

**FERNCAST**

  
**aixtream**

**Software Manual**  
**aixtream**



# FERNCAST

Ferncast GmbH  
Gallierstr. 41a  
52074 Aachen  
Germany  
Tel.: +49(0)-241-99034567  
Fax: +49(0)-241-99034568  
info@ferncast.com  
www.ferncast.com

Publisher: Ferncast Communications GmbH  
Authors: Tobias Dornbusch  
Version: 1.0.0  
Revision: 2/14/2020

© 2020 Ferncast GmbH

<b>1. Introduction</b>	<b>1</b>
<b>2. Information</b>	<b>2</b>
<b>2.1 Functional Icons</b>	<b>2</b>
<b>2.2 First Start</b>	<b>2</b>
2.2.1 Network Access	3
2.2.2 Username and Password	3
<b>2.3 Notifications</b>	<b>4</b>
<b>2.4 License Overview</b>	<b>4</b>
<b>3. Menus</b>	<b>6</b>
<b>3.1 Overview</b>	<b>6</b>
<b>3.2 Dashboard</b>	<b>7</b>
3.2.1 Create Dashboard	7
<b>3.3 Phonebook</b>	<b>8</b>
<b>3.4 PIPEs</b>	<b>10</b>
3.4.1 Edit PIPEs	11
<b>3.5 Archive</b>	<b>12</b>
<b>3.6 Applets</b>	<b>13</b>
<b>3.7 Monitoring</b>	<b>14</b>
<b>3.8 Settings</b>	<b>14</b>
3.8.1 User	16
3.8.2 User Roles	17
3.8.3 SIP Accounts	18
3.8.4 Licenses	20
3.8.5 Log	21
3.8.6 Audio	21
3.8.7 Network	22
3.8.8 System	23
<b>3.9 Logout</b>	<b>25</b>

# 1 Introduction

This document is a user manual for the **aixtream** software by Ferncast. This is a software for realization and management of high-quality audio transmission and recording in various formats. It is based on a hardened Linux kernel and can run on nearly every kind of hardware.







In this manual you find general information about the software as well as explanations of the various GUI elements and configuration options.

## 2 Information

In this chapter you will find general information about this manuals, the first start and other miscellaneous information.

### 2.1 Functional Icons

This document uses a series of functional icons with which different types of information are categorized. This allows you to quickly identify relevant information. This also includes calling out security instructions related to the respective processes.

Icon	Name	Description
	Warning	Marks a process or a configuration which can cause damage to the installation or device if incorrectly performed. In these cases maximal attention and care from the user is required.
	Information	Marks general information relevant to the current section.
	Tip	Marks advice for better and easier use of aixtream.
	Expert	Marks a process or configuration which should only be performed by experienced users (like admins) or Ferncast technicians.
	Internal Link	Marks a link to a different part of this manual relevant to this section.
	External Link	Marks a link to an external internet page relevant to this section.

### 2.2 First Start

In the following section you find all information you should be aware of before a first start.

#### Recommended web browser



For optimal performance we recommend **Mozilla Firefox** and **Google Chrome** in the most current versions.

## 2.2.1 Network Access

### Access web GUI

Prerequisite: Device is turned on. Computer with internet browser (Firefox or Chrome) is connected via the same network.

1. Open internet browser.
  2. Enter one of the addresses listed below into the URL bar.
  3. Enter Username a password (see following section).
- ✓ You now have access to the web GUI of aixstream.

① The web GUI can be reached over all Ethernet ports.

① Interface 1 is set to DHCP by default and can also be reached via the hostname. The hostname follows this format: [PRODUCT NAME]-[SERIAL NUMBER]. You can find the serial number on the back of the device in the case of Ferncast hardware products or on the license dongle in the case of aixstream. Before the hostname you must insert an http:// to access the web GUI via the URL bar.

Ethernet-Port	Adressen
Interface 1	http://[HOSTNAME]
Interface 2	10.0.0.11
Interface 3	10.0.0.12
Interface 4	10.0.0.13
Interface 5	10.0.0.14
Interface 6	10.0.0.15

① After the first login into the web GUI, you can change the IP addresses in the menu [Settings](#)<sup>[14]</sup> under [Network](#)<sup>[22]</sup>.

## 2.2.2 Username and Password

The standard user and password are:

<b>Username</b>	root
<b>Password</b>	ferncast

① After the first login into the web GUI new users can be created and edited in the menu [Settings](#)<sup>[14]</sup> in [User](#)<sup>[16]</sup>. New user roles can be created and edited in [User Roles](#)<sup>[17]</sup>.

## 2.3 Notifications

This section explains general notifications and so-called toasts, for example notifications during incoming calls.

