

How to install the SHOUTcast server with Barix Instreamer and Barix Exstreamers

The SHOUTcast server is great tool to provide Internet Radio or to multiply your audio stream to many listeners (PCs) or Exstreamers. It is used from many professionals like radio stations, to make the radio sound in the internet available. This software is for free and can be downloaded from www.shoutcast.com. The SHOUTcast software is available for almost all operating systems, Windows, Linux, Solaris and Mac.

The Shoutcast software has currently two versions, Shoutcast V1 and Shoutcast V2 – both are currently in use. The main difference is the new “Stream ID” and the new protocol (Ultravox 2.1) in version V2. Following you can find two chapters, one for Shoutcast version V1 and one for Shoutcast version V2. The third chapter informs about the Shoutcast Source DSP for Winamp (Shoutcast DJ-tool)

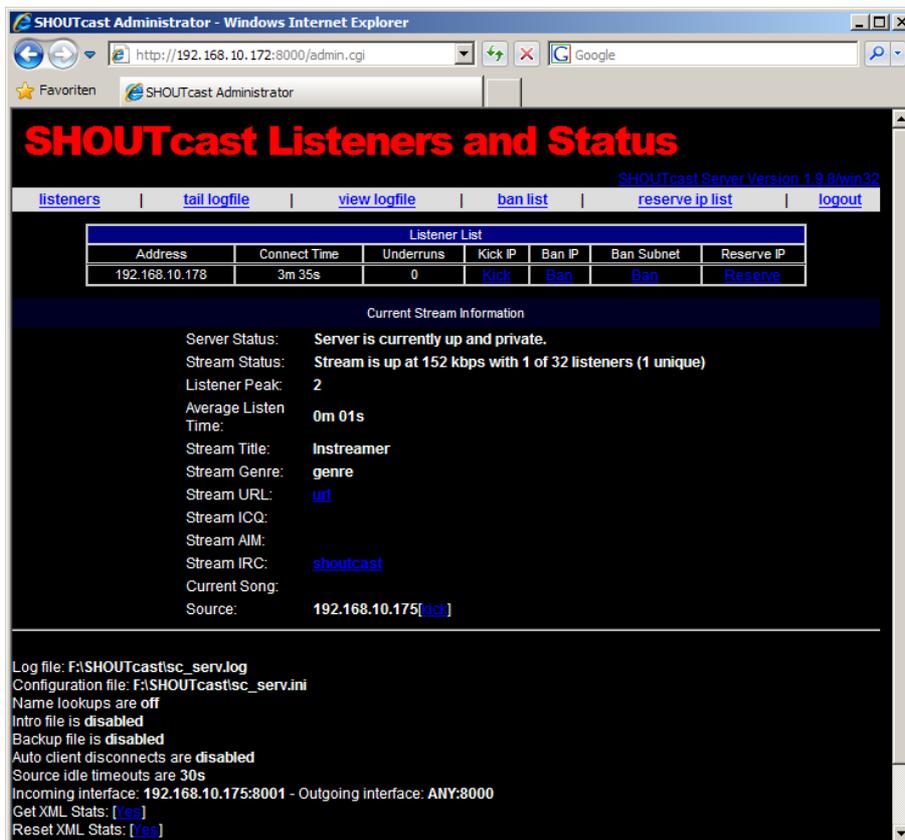
The Barix Instreamer supports the SHOUTcast authentication and also Icecast authentication, so it is possible to stream directly to the SHOUTcast server and to be a source for the SHOUTcast server. SHOUTcast and Icecast are similar Internet Streaming Server solutions.

The Instreamer itself supports up to 6 http MP3 audio streams at the same time, if this is not sufficient then SHOUTcast is a perfect solution for you.

The newer Shoutcast version 2 even creates some trouble at VBR source streams, for that reason it is recommended to use CBR streaming on the Instreamer!
Note, when the Instreamer stream is set to CBR then MP3 Bit Reservouir must be set to “use” (under AUDIO)!

