

Multi Instance Playout

This tutorial explains how to set up a multi instance playout server with Aircast:

A single computers that hosts multiple Aircast playout processes, usually each creating one or more Shoutcast/Icecast streams.

Multi instance installations can be set up on ordinary PC hardware, or on Windows servers hosted in datacenters – if you are only going to create streams (no local audio), no sound card is required.

Prerequisites

For this tutorial, we assume that

- Aircast is correctly set up on the target computer (for Windows Server machines, don't forget to install the Desktop Experience feature in Server Manager in order to obtain the required codecs), and
- a AircastDB has been set up, and audio has been added to its Library.

License-wise, you will need a

- Aircast Professional Studio license, and a
- Multi Instance add-on which allows you to start one or more simultaneous playout processes.

Prepare Playout Instances

The first step is to prepare the individual playout instances. A “playout instance” is nothing but a Aircast playout process, running with a separate configuration. We have two options here: 1. Use the ZIP distribution, or 2. use separate data folders and an appropriate command line switch.

Option 1: ZIP distribution

All Aircast versions are available as a ZIP file from the Download page. That ZIP file does not include an installer, so you don't install those versions into C:\Program Files, but instead, you just unzip them anywhere you like.

There is another notable difference between the “setup” installations and “ZIP” installations:

The normal setup installation store all Aircast configuration data in the system-wide ProgramData folder C:\ProgramData\Aircast\<version> – this is the place Microsoft recommenends for all program-related configuration and data, as a normal user will not have write access to C:\Program Files anymore since Windows Vista.

The ZIP distribution, however, stores the configuration directly inside the program folder. That means that you can have multiple Aircast installations side-by-side, each with a separate config, just by unpacking the ZIP distribution multiple times, or duplicating an existing program folder.

(How can Aircast tell whether it is a ZIP distribution or not? In other words, how does Aircast tell whether the config should go to C:\Program Files or rather in to the program folder? It check if there is a folder named `config` in the same folder as `Aircast.exe`. If there is, it assumes “ZIP-style” installation with `config` inside the program folder; if not, it will use C:\ProgramData. Bottom line is, if you want to duplicate the program folder to make separate configurations, always make sure that there is a `config` subfolder inside the program folder. The ZIP distribution comes with an empty `config` folder for this purpose.)

So in order to install multiple Aircast instances using the ZIP distribution, simply unzip it to multiple locations. Or prepare the base configuration of the first instance, then make copies of that folder.

Option 2: Separate data folders

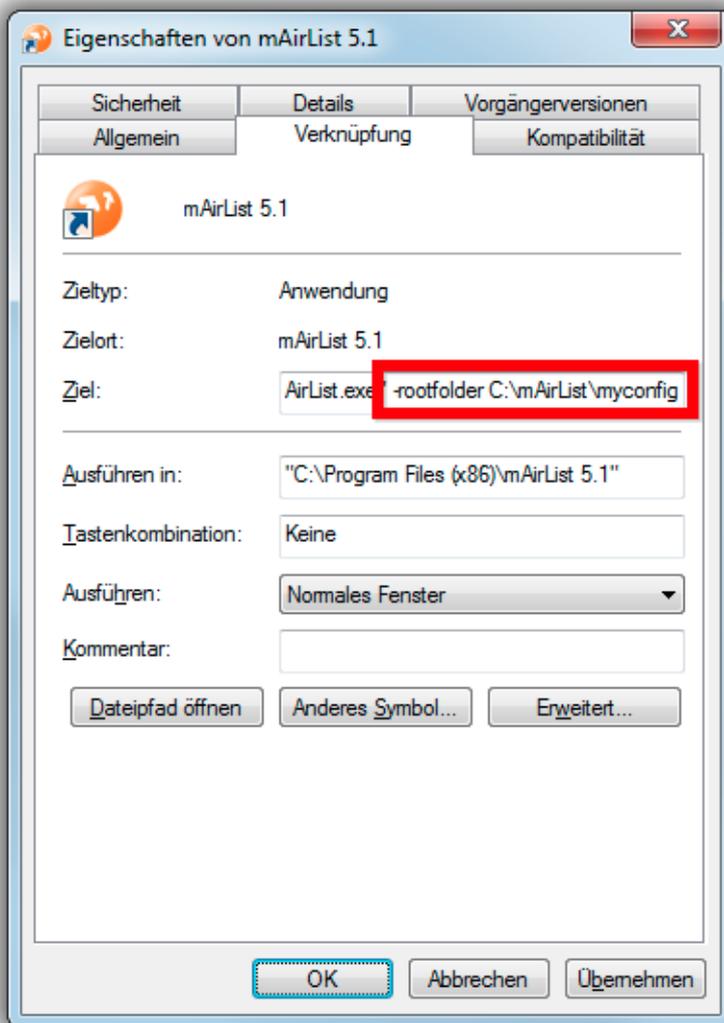
We learned above that Aircast will usually put all configuration into C:\ProgramData\Aircast\<version>, the so-called *root data folder*. However it is possible to override this folder using the command line switch `-rootfolder`. For example:

```
Aircast.exe -rootfolder C:\Aircast\myconfig
```