### Notifications

The system can display notifications at various points during use. They are displayed to inform the user of the success of processes or issues that require the user's attention. iert werden soll.



- Notifications are displayed in the bottom right of the screen.
- Confirmation notifications are displayed green.
- Error notifications are displayed red.
- Both kinds of notifications have a timer at the lower end which shows how the long the notifications will be displayed.

### Incoming Calls



Incoming calls are displayed just like other notifications at the bottom right of the screen. See the following table for the anatomy of such a call notification. Please note that such notifications are only displayed if automatic call acceptance is not activated.

Element	Description
<b>Call Type</b>	Shows that a call is incoming and whether it is a SIP or RTP call.
<b>Name</b>	Identification of the caller (Device ID or similar).
<b>Address</b>	Shows the address of the caller. <ul style="list-style-type: none"> <li>• <b>SIP</b>: SIP address of the caller.</li> <li>• <b>RTP</b>: IP address of the caller.</li> </ul>
<b>Accept</b>	Click to accept the call.
<b>Decline</b>	Click to decline the call.

## 2.4 License Overview

This sections gives an overview of all features and codec algorithms which can be unlocked via licenses.

### Just where is...?



Should you be unable to see some of the menus listedn here, your current license may not contain access to them. If you think you have received the wrong license file or that there was an error in your licensing, please contact our support ([support@ferncast.de](mailto:support@ferncast.de)).



## Unlimited licenses

Licenses which are marked with a \* count used licenses but are always sold as a complete, unlimited package. These licenses do not scale.

License	Explanation
AAC Codec	Number of active PIPEs with the AAC codec. This includes AAC LD, LC and HE, but not xHE AAC (see following).
AAC-xHE Codec	Number of active PIPEs with the xHE AAC codec.
AES67	Number of active PIPEs with the source or sink element <b>Audio over IP</b> .
AUDIO I/O	Number of active PIPEs with the source or sink element <b>Audio</b> .
Basic Codecs	Number of active PIPEs with base codecs. This includes G.711 (A-Law, $\mu$ -Law), G.722, MP2, MP3, Opus, Vorbis, FLAC.
Dash*	Number of active PIPEs with the sink element <b>Dash</b> .
Encryption*	Number of PIPEs with the <b>Audio Processing</b> element <b>File Encryption</b> .
HLS*	Number of active PIPEs with the sink element <b>HLS</b> .
Icecast*	Number of active PIPEs with the sink element <b>Icecast</b> .
Recording*	Anzahl der PIPEs, die zum Recording aktiv sein können.
RTMP*	Number of active PIPEs with the sink element <b>RTMP</b> .
SIP	Number of active SIP PIPEs.
Smart Control*	Number of <a href="#">applets</a> <sup>13</sup> which can be created.
Upload*	Number of active PIPEs with file upload ( <b>FTP upload</b> , <b>HTTP upload</b> and <b>rsync upload</b> ).
Ybrid	Number of active PIPEs with the sink element <b>Ybrid</b> .



### 3 Menus

In this chapter all the menus of aixtream are explained. Following is a table listing all the menus with a short explanation.

#### 3.1 Overview

This is a short overview of all aixtream menus.

##### Debug



The debug menu is not normally visible. It can be turned on in the menu [System](#)<sup>[23]</sup>. It is used to identify errors in a support case and is otherwise unnecessary. It should only be activated after instruction from a Ferncast employee.

