ZelloSvxLink recipe

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1) Install Debian with LXDE desktop environment and nothing else.

2) disable sleep, etc
Official documentation: https://wiki.debian.org/Suspend#Disable_suspend_and_hibernation
sudo systemctl mask sleep.target suspend.target hibernate.target hybrid-sleep.target
3) Add your user to the sudoers list (sudo visudo, duplicate the root line and customize for your user ,with NOPASSWD:ALL at the end of the line)

4) Set up auto login in in Debian desktop environment
sudo nano /usr/share/lightdm/lightdm.conf.d/02_user.conf
[SeatDefaults]
autologin-user=<user>
autologin-user-timeout=0

5) Remove bloatware (synaptic package manager, filter installed, remove libreoffice, games, etc)

6) Install Playonlinux, Wine, Winetricks and Zello Windows app
sudo apt update
sudo apt -y install software-properties-common
sudo add-apt-repository contrib
sudo dpkg --add-architecture i386
sudo apt update
sudo apt -y install wine wine64 wine32 winbind winetricks playonlinux
Download and install Zello.
https://support.zellowork.com/hc/en-us/articles/4422588052759-Downloading-the-Legacy-PC-Application

6) Autostart Zello
Official documentation:
https://superuser.com/questions/146457/how-do-i-add-startup-applications-in-lubuntu-lxde
sudo nano /home/zgw/.config/autostart/zello.desktop
[Desktop Entry]
Type=Application
Name=Zello autostart
Comment=Start Zello
Exec=playonlinux --run Zello
OnlyShowIn=LXDE

7) Remove pulseaudio (for Zello to see ALSA cards in Audio settings)

Official documentation:
https://linuxg.net/how-to-properly-replace-pulseaudio-with-alsa-on-crunchbag-linux-and-debian-squeeze/
sudo apt autoremove pulseaudio

8) Add alsa loopback card (card 0 devices 0 and 1. audio from 0 goes to 1 and viceversa)
sudo nano /etc/modules
then add the line
snd_aloop

9) Install svxlink (2 options)
version 1 (from aptitude): sudo apt update && sudo apt -y install svxlink-server
or latest version (with TG selection): https://github.com/sm0svx/svxlink/wiki/InstallSrcHwRpi
"sudo groupadd gpio" before "sudo useradd -rG audio,plugdev,gpio,dialout

10) install svxlink sounds
cd /usr/share/svxlink/sounds/
git clone https://github.com/yo3agc/ro_RO-wilhelmina.git
OR
git clone https://github.com/yo3agc/ro_RO-alexandra.git
in /etc/svxlink/svxlink.conf set
DEFAULT_LANG=ro_RO-wilhelmina
OR
DEFAULT_LANG=ro_RO-alexandra

12) set svxlink node info
sudo nano /etc/svxlink/node_info.json
{
    "isx": "1",
    "k_id": "n_a",
    "name": "YO3AGC-P",
    "nameA": "YO3AGC-P",
    "nodeLocation": "KN34ao",
    "pl_in": "103.5",
    "pl_out": "103.5",
    "rx_frq": "436.925",
    "shift": "0",
    "tip": "Nod POCtabil",
    "tx_frq": "436.925",
    "tg": "226"
}

13) Configure svxlink logics (SimplexLogic,ReflectorLogic and a link between the 2)

14) Install tty0tty (virtual com ports, interconnected pairs, used for PTT and SQL between Zello and svxlink)
git clone https://github.com/freemed/tty0tty.git
cd tty0tty/module

sudo apt update
sudo apt -y install dh-make dkms build-essential
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*
# to make virtual serial ports start automatically after restart:
sudo nano /etc/modules
and add the line:
tty0tty
To make 666 permissions on /dev/tct* persist after reboot (otherwise Zello will report 'failed' for
com port status when opened):
sudo nano /etc/udev/rules.d/tty0tty_tnt.rules
And add line
KERNEL=="tnt[0-7]*",MODE="0666"

