


3CX Trunk Configuration for Spark SIP Connect Trunks

Create Trunk

First Create a new Trunk in 3CX using the "Generic" Template

Add SIP Trunk/VoIP Provider ✕

Select Country

 Generic ▼

Select Provider in your Country

Generic SIP Trunk ▼

Main Trunk No

Lead Number as Specified by Spark

OK Cancel

Specify The Main Trunk No. as the Lead Number specified by Spark.

General

Enter the details on the General Tab as shown below

Spark SIP Trunk OK Cancel Help

General DIDs Caller ID Options Inbound Parameters Outbound Parameters

Trunk Details

Enter name for Trunk

Spark SIP Trunk (Description of your choice)

Registrar/Server/Gateway Hostname or IP

sip-net.spark.co.nz (SIP Realm as specified by Spark) 5060 Auto Discovery

Outbound Proxy

ric0102-p01.spark.co.nz (Outbound Proxy as specified by Spark) 5060 Auto Discovery

Number of SIM Calls

10

Authentication

Type of Authentication

Register/Account based

Authentication ID (aka SIP User ID)

35437015 (The Authentication ID as specified by Spark Note the lack of the leading 0)

Authentication Password

Authentication Password as specified by Spark

3 Way Authentication Password

DDI's

On the DDI Tab, enter any DDI numbers or test numbers that have been assigned to the SIP Trunk by Spark

The screenshot shows the 'Spark SIP Trunk' configuration window with the 'DDI's' tab selected. The window has 'OK' and 'Cancel' buttons at the top left and a 'Help' icon at the top right. Below the title bar are tabs for 'General', 'DDI's', 'Caller ID', 'Options', 'Inbound Parameters', and 'Outbound Parameters'. The 'DDI's' tab contains a table with the following structure:

DDI's	
<input type="checkbox"/>	DID/DDI Number
<input type="checkbox"/>	03543700
<input type="checkbox"/>	03543700
<input type="checkbox"/>	03543700

Caller ID

On the Caller ID Tab specify the Default Outbound Caller ID for the trunk (Note individual Outbound Caller ID's can be specified per extension and will override this Caller ID)

The screenshot shows the 'Spark SIP Trunk' configuration window with the 'Caller ID' tab selected. The window has 'OK' and 'Cancel' buttons at the top left and a 'Help' icon at the top right. Below the title bar are tabs for 'General', 'DDI's', 'Caller ID', 'Options', 'Inbound Parameters', and 'Outbound Parameters'. The 'Caller ID' tab contains the following text:

Reformat Incoming or Outgoing Caller Identification numbers by configuring matching patterns. [Click here for more information.](#)

Default caller ID

Configure Outbound Caller ID

03543700

Options

On the Options tab Scroll to the bottom and remove all but G711-a Law codec

Spark SIP Trunk OK Cancel Help

General DIDs Caller ID **Options** Inbound Parameters Outbound Parameters

Call options

- Allow inbound calls
- Allow outbound calls
- Disallow video calls

Advanced

- PBX Delivers Audio
- Supports Re-Invite
- Support Replaces
- Put Public IP in SIP VIA Header
- Alternative Proxy

Alternative Proxy

SRTP

Re-Register Timeout
180

Select which IP to use in 'Contact' (SIP) and 'Connection'(SDP) fields
Use Default Settings

Transport Protocol
Any

IP Mode
Any

Codec Priority

+ Add codecs ↑ Move Up ↓ Move Down

G.711 A-law ×

Inbound

On the Inbound Parameters unselect the Option “Call Source Identification”

Spark SIP Trunk OK Cancel Help

General DIDs Caller ID Options **Inbound Parameters** Outbound Parameters

Caller Number/Name Field Mapping:

Review the SIP header of the INVITE and specify where the following values should be present within the INVITE:

"CalledNum" number that has been dialed (default: To->user)	To : User Part
"CallerName" caller's name (default: From->display name)	From : User Part
"CallerNum" caller's number (default: From->user)	From : User Part

Call Source Identification

Configure this option only when the SIP Trunk is IP based (peering), or does not support automatic inbound call detection. If you have multiple trunks from the same vendor or issues with incoming calls, you might need to toggle this option (on/off) and see what configuration works best for this SIP Trunk

Request Line URI : User Part
"EnforcedOriginatorCallerID" To be used when you want to send Anonymous via PAI

Use both "Call Source Identification" rules and "Caller Number/Name -> CalledNum" field mappings (Note: Disables catch all routing capability)

Outbound

On The outbound Parameters you can Leave most of the settings as they are in the Generic Template except for the PAI (P-Asserted Identity) The P-Asserted Identity : User Part should be set to AuthID and the P-Asserted Identity : Host Part should be set to GWHostPort as shown below (Scroll down to the bottom of the outbound Parameters)

Without these parameters set Spark will not Authenticate or accept your Outbound Calls and you will receive a 404 Not found error when trying to make calls.

Spark SIP Trunk OK Cancel Help

General DIDs Caller ID Options Inbound Parameters **Outbound Parameters**

Outbound Parameters

Assign SIP header fields to 3CX Call Variables. Requires advanced SIP knowledge. Misconfiguration will cause your PBX to malfunction

SIP Field	Variable	Custom Value
Request Line URI : User Part	"CalledNum" number that has been dialed (default: To->i)	
Request Line URI : Host Part	"GWHostPort" gateway/provider host/port	
Contact : User Part	"OutboundCallerId" Outbound caller Id taken from Exten	
Contact : Host Part	"ContactUri" usually, content of Contact field	
To : Display Name	"CalledName" name that has been dialed (default: To->d)	
To : User Part	"CalledNum" number that has been dialed (default: To->i)	
To : Host Part	"GWHostPort" gateway/provider host/port	
From : Display Name	"OutboundCallerId" Outbound caller Id taken from Exten	
From : Host Part	"GWHostPort" gateway/provider host/port	
User Agent : Text.String	Leave default value	
Remote Party ID - Called Party : Display Name	Leave default value	
Remote Party ID - Called Party : User Part	Leave default value	
Remote Party ID - Called Party : Host Part	Leave default value	
Remote Party ID - Calling Party : Display Name	"OutboundCallerId" Outbound caller Id taken from Exten	
Remote Party ID - Calling Party : User Part	"OutboundCallerId" Outbound caller Id taken from Exten	
Remote Party ID - Calling Party : Host Part	"GWHostPort" gateway/provider host/port	
P-Asserted Identity : Display Name	Leave default value	
P-Asserted Identity : User Part	"AuthID" authentication	
P-Asserted Identity : Host Part	"GWHostPort" gateway/provider host/port	
P-Preferred Identity : Display Name	Leave default value	
P-Preferred Identity : User Part	Leave default value	