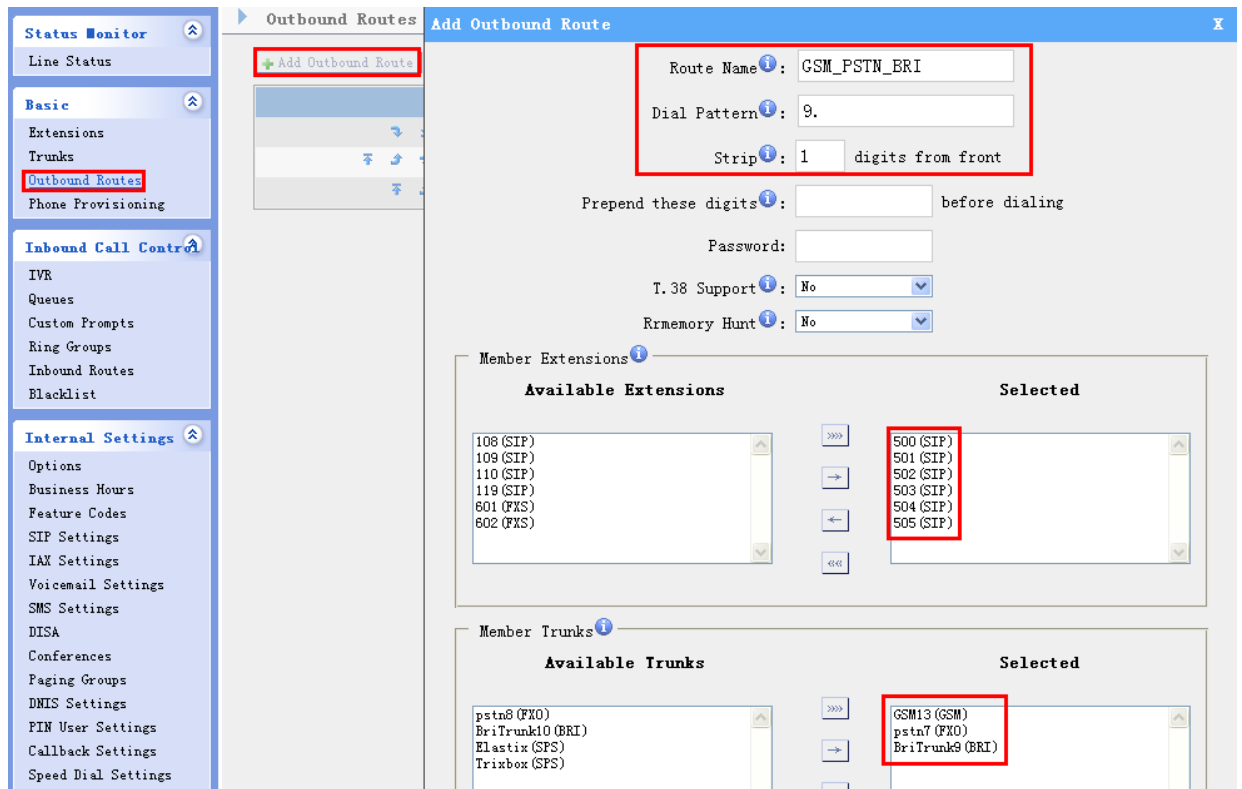


Figure 2-2 Outbound route for SIP Trunking in MyPBX

**Step2:** Setup Inbound Route for SIP Trunking in MyPBX, and choose the outbound route we created in the last step as destination, so that the calls via this SIP Trunking will be sent out through GSM/PSTN trunk.

**Note:** We must configure DID number of this inbound route to match the dial pattern of outbound routes which are used to make call to GSM/PSTN trunk of MyPBX in Elastix, however, this dial pattern must match the dial pattern of the outbound route for GSM/PSTN trunk in MyPBX. So, we should configure DID number is '9.'

