



# Grandstream Networks, Inc.

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## Configuration Guide

### UCM61xx and Clearly Sip Trunking Service

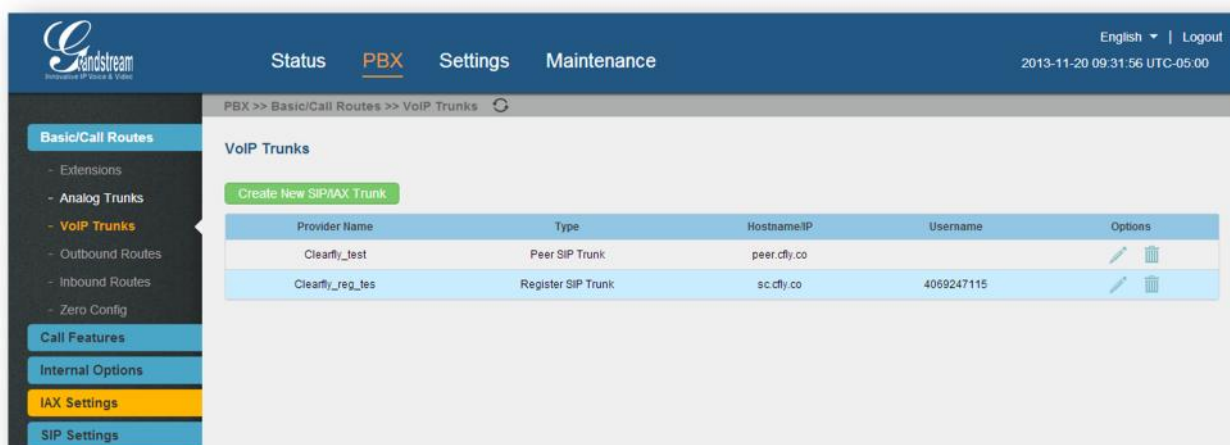
## INTRODUCTION:

This document is intended only for Clearly customers and resellers as an aid to setting up the Grandstream UCM6100 series IPPBX to connect to the Clearly Business Grade SIP Trunking Service. This guide was made while using UCM61xx FW 1.0.3.13





- Further UCM6100 Series IPPBX product information can be found at <http://www.grandstream.com/index.php/products/ip-voice-telephony/ip-pbx-solutions/ucm61xx>
- Further help may be obtained by contacting clearly support phone: (866)652-7520

## REGISTERING YOUR CLEARFLY SIP TRUNK ON THE UCM61XX

- Navigate to PBX → Basic/Call Routes → VoIP Trunks



The screenshot shows the Grandstream UCM61xx web interface. The top navigation bar includes 'Status', 'PBX', 'Settings', and 'Maintenance'. The left sidebar shows a tree view with 'Basic/Call Routes' expanded, containing 'Extensions', 'Analog Trunks', 'VoIP Trunks' (selected), 'Outbound Routes', 'Inbound Routes', and 'Zero Config'. Below this are 'Call Features', 'Internal Options', 'IAX Settings', and 'SIP Settings'. The main content area is titled 'VoIP Trunks' and includes a 'Create New SIP/IAX Trunk' button. A table lists existing trunks:

Provider Name	Type	Hostname/IP	Username	Options
Clearly_test	Peer SIP Trunk	peer.cfly.co		 
Clearly_reg_tes	Register SIP Trunk	sc.cfly.co	4069247115	 

- Click on “Create New SIP/IAX Trunks”

Edit SIP Trunk: trunk\_3

*i* Provider Name:

Clearfly\_reg\_tes

*i* Host Name:

sc.cfly.co

*i* Transport:

All - UDP Primary

*i* Username:

4069247115

Password:

\*\*\*\*\*

*i* AuthID:

4069247115

*i* Codec Preference:

Available Codecs

Selected Codecs

*i* From Domain:

*i* From User:

*i* Outbound Proxy Support:

☐

*i* Auto Record:

No

You will need to provide the following details about your clearfly SIP Trunk:

**Type:** Register SIP Trunk

**Provider Name:** Used for Reference

**Host Name:** sc.cfly.co

**Username:** Trunk ID provided by clearfly

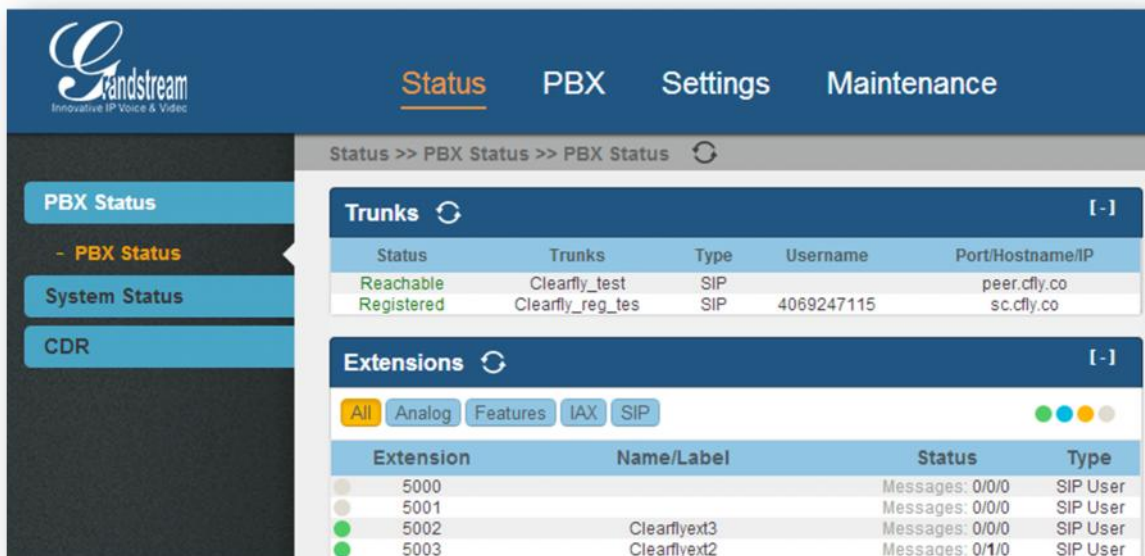
**Password:** Trunk Password provided by clearfly

**Auth ID:** Same as Username or the one provided by clearfly

**Outbound Proxy:** This is optional depending on your network environment

Click ‘**SAVE**’ when done. Next click on ‘**Apply Changes**’ at the top right.

After applying changes, you can verify if the SIP trunk has been registered successfully by clicking on the 'Status' link at the top then check under Trunks Status.



The screenshot shows the Grandstream PBX Status page. The top navigation bar includes 'Status', 'PBX', 'Settings', and 'Maintenance'. The left sidebar has 'PBX Status', 'System Status', and 'CDR'. The main content area shows the 'Status >> PBX Status >> PBX Status' breadcrumb. Under the 'Trunks' section, there is a table with the following data:

Status	Trunks	Type	Username	Port/Hostname/IP
Reachable	Clearly_test	SIP		peer.cfly.co
Registered	Clearly_reg_tes	SIP	4069247115	sc.cfly.co

