ayon

User Manual for
Squeeze2upnp Bridge
(Software Version)
for enabling playing Roon on
NW-T, S-3 and S-5
Network Players

Squeeze2upnp Bridge (Software Version)

This program (squeeze2upnp – a.k.a the bridge) turns UPnP/DLNA players into squeezeboxes, so they can be seen by Roon as regular Squeezebox devices. It automatically scans local network for UPnP players and creates an instance of a modified Squeezelite for each one found. Pass-through mode is the default mode of UPnPBridge. In this mode, the bridge simply forwards the audio signal received from Roon to the UPnP player, i.e. the audio remains in its original quality.

The UPnPBridge-1.27.0.zip file, which is the latest version at the moment, can be downloaded from the following link:
https://sourceforge.net/projects/lms-to-upnp/

UPnPBridge can run on any computer running Windows, OSX, or Linux x86/64, ARM and OSX. There is also a FreeBSD x86 build. Linux ppc and sparc version are available as well.

The installation steps are as follow:

1.1.	In the Roon app installed on a Smartphone/Tablet/PC go to **Settings > Setup** and enable "Squeezebox Support"
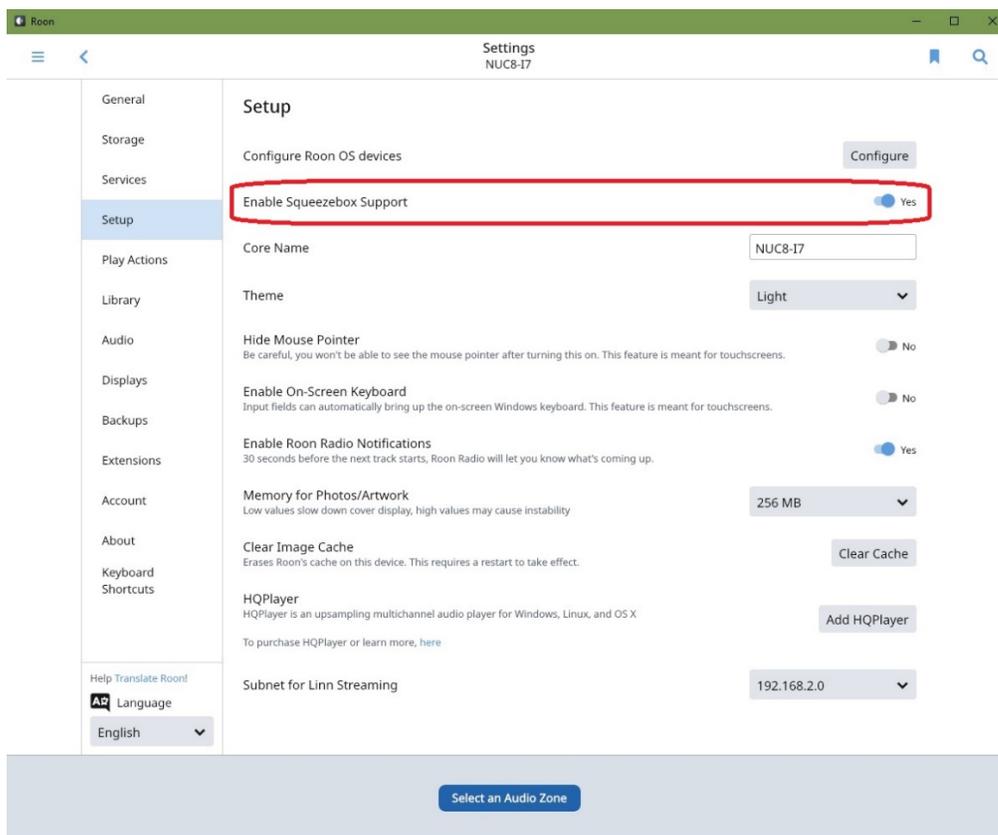
1.2.	Turn on your UPnP/DLNA device(s) like NW-T, S-3, S-5.

