

Zello-Svxlink gateway configuration

Zello settings

Prerequisites

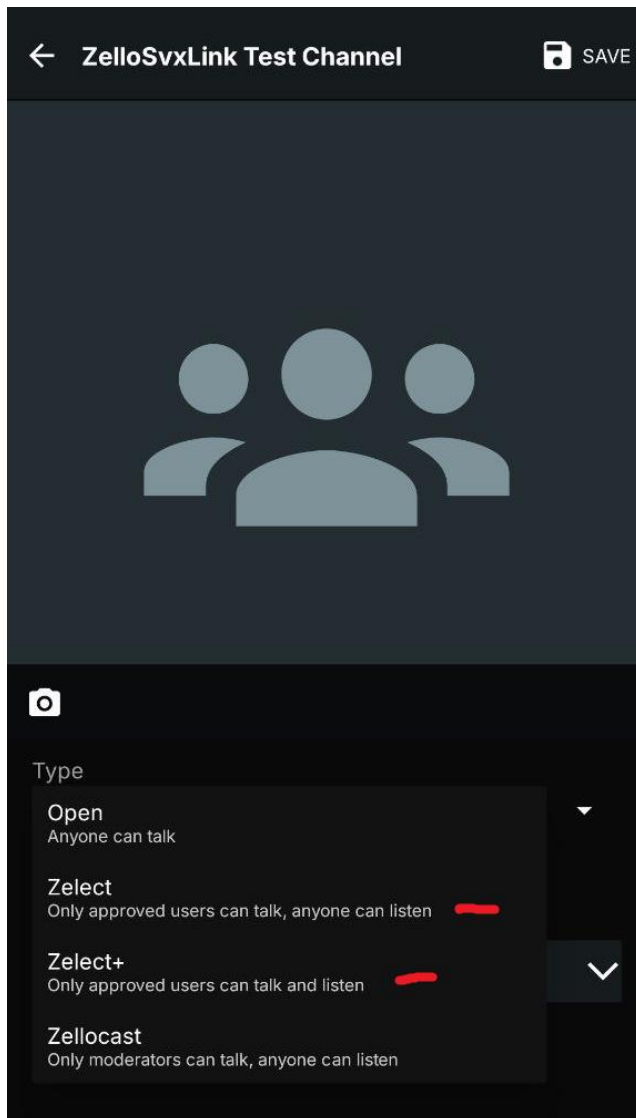
The Gateway admin needs to create:

- A Zello user dedicated to the gateway (Gateway Zello User)
- A Zello channel dedicated to the gateway (Gateway Zello Channel)

Gateway Zello Channel

This channel should not be created (and owned) by the Gateway Zello User. It should be created from the Zello mobile app by a different user, who will be the admin of the group.

The recommended channel type is 'Zselect' (everyone can listen, only trusted users can speak, like in ham radio), or 'Zselect+' (only trusted users can speak / listen), if the content of the channel is not ham radio.



In this document, we will use a test channel called “ZelloSvxLink Test Channel”.

This is the default you will find configured on the VM image, please change it to your own.

Gateway Zello User

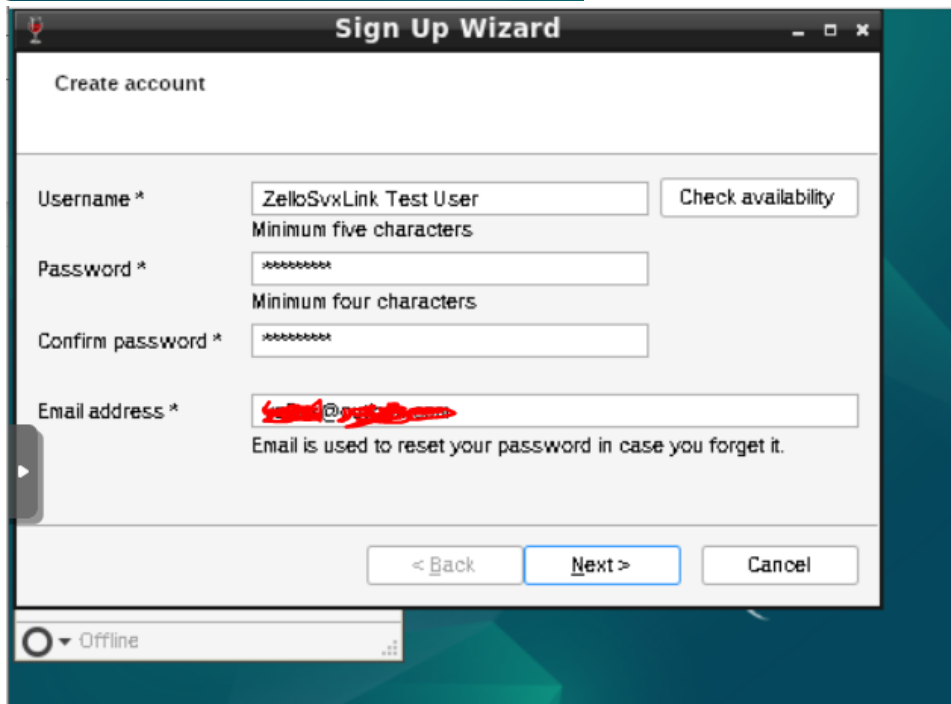
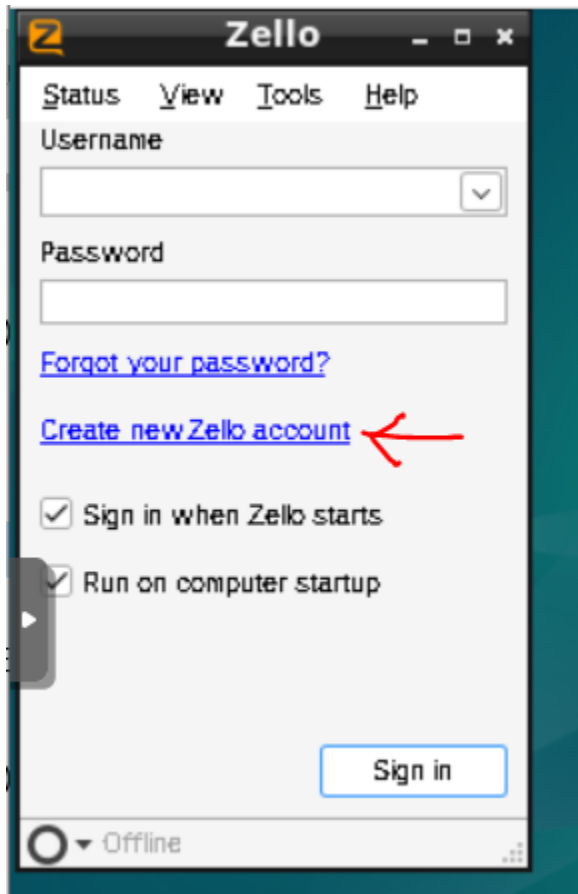
All the audio traffic coming from the svxlink server (reflector) will come in Zello via this user.

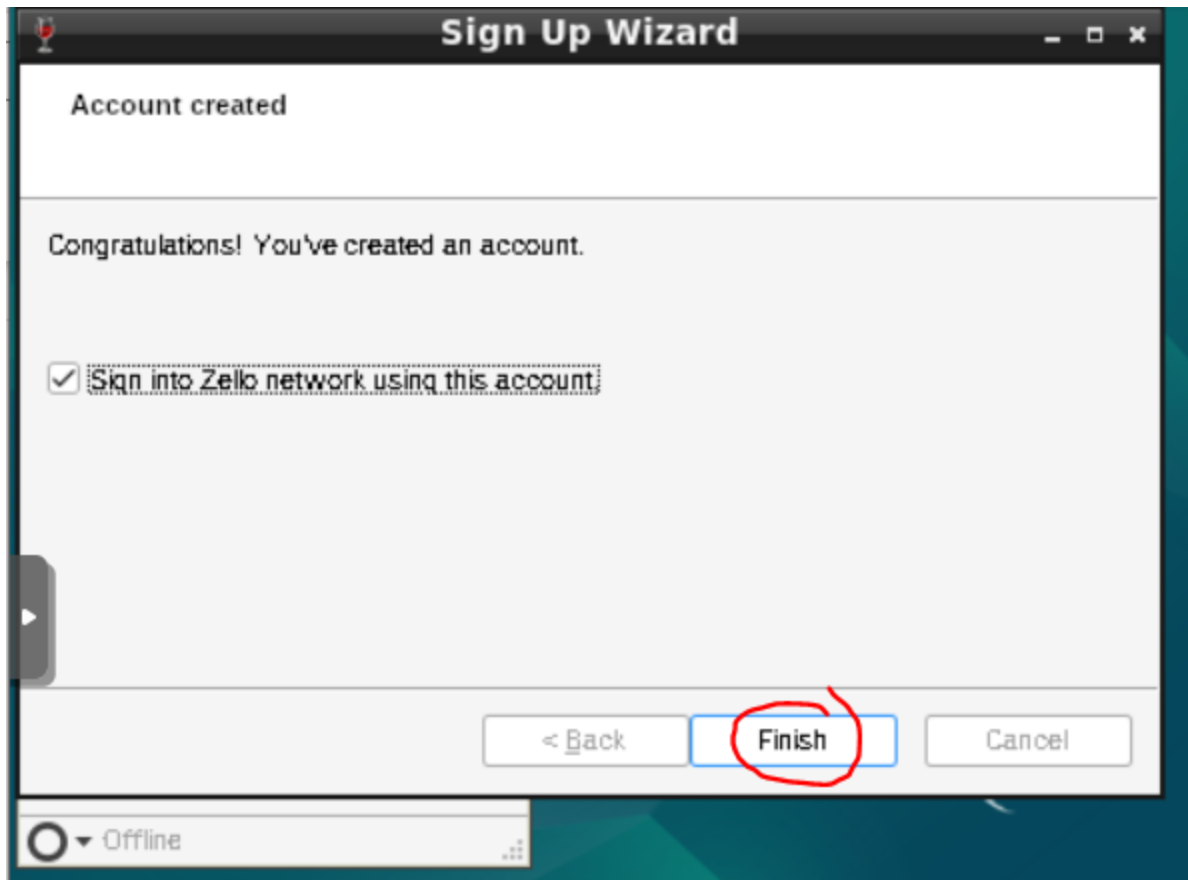
Important: This user should not be an admin or moderator of the channel, but only a ‘trusted’ user. This is important, because new ‘untrusted’ channel joiners can contact moderators, so that traffic WILL go to the reflector if the gateway Zello user is a moderator.

