Moose TTS Setup Guide (June 2022)

We'll be going through the basic steps in order to be able to use TTS or Text-To-Speech with the Windows build-in capabilities, so you can use the Moose MSRS Class and classes using that.

1. What you need

Download and install the latest copy of Ciribob's DC-SRS from here:

https://github.com/ciribob/DCS-SimpleRadioStandalone/releases

Download and install a copy of Notepad++ from here (for editing):

https://notepad-plus-plus.org/downloads/

And a test mission with one „hot start" plane or helo which is supported by SRS.

2. De-Sanitize the DCS scripting environment

In the File-Explorer, navigate to your DCS main installation folder, should be something like

`C:\Program Files\Eagle Dynamics\DCS World.Openbeta`

or

`C:\Program Files\Eagle Dynamics\DCS World`

depending on whether you use the Open Beta or not.

Navigate to the folder `Scripts` and open the file `MissionScripting.lua` with Notepad++. Add two dashes „-" in front of each of the lines starting with „sanitize…." to make it look like so and save:

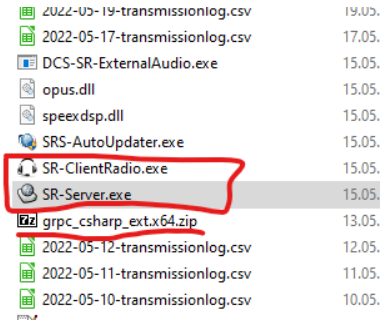
```
--Initialization script for the Mission lua Environment (SSE)

dofile('Scripts/ScriptingSystem.lua')

--Sanitize Mission Scripting environment
--This makes unavailable some unsecure functions.
--Mission downloaded from server to client may contain potentialy harmful lua code that may use these functions.
--You can remove the code below and make availble these functions at your own risk.

local function sanitizeModule(name)
    _G[name] = nil
    package.loaded[name] = nil
end

do
    --sanitizeModule('os')
    --sanitizeModule('io')
    --sanitizeModule('lfs')
    _G['require'] = nil
    _G['loadlib'] = nil
    _G['package'] = nil
end
```

This will enable the DCS Lua sandbox to access stuff on your computer. **Note that after each update of DCS, you need to repeat this because each update will overwrite your file by default.**

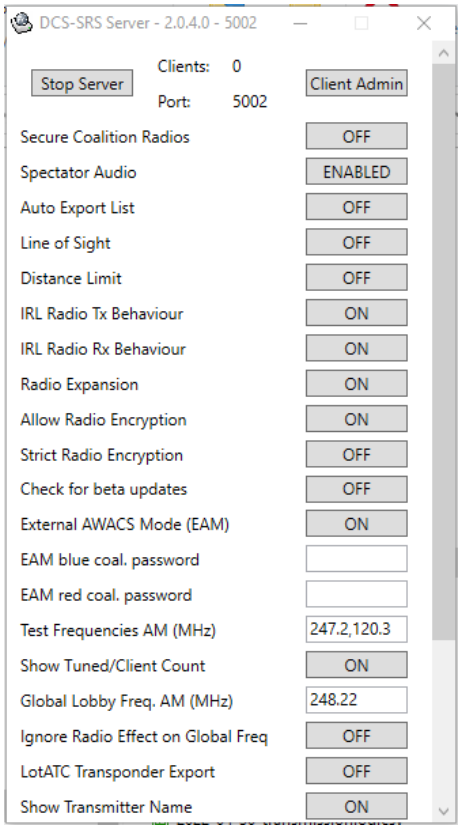
3. Start SR-Server and connect the client

Navigate to the install directory of SRS and start the server „SR-Server.exe“. It should be located here:

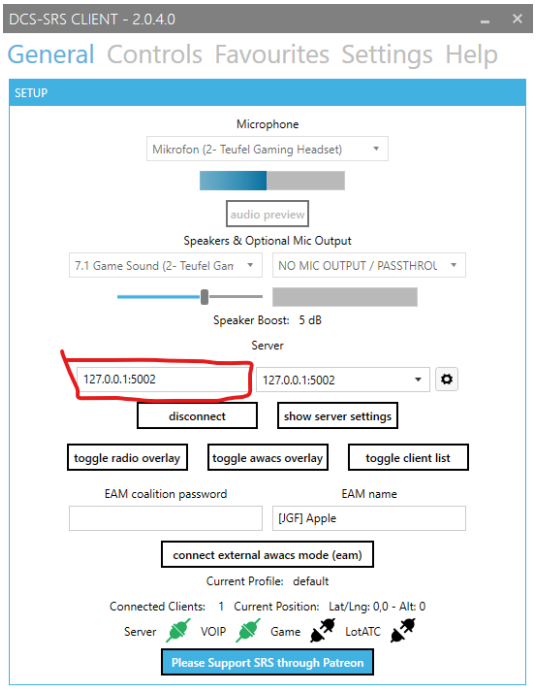
```
C:\Program Files\DCS-SimpleRadio-Standalone
```



The started server looks like this



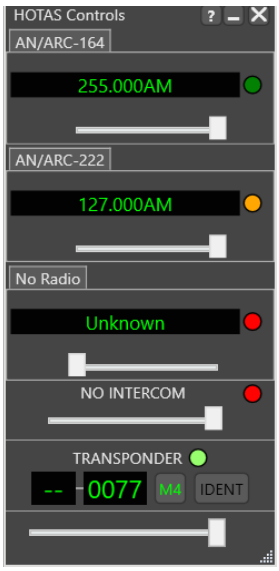
Start the „SR-ClientRadio.exe“ and connect to the local server with the address „127.0.0.1:5002“. If asked if you want to allow changes to your PC, say yes.



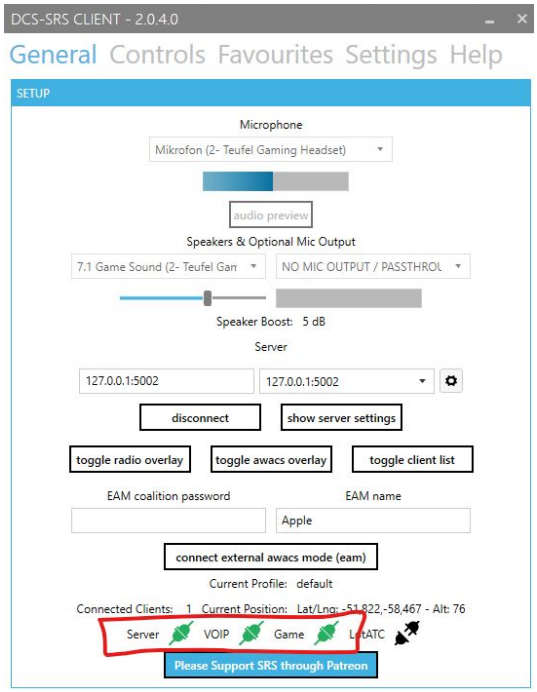
Your server UI now shows 1 connected client. Click on „toggle radio overlay“.

4. Start DCS World and jump into a plane/helo in your test mission

The connection status on the client UI and Overlay should be changing accordingly (connected plane at 255 AM)

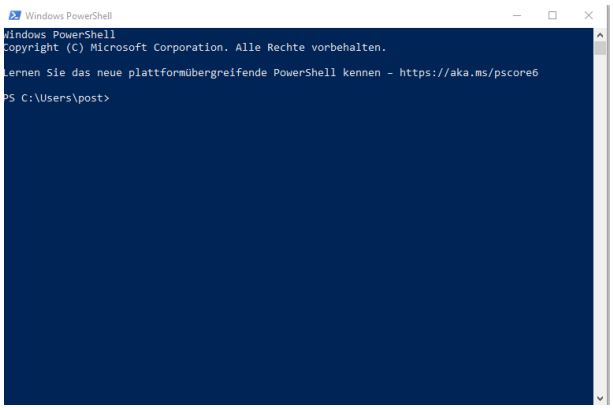


Three green connectors on the client UI:



5. Command line test with Windows Power Shell

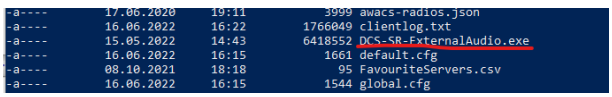
Use the search icon in windows to locate and start power shell, you'll get a blue terminal window:



Now, navigate in power shell to the SRS install window (mine is on the E drive, yours might be somewhere else), type the following command and press enter:

```
cd 'E:\Program Files\DCS-SimpleRadio-Standalone\'
```

Type `dir` and press enter to get a listing of all files in the directory, `DCS-SR-ExternalAudio.exe` should be amongst them.