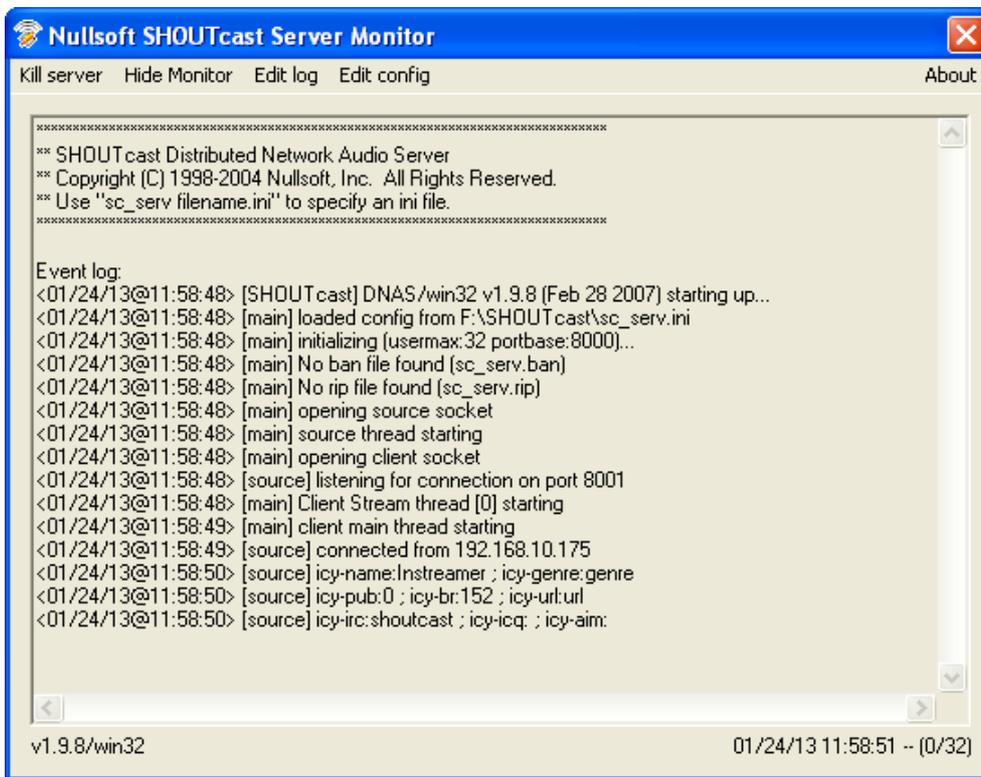
Shoutcast V1

On the SHOUTcast server configuration you can define how many users can listen the stream (default is 32). The limit is depending from the performance of your system and your network. It has a nice administration GUI to set restrictions or for control purposes.



Shoutcast startup and configuration

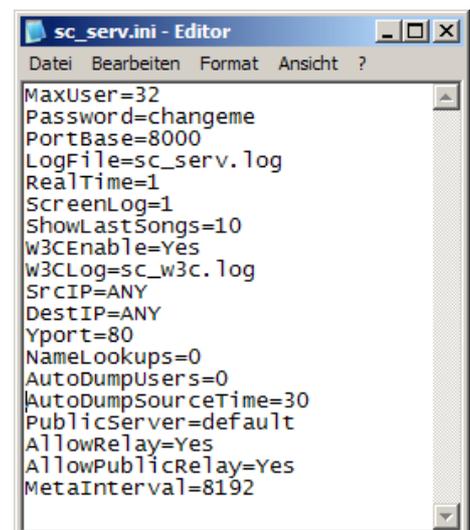
After Shoutcast software installation start Shoutcast over the Shoutcast icon or start it by double-clicking the file “sc_serv.exe” from the shoutcast program folder.



Next is the configuration of the Shoutcast software, click “Edit config” from the Shoutcast menu for that.

All settings are very well documented in the sv_serv.ini. I have used the configuration (default) you can see on the right side (all comments are removed).

After your changes save and close the config file and close the application by clicking the “kill server” button. Then start it again.