In this document, we will use a test user called “ZelloSvxLink Test User”.

This is the default you will find configured on the VM image, please change it to your own.

The Zello user dedicated to the gateway can be created from the VM as follows:

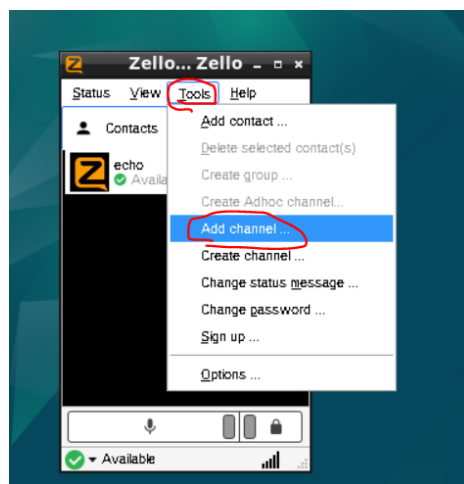




Joining the Gateway Zello Channel with the Gateway Zello User from the VM:

Of course this can be done from any device (logging in with a user to another device will automatically log off that user from all other devices)

From the VM:



Tools > Add Channel...:

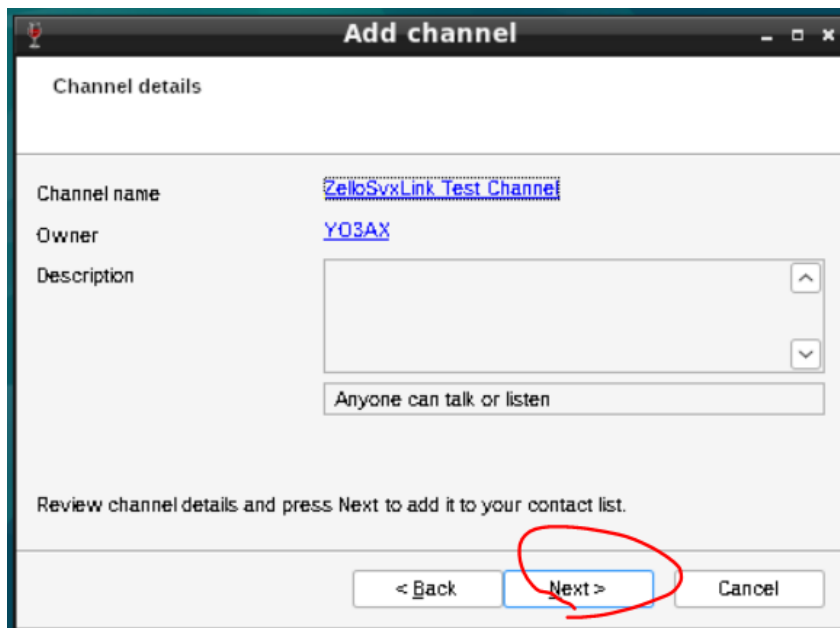
Enter the channel's name and click Next

The screenshot shows a window titled "Add channel". Inside, there's a section labeled "Add channel" with a text input field. The field contains the text "ZelloSvxLink Test Channel". Below the field is a link labeled "Advanced search". At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel". A red circle highlights the text input field, and a red arrow points from it to the "Next >" button. A red number "1" is placed below the input field, and a red number "2" is placed above the "Next >" button.

Click again Next

The screenshot shows the same "Add channel" window. The input field is now empty, and a list of channels is displayed. The list has two columns: "Name (Owner)" and "Description". The first entry is "ZelloSvxLink Test Channel (Y03AX)", which is highlighted with a blue background. Below the list is a search bar with "<" and ">" navigation buttons. At the bottom left, it says "Channels found: 1.". At the bottom right are the same three buttons: "< Back", "Next >", and "Cancel". A red circle highlights the "Next >" button.

Click again Next

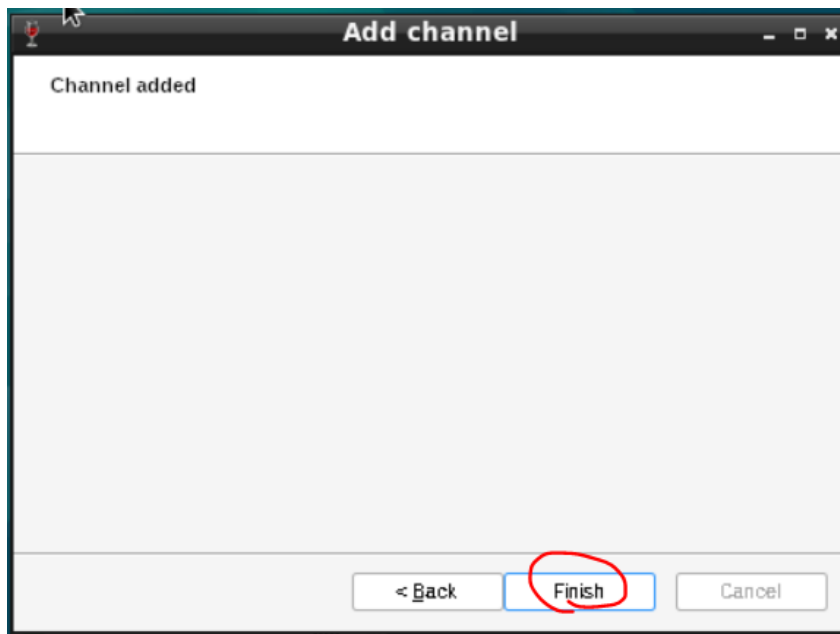


The screenshot shows a window titled "Add channel" with a sub-header "Channel details". It contains the following fields:

- Channel name: [ZelloSvxLink Test Channel](#)
- Owner: [Y03AX](#)
- Description: A text area with a scroll bar, containing the text "Anyone can talk or listen".

Below the fields, there is a message: "Review channel details and press Next to add it to your contact list." At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The "Next >" button is circled in red.

