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VoiceGear/3CX Integration Guide– Ver.0.1

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# 1. Overview

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This document presents a complete guide for integrating VoiceGear Skype gateways with 3CX phone systems running version 7 of 3CX software. The document assumes reader familiarity with both VoiceGear gateways and 3CX PBX. For more details on VoiceGear gateway configuration, please refer to the VoiceGear SkyBridge or VoiceGear Connect user guides available at [www.industrydynamics.ca](http://www.industrydynamics.ca).

## 1.1 Setting up 3CX PBX

To get started with your 3CX PBX please follow steps outlined below.

1. Install and launch 3CX on a Windows computer and make sure it is connected to the same LAN as VoiceGear gateway. Make sure there is no firewall between the two systems
2. Run the 3CX management console by selecting “3CX Phone system->ManagementConsole” option from the start menu and login with administrator credentials
3. Make sure the system running 3CX software has an assigned static IP or a DHCP assigned IP that does not change
4. Set up a new VoIP provider and an outbound route to enable the 3CX system to talk to VoiceGear gateway. For more information, please refer to section 2.1

## 1.2 Setting up VoiceGear Gateway

To get started with VoiceGear, please follow steps outlined below.

1. Connect the supplied power brick/cord and network cable to your new VoiceGear gateway
2. Connect monitor and keyboard to the gateway and use username: root, password: vgcroot123 credentials to access the administration console. Using the console, configure networking settings and set a static IP for the gateway
3. Open the VoiceGear web configuration interface in a web browser using the static IP you have assigned and TCP port 8080. For example, if the static IP assigned is 192.168.2.194, point your browser to <http://192.168.2.194:8080>
4. Once the web configuration interface has been loaded, please login with the following credentials: username: admin, password: admin
5. Once logged in, register at least one valid Skype account with the gateway via the “Skype-> Accounts->Add New” page
6. Please refer to section 2.2 for more details on setting up a SIP trunk to enable VoiceGear gateway to communicate with a 3CX PBX

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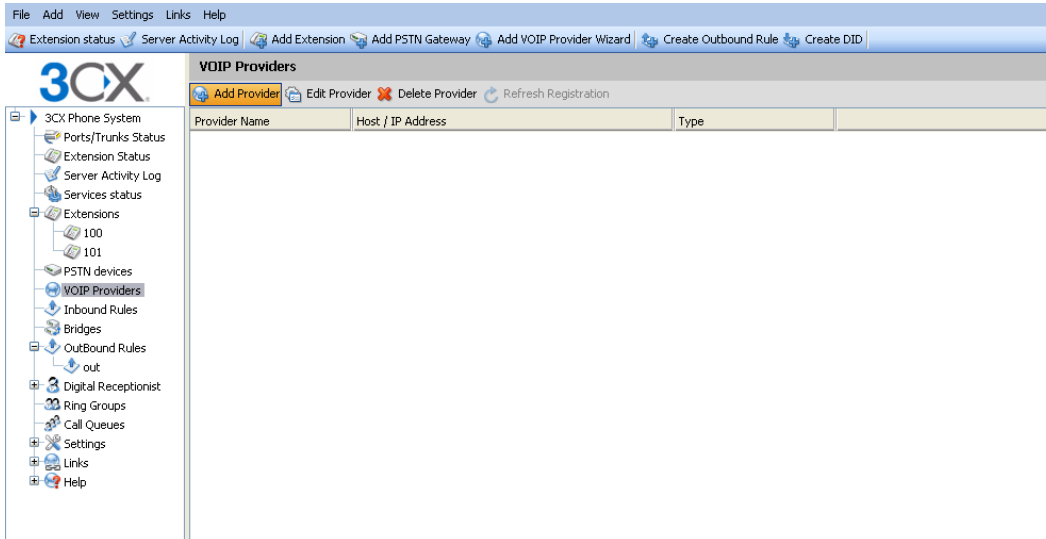
## 2. VoiceGear-3CX SIP Integration