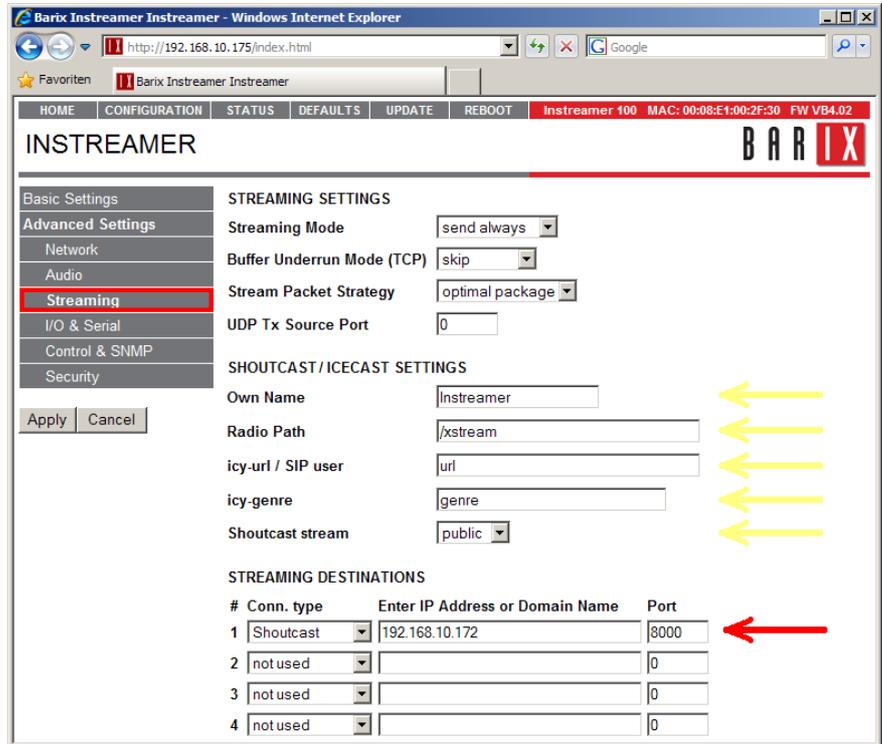
Instreamer Configuration

In the Instreamer configuration are atleast two items to define, the “Streaming Destinations” and the Shoutcast password.

For the “Streaming Destinations” click on the tab “Streaming” where the Instreamer should the stream to. Here select Shoutcast protocol, then define the IP address of the Shoutcast server and also the port number of the Shoutcasts service.

The default port number for the SHOUTcast server is port 8000.

Optionally you can also change the ICY parameters and the “Own name”. This parameters/information are forwarded to the Shoutcast server and partially also to the listeners.



The SHOUTcast server requires a password authentication for all streaming sources.

This password you have to define in the SECURITY section of the Instreamer’s web configuration.

Default password: changeme

The password you can find in the Shoutcast server configuration file “sc_serv.ini”.



