



# auXala manual & requirements

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## Quick Start

### 1. Login to admin interface

Open the link, that has been provided to you by the auXala team, to login to the admin interface of your instance. For more information about the admin interface please see section 1.1.

### 2. Configure your instance

The admin interface allows to monitor and configure your streams in real-time. You can change the name, description, logos and background of each stream, add password protection and much more.

### 3. Download and install ingest software

The auXala ingest software is responsible for streaming the local audio feeds of the computer (where the software will be installed) to our cloud platform. To download the software for your platform, click the **“Download Ingest”** button in the top right corner of the admin interface.

Once the application is installed and opened, use the admin interface link to login, choose the inputs, channels, types, and audio quality of each stream and click the **“START”** button. For more information about the ingest software please see section 1.2. For best stability we recommend connecting the audio ingest computer via RJ45 (Ethernet) cable only.

### 4. Provide listeners with link

Now that the audio ingest has been connected and the platform is ready to stream all that is left to do is to provide the link to your listeners. To do that, click the **“Go to Stream”** button in the top right corner of the admin interface. This will take you to the web interface that listeners can use to hear the streams. For more information about the ingest software please see section 1.3.

# 1. Manual

## 1.1 Admin Interface

The admin interface allows the administrator to monitor and configure the streaming service in real-time through a web browser.

### 1.1.1 Manual

This link on the top left directs to the auXala manual.

### 1.1.2 Protection

The admin interface is protected by a randomly generated key and can only be accessed by users in the possession of said key. **Example:**

<https://customer.auxala.com/admin?key=506uq0ijd>

### 1.1.3 Monitoring & Export

The monitoring capabilities allows the administrator to see how the auXala cloud instances performs, how many users are connected to each stream, how much traffic and bandwidth is used and much more.



Example screenshot of the admin interface with 3 streams.

The following metrics are available:

- **CPU:** shows the current and history CPU utilization of the server
- **RAM:** shows the current and history RAM utilization of the server
- **Users:** shows the current and historic user distribution per streams
- **Ingest:** shows the current connected audio ingests incl. their metrics (quality, host, device, etc.)

Each metric can be observed and exported in the following intervals:

- 1 Minute
- 1 Hour
- 3 Hours
- 6 Hours
- 12 Hours
- 24 Hours

Using the export function, you will be able to download all metrics in CSV format into a single .zip file.

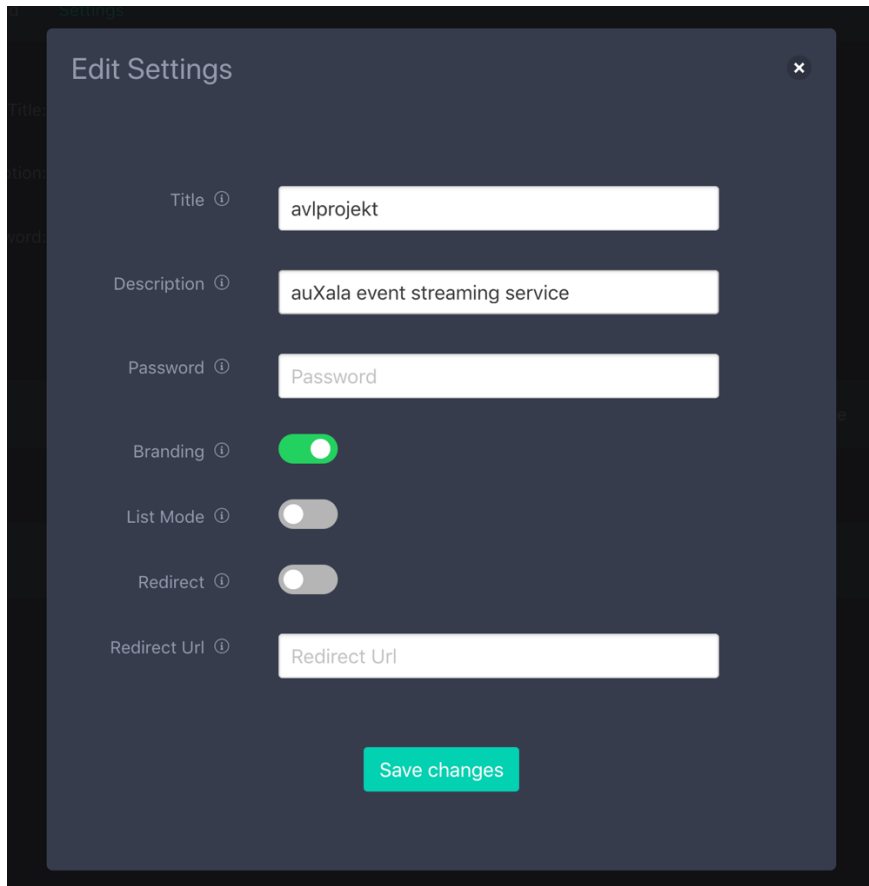
Using the monitor function, you will be able to listen to the stream without having to switch to the actual streaming interface.

