

Create your SIP Trunk on 3CX first.

1. In the 3CX Management Console menu, select “**SIP Trunks**” > “**Add SIP Trunk.**”
2. Select the Country that the VoIP provider operates in.
3. Select the “Generic” option in Country drop down menu and then choose between “**Generic VoIP Provider,**” or “**Generic SIP Trunk,**”.
4. Enter the Main Number assigned to this SIP Trunk. If you just have DIDs and no main number you can select one of the DIDs as the main number. Click “**OK.**” The SIP Trunk will be created and a new dialog will open.
5. Enter a name for this VoIP provider account. The “SIP server hostname or IP” and optional “Outbound Proxy” will be pre-filled. Compare these with the details you have received from your VoIP provider and check that these are indeed correct.
6. Specify the “number of simultaneous calls” your provider allows.
7. In “Authentication,” specify whether authentication is based on IP or based on Account/Registration. If you selected a template, this will be automatically pre populated and you must leave as is. If IP based, the password will be greyed out, since authentication is linked to your IP. The outbound or inbound only are not applicable in most cases and can be ignored.
8. Specify how calls to the main number should be routed. The routing configured here will be for calls matching the main number.
9. If you have DID numbers, you will need to specify these in the DIDs tab. Click on the “DIDs” tab and add the DID numbers associated with this account. The DID will be created and linked to the operator extension. You can change this later from the “Inbound Rules” node by adding an inbound rule for the DID and routing to the desired destination.
10. In the Caller ID tab, add the caller ID you wish to have appear on outbound calls.
11. Click “OK” to save the trunk settings.

Add Outbound Route

Now you need to create an outbound call rule. To do this:

1. Go to the **“Outbound Rules”** node and press **“Add”** to create a new rule.
2. Decide what calls should be routed over this trunk.
3. In the **“Make Outbound Calls”** section select the trunk you just created.
4. Click **“OK”** to create the outbound rule.

Instructions taken from www.3cx.com (see <https://www.3cx.com/docs/manual/sip-trunks/>)

Outbound Caller ID Presentation

SIP Field	Variable
Request Line URI : User Part	"CalledNum" number that has been dialed (default: To->user)
Request Line URI : Host Part	"GWHostPort" gateway/provider host/port
Contact : User Part	"AuthID" authentication
Contact : Host Part	"ContactUri" usually, content of Contact field
To : Display Name	"CalledName" name that has been dialed (default: To->display name)
To : User Part	"CalledNum" number that has been dialed (default: To->user)
To : Host Part	"GWHostPort" gateway/provider host/port
From : Display Name	"OutboundCallerId" Outbound caller Id taken from Extension settings in management console
From : User Part	"AuthID" authentication
From : Host Part	"GWHostPort" gateway/provider host/port
User Agent : Text String	Leave default value

To use a fixed CLID from the trunk configuration, under "Outbound Parameters" on the VoIP Provider settings page, change the following:

- Set "From: User Part" to "OutboundCallerId"

To use the Per extension CLID configuration:

- Set "From: User Part" to "OriginatorCallerID"

Call presentation should now work as expected.

Firewall Settings (Guideline)

Below is a guideline for your firewall settings based on IP Authentication SIP trunks, and may vary depending on your own setup.

Protocol	Direction	Port Range	Source	Destination	Description
UDP	Inbound	9,000-9,500	Anywhere (0.0.0.0)	LAN IP of 3CX	RTP Media Range
UDP	Inbound	5060	SIP Gateway Assigned to Customer	LAN IP of 3CX	SIP Signalling Port