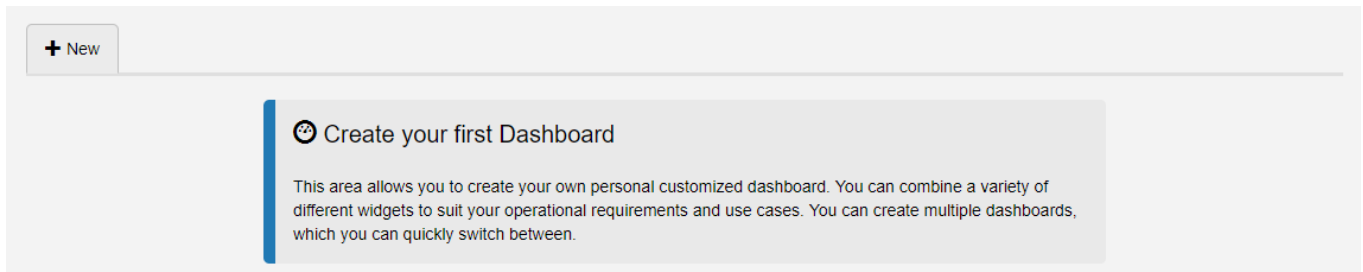


The menu bar of aixtream

Menü	Description
<a href="#">Dashboard</a> <sup>[7]</sup>	The dashboard for the configuration and of widgets for control and monitoring of diverse features. After your dashboard is configured you can control aixtream almost exclusively from here.
<a href="#">Phonebook</a> <sup>[8]</sup>	The phonebook in which you can save conacts and target addresses for connections. It is fully integrated with the widget SIP Calls.
<a href="#">PIPEs</a> <sup>[10]</sup>	The menu for setting up and editing new PIPEs (connections).
<a href="#">Archive</a> <sup>[12]</sup>	The archive for saved recordings and applet scripts. This is also where files for an upload or synchronization are temporarily stored.
<a href="#">Applets</a> <sup>[13]</sup>	Das Menü zum erstellen von Applet-Skripten für vorprogrammierte Reaktionen. Dazu gehören z. B. das Aktivieren einer PIPE oder Schreiben eines speziellen Log-Eintrags bei einem vorbestimmten Ereignis.
<a href="#">Monitoring</a> <sup>[14]</sup>	The overview of the system and network condition. Here you can find the load on the system as well as information about any connection problems (like dropped packets).
Debug	This menus only appears if it has first been enabled (in <a href="#">System</a> ) <sup>[23]</sup> . It aids in troubleshooting and error identification in a support case.
<a href="#">Settings</a> <sup>[14]</sup>	The general device and software settings. This includes settings for users, network config, audio hardware and SIP.
<a href="#">Logout</a> <sup>[25]</sup>	The logout button. This allows a user to log out with a click on it.

## 3.2 Dashboard

The dashboard is the fully configurable control center for aixtream. Every user can customize their dashboard exactly as they need it to be. Thanks to the great variety of widgets available for aixtream, almost every function can be performed through the dashboard.


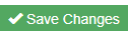


Dashboard menu at first start

### 3.2.1 Create Dashboard

To create a new dashboard follow these steps:

#### Create new Dashboard

1. Click in the top left on .
  - The menu "Customize Dashboard" appears.
2. Give the new dashboard a unique, identifiable name (top field).
3. Drag the desired widgets from the pool into the desired place.
  - a. **Applied:** Active widgets for the current dashboard.
  - b. **Pool:** Inactive widgets which are still available..
4. Click on .
  - ✓ The dashboard has been successfully configured.

Customize Dashboard

name

Applied:

Pool:

Audio Interface Control

Balance Control

DTMF

Level Meter

Monitoring

Network Status

Recorder Groups

Recorder Streams

Stream Groups

Connection Overview

System Health

Tip of the Day

Volume Control

Save changes

The popup menu "Customize Dashboard"

Widgets?



Widgets are the individual, optional software elements which make up the dashboard. Every widget is a software function for a specific application case.

Mehrere Dashboards



You can have muliple dashboards at the same time. Additional dashboards are added with a click on 

+ New

 and can then be edited just like the first one. Afterwards you can switch between the different dashboards with a click on the respective tabs.

3.3 Phonebook

The phonebook allows you to create contacts and add general information as well as SIP addresses. Phonebook contacts can be used as sinks in SIP PIPEs and the SIP Calls widget.

Search ...

+ Create new entry

« Previous

Next »

Change avatar

☆ -/-

Name

Contact firstname

Contact lastname

Contact email

Contact phone

SIP Configuration

⚡ Contact SIP Address

Sending Pipe

Receiving Pipe

Caller SIP Account

✓ Add entry

Menu Phonebook


Element	Description
<b>Search field and sorter</b>	Filters the contacts with a full text search of the entered text (including searching for matches from the contact data). The sorting button changes the sequence of the listed contacts (alphabetical, up or down).
<b>Create new entry</b>	Creates a new empty phonebook entry.
<b>List of available phonebook entries</b>	Shows all the created phonebook entries. Existing phonebook entries can also be chosen and edited.
<b>Change avatar</b>	Opens the file menu for selecting an avatar picture. Over this button you can see the current avatar picture for the contact.
<b>Contact information</b>	Here the various pieces of contact information are displayed.
<ul style="list-style-type: none"> <li>• Name</li> <li>• Contact firstname</li> <li>• Contact lastname</li> <li>• Contact email</li> <li>• Contact phone</li> </ul>	
<b>SIP Configuration</b>	
<b>Contact SIP Address</b>	The full SIP address of the contact, including registrar.
<b>Sending PIPE</b>	The default send PIPE for the contact.
<b>Receiving PIPE</b>	The default receiving PIPE for calls from the contact.

