Instruction to run ubuntu on linux and windows.

* Windows

1. To install ros2 on ubuntu follow the installation guide

<https://ms-iot.github.io/ROSOnWindows/GettingStarted/SetupRos2.html>

1. Follow this guid to install vcpkg <https://vcpkg.io/en/getting-started.html>
2. To install portaudio run:

vcpkg install portaudio

1. To install curl run:
2. vcpkg install curl
3. clone the speech repository
4. run "x64 Native Tools Command Prompt for VS 2019" as administrator.
5. go to speech\_ros2 file
6. source the ros2 environment using:

cd c:\opt\ros\foxy\x64\setup.bat

1. you can now build the speech node using the command:

colcon build --merge-install --packages-select speech\_ros2

1. run the setup files:

call install/setup.bat

1. now you are ready to run the speech node:

ros2 run speech\_ros2 talker

* Ubuntu/raspberry

1. Make sure that you run ubuntu linux focal fossa (20.04)
2. To install ros2 on ubuntu follow the installation guide <https://docs.ros.org/en/foxy/Installation/Ubuntu-Install-Binary.html>
3. clone the speech repository
4. to install ros2 build tools and ssl for cmake run:

sudo apt install python3-colcon-common-extensions libssl-dev

1. clone the latest portaudio source files with:

git clone <https://github.com/PortAudio/portaudio.git>

1. go to portaudio
2. run the following command to generate build files:

cmake . -G "Unix Makefiles" -DCMAKE\_INSTALL\_PREFIX=/home/ubuntu/portaudio/install

1. to build portaudio and install run:

make && make install

1. go to speech\_ros2 file
2. source the ros2 environment using:

~/ros2\_foxy/ros2-linux/setup.bash

1. you can now build the speech node using the command:

colcon build --merge-install --packages-select speech\_ros2

1. run the setup files:

call install/setup.bat

1. now you are ready to run the speech node:

ros2 run speech\_ros2 talker