will use C:\Aircast\myconfig as the root data folder. Likewise, you can run the config application for that data folder with

```
Aircast.exe -mode config -rootfolder C:\Aircast\myconfig
```

You can easily create a shortcut to `Aircast.exe` on your Desktop (or somewhere else), open its Properties, and add the `-rootfolder` parameter to the *Target* field:



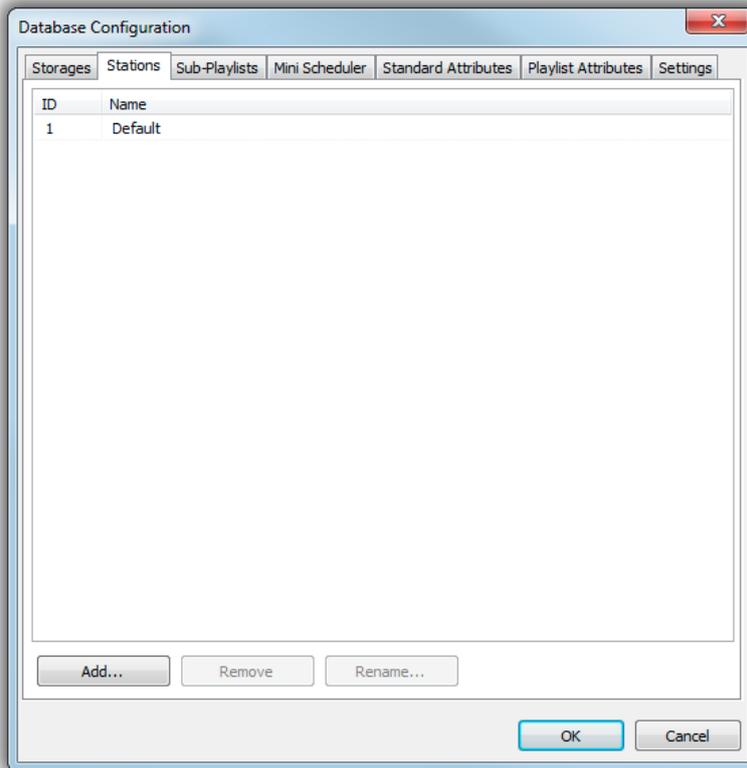
So in order to set up multiple Aircast instances, just create one or more root data folders (initially empty, or a copy of an existing root data folder), and a set of shortcuts (at least for the playout and config app) with the appropriate `-rootfolder` command line parameter.

Prepare Multi-Station Scheduling

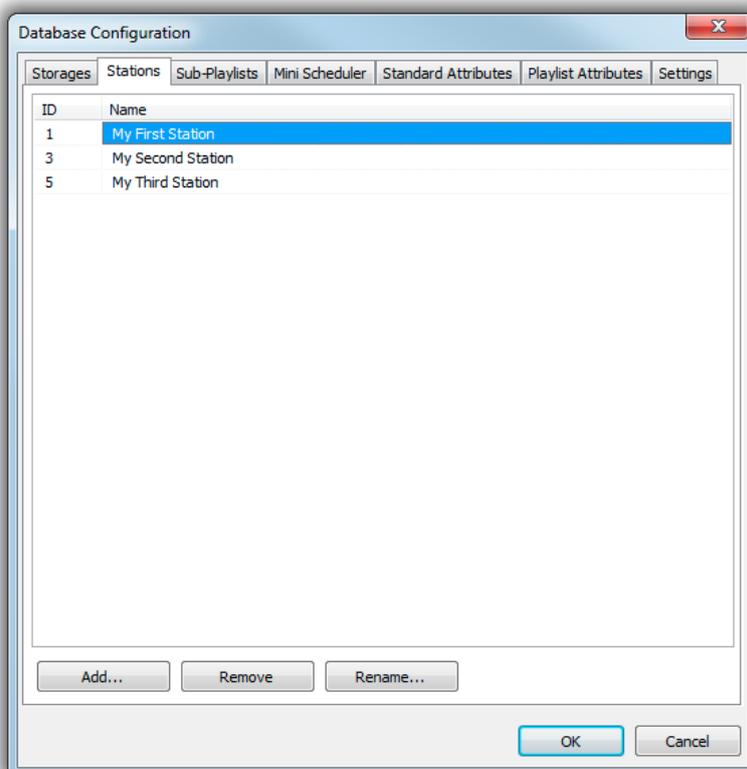
Although not strictly necessary, you will usually use a AircastDB database as audio/scheduling backend. AircastDB has the capability of handling multiple channels, called “stations”, each of which will have **separate scheduling** (playlists, hour template assignments, etc.), but all of which share the **same audio library**.