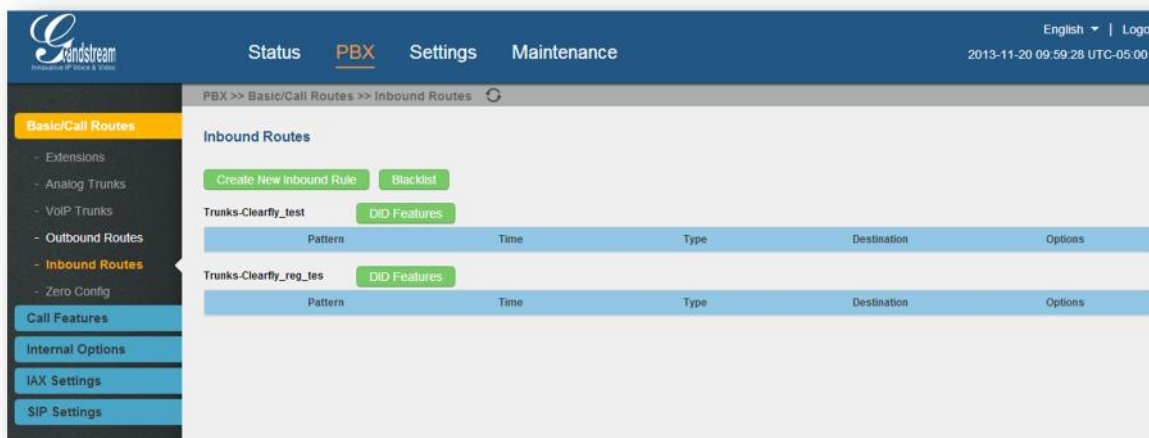
Below the Trunks section is the 'Extensions' section, which has tabs for 'All', 'Analog', 'Features', 'IAX', and 'SIP'. The 'SIP' tab is selected. The table below shows the following data:

Extension	Name/Label	Status	Type
5000		Messages: 0/0/0	SIP User
5001		Messages: 0/0/0	SIP User
5002	Clearlyext3	Messages: 0/0/0	SIP User
5003	Clearlyext2	Messages: 0/1/0	SIP User

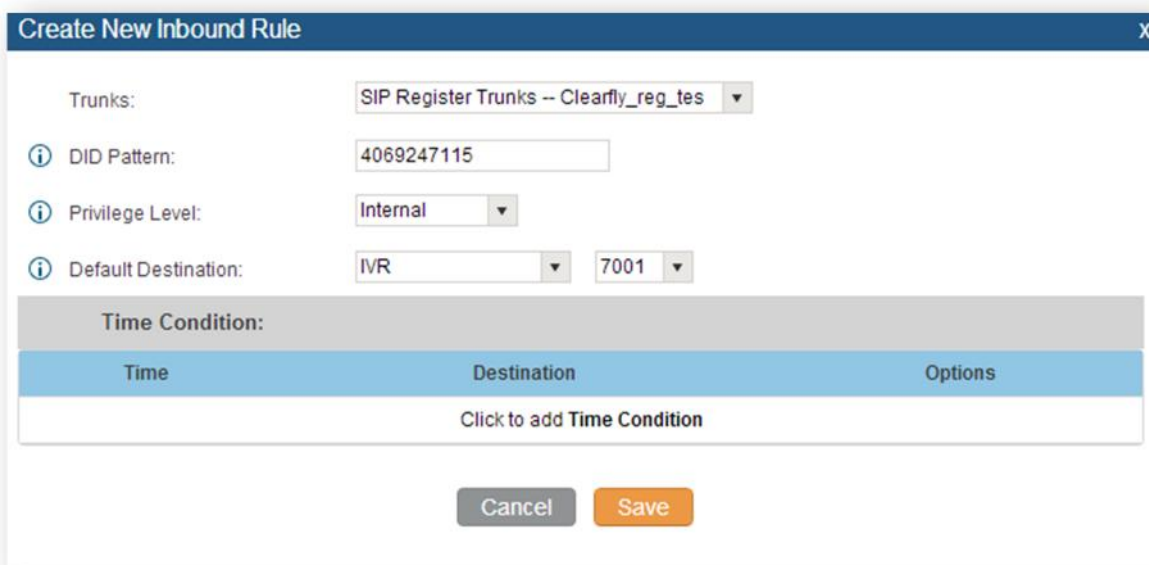
After confirming the Trunk's status, the next is to create inbound and outbound routes so as to route the calls through the registered trunk.