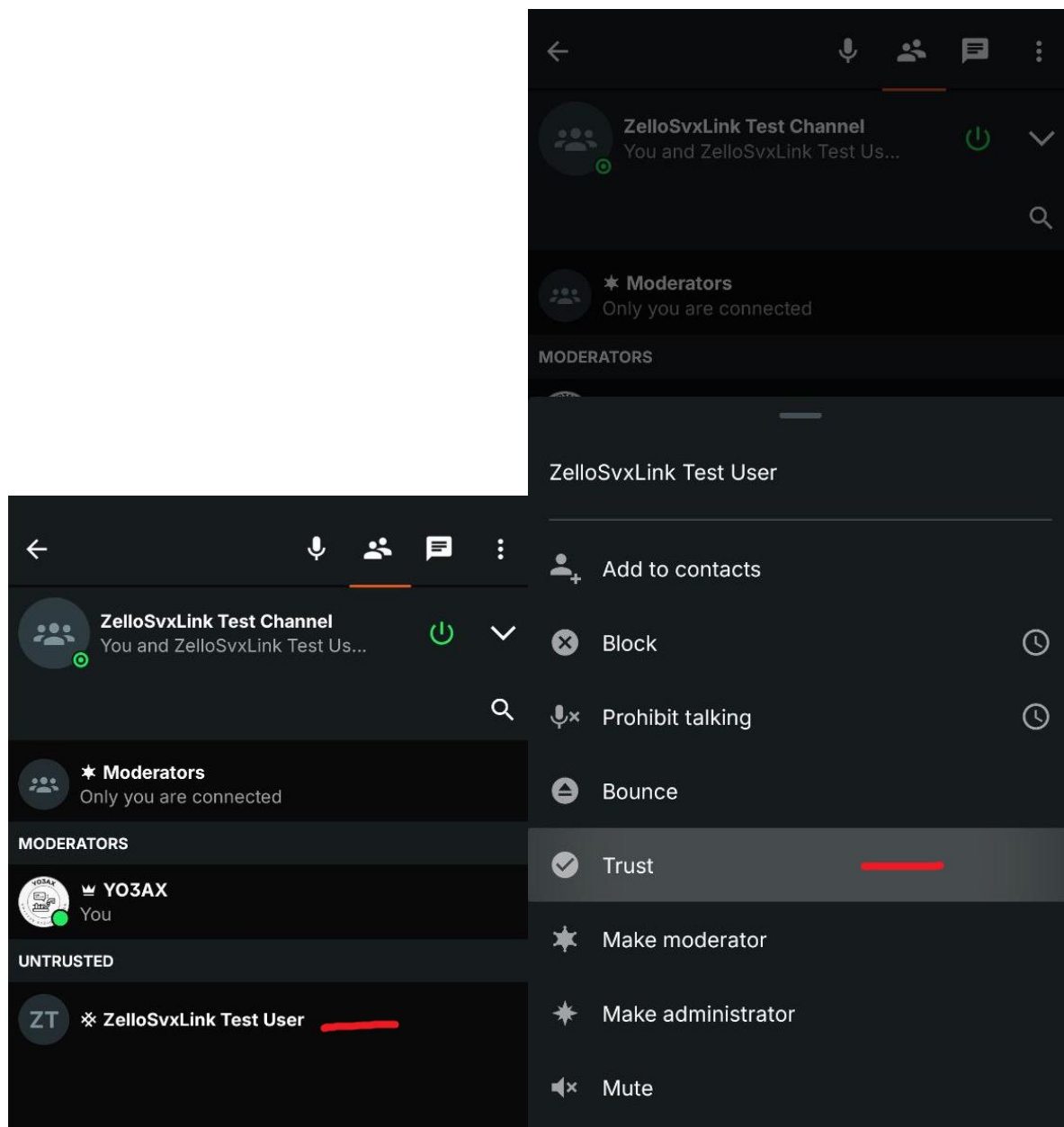
Click Finish



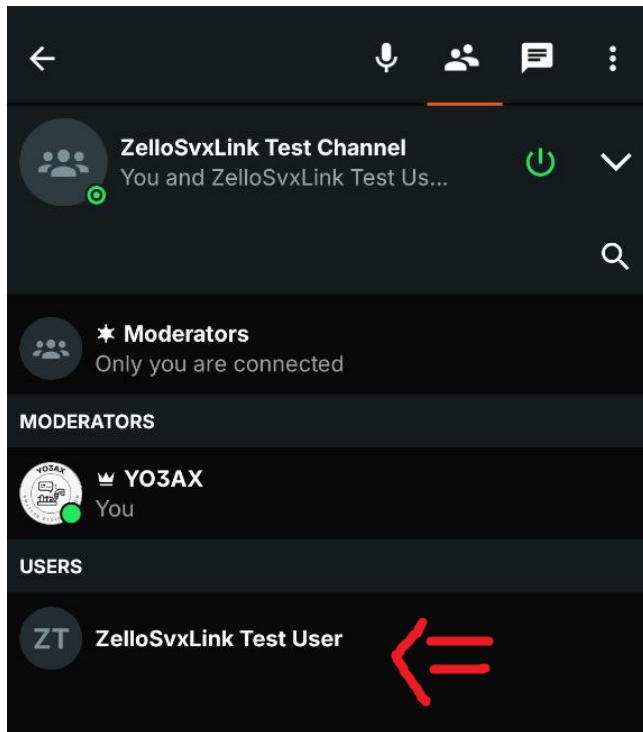
The screenshot shows the same "Add channel" window, but the sub-header now says "Channel added". The main area is empty. At the bottom, the buttons are "< Back", "Finish", and "Cancel". The "Finish" button is circled in red.

Trusting the Zello gateway user in the channel

From another device, logged in as the Administrator of the group (or as a moderator, if a moderator was defined):



Result:

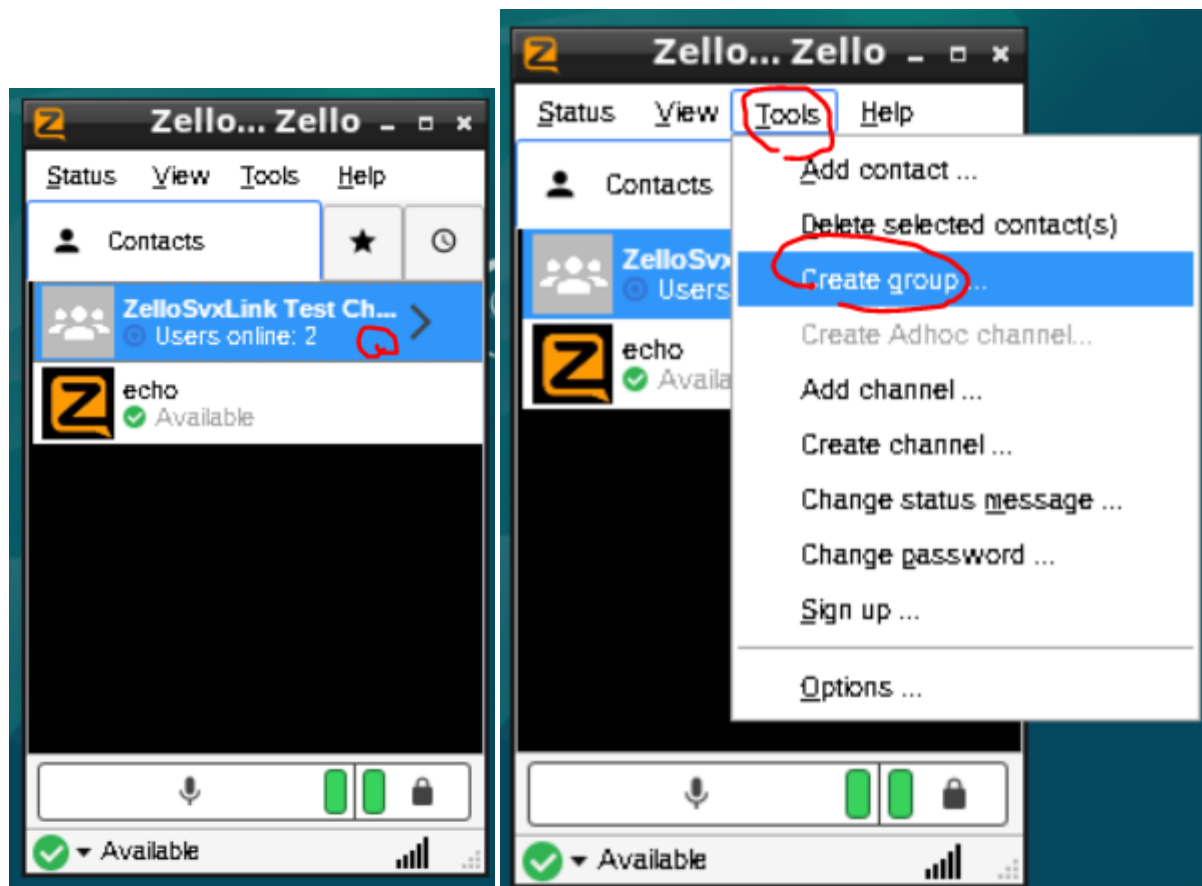


Setting the Gateway Zello Channel as target channel:

In Gateway mode, Zello App will make traffic in a specific target 'group' named **Zello Gateway**

This group can contain one or more channels or contacts. In our case, we will only add to it the desired Zello Gateway Channel.

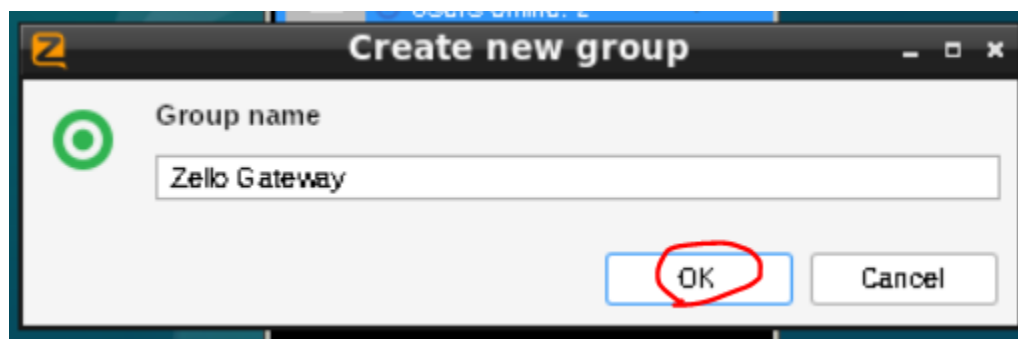
Click on the channel to select it, then click on **Tools > Create group....**



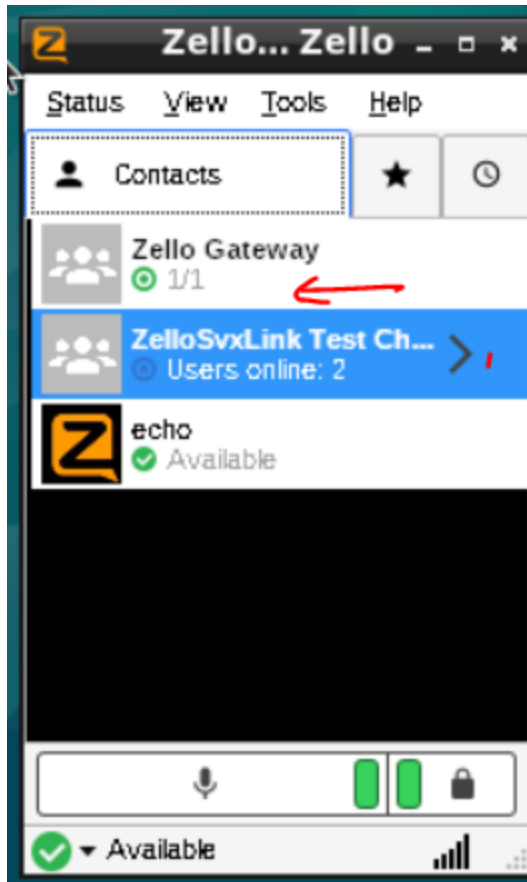
Give the new group exactly this name:

Zello Gateway

Then click OK

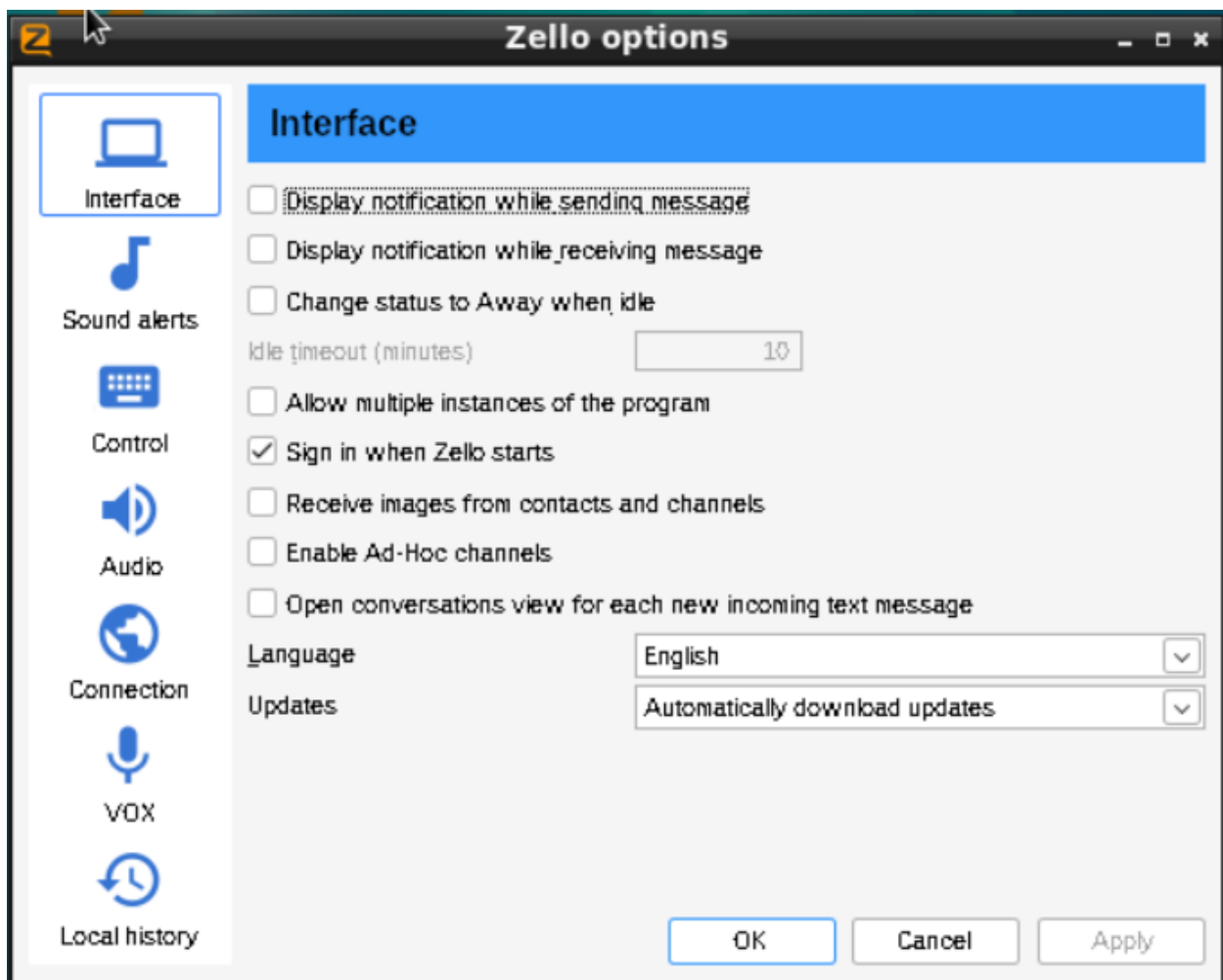


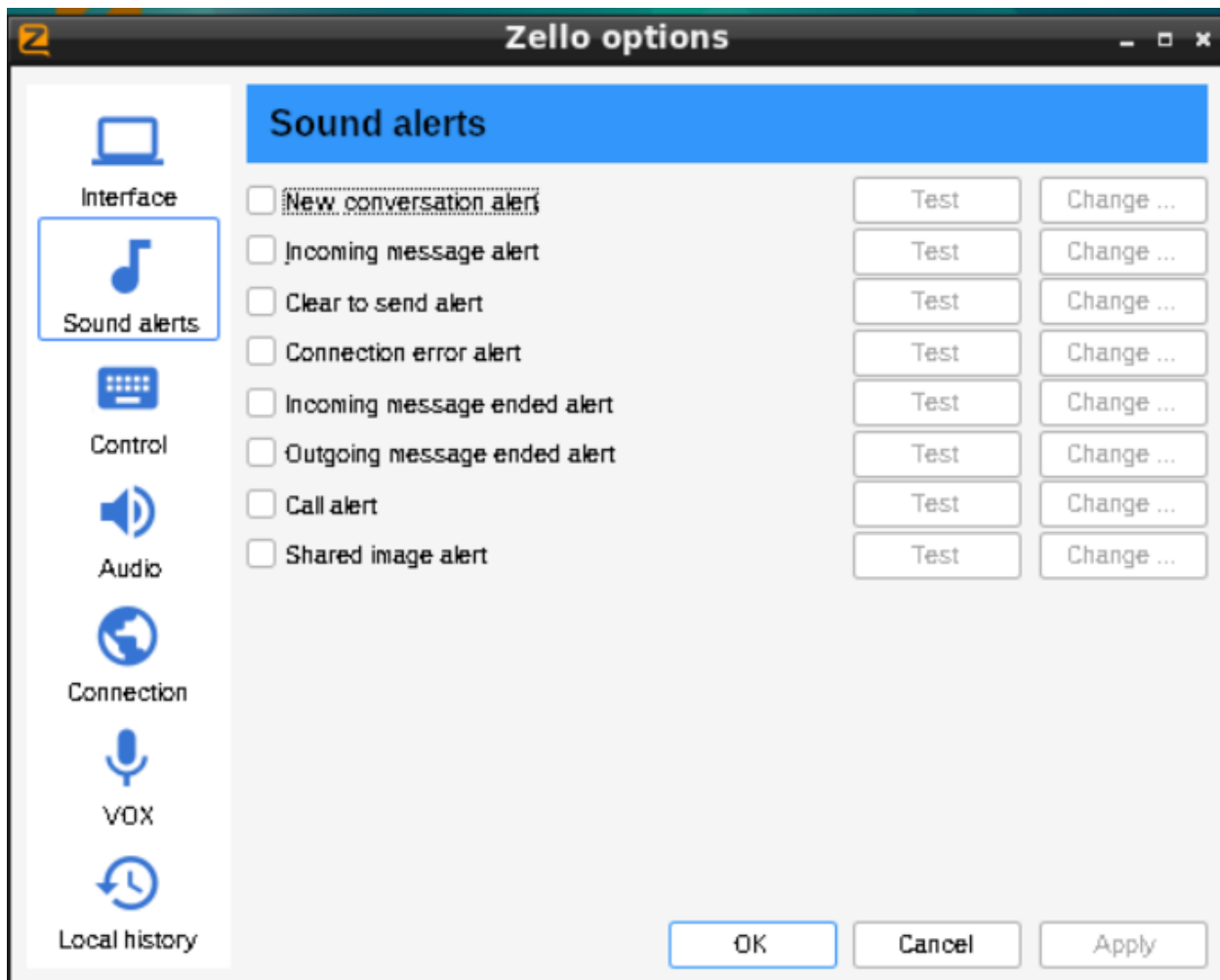
You should then see the new group in the list, with 1/1 members in it:

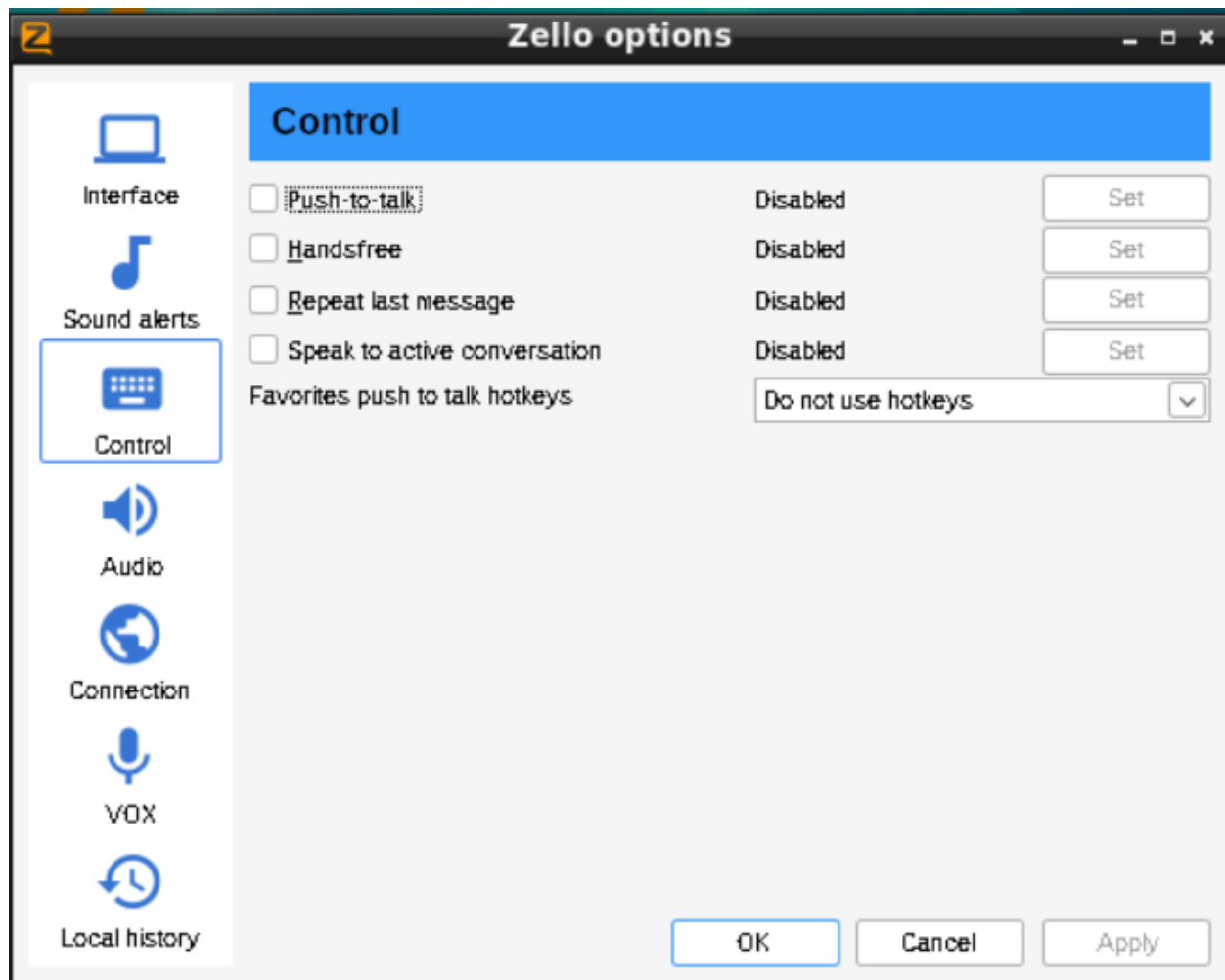


Change Zello settings to turn off all notifications:

Tools > Options, then replicate settings as in the pictures:







Zello Audio and Radio Settings

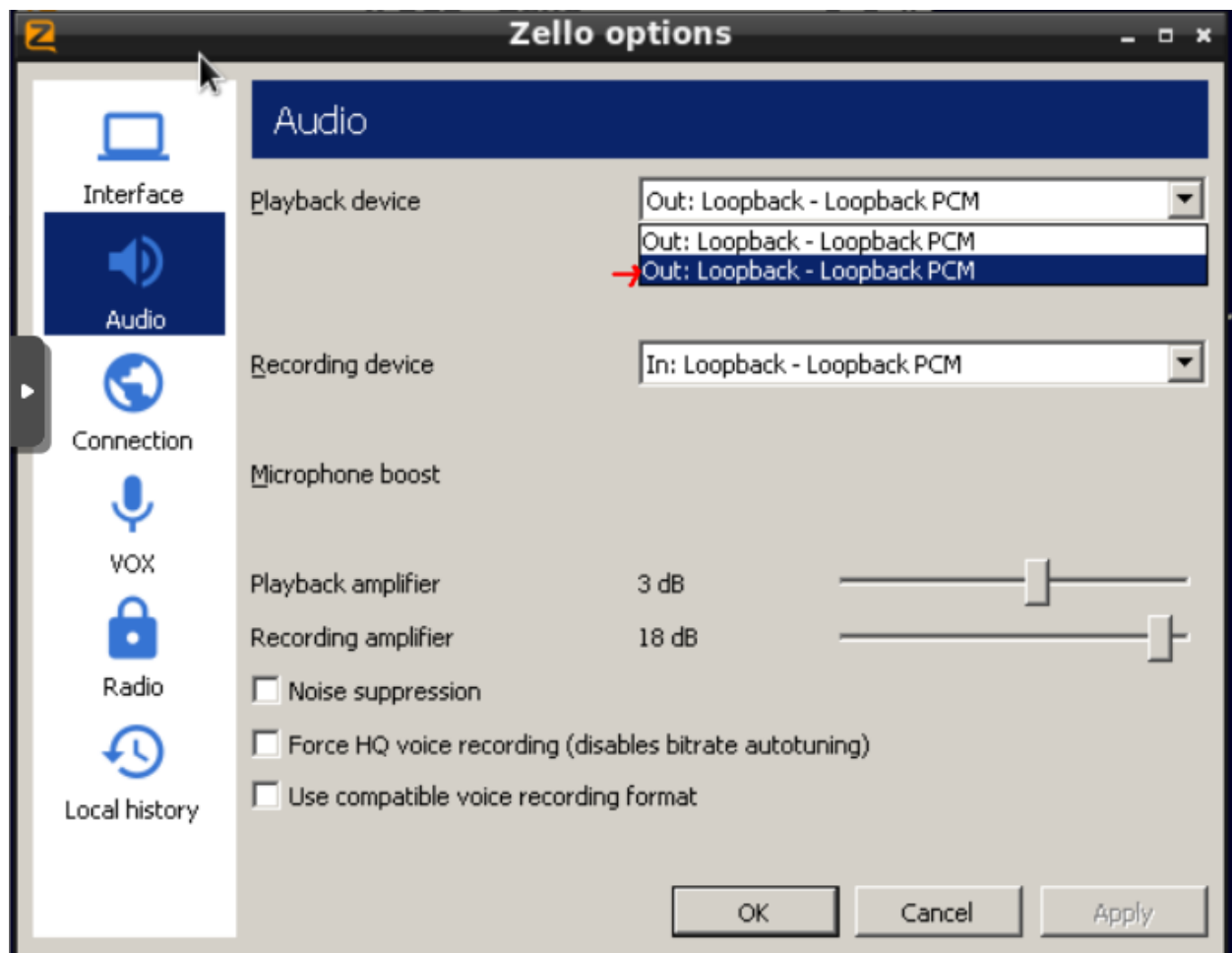
We will change the rest of the settings (Com port for PTT / SQL, Audio card, etc) after returning the app in Gateway mode. Go to the next chapter to see how to do that, then return here. Click blue text jump to: [Enabling Gateway mode of the Zello app in the VM:](#)

Once in Gateway mode,

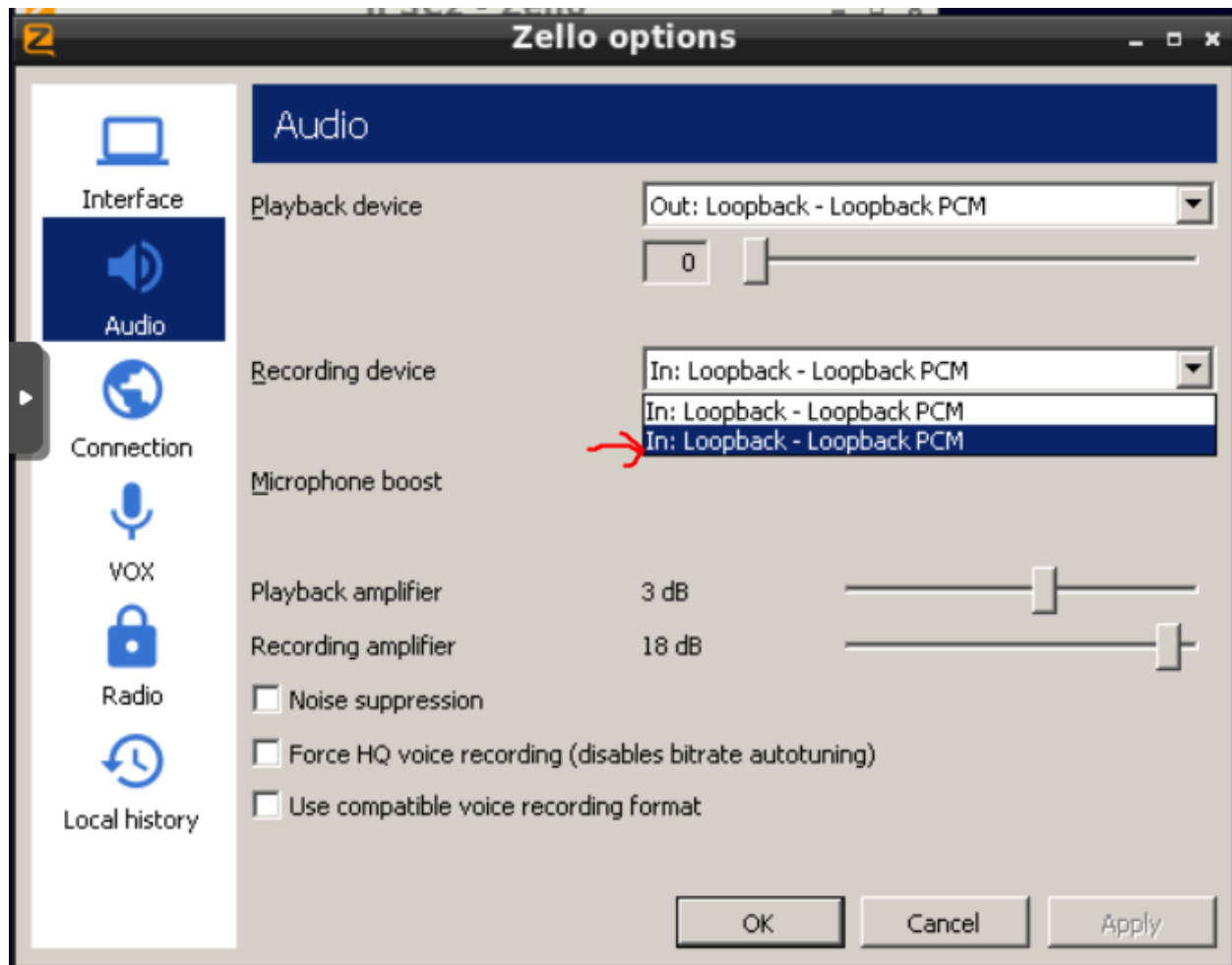
Configure Zello Audio settings:

Tools>Options>Audio

Playback: **Second** device



Recording: **Second** device



Playback Amplifier: +3dB

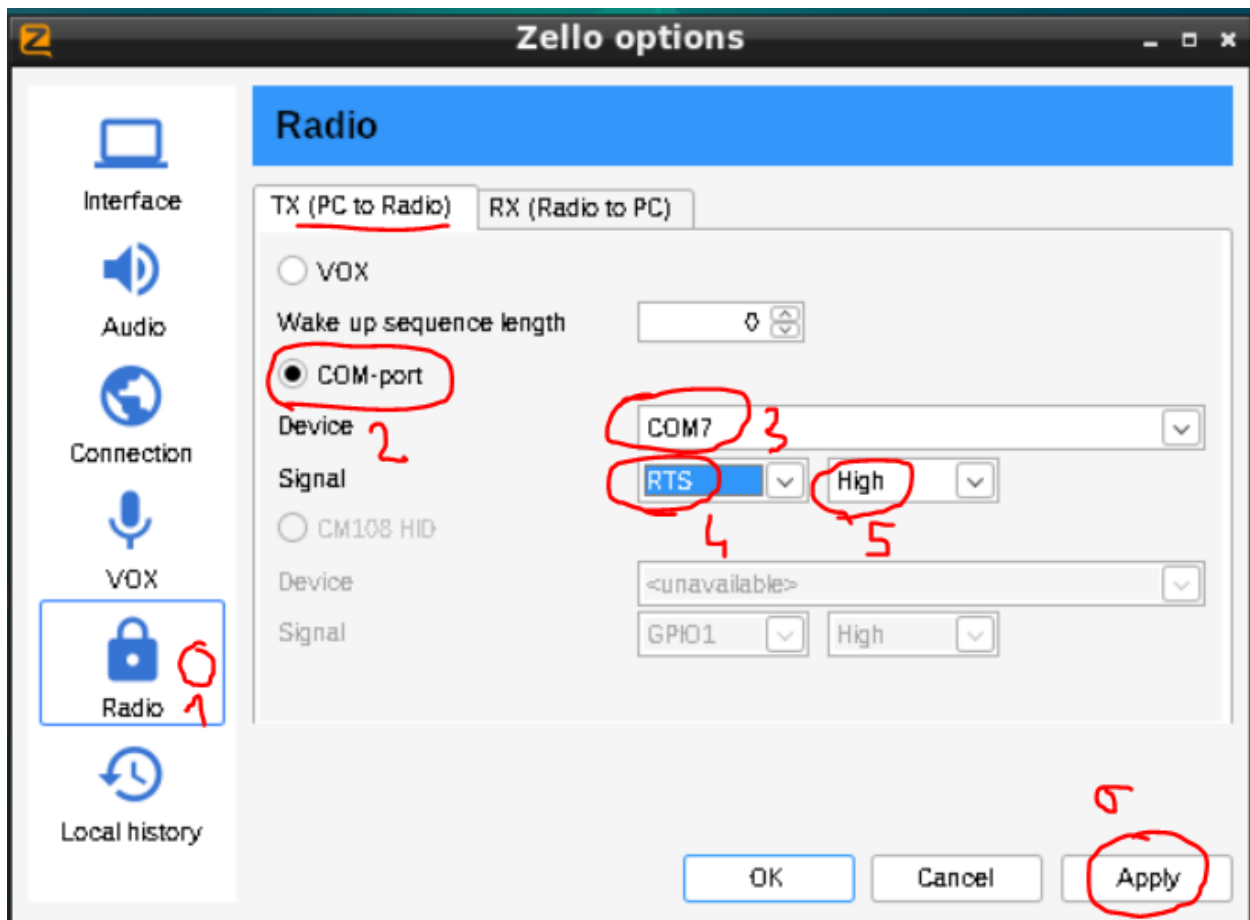
Recording Amplifier: +18dB

(You can later adjust these values as you find more appropriate for your use case).