Please place this route to the top.

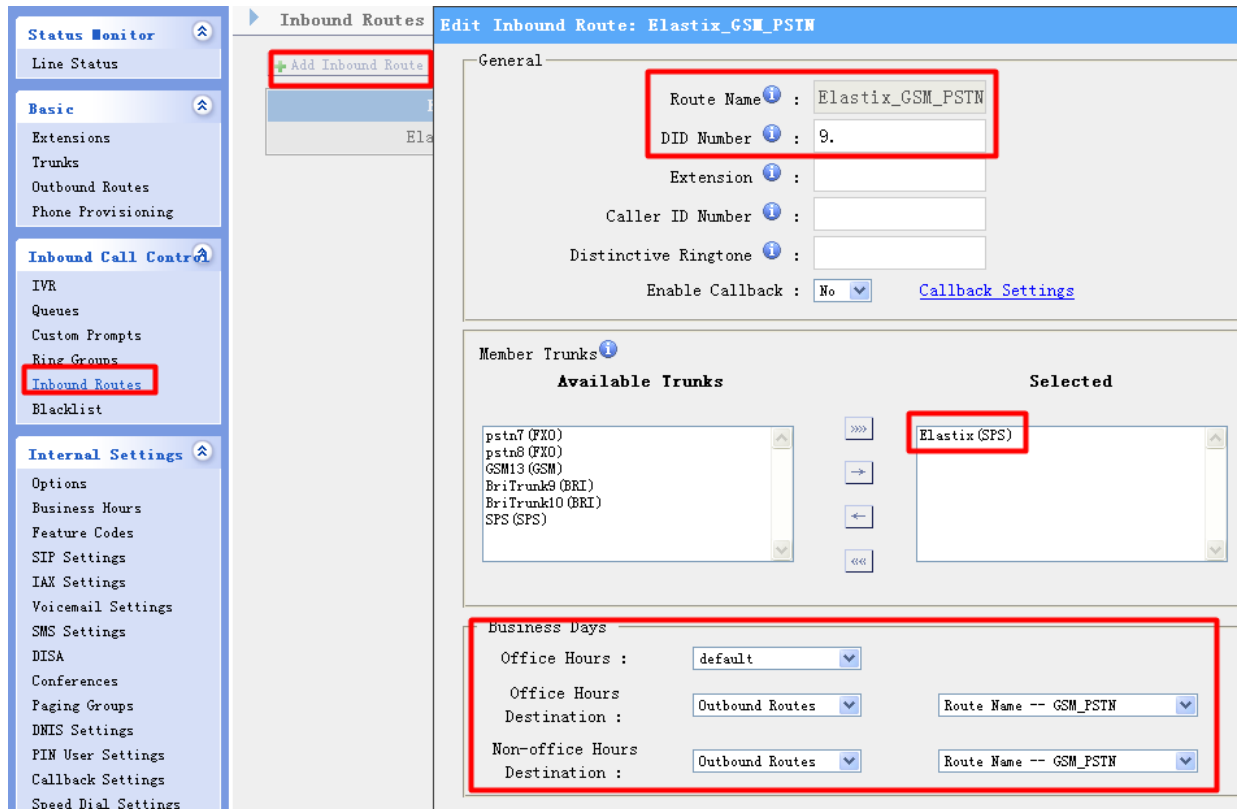


Figure 2-3 Setup Inbound Route for the SIP Trunking

## 2.2 Elastix Configuration

**Step1:** Setup outbound routes in Elastix.

PBX → Outbound Routes → Add Route.