#### 1.1.4 Settings

The settings section of the admin interface allows you to make changes to the instance. The following settings are available:

- **Global:** settings that relate to your entire instance such as: title, password protection, or player mode.
- **Streams:** settings that relate to specific streams such as: name, description, icons, backgrounds, and visibility.

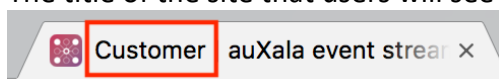
### 1.1.4.1 Global Settings



Example Screenshot of the global settings menu.

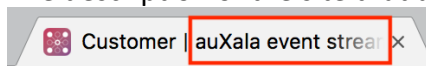
#### Title

The title of the site that users will see in their browser tabs.



#### Description

The description of the site that users will see in their browser tabs.



#### Password

If a password is set, users are required to enter the password to access the player. If empty, the player can be accessed by anybody.

## Branding

If disabled, removes the branding (“powered by auxala.com”) from the player.

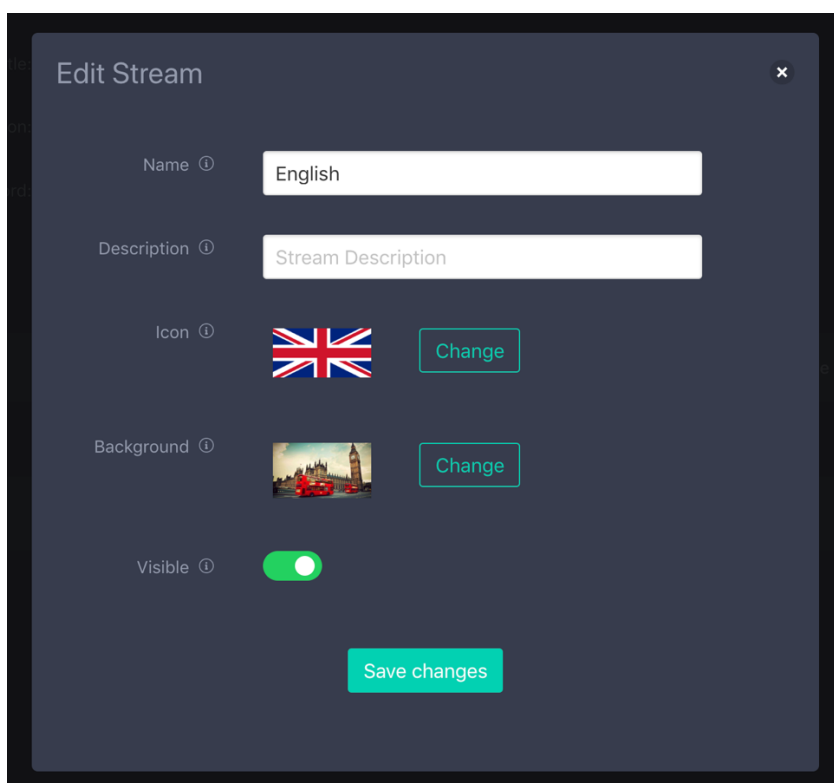
## Player Mode

The player mode which is displayed to the end user. Either Player (default) or List. If list mode enabled, displays the streams in a list. If player mode enabled, displays the streams in the player. This feature is explained in more detail in section 1.3.2.

## Redirect

If enabled, redirects all users to the given URL. This can be used to redirect users to other pages (i.e. information page before the event is happening).