Now we are going to create a text-to-speech command which should be sent to the radio on your plane or helo, at 255 AM:

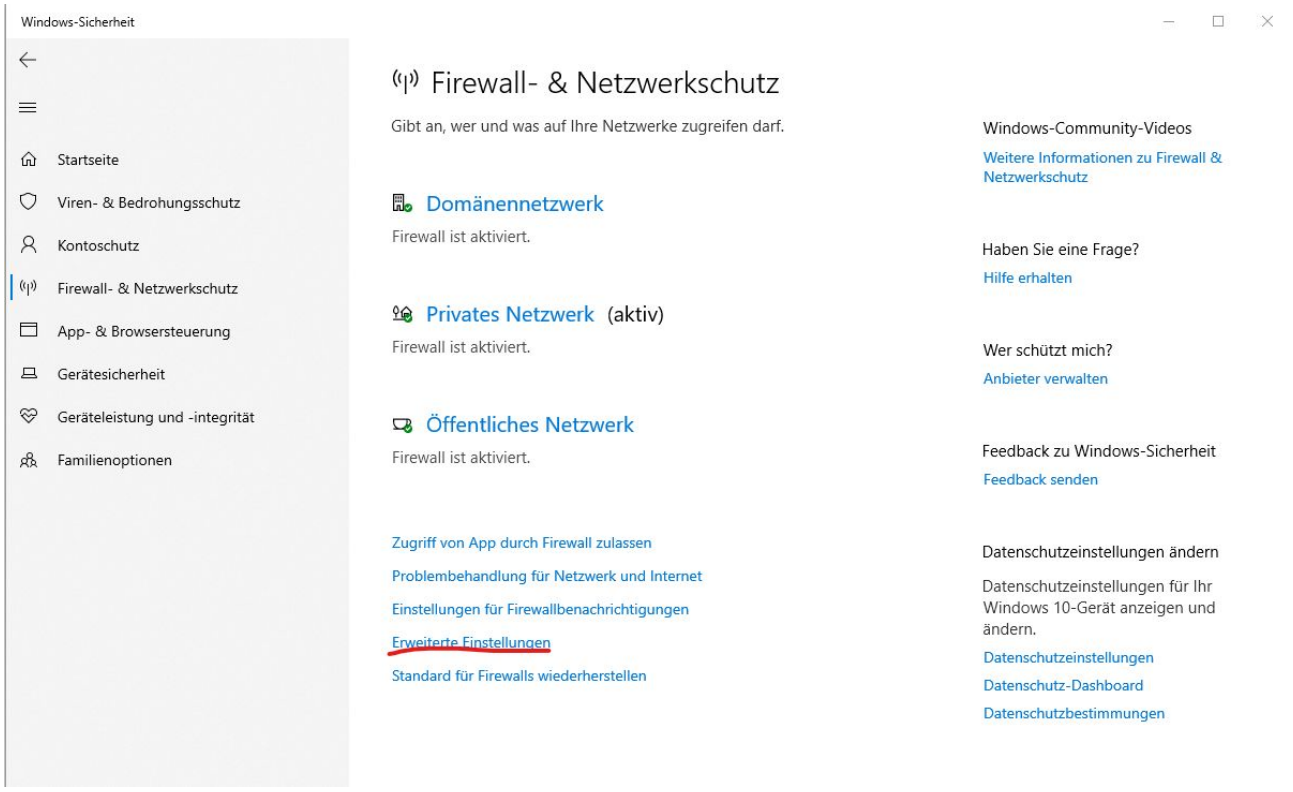
```
.\DCS-SR-ExternalAudio.exe -t "Hello Moosers" -f 255 -m AM -c 2
```

```
PS E:\Program Files\DCS-SimpleRadio-Standalone> .\DCS-SR-ExternalAudio.exe -t "Hello Moosers"
 -f 255 -m AM -c 2
2022-06-16 16:27:39.9663|INFO|Starting with params:
2022-06-16 16:27:39.9663|INFO|Frequency: 255000000 Hz - AM
2022-06-16 16:27:39.9793|INFO|Connecting to server @127.0.0.1:5002
2022-06-16 16:27:39.9793|INFO|Connected to 127.0.0.1:5002
2022-06-16 16:27:39.9963|INFO|Sending client sync to 127.0.0.1:5002
2022-06-16 16:27:40.1294|INFO|Sending radio update to 127.0.0.1:5002
2022-06-16 16:27:40.1874|INFO|Connecting UDP VoIP
2022-06-16 16:27:40.1874|INFO|Sending UDP Ping
2022-06-16 16:27:43.1901|INFO|Ping Sent
2022-06-16 16:27:43.1901|INFO|Sending Audio... Please Wait
2022-06-16 16:27:43.1901|INFO|Doing Text To Speech as its not an MP3/Ogg path
2022-06-16 16:27:43.4031|INFO|Encode as Opus
2022-06-16 16:27:43.4301|INFO|Finished encoding as Opus
2022-06-16 16:27:45.1913|INFO|Finished Sending Audio
2022-06-16 16:27:45.1913|INFO|Finished - Closing
2022-06-16 16:27:45.1913|INFO|Disconnecting from server
2022-06-16 16:27:45.1963|INFO|Disconnecting from server
PS E:\Program Files\DCS-SimpleRadio-Standalone>
```