Element	Description
Caller SIP Account	The default SIP account which should be used for calls from this contact.
<div>✓ Add entry</div>	Adds the contact with the currently entered information.
<div>✓ Save Changes</div>	(Appears only when selecting an existing contact) Saves the entered changes.
<div>✗ Delete entry</div>	(Appears only when selecting an existing contact) Deletes the selected contact.

### 3.4 PIPES

In this menu connections are configured and can also be controlled from here.

#### PIPES?



In aixtream connections and recording profiles are called "PIPES". This also describes how they are displayed in menus. These connection and recording profiles are referred to whenever this manual speaks of *PIPES*.

Q

Search ...


⌵


State Filter


+

Create


↔ Unidirectional


 SIP 0


 Groups 0


 Template


✓ New Pipeline 1
















PIPES

Element	Description
Search bar	Filters the displayed PIPES by the entered search term (including names of used PIPE elements).
Filter	Filters the displayed PIPES by their connection status. <ul style="list-style-type: none"><li>• <b>Playing:</b> Recordings that are playing.</li><li>• <b>Paused:</b> Recordings that are paused.</li><li>• <b>Active:</b> Active transmissions.</li><li>• <b>Inactive:</b> Inactive transmissions.</li><li>• <b>Incomplete:</b> PIPES that are not fully configured and therefore unusable.</li></ul>
Tabs	Changes the listed view to the respective types of PIPES. <ul style="list-style-type: none"><li>• <b>Unidirectional:</b> PIPES for unidirectional connections.</li><li>• <b>SIP:</b> SIP PIPES</li><li>• <b>Groups:</b> Recording and stream groups.</li><li>• <b>Template:</b> Created PIPE templates.</li></ul>
+ Create	Creates a new PIPE and opens the <a href="#">submenu</a> <sup>11)</sup> to edit it.

Element	Description
	<p>The control panel for PIPE activity.</p> <ul style="list-style-type: none"> <li>• <b>Red:</b> Stops the transmission/recording entirely.</li> <li>• <b>Yellow:</b> Pauses the transmission/recording but holds the connection.</li> <li>• <b>Green:</b> Starts or restarts the connection.</li> </ul>
	<p>Further options for the respective PIPE. Starting from the right:</p> <ul style="list-style-type: none"> <li>• <b>Validation failed:</b> The PIPE is incorrectly configured. This is only displayed when an error is actually present.</li> <li>• <b>Edit PIPEs:</b> Opens the menu for editing the PIPE. See <a href="#">Edit PIPEs</a>.</li> <li>• <b>Lock PIPE:</b> Prevents any changes to the PIPE, until the lock is unlocked via another click on this icon.</li> <li>• <b>Clone PIPE:</b> Creates a new PIPE which is a duplicate of this PIPE.</li> <li>• <b>Delete PIPE:</b> Deletes the PIPE beyond recovery.</li> <li>• <b>Show log messages:</b> Shows all log messages related to this PIPE specifically.</li> </ul>

### 3.4.1 Edit PIPEs

This is where a PIPE is created and edited. The individual PIPE elements are combined to into a new PIPE which can then be saved and used afterwards. See the table below for an explanation of the various GUI elements.

#### Order of PIPE Elements

aixtream checks automatically whether a specific PIPE configuration is correct and applicable. Should a specific configuration be not applicable somehow, the misplaced elements within the PIPE will blink red.



Generally, the correct order of elements is:


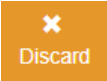

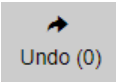
1. Source elements (green)
2. Audio processing (magenta)
3. De/Encoder Elements (yellow)
4. Sink elements (teal)
5. Encryption and upload elements (blue)



#### PIPE Elements


The individual PIPE elements and how they are configured is explained in PIPE Elements.


Element	Description
<b>Text field name</b>	Here the desired name for the PIPE can be entered.
<b>Name der PIPE</b>	Shows the current name.


Element	Description
Settings	General settings for this PIPE, like sampling rate and number of channels.
Edit field for the PIPE	Here the PIPE is assembled. <b>Adding a PIPE element:</b> Drag and drop the desired elements from the pools below. <b>Edit PIPE Element:</b> After a PIPE element is added, detailed settings can be accessed via a click on the respective element.
Pools of available PIPE elements	Here all the available PIPE elements are found. <ul style="list-style-type: none"><li>• <b>Sources:</b> Source elements for the audio signal. Note that a PIPE may normally have only one source.</li><li>• <b>Audio Processing:</b> Further audio processing features as well as the options to encrypt files or upload them externally.</li><li>• <b>Encoder:</b> The selection of available codec algorithms for the encoding.</li><li>• <b>Sinks:</b> Target elements for the audio signal. Note that a PIPE may normally have only one sink.</li></ul>
 Save	Saves the current PIPE and returns to the menu PIPEs.
 Discard	Ignores all changes which have been performed and returns to the menu PIPEs.
 Remove	Deletes the current PIPE and returns to the menu PIPEs.
 Undo (0)	Reverts the last editing steps. The number in brackets shows how many steps can be reverted.