### 1.1.4.2 Streams



The screenshot shows a dark-themed 'Edit Stream' dialog box. It contains the following elements:

- Name:** A text input field containing 'English'.
- Description:** A text input field containing 'Stream Description'.
- Icon:** A preview of the UK flag with a 'Change' button to its right.
- Background:** A preview of a London street scene with a 'Change' button to its right.
- Visible:** A green toggle switch that is currently turned on.
- Save changes:** A prominent green button at the bottom center.

*Example screenshot of the stream settings menu.*

**Name**

The name of the stream that should be displayed in the player. This field supports plain text and markdown.

**Description**

The description of the stream that should be displayed below the stream name. This field supports plain text, links, and markdown.

**Icon**

The icon of the stream that should be displayed in the player. You can either upload a custom icon or use one from our collection. Format: jpg, jpeg - Size: 640x360 (16x9) recommended.

**Background**

The background of the stream that should be displayed in the player. You can either upload a custom background or use one from our collection. Format: jpg, jpeg - Size: 1920x1080 (16x9) recommended.

**Visible**

Whether the stream should be visible in the player.

### 1.1.5 Action Buttons

The action buttons can be found in the top right corner of the admin interface.

#### 1.1.5.1 Download Ingest

Takes you to the auXala ingest download page where you can download the software for your selected platform. Currently, Windows and Mac are supported.

For more information on how to use the ingest software see section 1.2 and section 2.1 for the computer requirements.

#### 1.1.5.2 Go to Stream

Takes you to the auXala streaming interface that listeners will use to access the audio stream. This link has to be made accessible to listeners before and during the event, for example via email newsletters, handouts, folders, or inserts.

For more information on how to use the streaming interface please see section 1.3

## 1.2 Ingest Software

The ingest software is responsible for streaming the local audio feeds of the computer (where the software is installed) to our cloud platform.

### 1.2.1 Installation

The ingest software is available for Windows and Mac operating systems which can be downloaded from your streaming instance using the “**Download Ingest**” button.

#### 1.2.1.1 Windows

The downloaded software includes an installer that installs the software automatically. Simply starting the software via the shortcut on the desktop/programs list is enough.

#### 1.2.1.2 Mac OS

The downloaded software includes the .app package which can simply be copied into your Applications folder.

### 1.2.2 Usage scenarios

The ingest software can be used in multiple ways and combinations. The following ingest scenarios are possible:

- 1 stream from one computer
- Multiple streams from one computer
- All streams from one computer

This flexibility allows you to generate all streams from a single computer or from multiple at the same time. *It is, however, not possible to generate the same stream from 2 computers at once.* Consider the following examples.

#### Example A

10 interpreter booths in a single conference venue: all streams can be generated from a single computer using a suitable audio interface.

#### Example B

2 interpreter booths in 5 different rooms: connecting all booths to a single computer might not be possible (cable length, physically separated, etc.) so it would make sense to use one computer with a suitable audio interface for each room.



### 1.1.1 Running the software

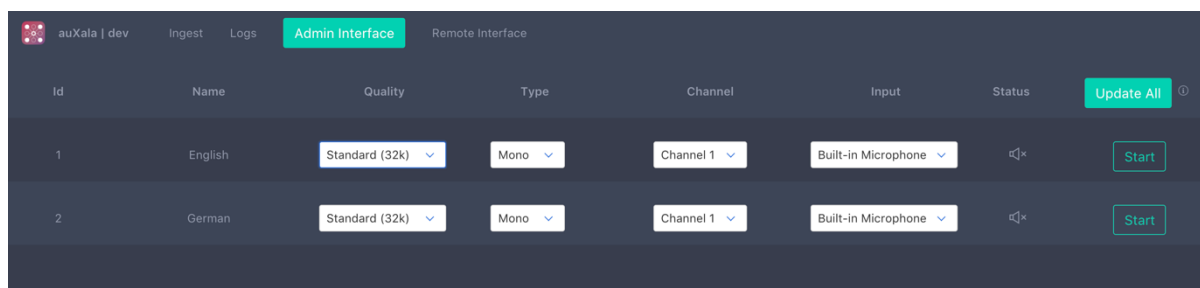
Before running the software, please make sure the computer is connected via cable to the internet. Once the software has been successfully started, the following screen will appear:



Enter the admin interface link, that has been sent to you by the auXala team and the login button will appear.