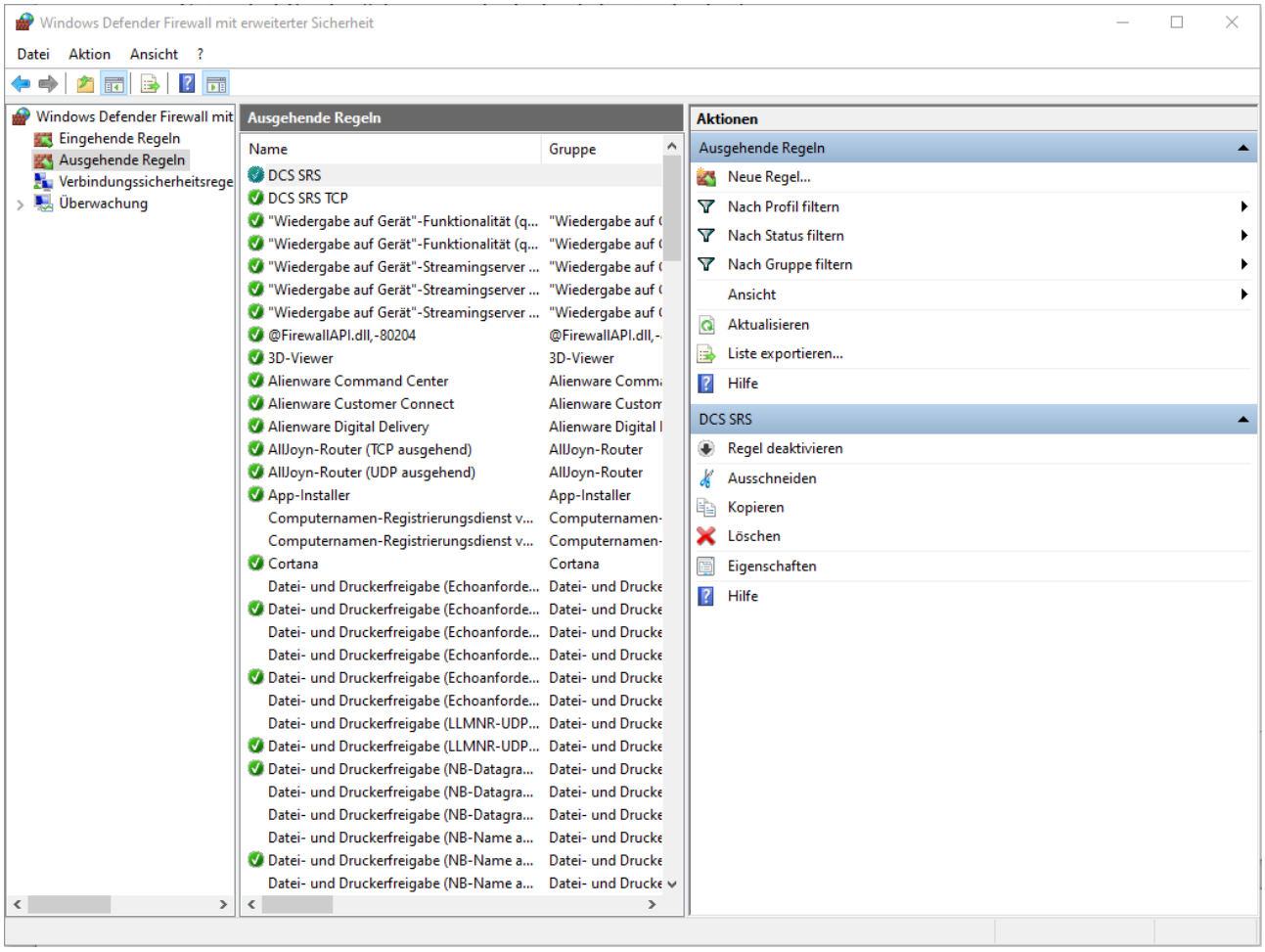
If you can hear the voice on the cockpit radio, you are done! If you get UpnP/Network errors, you need to allow DCS-SR-ExternalAudio.exe to traverse your firewall.