### 3.5 Archive

This menu allows you to see and manage audio recordings as well as all created applet scripts.


 New Folder

 Recordings

 Applets

▼ Name

FirstPrevious1NextLast

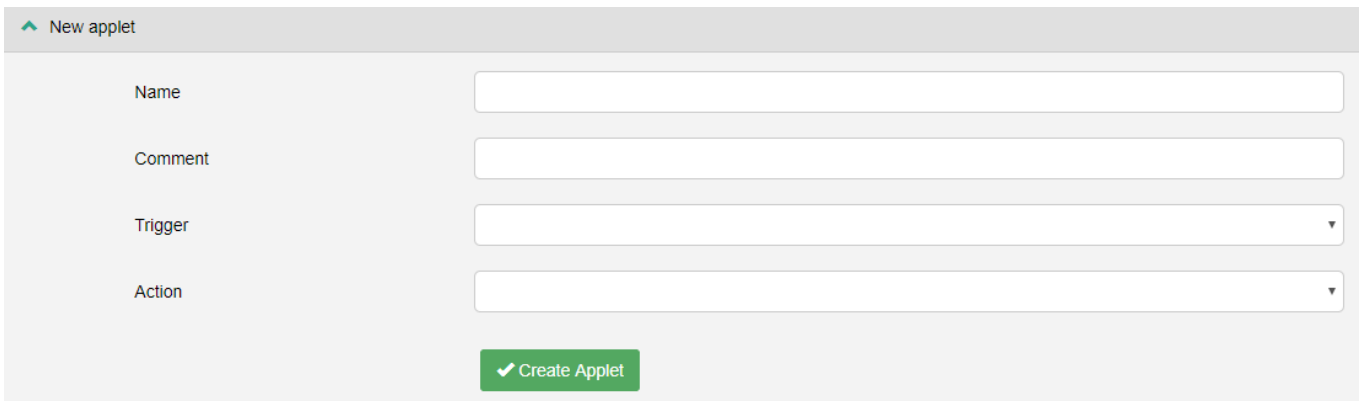
25

Archive


Element	Description
<b>+ New Folder</b>	Creates a new folder for recordings and other saved files.
<b>Folder Recordings</b>	The default folder for recordings.
<b>Folder Applets</b>	The default folder for applets.
<b>Name/Date</b>	Switches between sorting entries by name (alphabetically) or date.
<b>Page Selector</b>	Selector for the desired page.
<b>Scale</b>	Sets how many archive entries are shown at once (before a page break).

## 3.6 Applets

This menu allows you to create applets. These are if-then scripts which allow you to automatize reactions to specific system events.



### Applets


Element	Description
<b>Name</b>	Here the desired name for the applet is entered. Ensure that the name is a unique identifier.
<b>Comment</b> (Kommentar)	Here an optional comment can be added to the applet. This can help other users identify specific applets and their use better.
<b>Trigger</b> (Auslöser)	In this dropdown menu the triggering event for the applet is chosen. <ul style="list-style-type: none"> <li>• <b>Pipe state change:</b> The applet is triggered through a specified change in the PIPE. Afterwards you can pick which change specifically should trigger the applet.</li> </ul>
<b>Action</b> (Aktion)	In this dropdown menu the action which should be performed when the applet is triggered is chosen.
	Creates the constructed applet and saves it.

+



### 3.7 Monitoring

In this menu the load on the system can be observed based on various parameters. Any issues with the internet connection can also be spotted.





**Monitoring multiple network interfaces**  
Under Network Interfaces you can switch between the different interfaces by clicking on the respective tabs. This way all available network interfaces can be checked.

Element	Description
Save Icons	These buttons, found to the top right of each diagram, allow the respective diagrams to be saved as image files.
Memory Usage	Load on the RAM.
Load	Load on the entire system.
TCP Connections	Load on TCP connections.
CPU Load (in %)	Load on the CPU in percent.
Errors per second at: Interface X	The number of transmission errors at the respective interface.
Packets per second at: Interface X	How many packages are sent and received at the respective interface.
Megabit per second at: Interface X	How many megabits per second are sent and received at the respective interface.

### 3.8 Settings

In this section the Settings menu and its submenus are explained. Here users, user roles and general system settings can be performed. See the following table for details.