Click the **“Login”** button and you will be taken to the interface that allows you to configure the ingest streams. It looks like this:



You will see the list of streams that are available to you. In this case there are 2 streams available: English and German.

### 1.1.2 Global Settings

#### Input

Shows a list of available streams and their configuration options.

#### Logs

Shows systems logs that can help identify problems. At the end of the log sections there is also a button available to export logs to a file which can then be sent to our support team.

#### Admin Interface

This provides a quick link back to the admin interface.

#### Remote interface

Allows you to access the interface of the ingest software from a remote computer. This is especially useful when the computer, that is running the software, can't easily be accessed physically and you want to perform configurations.

#### Update All

This button allows you to refresh the auXala streams and connected audio input devices. This is needed to refresh the input device list when you plug in a new audio device while the software is already running.

### 1.1.3 Stream Settings

Each stream has several configuration options and actions available:

#### Quality

The audio quality that should be streamed. The following quality options are available:

- Standard: 44.1 kHz @ 32kbit
- Advanced: 44.1 kHz @ 64kbit
- Best: 44.1 kHz @ 96kbit

We recommend having a look at the bandwidth requirements at section 2.2.3 before deciding upon a quality.

#### Type:

The audio type of the input audio feed. The following types are available:

- Mono
- Stereo

#### Stream:

The stream (mono) or stream pair (stereo) that should be used to capture audio. This setting is important when using multi-channel USB audio interfaces or network protocols such as DANTE. The number of channels you can use is limited by the amount of auXala streams you have available (i.e. double for stereo).

#### Example:

There are 3 auXala streams: English, German, and French. You will be using a Focusrite Scarlett 8i6 USB interface with 8 input audio channels to capture the audio. The ingest software will allow you to pick:

- Mono: channel 1 to 3
- Stereo: channel 1-2, Channel 3-4, Channel 5-6

The audio interface might have more audio channels available but for simplicity reasons only the first N channels are usable where N equals the number of auXala streams (or  $N * 2$  for stereo).

#### Input

The audio device that should be used to capture audio. This will be a list of all connected audio interfaces

## Status

The status information indicates whether the software is capturing audio for the specific stream.

## Start/Stop

Allows you to start or stop capture audio from the configured audio input device.

### 1.1.4 Supported Audio Devices

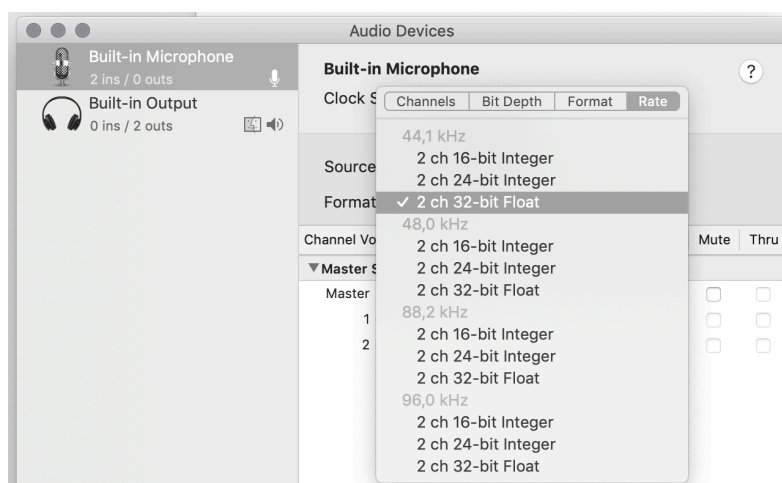
The auXala ingest software supports all audio input devices that are successfully connected to the computer that is running the software. This includes, but is not limited to:

- Built-in Microphones and audio devices
- External USB audio devices
  - USB Microphones
  - Multi-channel USB interfaces such as Focusrite Scarlett, etc.
  - Wireless Microphones with USB connector
- Virtual Audio Interfaces
- Network protocols such as DANTE

### 1.1.5 Operating System Configuration

On macOS Mojave 10.14 or higher, please ensure the following audio MIDI settings before running the ingest software:

#### 44,1 kHz 2 CH 32-bit Float



Audio Midi Settings, example Built-in Microphone.