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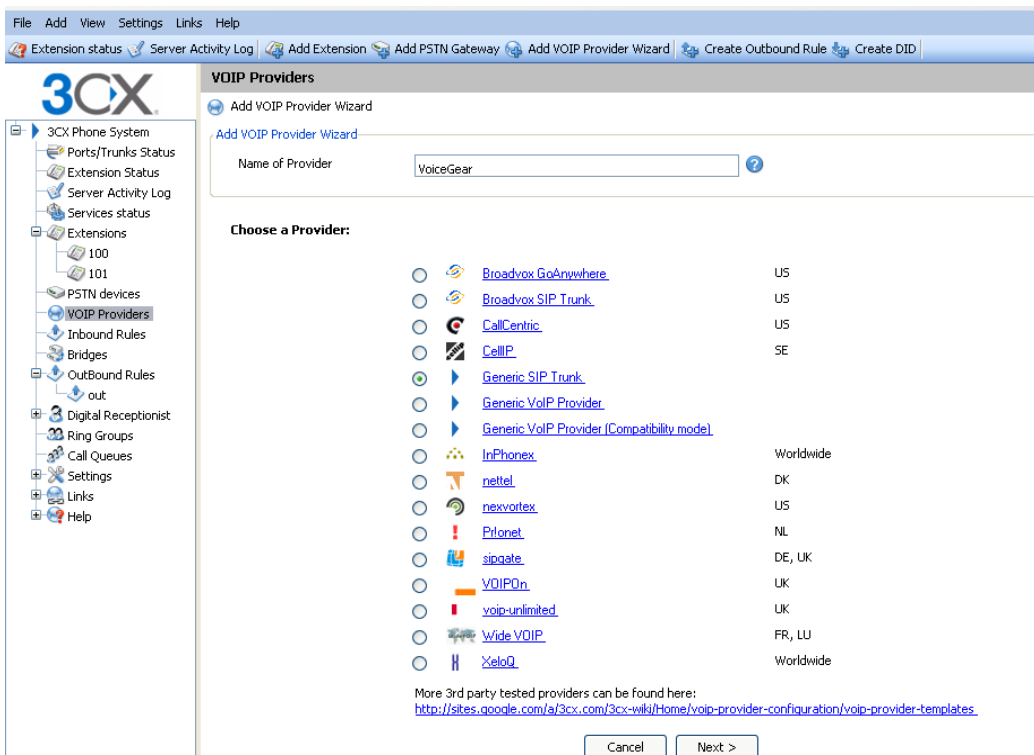
The main purpose of this section is to outline both VoiceGear gateway and 3CX PBX configuration to enable integration of both systems via SIP protocol.

## 2.1 3CX Configuration

1. Navigate to the “3CX Phone System->VoIP Providers” screen via the configuration menu of the 3CX management console (open within your web browser) and click on “Add Provider” button



2. In the subsequent screen, enter “VoiceGear” as the name of the provider, select the “Generic SIP Trunk” option in the “Choose a Provider” list, and click “Next”



- In the subsequent screen, enter the static IP of the VoiceGear gateway from section 1.2 for both “SIP server hostname or IP” and “Outbound proxy hostname or IP” fields, leave SIP ports set to “5060” and click “Next”

The screenshot shows the 3CX web interface for configuring a VOIP provider. The left sidebar shows the navigation tree with 'VOIP Providers' selected. The main content area is titled 'VOIP Providers' and contains the 'Add VOIP Provider Wizard' section. Under 'VOIP Provider Details', there is a form with the following fields:

|                                       |                      |   |
|---------------------------------------|----------------------|---|
| SIP server hostname or IP             | <input type="text"/> | ? |
| SIP Server port                       | 5060                 | ? |
| Outbound proxy hostname or IP         | <input type="text"/> | ? |
| Outbound proxy port (default is 5060) | 5060                 | ? |

At the bottom right of the form are two buttons: '< Back' and 'Next >'.

- In the next screen, enter “12345” or any unique value as “External Number”, “Authentication ID”, and “Authentication Password”. Set the number of maximum simultaneous calls to be the number of lines available on your VoiceGear gateway and click “Next”.

The screenshot shows the 3CX web interface for configuring a VOIP provider. The left sidebar shows the navigation tree with 'VOIP Providers' selected. The main content area is titled 'VOIP Providers' and contains the 'Add VOIP Provider Wizard' section. Under 'Account Details', there is a form with the following fields:

|                         |       |   |
|-------------------------|-------|---|
| External Number         | 12345 | ? |
| Authentication ID       | 12345 | ? |
| Authentication Password | ••••• | ? |

Below this is the 'Simultaneous Calls' section with a single field:

|                            |   |   |
|----------------------------|---|---|
| Maximum simultaneous calls | 4 | ? |
|----------------------------|---|---|

At the bottom right of the form are two buttons: '< Back' and 'Next >'.