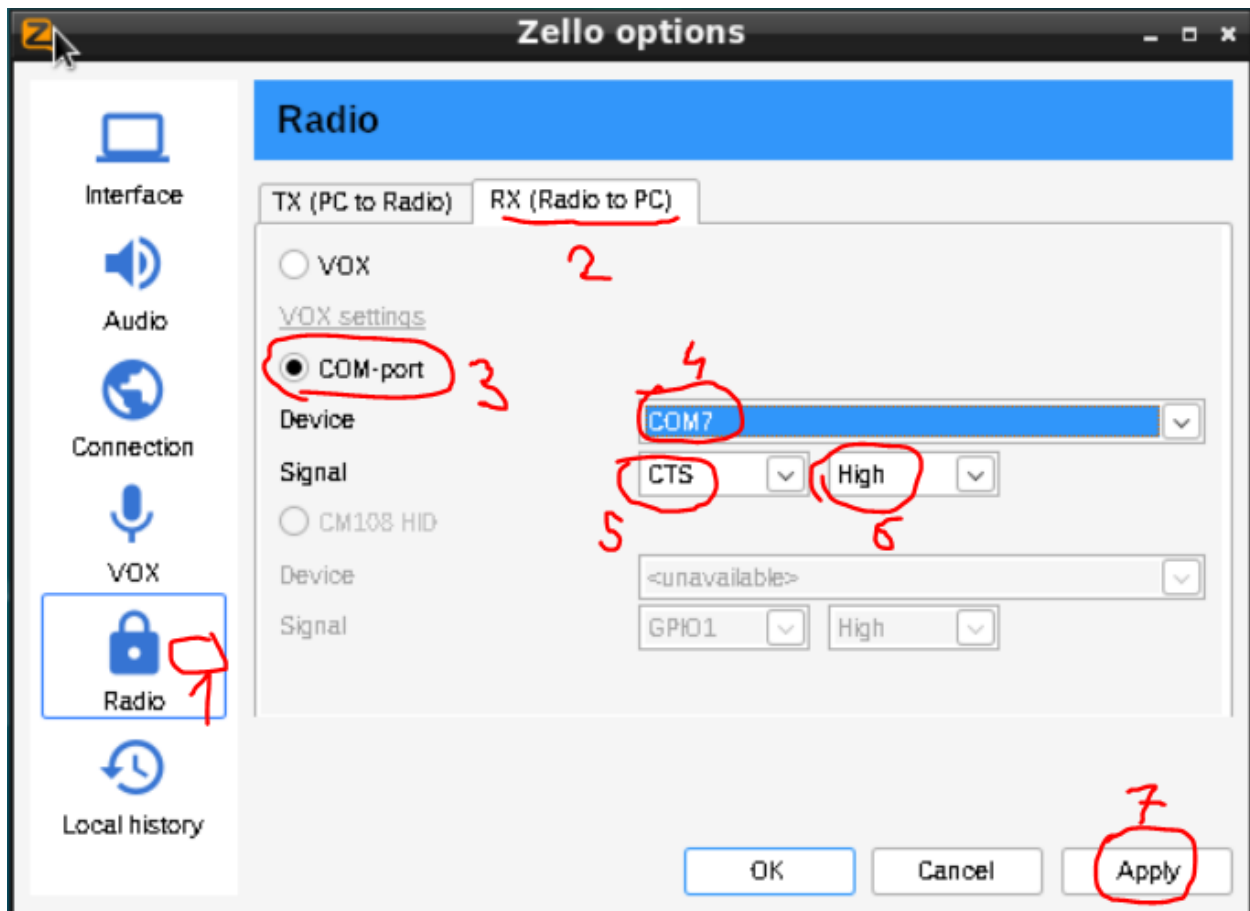
[Configure Zello Radio \(Gateway control interface\)](#)

Tools>Options>Audio

TX (Zello to Svxlk)



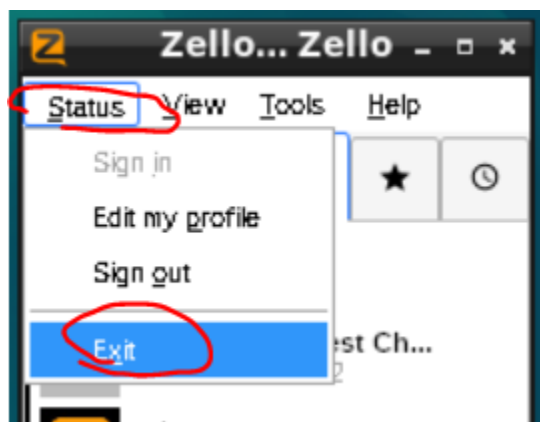
RX (Svxlink to Zello)



Click then OK to close the Options window.

Enabling Gateway mode of the Zello app in the VM:

Save all settings in Zello app (Apply>Ok to close Options), Close the app (Status>Exit).



Edit the file:

/home/zgw/PlayOnLinux's virtual
drives/Zello/drive_c/users/zgw/AppData/Roaming/ZelloDesktop/Zello.config

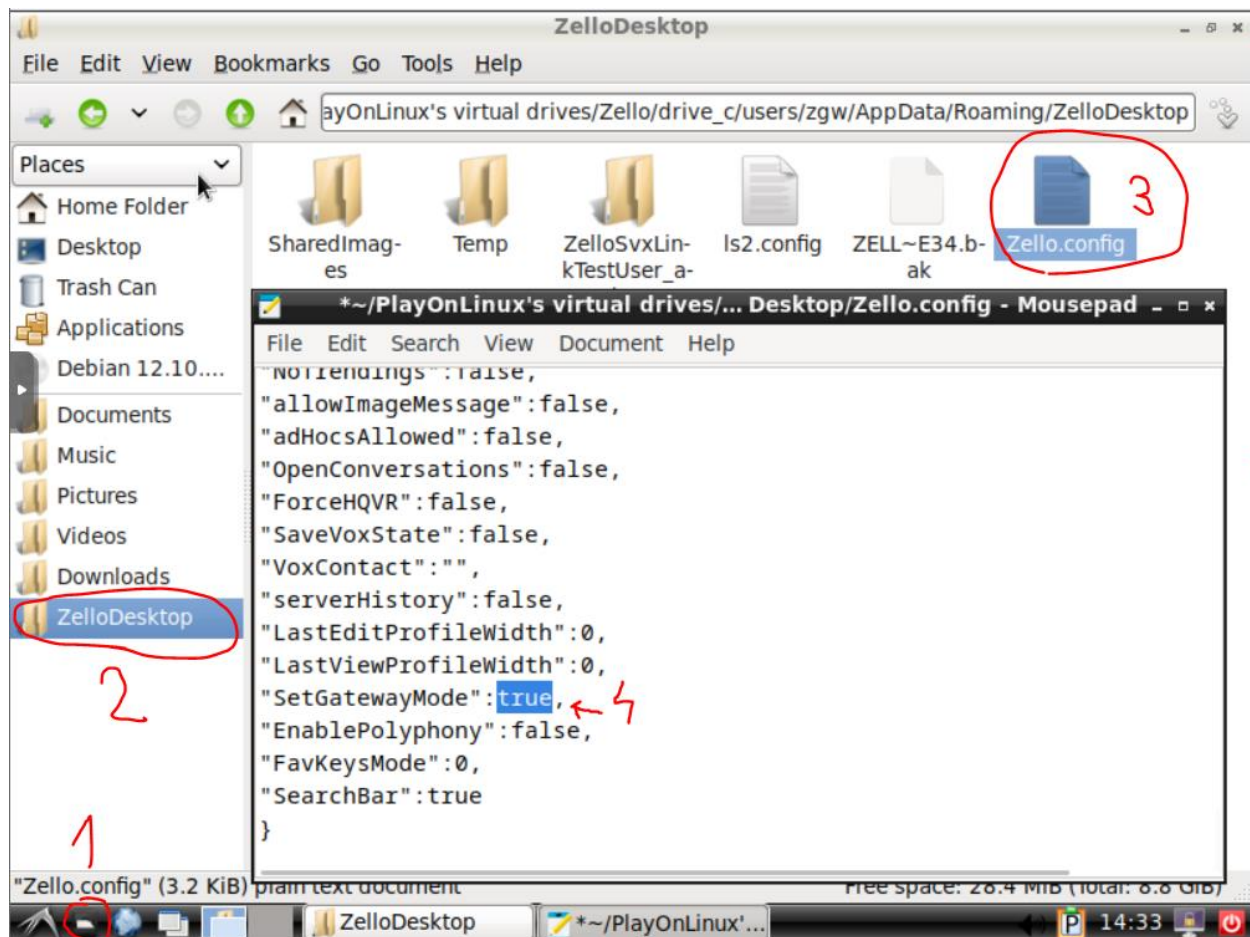
You can do this with the File Manager (second icon in the bar, lower left corner), as explained below, or from the terminal, as you find it easier:

- Navigate to the file location, which you will find already bookmarked as 'ZelloDesktop' on the left side menu of the file manager.