### 1.1.6 Updating

You will be notified about updates of the ingest software and you can update to the new versions by following the install procedure 1.2.1 again.

### Audio devices

The ingest software will automatically detect all audio devices that are connected to the computer.

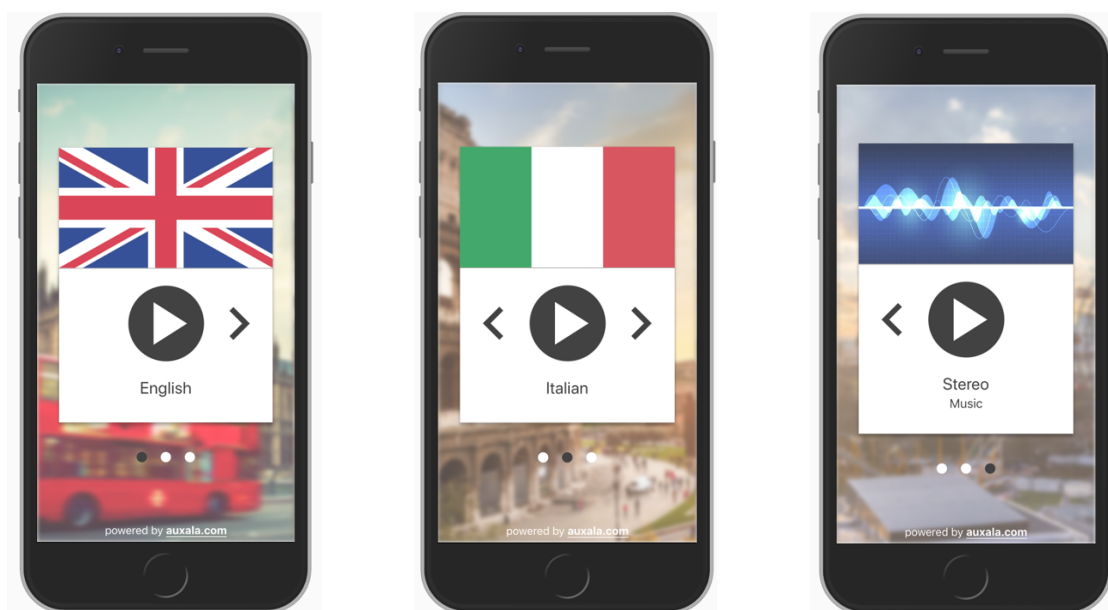
## 1.3 Streaming Interface

The streaming interface is what listeners will use to access the streams. A live demo can be found here <https://demo.auxala.com>

Listeners can access this interface with a web browser on their device. For a list of compatible browsers please see section 2.3.1.

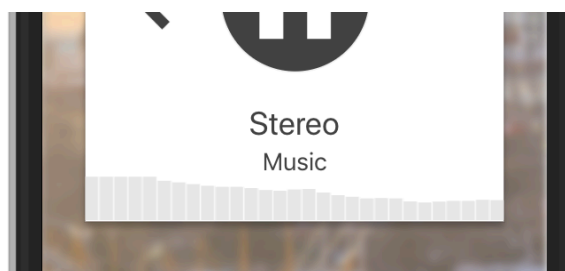
### 1.3.1 Player Mode

The player is the default interface of auXala. The player allows the listener to listen and navigate between streams. The player displays the name, description, icon and background which can be changed in the admin interface. For more information see section 1.1.3.2.