- In the subsequent screen, select the action for inbound call routing during office and out of office hours. Usually, inbound calls are routed to a digital receptionist. Click “Next” to proceed

The screenshot shows the 3CX web interface for configuring a VOIP provider. The left sidebar shows the navigation tree with 'VOIP Providers' selected. The main content area is titled 'VOIP Providers' and contains the 'Add VOIP Provider Wizard' section. Under 'Office Hours', there is a form with the following fields:

Configure where calls should be routed during office hours.

End Call

Connect to Extension: 100 Test Test

Connect to Queue / Ring Group: [Empty]

Connect to Digital Receptionist: 800 IVR

Voicemail box for Extension: 100 Test Test

Forward to Outside Number: [Empty]

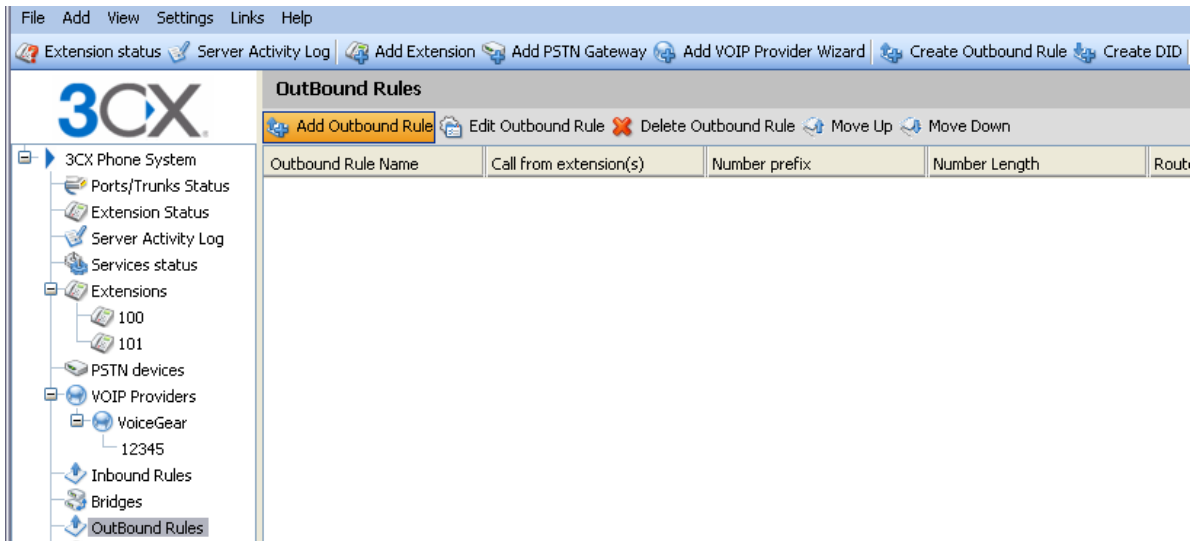
Send fax to email of extension: 888 Default FAX Destination