Menu	Description
<a href="#">User</a> <sup>[16]</sup>	Creating, editing and deleting users. Setting passwords and assigning user roles.
<a href="#">User Roles</a> <sup>[17]</sup>	Creating, editing and deleting user roles.
<a href="#">SIP Accounts</a> <sup>[18]</sup>	Adding, editing and deleting SIP account registrations.
<a href="#">Licenses</a> <sup>[20]</sup>	Inspecting used licenses and uploading new license files into the system.
<a href="#">Log</a> <sup>[21]</sup>	Viewing the system's event log. Filter and search it or export it.
<a href="#">Audio</a> <sup>[21]</sup>	Configuring the system's audio hardware.

Menu	Description
<a href="#">Network</a> 	Configuring the network settings, including IP address, DHCP, Routing, NTP and DNS, SSH and WebAPI access.
<a href="#">System</a> 	Viewing general system information and configuring general system settings, rebooting the system, performing factory resets or installing updates.

### 3.8.1 User

In this menu new users can be created and existing users edited or deleted.

Create new user

root

Change avatar

-/-

Username

First name

Last name

⚡

User roles

No entries available.

+

New Password

Verify Password

⚡

Dashboard only

Off

✓ Add entry





User

#### Priority of User Roles

i

Please note that when a user has multiple user roles the role which gives the user the most rights in a given situation is the one that counts. Avoid giving a user contradictory user roles, if this is a problem.

Element	Description
Create new role	While this option is selected, a new user can be configured.
List of existing users	Selecting one of these shows the configuration for that user and any changes made will be applied to that user.
Change avatar	Opens the file menu for selecting an avatar picture. Over this button you can see the current avatar picture for the user.
Username	The displayed username of the user is entered here.
Firstname (Vorname)	The first name of the user is entered here.
Lastname (Nachname)	The last name of the user is entered here.

Element	Description
<b>User roles</b>	Via the dropdown menu to the right you can select a user role and then assign it to this user via click on the  button. Note that multiple user roles can be assigned to one user.
<b>New Password</b> ( <i>Neues Passwort</i> )	The new (or first) password for this user to log in.
<b>Verify Password</b> ( <i>Passwort bestätigen</i> )	Here the entered password must be confirmed by entering it a second time.
<b>Dashboard only</b>	If this toggle is set to "On", the user is limited to the dashboard.
 <b>Add entry</b>	Creates the user with the chosen settings.
<b>Only visible when editing an existing user</b>	
 <b>Save Changes</b>	Saves the changed user settings.
 <b>Delete entry</b>	Deletes the selected user.

### 3.8.2 User Roles

In this menu new user roles can be created and existing ones edited and deleted.



#### Editing User Roles - Expert

Creating new users is an expert feature. Especially the attribute editor and custom LUA scripts should only be handled by IT admins or Ferncast personnel.

Element	Description
Create new role	While this option is selected, any configurations will apply to a new user role.
List of existing user roles	Selecting one of these shows the configuration for that user role and any changes made will be applied to that user role.
Role Name	The desired name for the user role is entered here.
Objects	In this tab rights regarding specific GUI and system elements can be changed.
Methods	In this tab rights regarding specific processes and methos can be changed.
Attribute Editor	Rights for Objects can be changed in code here.
Optionen (Objects)	<div>4 rights are available in Objects. These are:</div> <ul style="list-style-type: none"><li>• <b>Create</b>: User role can create such objects.</li><li>• <b>Read</b>: User role can view such objects and configurations connected to them.</li><li>• <b>Update</b>: User role can edit such objects.</li><li>• <b>Destroy</b>: User role can delete such objects .</li></ul>
Optionen (Methods)	Here specific processes (called "methods") can be allowed or forbidden for the user role.

3.8.3 SIP Accounts

In this menu new SIP accounts can be created and existing SIP accounts can be edited or deleted.

Create SIP account

### Create new SIP Account

⚡ Display Name

Account enabled

On

⚡ SIP Username

SIP Password

⚡ SIP Registrar

Sending Pipe

Select ...

Receiving Pipe

Select ...

⚡ Automatic call accept

Off

▼ Advanced Options

ⓘ Encoders ⚙

✓ Add new Account

#### SIP Accounts

#### Automatic call accept



Wenn die automatische Anrufannahme deaktiviert ist, wird bei eingehende Anrufe unten rechts ein Menü eingeblendet, das Ihnen erlaubt den Anruf an- oder abzulehnen.

#### Default PIPEs



Even if a default source PIPE is selected can a different one be chosen before a call or via a [Phonebook](#) entry.