1.3. Put the UPnPBridge-1.27.0.zip file on a LOCAL disk of the NAS, for example Disk (C:), where you have read/write access and extract it. After extraction we want to have the following path:
C:\UPnPBridge-1.27.0

1.4. Open the Command Prompt (CMD) on the NAS. You can easily open the Command Prompt by clicking Start and/or Search box then typing "cmd".
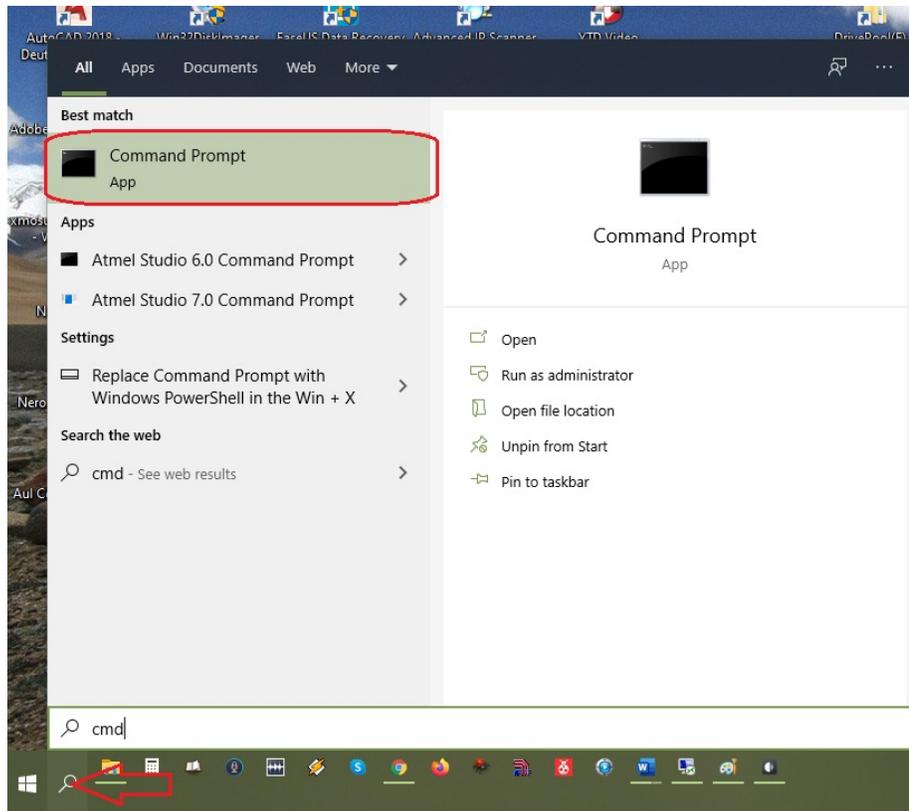
1.5. In the command line write the command "cd.." and press "Enter" key. Repeat this several times, until the root of the Hard Disk (C:) has been reached:
C:\Users\Gerhard>cd..
C:\Users>cd..
C:\ >

1.6. Navigate to the "Bin" folder inside of "UPnPBridge-1.27.0" folder using the same command:
C:\>cd UPnPBridge-1.27.0\Bin
C:\UPnPBridge-1.27.0\Bin>

1.7. Choose the correct file for your OS (Windows, Mac, Linux) and CPU and launch it on the command line, and wait 30s till it exits. Inside of "Bin" folder there are the necessary files for different operating systems Windows, OSX, or Linux. For Windows the command line looks like this: C:\UPnPBridge-1.27.0\Bin>squeeze2upnp-win.exe -i config.xml

This will create a config.xml file inside of the "Bin" folder.
All steps and used commands in Command Prompt about creating the config file can be seen on the next picture.