6. Firewall Setup

On Windows search, type Firewall and open „Firewall- and Network Protection“. Klick on „Extended Setting“ (you need admin rights to do that).



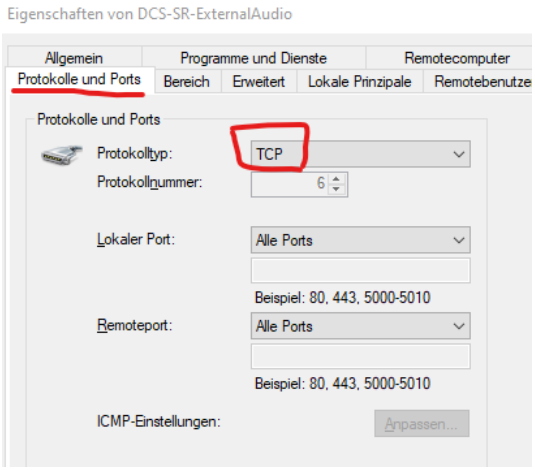
You'll get this window



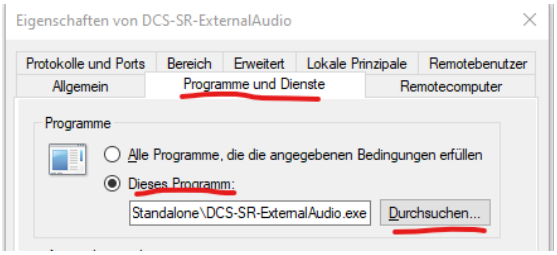
You will need two incoming and two outgoing rules (4 overall), right-click on incoming/outgoing rules to create new rules.

Give the rule a nice name

Protocols and Services – you need to create ONE rule for TCP and another one for UDP. Select TCP from the drop down:



On Programs and Services, enable „this program“ and use search to locate and select `DCS-SR-ExternalAudio.exe`:



Click „ok“ to save and close the rule. Repeat for UDP. Repeat twice for outgoing, one for TCP and one for UDP. You’re done and can return to step 5.

7. Google TTS

For Google TTS you need to have a Google Cloud Account (a testing one will do). You can start here

https://cloud.google.com/text-to-speech/

You need to create a projekt and enable the „Cloud Text-To-Speech API“ in it. You also need to create a service-account and create a .json key file for it. There’s a lot of supporting information on the Google Cloud Site to help you with that. Similar to **Step 5,** you can test your setup on the command key, assumed that your .json key file resides in the SRS directory:

```
.\DCS-SR-ExternalAudio.exe -t "Hello Moosers" -f 255 -m AM -c 2 -z -G .\yourgoogleaccount.json
```