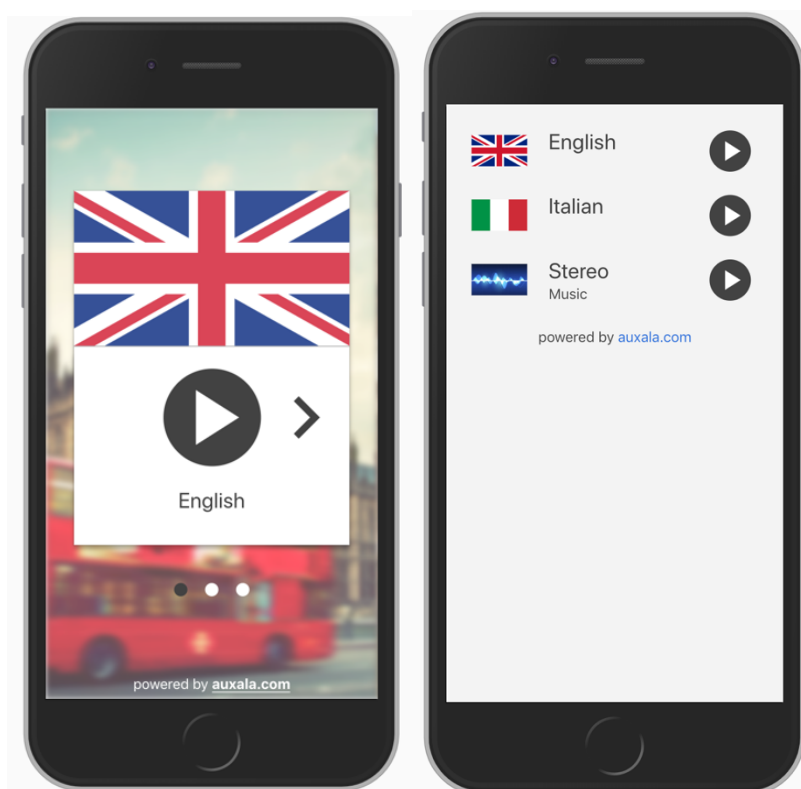




The player includes a visual audio indicator that allows the listener to quickly see when an audio stream is available.



The list player mode is an alternative interface that can be used when many languages are streamed as it's easier to navigate than the player.



Player Interface

List Interface

## 2. Requirements

### 2.1 Audio ingest computer

The audio ingest computer is necessary to stream the local audio feeds to our cloud platform and is provided onsite by the customer.

The audio feeds, that need to be streamed, must be connected to the computer onsite via a USB audio interface, network protocols such as DANTE, or by any other means. For best stability we recommend connecting the audio ingest computer via a RJ45 (Ethernet) cable only.

On this computer, the auXala ingest software must be installed and connected to the streaming instance via the admin interface link. The ingest software is compatible with any audio source connected to the computer.

#### 2.1.1 Minimal requirements

The computer must have the following minimal specs:

- Windows 7 64bit or Mac OS 10.11 (El Capitan) 64bit
- 1.3 GHz dual-core Intel Core i3
- 4GB of RAM
- 250mb available disk space
- Network interface card (NIC) with ethernet adapter or Wi-Fi IEEE 802.11/n/ac
- Internal/external/virtual sound card with in/out stream, 44.1 kHz/16bit or better sampling rate
- Internet connection, ~200kbit/s upstream per stream depending on quality and type

**Important:** On macOS Mojave 10.14 or higher, please ensure the following audio MIDI settings before running the ingest software: **44,1 kHz 2 CH 32-bit Float**

**Note:** For best stability we recommend connecting the audio ingest computer via RJ45 (Ethernet) cabled only. We recommend using an up-to-date operating system including the latest audio drivers for your soundcard.

## 2.2 Internet connection

auXala is a cloud platform and therefore requires a stable internet connection. Your streaming instance will be located as closely as possible to the desired location of the event/venue. For best stability we recommend connecting the audio ingest computer via RJ45 (Ethernet) cable only. We operate our service in 13 datacenters across the globe. Listeners can stream using their mobile data (3G/4G/LTE) or using an onsite provided Wi-Fi network.

### 2.2.1 Mobile data

Listeners can use their own mobile data plan to listen to the auXala stream from their device directly. Mobile data is our preferred way to deliver the audio streams to the listeners due to its technical superiority over Wi-Fi.

### 2.2.2 Wi-Fi/WLAN

The onsite Wi-Fi must be connected to the internet and must be able to handle the bandwidth and traffic requirements below. Additionally, we recommend the following setup:

- Setup by a professional Wi-Fi provider
- No more than 100 clients per access point
- Optimized for Voice Applications (QoS/DSCP)
- Port 80 and 443 open on the firewall
- No auto-disconnect after a certain amount of time

### 2.2.3 Bandwidth and Traffic

The bandwidth and traffic that is required depends on the audio quality by each stream and number of listeners. The following values are calculated in mono. Streaming stereo audio will obviously double the bandwidth and traffic.