Note: The procedure of creating a config file should be repeated every time a new player has been added to the network.
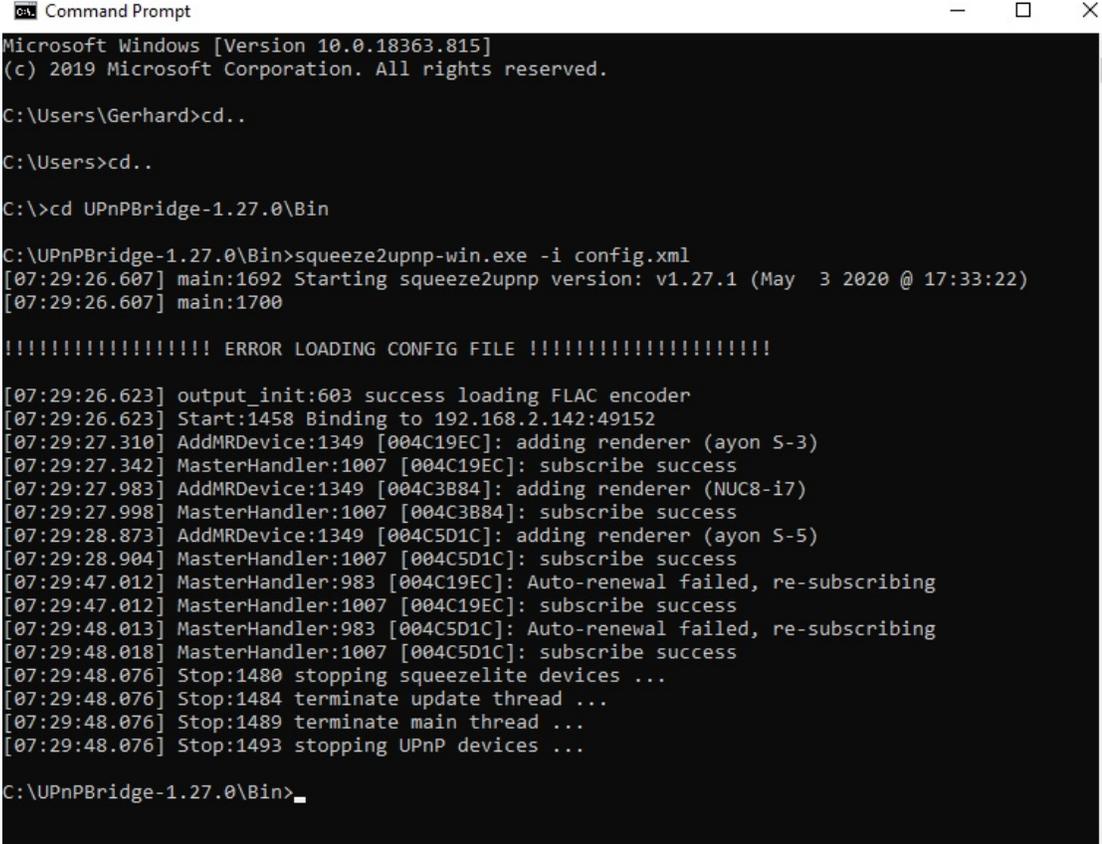

```
Command Prompt                                              —    □    ×

Microsoft Windows [Version 10.0.18363.815]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Gerhard>cd..

C:\Users>cd..

C:\>cd UPnPBridge-1.27.0\Bin

C:\UPnPBridge-1.27.0\Bin>squeeze2upnp-win.exe -i config.xml
[07:29:26.607] main:1692 Starting squeeze2upnp version: v1.27.1 (May  3 2020 @ 17:33:22)
[07:29:26.607] main:1700

!!!!!!!!!!!!!!!!!! ERROR LOADING CONFIG FILE !!!!!!!!!!!!!!!!!!!!!!

[07:29:26.623] output_init:603 success loading FLAC encoder
[07:29:26.623] Start:1458 Binding to 192.168.2.142:49152
[07:29:27.310] AddMRDevice:1349 [004C19EC]: adding renderer (ayon S-3)
[07:29:27.342] MasterHandler:1007 [004C19EC]: subscribe success
[07:29:27.983] AddMRDevice:1349 [004C3B84]: adding renderer (NUC8-i7)
[07:29:27.998] MasterHandler:1007 [004C3B84]: subscribe success
[07:29:28.873] AddMRDevice:1349 [004C5D1C]: adding renderer (ayon S-5)
[07:29:28.904] MasterHandler:1007 [004C5D1C]: subscribe success
[07:29:47.012] MasterHandler:983 [004C19EC]: Auto-renewal failed, re-subscribing
[07:29:47.012] MasterHandler:1007 [004C19EC]: subscribe success
[07:29:48.013] MasterHandler:983 [004C5D1C]: Auto-renewal failed, re-subscribing
[07:29:48.018] MasterHandler:1007 [004C5D1C]: subscribe success
[07:29:48.076] Stop:1480 stopping squeezelite devices ...
[07:29:48.076] Stop:1484 terminate update thread ...
[07:29:48.076] Stop:1489 terminate main thread ...
[07:29:48.076] Stop:1493 stopping UPnP devices ...

C:\UPnPBridge-1.27.0\Bin>_
```

1.8. By using the Notepad in Windows different parameters in the config file config.xml must be customized, as it is shown on the next picture. After all the changes has been made, don't forget to Save the config file before exit.