Same as Out of Office hours

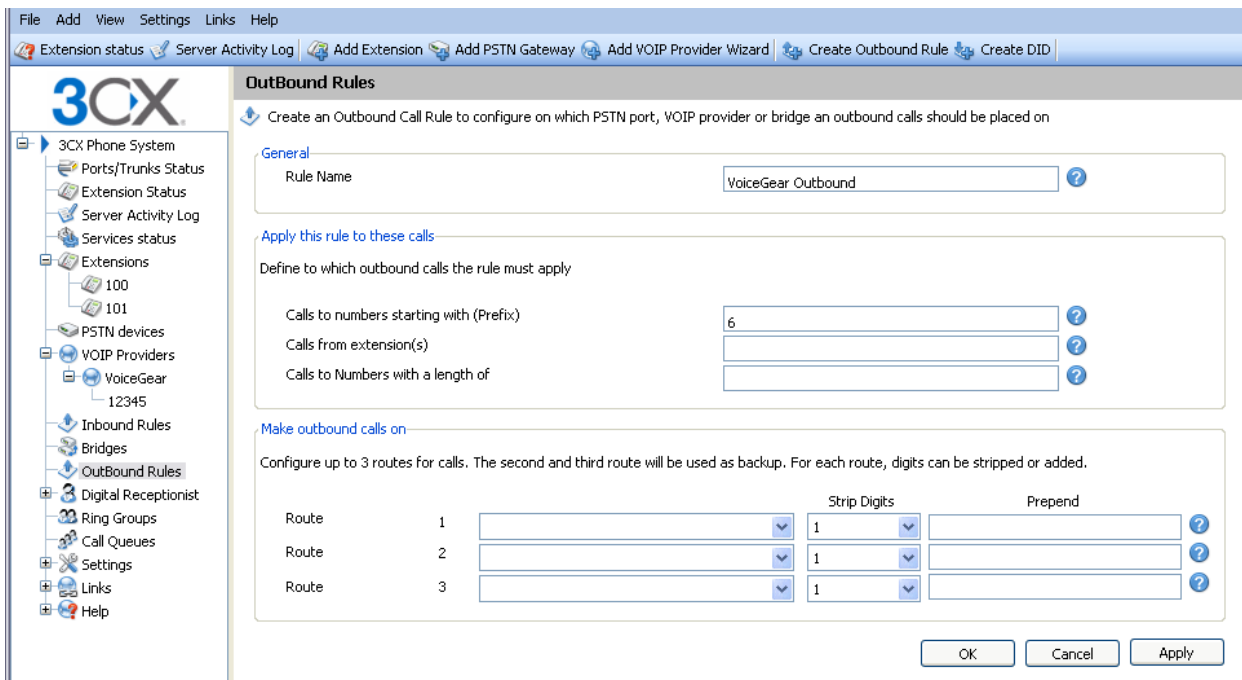
At the bottom right of the form are two buttons: '< Back' and 'Next >'.



6. Click on “Skip” button in the subsequent screen
7. Navigate to the “3CX Phone System->OutBound Rules” screen via the configuration menu of the 3CX management console and click on “Add Outbound Rule” button