**Note:** This dial pattern must match the dial pattern of the outbound route for GSM/PSTN trunk in MyPBX.

The screenshot shows the Elastix web interface. At the top, the 'PBX' menu item is highlighted with a red box. Below it, the 'PBX Configuration' menu is open, and 'Outbound Routes' is highlighted with a red box. The main content area is titled 'Add Route'. The 'Route Name' field is filled with 'ToGSMSTNofmypbx' and is highlighted with a red box. The 'Dial Patterns' field contains '9.' and is also highlighted with a red box. The 'Trunk Sequence' dropdown menu is set to 'SIP/MyPBX' and is highlighted with a red box. Other fields include 'Route CID', 'Route Password', 'PIN Set' (set to 'None'), 'Emergency Dialing' (unchecked), 'Intra Company Route' (unchecked), and 'Music On Hold?' (set to 'default'). There is a 'Submit Changes' button at the bottom.

Figure 2-4 Outbound route for SIP Trunking in Elastix

### 2.3 Test Call

Use Elastix's extension to dial 913800000000, then mobile phone 13800000000 will ringing and you can answer the calls.

### 3. Receive calls from GSM/PSTN/BRI trunks of MyPBX at Elastix

The SIP Trunking connection is finished in the previous step, so we can start to configure a rule to route the incoming calls to Elastix side.

#### 3.1 MyPBX Configuration

**Step1:** Setup an outbound route for this SIP Trunking to Elastix.

**Note:** In this example, we setup the dial pattern is "X.". We can dial any number via this SIP Trunking. And place this route to the end.