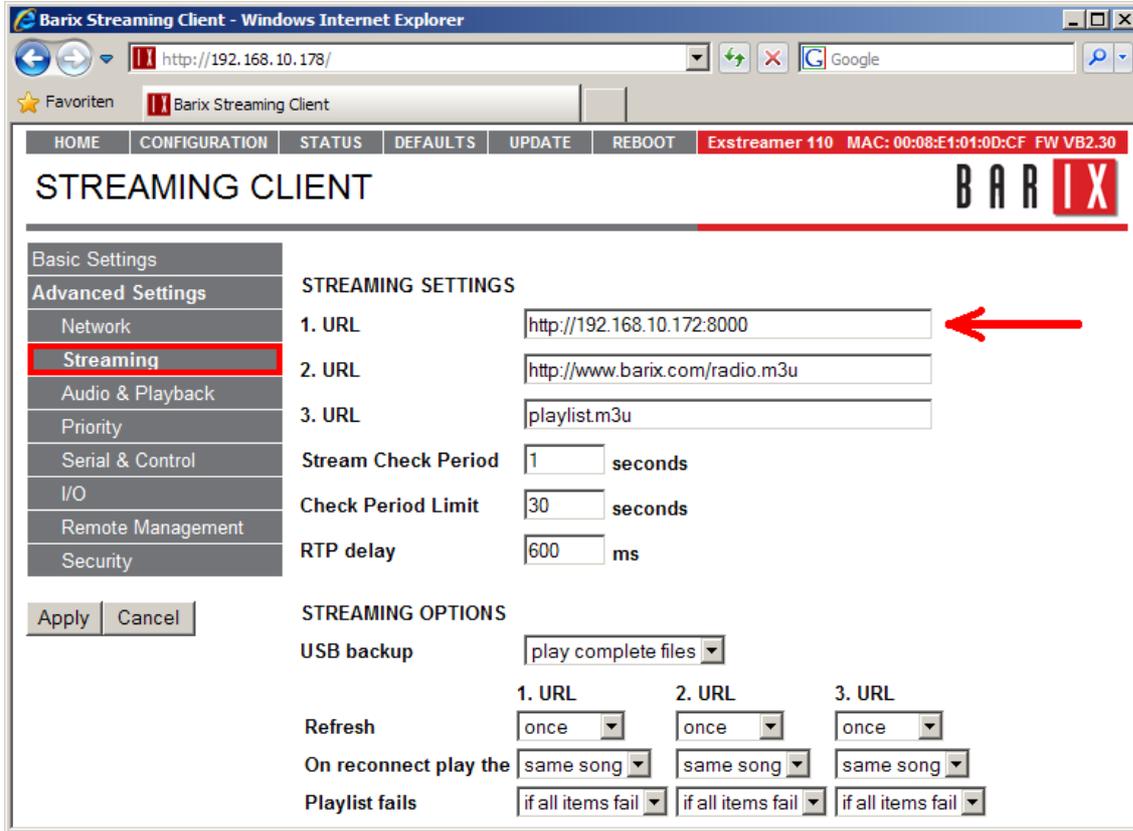
Extreamer Configuration

How to listen the SHOUTcast server with a Barix Exstreamer ?

The Barix Exstreamers (except Exstreamer 500/1000) comes with the Streaming Client firmware preloaded. There the configuration is pretty simple, only Shoutcast listen URL has to be defined in one of the three URLs under "STREAMING" (see picture below).

Define there: ***http://IP-address of the Shoutcast server:port number***

The port number is the same as the Instreamer is using to stream to the Shoutcast server.



Ready, now you can enjoy to the Instreamer MP3 audio stream over a SHOUTcast server on the Exstreamer.

Shoutcast V2

Currently the Instreamer is not fully supporting the new Shoutcast V2 protocol (only Shoutcast V1), there is no possibility in the Instreamer setup to define a SID for the stream. But because of the backward compatibility of the Shoutcast V2 software it is also working, but with the default “streamid=1” only.

The application Shoutcast V2 is now command line based, in the little menu you can select between default config files and own configurations. When the number for the according config file is selected then it starts.

```
F:\SHOUTcast_v2>sc_serv
2013-01-25 09:24:45 I msg:<***> Logger startup
2013-01-25 09:24:45 I msg:<***> version 2.0.0.29
2013-01-25 09:24:45 D msg:<***>
2013-01-25 09:24:45 I msg:*****
2013-01-25 09:24:45 I msg:** SHOUTcast Distributed Network Audio Server
2013-01-25 09:24:45 I msg:** Copyright (C) 1999-2011 Nullsoft, Inc. All
2013-01-25 09:24:45 I msg:** Use "sc_serv filename.conf" to specify a
2013-01-25 09:24:45 I msg:*****
2013-01-25 09:24:45 I msg:[SHOUTcast] DNAS/win32 v2.0.0.29 (Jul 31 201
2013-01-25 09:24:45 I msg:[MAIN] PID: 3360
2013-01-25 09:24:45 I msg:
2013-01-25 09:24:45 I msg:[CONFIG] Choose one of the detected config f
2013-01-25 09:24:45 I msg:[CONFIG] enter 'x' to close this instance of
2013-01-25 09:24:45 I msg:[CONFIG] Note: Press 'Enter' after choosing
2013-01-25 09:24:45 I msg:
2013-01-25 09:24:45 I msg:[CONFIG] [0] : sc_serv.conf
2013-01-25 09:24:45 I msg:[CONFIG] [1] : sc_serv_basic.conf
2013-01-25 09:24:45 I msg:[CONFIG] [2] : sc_serv_debug.conf
2013-01-25 09:24:45 I msg:[CONFIG] [3] : sc_serv_public.conf
2013-01-25 09:24:45 I msg:[CONFIG] [4] : sc_serv_relay.conf
2013-01-25 09:24:45 I msg:[CONFIG] [5] : sc_serv_simple.conf
2013-01-25 09:24:45 I msg:[CONFIG] [6] : sc_serv_Barix.conf
2013-01-25 09:24:45 I msg:[CONFIG] [7] : sc_serv_*.conf
2013-01-25 09:24:45 I msg:[CONFIG] [8] : sc_trans.conf
2013-01-25 09:24:45 I msg:
2013-01-25 09:24:49 I msg:[MAIN] Logger updating log file to use
2013-01-25 09:24:49 I msg:[MAIN] Loaded config from sc_serv_Barix.conf
2013-01-25 09:24:49 I msg:[MAIN] Calculated CPU count is 2
2013-01-25 09:24:49 I msg:[MAIN] Starting 2 network threads
2013-01-25 09:24:49 I msg:[MICROSERVER] Listening for connection on po
2013-01-25 09:24:49 I msg:[MICROSERVER] Listening for connection on po
2013-01-25 09:24:51 I msg:[SRC 192.168.10.175:54607 sid=1] SHOUTcast 1
2013-01-25 09:25:31 I msg:[DST 192.168.10.178:53320 sid=1] SHOUTcast 1
2013-01-25 09:25:31 I msg:[DST 192.168.10.178:53321 sid=1] SHOUTcast 1
```