Element	Description
<b>Display Name</b>	The displayed name identifying the SIP account.
<b>Account enabled</b>	Activates ("On") or deactivates ("Off") the registration of the account. If deactivated the account will not register with the registrar.
<b>SIP Username</b>	Here the username for the SIP account is entered (the part of the SIP address before the "@").

Element	Description
SIP Password	Here the password for the SIP account is entered.
SIP Registrar	Here the registrar for the SIP account is entered. (the part of the SIP address after the "@").
Automatic call accept	Activates ("On") or deactivates ("Off") the automatic call acceptance. If deactivated calls must be manually accepted via the call <a href="#">notification</a> <sup>4</sup> .
Call profile	Dropdown menu for selecting the used call profile for this SIP account.
Advanced Options	
Account Visibility	Sets if the online status of the SIP account should be publicly displayed. <ul style="list-style-type: none"><li>• <b>On</b>: Online status is public.</li><li>• <b>Off</b>: Online status is not public.</li></ul>
Registration Interval	Sets the interval after which the registration is renewed.
Transport Type	Dropdown menu for setting the transport protocol used with the SIP account.
Echo mode	Only used for testing: Received audio is send back automatically.
Size of jitter buffer	Sets the size of the jitter buffer in milliseconds (ms).

### 3.8.4 Licenses

Here all used and available licenses are listed, and new license files can be uploaded into the system.



#### Restart

Please note that a restart of the system is necessary after uploading a new license file.

#### Uploading new license file

1. Click on "Choose file".
  - An explorer menu opens.
2. Navigate to the desired license file and select it for upload.
3. Click on **Import**
  - ✓ The license file has been uploaded into the system.

### 3.8.5 Log

In the log all system notifications and warnuns are saved and these can also be exported from here. This is especially useful to help the support with troubleshooting.

Element	Description
<b>Start date</b>	Filters the log by the chosen start date. Notifications that are older than this date are not displayed.
<b>Level</b>	Selects the level of notifications that are to be displayed: <ul style="list-style-type: none"> <li>• <b>Debug</b>: Debug information.</li> <li>• <b>Info</b>: General notifications about regular system processes.</li> <li>• <b>Warning</b>: General warnings about undesirable system behavior.</li> <li>• <b>Error</b>: Failed system processes.</li> <li>• <b>Critical</b>: Notifications about events that compromise the entire system operation.</li> </ul>
<b>Object Filter</b>	Filters the log entries by notifications related to this object. <b>On</b> : Notifications related to this object are displayed. <b>Off</b> : Notifications related to this object are not displayed.
<b>Button Refresh</b>	Reloads the log display to include the newest events.
<b>Button Download</b>	Downloads the current log to the accessing device.
<b>+ Load More Items</b>	Loads more notifications in the log view. This may be necessary when viewing a longer log.

### 3.8.6 Audio

In this menu the used audio hardware can be configured.

#### Hardware-dependent settings



Most settings in this menu are dependent on the used audio hardware. However, the audio buffer can be set for all.

#### Size of the audio buffer






The audio buffer should only be adjusted by experts or Ferncast employees. An incorrect or impossible value can cause the audio hardware to crash.

Menü	Description
<b>ALSA Period</b>	Sets the size of the audio buffer.



### 3.8.7 Network

In this menu the network settings can be configured.

Element	Description
Export	Exports the current network settings
Physical Interfaces	Sets which interface is being configured.
	Interface Settings
Port name	Sets the internal naming of the interface. This name is referenced in PIPEs.
devName	Displays the automatically generated name in the software backend.
MAC address	Displays the mac address of the interface.
IP address	Displays the current IP address of the interface.
	Network Configuration
Network name	Displays the name of the network in which the interface is.
DHCP	Dropdown menu for enabling or disabling DHCP (automatic IP assignment). If disabled, a static IP can be set under <b>Static IP address</b> .
DNS	Activates ("On") or deactivates ("Off") DNS.
NTP	Activates ("On") or deactivates ("Off") NTP.
Routes	Activates ("On") or deactivates ("Off") routing.
Route metric	Sets the route metric for the router. The higher this value is, the greater is the priority for route and therefore the chance that this route will be chosen.
MTU	Sets the maximum transmission unit.
	Server Configuration
NTP Server	New NTP servers can be added here. This serves the time synchronisation of the network. Enter a desired NTP server here and click on  to add it.
DNS Server	New DNS servers can be added here. This serves the identification of the hostname. Enter a desired DNS server here and click on  to add it.
	Routing
Network Routes	New network routes can be configured here. Enter the required information and the gateway here and click on  to add it.