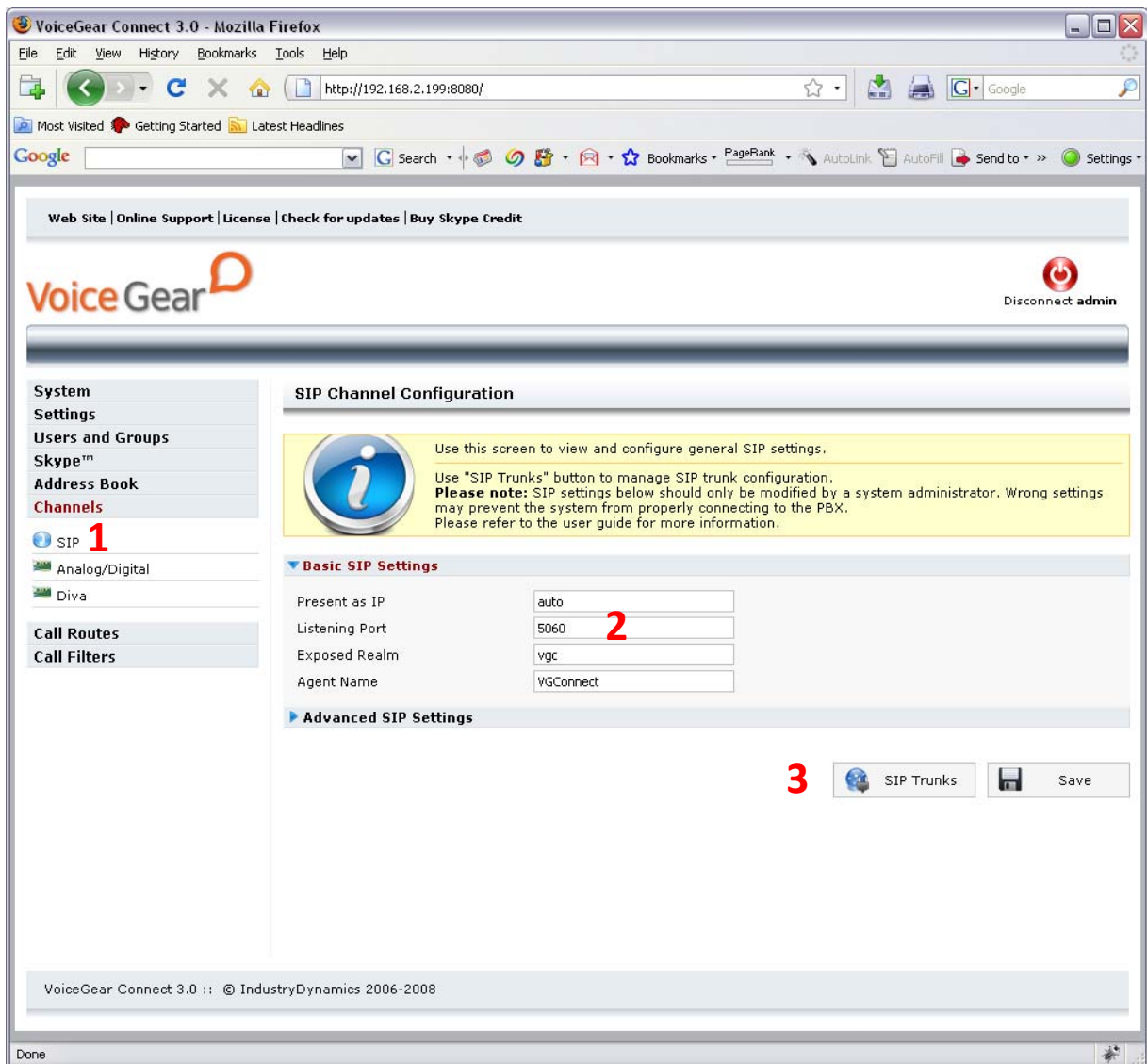


8. In the subsequent screen enter “VoiceGear Outbound” as “Rule Name” and add a prefix to apply to outbound calls. The prefix can be any number not currently used by the PBX and will be used to access the VoiceGear gateway and make calls to Skype (in this case 6 was used). To make that happen, select “VoiceGear” from the drop down list for route 1 and click “OK”.