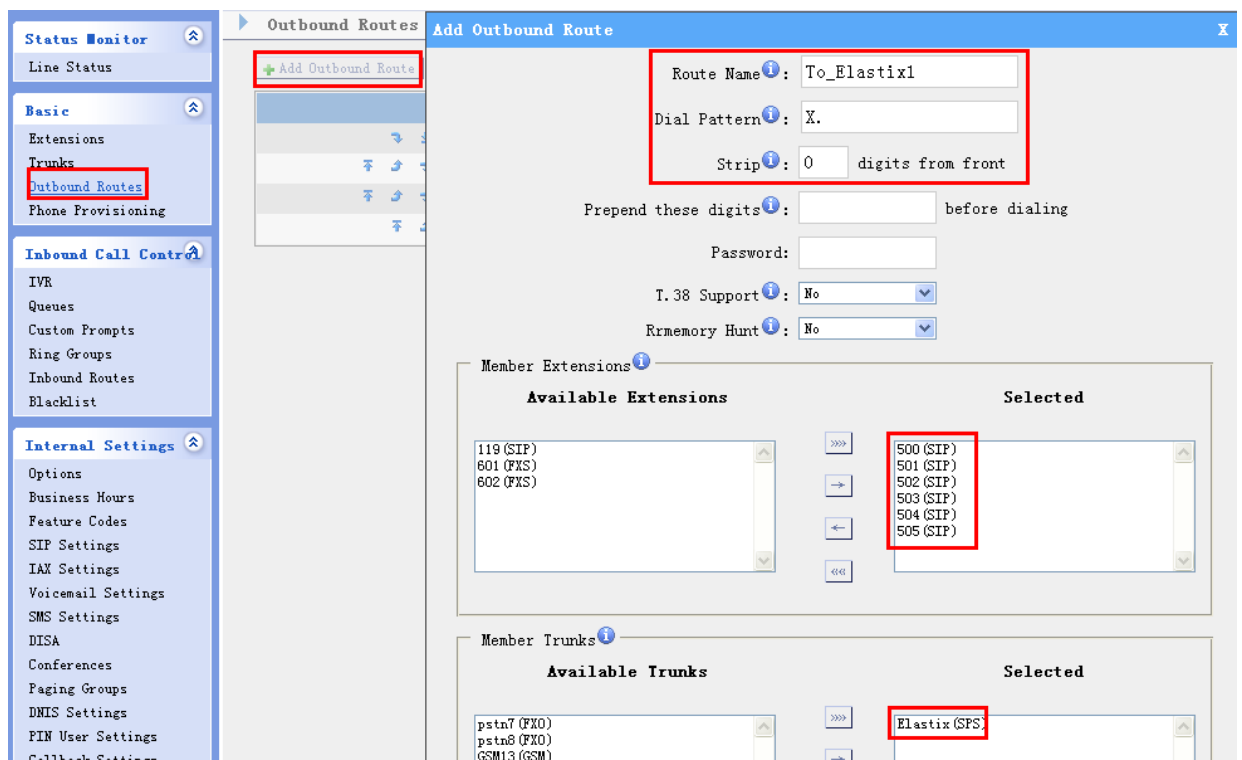


Figure 3-1 outbound route for SIP Trunking in MyPBX

The order of outbound routes: (Basic → Outbound routes)

	Route Name	Dial Pattern	
↕	GSM_PSTN_BRI	9.	Edit Delete
↕	To_Elastix	3XX	Edit Delete
↕	To_Elastix1	X.	Edit Delete

Figure 3-2 Order

**Step2:** Create an inbound route for GSM/PSTN/BRI trunk, and choose the outbound route we created in previous step as destination, so that the incoming calls from GSM/PSTN/BRI trunk will be sent to Elastix via the SIP Trunking.