Add stations in AircastDB

To define multiple stations, open the AircastDB app and go to *Administration* → *Configuration* → *Stations*. You will see that there is currently only one “Default” station defined:

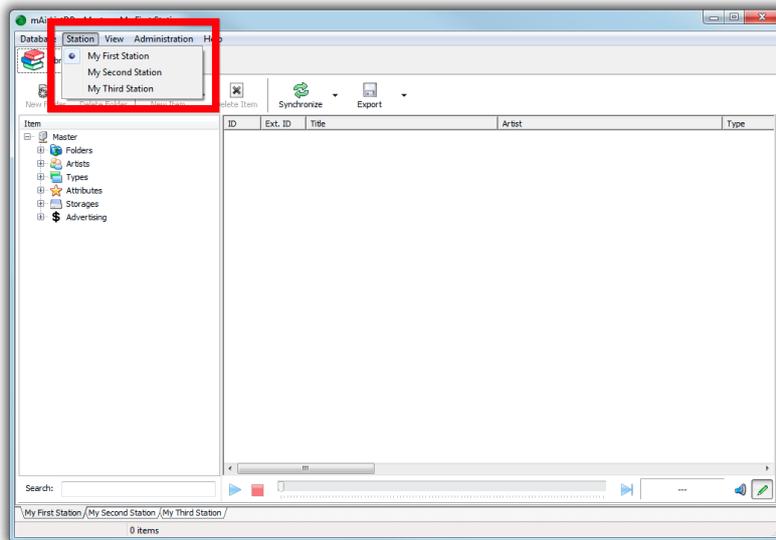


Now click "Add" and add as many stations as you require. You can also click the name of an existing station and change its name:



Please note that a new ID is assigned everytime you add a new station; the ID is not reused when you delete a station. In the screenshot above, the IDs 2 and 4 had been used for stations that have been deleted again in the meantime.

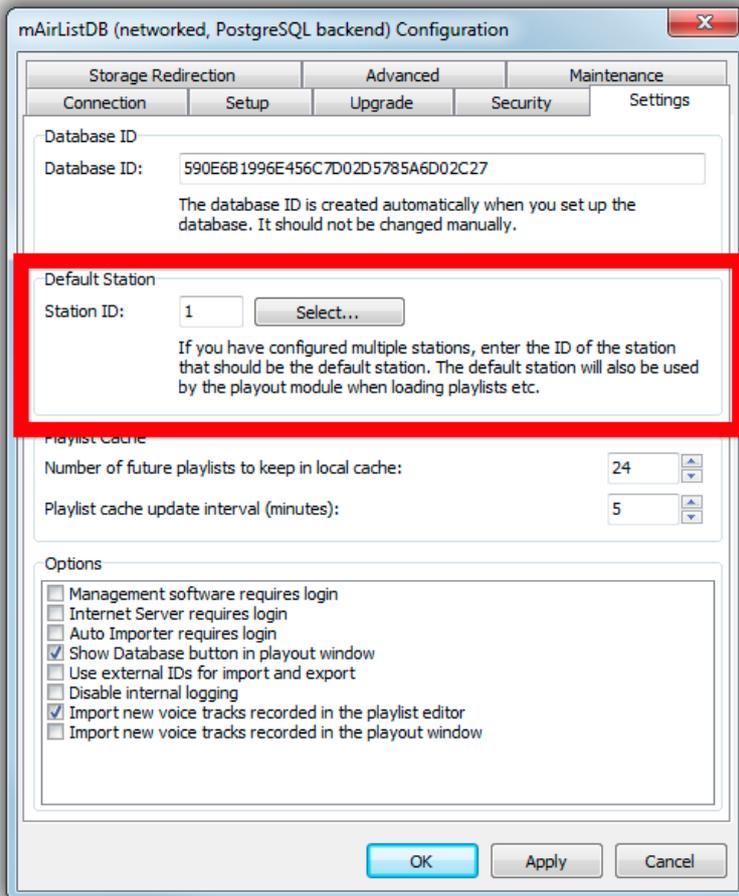
Don't forget to click OK to save the new configuration. You will be prompted to restart the AircastDB app and all running Aircast instances. When you re-open the AircastDB app, you will notice that a new item *Station* appeared in the the menu. Use this menu to switch between stations when doing scheduling work. Alternatively, use the small tabs at the bottom of the window.