- Standard: ~100kbit/sec (45 mbyte/hour) per listener
- Advanced: ~150kbit/sec (67,5 mbyte/hour) per listener
- Best: ~200kbit/sec (90 mbyte/hour) per listener

### 2.2.4 Example

Assume an event with 1 mono stream and 100 concurrent listeners for 1 hour.

- Standard:  
 $100 \text{ kbit/s} * 100 \text{ listeners} = 10 \text{ mbit/s bandwidth and } 4.50 \text{ GB traffic}$
- Advanced:  
 $150 \text{ kbit/s} * 100 \text{ listeners} = 15 \text{ mbit/s bandwidth and } 6.75 \text{ GB traffic}$
- Best:  
 $200 \text{ kbit/s} * 100 \text{ listeners} = 20 \text{ mbit/s bandwidth and } 9.00 \text{ GB traffic}$



## 2.3 Listeners

Listeners need to have a recent browser and stable 3G/4G/Wi-Fi connection in order to listen to the streams.

## 2.4 Supported Browsers

Following minimum versions of browsers are required:

- Microsoft Edge: 12
- Microsoft IE Mobile: 10
- Firefox: 25
- Google Chrome: 10
- Apple Safari: 6
- Apple Safari iOS: 6.1
- Android Browser: 4.4
- Baidu Browser: 7.12
- QQ Browser: 1.2
- Samsung Internet: 4
- UC Browser for Android: 11.8
- Firefox for Android: 62
- Chrome for Android: 69
- Opera Mobile: 46
- Opera: 15

### 2.4.1 Delay

The delay between the audio ingest and audio output on the device of the listener is usually **less than 1 second**. The delay depends on the delivery method (3G, 4G, LTE, Wi-Fi) and the device that is used to listen to the streams. In our experience low-end Android devices are usually 100 to 250ms slower than iOS devices.

We operate 13 datacenters across the globe to ensure the smallest amount of delay possible.

### 3. Example use cases

We have created the following example scenarios to give you a better understanding of our offering, service, and procedure and how to integrate it into your conference, event, or venue.

#### Example 1: Simple

**Scenario:** simultaneous translation of a national conference in a hotel

No. Listeners	No. streams	No. rooms	Delivery
70	2	1	LTE and/or Wi-Fi

#### 4 weeks before the event

You let us know that you require our streaming service with the parameters above, the purchase is made, we set up the instance and send you the link to the admin interface. This gives you enough time to:

- Configure the instance and streams
- Download and install the ingest software, choose specific audio-channels and assign them to the streams
- Name of the link: ***yourcompany.auXala.com***

#### 2 Weeks before the event

You let your attendees and potential listeners know that translation will be provided by auXala by sending them the demo link: <https://demo.auxala.com> and that they need to make sure that their mobile device is charged and to bring their own headphones/earphones. Remind the attendees of this a few days before the event starts.

#### 1 hour before the event

You start your computer and connect the audio input feeds from the interpreter booths to your USB audio interface. After this is done you start the ingest software, log in to your instance, configure the channels and start streaming, for example, a predefined audio file or a jingle before the actual event starts. At the registration desk, all potential listeners are informed about the new translation service again (and preferably tested).