On the right you can see the used config file (all comments removed). As you see except the “streamid” entry and the “AdminPassword” it is the same as in Shoutcast V1. Even if the “streamid” entry is omitted, then it will use “streamid=1” as default.

```
MaxUser=32
streamid=1
Password=changeme
PortBase=8000
LogFile=sc_serv.log
ScreenLog=1
ShowLast Songs=10
W3CEnable=Yes
W3CLog=sc_w3c.log
SrcIP=ANY
DestIP=ANY
Yport=80
NameLookups=0
AdminPassword=adminpass
AutoDumpUsers=0
AutoDumpSourceTime=30
PublicServer=never
AllowRelay=Yes
AllowPublicRelay=Yes
MetaInterval=8192
```

Also here the software has a WEB user interface for administration.

SHOUTcast Administrator - Windows Internet Explorer
http://192.168.10.172:8000/e

SHOUTcast Listeners and Status

SHOUTcast Server v2.0.0.29/win32

Listeners | Tail Logfile | View Logfile | Ban List | Reserve IP List | Logout

Listener List						
Address	User Agent	Connect Time	Kick IP	Ban IP	Ban Subnet	Reserve IP
192.168.10.178	Barix Streaming Client	6 minutes 22 seconds	Kick	Ban	Ban	Reserve

Current Stream Information

Log file: sc_serv.log
Configuration file: sc_serv_Barix.conf
Intro file is empty
Backup file is empty

Source idle timeouts are 30s
Source connected from 192.168.10.175

Stream artwork not available
Playing artwork not available

Server Status: Server is currently up and private
Stream Status: Stream is up at 152 kbps with 1 of 32 listeners (1 unique)
Listener Peak: 2
Average Listen Time: 6 minutes 22 seconds
Stream Name: Instreamer
Content Type: audio/mpeg
Stream Genre: genre
Stream URL: url
Stream IRC: shoutcast
Source: 192.168.10.175 [kick]

Instreamer and Exstreamer configuration

The Instreamer and Exstreamer configuration are the same as with Shoutcast V1, please see page 3 and 4 of this guide.

But there is one exception for the Exstreamer configuration, when the Exstreamer should play a Shoutcast V2 stream with a higher "streamid" than 1 (a non-Instreamer stream), then the configured URL must look like the following:

http://IP-address of the Shoutcast server:port number/stream/streamid

e.g. ***http://192.168.10.172:8000/stream/333*** (for streamid=333)