config.xml - Notepad

File   Edit   Format   View   Help

```
<?xml version="1.0"?>
<squeeze2upnp>
<common>
<streambuf_size>524288</streambuf_size>
<output_size>4194304</output_size>
<stream_length>-3</stream_length>
<enabled>1</enabled>
<remove_timeout>120</remove_timeout>
<codecs>aac,ogg,ops,flc,alc,aif,pcm,mp3</codecs>
<mode>thru</mode>
<raw_audio_format>raw,wav,aif</raw_audio_format>
<sample_rate>192000</sample_rate>          ⇐
<L24_format>1</L24_format>
<flac_header>1</flac_header>
<roon_mode>1</roon_mode>                    ⇐
<forced_mimetypes></forced_mimetypes>
<seek_after_pause>0</seek_after_pause>
<send_icy>1</send_icy>
<volume_on_play>-1</volume_on_play>        ⇐
<volume_feedback>1</volume_feedback>
<send_metadata>1</send_metadata>
<send_coverart>1</send_coverart>
<max_volume>100</max_volume>
<accept_nexturi>1</accept_nexturi>
<auto_play>0</auto_play>
<server>?</server>
<resample_options></resample_options>
</common>
<upnp_socket>?</upnp_socket>
<slimproto_log>info</slimproto_log>
<slimmain_log>warn</slimmain_log>
<stream_log>warn</stream_log>
<output_log>info</output_log>
<decode_log>warn</decode_log>
<main_log>info</main_log>
<upnp_log>info</upnp_log>
<util_log>warn</util_log>
<log_limit>-1</log_limit>
<device>
<udn>uuid:5F9EC1B3-FF59-19BB-8530-0011F6A0480A</udn>
<name>ayon S-5</name>                      ⇐
<friendly_name>ayon S-5</friendly_name>
<mac>bb:bb:f6:a0:48:0a</mac>
<enabled>1</enabled>
</device>
<device>
<udn>uuid:5F9EC1B3-FF59-19BB-8530-0011F683AC6F</udn>
<name>ayon S-3</name>                      ⇐
<friendly_name>ayon S-3</friendly_name>
<mac>bb:bb:f6:83:ac:6f</mac>
<enabled>1</enabled>
</device>
<device>
<udn>uuid:e11b4f1f-51a5-44a8-9253-a0a4baf5588a</udn>
<name>NUC8-i7</name>                       ⇐
<friendly_name>NUC8-i7</friendly_name>
<mac>bb:bb:df:1e:08:e8</mac>
<enabled>1</enabled>
</device>
</squeeze2upnp>
```

Ln 1, Col 1   100%   Windows (CRLF)   UTF-8

1.8.1. `<sample_rate>`**192000**`</sample_rate>`
which is the maximum supported sample rate

1.8.2. `<roon_mode>`**1**`</roon_mode>`
which activates the UPnP/DLNA players as regular Squeezebox devices under Roon interface.

1.8.3. `<volume_on_play>`**-1**`</volume_on_play>`
which disables the digital volume control of Roon.
Use only the S-5 electric-analog volume control system by Remote Control or directly by the S-5 volume rotary knob.
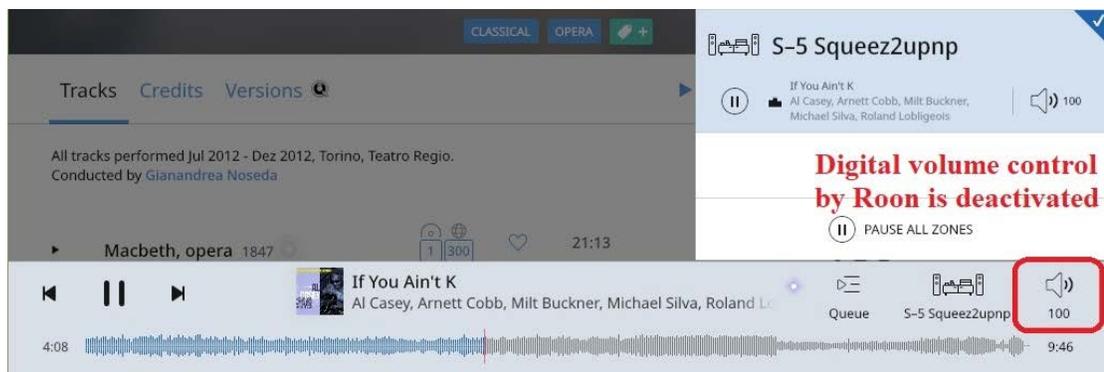
1.9.   Launch the squeeze2upnp-win.exe file again without any flags and now your devices should appear in Roon app:
C:\UPnPBridge-1.27.0\Bin>squeeze2upnp-win.exe