15) PTT and SQL ports setup in Playonlinux, Zello and svxlink
official documentation:
https://wiki.winehq.org/index.php?title=Wine_User%27s_Guide&oldid=2519#Serial_and_Paralle
l_Ports
With Zello Closed, in PlayOnLinux select the Zello app, Configure tab, Registry Editor,
HKEY_LOCAL_MACHINE/Software/Wine/Ports Add String Value COM7 set value to /dev/tnt7
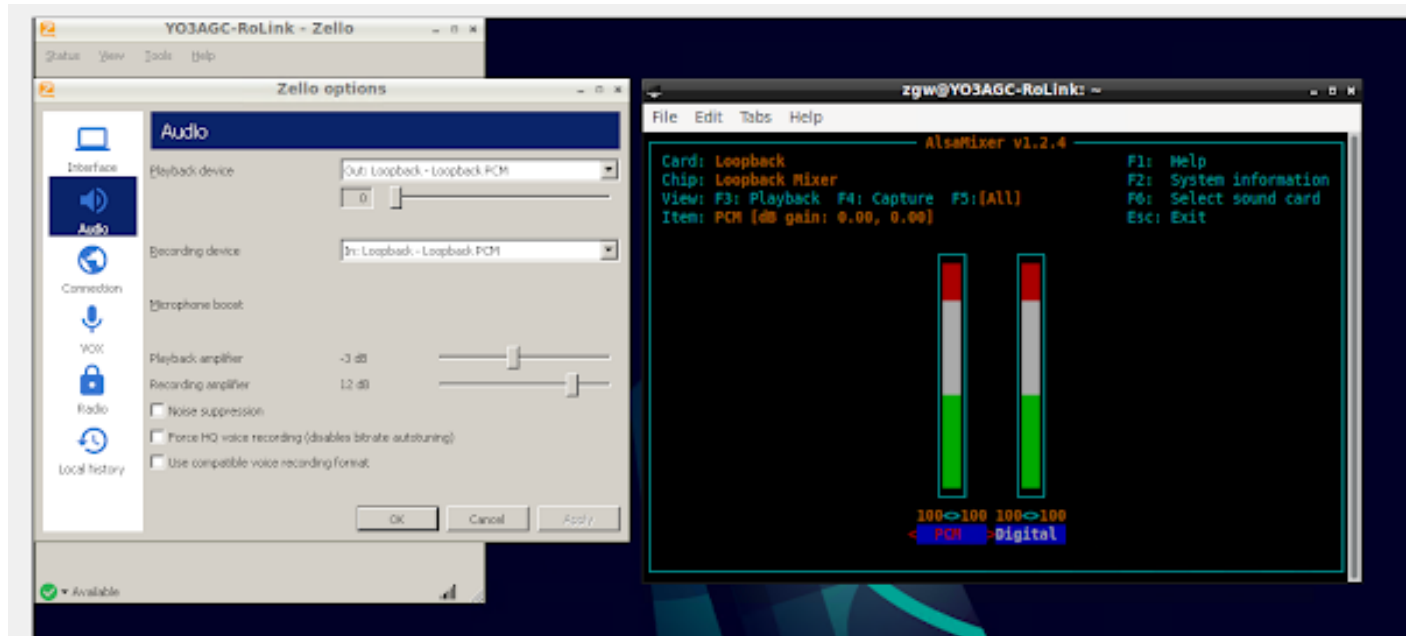close regedit. in ZELLO set rx tx to COM7 TX RTS High RX CTS High
In /etc/svxlink/svxlink.conf set PTT and SQL as follows:
RX
SQL_DET=SERIAL
SERIAL_PORT=/dev/tnt6
SERIAL_PIN=CTS
TX
PTT_TYPE=SerialPin
TT_PORT=/dev/tnt6
PTT_PIN=RTS

16) Set up audio Levels:

18) install Anydesk https://computingforgeeks.com/how-to-install-anydesk-on-debian-linux/

19) (Optional) Install Virtualbox guest additions
https://linuxize.com/post/how-to-install-virtualbox-guest-additions-on-debian-10/

19) Install a dashboard for svxlink
sudo tasksel (and then select web server entry and OK)
sudo su
cd /var/www
cp -R html html.$(date +"%Y%m%dT%H%M%s")
wget https://github.com/FM-POLAND/hs_dashboard_pi/archive/refs/heads/main.zip
unzip main.zip
rm main.zip
rm -R html
mv hs_dashboard_pi-main html
chown svxlink -R html
sudo chmod -R 777 /var/www
sudo usermod -aG sudo svxlink
sudo apt-get -y install avahi-daemon avahi-utils
sudo service apache2 restart

20) (Appendix) SVXLINK YO Reflectors Dashboards:
svx.439100.ro
http://tetra.radiofarafiltru.ro/
https://tetra-romania.ddns.net/

https://raw.githubusercontent.com/dl1hrc/svxlink/svxlink-usrp/CONFIG.adoc
http://www.granudden.info/Ham/Repeatrar/Files/svxbridge/svxbridge.py
Regrads, Florin / 73 de YO3AGC