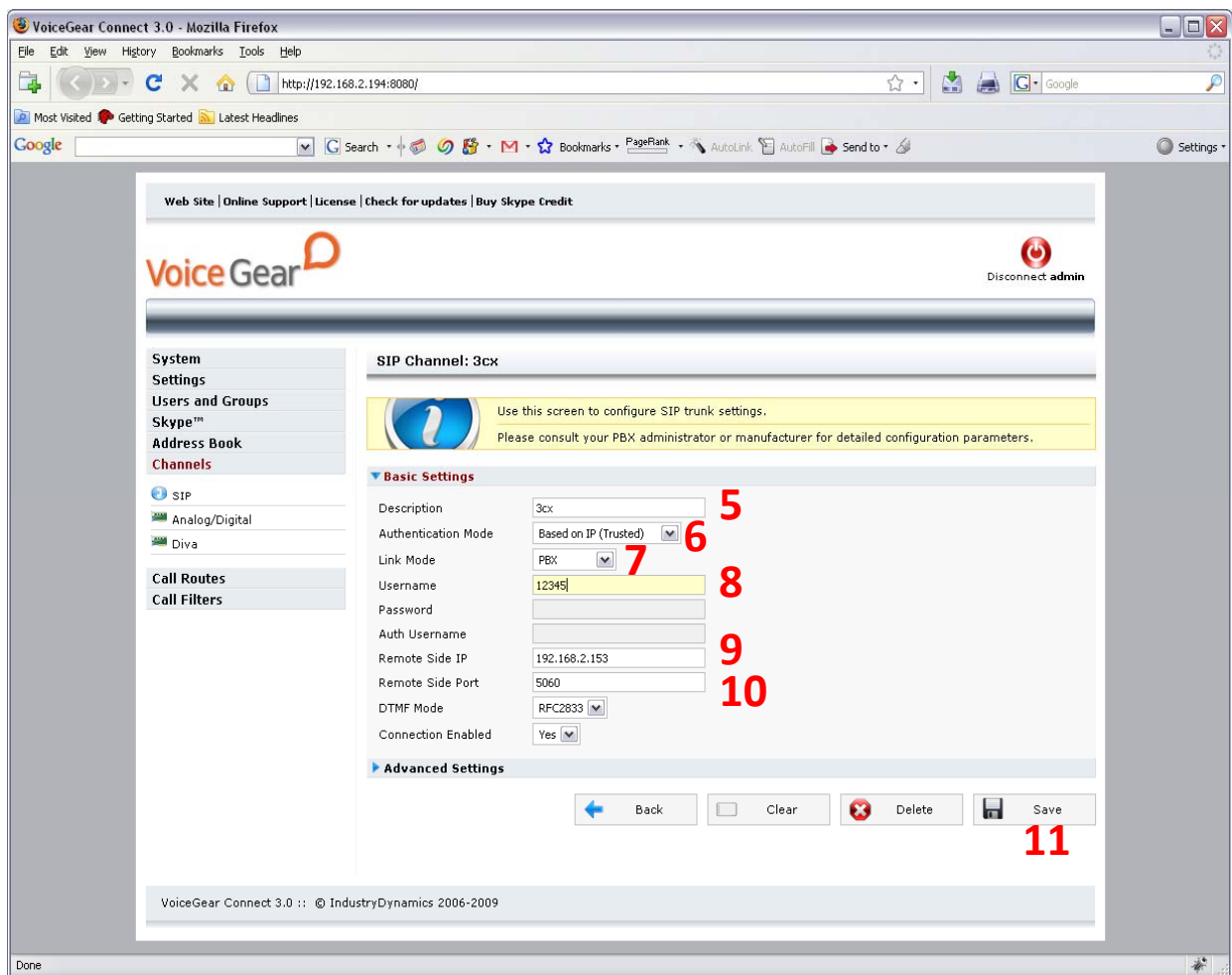


## 2.2 VoiceGear Gateway Configuration

1. Navigate to the “Channels->SIP” screen via the main menu of the VoiceGear web configuration interface




2. Make sure “listening port” is set to 5060
3. Click on the “SIP trunks” button to start the configuration of a SIP trunk that will communicate with 3CX PBX
4. Under the SIP trunks page that opens, click on the “Add new” button to start adding a new trunk



5. Under “Basic settings”, set the Description to 3CX to help future identification of this SIP trunk
6. Select the “Authentication mode” to be “Based on IP (trusted)”
7. Select the link mode to be “PBX”, this will tell VoiceGear gateway that it is communicating with a PBX as opposed to an individual user
8. Set the “Username” to be “12345”. Please note that this must match the number defined in step 4 of section 2.1
9. Set the “Remote Side IP” to the static IP configured for the 3CX PBX
10. Set the “Remote Side Port” to 5060
11. Click on the “Save” button to save your changes. Once clicked, an “Apply settings” dialog will come up. Please click on “Apply now” button to apply your settings

Web Site | Online Support | License | Check for updates | Buy Skype Credit

VoiceGear  Disconnect admin

**System Settings**  
 Users and Groups  
 Skype™  
 Address Book  
**Channels**  
 SIP  
 Analog/Digital  
 Diva

**Call Routes**  
 Call Filters

Modifications need to be applied, please click on the "Apply Now" button.  
 Apply Now

SIP Channel: 3cx

Use this screen to configure SIP trunk settings.  
 Please consult your PBX administrator or manufacturer for detailed configuration parameters.

Successfully saved

**Basic Settings**

|                     |                       |
|---------------------|-----------------------|
| Description         | 3cx                   |
| Authentication Mode | Based on IP (Trusted) |
| Link Mode           | PBX                   |
| Username            | 12345                 |
| Password            |                       |
| Auth Username       |                       |
| Remote Side IP      | 192.168.2.153         |
| Remote Side Port    | 5060                  |
| DTMF Mode           | RFC2833               |
| Connection Enabled  | Yes                   |

**Advanced Settings**

Back Clear Delete Save

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12. Navigate to the "Channels -> Call Routes -> Inbound Routes" screen via the main menu of the VoiceGear web configuration interface and click on "Incoming Calls Any/Any" route
13. In the subsequent screen, remove the existing destination by clicking on the "X" button to the right of it and add a new destination by selecting SIP PBX trunk identified with "12345". Fill in "12345" in the "Use this Number as Destination" field and click "Add". Please note that the destination number must match the one defined in step 4 of section 2.1. Click "Save" to apply your changes
14. To try a test call from any extension connected to the 3CX PBX, please dial "6123". This will route you to the Skype call testing center
15. If Skype account registered with the gateway has SkypeOut credits, you can try dialing a landline though Skype by entering "64168481850" from any extension. This will access IndustryDynamics head office