## INBOUND ROUTES

- Navigate to PBX → Basic/Call Routes → Inbound Routes



- Click on “Create New Inbound Rule”



The screenshot shows the 'Create New Inbound Rule' dialog box. It contains the following fields and options:

- Trunks:** A dropdown menu showing 'SIP Register Trunks -- Clearfly\_reg\_tes'.
- DID Pattern:** A text input field containing '4069247115'.
- Privilege Level:** A dropdown menu showing 'Internal'.
- Default Destination:** A dropdown menu showing 'IVR' and a text input field containing '7001'.
- Time Condition:** A section with a table for adding time conditions. The table has columns for 'Time', 'Destination', and 'Options'. Below the table is a link that says 'Click to add Time Condition'.
- Buttons:** 'Cancel' and 'Save' buttons at the bottom.

## What to configure for your inbound route?

**Trunks:** Select the clearly VoIP trunk that you just created.

**DID Pattern:** This is the DID that a caller dialed to reach your UCM. This should be set to DID that was provided by clearly for your trunk. In this example is it '\_4069247115'. (The underscore is require for the DID pattern)

**Privilege Level:** Set this to 'Internal' (Please refer to the UCM manual to understand more about the different privilege levels and their use )

**Default Destination:** This parameter is used to direct a caller to a particular destination. You have the option of sending the user to an Extension, Ring Group, Voicemail or Call Queue. In this guide we will choose IVR and the IVR extension.

Click on '**Save**' then '**Apply Changes**'. Now you can test your inbound calls by dialing into the clearly DID.

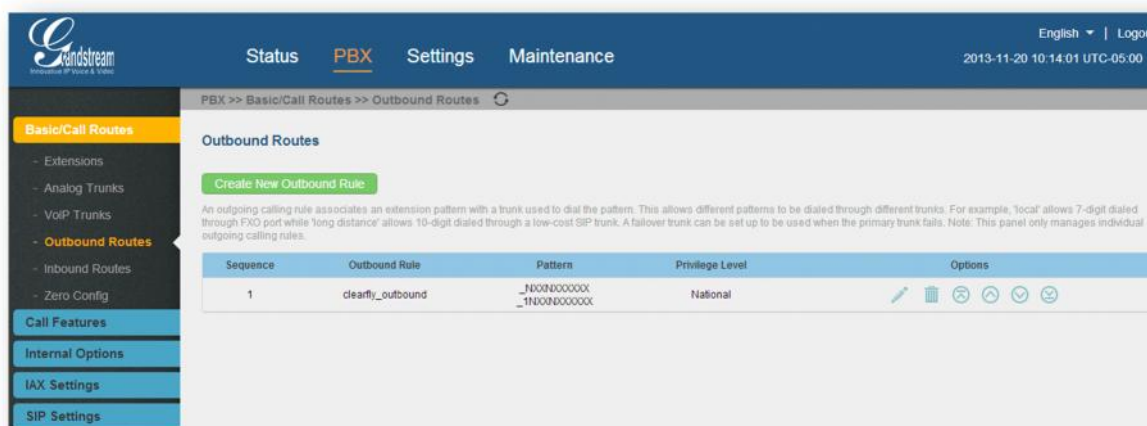
Users can also create a **Time Condition** as to when this inbound route can be used. For example, I can set the inbound calls to go directly to an extension for the following hours 7am – 6pm, and then create another inbound route that is scheduled to go to an auto attendant for the off hours of the office.