**Note:** Since GSM/PSTN trunks have no DID number, we need to setup a DID number for them.

- 1) Create an inbound route for GSM trunk.  
DID number: 15060748304

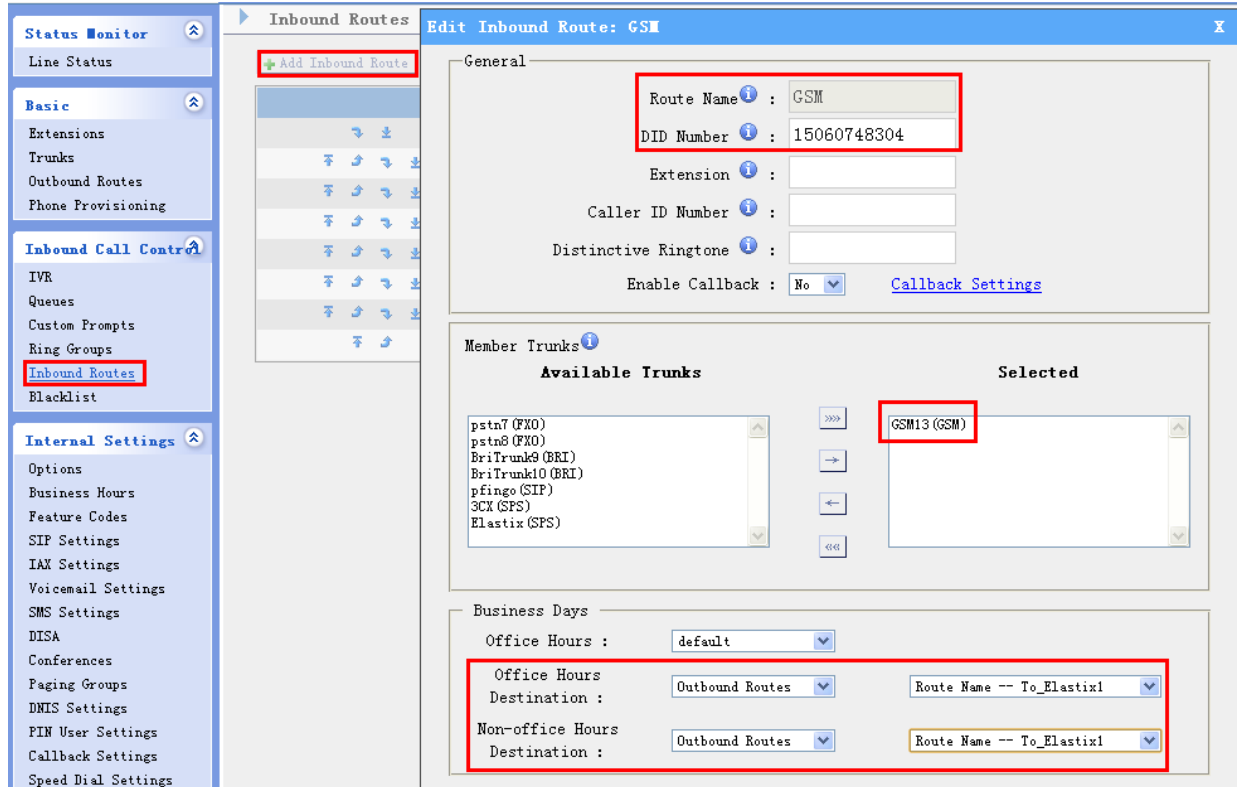


Figure 3-3 Inbound route for GSM trunk

- 2) Create an inbound route for PSTN trunk.  
DID number: 5503301

## How to connect Elastix to MyPBX via SIP Trunking

The screenshot displays the Asterisk Manager GUI interface for configuring an inbound route. The left sidebar shows the navigation menu with 'Inbound Routes' highlighted. The main content area is titled 'Edit Inbound Route: PSTN'. The 'General' section contains the following fields: 'Route Name' (PSTN), 'DID Number' (5503301), 'Extension' (empty), 'Caller ID Number' (empty), 'Distinctive Ringtone' (empty), and 'Enable Callback' (No). The 'Member Trunks' section shows 'Available Trunks' (pstn8 (FXO), GSM13 (GSM), BriTrunk9 (BRI), BriTrunk10 (BRI), pfxingo (SIP), 3CX (SPS), Elastix (SPS)) and 'Selected' (pstn7 (FXO)). The 'Business Days' section shows 'Office Hours' and 'Non-office Hours' both set to 'default' with 'Destination' as 'Outbound Routes' and 'Route Name' as 'To\_Elastix1'.

Figure 3-4 Inbound route for PSTN trunk

### 3) Create an inbound route for BRI trunk.

The screenshot displays the Asterisk Manager GUI interface for configuring an inbound route. The left sidebar shows the navigation menu with 'Inbound Routes' highlighted. The main content area is titled 'Edit Inbound Route: BRI'. The 'General' section contains the following fields: 'Route Name' (BRI), 'DID Number' (empty), 'Extension' (empty), 'Caller ID Number' (empty), 'Distinctive Ringtone' (empty), and 'Enable Callback' (No). The 'Member Trunks' section shows 'Available Trunks' (pstn7 (FXO), pstn8 (FXO), GSM13 (GSM), BriTrunk9 (BRI), BriTrunk10 (BRI), pfxingo (SIP), 3CX (SPS), Elastix (SPS)) and 'Selected' (BriTrunk9 (BRI)). The 'Business Days' section shows 'Office Hours' and 'Non-office Hours' both set to 'default' with 'Destination' as 'Outbound Routes' and 'Route Name' as 'To\_Elastix1'.

Figure 3-5 Inbound route for BRI trunk



### 3.2 Elastix Configuration

In Elastix side, we need create inbound route for the SIP Trunking so that we can dial in, in this example, we choose IVR as the destination (generally).

PBX → Admin → Setup → Inbound Routes

1) Create an inbound route for GSM trunk of MyPBX. Then DID Number must match that of MyPBX, so we configure DID Number of this route is 15060748304

The screenshot displays the Elastix web interface for configuring an incoming route. The top navigation bar includes 'System', 'Agenda', 'Email', 'Fax', and 'PBX' (highlighted). Below this is a secondary menu with 'PBX Configuration', 'Operator Panel', 'Voicemail', 'Monitoring', 'Endpoint Configurator', and 'Conference'. The left sidebar lists various configuration options, with 'Inbound Routes' selected. The main content area is titled 'Add Incoming Route' and contains the following fields:

- Description:** FromGSMofMyPBX
- DID Number:** 15060748304
- Caller ID Number:** [Empty field]
- CID Priority Route:**
- Alert Info:** [Empty field]
- CID name prefix:** [Empty field]
- Music On Hold:** Default
- Signal RINGING:**
- Pause Before Answer:** [Empty field]
- Privacy Manager:** No
- Fax Detect:** [Empty field]
- Detect Faxes:** No
- CID Lookup Source:** [Empty field]
- Privacy Manager:** No
- Fax Detect:** [Empty field]
- Detect Faxes:** No
- CID Lookup Source:** [Empty field]
- Source:** None
- Language:** [Empty field]
- Language:** [Empty field]
- Set Destination:** [Empty field]
- IVR:** Unnamed
- Terminate Call:** Hangup
- Extensions:** <200> 200
- Phonebook Directory:** Phonebook Directory
- Submit** and **Clear Destination & Submit** buttons.

Figure 3-6 Inbound route for GSM in Elastix

2) Create an inbound route for PSTN trunk of MyPBX. Then DID Number must match that of MyPBX, so we configure DID Number of this route is 5503301

The screenshot displays the Elastix web interface for configuring an inbound route. The top navigation bar includes 'System', 'Agenda', 'Email', 'Fax', and 'PBX' (highlighted). The left sidebar lists various configuration options, with 'Inbound Routes' selected. The main content area is titled 'Add Incoming Route' and contains the following fields:

- Description:** FromPSTNofMyPBX
- DID Number:** 5503301
- Caller ID Number:** (empty)
- CID Priority Route:**
- Options:**
- Alert Info:** (empty)
- CID name prefix:** (empty)
- Music On Hold:** Default
- Signal RINGING:**
- Pause Before Answer:** (empty)
- Privacy:**
- Privacy Manager:** No
- Fax Detect:**
- Detect Faxes:**  No  Yes
- CID Lookup Source:**
- Privacy Manager:** No
- Fax Detect:**
- Detect Faxes:**  No  Yes
- CID Lookup Source:**
- Source:** None
- Language:**
- Language:** (empty)
- Set Destination:**
- IVR:** Unnamed
- Terminate Call:** Hangup
- Extensions:** <200> 200
- Phonebook Directory:** Phonebook Directory
- Submit** and **Clear Destination & Submit** buttons.

Figure 3-7 Inbound route for PSTN in Elastix

3) Create an inbound route for BRI trunk of MyPBX. Then DID Number must match that of MyPBX, so we configure DID Number of this route is 5503300.

The screenshot displays the Elastix web interface for configuring an inbound route. The top navigation bar includes 'System', 'Agenda', 'Email', 'Fax', and 'PBX' (highlighted). The left sidebar lists various configuration options, with 'Inbound Routes' selected. The main content area is titled 'Add Incoming Route' and contains the following fields:

- Description: FromBRIofMyPBX
- DID Number: 5503300
- Caller ID Number: [Empty]
- CID Priority Route:
- Options:
- Alert Info: [Empty]
- CID name prefix: [Empty]
- Music On Hold: Default
- Signal RINGING:
- Pause Before Answer: [Empty]
- Privacy:
- Privacy Manager: No
- Fax Detect:
- Detect Faxes:  No  Yes
- CID Lookup Source:
- Privacy Manager: No
- Fax Detect:
- Detect Faxes:  No  Yes
- CID Lookup Source:
- Source: None
- Language:
- Language: [Empty]
- Set Destination:
- IVR: Unnamed
- Terminate Call: Hangup
- Extensions: <200> 200
- Phonebook Directory: Phonebook Directory

Buttons for 'Submit' and 'Clear Destination & Submit' are located at the bottom of the form.

Figure 3-8 Inbound route for BRI in Elastix

### 3.3 Test call

Use mobile phone dial the GSM trunk's number 15060748304 / the PSTN trunk's number 5503301/ the BRI trunk's number 5503300, then it will reach the IVR of Elastix.

<END>