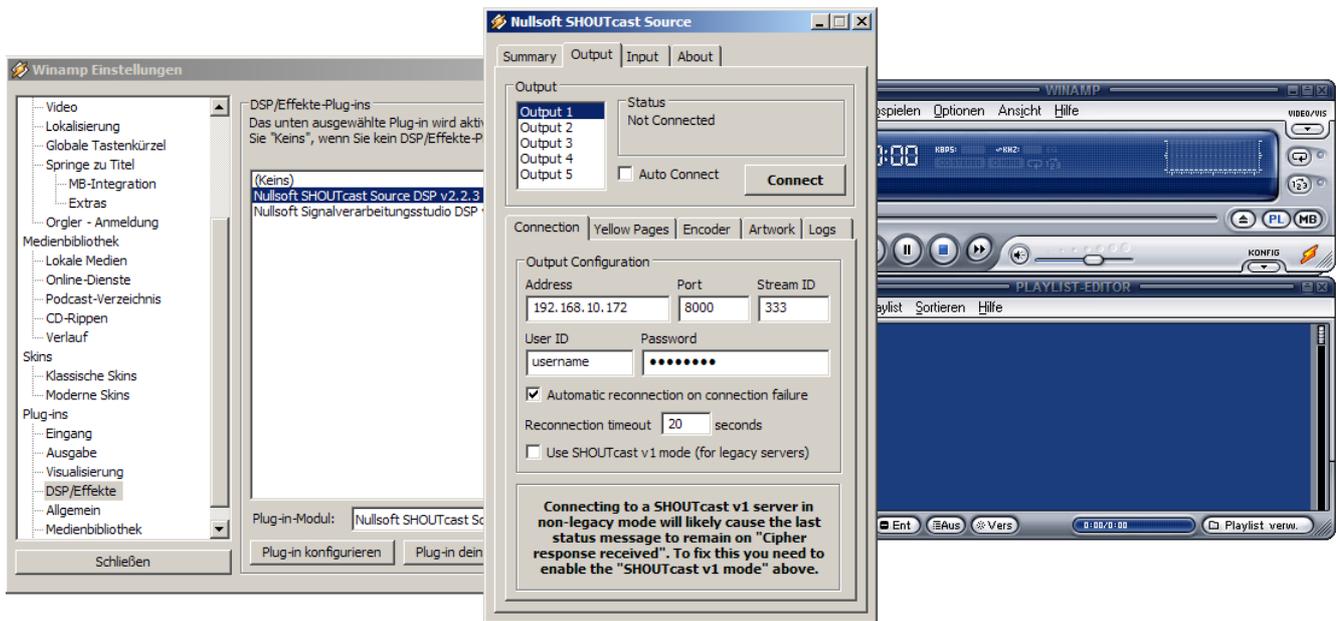
SHOUTcast with the DSP plug-in (DJ-software for Winamp)

The SHOUTcast server can manage different sources. Beside sources like the Instreamer you could use also a PC as Shoutcast source. For that is a Winamp DJ-Tool (Shoutcast Source DSP plug-in) existing this allows to stream locally on the PC stored audio files to the Shoutcast server. Also a normal HTTP (Internet radio) Instreamer stream can be listened on Winamp and forwarded over this way to Shoutcast.

The Shoutcast DJ tool can convert also in different audio formats, like MP3, AAC+ and WAV. Both, Winamp (www.winamp.com) and the Shoutcast DJ-tool (www.shoutcast.com) are freeware from the internet.

The Shoutcast Source DSP plug-in can run on the same PC than the SHOUTcast server is running, but it must not. The SHOUTcast Source DSP plug-in is not needed when you will use only a Instreamer as a source. You need this only if you will create MP3 / WAV playlists for your SHOUTcast server.

After the installation start Winamp and go to "OPTIONS" – "Preferences" – "DSP/Effect" and click on "Nullsoft SHOUTcast Source DSP". This will pop up the configuration and monitor of SHOUTcast source . Then close the "Preferences", the configuration window will remain open.



There go to "Output" – "Connection" – "Address" and define the IP address of the PC where the SHOUTcast server is installed. The "Port", the "Password" and the "Stream-ID" (with Shoutcast V2) must also fit to the settings in the sc_serv.ini . The "Encoder" setting can be changed optionally if other formats are needed.

Start the stream to the server by clicking the "Connect" button.

Then you can choose your favourite playlists, MP3 files also radio streams in the Winamp Playlist Editor and click on the play icon.

Ready !! Now you can connect your clients / Exstreamers.

Over this workaround you can make a Instreamer stream also compatible for a higher Stream-ID than 1.