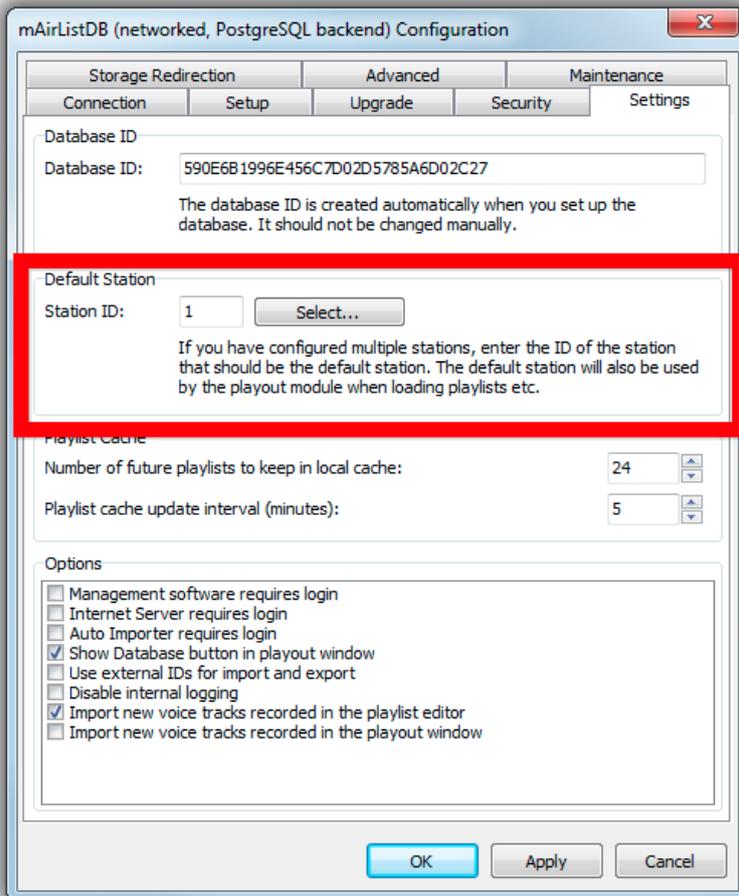
Note: The *Station* menu is only visible when you run the AircastDB app as a separate process (from the Windows Start Menu, or using the AircastDB.bat batch file). On the contrary, when you open the AircastDB window from the playout window (through the *Database* button in the toolbar), you can only access the “default station” for that instance (see next section).

Select the Default Station for each instance

Now that we have multiple playout instances, and multiple stations defined in our AircastDB, the missing piece of the puzzle is to tell each playout instance which station it should handle, i.e., which station it should obtain its playlists etc. from. We call this the **Default Station** for that instance/connection. This can be done on the *Settings* tab in the AircastDB connection setup in the configuration app:



Note that only the ID is displayed here – when you click *Select*, a list of available stations with the names and the IDs is presented:



Just select the appropriate station, click *OK* and save.

Window Title and Icon

The more instances are running at the same time, the harder it gets to tell them apart when looking at all the Aircast processes and windows.

To make life easier, edit the `gui.ini` file in the `config` folder of each instance, and add the following lines:

```
[Instance]
Name=My First Station
IconText=01
```

The `Name` will be displayed in the Aircast window title and application title (in Windows Task Bar).

The `IconText` will be displayed in the Aircast icon in the Windows Task Bar. Maximum number of characters is 2. This works on Windows 7 and above, and Windows Server 2012 and above.