1.10. Make a shortcut of the file squeeze2upnp-win.exe and place it in **Autostart** folder of Windows. So, a Command Prompt window, which enables the UPnP Bridge, will automatically start with Windows. If Windows Firewall pop-up windows appears, please authorize the Connection. If you want to stop the UPnP Bridge, just close the Command Prompt window. The location of files config and squeeze2upnp-win.exe is shown on the picture below.
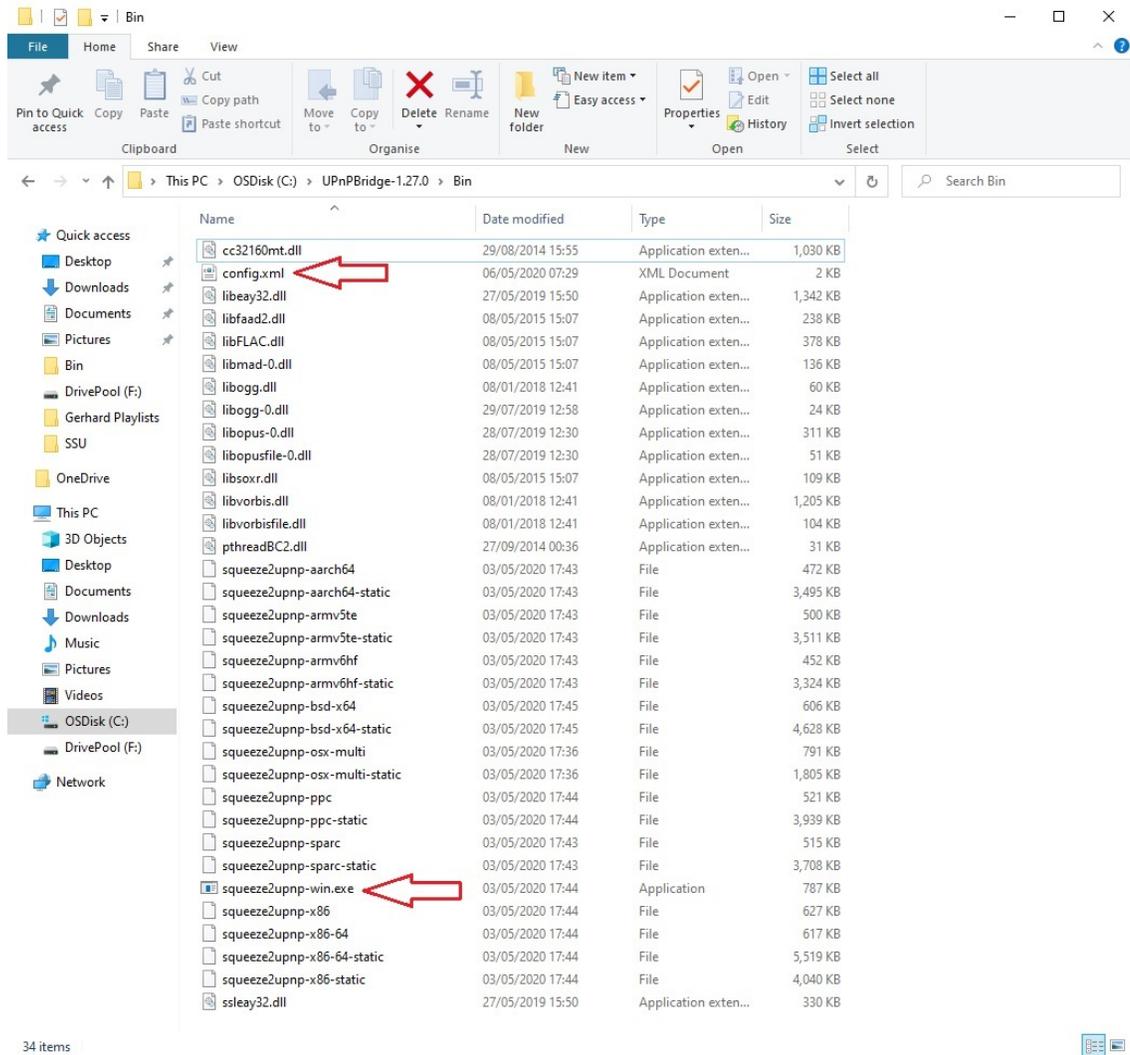