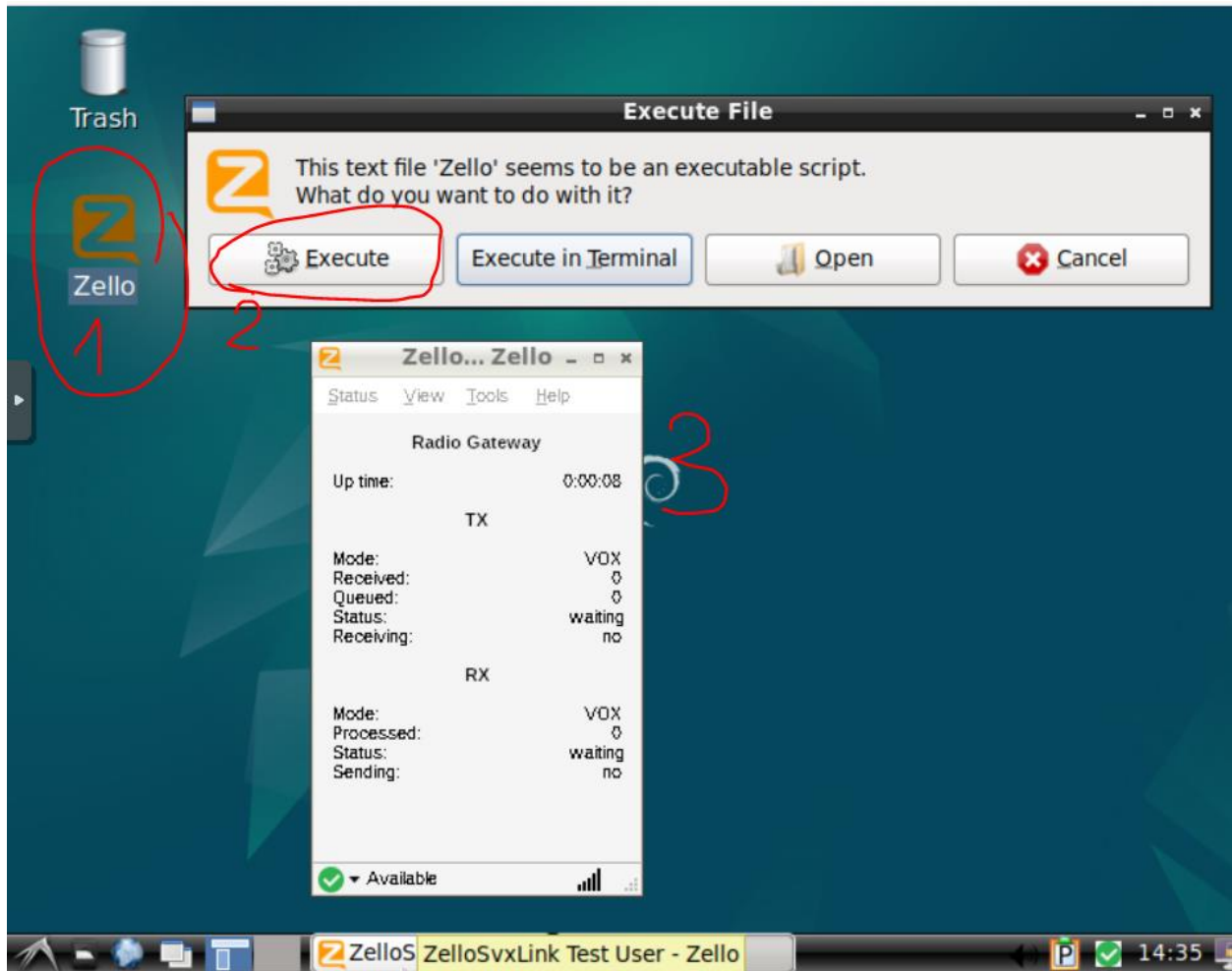
- Once there, right click the Zello.config file, then choose 'Mousepad' to edit with this tool.

- Scroll down to the bottom of the file, find the line with "SetGatewayMode", change the word **false** to **true**.

- Save and close the file.



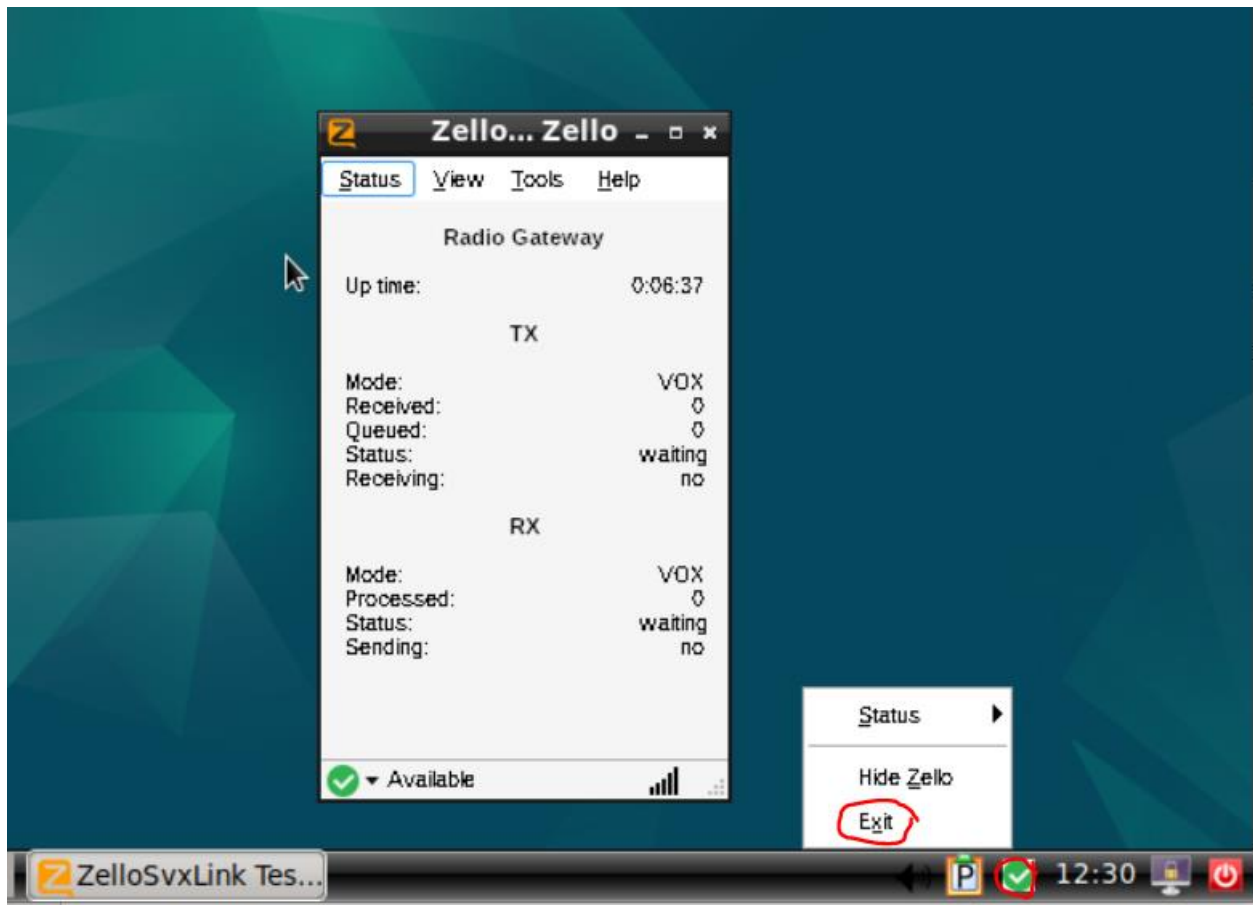
- Start again the Zello app from the desktop icon, (or by restarting the VM it will automatically start), and you should find the app in 'Normal' (non gateway) mode:



(If you arrived here from “[Zello Audio and Radio Settings](#)”, click the blue text to jump back.)

Disabling Gateway mode of the Zello app in the VM:

Stop and close the Zello app (right click icon in status bar > Exit):