\*For more details on how to configure an IVR and Time Conditions for Routes please see the Grandstream UCM6100 series User Manual here:

[http://www.grandstream.com/products/ucm\\_series/ucm61xx/documents/ucm61xx\\_usermanual\\_english.pdf](http://www.grandstream.com/products/ucm_series/ucm61xx/documents/ucm61xx_usermanual_english.pdf)

## OUTBOUND ROUTES

- Navigate to PBX → Basic/Call Routes → Outbound Routes



The screenshot shows the Grandstream UCM61xx web interface. The top navigation bar includes 'Status', 'PBX', 'Settings', and 'Maintenance'. The left sidebar shows a tree view with 'Basic/Call Routes' selected, containing 'Extensions', 'Analog Trunks', 'VoIP Trunks', 'Outbound Routes', 'Inbound Routes', and 'Zero Config'. The main content area is titled 'Outbound Routes' and includes a 'Create New Outbound Rule' button. Below this is a table with the following data:

Sequence	Outbound Rule	Pattern	Privilege Level	Options
1	clearly_outbound	_1000000000 _1000000000	National	[Edit] [Delete] [Add] [Refresh] [Check] [Close]

Below the table, there is a note: "An outgoing calling rule associates an extension pattern with a trunk used to dial the pattern. This allows different patterns to be dialed through different trunks. For example, 'local' allows 7-digit dialed through FXO port while 'long distance' allows 10-digit dialed through a low-cost SIP trunk. A failover trunk can be set up to be used when the primary trunk fails. Note: This panel only manages individual outgoing calling rules."

- Click on “Create New Outbound Rule”

Create New Outbound Rule

Calling Rule Name:

Clearly\_outbound

Pattern:

\_NXXNXXXXXX  
\_1NXXNXXXXXX

Privilege Level:

National

Password:

Send this call through trunk

Use Trunk:

SIP Register Trunks -- Clearly\_reg\_tes

Strip:

0

Prepend:

Use Failover Trunk:

Trunks	Strip	Prepend	Options
Click to add failover trunk			

Cancel

Save

Here are the details required for the new Outbound Rule:

**Calling Rule Name:** This is to identify the route. Our example uses ‘Clearly\_outbound’.

**Pattern:** Dial Pattern is used to help route the calls. In this example, we are using the Patterns such as ‘\_NXXNXXXXXX’, which means that if a user dials 10 digits the call will be routed out using this rule. Another pattern used in this example is ‘\_1NXXNXXXXXX’, which allows 11 digits dialing with a leading ‘1’ to go through this route.

**Privilege Level:** This is set to International by default, but it can be configured to a lower Privilege level. Keep in mind that your Extension must have a Permission Level equal or greater than the Privilege Level in order to use an Outbound Route. For example, Extension 600 has a Permission level of Local while the Outbound Rule has a Privilege level of National. If Extension 600 attempts to make an outbound call to 617-566-9300, which is 10 digits, it will not go through and return with an error due to Permission/Privilege level clearance.

**User Trunk:** Select your clearly Trunk.

Click on ‘**Save**’ and ‘**Apply Changes**’.





Your outbound route should be created and you should see the following detail:

PBX >> Basic/Call Routes >> Outbound Routes 


### Outbound Routes

[Create New Outbound Rule](#)

An outgoing calling rule associates an extension pattern with a trunk used to dial the pattern. This allows different patterns to be dialed through different trunks. For example, 'local' allows 7-digit dialed through FXO port while 'long distance' allows 10-digit dialed through a low-cost SIP trunk. A failover trunk can be set up to be used when the primary trunk fails. Note: This panel only manages individual outgoing calling rules.

Sequence	Outbound Rule	Pattern	Privilege Level	Options
1	clearly_outbound	_N00N00000X _1N00N00000X	National	     

You should now be able to perform an outbound call to any 10 digit number or 1 + 10 digits.

For more details on Inbound and Outbound Dial Patterns, you can highlight the tool tip icon  for syntax information, or you can check the UCM6100 Series IPPBX User Manual:

[http://www.grandstream.com/products/ucm\\_series/ucm61xx/documents/ucm61xx\\_usermanual\\_english.pdf](http://www.grandstream.com/products/ucm_series/ucm61xx/documents/ucm61xx_usermanual_english.pdf)