Element	Description
	<b>Services</b>
<b>SSH</b>	Activates ("On") or deactivates ("Off") access via SSH.
<b>WebAPI</b>	Activates ("On") or deactivates ("Off") access to the WebAPI.
<b>WebAPI (HTTPS)</b>	Activates ("On") or deactivates ("Off") access to the WebAPI via HTTPS.
<b>Ping</b>	Activates ("On") or deactivates ("Off") access pinging. If deactivated the system does not respond to pings.
<b>SIP / RTP</b>	Activates ("On") or deactivates ("Off") transmission via SIP and RTP.
<b>Save</b>	Saves all changes.

### 3.8.8 System

In this menu general system and device information can be viewed and general settings can be configured.

#### Expert settings!



Some options in this menu can cause irreversible changes to the device and settings. This menu should only be handled by administrators, authorized experts and Ferncast personnel.

#### Firmware updates and installation



While a firmware update is downloading, aixstream can still be used. During the installation of the update, operation will be interrupted. After the installation of the update the device restarts and can then be used again.

Device Actions	Device Information
<b>Configuration</b> <span>Export</span> <span>Import</span>	<b>Device ID:</b> aixstream-b1123f4b
<b>Reboot / Shutdown</b> <span>Reboot system</span> <span>Shutdown</span>	<b>Current Version:</b> master-8715+9533416 (dooku)
<b>Reset</b> <span>Clear Log</span> <span>Factory reset</span>	<b>Update</b> <span>Install version MASTER_DEV_florian</span> <span>Select</span>

#### Device

Element	Description
Device Actions	
<b>Configuration</b> <i>(Konfiguration)</i>	<p>Allows import and export of configurations</p> <ul style="list-style-type: none"><li>• <b>Export:</b> Exports the current configuration. This requires you to set a password for the config export.</li><li>• <b>Import:</b> Imports a config file. Use the explorer menu to select the config file. Note that the password set during export is required for the import.</li></ul>
<b>Reboot / Shutdown</b>	<ul style="list-style-type: none"><li>• <b>Reboot system:</b> Initiates a reboot of the system.</li><li>• <b>Shutdown:</b> Turns off the system.</li></ul>
<b>Reset</b>	<p><b>Clear Log:</b> Resets the log entirely to a fresh state.</p> <p><b>Factory Reset:</b> Resets the entire device to factory settings.</p>
Device Information	
<b>Device ID</b> <i>(Geräte-ID)</i>	Displays the identifier of the system. This is the name with which the system identifies itself to other devices (including other hardware audio codecs).
<b>Current Version</b> <i>(Aktuelle Version)</i>	Displays the currently installed firmware version of the system.
<b>Update</b> <i>(Aktualisierung)</i>	Displays available firmware updates and starts an update with click on it. If you have been given access to multiple different versions, the dropdown selector to the right allows the selection of the desired firmware version.

⚡

Hostname

⚡

Current Timezone

Local: UTC (UTC+00:00) ▾

⚡

SSH

On

⚡

Updater Proxy

⚡

SSL public certificate

-----BEGIN CERTIFICATE-----  
\\nMIIID1zCCAr+gAwIBAgIJAI5ozi7cWnvjMA0GCSqGSIb3DQEBCwUAMIGAMQswCQYD\\nVQQGEWJERTEQ

⚡

SSL private certificate

-----BEGIN PRIVATE KEY-----  
\\nMIIIEvQIBADANBgkqhkiG9w0BAQEFAASCBCwggSjAgEAAoIBAQCv8MZ++wnBrlLb\\n5MWk/DMN1QH0BI

⚡

Debug mode

Off

Audio I/O buffer size

32000

μs

⚡

Timestamp source

System ▾

⚡

Show clock

Off

✓ Save Changes

Additional system settings

Element	Description
Hostname	Hostname of the device which identifies the device in the network.
Current Timezone	Sets the time zone of the system time used for time synchronization.
SSH	Activates ("On") or deactivates ("Off") the SSH access to the system.
Update Proxy	Sets proxy access to the system.
SSL public certificate	Displays the used SSL public certificate.
SSL private certificate	Displays the used SSL private certificate.
Debug Mode	Activates ("On") or deactivates ("Off") the display of the debug menu.
Audio I/O buffer size	Adjusts the size of the audio buffer on the software side.
Timestamp source	A dropdown menu for the selection of the source of the timestamp.
Show clock	Activates ("On") or deactivates ("Off") the display of the clock (current system time) in the <a href="#">Dashboard</a> <sup>74</sup> .
✓ Save Changes	Saves all made changes.

3.9 Logout

A click on this button logs the current user out and returns them to the login screen.

 Logout  
Logout