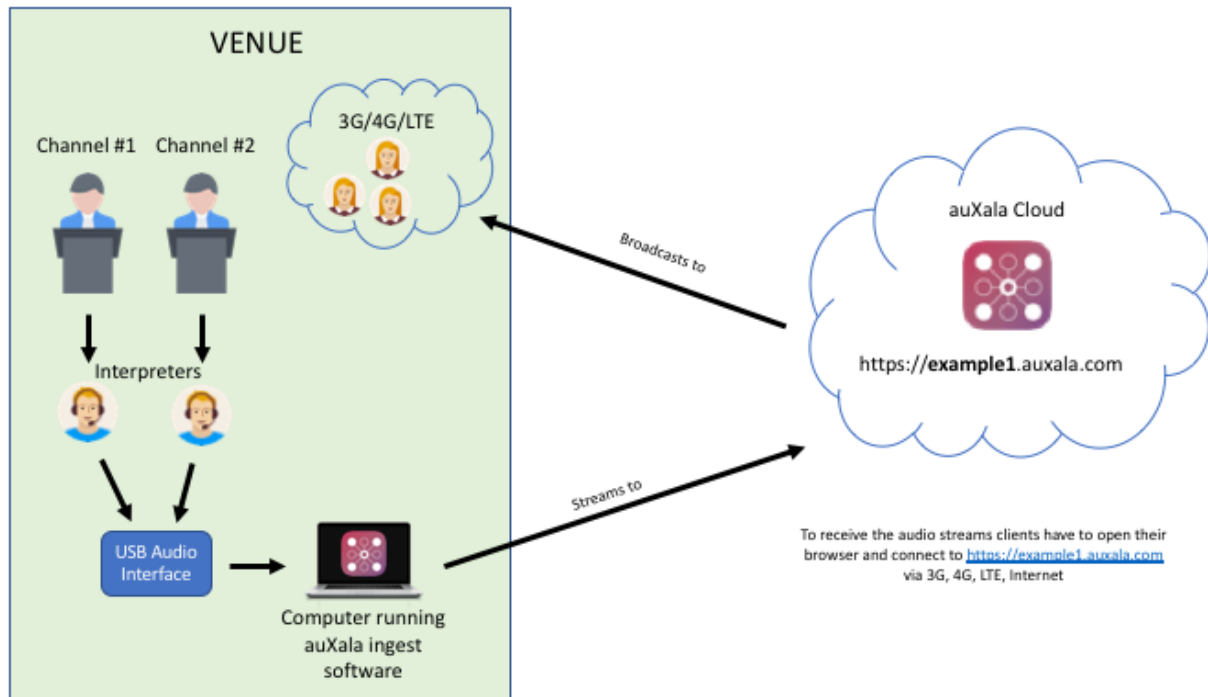
#### During the event

You monitor the instance and the number of users per channel and give the event organizer feedback on how the translation is doing.

### After the event

You export the monitoring data for future use and let us know that the event is done.

### Procedure diagram



## Example 2: Advanced

**Scenario:** simultaneous translation of an international conference in a large venue.

No. Listeners	No. streams	No. rooms	Delivery
2200	5	3	LTE and Wi-Fi

### 4 weeks before the event

You let us know that you require our streaming service with the parameters above, the purchase is made, we agree on when to set up the instance and send you the link to the admin interface. This gives you enough time to:

- Configure the instance, streams and audio channels
- Name the link for example: ***translation.yourcompany.com***
- Download and install the ingest software

Set up an audio loop on *translation.yourcompany.com* to let the attendees give the possibility to test the streaming service.

### 2 weeks before the event

You let your attendees and potential listeners know that translation will be provided by auXala and that they need to make sure that their mobile device is charged and to bring their own headphones/earphones.

### 2 days before the event

Since 8 streams across 3 rooms are required, it is not possible to physically connect all booths to the same computer. You will, for the sake of example, set up a computer in each room and connect the audio input feeds of the booths into the USB audio interfaces of each computer respectively. Room 1 is the biggest and has 3 booths, the rest has 1 booth per room.

**Note:** *alternatively, you could also use i.e. DANTE to stream all input feeds to a single computer. We leave the option on how you would like to deliver the audio to the computer(s) entirely up to you.*

A test is performed by you to check if everything is working and a predefined audio file is streamed to let the listeners know that the service is working. Also, the onsite Wi-Fi is configured, measured, and monitored by a professional Wi-Fi provider based on our requirements and knowledge.

**Note:** *our experience has shown, that on average, only one third of all users will use the Wi-Fi to listen to the stream.*

## 2 Hours before the event

At the registration desk, all potential listeners are informed about the new translation service again and the functionality is preferably tested.

## During the event

Within the venue there are flyers and inserts on how the new translation service works.

You monitor the instance and the number of users per stream and give the event organizer feedback on how the translation is doing. This allows the organizer to optimize the translation service in the future.

## After the event

You export the monitoring data for future use and let us know that the event is done.

## Procedure diagram