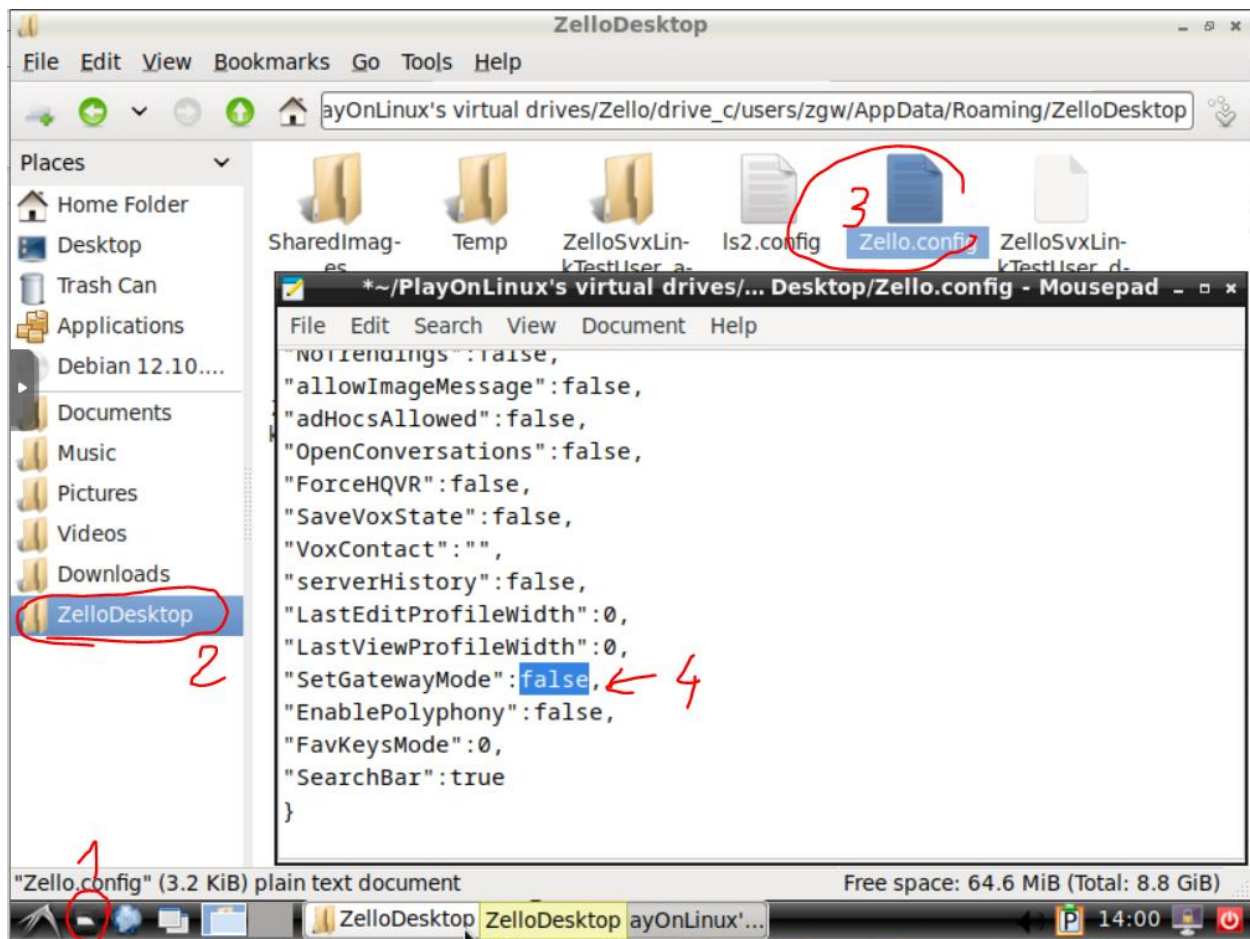


Edit the file:

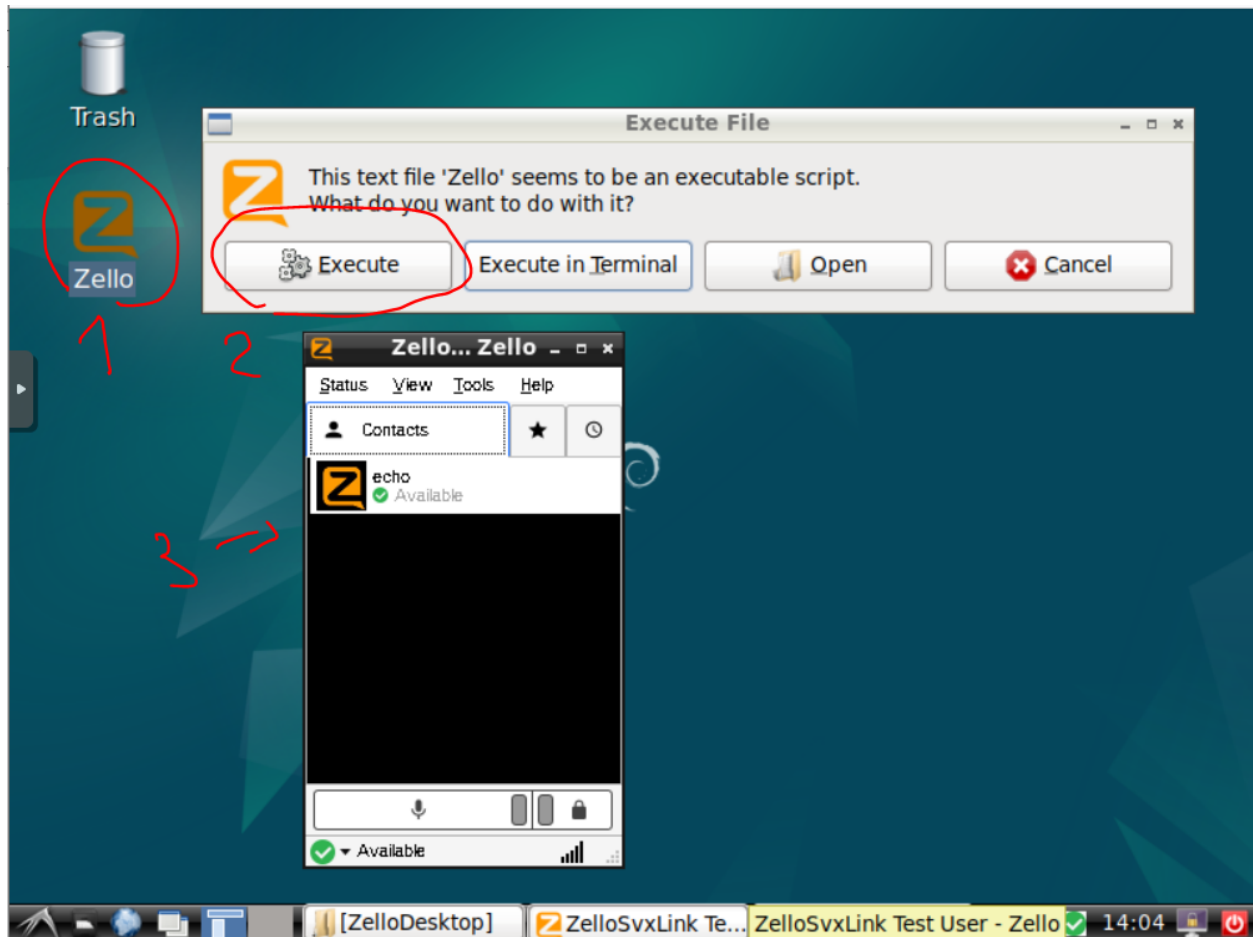
/home/zgw/PlayOnLinux's virtual
drives/Zello/drive_c/users/zgw/AppData/Roaming/ZelloDesktop/Zello.config

You can do this with the File Manager (second icon in the bar, lower left corner), as explained below, or from the terminal, as you find it easier:

- Navigate to the file location, which you will find already bookmarked as 'ZelloDesktop' on the left side menu of the file manager.
- Once there, right click the Zello.config file, then choose 'Mousepad' to edit with this tool.
- Scroll down to the bottom of the file, find the line with "SetGatewayMode", change the word **true** to **false**.
- Save and close the file.



-Start again the Zello app from the desktop icon, (or by restarting the VM it will automatically start), and you should find the app in 'Normal' (non gateway) mode:



Changing Zello settings on the VM:

SVXlink settings

Find below an example of svxlink.config file.

This can be found at location: `/etc/svxlink/svxlink.conf` and can be edited:

- in the terminal using command: `sudo nano /etc/svxlink/svxlink.conf`
- from file manager, same as we did for the Zello.config file in the chapters:
 - o Enabling Gateway mode of the Zello app in the VM:
 - o Disabling Gateway mode of the Zello app in the VM:

Example config:



Replace reflector details and talkgroup information as needed:

```
### Reflector ###  
HOSTS=reflector.address.example  
HOST_PORT=5300  
CALLSIGN="svxlink_username"  
AUTH_KEY="svxlink_pass"  
DEFAULT_TG=226  
MONITOR_TGS=226++
```

Other settings

Set up ALSA audio levels as shown at point 16 in the file:

<https://github.com/YO3AX/ZelloSvxLink/blob/main/ZelloSvxLink.pdf>

To open the alsa audio control panel use command:

alsamixer

(press **F5** to show all cards, playback and capture, as in the document)

To store settings use:

sudo alsactl store

Troubleshooting:

A common problem after updating the linux OS is losing the tty0tty virtual com ports.

The result is that although there is activity in reflector or in Zello, it does not pass on the other side.

To solve these, several steps of point 14) in the document

<https://github.com/YO3AX/ZelloSvxLink/blob/main/ZelloSvxLink.pdf> need to be repeated:

The commands are:

```
cd tty0tty/module
```

```
make
```

```
sudo cp tty0tty.ko /lib/modules/$(uname -r)/kernel/drivers/misc
```

```
sudo depmod
```

```
sudo modprobe tty0tty
```

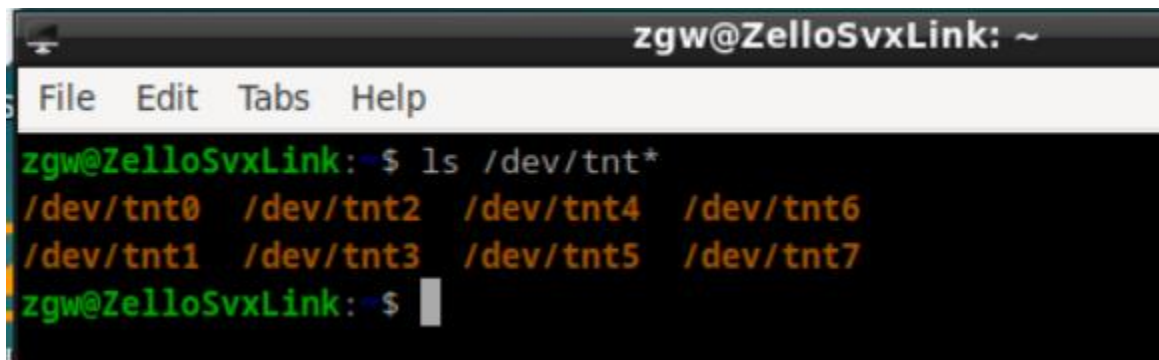
```
ls /dev/tnt*
```

```
sudo chmod 666 /dev/tnt*
```

```
sudo reboot
```

```
ls /dev/tnt*
```

The last command should show the /dev/tnt... virtual com ports, used between Zello and Svmlink for PTT / SQL control:

A terminal window titled 'zgw@ZelloSvxLink: ~' with a menu bar containing 'File', 'Edit', 'Tabs', and 'Help'. The terminal shows the command 'ls /dev/tnt*' being executed. The output lists eight virtual serial ports: /dev/tnt0, /dev/tnt1, /dev/tnt2, /dev/tnt3, /dev/tnt4, /dev/tnt5, /dev/tnt6, and /dev/tnt7, arranged in two rows of four. The prompt 'zgw@ZelloSvxLink:~\$' is visible at the bottom with a cursor.