1.11. Go to **Settings > Audio** of Roon to view your available outputs (zones). A 'SqueezeLite' devices should show up in the 'Squeezebox' section, which corresponds to the UPnP devices available in the network. In our case we have S-5 and S-3, we rename them respectively so.
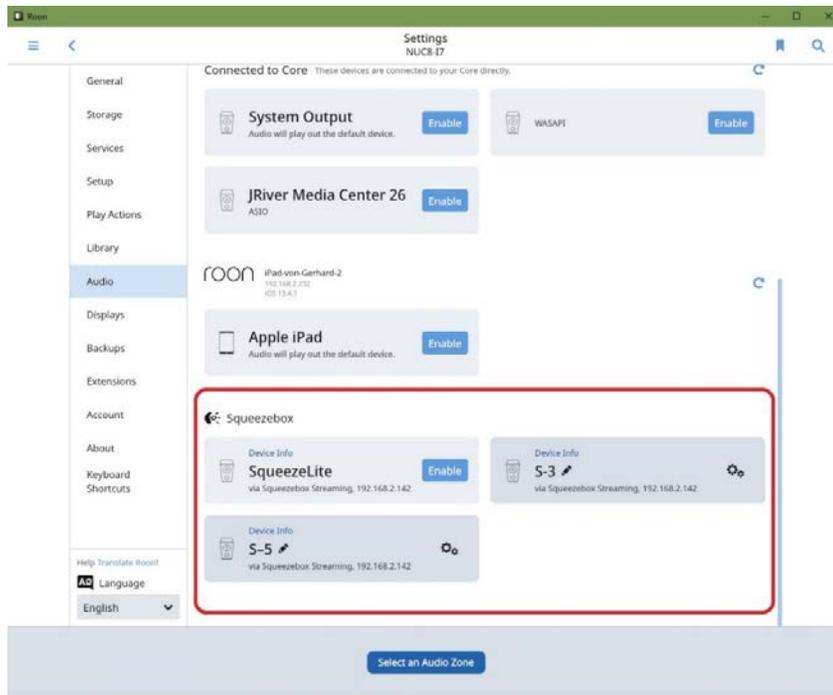
1.12. Go to the Library, choose and play a song.
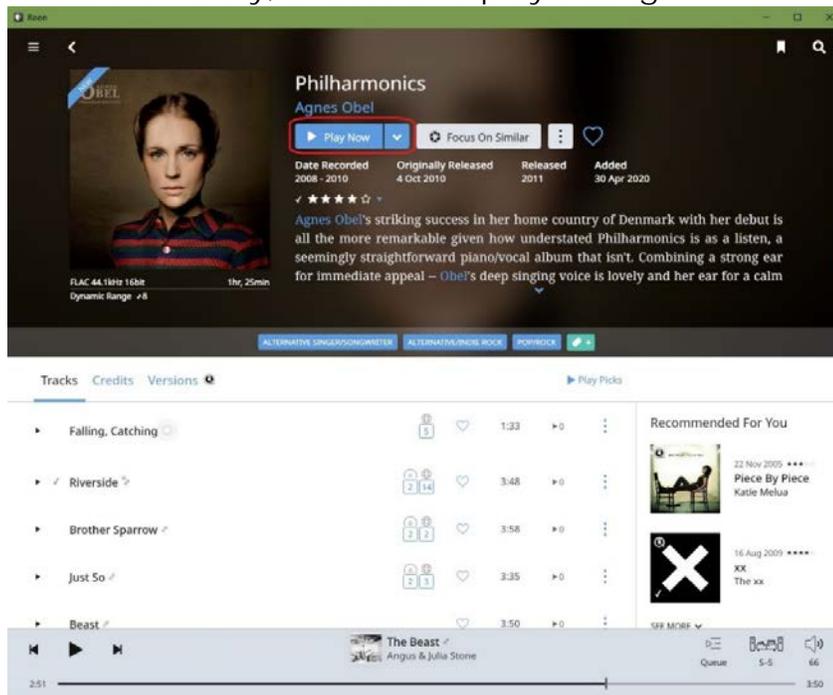
1.13. From the Zones select S-5 Network Player